UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended 31 December 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number: 001-14642

ING GROEP NV

(Exact name of Registrant as specified in its charter)

ING GROUP

(Translation of Registrant's name into English)

The Netherlands

(Jurisdiction of incorporation or organization)

ING Groep N.V. Bijlmerdreef 106
1102 CT Amsterdam
P.O. Box 1800, 1000 BV Amsterdam
The Netherlands
(Address of principal executive offices)

Erwin Olijslager
Telephone: +31 20 564 7705
E-mail: Erwin.Olijslager@ing.com
Bijlmerdreef 106
1102 CT Amsterdam
The Netherlands
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class	Trading symbols	Name of each exchange on which registered
American Depositary Shares	ING	New York Stock Exchange
Ordinary shares		New York Stock Exchange(i)
3.150% Fixed Rate Senior Notes due 2022	ING22	New York Stock Exchange
3.950% Fixed Rate Senior Notes due 2027	ING27	New York Stock Exchange
Floating Rate Senior Notes due 2022	ING22A	New York Stock Exchange
Floating Rate Senior Notes due 2023	ING23A	New York Stock Exchange
4.100% Fixed Rate Senior Notes due 2023	ING23	New York Stock Exchange
4.550% Fixed Rate Senior Notes due 2028	ING28	New York Stock Exchange
3.550% Fixed Rate Senior Notes due 2024	ING24	New York Stock Exchange
4.050% Fixed Rate Senior Notes due 2029	ING29	New York Stock Exchange
1.726% Callable Fixed-to-Floating Rate Senior Notes due 2027	ING27A	New York Stock Exchange
2.727% Callable Fixed-to-Floating Rate Senior Notes due 2032	ING32	New York Stock Exchange
Callable Floating Rate Senior Notes due 2027	ING27B	New York Stock Exchange

(i) Not for trading, but only in connection with the registration of American Depositary Shares representing such ordinary shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act.	None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.	None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Ordinary Shares, nominal value EUR 0.01 per Ordinary Share 3,904,065,304

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 193

☐ Yes ☒ No

Note — Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer☒ Accelerated filer☐ Non-accelerated filer☐ Emerging growth company☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

☐ Item 17 ☐ Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

ING GROUP

Annual Report 2021 on Form 20-F

Contents

PRESENTATION OF INFORMATION

In this Annual Report, and unless otherwise stated or the context otherwise dictates, references to "ING Groep N.V.", "ING Groep" and "ING Group" refer to ING Groep N.V. and references to "ING", the "Company", the "Group", "we" and "us" refer to ING Groep N.V. and its consolidated subsidiaries. ING Groep N.V.'s primary banking subsidiary is ING Bank N.V. (together with its consolidated subsidiaries, "ING Bank"). References to "Executive Board" and "Supervisory Board" refer to the Executive Board or Supervisory Board of ING Groep N.V., respectively.

ING presents its consolidated financial statements in euros, the currency of the European Economic and Monetary Union. Unless otherwise specified or the context otherwise requires, references to “$”, “US$” and “Dollars” are to the United States dollars and references to “EUR” are to euros.

ING prepares financial information in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS-IASB”) for purposes of reporting with the U.S. Securities and Exchange Commission (“SEC”), including financial information contained in this Annual Report on Form 20-F. ING Group’s accounting policies and its use of various options under IFRS-IASB are described under ‘Principles of valuation and determination of results’ in the consolidated financial statements. In this document the term “IFRS-IASB” is used to refer to IFRS-IASB as applied by ING Group.

The published 2021 Annual Accounts of ING Group, however, are prepared in accordance with IFRS-EU. IFRS-EU refers to International Financial Reporting Standards (“IFRS”) as adopted by the European Union (“EU”), including the decisions ING Group made with regard to the options available under IFRS as adopted by the EU (IFRS-EU).

IFRS-EU differs from IFRS-IASB, in respect of certain paragraphs in IAS 39 ‘Financial Instruments: Recognition and Measurement’ regarding hedge accounting for portfolio hedges of interest rate risk. Under IFRS-EU, ING Group applies fair value hedge accounting for portfolio hedges of interest rate risk (fair value macro hedges) in accordance with the EU “carve-out” version of IAS 39. Under the EU “IAS 39 carve-out”, hedge accounting may be applied, in respect of fair value macro hedges, to core deposits and hedge ineffectiveness is only recognised when the revised estimate of the amount of cash flows in scheduled time buckets falls below the original designated amount of that bucket, and is not recognised when the revised amount of cash flows in scheduled time buckets is more than the original designated amount. Under IFRS-IASB, hedge accounting for fair value macro hedges cannot be applied to core deposits and hedge ineffectiveness arises whenever the revised estimate of the amount of cash flows in scheduled time buckets is either more or less than the original designated amount of that bucket. IFRS-IASB financial information is prepared by reversing the hedge accounting impacts that are applied under the EU “carve-out”’ version of IAS 39. Financial information under IFRS-IASB accordingly does not take account of the possibility that, had ING Group applied IFRS-IASB as its primary accounting framework, it might have applied alternative hedge strategies where those alternative hedge strategies could have qualified for IFRS-IASB compliant hedge accounting. These decisions could have resulted in different shareholders’ equity and net result amounts compared to those indicated in this Annual Report on Form 20-F.

Other than for the purpose of SEC reporting, ING Group intends to continue to prepare its Annual Accounts under IFRS-EU. A reconciliation between IFRS-EU and IFRS-IASB for shareholders’ equity and net result is included in Note 1 ‘Basis of preparation and significant accounting policies'’’ to the consolidated financial statements.

Certain amounts set forth herein, such as percentages, may not sum due to rounding.

This Annual Report on Form 20-F contains inactive textual addresses to Internet websites operated by us and third parties. Reference to such websites is made for information purposes only, and information found at such websites is not incorporated by reference into this Annual Report on Form 20-F.

CAUTIONARY STATEMENT WITH RESPECT TO FORWARD-LOOKING STATEMENTS

Certain of the statements contained herein are not historical facts, including, without limitation, certain statements made of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. Actual results, performance or events may differ materially from those in such statements due to a number of factors, including, without limitation,

- changes in general economic conditions and customer behaviour, in particular economic conditions in ING's core markets, including changes affecting currency exchange rates and the regional and global economic impact of the invasion of Russia into Ukraine and related international response measures
- effects of the Covid-19 pandemic and related response measures, including lockdowns and travel restrictions, on economic conditions in countries in which ING operates, on ING's business and operations and on ING's employees, customers and counterparties
- changes affecting interest rate levels
- any default of a major market participant and related market disruption
- changes in performance of financial markets, including in Europe and developing markets
- fiscal uncertainty in Europe and the United States
- discontinuation of or changes in 'benchmark' indices
- inflation and deflation in our principal markets
- changes in conditions in the credit and capital markets generally, including changes in borrower and counterparty creditworthiness
- failures of banks falling under the scope of state compensation schemes
- non-compliance with or changes in laws and regulations, including those concerning financial services, financial economic crimes and tax laws, and the interpretation and application thereof
- geopolitical risks, political instabilities and policies and actions of governmental and regulatory authorities, including in connection with the invasion of Russia into Ukraine and related international response measures
- legal and regulatory risks in certain countries with less developed legal and regulatory frameworks
- prudential supervision and regulations, including in relation to stress tests and regulatory restrictions on dividends and distributions, (also among members of the group)
- regulatory consequences of the United Kingdom's withdrawal from the European Union, including authorizations and equivalence decisions
- ING's ability to meet minimum capital and other prudential regulatory requirements
- changes in regulation of US commodities and derivatives businesses of ING and its customers
- application of bank recovery and resolution regimes, including write-down and conversion powers in relation to our securities
- outcome of current and future litigation, enforcement proceedings, investigations or other regulatory actions, including claims by customers or stakeholders who feel misled or treated unfairly, and other conduct issues
- changes in tax laws and regulations and risks of non-compliance or investigation in connection with tax laws, including FATCA
- operational and IT risks, such as system disruptions or failures, breaches of security, cyber-attacks, human error, changes in operational practices or inadequate controls including in respect of third parties with which we do business
- risks and challenges related to cybercrime including the effects of cyberattacks and changes in legislation and regulation related to cybersecurity and data privacy
- changes in general competitive factors, including ability to increase or maintain market share
- inability to protect our intellectual property and infringement claims by third parties
- inability of counterparties to meet financial obligations or ability to enforce rights against such counterparties
- changes in credit ratings
- business, operational, regulatory, reputation, transition and other risks and challenges in connection with climate change and ESG-related matters
- inability to attract and retain key personnel

- future liabilities under defined benefit retirement plans
- failure to manage business risks, including in connection with use of models, use of derivatives, or maintaining appropriate policies and guidelines
- changes in capital and credit markets, including interbank funding, as well as customer deposits, which provide the liquidity and capital required to fund our operations, and
- the other risks and uncertainties detailed in the most recent annual report of ING Groep N.V. (including the Risk Factors contained therein) and ING's more recent disclosures, including press releases, which are available on www.ing.com.

This annual report contains inactive textual addresses to internet websites operated by us and third parties. Reference to such websites is made for information purposes only, and information found at such websites is not incorporated by reference into this annual report. ING does not make any representation or warranty with respect to the accuracy or completeness of, or take any responsibility for, any information found at any websites operated by third parties. ING specifically disclaims any liability with respect to any information found at websites operated by third parties. ING cannot guarantee that websites operated by third parties remain available following the filing of this annual report or that any information found at such websites will not change following the filing of this annual report. Many of those factors are beyond ING's control.

Any forward looking statements made by or on behalf of ING speak only as of the date they are made, and ING assumes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or for any other reason.

This document does not constitute an offer to sell, or a solicitation of an offer to purchase, any securities in the United States or any other jurisdiction.

PART I

Item 1. Identity of Directors, Senior Management And Advisors

Not Applicable.

Item 2. Offer Statistics and Expected Timetable

Not Applicable.

Item 3. Key Information

A. Selected financial data

Not applicable.

B. Capitalization and indebtedness

This item does not apply to annual reports on Form 20-F.

C. Reasons for the offer and use of proceeds

This item does not apply to annual reports on Form 20-F.

D. Risk Factors

Summary of Risk factors

The following is a summary of the principal risk factors that could have a material adverse effect on the business activities, financial condition, results and prospects of ING. Please carefully consider all of the information discussed in this Item 3.D "Risk Factors" for a detailed description of these risks.

Risks related to financial conditions, market environment and general economic trends

- Our revenues and earnings are affected by the volatility and strength of the economic, business, liquidity, funding and capital markets environments of the various geographic regions in which we conduct business, including Russia and Ukraine, as well as by changes in customer behaviour in these regions, and an adverse change in any one region could have an impact on our business, results and financial condition.
- ING's business, results and financial condition have been, and likely will continue to be, adversely affected by the Covid-19 pandemic.
- Interest rate volatility and other interest rate changes may adversely affect our business, results and financial condition.
- The default of a major market participant could disrupt the markets and may have an adverse effect on our business, results and financial condition.
- Continued risk of political instability and fiscal uncertainty in Europe and the United States, as well as ongoing volatility in the financial markets and the economy generally have adversely affected, and may continue to adversely affect, our business, results and financial condition.
- Discontinuation of USD LIBOR may negatively affect our business, results and financial condition.
- Inflation and deflation may negatively affect our business, results and financial condition.
- Market conditions, including those observed over the past few years, and the application of IFRS 9 may increase the risk of loans being impaired and have a negative effect on our results and financial condition.
- We may incur losses due to failures of banks falling under the scope of state compensation schemes.

Risks related to the regulation and supervision of the Group

- Non-compliance with laws and/or regulations concerning financial services or financial institutions, including with respect to financial economic crimes, could result in fines and other liabilities, penalties or consequences for us, which could materially affect our business and reduce our profitability.
- Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations may increase our operating costs and limit our activities.
- We are subject to additional legal and regulatory risk in certain countries where we operate with less developed or predictable legal and regulatory frameworks.
- We are subject to the regulatory supervision of the ECB and other regulators with extensive supervisory and investigatory powers.
- The regulatory consequences of the United Kingdom's withdrawal from the European Union may have adverse effects on our business, results and financial condition.
- Failure to meet minimum capital and other prudential regulatory requirements as applicable to us from time to time may have a material adverse effect on our business, results and financial condition and on our ability to make payments on certain of our securities.
- Our US commodities and derivatives business is subject to CFTC and SEC regulation under the Dodd-Frank Act.
- We are subject to several other bank recovery and resolution regimes that include statutory write down and conversion as well as other powers, which remains subject to significant uncertainties as to scope and impact on us.

Risks related to litigation, enforcement proceedings and investigations and to changes in tax laws

- We may be subject to litigation, enforcement proceedings, investigations or other regulatory actions, and adverse publicity.
- We are subject to different tax regulations in each of the jurisdictions where we conduct business, and are exposed to changes in tax laws, and risks of non-compliance with or proceedings or investigations with respect to, tax laws.
- We may be subject to withholding tax if we fail to comply with the Foreign Account Tax Compliance Act ("FATCA") and other US withholding tax regulations
- ING is exposed to the risk of claims from customers who feel misled or treated unfairly because of advice or information received.

Risks related to the Group's business and operations

- ING may be unable to meet internal or external aims or expectations with respect to ESG-related matters.
- ING may be unable to adapt its products and services to meet changing customer behaviour and demand, including as a result of ESG-related matters.
- ING's business and operations are exposed to physical risks, including as a direct result of climate change.
- ING's business and operations are exposed to transition risks related to climate change.
- Operational and IT risks, such as systems disruptions or failures, breaches of security, cyber attacks, human error, changes in operational practices, inadequate controls including in respect of third parties with which we do business or outbreaks of communicable diseases may adversely impact our reputation, business and results.
- We are subject to increasing risks related to cybercrime and compliance with cybersecurity regulation.
- Because we operate in highly competitive markets, including our home market, we may not be able to increase or maintain our market share, which may have an adverse effect on our results.
- We may not always be able to protect our intellectual property developed in our products and services and may be subject to infringement claims, which could adversely impact our core business, inhibit efforts to monetize our internal innovations and restrict our ability to capitalize on future opportunities.
- The inability of counterparties, including those located in Russia or the Ukraine, to meet their financial obligations or our inability to fully enforce our rights against counterparties could have a material adverse effect on our results.
- Ratings are important to our business for a number of reasons, and a downgrade or a potential downgrade in our credit ratings could have an adverse impact on our results and net results.
- An inability to retain or attract key personnel may affect our business and results.
- We may incur further liabilities in respect of our defined benefit retirement plans if the value of plan assets is not sufficient to cover potential obligations, including as a result of differences between actual results and underlying actuarial assumptions and models.

Risks related to the Group's risk management practices

- Risks relating to our use of quantitative models or assumptions to model client behaviour for the purposes of our market calculations may adversely impact our reputation or results.
- We may be unable to manage our risks successfully through derivatives.

Risks related to the Group's liquidity and financing activities

- We depend on the capital and credit markets, as well as customer deposits, to provide the liquidity and capital required to fund our operations, and adverse conditions in the capital and credit markets, or significant withdrawals of customer deposits, may impact our liquidity, borrowing and capital positions, as well as the cost of liquidity, borrowings and capital.
- As a holding company, ING Groep N.V. is dependent for liquidity on payments from its subsidiaries, many of which are subject to regulatory and other restrictions on their ability to transact with affiliates.

Additional risks relating to ownership of ING shares

- Holders of ING shares may experience dilution of their holdings and may be impacted by any share buyback programme.
- Because we are incorporated under the laws of the Netherlands and many of the members of our Supervisory and Executive Board and our officers reside outside of the United States, it may be difficult to enforce judgments against ING or the members of our Supervisory and Executive Boards or our officers.

Risk factors

Any of the risks described below could have a material adverse effect on the business activities, financial condition, results and prospects of ING. ING may face a number of the risks described below simultaneously and some risks described below may be interdependent. While the risk factors below have been divided into categories, some risk factors could belong in more than one category and investors should carefully consider all of the risk factors set out in this section. Additional risks of which the Company is not presently aware, or that are currently viewed as immaterial, could also affect the business operations of ING and have a material adverse effect on ING's business activities, financial condition, results and prospects. The market price of ING shares or other securities could decline due to any of those risks including the risks described below, and investors could lose all or part of their investments.

Although the most material risk factors have been presented first within each category, the order in which the remaining risk factors are presented is not necessarily an indication of the likelihood of the risks actually materialising, of the potential significance of the risks or of the scope of any potential negative impact to our business, results, financial condition and prospects.

Risks related to financial conditions, market environment and general economic trends

Our revenues and earnings are affected by the volatility and strength of the economic, business, liquidity, funding and capital markets environments of the various geographic regions in which we conduct business, as well as by changes in customer behaviour in these regions, and an adverse change in any one region could have an impact on our business, results and financial condition.

Because ING is a multinational banking and financial services corporation, with a global presence and serving around 38 million customers, corporate clients and financial institutions in over 40 countries, ING's business, results and financial condition may be significantly impacted by turmoil and volatility in the worldwide financial markets or in the particular geographic areas in which we operate. In Retail Banking, our products include savings, payments, investments, loans and mortgages in most of our Retail Banking markets. In Wholesale Banking, we provide specialised lending, tailored corporate finance, debt and equity market solutions, payments & cash management, trade and treasury services. As a result, negative developments in financial markets and/or countries or regions in which we operate, have in the past had and may in the future have a material adverse impact on our business, results and financial condition, including as a result of the potential consequences listed below.

Factors such as interest rates, securities prices, credit spreads, liquidity spreads, exchange rates, consumer spending, changes in customer behaviour, climate change, business investment, real estate values and private equity valuations, government spending, inflation or deflation, the volatility and strength of the capital markets, political events and trends, supply chain disruptions, shortages, terrorism, pandemics and epidemics (such as Covid-19, as described in greater detail below under the heading "– ING's business, results and financial condition have been, and likely will continue to be adversely affected by the Covid-19 pandemic") or other widespread health emergencies all impact the business and economic environment and, ultimately, our solvency, liquidity and the amount and profitability of business we conduct in a specific geographic region. Certain of these risks are often experienced globally as well as in specific geographic regions and are described in greater detail below under the headings "–Interest rate volatility and other interest rate changes may adversely affect our business, results and financial condition", "–Inflation and deflation may negatively affect our business, results and financial condition", "–Market conditions, including those observed over the past few years and the application of IFRS 9 may increase the risk of loans being impaired and have a negative effect on our results and financial condition" and "–Continued risk of political instability and fiscal uncertainty in Europe and the United States, as well as ongoing volatility in the financial markets and the economy generally have adversely affected, and may continue to adversely affect, our business, results and financial condition". All of these are factors in local and regional economies as well as in the global economy, and we may be affected by changes in any one of these factors in any one country or region, and more if more of these factors occur simultaneously and/or in multiple countries or regions or on a global scale.

In case one or more of the factors mentioned above adversely affects the profitability of our business, this might also result, among other things, in the following:

- inadequate reserves or provisions, in relation to which losses could ultimately be realised through profit and loss and shareholders' equity;
- the write-down of tax assets impacting net results and/or equity;
- impairment expenses related to goodwill and other intangible assets, impacting our net result and equity; and/or
- movements in risk weighted assets for the determination of required capital.

In particular, we are exposed to financial, economic, market and political conditions in the Benelux countries and Germany, from which we derive a significant portion of our revenues in both Retail Banking and Wholesale Banking, and which could present risks of economic downturn. Though less material, we also derive substantial revenues in the following geographic regions: Turkey, Eastern Europe (primarily Poland among others), Southern Europe (primarily Spain among others), East Asia (primarily Singapore among others) and Australia. In an economic downturn affecting some or all of these jurisdictions, we expect that higher unemployment, lower family income, lower corporate earnings, higher corporate and private debt defaults, lower business investments and lower consumer spending would adversely affect the demand for banking products, and that ING may need to increase its reserves and provisions, each of which may result in overall lower earnings. The impact of the Covid-19 pandemic, as an example of an economic downturn, as well as the substantial monetary and government measures, are still materialising and expected to continue to affect our business. For more information, refer to the risk factor described under heading "–ING's business, results and financial condition have been, and likely will continue to be adversely affected by the Covid-19 pandemic". We also have wholesale banking activities in both Russia and Ukraine, as well as investments in Russia, some of which are denominated in local currency. The impact on our business in Russia and Ukraine, as well as the potential regional and global economic impact of the invasion of Ukraine and related international response measures, including sanctions, capital controls, restrictions on SWIFT access and restrictions on central bank activity, on our broader business, including spill-over risk to the entire wholesale banking portfolio (e.g. commodities financing, energy and utilities and energy-consuming clients), remain uncertain. Securities prices, real estate values and private equity valuations may also be adversely impacted, and any such losses would be realised through profit and loss and shareholders' equity. We also offer a number of financial products that expose us to risks associated with fluctuations in interest rates, securities prices, corporate and private default rates, the value of real estate assets, exchange rates and credit spreads.

For further information on ING's exposure to particular geographic areas, see Note 36 'Information on geographic areas' to the consolidated financial statements.

ING's business, results and financial condition have been, and likely will continue to be, adversely affected by the Covid-19 pandemic.

The Covid-19 pandemic and the related response measures introduced by various national and local governmental authorities aimed at preventing the further spread of the disease (such as bans on public events with over a certain number of attendees, closures of places where larger groups of people gather such as schools, sports facilities, bars and restaurants, lockdowns, border controls and travel and other restrictions) have disrupted the normal flow of business operations in those countries and regions where we and our customers and counterparties operate (such as, among others, Benelux, Germany, France, Italy, Spain, the U.K. and the U.S.). This disruption has adversely affected, and will likely continue to adversely affect, global economic growth, supply chains, manufacturing, tourism, consumer spending, asset prices and unemployment levels, and has resulted in volatility and uncertainty across the global economy and financial markets. Please also refer to the interdependent risk factor '–ING's revenues and earnings are affected by the volatility and strength of the economic, business, liquidity, funding and capital markets environments of the various geographic regions in which it conducts business, and an adverse change in any one region could have an impact on its business, results and financial condition' for a further description of how ING's business, results and financial condition may be materially adversely impacted by developments in regional or global economic conditions.

In addition to the measures aimed at preventing the further spread of Covid-19, governments and central banks around the world have also introduced measures aimed at mitigating the economic consequences of the pandemic and related response measures, such as guarantee schemes, compensation schemes and cutting interest rates. For example, the Dutch government has implemented economic measures aimed at protecting jobs, households' wages and companies, e.g., by way of tax payment holidays, guarantee schemes and a compensation scheme for heavily affected sectors in the economy. These announced measures and any additional measures, including any payment holidays with respect to mortgages or other loans, have had and may continue to have a significant impact on our customers and other counterparties.

Governments, regulators and central banks (including the ECB), have also announced that they are taking or considering measures seeking to safeguard the stability of the financial sector, to prevent lending to the business sector from being jeopardised and to ensure the payment system continues to function properly. The ECB allows banks to operate below the level of capital required by the Pillar 2 Guidance, capital conservation buffer and the liquidity coverage ratio. The ECB has communicated its commitment to extend this permission until at least the end of 2022. In March 2020, several countries also released or reduced countercyclical buffers (CCyB), with some of these countries subsequently announcing increases in CCyB in the second half of 2022. The ECB's recommendation to the banks that it supervises to limit shareholder remuneration through dividends or share buy-backs expired on 30 September 2021. However, it is not certain whether these or future Covid-19 relief measures will be extended or maintained for a sufficient period of time, or whether such measures will be successful in mitigating the economic consequences of the pandemic and related response measures. If the pandemic is prolonged or the actions are unsuccessful, additional actions by governments and central banks may follow and the adverse impact on the global economy will deepen, and our business, results and financial condition may be materially adversely affected.

In 2020, the Covid-19 pandemic affected all of our businesses, including lower or negative interest rates, lower oil prices and credit deterioration of loans to ING's customers. These effects have also resulted in an increase in the allowance for credit losses and impairments on non-financial assets, and reduced net interest income due to lower interest rates. While these effects were partly offset by resilient fee and commission income in 2020, this level of activity may not persist in future periods.

While vaccination rates continued to increase and Covid-19 related restrictions were lifted in some jurisdictions in the third quarter of 2021, the end of the 2021 was again marked by an increasing number of Covid-19 infections. This may result in changes in government responses and further downside risk towards macro-economic developments, with possibly a deeper risk aversion and a delayed recovery. These developments may result in further negative impact on our business, results and financial condition.

In 2021, ING also took certain measures to support customers impacted by the Covid-19 pandemic, including payment holidays, offering credit facilities to business clients under government guarantee schemes and providing liquidity under credit facilities to large corporate clients. As of 31 December 2021, in line with the European Banking Association (EBA) moratoria guidelines, approximately 137,000 customers had been granted payment holidays (down from 148,000 as of 30 September 2021 due to reimbursements and prepayments). The total exposure of loans for these customers for which a payment holiday has been granted amounts to €15.3 billion, of which 57% were for customers located in the Netherlands and Belgium. As of 31 December 2021, the outstanding amount of granted payment holidays not expired was €38 million. ING recorded a net addition of €346 million to loan loss provisions in the fourth quarter of 2021, mainly as a result of adjustments to existing Stage 3 files reflecting uncertainty in recovery scenarios and valuations in certain asset classes and also reflecting a potential impact of higher inflation and interest rates on customers' ability to pay and the potential impact of market uncertainty on the recovery value of certain asset classes. In 2021, ING recorded €516 million of net additions to loan loss provisions, compared to €2,675 million in 2020. At the end of the fourth quarter of 2021, increasing numbers of Covid-19 infections were observed and uncertainty concerning the ongoing pandemic remained. Should these global economic conditions be prolonged or worsen, or should the pandemic lead to additional market disruptions, we may experience more client defaults and further additions to loan loss provisions. In these circumstances, we may also experience reduced client activity and demand for its products and services, increased utilization of lending commitments and higher credit and valuation adjustments on financial assets. In addition, persistently low interest rates for a longer period, as well as a potential further decline in interest rates might result in further decreases in net interest income. These factors and other consequences of the Covid-19 pandemic may materially adversely affect our business, results and financial condition.

Our capital and liquidity position may also be adversely impacted by the Covid-19 pandemic and related response measures, including as a result of changes in future levels of savings and deposits from customers, changes in asset quality, and the effects of government or regulatory responses to the pandemic, and may require changes to our funding structure, impact our ability to comply with regulatory capital requirements and adversely affect our cost of capital and credit rating. Any of the foregoing developments may have a material adverse impact on our business, results and financial condition.

As of December 31, 2021, most of our staff continue to work from home, with employees in certain jurisdictions beginning to return to ING's offices in a controlled manner, taking into account local circumstances and any applicable government measures (including with respect to social distancing where applicable). Due to the uncertainties relating to the future development of the Covid-19 pandemic, it is not certain when our employees may be generally expected or permitted to return or to remain at ING's offices. If due to illness, technical limitations or other restrictions in connection with the pandemic, employees are unable to work or are not able to operate as effectively and efficiently as they did in the office, this may adversely affect our business, results and financial condition.

In addition, a situation in which most or some of our employees continue working from home may raise operational risks, including with respect to information security, data protection, availability of key systems and infrastructure integrity. There is also a risk that we will not be effective in implementing regulatory or strategic change programs in the current environment. The Covid-19 pandemic has led to new banking behaviour from customers. There has been an increase in the digital behaviour of our customers leading to reduced traffic in branches. Over 95% of our customers now interact with us via digital channels only. Criminals are also taking advantage of the Covid-19 pandemic to carry out financial fraud and exploitation scams, with examples including advertising and trafficking in counterfeit medicines, offering fraudulent investment opportunities, fundraising for fake charities and engaging in phishing schemes that prey on virus-related fears. National authorities and international bodies (including the Financial Action Task Force) warn citizens and businesses against impostor, investment and product scams. Although we have organized a Covid-19 taskforce to identify and analyse new behavioural patterns, leading to new cases of unusual transactions being reported to the relevant authorities, new banking behaviours may result in additional Know Your Customer (KYC) risks. If any of these risks were to materialize that may adversely affect our business, results and financial condition.

The duration of the pandemic and the impact of measures taken in response by governmental authorities, central banks and other third parties, whether direct or indirect, such as by increasing sovereign debt of certain countries which may result in increased volatility and widening credit spreads, remain uncertain. Therefore, it is difficult to predict the extent to which our business, results and financial condition, as well as our ability to access capital and liquidity on financial terms acceptable for us, may be materially adversely affected.

Interest rate volatility and other interest rate changes may adversely affect our business, results and financial condition.

Changes in prevailing interest rates may negatively affect our business, including the level of net interest revenue we earn, and the levels of deposits and the demand for loans. A sustained increase in the inflation rate in our principal markets may also negatively affect our business, results and financial condition. For example, a sustained increase in the inflation rate may result in an increase in nominal market interest rates. A failure to accurately anticipate higher inflation and factor it into our product pricing assumptions may result in mispricing of our products, which could materially and adversely impact our results. On the other hand, negative interest rates may negatively impact our net interest income, which may have an adverse impact on our profitability.

A prolonged period of low interest rates, and in some situations negative interest rates, has resulted in, and may continue to result in:

- lower earnings over time on investments, as reinvestments will earn lower rates;
- increased prepayment or redemption of mortgages and fixed maturity securities in our investment portfolios, as well as increased prepayments of corporate loans. This as borrowers seek to borrow at lower interest rates potentially combined with lower credit spreads. Consequently, we may be required to reinvest the proceeds into assets at lower interest rates;
- lower profitability as the result of a decrease in the spread between client rates earned on assets and client rates paid on savings, current account and other liabilities;
- higher costs for certain derivative instruments that may be used to hedge certain of our product risks;
- lower profitability since we may not be able to fully track the decline in interest rates in our savings rates;
- lower profitability since we may not always be entitled to impose surcharges to customers to compensate for the decline in interest rates;
- lower profitability since we may have to pay a higher premium for the defined contribution scheme in the Netherlands for which the premium paid is dependent on interest rate developments and the Dutch Central Bank’s (“DNB’s”) methodology for determining the ultimate forward rate;
- lower interest rates may cause asset margins to decrease thereby lowering our results. This may for example be the consequence of increased competition for investments as result of the low rates, thereby driving margins down; and/or
- (depending on the position) a significant collateral posting requirement associated with our interest rate hedge programs, which could materially and adversely affect liquidity and our profitability.

The foregoing impacts have been and may be further amplified in a negative interest rate environment, since we may not be able to earn interest on our assets (including reserves). In addition, we have, and may continue to, earn negative interest on certain of our assets (including cash balances, loans and bonds), while still paying positive interest or no interest to others to hold our liabilities, resulting in an adverse impact on our credit spread and lowering of our net interest income. Furthermore, in the event that a negative interest rate environment results in ING's depositors being forced to pay interest to ING to hold cash deposits, some depositors may choose to withdraw their deposits rather than pay interest to ING, which would have an adverse effect on our reputation, business, results and financial condition. For example, in March 2020, the U.S. Federal Reserve has cut the benchmark U.S. interest rate in response to the Covid-19 pandemic and related impacts on the economy and financial markets. On 1 July 2021, ING announced in the Netherlands that it will charge negative interest to customers on current and deposit accounts exceeding €100,000 (such negative interest rate will only apply to the amount by which the current or deposit account exceeds €100,000). Such declines in interest rates in the United States or other markets in which ING and its customers and counterparties operate may have a significant adverse effect on our business and operations.

Alternatively, any period of rapidly increasing interest rates may result in:

- a decrease in the demand for loans;
- higher interest rates to be paid on customer deposits and on debt securities that we have issued or may issue on the financial markets from time to time to finance our operations, which would increase our interest expenses and reduce our results;
- higher interest rates which can lead to lower investments prices and reduce the revaluation reserves, thereby lowering IFRS equity and the capital ratios. Also the lower securities value leads to a loss of liquidity generating capacity which needs to be compensated by attracting new liquidity generating capacity which reduces our results;
- prepayment losses if prepayment rates are lower than expected or if interest rates increase too rapidly to adjust the accompanying hedges; and/or
- (depending on the position) a significant collateral posting requirement associated with our interest rate hedge program.

The foregoing impacts grow in relevance following the U.S. Federal Reserve's plan to wind down its bond-purchase stimulus program and to set the stage for a series of interest rate increases beginning in spring of 2022.

The default of a major market participant could disrupt the markets and may have an adverse effect on our business, results and financial condition.

Within the financial services industry, the severe distress or default of any one institution (including sovereigns and central counterparties (CCPs)) could lead to defaults by, or the severe distress of, other market participants. While prudential regulation may reduce the probability of a default by a major financial institution, the actual occurrence of such a default could have a material adverse impact on ING. Such distress of, or default by, a major financial institution could disrupt markets or clearance and settlement systems and lead to a chain of defaults by other financial institutions, since the commercial and financial soundness of many financial institutions may be closely related as a result of credit, trading, clearing or other relationships. Also the perceived lack of creditworthiness of a sovereign or a major financial institution (or a default by any such entity) may lead to market-wide liquidity problems and losses or defaults by us or by other institutions. This risk is sometimes referred to as 'systemic risk' and may adversely affect financial intermediaries, such as clearing agencies, clearing houses, banks, securities firms and exchanges with whom we interact on a daily basis and financial instruments of sovereigns in which we invest. Systemic risk could impact ING directly, by exposing it to material credit losses on transactions with defaulting counterparties or indirectly by significantly reducing the available market liquidity on which ING and its lending customers depend to fund their operations and/or leading to a write down of loans or securities held by ING. In addition, ING may also be faced with additional open market risk for which hedging or mitigation strategies may not be available or effective (either by hedges eliminated by defaulting counterparties, or reduce market liquidity). Systemic risk could have a material adverse effect on our ability to raise new funding and on our business, results and financial condition. In addition, such distress or failure could impact future product sales as a potential result of reduced confidence in the financial services industry.

Continued risk of political instability and fiscal uncertainty in Europe and the United States, as well as ongoing volatility in the financial markets and the economy generally have adversely affected, and may continue to adversely affect, our business, results and financial condition.

Our global business and results are materially affected by conditions in the global capital markets and the economy generally. In Europe, there are continuing concerns over weaker economic conditions, levels of unemployment in certain countries, the availability and cost of credit, as well as credit spreads. In addition, geopolitical issues, including trade tensions between the US and China, increasing protectionism between key countries, and issues with respect to the Middle East and North Korea may all contribute to adverse developments in the global capital markets and the economy generally. In addition, Russia's recent invasion of Ukraine and related international response measures may have a negative impact on regional and global economic conditions, including as a result of disruptions in foreign currency markets and increased energy and commodity prices. This could in turn have a spill-over effect on our entire wholesale banking portfolio, in areas such as commodities financing, energy and utilities and energy-consuming clients.

Moreover, there is a risk that an adverse credit event at one or more European sovereign debtors (including a credit rating downgrade or a default) could trigger a broader economic downturn in Europe and elsewhere. In addition, the confluence of these and other factors has resulted in volatile foreign exchange markets. International equity markets have also continued to experience heightened volatility and turmoil, with issuers, including ourselves, that have exposure to the real estate, mortgage, private equity and credit markets particularly affected. These events, market upheavals and continuing risks, including high levels of volatility, have had and may continue to have an adverse effect on our results, in part because we have a large investment portfolio.

There is also continued uncertainty over the long-term outlook for the tax, spending and borrowing policies of the US, the future economic performance of the US within the global economy and any potential future budgetary restrictions in the US, with a potential impact on a future sovereign credit ratings downgrade of the US government, including the rating of US Treasury securities. A downgrade of US Treasury securities could also impact the ratings and perceived creditworthiness of instruments issued, insured or guaranteed by institutions, agencies or instrumentalities directly linked to the US government. US Treasury securities and other US government-linked securities are key assets on the balance sheets of many financial institutions and are widely used as collateral by financial institutions to meet their day-to-day cash flows in the short-term debt market. The impact of any further downgrades to the sovereign credit rating of the US government or a default by the US government on its debt obligations would create broader financial turmoil and uncertainty, which would weigh heavily on the global financial system and could consequently result in a significant adverse impact to the Group's business and operations.

In many cases, the markets for investments and instruments have been and remain illiquid, and issues relating to counterparty credit ratings and other factors have exacerbated pricing and valuation uncertainties. Valuation of such investments and instruments is a complex process involving the consideration of market transactions, pricing models, management judgment and other factors, and is also impacted by external factors, such as underlying mortgage default rates, interest rates, rating agency actions and property valuations. Historically these factors have resulted in, among other things, valuation and impairment issues in connection with our exposures to European sovereign debt and other investments.

Any of these general developments in global financial and political conditions could negatively impact to our business, results and financial condition in future periods.

Discontinuation of USD LIBOR may negatively affect our business, results and financial condition.

Changes to major interest rates benchmarks may negatively affect our business, including the level of net interest revenue. Financial markets have historically relied on Interbank Offered Rates ('IBORs') benchmarks, such as the London Interbank Offered Rate ('LIBOR'), the Euro Over Night Index Average ('EONIA') and the Euro Interbank Offered Rate ('EURIBOR'). While some interest benchmarks have been reformed and will continue to exist, such as EURIBOR, others such as EONIA and LIBOR have been or will be replaced by alternative rates. EONIA ceased to be published on 3 January 2022, and is succeeded by €STR. All GBP, JPY, CHF and EUR LIBOR settings ceased on 31 December 2021. ING has substantially completed the transition of contracts referencing these benchmark rates and now offers the recommended alternative benchmark rates.

The most commonly used USD LIBOR tenors will continue to be published until 30 June 2023 to support existing contracts. However, the use of USD LIBOR for new contracts is no longer allowed from January 2022, with only limited exceptions.

Public authorities have recognised that many contracts do not contain reference to alternative rates, or reference inappropriate alternatives, or cannot be renegotiated or amended prior to the cessation of the relevant benchmark. In response, the European Commission has implemented legislation that gives the Commission the power to replace critical benchmarks if their termination would significantly disrupt or otherwise affect the functioning of the financial markets in the EU. The EU has used these powers to put in place statutory replacement rates for EONIA and CHF LIBOR. The UK government has also granted additional powers to the Financial Conduct Authority (FCA) to enable the temporary publication of a 'synthetic' LIBOR using a different methodology and inputs. The FCA has used these powers to ensure the most commonly used GBP and JPY LIBOR settings continue to be available using a "synthetic" methodology for a limited time. The FCA has not yet decided whether it will require the LIBOR benchmark administrator to publish synthetic USD LIBOR after June 2023. On 6 April 2021, the State of New York passed legislation on benchmark replacement addressing certain contracts, securities and instruments governed by New York which involve interest rates or dividend rates determined by the use of USD LIBOR without “fallback” rate provisions or with inadequate “fallback” rate provisions. A U.S. federal version of such legislation (passed by the U.S. House of Representatives on 8 December 2021) remains under consideration in the U.S. Senate.

The discontinuation of USD LIBOR and related interest rate benchmarks could result in a number of risks for the Group, its customers, and the financial services industry more widely. These risks include legal risks and costs in relation to changes required to documentation for existing transactions. In addition to the heightened conduct and operational risks, the process of adopting new reference rates may expose the Group to an increased level of financial risk, such as potential earnings volatility resulting from contract modifications and changes in hedge accounting relationships.

It is not possible to determine the full impact of the USD LIBOR transition on the Group. However, the experience gained and solutions put in place for the other LIBOR rates, together with our investment in and ability to offer a wide range of products using alternative rates, should help to limit any material adverse effect on our business, results and financial condition.

Inflation and deflation may negatively affect our business, results and financial condition.

A sustained increase in the inflation rate in our principal markets could have multiple impacts on us and may negatively affect our business, results and financial condition. For example, a sustained increase in the inflation rate may result in an increase in market interest rates, which may:

- decrease the estimated fair value of certain fixed income securities that we hold in our investment portfolios, resulting in:
  - reduced levels of unrealised capital gains available to us, which could negatively impact our solvency position and net income, and/or
  - a decrease in collateral values,
- result in increased withdrawal of certain savings products, particularly those with fixed rates below market rates,
- require us, as an issuer of securities, to pay higher interest rates on debt securities that we issue in the financial markets from time to time to finance our operations, which would increase our interest expenses and reduce our results,
- result in further customer defaults as interest rate rises flow through into payment stress for lower credit quality customers.

A significant and sustained increase in inflation has historically also been associated with decreased prices for equity securities and sluggish performance of equity markets generally. A sustained decline in equity markets may:

- result in impairment charges to equity securities that we hold in our investment portfolios and reduced levels of unrealised capital gains available to us which would reduce our net income, and
- lower the value of our equity investments impacting our capital position.

In addition, a failure to accurately anticipate higher inflation and factor it into our product pricing may result in a systemic mispricing of our products, which would negatively impact our results.

On the other hand, deflation could be experienced in our principal markets adversely affecting our financial performance. Deflation may erode collateral values and diminish the quality of loans and cause a decrease in borrowing levels, which would negatively affect our business and results.

Market conditions, including those observed over the past few years, and the application of IFRS 9 may increase the risk of loans being impaired and have a negative effect on our results and financial condition.

We are exposed to the risk that our borrowers (including sovereigns) may not repay their loans according to their contractual terms and that the collateral securing the payment of these loans may be insufficient. We may see adverse changes in the credit quality of our borrowers and counterparties, for example, as a result of their inability to refinance their indebtedness, with increasing delinquencies, defaults and insolvencies across a range of sectors. This may lead to impairment charges on loans and other assets, higher costs and additions to loan loss provisions. A significant increase in the size of our provision for loan losses could have a material adverse effect on our business, results and financial condition. Also see above under the heading “–ING’s business, results and financial condition have been, and likely will continue to be adversely affected by the Covid-19 pandemic”. As set out there, we expect to be affected by the Covid-19 pandemic through its impact on, among others, the financial condition of our customers or other counterparties.

We may incur losses due to failures of banks falling under the scope of state compensation schemes.

While prudential regulation is intended to minimize the risk of bank failures, in the event such a failure occurs, given our size, we may incur significant compensation payments to be made under the Dutch Deposit Guarantee Scheme (DGS), which we may be unable to recover from the bankrupt estate, and therefore the consequences of any future failure of such a bank could be significant to ING. Such costs and the associated costs to be borne by us may have a material adverse effect on our results and financial condition. On the basis of the EU Directive on deposit guarantee schemes, ING pays quarterly risk-weighted contributions into a DGS-fund. The DGS-fund is to grow to a target size of 0.8% of all deposits guaranteed under the DGS, which is expected to be reached in July 2024. In case of failure of a Dutch bank, depositor compensation is paid from the DGS-fund. If the available financial means of the fund are insufficient, Dutch banks, including ING, may be required pay to extraordinary ex-post contributions not exceeding 0.5% of their covered deposits per calendar year. In exceptional circumstances and with the consent of the competent authority, higher contributions may be required. However, extraordinary ex-post contributions may be temporarily deferred if, and for so long as, they would jeopardise the solvency or liquidity of a bank. Depending on the size of the failed bank, the available financial means in the fund, and the required additional financial means, the impact of the extraordinary ex-post contributions on ING may be material.

Since 2015, the EU has been discussing the introduction of a pan-European deposit guarantee scheme (‘EDIS’), (partly) replacing or complementing national compensation schemes in two or three phases. Proposals contain elements of (re)insurance, mutual lending and mutualisation of funds. The new model is intended to be ‘overall cost-neutral’. Discussions have continued in 2020, but it remains uncertain when EDIS will be introduced and, if introduced, what impact EDIS would have on ING’s business and operations.

In February 2021, the European Commission issued a public consultation on the review of the bank crisis management and deposit insurance (CMDI) framework, with a focus on three EU legislative texts: the Bank Recovery and Resolution Directive (BRRD), the Single Resolution Mechanism Regulation (SRMR), and the Deposit Guarantee Schemes Directive (DGSD). The anticipated revision of the CMDI framework is part of the debate on the completion of the Banking Union and in particular its third and missing pillar EDIS. The consultation period ran until May 2021. It is uncertain when the next steps towards revision of the CMDI framework, including EDIS, can be expected.

Risks related to the regulation and supervision of the Group

Non-compliance with laws and/or regulations concerning financial services or financial institutions, including with respect to financial economic crimes, could result in fines and other liabilities, penalties or consequences for us, which could materially affect our business and reduce our profitability.

ING has faced, and in the future may continue to face, the risk of consequences in connection with non-compliance with applicable laws and regulations. For additional information on legal proceedings, see Note 46 ‘Legal proceedings’ to the consolidated financial statements. There are a number of risks in areas where applicable regulations may be unclear, subject to multiple interpretations or under development, or where regulations may conflict with one another, or where regulators revise their previous guidance or courts overturn previous rulings, which could result in our failure to meet applicable standards. Regulators and other authorities have the power to bring administrative or judicial proceedings against us, which could result, among other things, in suspension or revocation of our licenses, cease and desist orders, fines, civil penalties, criminal penalties or other disciplinary action, which could materially harm our results and financial condition. If we fail to address, or appear to fail to address, any of these matters appropriately, our reputation could be harmed and we could be subject to additional legal risk, which could, in turn, increase the size and number of claims and damages brought against us or subject us to enforcement actions, fines and penalties.

Furthermore, as a financial institution, we are exposed to the risk of unintentional involvement in criminal activity in connection with the commission of financial economic crimes, including with respect to money laundering and the funding of terrorist and other criminal activities. The failure or perceived failure by us to comply with legal and regulatory requirements with respect to financial economic crimes may result in adverse publicity, claims and allegations, litigation and regulatory investigations and sanctions, which may have a material adverse effect on our business, results, financial condition and/or prospects in any given period. For further discussion of the impact of litigation, enforcement proceedings, investigations or other regulatory actions with respect to financial economic crimes, see “– We may be subject to litigation, enforcement proceedings, investigations or other regulatory actions, and adverse publicity” below.

Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations may increase our operating costs and limit our activities.

We are subject to detailed banking laws and financial regulation in the jurisdictions in which we conduct business. Regulation of the industries in which we operate is becoming increasingly more extensive and complex, while also attracting supervisory scrutiny. Compliance with applicable and new laws and regulations is resources-intensive, and may materially increase our operating costs. Moreover, these regulations intended to protect our customers, markets and society as a whole and can limit our activities, among others, through stricter net capital, market conduct and transparency requirements and restrictions on the businesses in which we can operate or invest.

Our revenues and profitability and those of our industry have been and will continue to be impacted by requirements relating to capital, additional loss-absorbing capacity, leverage, minimum liquidity and long-term funding levels, requirements related to resolution and recovery planning, derivatives clearing and margin rules and levels of regulatory oversight, as well as limitations on which and, if permitted, how certain business activities may be carried out by financial institutions.

We are subject to additional legal and regulatory risk in certain countries where we operate with less developed or predictable legal and regulatory frameworks.

In certain countries in which we operate, judiciary and dispute resolution systems may be less effective. As a result, in case of a breach of contract, we may have difficulties in making and enforcing claims against contractual counterparties and, if claims are made against us, we might encounter difficulties in mounting a defence against such allegations. If we become party to legal proceedings in a market with an insufficiently developed judicial system, it could have an adverse effect on our operations and net results.

In addition, as a result of our operations in certain countries, we are subject to risks of possible nationalisation, expropriation, price controls, exchange controls and other restrictive government actions, as well as the outbreak of hostilities and or war, in these markets. In particular, we have wholesale banking activities in both Russia and Ukraine, as well as investments in Russia, some of which are denominated in local currency, and other counterparties located in Russia. Furthermore, the current economic environment in certain countries in which we operate may increase the likelihood for regulatory initiatives to enhance consumer protection or to protect homeowners from foreclosures. Any such regulatory initiative could have an adverse impact on our ability to protect our economic interest, for instance in the event of defaults on residential mortgages.

We are subject to the regulatory supervision of the ECB and other regulators with extensive supervisory and investigatory powers.

In its capacity as principal prudential supervisor in the EU, the ECB has extensive supervisory and investigatory powers, including the ability to issue requests for information, to conduct regulatory investigations and on-site inspections, and to impose monetary and other sanctions. For example, under the Single Supervisory Mechanism (SSM), the regulators with jurisdiction over the Group, including the ECB, may conduct stress tests and have discretion to impose capital surcharges on financial institutions for risks that are not otherwise recognised in risk-weighted assets or other surcharges depending on the individual situation of the bank and take or require other measures, such as restrictions on or changes to the Group’s business. Competent authorities may also, if the Group fails to comply with regulatory requirements, in particular with supervisory actions, minimum capital requirements (including buffer requirements) or with liquidity requirements, or if there are shortcomings in its governance and risk management processes, prohibit the Group from making dividend payments to shareholders or distributions to holders of its regulatory capital instruments. Generally, a failure to comply with prudential or conduct regulations could have a material adverse effect on the Group’s business, results and financial condition.

The regulatory consequences of the United Kingdom’s withdrawal from the European Union may have adverse effects on our business, results and financial condition.

On 24 December 2020, the United Kingdom and the EU agreed to the EU-UK Trade and Cooperation Agreement (the “TCA”) in connection with the departure of the UK from the EU (commonly referred to as ‘Brexit’). However, the financial services provisions of the TCA are very limited and , as a result, UK-based financial services providers lost EU passporting rights as of 1 January 2021 and EU-UK financial services are now subject to unilateral equivalence decisions. EU and UK regulators have, however, taken certain measures to address overall financial stability risks, such as the temporary extension by the EU of equivalence recognition to UK-based central counterparties (UK CCPs) through to 30 June 2022. In November 2021 the European Commissioner for financial services announced that the 30 June 2022 extension date will be further extended in early 2022, although the duration of the extension has not yet been specified. There is, however, no guarantee that such equivalence decisions will be issued by the EU or the UK in the future, or that any further extensions or renewals of temporary equivalence decisions or similar transitional arrangements will be made by the EU or the UK in the future. The absence of such equivalence decisions for financial services could have a negative impact on ING's activities, with the absence of future UK CCPs recognition expected to increase costs for both ING and its financial markets customers. In addition, Brexit has required and will require other changes to ING's business and operations, including requiring ING to obtain a third country branch banking license in the UK, which was granted in November 2021. ING is also progressing the move of certain financial markets activities from London to Amsterdam in light of the ECB's supervisory expectations on booking models as a result of Brexit. The regulatory impact of Brexit continues to present material risks and uncertainties, particularly as to how regulations may diverge between the EU and the UK, which could materially increase ING's compliance costs and have a material adverse effect on ING's business, results and financial condition.

Failure to meet minimum capital and other prudential regulatory requirements as applicable to us from time to time may have a material adverse effect on our business, results and financial condition and on our ability to make payments on certain of our securities.

ING is subject to a variety of regulations that require us to comply with minimum requirements for capital (own funds) and additional loss absorbing capacity, as well as for liquidity, and to comply with leverage restrictions. In addition, such capital, liquidity and leverage requirements and their application and interpretation may change. Any changes may require us to maintain more capital or to raise a different type of capital by disqualifying existing capital instruments from continued inclusion in regulatory capital, requiring replacement with new capital instruments that meet the new criteria. Sometimes changes are introduced subject to a transitional period during which the new requirements are being phased in, gradually progressing to a fully phased-in, or fully-loaded, application of the requirements.

Any failure to comply with these requirements, or to adapt to changes in such requirements, may have a material adverse effect on our business, results and financial condition, and may require us to seek additional capital. Failures to meet minimum capital or other prudential requirements may also result in ING being prohibited from making payments on certain of our securities. Because implementation phases and transposition into EU or national regulation where required may often involve a lengthy period, the impact of changes in capital, liquidity and leverage regulations on our business, results and financial condition, and on our ability to make payments on certain of our securities, is often unclear.

For further discussion of the impact of minimum capital and other prudential regulatory requirements on ING, see "Item 4. Information on the Company—Regulation and Supervision—Regulatory Developments—Basel III and European Union Standards as currently applied by ING Group."

Our US commodities and derivatives business is subject to CFTC and SEC regulation under the Dodd-Frank Act.

Our affiliate ING Capital Markets LLC is registered with the Commodity Futures Trading Commission ("CFTC") as a swap dealer and is subject to CFTC regulation of the off-exchange derivatives market pursuant to Title VII of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"). Operating as a swap dealer requires compliance with CFTC regulatory requirements, which may be burdensome, impose additional compliance costs and could adversely affect the profitability of this business, as well as exposing ING to the risk of non-compliance with these regulations.

ING Capital Markets LLC is also registered with the SEC as a security-based swap dealer pursuant to Dodd-Frank and SEC regulations enacted thereunder effective 1 November 2021. While ING Capital Markets LLC, as a security-based swap dealer, is required to comply with SEC rules with respect to most of these requirements, SEC rules have permitted an "Alternative Compliance Mechanism" that allows for compliance, subject to eligibility requirements, with CFTC capital and margin rules applying to swap dealers in lieu of SEC capital and margin rules applying to security-based swap dealers. ING Capital Markets LLC has elected to use the Alternative Compliance Mechanism. However, should ING Capital Markets LLC in the future be ineligible for the "Alternative Compliance Mechanism" it would be subject to SEC capital and margin security-based swap dealer rules instead of the CFTC capital and margin security-based swap dealer rules. SEC registration may increase ING Capital Markets LLC's operational costs as a result of compliance, margin, capital and other requirements, and result in a substantial portion or all of ING's security-based swap activities with U.S. persons being conducted through ING Capital Markets LLC. These registration and related requirements may also reduce trading activity, reduce market liquidity and increase volatility in the relevant markets.

In addition, new position limits under Dodd-Frank applicable to the derivatives market generally for futures contracts based on any of twenty-five commodity futures contracts on physical commodities, which to all market participants, could limit ING's position sizes in these futures contracts and similarly limit the ability of counterparties to utilize certain of our products to the extent hedging exemptions from the position limits are unavailable. In addition, position limits on swaps on the same physical commodities will become effective in

January 2023, which could further limit the ability of ING and its counterparties to enter into such swaps. Such regulation of the derivative markets and market participants will likely result in increased cost of hedging and other trading activities, both for ING and its customers, which could expose our business to greater risk and could reduce the size and profitability of our customer business. The imposition of these regulatory restrictions and requirements, could also result in reduced market liquidity, which could in turn increase market volatility and the risks and costs of hedging and other trading activities.

Any of the foregoing factors, and any further regulatory developments with respect to commodities and derivatives, could have a material impact on our business, results and financial condition.

For further discussion of the impact of regulation of commodities and derivatives on ING, see “Item 4. Information on the Company—Regulation and Supervision—Regulatory Developments—Dodd-Frank Act and other US Regulations.”

We are subject to several other bank recovery and resolution regimes that include statutory write down and conversion as well as other powers, which remains subject to significant uncertainties as to scope and impact on us.

We are subject to several recovery and resolution regimes, including the Single Resolution Mechanism (‘SRM’), the ‘Bank Recovery and Resolution Directive’ (‘BRRD’) as implemented in national legislation, and the Dutch ‘Intervention Act’ (Wet bijzondere maatregelen financiële ondernemingen, as implemented in the Dutch Financial Supervision Act). The SRM applies to banks that are supervised by the ECB under the SSM, with the aim of ensuring an orderly resolution of failing banks at minimum costs for taxpayers and the real economy. The BRRD establishes a common framework for the recovery and resolution for banks within the European Union, with the aim of providing supervisory authorities and resolution authorities with common tools and powers to address banking crises pre-emptively in order to safeguard financial stability and minimise taxpayers’ exposure to losses. In addition, the Intervention Act confers wide-ranging powers to the Dutch Minister of Finance, including, among other things, in relation to shares and other securities issued by us or with our cooperation or other claims on us (including, without limitation, expropriation thereof) if there is a serious and immediate threat to the stability of the financial system. Any application of statutory write-down and conversion or other powers would not be expected to constitute an event of default under our securities entitling holders to seek repayment. If any of these powers were to be exercised in respect of ING, there could be a material adverse effect on both ING and on holders of ING securities, including through a material adverse effect on credit ratings and/or the price of our securities. Investors in our securities may lose their investment if resolution measures are taken under current or future regimes.

For further discussion of the impact of bank recovery and resolution regimes on ING, see “Item 4. Information on the Company—Regulation and Supervision—Regulatory Developments—Bank Recovery and Resolution Directive.”

Risks related to litigation, enforcement proceedings and investigations and to changes in tax laws

We may be subject to litigation, enforcement proceedings, investigations or other regulatory actions, and adverse publicity.

We are involved in governmental, regulatory, arbitration and legal proceedings and investigations involving claims by and against us which arise in the ordinary course of our businesses, including in connection with our activities as financial services provider, employer, investor and taxpayer. As a financial institution, we are subject to specific laws and regulations governing financial services or financial institutions. See “Risks related to the regulation and supervision of the Group– Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations may increase our operating costs and limit our activities” above. Financial reporting irregularities involving other large and well-known companies, possible findings of government authorities in various jurisdictions which are investigating several rate-setting processes, notifications made by whistleblowers, increasing regulatory and law enforcement scrutiny of ‘know your customer’ anti-money laundering, tax evasion, prohibited transactions with countries or persons subject to sanctions, and bribery or other anti-corruption measures and anti-terrorist-financing procedures and their effectiveness, regulatory investigations of the banking industry, and litigation that arises from the failure or perceived failure by us to comply with legal, regulatory, tax and compliance requirements could result in adverse publicity and reputational harm, lead to increased regulatory supervision, affect our ability to attract and retain customers and maintain access to the capital markets, result in cease and desist orders, claims, enforcement actions, fines and civil and criminal penalties, other disciplinary action or have other material adverse effects on us in ways that are not predictable. With respect to sanctions, beginning in February 2022, the EU, UK and the US, in a coordinated effort joined by several other countries, imposed a variety of new sanctions with respect to Russia and various Russia-related parties. Despite significant similarities between these Russia-related sanctions programmes, there are notable differences between the EU, UK and US sanctions programmes, which may continue to evolve and are expected to require ING to implement new control measures with related costs and risks of non-compliance. While various sanctions include grace periods before full compliance is required, there is no guarantee that ING will be able to implement all required procedures within the applicable grace periods. In addition, some claims and allegations may be brought by or on behalf of a class and claimants may seek large or indeterminate amounts of damages, including compensatory, liquidated, treble and punitive damages. Our reserves for litigation liabilities may prove to be inadequate. Claims and allegations, should they become public, need not be well founded, true or successful to have a negative impact on our reputation. In addition, press reports and other public statements that assert some form of wrongdoing could result in inquiries or investigations by regulators, legislators and law enforcement officials, and responding to these inquiries and investigations, regardless of their ultimate outcome, is time consuming and expensive. Adverse publicity, claims and allegations, litigation and regulatory investigations and sanctions may have a material adverse effect on our business, results, financial condition and/or prospects in any given period.

We are subject to different tax regulations in each of the jurisdictions where we conduct business, and are exposed to changes in tax laws, and risks of non-compliance with or proceedings or investigations with respect to, tax laws.

Changes in tax laws (including case law) and tax treaties (including the termination thereof) could increase our taxes and our effective tax rates and could materially impact our tax receivables and liabilities as well as deferred tax assets and deferred tax liabilities, which could have a material adverse effect on our business, results and financial condition. Changes in tax laws could also make certain ING products less attractive, which could have adverse consequences for our businesses and results. On 7 June 2021, the Dutch government received a formal notice of denunciation of the Dutch-Russian tax treaty from Russia, and as a result, the tax treaty was terminated as of 1 January 2022. The termination of the Dutch-Russian tax treaty or any other similar developments may have adverse effects on ING and ING’s customers.

Because of the geographic spread of its business, ING may be subject to tax audits, investigations and procedures in numerous jurisdictions at any point in time. Although we believe that we have adequately provided for all our tax positions, the ultimate resolution of these audits, investigations and procedures may result in liabilities which are different from the amounts recognized. In addition, increased bank taxes in countries where the Group is active result in increased taxes on ING’s banking operations, which could negatively impact our operations, financial condition and liquidity.

We may be subject to withholding tax if we fail to comply with the Foreign Account Tax Compliance Act (“FATCA”) and other US withholding tax regulations

Due to the nature of its business, ING is subject to various provisions of US tax law. These include FATCA, which requires ING to provide certain information for the US Internal Revenue Service (“IRS”), and the Qualified Intermediary (“QI”) requirements, which require withholding tax on certain US-source payments. Failure to comply with FATCA and/or QI requirements and regulations could harm our reputation and could subject the Group to enforcement actions, fines and penalties, which could have a material adverse effect on our business, reputation, revenues, results, financial condition and prospects. For further discussion of FATCA and QI requirements with respect to ING, see “Item 4. Information on the Company—Regulation and Supervision—KYC Requirements.”

ING is exposed to the risk of claims from customers or stakeholders who feel misled or treated unfairly because of advice or information received.

Our products and services, including banking products and advice services for third-party products are exposed to claims from customers who might allege that they have received insufficient advice or misleading information from advisers (both internal and external) as to which products were most appropriate for them, or that the terms and conditions of the products, the nature of the products or the circumstances under which the products were sold, were misrepresented to them. When new financial products are brought to the market, ING engages in a multidisciplinary product approval process in connection with the development and distribution of such products, including production of appropriate marketing and communication materials. Notwithstanding these processes, customers may make claims against ING if the products do not meet their expectations , either at the purchase/execution of the product and/or through the life of the product. Customer protection regulations, as well as changes in interpretation and perception by both the public at large and governmental authorities of acceptable market practices, influence customer expectations.

Products distributed through person-to-person sales forces have a higher exposure to such claims as the sales forces may provide face-to-face financial planning and advisory services. Complaints may also arise if customers feel that they have not been treated reasonably or fairly, or that the duty of care has not been complied with. While a considerable amount of time and resources have been invested in reviewing and assessing historical sales practices and products that were sold in the past, and in the maintenance of risk management, legal and compliance procedures to monitor current sales practices, there can be no assurance that all of the issues associated with current and historical sales practices have been or will be identified, nor that any issues already identified will not be more widespread than presently estimated.

The negative publicity associated with any sales practices, any compensation payable in respect of any such issues and regulatory changes resulting from such issues, has had and could have a material adverse effect on our reputation, business, results, financial condition and prospects. For additional information regarding legal proceedings or claims, see Note 46 ‘Legal proceedings’ to the consolidated financial statements.

Risks related to the Group’s business and operations

ING may be unable to meet internal or external aims or expectations with respect to ESG-related matters.

Environmental, Social and Governance (ESG) is an area of significant and increased focus for governments and regulators, investors, ING’s customers and employees, and other stakeholders or third parties (e.g., non-governmental organizations or NGOs). As a result, an increasing number of laws, regulations and legislative actions have been introduced to address climate change, sustainability and other ESG-related matters, including in relation to the financial sector’s operations and strategy. Such recent regulations include the EU Sustainable Finance Disclosure Regulation (SFDR), EU Taxonomy Regulation and EU Green Bond Standards, which broadly focus on disclosure obligations, standardized definitions and classification frameworks for environmentally sustainable activities. These laws, regulations and legislative frameworks may directly and indirectly impact the business environment in which ING operates and may expose ING to significant risks.

National or international regulatory actions or developments may also result in financial institutions coming under increased pressure from internal and external stakeholders regarding the management and disclosure of their ESG risks and related lending and investment activities. ING may from time to time disclose ESG-related initiatives or aims in connection with the conduct of its business and operations. However, there is no guarantee that ING will be able to implement such initiatives or meet such aims within anticipated timeframes, or at all. ING may fail to fulfil internal or external ESG-related initiatives, aims or expectations, or may be perceived to fail to do so, or may fail to adequately or accurately report performance or developments with respect to such initiatives, aims or expectations. ING could therefore be criticized or held responsible for the scope of its initiatives or goals regarding such matters. In addition, ING might face requests for specific strategies, plans or commitments to address ESG-related matters, which may or may not be viewed as satisfactory to the relevant internal and external stakeholders (including NGOs). Any of these factors may have an adverse impact on ING’s reputation and brand value, or on ING’s business, financial condition and operating results.

ING may be unable to adapt its products and services to meet changing customer behaviour and demand, including as a result of ESG-related matters.

Customers or other counterparties may increasingly assess sustainability or other ESG-related matters in their economic decisions. For instance, customers may choose investment products or services based on sustainability or other ESG criteria, or may look at a financial institution’s ESG-related lending strategy when choosing to make deposits. To remain competitive and to safeguard its reputation, ING is required to continuously adapt its business strategy, products and services to respond to emerging, increasing or changing sustainability and other ESG-related demands from customers, investors and other stakeholders. However, there is no guarantee that ING’s current or future products or services will meet applicable ESG-related regulatory requirements, customer preferences or investor expectations.

For further information regarding the alignment of ING’s lending portfolio with its climate-related goals, see “Item 4. – Information on the Company – Business Overview – Responsible finance” below.

ING’s business and operations are exposed to physical risks, including as a direct result of climate change.

ING’s business and operations may be exposed to the impacts of physical risks arising from climate and weather-related events, including heatwaves, droughts, flooding, storms, rising sea levels, other extreme weather events or natural disasters, and to the impacts of physical risks arising from the environmental degradation, including loss of biodiversity, water or resources scarcity, pollution or waste management. Such physical risks could disrupt ING’s business continuity and operations or impact ING’s premises or property portfolio, as well as its customers’ property, business or other financial interests. These risks could potentially result in impairing asset values, financial losses, declining creditworthiness of customers and increased defaults, delinquencies, write-offs and impairment charges in ING’s portfolio, etc. In particular, changing climate patterns resulting in more frequent and extreme weather events, such as the severe flooding that occurred in Western Europe in July 2021 or the long-lasting bushfires in Australia in February 2021, could lead to unexpected business interruptions or losses for ING or its customers.

For a description of physical risks to our operations and business other than resulting from natural disasters as a result of climate change, see "–Operational and IT risks, such as systems disruptions or failures, breaches of security, cyber attacks, human error, changes in operational practices, inadequate controls including in respect of third parties with which we do business or outbreaks of communicable diseases may adversely impact our reputation, business and results" above.

ING's business and operations are exposed to transition risks related to climate change.

The transition to a low carbon or net zero economy may give rise to risks and uncertainties associated with climate change-related laws, regulations and oversight, changing or new technologies, and shifting customer sentiment. For instance, ING may be required to change its lending portfolio to comply with new climate change-related regulations. As a result, it might be unable to lend to certain prospective customers, or might even lead to the termination of certain existing relationships with certain customers. This could result in claims or legal challenges from such customers against ING. This transition may also adversely impact the business and operations of ING's customers and other counterparties. If ING fails to adequately factor in such risks in its lending or other business decisions, ING could be exposed to losses.

The low carbon or net zero transition may also require ING to modify or implement new compliance systems, internal controls and procedures or governance frameworks. The integration and automation of internal governance, compliance, and disclosure and reporting frameworks across ING could lead to increased operational costs for ING and other execution and operational risks. The implementation cost of these systems may especially be higher in the near term as ING seeks to adapt its business, or address overlapping, duplicative or conflicting regulatory or other requirements in this fast-developing area. Furthermore, ING's ongoing implementation of appropriate systems, controls and frameworks increasingly requires ING to develop adequate climate change-related risk assessment and modelling capabilities (as there is currently no standard approach or methodology available), and to collect customer, third party or other data. There are significant risks and uncertainties inherent in the development of new risk modelling methodologies and the collection of data, potentially resulting in systems or frameworks that could be inadequate, inaccurate or susceptible to incorrect customer, third party or other data.

Any delay or failure in developing, implementing or meeting ING's climate change-related commitments and regulatory requirements may have a material adverse impact on our business, financial condition, operating results and reputation, and lead to climate change or ESG-related investigations, enforcement proceedings or litigation.

Operational and IT risks, such as systems disruptions or failures, breaches of security, cyber attacks, human error, changes in operational practices, inadequate controls including in respect of third parties with which we do business or outbreaks of communicable diseases may adversely impact our reputation, business and results.

We face the risk that the design and operating effectiveness of our controls and procedures may prove to be inadequate. Operational and IT risks are inherent to our business. Our businesses depend on the ability to process and report a large number of transactions efficiently and accurately. In addition, we routinely transmit, receive and store personal, confidential and proprietary information by email and other electronic means. Although we endeavour to safeguard our systems and processes, losses can result from inadequately trained or skilled personnel, IT failures (including due to a computer virus or a failure to anticipate or prevent cyber attacks or other attempts to gain unauthorised access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or impairing operational performance, or security breaches by third parties), inadequate or failed internal control processes and systems, regulatory breaches, human errors, employee misconduct, including fraud, or from natural disasters or other external events that interrupt normal business operations. Such losses may adversely affect our reputation, business and results. We depend on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. The equipment and software used in our computer systems and networks may not always be capable of processing, storing or transmitting information as expected. Despite our business continuity plans and procedures, certain of our computer systems and networks may have insufficient recovery capabilities in the event of a malfunction or loss of data. We are consistently managing and monitoring our IT risk profile globally. ING is subject to increasing regulatory requirements including EU General Data Protection Regulation ('GDPR') and EU Payment Services Directive ('PSD2'). Failure to appropriately manage and monitor our IT risk profile could affect our ability to comply with these regulatory requirements, to securely and efficiently serve our clients or to timely, completely or accurately process, store and transmit information, and may adversely impact our reputation, business and results. For further description of the particular risks associated with cybercrime, which is a specific risk to ING as a result of its strategic focus on technology and innovation, see "–We are subject to increasing risks related to cybercrime and compliance with cybersecurity regulation" below.

Widespread outbreaks of communicable diseases may impact the health of our employees, increasing absenteeism, or may cause a significant increase in the utilisation of health benefits offered to our employees, either or both of which could adversely impact our business. Also see above under the heading "–ING's business, results and financial condition have been, and likely will continue to be adversely affected by the Covid-19 pandemic". As set out there, we expect to be affected by the Covid-19 pandemic through its impact on, among others, our employees. In addition, other events including unforeseeable and/or catastrophic events can lead to an abrupt interruption of activities, and our operations may be subject to losses resulting from such disruptions. Losses can result from destruction or impairment of property, financial assets, trading positions, and the loss of key personnel. If our business continuity plans are not able to be implemented, are not effective or do not sufficiently take such events into account, losses may increase further.

We are subject to increasing risks related to cybercrime and compliance with cybersecurity regulation.

Like other financial institutions and global companies, we are regularly the target of cyber attacks, which is a specific risk to ING as a result of its strategic focus on technology and innovation. In particular, threats from Distributed Denial of Service ('DDoS'), targeted attacks (also called Advanced Persistent Threats) and Ransomware intensify worldwide, and attempts to gain unauthorised access and the techniques used for such attacks are increasingly sophisticated. We have faced, and expect to continue to face, an increasing number of cyber attacks (both successful and unsuccessful) as we have further digitalized. This includes the continuing expansion of our mobile- and other internet-based products and services, as well as our usage and reliance on cloud technology.

Cybersecurity, customer data and data privacy have become the subject of increasing legislative and regulatory focus. The EU's second Payment Services Directive ('PSD2') and GDPR are examples of such regulations. In certain locations where ING is active, there are additional local regulatory requirements and legislation on top of EU regulations that must be followed for business conducted in that jurisdiction. Some of these legislations and regulations may be conflicting due to local regulatory interpretations. We may become subject to new EU and local legislation or regulation concerning cybersecurity, security of customer data in general or the privacy of information we may store or maintain. Compliance with such new legislation or regulation could increase the Group's compliance cost. Failure to comply with new and existing legislation or regulation could harm our reputation and could subject the Group to enforcement actions, fines and penalties.

ING may be exposed to the risks of misappropriation, unauthorised access, computer viruses or other malicious code, cyber attacks and other external attacks or internal breaches that could have a security impact. These events could also jeopardise our confidential information or that of our clients or our counterparties and this could be exacerbated by the increase in data protection requirements as a result of GDPR. These events can potentially result in financial loss and harm to our reputation, hinder our operational effectiveness, result in regulatory censure, compensation costs or fines resulting from regulatory investigations and could have a material adverse effect on our business, reputation, revenues, results, financial condition and prospects. Even when we are successful in defending against cyber attacks, such defence may consume significant resources or impose significant additional costs on ING.

Because we operate in highly competitive markets, including our home market, we may not be able to increase or maintain our market share, which may have an adverse effect on our results.

There is substantial competition in the Netherlands and the other countries in which we do business for the types of wholesale banking, retail banking, investment banking and other products and services we provide. Customer loyalty and retention can be influenced by a number of factors, including brand recognition, reputation, relative service levels, the prices and attributes of products and services, scope of distribution, credit ratings and actions taken by existing or new competitors (including non-bank or financial technology competitors). A decline in our competitive position as to one or more of these factors could adversely impact our ability to maintain or further increase our market share, which would adversely affect our results. Such competition is most pronounced in our more mature markets of the Netherlands, Belgium, the rest of Western Europe and Australia. In recent years, however, competition in emerging markets, such as Asia and Central and Eastern Europe, has also increased as large financial services companies from more developed countries have sought to establish themselves in markets which are perceived to offer higher growth potential, and as local institutions have become more sophisticated and competitive and proceeded to form alliances, mergers or strategic relationships with our competitors. The Netherlands is our largest market. Our main competitors in the banking sector in the Netherlands are ABN AMRO Bank and Rabobank.

Competition could also increase due to new entrants (including non-bank and financial technology competitors) in the markets that may have new operating models that are not burdened by potentially costly legacy operations and that are subject to reduced regulation. New entrants may rely on new technologies, advanced data and analytic tools, lower cost to serve, reduced regulatory burden and/or faster processes in order to challenge traditional banks. Developments in technology has also accelerated the use of new business models, and ING may not be successful in adapting to this pace of change or may incur significant costs in adapting its business and operations to meet such changes. For example, new business models have been observed in retail payments, consumer and commercial lending (such as peer-to-peer lending), foreign exchange and low-cost investment advisory services. In particular, the emergence of disintermediation in the financial sector resulting from new banking, lending and payment solutions offered by rapidly evolving incumbents, challengers and new entrants, in particular with respect to payment services and products, and the introduction of disruptive technology may impede our ability to grow or retain our market share and impact our revenues and profitability.

Increasing competition in the markets in which we operate (including from non-banks and financial technology competitors) may significantly impact our results if we are unable to match the products and services offered by our competitors. Future economic turmoil may accelerate additional consolidation activity. Over time, certain sectors of the financial services industry have become more concentrated, as institutions involved in a broad range of financial services have been acquired by or merged into other firms or have declared bankruptcy. These developments could result in our competitors gaining greater access to capital and liquidity, expanding their ranges of products and services, or gaining geographic diversity. We may experience pricing pressures as a result of these factors in the event that some of our competitors seek to increase market share by reducing prices, which may have a material adverse impact on our business, results and financial condition.

We may not always be able to protect our intellectual property developed in our products and services and may be subject to infringement claims, which could adversely impact our core business, inhibit efforts to monetize our internal innovations and restrict our ability to capitalize on future opportunities.

In the conduct of our business, we rely on a combination of contractual rights with third parties and copyright, trademark, trade name, patent and trade secret laws to establish and protect our intellectual property, which we develop in connection with our products and services. Third parties may infringe or misappropriate our intellectual property. We may have to litigate to enforce and protect our copyrights, trademarks, trade names, patents, trade secrets and know-how or to determine their scope, validity or enforceability. In that event, we may be required to incur significant costs, and our efforts may not prove successful. The inability to secure or protect our intellectual property assets could have an adverse effect on our core business and our ability to compete, including through the monetization of our internal innovations.

We may also be subject to claims made by third parties for (1) patent, trademark or copyright infringement, (2) breach of copyright, trademark or licence usage rights, or (3) misappropriation of trade secrets. Any such claims and any resulting litigation could result in significant expense and liability for damages. If we were found to have infringed or misappropriated a third-party patent or other intellectual property right, we could in some circumstances be enjoined from providing certain products or services to our customers or from utilizing and benefiting from certain methods, processes, copyrights, trademarks, trade secrets or licences. Alternatively, we could be required to enter into costly licensing arrangements with third parties or to implement a costly workaround. Any of these scenarios could have a material adverse effect on our business and results and could restrict our ability to pursue future business opportunities.

The inability of counterparties to meet their financial obligations or our inability to fully enforce our rights against counterparties could have a material adverse effect on our results.

Third parties that have an payment obligations to ING, or obligations to return money, securities or other assets, may not pay or perform under their obligations. These parties include the issuers and guarantors (including sovereigns) of securities we hold, borrowers under loans originated, reinsurers, customers, trading counterparties, securities lending and repurchase counterparties, counterparties under swaps, credit default and other derivative contracts, clearing agents, exchanges, clearing houses and other financial intermediaries. Defaults by one or more of these parties on their obligations to us due to bankruptcy, lack of liquidity, downturns in the economy or real estate values, continuing low oil or other commodity prices, operational failure or other factors, or even rumours about potential defaults by one or more of these parties or regarding a severe distress of the financial services industry generally, could have a material adverse effect on our results, financial condition and liquidity. Given the high level of interdependence between financial institutions, we are and will continue to be subject to the risk of deterioration of the commercial and financial soundness, or perceived soundness, of sovereigns and other financial services institutions. This is particularly relevant to our franchise as an important and large counterparty in equity, fixed income and foreign exchange markets, including related derivatives.

We routinely execute a high volume of transactions, such as unsecured debt instruments, derivative transactions and equity investments with counterparties and customers in the financial services industry, including brokers and dealers, commercial and investment banks, mutual and hedge funds, insurance companies, institutional clients, futures clearing merchants, swap dealers, and other institutions, resulting in large periodic settlement amounts, which may result in us having significant credit exposure to one or more of such counterparties or customers. As a result, we could face concentration risk with respect to liabilities or amounts we expect to collect from specific counterparties and customers. We are exposed to increased counterparty risk as a result of recent financial institution failures and weakness and will continue to be exposed to the risk of loss if counterparty financial institutions fail or are otherwise unable to meet their obligations. As a result of the Russian invasion of Ukraine and related international response measures, including sanctions and capital controls, we may be exposed to increased risk of default of counterparties located in Russia and Ukraine, counterparties of which the ultimate parent is located in Russia or may be considered effectively controlled or influenced through Russian involvement, and other counterparties in sectors affected by the response measures. Also liquidity or currency controls enforced by the Russian Central Bank may impact Russian companies ability to pay. In addition, we have counterparty exposure to Russian entities in connection with foreign exchange derivatives for future receipt of foreign currencies against RUB. Of our total EUR 600 billion loan book, the total Russia exposure is around EUR 6.7 billion on 28 February 2022 and EUR 500 million with clients in Ukraine. A default by, or even concerns about the creditworthiness of, one or more of these counterparties or customers or other financial services institutions could therefore have an adverse effect on our results or liquidity.

With respect to secured transactions, our credit risk may be exacerbated when the collateral held by us cannot be or is liquidated at prices not sufficient to recover the full amount of the loan or derivative exposure due to us. We also have exposure to a number of financial institutions in the form of unsecured debt instruments, derivative transactions and equity investments. For example, we hold certain hybrid regulatory capital instruments issued by financial institutions which permit the issuer to cancel coupon payments on the occurrence of certain events or at their option. The EC has indicated that, in certain circumstances, it may require these financial institutions to cancel payment. If this were to happen, we expect that such instruments may experience ratings downgrades and/or a drop in value and we may have to treat them as impaired, which could result in significant losses. There is no assurance that losses on, or impairments to the carrying value of, these assets would not materially and adversely affect our business, results or financial condition.

In addition, we are subject to the risk that our rights against third parties may not be enforceable in all circumstances. The deterioration or perceived deterioration in the credit quality of third parties whose securities or obligations we hold could result in losses and/ or adversely affect our ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes. A significant downgrade in the credit ratings of our counterparties could also have a negative impact on our income and risk weighting, leading to increased capital requirements. While in many cases we are permitted to require additional collateral from counterparties that experience financial difficulty, disputes may arise as to the amount of collateral we are entitled to receive and the value of pledged assets. Also in this case, our credit risk may also be exacerbated when the collateral we hold cannot be liquidated at prices sufficient to recover the full amount of the loan or derivative exposure due to us, which is most likely to occur during periods of illiquidity and depressed asset valuations, such as those experienced during the financial crisis of 2008. The termination of contracts and the foreclosure on collateral may subject us to claims. Bankruptcies, downgrades and disputes with counterparties as to the valuation of collateral tend to increase in times of market stress and illiquidity. Any of these developments or losses could materially and adversely affect our business, results, financial condition, and/or prospects.

Ratings are important to our business for a number of reasons, and a downgrade or a potential downgrade in our credit ratings could have an adverse impact on our results and net results.

Credit ratings represent the opinions of rating agencies regarding an entity’s ability to repay its indebtedness. Our credit ratings are important to our ability to raise capital and funding through the issuance of debt and to the cost of such financing. In the event of a downgrade, the cost of issuing debt will increase, having an adverse effect on our net results. Certain institutional investors may also be obliged to withdraw their deposits from ING following a downgrade, which could have an adverse effect on our liquidity. They can also have lower risk appetite for our debt notes, leading to lower purchases of (newly issued) debt notes. We have credit ratings from S&P, Moody’s Investor Service and Fitch Ratings. Each of the rating agencies reviews its ratings and rating methodologies on a recurring basis and may decide on a downgrade at any time.

As rating agencies continue to evaluate the financial services industry, it is possible that rating agencies will heighten the level of scrutiny that they apply to financial institutions, increase the frequency and scope of their credit reviews, request additional information from the companies that they rate and potentially adjust upward the capital and other requirements employed in the rating agency models for maintenance of certain ratings levels. It is possible that the outcome of any such review of us would have additional adverse ratings consequences, which could have a material adverse effect on our results and financial condition. We may need to take actions in response to changing standards or capital requirements set by any of the rating agencies, which could cause our business and operations to suffer. We cannot predict what additional actions rating agencies may take, or what actions we may take in response to the actions of rating agencies.

Furthermore, ING Bank’s assets are risk-weighted. Downgrades of these assets could result in a higher risk-weighting, which may result in higher capital requirements. This may impact net earnings and the return on capital, and may have an adverse impact on our competitive position.

An inability to retain or attract key personnel may affect our business and results.

ING Group relies to a considerable extent on the quality of its senior management, such as members of the executive committee, and management in the jurisdictions which are material to ING's business and operations. The success of ING Group's operations is dependent, among other things, on its ability to attract and retain highly qualified personnel. Competition for key personnel in most countries in which ING Group operates, and globally for senior management, is intense. ING Group's ability to attract and retain key personnel, in senior management and in particular areas such as technology and operational management, client relationship management, finance, risk and product development, is dependent on a number of factors, including prevailing market conditions and compensation packages offered by companies competing for the same talent.

The (increasing) restrictions on remuneration, plus the public and political scrutiny especially in the Netherlands, will continue to have an impact on existing ING Group remuneration policies and individual remuneration packages for personnel. For example, under the EU's amended Shareholder Rights Directive, known as 'SRD II', which came into effect on June 10, 2019, ING is required to hold a shareholder (binding) vote on ING's Executive Board remuneration policy and Supervisory Board remuneration policy at least every four years. Furthermore the shareholders have an advisory vote on ING's remuneration report annually. This may restrict our ability to offer competitive compensation compared with companies (financial and/or non-financial) that are not subject to such restrictions and it could adversely affect ING Group's ability to retain or attract key personnel, which, in turn, may affect our business and results.

We may incur further liabilities in respect of our defined benefit retirement plans if the value of plan assets is not sufficient to cover potential obligations, including as a result of differences between actual results and underlying actuarial assumptions and models.

ING Group companies operate various defined benefit retirement plans covering the post-employment benefits of a number of our employees. The liability recognised in our consolidated balance sheet in respect of our defined benefit plans is the present value of the defined benefit obligations at the balance sheet date, less the fair value of each plan's assets, together with adjustments for unrecognised actuarial gains and losses and unrecognised past service costs. We determine our defined benefit plan obligations based on internal and external actuarial models and calculations using the projected unit credit method. Inherent in these actuarial models are assumptions, including discount rates, rates of increase in future salary and benefit levels, mortality rates and consumer price index. These assumptions are based on available market data and are updated annually. Nevertheless, the actuarial assumptions may differ significantly from actual results due to changes in market conditions, economic and mortality trends and other assumptions. Any changes in these assumptions could have a significant impact on our present and future liabilities and costs associated with our defined benefit plans.

Risks related to the Group's risk management practices

Risks relating to our use of quantitative models or assumptions to model client behaviour for the purposes of our market calculations may adversely impact our reputation or results.

We use quantitative methods, systems or approaches that apply statistical, economic financial, or mathematical theories, techniques and assumptions to process input data into quantitative estimates. Errors in the development, implementation, use or interpretation of such models, or from incomplete or incorrect data, can lead to inaccurate, noncompliant or misinterpreted model outputs, which may adversely impact our reputation and results. In addition, we use assumptions in order to model client behaviour for the risk calculations in our banking books. Assumptions are used to determine the interest rate risk profile of savings and current accounts and to estimate the embedded option risk in the mortgage and investment portfolios. Assumptions based on past client behaviour may not always be a reliable indicator of future behaviour. The realisation or use of different assumptions to determine client behaviour could have a material adverse effect on the calculated risk figures and, ultimately, our future results or reputation. Furthermore, we may be subject to risks related to changes in the laws and regulations governing the risk management practices of financial institutions. For further information, see "Risks related to the regulation and supervision of the Group – Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations may increase our operating costs and limit our activities" above. As noted there, regulation of the industries in which we operates is becoming increasingly more extensive and complex, while also attracting supervisory scrutiny. Compliance failures may lead to changes in the laws and regulations governing the risk management practices and materially increase our operating costs.

We may be unable to manage our risks successfully through derivatives.

We employ various economic hedging strategies with the objective of mitigating the market risks that are inherent in our business and operations. These risks include currency fluctuations, changes in the fair value of our investments, the impact of interest rates, equity markets and credit spread changes, the occurrence of credit defaults and changes in client behaviour. We seek to control these risks by, among other things, entering into a number of derivative instruments, such as swaps, options, futures and forward contracts, including, from time to time, macro hedges for parts of our business, either directly as a counterparty or as a credit support provider to affiliate counterparties. Developing an effective strategy for dealing with these risks is complex, and no strategy can completely insulate us from risks associated with those fluctuations. Our hedging strategies also rely on assumptions and projections regarding our assets, liabilities, general market factors and the creditworthiness of our counterparties that may prove to be incorrect or prove to be inadequate. Accordingly, our hedging activities may not have the desired beneficial impact on our results or financial condition. Poorly designed strategies or improperly executed transactions could actually increase our risks and losses. Hedging strategies involve transaction costs and other costs, and if we terminate a hedging arrangement, we may also be required to pay additional costs, such as transaction fees or breakage costs. There have been periods in the past, and it is likely that there will be periods in the future, during which we have incurred or may incur losses on transactions, possibly significant, after taking into account our hedging strategies. Further, the nature and timing of our hedging transactions could actually increase our risk and losses. Hedging instruments we use to manage product and other risks might not perform as intended or expected, which could result in higher (un)realised losses, such as credit value adjustment risks or unexpected P&L effects, and unanticipated cash needs to collateralise or settle such transactions. Adverse market conditions can limit the availability and increase the costs of hedging instruments, and such costs may not be recovered in the pricing of the underlying products being hedged. In addition, hedging counterparties may fail to perform their obligations, resulting in unhedged exposures and losses on positions that are not collateralised. As such, our hedging strategies and the derivatives that we use or may use may not adequately mitigate or offset the risks they intend to cover, and our hedging transactions may result in losses.

Our hedging strategy additionally relies on the assumption that hedging counterparties remain able and willing to provide the hedges required by our strategy. Increased regulation, market shocks, worsening market conditions (whether due to the ongoing euro crisis or otherwise), and/or other factors that affect or are perceived to affect the financial condition, liquidity and creditworthiness of ING may reduce the ability and/or willingness of such counterparties to engage in hedging contracts with us and/or other parties, affecting our overall ability to hedge our risks and adversely affecting our business, results and financial condition.

Risks related to the Group’s liquidity and financing activities

We depend on the capital and credit markets, as well as customer deposits, to provide the liquidity and capital required to fund our operations, and adverse conditions in the capital and credit markets, or significant withdrawals of customer deposits, may impact our liquidity, borrowing and capital positions, as well as the cost of liquidity, borrowings and capital.

Adverse capital market conditions have in the past affected, and may in the future affect, our cost of borrowed funds and our ability to borrow on a secured and unsecured basis, thereby impacting our ability to support and/or grow our businesses. Furthermore, although interest rates are at or near historically low levels, since the recent financial crisis, we have experienced increased funding costs due in part to the withdrawal of perceived government support of such institutions in the event of future financial crises. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures adjust to new regulations.

We need liquidity to fund new and recurring business, to pay our operating expenses, interest on our debt and dividends on our capital stock, maintain our securities lending activities and replace certain maturing liabilities. Without sufficient liquidity, we will be forced to curtail our operations and our business will suffer. The principal sources of our funding include a variety of short-and long-term instruments, including deposit fund, repurchase agreements, commercial paper, medium- and long-term debt, subordinated debt securities, capital securities and shareholders’ equity.

In addition, because we rely on customer deposits to fund our business and operations, the confidence of customers in financial institutions may be tested in a manner that may adversely impact our liquidity and capital position. Consumer confidence in financial institutions may, for example, decrease due to our or our competitors’ failure to communicate to customers the terms of, and the benefits to customers of, complex or high-fee financial products. Reduced confidence could have an adverse effect on our liquidity and capital position through withdrawal of deposits, in addition to our revenues and results. Because a significant percentage of our customer deposit base is originated via Internet banking, a loss of customer confidence may result in a rapid withdrawal of deposits over the Internet.

In the event that our current resources do not satisfy our needs, we may need to seek additional financing. The availability of additional financing will depend on a variety of factors, such as market conditions, the general availability of credit, the volume of trading activities, the overall availability of credit to the financial services industry, our credit ratings and credit capacity, as well as the possibility that customers or lenders could develop a negative perception of our long- or short-term financial prospects. Also see under the heading “Ratings are important to our business for a number of reasons, and a downgrade or a potential downgrade in our credit ratings could have an adverse impact on our results and net results”. Similarly, our access to funds may be limited if regulatory authorities or rating agencies take negative actions against us. If our internal sources of liquidity prove to be insufficient, there is a risk that we may not be able to successfully obtain additional financing on favourable terms, or at all. Any actions we might take to access financing may, in turn, cause rating agencies to re-evaluate our ratings.

Disruptions, uncertainty or volatility in the capital and credit markets may also limit our access to capital. Such market conditions may in the future limit our ability to raise additional capital to support business growth, or to counterbalance the consequences of losses or increased regulatory capital and rating agency capital requirements. This could force us to (i) delay raising capital, (ii) reduce, cancel or postpone payment of dividends on our shares, (iii) reduce, cancel or postpone interest payments on our other securities, (iv) issue capital of different types or under different terms than we would otherwise, or (v) incur a higher cost of capital than in a more stable market environment. This would have the potential to decrease both our profitability and our financial flexibility. Our results, financial condition, cash flows, regulatory capital and rating agency capital position could be materially adversely affected by disruptions in the financial markets.

Furthermore, regulatory liquidity requirements in certain jurisdictions in which we operate are remain stringent, undermining our efforts to maintain centralised management of our liquidity. These developments may cause trapped pools of liquidity and capital, resulting in inefficiencies in the cost of managing our liquidity and solvency, and hinder our efforts to integrate our balance sheet. An example of such trapped liquidity includes our operations in Germany where German regulations impose separate liquidity requirements that restrict ING’s ability to move a liquidity surplus out of the German subsidiary.

As a holding company, ING Groep N.V. is dependent for liquidity on payments from its subsidiaries, many of which are subject to regulatory and other restrictions on their ability to transact with affiliates.

ING Groep N.V. is a holding company and, therefore, depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments to its shareholders and to fund all payments on its obligations, including debt service obligations.

ING Groep N.V.’s ability to obtain funds to meet its obligations depends on legal and regulatory restrictions applicable to ING Groep N.V.’s subsidiaries. Many of ING Groep N.V.’s direct and indirect subsidiaries, including certain subsidiaries of ING Bank N.V., may be subject to laws that restrict dividend payments, as well as requirements with respect to capital and liquidity levels. For example, certain local governments and regulators have taken steps and may take further steps to “ring fence” or impose minimum internal total loss-absorbing capacity on the local affiliates of a foreign financial institution in order to protect clients and creditors of such affiliates in the event of financial difficulties involving such affiliates or the broader banking group. Increased local regulation and supervision have therefore limited and may in the future further limit the ability to move capital and liquidity among affiliated entities and between ING Groep N.V. and its direct and indirect subsidiaries, limit the flexibility to structure intercompany and external activities of ING as otherwise deemed most operationally efficient, and increase in the overall level of capital and liquidity required by ING on a consolidated basis.

Lower earnings of a local entity may also reduce the ability of such local entity to make dividends and distributions to ING Groep N.V. Other restrictions, such as restrictions on payments from subsidiaries or limitations on the use of funds in client accounts, may also apply to distributions to ING Groep N.V. from its subsidiaries.

ING Groep N.V. has also in the past guaranteed and may in the future continue to guarantee the payment obligations of some of its subsidiaries, including ING Bank N.V. Any such guarantees may require ING Groep N.V. to provide substantial funds or assets to its subsidiaries or the creditors or counterparties of these subsidiaries at a time when the guaranteed subsidiary is in need of liquidity to fund its own obligations.

Finally, ING Groep N.V., as the resolution entity of ING, has an obligation to remove impediments to resolution and to improve resolvability. Regulatory authorities have required and may continue to require ING to increase capital or liquidity levels at the level of the resolution entity or at particular subsidiaries. This may result in, among other things, the issuance of additional long-term debt issuance at the level of ING Groep N.V. or particular subsidiaries.

Additional risks relating to ownership of ING shares

Holders of ING shares may experience dilution of their holdings and may be impacted by any share buyback programme.

ING's AT1 Securities may, under certain circumstances, convert into equity securities. Such conversion would dilute the ownership interests of existing holders of ING shares and such dilution could be substantial. Additionally, any conversion, or the anticipation of the possibility of a conversion, could depress the market price of ING shares. Furthermore, we may undertake future equity offerings with or without subscription rights. In case of equity offerings without subscription rights, holders of ING shares may suffer dilutions. In case of equity offerings with subscription rights, holders of ING shares in certain jurisdictions, however, may not be entitled to exercise such rights unless the rights and the related shares are registered or qualified for sale under the relevant legislation or regulatory framework. Holders of ING shares in these jurisdictions may suffer dilution of their shareholding should they not be permitted to, or otherwise chose not to, participate in future equity offerings with subscription rights.

Any share repurchases could affect the price of our ordinary shares, ADSs or other securities and increase trading price volatility. The existence of a share buyback programme could also cause the price of our ordinary shares, ADSs or other securities to be higher than it would be in the absence of such a share buyback programme, and could potentially reduce the market liquidity of our ordinary shares, ADSs or other securities. There can be no assurance that any share buybacks will enhance shareholder value because the market price of our ordinary shares or ADSs may decline below the levels at which we repurchase any ordinary shares or ADSs.

In addition, ING cannot guarantee that any future share buyback programme will be fully consummated. The timing and amount of share repurchases pursuant to a share buyback programme will depend upon a number of factors, including market, business conditions, and the trading price of the our ordinary shares or ADSs. A share buyback programme may also be suspended or terminated at any time, and any such suspension or termination could negatively affect the trading price of, increase trading price volatility of or reduce the market liquidity of our ordinary shares, ADSs or other securities. Additionally, a share buyback programme could diminish our cash reserves, which may impact our ability to finance future growth and to pursue possible future strategic opportunities.

Because we are incorporated under the laws of the Netherlands and many of the members of our Supervisory and Executive Board and our officers reside outside of the United States, it may be difficult to enforce judgments against ING or the members of our Supervisory and Executive Boards or our officers.

Most of our Supervisory Board members, our Executive Board members and some of the experts named in this Annual Report, as well as many of our officers are persons who are not residents of the United States, and most of our and their assets are located outside the United States. As a result, investors may not be able to serve process on those persons within the United States or to enforce in the United States judgments obtained in US courts against us or those persons based on the civil liability provisions of the US securities laws.

Investors also may not be able to enforce judgments of US courts under the US federal securities laws in courts outside the United States, including the Netherlands. The United States and the Netherlands do not currently have a treaty providing for the reciprocal recognition and enforcement of judgments (other than arbitration awards) in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the U.S. federal securities laws, would not be enforceable in the Netherlands unless the underlying claim is re-litigated before a Dutch court. However, under current practice, the courts of the Netherlands may be expected to render a judgment in accordance with the judgment of the relevant U.S. court, provided that such judgment (i) is a final judgment and has been rendered by a court which has established its jurisdiction on the basis of internationally accepted grounds of jurisdictions, (ii) has not been rendered in violation of elementary principles of fair trial, (iii) is not contrary to the public policy of the Netherlands, and (iv) is not incompatible with (a) a prior judgment of a Netherlands court rendered in a dispute between the same parties, or (b) a prior judgment of a foreign court rendered in a dispute between the same parties, concerning the same subject matter and based on the same cause of action, provided that such prior judgment is not capable of being recognized in the Netherlands. It is uncertain whether this practice extends to default judgments as well.

Based on the foregoing, there can be no assurance that U.S. investors will be able to enforce against us or members of our board of directors, officers or certain experts named herein who are residents of the

Netherlands or countries other than the United States any judgments obtained in U.S. courts in civil and commercial matters, including judgments under the U.S. federal securities laws.

In addition, there is doubt as to whether a Dutch court would impose civil liability on us, the members of our board of directors, our officers or certain experts named herein in an original action predicated solely upon the U.S. federal securities laws brought in a court of competent jurisdiction in the Netherlands against us or such members, officers or experts, respectively.

Item 4. Information on the Company

A. History and development of the company

General

ING Groep N.V. was established as a Naamloze Vennootschap (a Dutch public limited liability company) on March 4, 1991. ING Groep N.V. is incorporated under the laws of the Netherlands.

The corporate site of ING, www.ing.com, provides news, investor relations and general information about the company.

ING is required to file certain documents and information with the United States Securities and Exchange Commission (SEC). These filings relate primarily to periodic reporting requirements applicable to issuers of securities, as well as to beneficial ownership reporting requirements as a holder of securities. The most common filings we submit to the SEC are Forms 6-K and 20-F (periodic reporting requirements). The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov. ING's electronic filings are available on the SEC's internet site under CIK ID 0001039765 (ING Groep N.V.).

The official address of ING Group is:

ING Groep N.V.
Bijlmerdreef 106
1102 CT Amsterdam
P.O. Box 1800,
1000 BV Amsterdam
The Netherlands
Telephone +31 20 563 9111

The name and address of ING Group's agent for service of process in the United States in connection with ING's registration statement on Form F-3 is:

ING Financial Holdings Corporation
1133 Avenue of the Americas
New York, NY 10036
United States of America
Telephone +1 646 424 6000

Changes in the composition of the Group

For information on changes in the composition of the Group, reference is made to Note 47 'Consolidated companies and businesses acquired and divested'.

ING at a glance

Our brand

ING's global 'do your thing' tagline embodies our purpose of empowering people to stay a step ahead in life and business, and our promise to make banking frictionless by creating customer experiences that are personal, easy and smart, so people can do more of the things that move them.

Launched in 2020, 'do your thing' aligns our brand fundamentals to create one coherent brand experience everywhere, driven by our belief that progress is always possible.

In 2021, ING was ranked among the world's most valuable brands in Brand Finance's annual Global 500 ranking and is the third most valuable Dutch brand.

Our products & services

In our **Retail Banking business**, which includes the Business Banking segment, we offer (individuals, small to medium-sized businesses and mid-corporates) a full range of products and services covering payments, savings, insurance, investments and secured and unsecured lending.

In **Wholesale Banking** we provide corporate clients and financial institutions with advisory value propositions such as specialised lending, tailored corporate finance, sustainable and sustainability-linked financing, and debt and equity market solutions, as well as payments and cash management and trade and treasury services.

Our markets

We serve 38 million customers in more than 40 countries

Our **Market Leaders**

Market Leaders

- Netherlands
- Belgium
- Luxembourg

Our **Challengers & Growth markets**

Challengers Markets

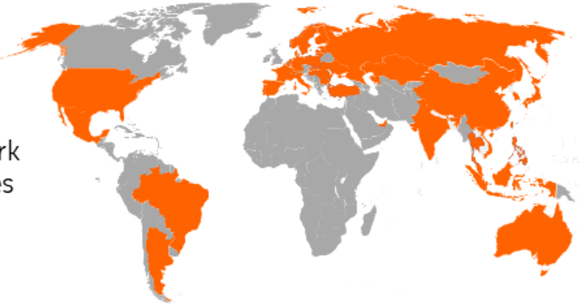
- Austria*
- Australia
- Czech Republic*
- France**
- Germany
- Italy
- Spain

Growth Markets

- Poland
- Romania
- Turkey
- Philippines
- Stakes in Asia

(*) exited Retail market in 2021
(**) to exit Retail market in 2022

Wholesale Banking international network and global franchises



Our strategy

Delivering on our strategy is about creating a differentiating customer experience that is personal, easy and smart. It's also about focusing on the things that matter: being a bank that is safe, secure and compliant; maintaining a healthy business; data-driven digitalisation to better meet our customers' evolving needs; and jointly building a sustainable future for all.

ING has a clear purpose: empowering people to stay a step ahead in life and in business. This is reflected by our 'do your thing' tagline, which encapsulates our brand and our promise to make banking frictionless so people and businesses can do more of the things that move them. Our purpose guides us in everything we do and is founded on our belief that it's our role to support and promote social and environmental progress and at the same time generate healthy returns for shareholders.

We have a strong – and growing – primary customer base. We have a digital, mobile-first mindset and we've put in place the building blocks for becoming a data-driven digital bank. We continuously strive to improve the customer experience, working in an agile way and guided by our Orange Code, which describes the values and behaviours that define ING.

Even in a digital world, our business is founded on relationships and our people are among our greatest assets. We therefore work to provide a differentiating employee experience that keeps our people motivated and engaged. This includes supporting their wellbeing, providing a safe and healthy workplace and opportunities to develop themselves to their full potential, as well as promoting a diverse and inclusive work environment where they feel free to be themselves. For most of the year, the majority of our employees continued to work from home due to ongoing measures to stop the spread of Covid-19. As restrictions were lifted in various countries, we moved towards a hybrid mode, giving employees the flexibility to combine working from home with working from the office. However, new outbreaks meant they had to remain ready to adapt to a constantly changing situation.

The trends that have shaped our direction so far – digitalisation, continuing low and negative interest rates, new competitors, changing customer behaviours and expectations, increasing regulation and the growing urgency for action on climate change and to address social imbalances – continue to influence our business and were amplified by the Covid-19 pandemic.

We've also learnt some important lessons over the past years: some of our projects became too complex, went on for too long or resulted in us sometimes losing sight of customers and competition. We're guided by our purpose and our strategy in how we respond to these and other challenges and opportunities.

As we look to the future, we are now focusing on delivering with impact so we can truly differentiate ourselves from the competition and emerge from the pandemic in a position of strength for our customers, our investors, our employees and society in general. In the near-to-mid-term, this means focusing on:

- being a safe, secure and compliant bank
- being a healthy business making healthy returns
- data-driven digitalisation
- sustainability.

Safe, secure and compliant bank

Keeping our bank safe, secure and compliant remains a top priority for ING. This means fighting financial economic crime as a gatekeeper to the financial system, protecting our bank and our customers against cybercrime and fraud, as well as from conduct that will jeopardise people's trust in us, and the safe and ethical use of data and data-driven models. This year too, the growing importance of climate risk was emphasised in ING's first integrated climate report.

Protecting our bank and our customers also means continuously improving our risk culture and behaviours. Everyone at ING has a responsibility to understand, discuss and act on the many non-financial risks that banks are confronted with every day. To this end, we introduced a risk culture programme in 2021 that aims to ensure our risk culture reflects the dynamic business and regulatory environment we operate in. By acting with the right mindset and living up to our Orange Code and Global Code of Conduct, we all play a part in safeguarding ING and our customers.

Knowing our customers (KYC) and ensuring we only do business with people and companies that meet regulatory requirements and are within our risk appetite, are essential for preventing financial economic crime. Monitoring transactions for unusual activities and carrying out customer due-diligence checks at regular intervals are an important part of KYC. We also assess the environmental and social impact of companies and projects we finance.

Since 2017, we've introduced a number of structural improvements to enhance our KYC organisation and activities, including standardised policies and digital tooling, and further increasing knowledge and awareness across the bank. This includes mandatory e-learnings for all staff and the KYC and Risk Academies for more specialist training. We are building on this with our financial economic crime controls maturity programme, which consolidates all our activities to fight financial economic crime (policies, systems and processes) in one holistic approach.

With the growing number of digital transactions and employees working from home it's of the utmost importance to safeguard ING and our customers against cybercrimes such as digital fraud, phishing scams and malicious software. ING has preventative measures in place to test our resilience against cyberattacks and attempts to gain unauthorised access to our systems. We also focus strongly on managing our exposure to operational risks with respect to the availability of our networks and infrastructure to ensure we're always accessible to our customers and our employees.

Closely related to cybersecurity resilience is protecting customers' data and their privacy. To this end, ING follows European data protection regulation (GDPR) and local laws applicable in our countries. We consider people's expectations about how their data is used and respect their privacy when processing it. Local and global data ethics councils help ensure we use data responsibly.

Healthy business

While the economy picked up in many of our markets in 2021, to remain a financially healthy business it's imperative that we diversify our income, optimise capital allocation and scrutinise costs. Our 2021 figures show we're on the right track, with fee income up 17% compared to a year earlier and contributing 19% to our full-year income, which is a crucial component of our strategy to diversify our revenue sources in the negative interest environment. This strong fee income growth combined with higher lending volumes contributed to a 4.8% increase in total income compared to 2020, while net customer deposits grew with €10.3 billion.

We earned higher fees from daily banking activities in 2021, spurred by economic recovery, and benefitted from continued demand for digital investment products in our Retail business. Our results were also supported by low risk costs. We were able to release some of the Covid-19-related provisions we took earlier and are confident about the quality of our loan book. However, we remain cautious about the impact of supply chain disruptions, rising energy prices and increasing inflation on companies and consumers. We therefore remain ready to support our clients when they need it.

Ensuring ING remains a financially healthy company means there are also times we have to make difficult decisions about where and how we allocate our capital, so that we put it to work in the places that provide the best growth opportunities and viable returns. Unfortunately, this can affect our customers and colleagues. In the current environment, with varying local and regulatory environments, we believe that we require sufficient local scale in the Retail markets in which we operate to maintain a reasonable franchise. It's in these markets that we want to invest our people, capital and costs. This led to our decision to exit selected Retail markets in 2021. Separately, we decided to wind down our payment services provider Payvision, which we believe was not evolving rapidly enough to keep pace with the competitive payments market, and to stop certain partnerships. These include discontinuing the consumer-facing smart money app Yolt to focus instead on growing its business-to-business open banking platform Yolt Technology Services. We also sold our stake in Dutch property platform Makelaarsland as the partnership did not bring what we had expected from it.

We had expenses under control in 2021, with room for us as a digital-first bank to improve our cost-to-serve, supported by investments in further (end-to-end) digitalisation. This brings benefits to the experience of customers and colleagues and improves our operational quality and processing speed. It also helps us better absorb the eroding effects of negative interest rates on our net interest income.

In October 2021, we launched a €1,744 million share buyback programme related to the amount reserved over 2019. The distribution is in line with our aim to provide an attractive return to shareholders and follows the expiration of the European Central Bank's (ECB) recommendation not to pay dividends during the pandemic in 2020. The buyback was possible due to ING's strong capital position. At year-end 2021, approximately 92% of the maximum total value of the programme had been completed. On 28 February 2022, we announced the programme was fully complete, having repurchased 139,711,040 ordinary shares for a total consideration of €1,741,696,166.19.

Data-driven digitalisation

Delivering on our customer promise is all about creating a customer experience that's personal, easy and smart. And a key driver for this is digitalisation – a trend that was accelerated by the Covid-19 pandemic and the demand it unleashed for mobile and contactless banking – and data, which is the fuel powering end-to-end digitalisation.

Reflecting the growing importance of technology and digitalisation in fulfilling our purpose and strategy, in 2021, ING appointed a chief technology officer to its Management Board Banking for the first time, having split the role of the chief operations officer. Digitalisation has benefits for our customers, our employees and our business. Automating tasks frees up time for more rewarding activities. It improves efficiency and effectiveness, and helps to make our bank safer and compliant-by-design. However, we also have to be cognisant of those customers who are not (yet) fully digital and ensure our products and services remain accessible to them.

In 2021, mobile interactions grew to 6.2 billion from 5.3 billion in 2020, accounting for 91% of total interactions with ING. The number of mobile payment transactions also grew each quarter, with 267 million made in 4Q 2021, compared to 154 million transactions in 1Q 2020.

This digital connectivity in turn yields data and insights that contribute to a more personalised and empowering experience, giving customers even more reason to interact with us. This is how we believe we can become an essential part of people's digital lives.

Mastering data is essential for this. Data, used responsibly, helps us understand our customers better and personalise our interactions. It is the main ingredient for the models that inform our business decisions, manage risks and keep our capital in control. We use transaction data to detect money laundering and fight financial crime. And it powers technologies like artificial intelligence, robotics and blockchain that digitalise processes and improve the customer experience. Examples include using machine learning to understand why customers contact us and proactively come up with solutions that will reduce the number of calls in future; virtual assistants to help customers 24/7; and instant loans, personalised insurance and easy-to-use investment products. And there are innovative solutions for ING and for our customers, such as Komgo, which digitalises trade finance; supply chain management tool Stemly; and Flowcast to reduce risk and unlock credit for businesses.

To make raw data meaningful it needs to be sorted, harmonised and put into context. That's why it's essential to have one common language for defining our data. We call this ING Esperanto. In addition, we're standardising data models (Esperanto Warehouse Model) through which we can store and use our data. This approach contributes to the availability, quality, integrity, usability, control and governance of our data. We also have a uniform global customer data management approach that facilitates customer self-service and enables new ways of doing banking by making it easier to retrieve information that can be used to propose new types of billable ING services or new product bundles. Global and local data ethics councils guide our decisions around the use of data based on ING's Orange Code values.

Our customers' appreciation of ING's smart and personal experience is reflected in above-average NPS scores in a number of our Retail and Wholesale Banking markets. Over the past year we gained 481,000 primary customers, bringing the total to 14.3 million, 3.5% higher than at end-2020.

ING is not the only bank with digital ambitions. Society's growing reliance on the internet has fundamentally changed the way people shop – and pay. These changing behaviours, along with the second European Payments Services Directive (PSD2), are reshaping the role of banks in the payments industry, opening it up to new (non-traditional) payments providers. To stay a step ahead in this competitive digital environment, there's a growing urgency to speed up end-to-end digitalisation and the associated requirement for operational excellence.

Given the increasing commoditisation of payments and the need for scale and efficiency to remain competitive in this fast-growing area, we're looking to create a dedicated payments and settlement utility within the chief technology office domain in 2022 that will deliver all payments, settlement and liquidity services across ING, subject to Works Council approval. Until now this has been done within the business lines, notably Wholesale Banking, also for Retail payments. The aim is to build on our existing payments capabilities and further mature, scale and evolve the way these services are delivered, allowing the business lines to focus on meeting the needs of our customers.

Digitalisation is also empowering customers to have agency over their finances with innovative tools such as personal budget planners, expense trackers and smart saver tools. Given the costs and complexities of cross-border integration, we're using our scalable technology to implement products locally that meet the needs of our customers, particularly in areas such as retail investments, consumer finance and insurance.

Since 2016, we've worked on putting in place a technology and operations foundation on which to build a mobile-first digital experience for all our 38 million customers. This foundation includes IT infrastructure, uniform processes, data management and way of working, and bundling expertise in shared service centres that support our businesses globally. Underlying all of this are technology platforms such as Touchpoint and OnePipeline. Designed to create speed, scale, security and cost efficiency, this foundation allows us to bring new products and services to our customers faster and in multiple markets using next-generation technologies and re-useable modular components.

It has also enabled our employees to continue working from home during the ongoing lockdowns and supports their return to the office in a hybrid mode when that's possible.

Sustainability

Sustainability in all its forms is one of the biggest challenges facing society. Climate change is threatening our planet and its people, many of whom also struggle with inequality, poor financial health and even a lack of basic human rights. It's clear the world is changing and banking needs to change with it. We have a responsibility to society to define new ways of doing business that align economic growth with positive environmental and social impact.

On the environmental side, we believe we can do this by aligning our lending portfolio with global climate goals, supporting the transition to a net-zero economy in our own operations and by actively engaging with companies to finance the investments needed, and addressing related challenges like biodiversity; on the people side, by steering customers and local communities towards improved financial health.

To tackle climate change even faster, we joined the Net-Zero Banking Alliance in 2021 and increased the ambition of our Terra approach. We're now aiming to steer our lending portfolio towards net-zero greenhouse gas emissions by 2050 or sooner. In our integrated climate report on ing.com we report on our progress until end-2020 in the nine most carbon-intensive sectors, which are our main focus for steering. We're working on pathways for those sectors to align our targets for them with our own net-zero ambitions.

In addition to financing sustainable projects, we believe we can influence positive change by advising clients on their own transition to sustainable and circular business models, as well as through innovative products such as sustainability-linked financing, gaining access to a new range of opportunities. To protect the integrity of this fast-growing market, we believe these targets should be ambitious, recognised industry-wide and verified by a reputable, independent party, thereby ensuring companies tackle the most difficult and urgent climate issues first.

It's also about what we don't finance: we say no to certain companies and sectors; for example, new clients active in palm oil plantations and new coal-fired power plants. However, much of the 'real' economy still runs on fossil fuels, and some sectors are further along on their journey than others. So rather than withdrawing completely from a particular sector (such as oil and gas) – with the associated impact in terms of jobs and economic fall-out – we believe we can be more effective by actively engaging with that sector to speed up its transition. For example, we're leading the climate-aligned finance working group for the Net-Zero Steel Initiative to support the sector's decarbonisation and have signed up to the Global Maritime Forum's call to action to decarbonise the shipping industry.

Climate change also brings risks for ING and the companies we finance. These range from physical risks such as floods and wildfires to social risks related to displacement, discrimination and human rights violations, as well as transition risks that could lead to stranded assets when policies, regulations or consumer preferences shift towards a lower-carbon economy. We're working to embed the management of climate risk into our overall risk management approach and our business practices. We also evaluate clients and transactions against our environmental and social risk framework to limit the negative impact of our financing decisions on the environment and communities.

Climate action requires a concerted collaborative effort across all sections of society. There's a growing sense of urgency for governments and businesses to step in and help. While banks can finance the transition, it's companies that need to make it happen in their own businesses and supply chains. Governments can, and should, direct and guide this change. We believe the European Union's Green Deal is a step in the right direction.

Recognising the importance of environmental, social and corporate governance (ESG), we have a number of initiatives running in the bank covering our governance structure, developing a diverse and engaged workforce and being a trusted counterparty for our customers and clients.

When it comes to financial health, we're embedding our activities directly into our core business where we can make a more tangible impact on our customers. We're currently defining actions we can take in our Retail markets to help customers who are financially vulnerable; for example, to get out of problematic debt, or to save more. We're also bringing our community support closer to home through our new community investment programme, which targets a broader range of local initiatives that contribute to an inclusive economy and support vulnerable groups in the communities we serve.

B. Business Overview

A sharper focus on digital investment products, daily banking and on providing a smart, easy and personal customer experience, boosted growth in 2021, with more people than ever doing their banking on a mobile device. Companies also increasingly chose to link their financing to their efforts to protect our planet and its people.

Diversifying our income is a crucial component of our strategy in a negative interest environment, and in 2021, our fee income grew by 17% year-on-year. Much of this growth came from an increase in daily banking activities on the back of economic recovery, coupled with good investment product revenues from the growing number of new investment accounts opened and customers making a higher average number of trades.

We saw continued lending growth in mortgages and in the last quarter of the year lending volumes increased, a sign that confidence in the economy is picking up. Still, economic recovery remains fragile. Covid-19 continues to be a factor in many markets with new waves of infections, geopolitical tensions and supply chain disruptions, rising energy prices and increasing inflation impacting companies and consumers alike. We therefore continue to be cautious and remain ready to support our clients when they need it.

A differentiating customer experience

Delivering a differentiating customer experience is what sets ING apart and ensures customers choose us rather than another provider. We can measure how successful we are by looking at our Net Promoter Scores, which are an indicator of customer satisfaction. To provide a differentiating customer experience, we have to keep making banking as frictionless as possible, providing smarter, easier and more personal experiences, and continuously work to keep getting better at it.

Every interaction with our customers – whether it's a call to a contact centre, a click on a web page, a conversation or a survey – is an opportunity to understand their thinking and how we can improve their experience. Sometimes it's small changes that can make a big impact. This is the idea behind our global CX Day where colleagues from across the organisation work on ways to improve the customer experience. In 2021, teams from 27 countries and 15 Wholesale Banking business units worked on around 300 improvements on the day, of which 21 were aimed at corporate clients.

By enabling ING designers and customer journey experts to work together, we connect the dots between insights and delivering real value for our customers. This is the case for example in Germany where our designers joined a cross-industry effort to make digital experiences more accessible to all. Customer testimonials underscore that good design is good business.

As we've digitalised more of our processes, we've empowered customers to take more of their money matters into their own hands. For example, in Germany, Spain, Poland, Italy and Turkey pre-approved consumer loans are available for existing customers via our digital channels, providing them with instant access to financing when and where they need it. Users of our OneApp in the Netherlands, Belgium and Germany can update their contact details, block a stolen bank card, open a new account and send payment requests without needing to visit a branch. Financial advice is also increasingly given online.

In 2021, digital interactions with customers rose to 6.9 billion (up from 5.3 billion in 2020). In Wholesale Banking, the number of digital interactions increased to 11.8 million, of which 49% were via or in combination with the mobile app introduced five years ago.
This digital connectivity yields data and insights that contribute to a more personalised and empowering experience, giving customers more reasons to interact with ING. Getting the most out of our data will unlock even more potential to create a differentiating experience for our customers. But there's still work to be done to gain the most value from our data, both by moving data into our data lakes and by using analytics. Closely linked to this is the trust our customers and employees have that we will protect their data and ensure it's not used for purposes they have not agreed to.

Retail Banking

For consumers using our Retail Banking services our focus is on providing a fully digital, mobile-first experience that's smart, personal and easy, empowering, and seamlessly connects with the apps and platforms they're on.

We want to engage with these customers on mobile at every stage of the customer journey. This means as far as possible each step of our processes has to be fully digitalised, from onboarding and customer due diligence checks to daily banking and contact centres.

Over the past years we've been working to harmonise the customer experience in our different markets and created one brand identity. Now we're increasingly focused on end-to-end digitalisation of our customer journeys to make our products and services even easier, smarter and more personal.

In 2021, we migrated the last of our Belgian Retail customers to ING's OneApp for mobile banking, which is now available to 17.4 million customers in the Netherlands, Belgium and Germany, of which 9.8 million are actively using mobile channels. OneApp offers a single unified banking proposition that is continuously being extended with new functionalities (e.g. Apple Pay). In addition, all 9.8 million active Retail customers in Belgium and the Netherlands have the same OneWeb online banking environment. This is an outcome of the unite be+nl transformation programme, which ended in the first half of 2021.

A positive impact of the pandemic was the acceleration of mobile banking, with high adoption by customers in Turkey (88%), Romania (72%) and Spain (59%). More than half of active ING customers – 51% – were mobile-only at end-2021, up from 40% in 2020.

In addition, mobile and card payment volumes more than doubled compared to 2020, reflecting the increasing use of contactless payments via third-party services like Apple Pay and our own Android solution in the banking app. In Poland customers can also use their mobile phone to make contactless ATM transactions and here the ING app has more functionality than our website (unique in the market). Over two-thirds (68%) of active customers in Poland use mobile banking.

Another fast-growing digital market is Romania where mobile sales have tripled since 2019. Customers here can access a complete offering of digital products from loans and insurance to investments, shopping programmes and virtual cards.

Remote advice

This digital shift also means more customers are now using remote video advice and digital self-service channels. We can connect with customers across multiple channels through ING's cloud-based customer interaction platform for phone, chat and video contacts. The customer interaction platform is used in nine countries to harmonise the experience and ensure customers receive the same services everywhere.

In the Netherlands, we saw a year-on-year increase of video contacts through ING Beeldgesprek, which enables customers to speak to an advisor about a new mortgage or investment product from the comfort of their own home. On average, it is used for around 7,500 customer conversations per month in the Netherlands and is now also available in Belgium, Spain, Italy and Germany. A similar remote advice service was launched in Turkey in March 2021 via the ING app. ING is the first bank to offer this service in Turkey.

In addition, more customers are using the chat function on our website and mobile app to reach out to us. On average, we handle around 22,500 chat interactions per month in each of the six countries where the service is offered.

Given the rise in digital interactions, we announced the closure of a number of bank branches. In March 2021, we announced the closure of 69 branches in the Netherlands by July 2022, and over the course of 2021 we closed 59 statutory branches in Belgium. Our business is built on both digital and real-life connections and there are still customers who prefer to visit us in person. To make sure these customers can still get in-person assistance, in the Netherlands, for example, we are expanding the number of ING service points (shops inside other shops) to 321. In some countries, like the Philippines, our Retail offering is entirely digital.

All but a limited number of branches remained open throughout the Covid-19 lockdowns, working by appointment only in most countries. In all our branches we took precautions to ensure the health and safety of our customers and employees, such as limiting the number of visitors, installing plexiglass screens and making hand sanitisers available.

Financing for consumers

Point-of-sale (POS) lending, where online merchants offer shoppers the option to 'buy now, pay later', is a new area offering opportunities for ING. In June, ING Ventures invested in POS platform Divido, which allows its partners to 'white-label' its technology. Merchants, banks and payment companies can brand the Divido platform as their own to give their customers the option of paying for their purchases in instalments when they check out online, or in-store. Based on this, ING launched its first European POS lending initiative in Spain, where pre-approved ING customers can pay in instalments for online purchase from enrolled merchants.

In addition to a physical POS offering in Turkey, we launched ING Shopper, a new digital sales channel that enables shoppers (including non-ING customers) to apply for an online loan at checkout (thanks to digital customer onboarding) or pay for their purchases in instalments. It also allows e-commerce merchants to grow their customer base by offering easy payment alternatives. For ING Orange Extra programme members there's an additional incentive to repay their loans interest-free.

In Romania, we're encouraging consumers to become more environmentally friendly by offering green loans with favourable rates for electric and hybrid cars. A pilot programme involving 1,000 loans was launched in the summer of 2021 as a limited offer. Around 180 loans were distributed by year-end and ING's share of the market for new electric and plug-in hybrid vehicle sales reached 11%. Building on this, in 2022 we intend to add eligible new green and sustainability products to increase our social responsibility impact.

In our mortgages business in the Netherlands, where around 60% of mortgages are sold through intermediaries, we have been making strides to improve our services, including faster processing times for their applications and fewer documents needing to be provided. In December 2021, intermediaries named ING as the best money provider in a survey by the national mortgage association (Nationale Hypotheekbond). In addition, we developed new mortgage propositions for customers nearing retirement age, and for international home buyers, and made it possible for customers to see their mortgages in the ING app and use it to make repayments.

At Interhyp in Germany, the HOME platform digitalises the mortgage process for home buyers, advisors, brokers and bank partners. Almost 500,000 Interhyp customers can connect directly to real-estate portals, create financing scenarios and upload documents from their smartphones, speeding up the mortgage decision process. Machine learning personalises the experience by matching (potential) buyers to advisors and mortgages for their needs, and providing property valuations. Mortgage advisors and brokers use HOME for processing mortgages and consultations with buyers via phone, video and chat messaging. To complete the end-to-end digitalisation of the mortgage process we're now focusing on integrating scoring mechanisms and digital signatures for instant approvals in just a few clicks. In 2021, Interhyp's market share rose to 11.6% in Germany (10% in 2020).

Business Banking

Our Business Banking segment is part of Retail Banking and serves around 1.7 million clients in seven markets (Belgium, Luxembourg, the Netherlands, Poland, Romania, Germany and Turkey). These range from self-employed and micro businesses to small and medium-sized enterprises (SMEs) and mid-corporate companies. We're using Touchpoint (ING's open banking technology platform) to digitalise and standardise our offering for business clients on ING's OneApp and OneWeb in Belgium, the Netherlands and Germany, with Luxembourg currently being migrated. This is helping to drive efficiency by avoiding duplication of services and unlocking synergies between the countries. In Belgium, all business clients now use OneApp and over 90% use OneWeb, providing a consistent experience for both their personal and professional financial needs. Further roll-outs are planned for Poland and Romania.

Our ambition to serve over 80% of SMEs digitally is in direct response to the increasing customer demand for digital solutions and self-servicing capabilities. To ensure the continuity of the quality customer relationships we have, we are focusing our efforts on the most important interactions with our customers, namely: KYC outreach for customer due diligence, onboarding, account opening, and loan or card requests. Each interaction is built in a modular way to ensure reusability across the global network, while leveraging and scaling local best practices. Invariably, automation underpins any improvement and supplies the speed needed to improve the customer experience.

Digital transformation of loan requests is end-to-end and focused on improving cycle times for the application process ('time to apply'), underwriting process ('time to yes') and fulfilment ('time to cash'). For example, Poland offers instant and fully automated lending journeys for disbursement of small tickets in less than two hours, whereas in Germany, semi-automated (fast-track) journeys for bigger tickets are possible within 48 hours.

We can add value for these clients through digital services that go beyond banking, such as factoring, liquidity management, tax accounting and by using APIs (application programming interfaces) that connect to third-party providers.

Wholesale Banking

In Wholesale Banking we believe our differentiators are our sector expertise, our network and our people. We continued in 2021 to focus on deepening client relationships and growing our franchise by unleashing our sector potential and delivering more of our network to our core clients in EMEA (Europe, the Middle East and Africa), Asia and the US. By this we mean partnering global product and sector specialists with local expert teams across our network to meet the increasingly sophisticated and complex cross-border needs of the companies we serve.

This is reflected in deals such as with Korea Ocean Business Corporation, a government agency that supports South Korea's maritime industry with ships and liquidity. The successful distribution of a $108.3 million out of the total $171.5 million loan to Korean investors – the third such transaction for KOBC in three years – relied on close cooperation between ING teams in Seoul and Singapore combined with our sector and product knowledge and distribution networks.

Our client segmentation model aligns our strengths with our clients' needs and is an important element for deepening relationships. ING's way of working allows us to respond rapidly to our clients' changing needs and to close the gap between local and global specialists, making an impact in our markets. During the year we continued to pair our sector knowledge and financial expertise to support companies with tailored advisory and daily banking, in line with the client segmentation model. We aim to provide relevant advice, data-driven insights and customised, integrated solutions that make our clients day-to-day banking more efficient and support their business ambitions.

Corporate clients also benefit from gains in speed, transparency, security and efficiency created by technologies such as blockchain and artificial intelligence. In 2021, Global Finance magazine named ING as the best bank for Commodity Finance in recognition of our efforts to modernise the market with digital trade finance initiatives such as Komgo, MineHub, Vakt, Marco Polo and Contour. Read more below in 'Innovating to stay a step ahead'.

Sustainability is another area where we can make a real difference for clients. We work closely with companies to help them transition towards net-zero emissions by providing advice, insights and financing, including for green projects and new technology like battery storage. Recognising the challenges many companies face in their transition journey, Wholesale Banking's 2021 global brand campaign is built around 'sustainable finance for the real world', which features actual clients who are working to change their sectors or industries from the inside. In 2021, we also supported 147 sustainability-linked loans (SLLs), where rates are linked to a client's sustainability performance. These included several firsts in their sector or industry, cementing our position as a sustainability-linked pioneer.

Supporting customers in crisis

The last thing customers want to worry about in the midst of a crisis is their daily banking. We aim to ensure uninterrupted access to our call centres, online banking and ATMs, and to make it easy for our customers to make contactless payments and arrange their finances from home. But for some customers, a bigger concern may be their ability to pay back a mortgage, loan or credit card debt.

At the start of the pandemic, ING introduced a raft of measures worldwide to alleviate these concerns. These differed from country to country and included payment deferrals on mortgages, personal loans, credit cards and business loans to small and medium-sized companies, as well as financing solutions to help companies bridge their short-term liquidity needs. In harder hit sectors we proactively reached out to business clients with tailored solutions for their specific circumstances.

A 2021 Coalition Greenwich survey recognised ING as one of eight 'standout' banks for its support of corporate clients during the Covid-19 pandemic. This included maintaining a strong, coordinated and continuous flow of information between clients and internal departments to address their clients' evolving needs at the right time, accommodate their liquidity needs and allow more operational flexibility while managing the potential associated risks.

Loan demand in 2021 continued to be influenced by the economic effects of the Covid-19 pandemic. To support the provision of credit to companies and consumers, the European Central Bank modified the terms and conditions of its third targeted longer-term refinancing operations (TLTRO III) programme. Under these conditions (which ING has met), banks can borrow from the ECB at attractive conditions up to -100 basis points. The programme aims to stimulate the real economy by providing funding to banks at favourable interest rates that they can pass on to their customers and business clients.

At the same time, signs of economic recovery during the year were tempered by other issues like supply chain disruptions, rising energy prices and rising inflation. We continue to support our customers and business clients wherever we can.

Financial health

According to the financial health working group convened by the United Nations Secretary-General's Special Advocate for Inclusive Finance for Development, having financial health as a core business purpose contributes to happier, more engaged and more profitable customers (larger deposit balances, lower delinquency and loan loss), leading to greater financial resilience and enhanced brand and reputation. ING is part of this working group and our approach to financial health has been showcased as a best practice.

In 2021, we renewed our financial health approach to integrate it more closely into our core business in order to increase the impact on our customers and target our support to the local communities where we operate.

This includes embedding into our business some of the activities related to the Think Forward Initiative (TFI), which was discontinued in December 2021. ING and its TFI partners believe the initiative has achieved key milestones in fulfilling its purpose to empower people financially through its research and insights. Since it was started in 2016, TFI has supported almost 60 research projects, 19 start-ups and reached more than 100 million people in 18 countries with insights aimed at improving their financial health. We will continue to use our insights into money management and people's financial behaviour to empower our customers and communities to make better financial decisions.

In late 2021, we started defining new ambitions for our financial health approach. We'll determine the specific financial health challenges in our local markets and actions we can take in each country to support financially vulnerable customers, for example with programmes to save structurally for the future or overcome problematic debt. This reflects our belief that financial health contributes to a healthy economy and helps drive social progress. We are committed to reporting on our financial health activities and progress systematically and regularly, as we do for climate action. Our efforts are aligned with the Principles for Responsible Banking and we're working with the United Nations Environment Programme Finance Initiative (UNEP FI) to contribute to setting a standard for financial health impact for our industry.
We think our biggest impact on improving financial health can be made through our products and services by equipping our customers with actionable insights, innovative tools and real-time information to make better, smarter financial choices now and in the future.

Financial health is also about financial inclusion. By this we mean creating equal opportunities and making sure our products, services and facilities are accessible to everyone in a way that best suits people's needs and abilities. Examples of this include talking ATMs in Poland, the Netherlands and Turkey, and an accessible bank card in the Netherlands and Belgium; the card has a notch in it so customers with a visual impairment can insert it correctly when it's used. It's also designed to support customers with limited hand functionality. In Australia we provide phone banking for customers with speech or hearing impairments via the national relay service, and sign language services are available in some bank branches in Poland. When it comes to accessible content on our websites we're working towards the web content accessibility guidelines standard (WCAG 2.1).

By using our knowledge of digitalisation and insights about money we've created innovative tools that help our customers manage their finances and improve their financial health. Among these are a personal budget planner and categorisation tool that helps customers in Germany to plan and control their expenses better and discover potential savings and a 'Smart Saver' tool that helps customers in Poland build their savings with automated transfers to a special account.

Customers in Romania, and, since early 2021, in Germany and Belgium, can use their banking app to access Dealwise, ING's smart shopping platform. Dealwise promotes healthier financial behaviour and encourages users to save on their daily spending by gathering the best shopping deals and giving them cash back on purchases. More than 1.1 million users have generated €30 million in transactions so far, which in turn has helped customers save almost €1.72 million in cashbacks. Merchants too can benefit from the insights they gain into customer behaviour on the platform. Over 1,100 brands offering fashion, accessories, electronics and even travel deals have partnered with Dealwise.

In the Netherlands, ING has a similar programme where customers can earn points from their daily banking activities, which they can use in ING's online shop to buy a wide range of fashion, beauty, household and other products at discount prices. Initiated in 2006, ING Points was added to the OneApp in 2021, delivering a turnover of €75 million on 2.4 million products sold to 812,000 customers.
As a result of our financial health activities, 72.2% of our customer base felt financially empowered by ING in 2021 (71% in 2020). In absolute numbers this is 27.5 million people, compared to 27.8 million people in 2020, due to the discontinuation of our Retail activities in Austria and the Czech Republic in 2021. More details on the scope and reporting methodology can be found on ing.com.

Achieving our business goals

Achieving our business goals is about growing our primary relationships by providing a differentiating experience that's safe and secure while driving capital and cost efficiency. We achieve this by deploying our resources effectively on activities that deliver sustainable returns, diversifying our income, driving an engaging and personalised experience through end-to-end digitalisation and data analytics, and developing new propositions that meet our customers' needs in areas such as insurance, investments and consumer lending.

To really stand out, we need to focus on our strengths. We have strong brand recognition. A higher-than-average Net Promoter Score (NPS) in many of our markets is indicative of customer satisfaction. We've built a solid Tech foundation for digitalising and innovating to improve the customer experience, make processes more efficient and effective, and bring new solutions to our markets faster. And not forgetting our people – even in a digital world ours is a relationship business – our people are crucial to our success.

Healthy business

To remain a financially healthy company, we have to put our people, capital and investments to work in markets and activities that provide the best growth opportunities and sustainable returns. Retail markets where ING has mostly savings and current accounts put pressure on our business model, especially in the negative interest rate environment. Rather than remain in markets where we do not see growth opportunities, we prefer to reallocate our resources to markets where we are growing. This led to our decision in 2021 to discontinue our Retail

Banking businesses in several countries that we believe have insufficient scale to maintain a reasonable franchise.

In Austria, we transferred our Retail operations to bank99, the digital banking arm of the Austrian postal service, and in the Czech Republic around half of ING's Retail customers and 60% of client balances were transferred to Raiffeisenbank. In December, following a strategic review of our activities, we announced we would also exit the French Retail Banking market where ING has been active as an online bank since 2000. In all these markets our Wholesale Banking activities will continue.

Diversifying our income: investment products

With customers looking for alternatives to savings accounts in the negative interest market, we're empowering them with smart digital investment tools like My Money Coach in Italy, Naranja+ in Spain and Easy Invest in the Netherlands. At the same time, growing our fee and commission income, and increasing its share in our overall income mix, remain very important as our net income is impacted by the negative or low interest rate environment. In 2021, fee income rose 17% in 2021, contributing 19% to our full-year income.

In 2021, we introduced Komfort-Anlage (Comfort Investing) in Germany, a low-threshold entry point for new investors. From as little as one euro, customers can invest in one of seven ING World funds according to their risk appetite. Komfort-Anlage is based on ING Spain's Naranja+ product and owes its scalability to reusable Touchpoint components that enable it to be rolled out in other countries. Since its introduction in June 2021, it has attracted 10,000 investors and €120 million in assets under management. Of these customers, 85% have a recurrent investment plan.

Also in Germany we offer securities savings plans that allow customers to invest small amounts in over 1,800 securities (shares, exchange-traded funds or mutual plans). More than half a million savings plans were activated in 2021, growing this service from 0.6 million savings plans at end-2020 to 1.3 million at end-2021. For more experienced investors, we have self-directed accounts as well as robo-advice from our fintech partner Scalable Capital, which has attracted more than €1.6 billion in assets under management.

This demand for digital investment products helped to boost our fee income to record levels in 2021, attracting €79 billion in assets under management (AuM) in Germany at year-end (39% higher than end-2020) and close to €15 billion in Spain (€12.3 billion in 2020). In Belgium and the Netherlands, investment product balances increased respectively to €42.6 billion (from €36.8 billion in 2020) and €40.1 billion (from €32.2 billion in 2020).

Insurance

In various Retail markets ING has teamed up with insurance partners to offer our customers insurance products via the ING app or website, based on the local needs within those markets. With insurer NN we're offering insurance linked to loans in Belgium, Poland, Romania, Turkey and Spain, as well as a range of standalone non-life insurance policies in Belgium, the Netherlands and Poland. In some countries we also team up with other insurers for additional protection needs. For example, in 2021 we introduced a new health insurance product in Romania and device protection in Turkey, as well as distributing pensions and offering insurance-based investment products in several countries.

Through our bancassurance offering in partnership with insurer AXA we've launched 20 products in five countries to date. Given the reduced number of markets now covered by the partnership (following ING's exit from the Retail Banking markets in the Czech Republic and Austria), which decreases the level of scalability, we announced our intention in November 2021 to refocus the scope of the partnership from a central platform approach to the local delivery of existing insurance propositions.

Daily banking and savings

Everyday Roundup (ERU) is a digital product that aims to make saving simpler at a time when customers may be financially vulnerable (due to the economic disruption caused by Covid-19). Used by more than 1 million customers in five countries (Poland, Australia, Germany, Romania and Turkey), it works by rounding up every transaction on a customer's current account and automatically transferring the difference to their savings account. ING in Australia also has a roundup option for mortgages while in Germany customers can use the service to make donations to support the UN's sustainable development goals. The next step will be investments.

Increased emphasis on fighting financial economic crime has necessitated investments in areas like know your customer and data protection over the past years with the aim of ensuring our relationships with our clients meet the highest due-diligence standards. In light of this, ING introduced a banking service fee for Wholesale Banking clients in 2021. It includes access to our CoorpID digital vault where they can store, manage and share their know your customer documentation, to make this often time-consuming process easier. Although there was some resistance to the fee, many clients see the benefits of making banking safer and more secure.

Similarly, banking fees for Retail customers in the Netherlands and Belgium were increased in 2021 in the context of higher regulatory costs combined with increasing investments in digitalisation, with a further rise announced for Dutch customers from January 2022. In Germany, where we introduced a monthly fee for current accounts linked to non-primary customers, we will also now charge a €0.99 fee a month for the girocard debit card from March 2022, reflecting a trend towards payment cards that are more suited to e-commerce and contactless payments. The fee will apply to all new customers. Existing customers will be approached for consent.

The negative interest rate environment is disadvantageous for savers and for banks. Some banks, including ING, are already charging a negative interest rate fee for savings above a certain threshold. At ING, this threshold is currently set at different levels across our euro markets, depending on local market dynamics and regulatory frameworks.

In October 2021, we reached an agreement with the Dutch consumer association to compensate certain Dutch Retail customers for past interest charges on revolving consumer loans that allegedly did not sufficiently follow market rates. We expect any such compensation to be paid before the end of 2022. Read more in the ‘Legal proceedings’ paragraph of the additional notes to the consolidated financial statements.

Digitalisation

We aim to digitalise our processes in order to increase productivity and decrease the time customers have to spend on banking. The Covid-19 pandemic accelerated the shift to mobile and online banking, with customers increasingly using their phones to connect to apps for shopping, making contactless payments, opening a bank account and getting instant financing.

Although ING has been a frontrunner in online banking (we were one of the first direct banks in Europe), we're no longer the only bank with digital ambitions. As we saw during the many Covid lockdowns, the demand for digital and contactless banking has grown exponentially, making digital delivery an essential requirement for all banks. Here, operational excellence matters.

Operational excellence leads to a better customer experience. It ensures effective and efficient processes that improve productivity and enable us to deliver high-quality services more easily. Operations management is therefore one of the Big 6 capabilities ING has identified for success, along with related capabilities such as customer experience, non-financial risk management and data fluency. Looking back at past years, we've learnt that by sharing our expertise and strengths across our countries we can be more effective in reducing duplication of business services and processes,developing new solutions and achieving end-to-end digitalisation.

ING Business Shared Services BV (IBSS) is a fully owned service company employing around 13% of ING's global workforce. Its shared service centres in Bratislava, Manila, Poland (Katowice and Warsaw) and Bucharest contribute to ING's digital transformation and cross-border scalability by providing shared operational and technology services in areas such as business operations, tech development, non-financial risk and compliance, KYC, data analytics and modelling.

Scalable technology

Given the costs and complexities of cross-border integration, we stopped the Maggie transformation programme (that aimed to standardise our Retail offering in four countries) in late 2020. Instead we're focusing on using our scalable technology – shared data lakes, infrastructure and reusable app components– to implement global products locally. In this way we can build on what we already have and scale it to our markets, adapting it to local needs as necessary.

To enable us to build and share standardised IT components and reusable services we developed Touchpoint, our open banking technology platform. It provides access to 31.8 million customers (over 80% of our customer base) using common architecture and shared application programming interfaces (APIs).

Related to Touchpoint, ING has built a private cloud (IPC) where we store and manage applications and data such as channel applications, core bank systems and other banking applications. Given its flexibility and scalability, cloud computing is an important component for scaling our digital capabilities. To keep up with global usage, scalability, availability and delivery speed, ING uses public cloud computing in addition to the IPC. By end-2021, 34.2% of our global infrastructure was running on IPC (up from 25% in 2020) following the migration to IPC of ING in the Netherlands, Belgium and Spain. One of the many advantages of a cloud-based infrastructure is that security-patching of databases can be done globally, with near-to-zero downtime. This new feature was added to IPC in 4Q 2021 and in the future will allow for the rapid global roll-out of other new cloud-based improvements. As an early adopter of cloud technology, ING joined forces with other banks in 2021 to establish the European Cloud User Coalition (ECUC). It aims to develop common security standards and best practices to mitigate security risks and address regulatory requirements around data privacy and sovereignty.

To consistently manage and protect data across ING we have built a set of data repositories: the data lake. By using a universal data language called ING Esperanto we make it easier to share and use data across the company.

OnePipeline is the third element of our scalable technology, providing engineers with a consistent and secure capability to develop, test and deploy fully automated software across ING. Around 74% of our engineers were using OnePipeline at the end of 2021.

Scalable technology allows us to create global and local propositions that can be shared across our business quickly and easily. We are focusing on products in three areas: investment products, consumer finance and insurance.

Open banking

In an age of disruption and changing customer expectations, banks have to keep adapting their services to become safer, more personalised, easier and more accessible for customers. Moreover, the introduction of the second European Payment Service Directive (PSD2) in 2019 changed the competitive landscape of banks dramatically, opening it up to non-traditional payments providers. This has created an uneven playing field disadvantaging more heavily regulated traditional banks. At the same time, it's the catalyst for banks to rethink traditional products and services and create new customer experiences using application programming interfaces (APIs).

More than compliance or regulated access via PSD2, open banking is about connecting with customers directly or through a third party (API banking) and adding value with new banking and 'beyond banking' propositions (embedded finance). Additionally, there are opportunities for Banking-as-a-Service (BaaS), which enables businesses to integrate banking processes into their own non-bank products through a secure and regulated infrastructure.

Open banking offers opportunities for us to meet the needs of our customers by connecting to the apps where they're shopping and socialising. This is supported by our open banking platform, which provides the capabilities we need to establish secure, scalable, compliant and uniform connectivity with external parties using APIs. These API-based propositions can often be used in multiple ways in new and traditional channels, apps, and platforms.

At the same time, there are inherent risks to sharing sensitive data and it's critical to protect the privacy and security of our customers' data. Each participant in the open banking ecosystem has a duty to treat data with the utmost care and to educate users on data permissions and privacy. Under European data privacy laws explicit consent is required from the account holder before sharing their data. For consumers, where their data is stored could also be a concern.

API-enabled services such as Minna (subscription management via OneApp) and small and medium-sized enterprise (SME) loans via Amazon's sellers platform showcase how open banking is digitalising our customer and partner relationships. The pandemic accelerated the need for end-to-end digitalisation and we've found that these ambitions go hand-in-hand with realising our open banking objectives. By breaking down our back office into modular, reusable, real-time services we can ultimately offer them externally to our customers and partners. Internal applications using API services to exchange data are built with this external reuse in mind. The recent go-live of our transaction screening API shows how we're putting this vision into practice. Now, payment service providers can integrate ING's capabilities for screening transactions into their systems of choice or customer journeys. We believe open banking and APIs are a great way to foster innovation, accelerate digitalisation and integrate and co-create with others, and are pursuing this across the bank and with our partners.

Given the rising demand for open banking services, we decided in 2021 to discontinue smart money app Yolt and focus our attention on growing its business-to-business open banking platform Yolt Technology Services. It provides businesses across Europe with the APIs they need to connect to users' bank accounts and initiate payments. In this way we are helping to speed up the adoption of open banking and empowering businesses to grow. Yolt Technology Services offers businesses API coverage to over 95% of bank accounts in the Netherlands, France and the UK, and its API infrastructure can connect to 80% of bank accounts in Belgium, Italy and Spain. By end-2021, it had made over two billion API calls – single uses of its API.

Payments

Open banking has changed the way people pay, giving consumers more options and opening up this service to non-traditional providers. This has accelerated the trend for instant payments executed in real time 24/7, 365 days a year. ING makes it possible for customers to make instant payments from the Netherlands, Belgium and Spain to the rest of Europe and is expanding this capability to other countries. Customers can instantly request and receive money from friends and family via mobile phone apps. We're now working with major Dutch retailers to extend peer-to-peer payments (apps enabling users to request and receive payments instantly) so merchants can send their customers a mobile payment request on delivery of goods.

To speed up international money transfers, ING uses SWIFT gpi (global payments innovation) in 11 countries. SWIFT – the Society for Worldwide Interbank Financial Telecommunication – facilitates payments between financial institutions. Around 80% of SWIFT gpi transfers are completed on the same day, as compared with three to five days previously. Our 'proof of payment' module on InsideBusiness now includes gpi information that allows corporate clients to track and trace their international transfers, including fees and FX conversions made during processing through our network of correspondent banks. For our Business Banking customers, we provide a bulk payment functionality API that makes it possible to pay up to 5,000 recipients simultaneously and which supports multiple strong customer authentication for all types of payments requiring two or more authorisations.

We announced in October 2021 that we are phasing out the services of our Payvision subsidiary by the second quarter of 2022. Acquired by ING in 2018 to grow our share in the e-commerce/online merchant payments market, Payvision offers business clients an omni-channel payments platform. However, this market has evolved faster than we anticipated, and is increasingly competitive and capital intensive. After thoroughly evaluating all options we concluded it's not feasible for ING to achieve its ambitions with Payvision. Until it's wound down, Payvision will continue to fulfil its contractual obligations and assist clients in the move to a new service provider. ING will continue to serve business clients in the offline point-of-sale market and in e-commerce payments, for example through providers such as iDeal in the Netherlands. Given iDeal's dominance in the local payments market, ING and other Dutch banks decided to discontinue the Payconiq payments app in the Netherlands from January 2022. Conceived by ING in 2014 and a stand-alone company since 2018, Payconiq remains active in other markets such as Belgium (via ING's OneApp) and Luxembourg.

Earning the primary relationship

Earning the primary relationship is an important driver for profitable growth. It leads to deeper relationships, greater customer satisfaction and ultimately customers choosing us for more of their banking needs. We want our customers to do more than just some of their banking with us; we want to be their first partner, where they deposit their salary, handle their payments, manage their assets, take out loans and do most of their other banking business.

In Retail Banking, primary customers have at least two active ING products. One of these should be a current account into which they deposit regular income. In Wholesale Banking, these are clients with lending and daily banking products and at least one other product generating recurring revenues.
ING grew the number of primary customers by 481,000 to 14.3 million in 2021, 3.5% higher than at end-2020.

Measuring customer satisfaction

One of the ways we measure our progress is through the Net Promoter Score (NPS), which indicates customer satisfaction and loyalty (whether they would recommend ING to others) compared to selected peers in each market. The score is calculated as the difference between the percentage of promoters (who rate ING as 9 or 10 out of 10) and detractors (those scoring ING below 6). Our aim is to achieve a number one NPS ranking in all our Retail markets, with a 10-point lead over our main competitors.

Retail Banking

Based on a rolling average of our NPS scores in 2021, ING ranked number one at year-end in five of our 11 Retail markets (six out 14 markets in 2020, which then had included Austria, the Czech Republic and France). In four of these we are more than 10 points ahead of our nearest competitor. In Australia, Spain and Germany we widened the gap on the number two player and maintained our number one position in Poland and Romania. In the Netherlands, where we rank second, our NPS score improved to close the gap on the top scorer, while in Italy we moved up two positions in the ranking.

Business Banking

In this segment, serving self-employed and micro businesses, small and medium-sized enterprises and mid-corporate companies, we measure NPS in four markets (on a scale of -100 to +100):

- **Netherlands**: NPS for mid-corporate clients improved to +30.5 (from +18.4 in 4Q 2020), well above our competitors (-19.2), based on feedback from clients who do business with multiple banks. In particular clients appreciate ING's sector knowledge combined with regional presence, with satisfaction highest in the services, industry and transport and logistics sectors. For Real Estate Finance clients there is a relational and transactional survey in place with a healthy +39 outcome in 2021. However, there is room to improve the digital customer experience for small and medium-sized businesses and for self-employed clients where NPS respectively declined to -39 (from -26 in 4Q 2020) and -23 (from -18).
- **Poland**: combined NPS for SME and mid-corporate clients improved to +47 (from +43 in 4Q 2020) and the relationship NPS for the self-employed and micro segment the NPS was +49.1.
- **Romania**: NPS for mid-corporates rose to +64 (from +54 in 2020) and for micro clients and SMEs it increased to +51 (from +43 in 2020), putting ING in joint first place in both categories.
- **Belgium**: NPS for mid-corporate and institutional clients (MCIs) improved to -33 in December 2021 (from -40 in January 2021), with an average score of -31 over the year. The NPS for self-employed and micro clients (SEMs) decreased to -55 from -32 at the start of 2021, scoring an average of -47 over the year.

This can be attributed to several factors including a new loans policy, branch closures, proximity to clients and ease of contact.

Wholesale Banking

In Wholesale Banking we measure both relational and transactional NPS. The relational NPS programme runs in 32 Wholesale Banking markets and is a qualitative measure of client satisfaction and how likely they are to recommend ING. The transactional NPS programme measures satisfaction with regards to specific transactions and services and the ease of doing business with ING. This is run in 23 countries.

In 2021, ING's relationship NPS score rose to +59.2 (on a scale of -100 to +100), from +56.3 in 2020, and 26% ahead of the industry average of +46.9 (+49 in 2020). The response rate increased to 62% from 60.4% and is based on clients representing more than 55% of Wholesale Banking revenue. In three of our four client segments (Platinum, Gold and Silver) NPS was higher; among Sapphire clients it retracted by 5% to 64.7. Six out of seven sectors registered stronger NPS, with Financial Institutions joining for the first time in a pilot programme. The higher scores suggest that clients appreciate our approach and that Wholesale Banking is succeeding in its strategy to focus on core clients, with as a result more resources allocated to a smaller group of clients and higher client satisfaction.
On the transactional side, the number of invites increased by ~68% compared to 2020, with an overall response rate of ~45%. A Client Services survey in June 2021 included a Transaction Services-related question. Here the response rate was ~48% and client services/transaction services scored above target with an overall satisfaction of 8.6 and a customer efforts score (measuring ease of doing business with ING) of 8.5. Also in June 2021, a Trade Financial Services survey was carried out in EMEA and APAC, with these clients rating ING above target with overall satisfaction of 8.8 and customer efforts score of 8.6.

External recognition

ING's digital leadership, customer experience and innovative products were recognised with several 'best bank' awards in 2021:

- Best bank in Spain at the 2021 HelpMyCash awards. ING was rated 4.4 out of 5 by customers. The sector average was 3.6.
- Euromoney named ING best bank in Poland and best bank for SMEs in Central and Eastern Europe, based on digital leadership, client-centricity and support for businesses during the pandemic.
- First in the Polish Banking Stars 2021 ranking by financial newspaper Dziennik Gazeta Prawna and PwC for the sixth consecutive year.
- ING in the Philippines named best digital bank for customer experience (Digital Banker magazine), and best savings bank, fastest-growing retail bank and most innovative mobile savings app (Global Banking & Finance Review).
- Recognised as most supportive bank through the Covid-19 crisis by trade commodity finance media outlet TXF.

Innovating to stay a step ahead

Innovation is a prerequisite for remaining relevant to our customers and living up to our purpose in a fast-changing world. It's how we can create new and differentiating experiences that deepen our engagement with customers and improve our own operational excellence. Ever since the introduction of direct banking in 1997, ING has been finding ways to make banking easier, smarter and more personal for our customers. Many of these advances stem from twinning the latest technologies with data insights. Growing demand for digital solutions is also spurring new ideas.

To increase the speed and impact of our innovation, at the start of 2021 we merged all of our innovation activities into one business area called ING Neo, which reports directly to the chief executive officer. This includes our beyond banking and platform activities in Retail Banking, Wholesale Banking innovation, the chief innovation office, ING Labs and our investment vehicle ING Ventures.

We're concentrating our innovation efforts on five value spaces chosen for their relative market size, potential to disrupt, and ING's right to play in those markets: housing, trade, disrupt lending, financial health, and safe and compliant. Closely related to our core business, these value spaces address trends that we believe will impact our customers and our business in areas such as customer convenience and access, sustainability, automation and digitalisation.

We've learnt that it takes time for an innovation to be widely adopted and reach the scale it needs to have an impact. This requires longer horizons and different ways of measuring success while still within a reasonable time frame for ING. New, non-traditional products and services also require a different approach to evaluating risk. ING Neo therefore has its own second line of defence (which reports into the group line), ensuring compliance by design and the right risk and control frameworks for our innovation activities.

How we innovate

Innovative ideas come from inside and outside ING. We encourage our employees to think creatively and turn their ideas into opportunities through hackathons and initiatives like CX Day (to improve customer experience). In addition, ING's Innovation Summit aims to raise awareness among all employees of innovation trends and activities, and innovation ambassadors link our activities more closely to our business goals. In November, ING's second virtual Innovation Summit was streamed to 26 countries and reached more than 2,000 users.

ING also has its own customised innovation methodology called PACE, which emphasises customers validation to ensure we're only developing what they really want. So far over 12,500 employees have been trained in PACE. In 2021, we set up a digital PACE Academy to move the training from the classroom to online and reach more colleagues. The PACE programme was recognised at the 2021 Stevie Awards for Great Employers in the categories Skills Training and Problem-solving Training.

Partner, invest and build

No-one knows what the future may hold, nor what technologies may emerge and we recognise we don't always have all the knowledge and skills in-house. That's why we partner with academic institutions like the Dutch Technical University of Delft on technologies like artificial intelligence, with consortiums like R3 on blockchain initiatives that are modernising commodity and trade finance, and with fintechs and others who look at banking from a different perspective.

ING Labs is our incubator for potential scale-ups where we work with various partners to validate and build new businesses for ING and our customers, such as Stemly, an AI-driven forecasting tool for supply chain managers, and Cobase, a cloud-based multi-bank platform for corporate clients. One of the first initiatives to be incubated in our Singapore Labs in 2018, Stemly was spun out as an independent venture in 2021, while Cobase, which was spun out earlier, became a minority shareholding in 2020. We believe combining corporate innovation with entrepreneurial experience contributes to a higher success and greater impact than either partner could achieve alone. In our four ING labs in Amsterdam, London, Singapore and Brussels we currently have 18 initiatives in the innovation funnel in our five value spaces. Global Finance magazine named ING as one of the best bank-sponsored innovation labs in its 2021 Innovators awards.

Through ING Ventures, our corporate venture capital fund, we make minority investments in early-stage companies with a strategic relevance for ING. These are mainly fintechs developing disruptive technologies that will ensure our customers get access to best-in-class services. In 2021, the size of the fund was €350 million.

In total, ING had 114 active fintech partnerships at end-2021, of which 17 are among 34 ING Ventures investments. These include eXate (data privacy and security fintech); Divido (buy-now-pay-later platform); Flowcast (AI-powered credit decisions); PRODA (commercial real estate automation); and Stemly (AI forecasting tool for supply chain managers).

In the housing value space, ING partnered with property valuation firm Sprengnetter on Scoperty, a digital marketplace that aims to make Germany's real-estate market more transparent. With valuation estimates for more than 35 million residential properties, it creates a 'pre-market' where buyers can make a bid directly to the seller before the property is officially listed. Scoperty also provides related services such as sales support and mortgage qualification, which is aligned with ING's independent mortgage brokerage platform Interhyp, offering access to 400 lenders.

In the safe and compliant value space, Blacksmith KYC and CoorpID are two initiatives being implemented globally for KYC processes. Blacksmith's digital policy management is designed to help banks digitalise and accelerate know your customer workflows, provide insight into industry practices and better monitor financial economic crime risk exposure, while CoorpID gives corporate clients a platform to easily store, manage and synchronise KYC documents.

For our Business Banking clients, various fintech partnerships are opening up new sources of financing to help companies find the right loans for their businesses. Countingup is a mobile banking app for self-employed entrepreneurs and freelancers that combines accounting and banking features into one seamless solution to reduce operating complexity and cost.

Not all our collaborations lead to new products or services. We've stopped over 90 partnerships so far, mostly after unsuccessful or unsatisfactory proofs of concept.

Distributed ledger technology and blockchain

When it comes to distributed ledger technology (DLT) and blockchain, ING was an early adopter of the technology and is considered an industry leader, consistently ranked among Forbes magazine's top-50 companies active in this area (for the third consecutive year in 2021).

Komgo – previously called Easy Trading Connect – is a former ING Innovation Bootcamp winner and one of the first to use DLT to digitalise commodities trade financing in 2017. In May 2021, ING-backed Komgo raised CHF26 million (€24.9 million) in its third funding round from a consortium of investors including ING Ventures. Spurred by demand for digital services during the pandemic, Komgo saw a 50% increase in trade finance transactions on its platform and a 65% increase in clients in the past year. Other DLT solutions include Contour, enabling letters of credit to be processed in under 24 hours (from 10 days); and HQLAx, facilitating trades in high-quality liquid assets, which was commercially launched in December 2020.

We amplify our DLT impact by addressing how our solutions can solve key problems in the finance industry and work with others to produce open-source assets that can serve and influence the wider community. Among others, ING contributed to the development of open-source blockchain platform Corda (with R3) and Ethereum, as well as zero-knowledge proof solutions to improve privacy and security of DLT-based transactions.

We continue to support the adoption of the technology in different areas of the bank and to explore additional opportunities as client demand, regulation and the technology evolve.

Data, AI and advanced analytics

In our competitive industry, data analytics stands to give us an edge. It goes hand-in-hand with digitalisation and we can use analytics to create actionable insights about customers and improve our daily decision-making. Advanced analytics techniques (machine learning and big data) can be applied to automate processes, making them faster and better; create better products and services; and fight financial crime. In 2021, we initiated a programme to further develop and strengthen our global analytics strategy and align it with our business goals, moving analytics closer to customer experience-related activities and creating a global community of data and analytics experts.

ING Analytics delivers solutions in areas such as customer interaction, smart pricing strategies and risk management, innovation, anti-money laundering, people analytics, automation and for Wholesale Banking. In 2021, we further invested in an analytics platform to service the analytics needs of ING. It has over 2,000 users working on more than 300 unique projects across the bank.

One of the ways we use AI to improve the customer experience is with chatbots, which are available 24/7 to answer questions and interact with customers. In Germany, our virtual assistant pING was able to answer 7.6 million customer queries in 2021; the recogniton rate for current account questions, for example, improved to 95.7% from 94.2% the previous year. INGo in Turkey has a 92% accuracy score on customer queries and can also assist with money transfers, loan applications, changing passwords and locating the nearest ATM. Since its introduction in 2018, it has been further improved and 'humanised' to make small talk and jokes with customers and proactively reach out on birthdays and other special occasions. In 2021, INGo had around 900,000 users in 5.1 million chat sessions and approved 476 million lira worth of loans.

Some of our fintech partnerships enhance our data capabilities, such as London-based data security company Exate, which makes it possible to securely share data with greater speed and efficiency. This will allow ING to test new software on real data to ensure effectiveness in production and enable closer collaboration with external partners across borders. Other solutions delivered by ING Analytics in 2021 were Nadia, a robot that automates repetitive tasks in our non-financial risk database in seven ING countries and SAIO, which automates financial and other administrative processes for business customers in Poland.

Sustainable business

Being sustainable is not just about reducing our own environmental footprint. We see it as an opportunity to use our experience and knowledge to support our clients on their own sustainability journeys. Our biggest impact is through our financing, via the loans we provide. That's why in 2018 we committed to steering our lending portfolio towards meeting the well-below two-degree goal of the Paris Agreement – an ambition we sharpened in 2021 when we joined the Net-Zero Banking Alliance. We use our Terra approach to align our portfolio with our ambitions, as well as to measure and report on our progress.

Recognising the merit of disclosing absolute greenhouse gas emissions we started doing so in our integrated climate report published in September 2021 (available on ing.com). This report also gives a broader overview of all the elements of our climate action approach, including how we assess climate risks and take action to mitigate them.

Terra approach

Terra helps us to steer our portfolio away from high-carbon technology towards the new low-carbon technology needed to reach these net-zero goals in the nine sectors most responsible for climate change. These are power generation, fossil fuels, automotive, shipping, aviation, steel, cement, residential mortgages and commercial real estate. To measure our progress, Terra uses the most appropriate methodology available per sector, given that each has its own transition pathway, and that some sectors are further along on their journeys.

One of the methodologies is PACTA for Banks, which ING co-created with 2DII (the 2° Investing Initiative). It looks at the technology shift that's needed across certain sectors to slow global warming and then measures this against the actual technology clients are using or plan to use in the future. For example, in the automotive sector we measure the number of internal combustion engines our clients are making compared to electric vehicles and based on science-based transition pathways, we can then see what needs to shift, by how much and when. This is where financing comes in, and where ING can have an impact in the real economy.

Reporting process

The process for reporting on Terra consists of a number of steps, most of them carried out by ING's Global Sustainability department in conjunction with colleagues in the front office. Required internal data relating to our portfolio composition is made available soon after ING's year-end close in February. External data relating to climate performances is collected around April. The external data is checked for consistency and matched with our internal data. A year-on-year portfolio comparison is made to analyse fluctuations at company or asset level for each sector. This helps us understand the drivers behind any changes, which are usually attributable to the climate performance of our clients, the composition of our sector portfolios or data improvements. When necessary, scenarios and targets are updated in conjunction with external parties.

Once the data is validated we draft our progress report, which since 2021 has been incorporated into the integrated climate report. The report is approved at board level and published in September of the reporting year. As such, all progress reported in 2021 relates to 2020. Reporting on progress in the shipping sector is linked to and aligned with the Poseidon Principles timelines. The report on 2020 year-end data was published in December 2021.

Targets and progress

We are currently working on incorporating our updated ambition into our Terra approach and aim to have the steps and intermediate targets needed for a net-zero pathway for all nine sectors by end-2022.

As a first step, we've updated our target for upstream oil and gas in line with the International Energy Agency's net-zero scenario. Our aim is to reduce financing to upstream oil and gas by 12% by 2025 (from the around €4 billion we loaned the industry in 2019) by decreasing our exposure in the sector and engaging with clients to help them shift to low-carbon technology. This new target reflects the accelerated pace that's needed to bring about change. Previously we had aimed to reduce financing in this sector by 19% by 2040.

To measure our progress we use the 2DII PACTA 'economic activities' methodology, which has two metrics to identify the carbon intensity of the Energy sector. For 'power generation' the alignment metric we use is emissions intensity. For 'fossil fuels' (coal, oil & gas) we use the 'portfolio financing trend', which requires an absolute reduction in the financing of primary energy production by reducing the size of our upstream oil & gas and thermal coal mining portfolios. Both metrics use the assumptions of International Energy Agency's net-zero scenario pathway to reduce the carbon intensity of global power generation.

Financing and advising our clients

As a financial institution we see it as our role to support the transition to net zero through our financing and by using our knowledge and insights to support our clients in their own transitions towards a greener future. We believe we can have more impact with what we do finance than what we don't finance. So while we say 'no' to financing certain businesses and sectors, in others we say 'yes but', outlining sustainability changes clients have to make to reach net zero.

Our integrated climate strategy helps us decide what activities we'll support and those we'll no longer finance. Our approach is closely aligned with the climate goals of the Paris Agreement, as well as the objectives of the European Commission's (EC's) Green Deal, which provides a framework for Europe's journey to achieve net-zero greenhouse gas emissions by 2050. It also aims to decouple economic growth from resource use and ensure economic inclusivity so no person or place is left behind.

European Taxonomy regulation, Article 8 Delegated Act

Throughout 2021, the EC published a set of policies and regulations aimed at channelling money towards sustainable activities and creating a level playing field for both companies and investors. This included defining which activities are considered to be environmentally sustainable and creating a common classification system for these activities: the European Taxonomy (EUT).

The EUT regulation aims to redirect capital flows to support the transition, help generate sustainable and inclusive growth and prevent greenwashing. Moreover, the EC has started translating its six environmental goals into technical screening criteria. These six goals are: climate mitigation, climate adaption, the sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems. Both financial services companies and non-financial companies are called upon to scrutinise their balance sheets with regards to climate change mitigation and adaptation in line with these criteria under the Climate Delegated Act (DA).

The EU's pathway to 2050 is laid out in a phased approach, with the first phase described in the DA Article 8 of the EUT regulation published in June 2021. Within the scope of Article 8 DA, all non-financial companies in the EU required to disclose ESG information under the non-financial reporting directive (NFRD companies) will have to determine the parts of their turnover, capital and operating expenditures that are eligible for inclusion in the EUT framework. Financial companies, including ING, will reuse the disclosed information from NFRD companies to determine their eligibility ratio. The eligible assets in scope can eventually be aligned with one or more of the six environmental goals, while doing no significant harm to any of the other goals and ensuring minimum safeguards.

ING sees the EUT as an opportunity to re-evaluate our assets and sustainable products, to be transparent about our efforts to our stakeholders, and ultimately to reach net zero. The EUT is still evolving and so are our sustainability efforts. It's essential to distinguish between our own efforts (through our Terra approach and sustainable finance products and services) and the incorporation of EUT requirements to reassess our assets for eligibility under the EC's scope.

When it comes to sustainable finance we categorise our lending activities to corporate clients as climate finance (funding to advance the transition) or social impact finance (driving social progress). Before providing financing we assess whether clients meet our environmental and social risk criteria, which are defined by our own risk appetite statement. Among the products we offer are green and social loans and bonds, sustainability-linked loans and bonds, and structured finance products.

We're continuously exploring new ways to support our clients in a sustainable way and aligned with the principles of the Loan Market Association, the International Capital Markets Association for green, social and sustainability-liked financial products and the EUT. We also proactively inform our clients about aligning their business activities with the EUT and have started incorporating published technical screening criteria into our loan assessment processes.

Energy policy in practice

Reducing society's reliance on fossil fuels is a vital contributor to the energy transmission and for reducing the emission of greenhouse gases. As part of our integrated sustainability strategy, we're working to align our energy portfolio (and other major CO2-emitting sectors) with net zero by 2050 targets through our Terra approach. However, transitioning from fossil-based fuels to low-carbon and renewable power sources requires massive investment in cleaner technologies and infrastructure to meet the growing demand for energy. This is a complex process that will not happen overnight and in the meantime the real economy still relies on fossil fuels. The least environmentally damaging of these is natural gas.

We believe that simply reallocating capital from high-carbon clients and assets to low-carbon ones does not support the transition we want to see in the real economy because it does not reduce the actual global CO2 emissions as the same assets can be financed through other means. Rather, we believe in working with our clients to support them in the transition towards reaching climate goals together. In the Terra approach, we've developed a distinct method for steering our portfolio by identifying carbon intensity metrics that reflect the shift that needs to happen in each specific sector to achieve climate goals.

Financing the transition

Since ING introduced the first sustainability-linked loan (SLL) for Philips in 2017, where rates are linked to the client's sustainability performance, the popularity of these products has increased as more and more companies push sustainability to the top of their strategic agendas. ING closed 147 sustainability-linked transactions in 2021. These included the world's biggest-yet SLL and the first in its sector for brewer AB InBev ($10.1 billion revolving credit facility linked to water-efficiency improvements, PET packaging recycling, renewable energy use and reduced emissions targets).

In addition, ING received four consecutive sustainability-related mandates from US data centre provider Aligned, acting as sole sustainability coordinator and sole green structuring advisor on the first SLL and first green securitisation in the data centre space.

Pioneering for the future

We also invest in the technology needed to reach a net-zero world, things like battery storage and solar power. In 2021, ING's innovative financing method to make inland shipping in the Netherlands more sustainable with a pay-per-use structure for renewable batteries, Zero Emissions Services (ZES), was recognised by the International Association of Ports and Harbours (IAPH) with a sustainability award in the climate and energy category. ING founded ZES along with consortium partners the Port of Rotterdam, energy company ENGIE, Finnish maritime technology company Wärtsilä and its first customer, Dutch brewer Heineken. The first vessel started sailing in September 2021.

ZES is also an example of how ING is exploring circular business models with various partners. The circular economy is a way for companies to reduce waste and emissions by rethinking their use of raw materials and resources from a 'take, make and waste' approach to 'reduce, reuse and recycle'. Companies like ZES stimulate other use models for depleted battery packs, giving them a second or even a third life after they are exchanged.

Another ING investment in green transport, electric bus company Ebusco made its debut on the Amsterdam stock exchange in October 2021. The initial public offering raised €300 million to fund Ebusco's international expansion and growth strategy and valued the company at around €1.3 billion. ING Corporate Investments continues to hold a 21% stake in Ebusco (initially acquired in 2016).

Accelerating the green economy

To accelerate a green and sustainable economy we provide financing for projects such as wind or solar energy and sustainability-linked financing that supports companies on their own sustainability journeys. In 2021, we closed 317 sustainable finance transactions (139 in 2020). These include 45 green and social loans, 147 sustainability-linked loans and 95 green, social, sustainability(-linked) and transition bonds. The remaining 30 transactions were spread among green and sustainability-linked schuldscheins (an investment form predominantly used in Germany), other sustainable investments, sustainable structured finance transactions and ESG advisory and green guarantees.

Sustainable bonds are an integral part of our sustaineble finance offering and are supported by ING's Green Bond Framework, which is in line with the Green Bond Principles of the International Capital Market Association. Among these are a euro-denominated green bond (two-part €1.1 billion) for US IT and data centre provider Equinix, which builds on the green finance framework ING created for them in 2020; and a $3.2 billion equivalent dual-currency bond offering for FedEx, part of which was a sustainability bond offering. ING was sole structuring advisor on the sustainability financing framework.

Through our social impact finance portfolio we lend to projects that lead to, for example, basic infrastructure improvements, community development or essential services. In December 2021, ING acted as joint coordinator of a social loan for the Ghanaian Ministry of Finance to set up national vocational training institutes across Ghana. The export credit facility is aligned with the standards of the Social Loan Principles. We also aim to make a positive contribution to human rights as financier, employer, taxpayer and as a driver of progress and prosperity. This is in line with the United Nations' Principles for Responsible Banking, of which ING was a founding signatory in 2019.

Who we finance is as important as what we finance. In 2021, lending to industry ESG leaders (based on the scores of independent ESG ratings provider Sustainalytics) grew to €37.8 billion from €28.5 billion in 2020. (This amount may overlap with the amounts reported under climate and social impact finance.)

In the Bloomberg league tables, ING ranked second for green, social and sustainability euro bond issues with more than €7.5 billion in bonds issued in 2021 (fourth with €3.8 billion in 2020), and fifth for green and sustainability-linked loans valued at €5.4 billion (fifth with €3.3 billion in 2020).

Greener homes

A significant part of our loan book – 42% – consists of residential mortgages, accounting for 68% of our Retail Banking loans. Houses generally account for about 22% of direct and indirect CO2 emissions in the EU. Our long-term vision is to empower our mortgage customers to reach net-zero emissions in their homes and to achieve the same for our mortgage portfolio by 2050. We're therefore working with our customers to improve the energy consumption of the houses we finance as a way of achieving our net-zero goals. However, there's a long way to go to help all our clients improve the energy efficiency of their homes.

Not knowing what renovations are most effective or what financing or subsidies are available to do so is one of the factors we've seen that is stopping people from taking action. Here banks can play a role. In addition, the energy mix varies from country to country and the energy intensity of homes is quite broad. To be able to understand how energy efficient homes are and make comparisons across markets a robust and standardised approach to data is necessary at country and European level and ambitious regulation will be critical to encourage a faster transition.

Our current carbon intensity measurement covers our Dutch, German, Belgian and Polish mortgage portfolios, with a combined outstanding lending amount of roughly €232 billion (78% of total mortgage outstandings) and more than 1.5 million financed homes. More countries will be added as the data becomes available. See our integrated climate report on ing.com for information on the underlying measurement, which, like the rest of Terra reporting, relates to 2020 data.

Across our mortgage markets we provide a range of products, services and advice to help homeowners make their houses more sustainable. These include eco loans to finance renovations to improve energy efficiency such as insulation, solar panels and double glazing. In Belgium, we offer interest-free eco renovation mortgages in collaboration with the Flemish government. We also provide access to subsidies in countries where these are available. In Germany, we work with development bank KfW to integrate subsidy programmes into our mortgage offering for energy-efficient new-builds and for modernising existing homes, for example with energy-efficient heating systems.

In the Netherlands, ING became a co-financier of the Dutch government's 'Warmtefonds' (Heat fund) in May, contributing €50 million in financing. The fund provides loans on favourable terms to make homes more sustainable. Since 2014, it has provided around €600 million in financing for this purpose. In November, a local hub of the European Energy Efficient Mortgages (EEM) initiative was set up in the Netherlands, with ING as a founding member, to support and promote the acceleration of energy-efficient housing by developing a framework for green mortgages.

To engage customers on their sustainability journeys our Dutch and German websites provide information and advice about energy-efficient living and financing available. In the Netherlands, customers can also check the energy profile of their homes as well as the options to improve in this area. To help them take the first step, we provided a free energy rating for homeowners wanting to invest in upgrading their energy label. Around 60% of our Dutch portfolio currently has an 'A', 'B' or 'C' energy label, with more homes moving into the most energy-efficient 'A' band (17.4% compared to 15% the previous year) and fewer homes in the 'C' band (27.2% v 28.3%). In addition, the CO_2 intensity of this portfolio reduced from 35kg CO_2/m2 to 31.3kg at end-2020, helped by the Netherlands' growing use of renewable energy sources in its electricity network.

Managing climate and environmental risks

Our integrated climate approach considers both how ING can impact climate change through our financing as well as how climate change can impact our business. We're working to be more resilient to climate risks, both physical risks, such as the risk of flooding on our mortgage portfolio, and transition risks, such as stranded assets, for example when carmakers don't make electric vehicles. These risks and their financial implications can potentially also impact our clients and ultimately our balance sheet. A critical process is therefore required to identify and understand these risks and integrate them into our risk management framework, including credit, market, liquidity and operational risks. Read more in 'Risk management'.

A climate risk assessment of around 65% of our mortgage portfolio identified flooding as the biggest physical risk where the impact would vary extensively. We have decided to develop this pilot further and increase the geographical scope and data granularity to grow our understanding of the financial impact of climate hazards for our portfolio management. We expect to report more on this in 2022. As part of this initiative we're collecting location data for the Belgian mortgage book to identify physical climate risk to our collateral. An initial assessment of the impact on Business Banking clients on a sector level will be used as input for ING's global heatmap. In line with its local regulatory requirements, ING in Belgium will also collect the energy efficiency levels of immovable property collaterals, both residential and commercial.

We apply strict social, ethical and environmental criteria in our financing and investment policies and practices to ensure they're in line with our sustainability goals. Every client and transaction is assessed, monitored and evaluated against the requirements of our environmental and social risk (ESR) framework to ensure compliance and limit negative impact on the environment and communities. That way, climate and environmental impact are taken into account every time we make financing or investment decisions.

Sustainable investment services

ING offers sustainable investment (SI) services to its Retail Banking customers in the Netherlands, Belgium, Luxembourg and Germany. These include brokerage, advisory and discretionary management. We provide dedicated portfolios, structured products and investment funds and cover all asset classes. In 2021, ING's Retail investment division recorded €19.2 billion in sustainability assets (from €13.2 billion in 2020). This also underlines our clients' appetite for products and services that integrate sustainability criteria.

To provide these clients with a portfolio that's in line with their values and interests we use a diverse set of environmental, social and governance criteria to assess all investments. Both companies and investment funds are screened against these criteria. For companies we take a two-step approach. First, we look at their policies and achievements on sustainability and score relative to their peers, choosing to invest in those companies with the best ESG profile per sector. Second, we exclude companies whose products or services have negative impacts or which are engaged in undesirable corporate conduct, for example conduct that infringes human rights. In selecting investment funds, we carry out quantitative and qualitative screening to understand the ESG profile of the asset and the asset manager. This includes interviewing fund managers and ensuring the underlying holdings also meet our sustainability criteria. For more information on the selection process please refer to ing.com.

ING is a signatory to the UN-backed Principles for Responsible Investment as a service provider and we've committed to incorporating ESG into our investment decisions, policies and processes underpinning our investment services.

For a description of the principal and geographic markets ING operates in and related revenue categories, see Item 5 of this Form 20-F.

Competition

ING is a global financial institution with a strong European base, offering Retail and Wholesale Banking services to 38 million customers in over 40 countries. ING's purpose is to empower people to stay a step ahead in life and in business.

ING's Retail business includes the Business Banking segment and serves customers ranging from individuals to small and medium-sized businesses and mid-corporate clients. ING offers these customers a full range of banking products and services, covering payments, savings, mortgages, insurance, investments and secured and unsecured lending. The Wholesale Banking business provides corporate clients (large companies and multinationals) and financial institutions with advisory value propositions such as specialised lending, tailored corporate finance, sustainable and sustainability-linked financing and debt and equity-market solutions. It also offers daily banking services such as payments and cash management and trade and treasury services.

There is substantial competition in the countries in which we do business for the types of wholesale banking, retail banking, investment banking and other products and services we provide. This competition is most pronounced in more mature markets such as the Netherlands, Belgium and Germany, the rest of Western Europe and Australia. Our largest market is the Netherlands, where our main competitors are ABN AMRO and Rabobank.

In recent years, competition has increased in emerging markets such as Asia and Central and Eastern Europe. Financial services companies from more developed countries see these markets as offering higher growth potential, while local institutions have become more sophisticated and competitive and have proceeded to form alliances, mergers or strategic relationships with our competitors.

Our competitive landscape is transforming as society becomes increasingly digitalised and ever more reliant on technology and the online economy – a trend amplified by the Covid-19 pandemic, which accelerated the shift to mobile banking and contactless payments. Our main competitors are no longer just other banks.
The opening up of the European payments market under the PSD2 directive is a significant competitive development. It is creating a more crowded, uneven playing field as third-party payment providers and fintechs enter this lucrative area once dominated by banks. These new entrant have operating models that are not burdened with potentially costly legacy operations. They are less regulated than banks and use technology and advanced data and analytic tools to lower cost to serve and speed up processes.

Advances in technology are accelerating the use of new business models, for example in retail payments, peer-to-peer lending, foreign exchange and low-cost investment advisory services. New solutions offered by rapidly evolving incumbents, challengers and new entrants, especially with respect to payment services and products, are disrupting the financial services sector and leading to the emergence of disintermediation.

In this competitive landscape, where banking products and services have mostly become commodified, the key differentiator is customer experience. For consumers, this means a seamless, mobile-first digital experience that's safe, easy, smart and personal. Businesses too want to benefit from gains in speed, transparency, security and efficiency created by technologies such as blockchain and artificial intelligence. Winners will be those with a strong trusted brand and a superior digital experience, taking the effort out of managing finances and offering personalised, real-time advice, products and services for all financial needs.

Statements regarding ING's competitive position reflect the assessment of ING's management about the general competitive landscape in which ING operates.

Regulation and Supervision

The banking and broker-dealer businesses of ING are subject to detailed and comprehensive supervision in all of the jurisdictions in which ING conducts business.

Regulatory agencies and supervisors have broad administrative power and enforcement capabilities over many aspects of our business, which may include liquidity, capital adequacy, permitted investments, ethical issues, money laundering, anti-terrorism measures, privacy, recordkeeping, product and sale suitability, marketing and sales practices, remuneration policies, personal conduct and our own internal governance practices. Also, regulators and other supervisory authorities in the EU, the US and elsewhere continue to scrutinise payment processing and other transactions and activities of the financial services industry through laws and regulations governing such matters as money laundering, anti-terrorism financing, tax evasion, prohibited transactions with countries or persons subject to sanctions, and bribery or other anti-corruption measures.

As discussed under “Item 3. Key Information — Risk Factors”, as a large multinational financial institution we are subject to reputational and other risks in connection with regulatory and compliance matters involving these countries.

European Regulatory framework

The Single Supervisory Mechanism (“SSM”) is the first pillar of the Banking Union and has been operational since 4 November 2014. The SSM is composed of the European Central Bank (“ECB”) and the national competent authorities of the participating EU member states. The main aims of European banking supervision are to ensure the safety and soundness of the European banking system, increase financial integration and stability and ensure consistent supervision. Under the SSM, the ECB is ING Group’s and ING Bank’s principal prudential supervisor. The ECB is amongst others responsible for tasks such as market access, compliance with capital and liquidity requirements and governance arrangements. National competent authorities, including the Dutch Central Bank (De Nederlandsche Bank or “DNB”) for ING Group and ING Bank, remain responsible for supervision of tasks that have not been transferred to the ECB such as financial crime and payment supervision.

The SSM is complemented by the second pillar of the Banking Union, the Single Resolution Mechanism (“SRM”), which comprises the Single Resolution Board (“SRB”) and the national resolution authorities. The SRM is fully responsible for the resolution of banks within the Eurozone since 1 January 2016. ING has been engaging already with the Dutch national resolution authorities and the SRB for a few years with the aim to support in the draw up of a resolution plan for ING and will continue to collaborate with the resolution authorities. The rules underpinning the SRM could have a significant impact on business models and capital structure of financial groups in order to become resolvable.

As a third pillar to the Banking Union, the EU aims at further harmonizing regulations for Deposit Guarantee Schemes (DGS). Main elements are the creation of ex-ante funded DGS funds, financed by risk-weighted contributions from banks. As a next step, the EU is discussing a pan-European (or pan-banking union) DGS (the European Deposit Insurance Scheme (EDIS)), (partly) replacing or complementing national compensation schemes. The EDIS proposal as well as certain accompanying risk reduction measures are still being discussed in the European Parliament and in the Council. In February 2021, the European Commission issued a public consultation on the review of the bank crisis management and deposit insurance (CMDI) framework, with a focus on three EU legislative texts: the Bank Recovery and Resolution Directive (BRRD), the Single Resolution Mechanism Regulation (SRMR), and the Deposit Guarantee Schemes Directive (DGSD). The anticipated revision of the CMDI framework is part of the debate on the completion of the Banking Union and in particular its third and missing pillar EDIS. The consultation period ran until May 2021. It is uncertain when the next steps towards revision of the CMDI framework, including EDIS, can be expected.

Dutch Regulatory Framework

The Dutch regulatory system for financial supervision consists of prudential supervision – monitoring the soundness of financial institutions and the financial sector, and conduct-of-business supervision – regulating institutions' conduct in the financial markets. As far as prudential supervision has not been transferred to the ECB, it is exercised by the Dutch Central Bank (De Nederlandsche Bank or "DNB"), while conduct-of-business supervision is performed by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten or "AFM"). DNB is in the lead with regard to macroprudential supervision.

Global Regulatory Environment

There is a variety of proposals for laws and regulations that could impact ING globally, in particular those made by the Financial Stability Board and the Basel Committee on Banking Supervision at the transnational level and an expanding series of supranational directives and national legislation in the European Union (see "Item 3. Key Information — Risk Factors — We operate in highly regulated industries. Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations governing our business may reduce our profitability). The aggregated impact and possible interaction of all of these proposals are hard to determine, and it may be difficult to reconcile them where they are not aligned. The financial industry has also taken initiatives by means of guidelines and self-regulatory initiatives.

Dodd-Frank Act and other US Regulations

ING Bank has a limited direct presence in the United States through the ING Bank Representative Offices in New York, Dallas (Texas) and Houston (Texas). Although the offices' activities are strictly limited to essentially that of a marketing agent of bank products and services and a facilitator (i.e. the offices may not take deposits or execute any transactions), the offices are subject to the regulation of the State of New York Department of Financial Services and the State of Texas Department of Banking, as well as the Federal Reserve. ING Bank also has a subsidiary in the United States, ING Financial Holdings Corporation, which through several operating subsidiaries (one of which is registered with the CFTC as a swap dealer and the SEC as a security-based swap dealer and another of which is registered with the SEC as a securities broker-dealer) offers various financial products, including lending, and financial markets products. These entities do not accept deposits in the United States on their own behalf or on behalf of ING Bank N.V.

The ING subsidiary, ING Capital Markets LLC, is registered as a swap dealer and subject to a statutory regulatory regime and CFTC rules and oversight.. As a registered entity, it is subject to, among others, business conduct, record-keeping and reporting requirements, as well as margin requirements and capital requirements. In addition to the obligations imposed on registrants (such as swap dealers), other requirements relating to reporting, clearing, and on-facility trading have been imposed for much of the off-exchange derivatives market. It is possible that some of these compliance requirements, especially the newly-implemented capital requirements and an increased scope of applicability for initial margin requirements, will increase the costs of and restrict participation in the derivative markets. This could have the effect of restricting trading activity, reducing trading opportunities and market liquidity, potentially increasing the cost of hedging transactions and the volatility of the relevant markets. This could adversely affect the business of ING in these markets.

The Dodd-Frank Act and SEC regulations enacted thereunder, effective 1 November 2021, resulted in ING Capital Markets LLC registering as a security-based swap dealer with the SEC. The SEC has adopted regulations, among others, establishing registration, reporting, risk management, business conduct, and margin and capital requirements for security-based swaps. While ING Capital Markets LLC, as a security-based swap dealer, is required to comply with SEC rules with respect to most of these requirements, SEC rules have permitted an "Alternative Compliance Mechanism" that allows for compliance subject to eligibility requirements , with CFTC capital and margin rules applying to swap dealers in lieu of SEC capital and margin rules applying to security-based swap dealers. ING Capital Markets LLC has elected to use the Alternative Compliance Mechanism. However, should ING Capital Markets LLC in the future be ineligible for the "Alternative Compliance Mechanism" it would be subject to SEC capital and margin security-based swap dealer rules instead of the CFTC capital and margin security-based swap dealer rules.

ING Capital Markets LLC's recent registration with the SEC as a security-based swap dealer along with the impact of these regulations to the industry may increase operational costs, reduce trading activity and market liquidity, and increase volatility of the relevant markets. It will also result in a substantial portion or all of ING's security-based swap activities with U.S. persons being conducted through ING Capital Markets LLC.

In addition, new position limits requirements for uncleared swaps referencing any of twenty-five commodity futures contracts for market participants could limit ING's position sizes in these swaps referencing specified physical commodities and similarly limit the ability of counterparties to utilize certain of our products to the extent hedging exemptions from the position limits are unavailable.

The Dodd-Frank Act also created a new agency, the Financial Stability Oversight Council (“FSOC”), an inter-agency body that is responsible for monitoring the activities of the U.S. financial system, designating systemically significant financial services firms and recommending a framework for substantially increased regulation of such firms, including systemically important non-bank financial companies that could consist of securities firms, insurance companies and other providers of financial services, including non-U.S. companies. ING has not been designated a systemically significant non-bank financial company by FSOC and such a designation currently is unlikely.

Dodd-Frank continues to impose significant requirements on us, some of which may have a material impact on our operations and results, as discussed further under “Item 3. Key Information — Risk Factors—We operate in highly regulated industries. Changes in laws and/or regulations governing financial services or financial institutions or the application of such laws and/or regulations governing our business may reduce our profitability”.

Basel III and European Union Standards as currently applied by ING Bank

DNB, our principal home country supervisor until the ECB took over that position in November 2014, has given ING permission to use the most sophisticated approaches for solvency reporting under the Financial Supervision Act, the Dutch legislation reflecting the Basel II and Basel III Frameworks. DNB has shared information with host regulators of relevant jurisdictions to come to a joint decision. In all jurisdictions where the bank operates through a separate legal entity that is a credit institution, ING must meet the local implementation of Basel requirements as well. ING uses the Advanced IRB Approach for credit risk, the Internal Model Approach for its trading book exposures and the Advanced Measurement Approach for operational risk. A small number of portfolios including certain sovereign exposures are reported under the Standardized Approach

In December 2010, the Basel Committee on Banking Supervision announced higher global minimum capital standards for banks, and has introduced a new global liquidity standard and a new leverage ratio. The Basel Committee's package of reforms, collectively referred to as the “Basel III” rules, has, among other requirements, increased the amount of common equity required to be held by subject banking institutions, has prescribed the amount of liquid assets and the long term funding a subject banking institution must hold at any given moment, and has limited leverage. Banks are required to hold a “capital conservation buffer” to withstand future periods of stress. Basel III has also introduced a “countercyclical buffer” as an extension of the capital conservation buffer, which permits national regulators to require banks to hold more capital during periods of high credit growth (to strengthen capital reserves and moderate the debt markets). Further, Basel III has strengthened the definition of capital that has the effect of gradually disqualifying many hybrid securities during the years 2013-2022, including the hybrids that were issued by the Group, from inclusion in regulatory capital, as well as the higher capital requirements associated with certain business conditions (for example, for credit value adjustments (“CVAs”) and illiquid collateral) as part of a number of reforms to the Basel II framework. In addition, the Basel Committee and Financial Stability Board (“FSB”) published measures that have had the effect of requiring higher loss absorbency capacity, liquidity surcharges, exposure limits and special resolution regimes for, and instituting more intensive and effective supervision of, “systemically important financial institutions” (“SIFIs”), in addition to the Basel III requirements otherwise applicable to most financial institutions. One such measure, published by the FSB in November 2015, is the Final Total-Loss Absorbing Capacity (‘TLAC’) standard for G-SIFIs, which aims for G-SIFIs to have sufficient loss-absorbing and recapitalisation capacity available in resolution. ING Bank has been designated by the Basel Committee and FSB as a so-called “Global Systemically Important Bank” (“G-SIB”), since 2011, and by DNB and the Dutch Ministry of Finance as a “other SII” (“O-SII”) since 2011. DNB requires ING Group to hold a 2.5% O-SII Buffer in addition to the capital conservation buffer and the countercyclical buffer described above.

CRR /CRD IV

For European banks the Basel III requirements have been implemented through the Capital Requirement Regulation (CRR) and the Capital Requirement Directive (“CRD IV”). The CRD IV regime entered into effect in August 2014 in the Netherlands, but not all requirements were implemented all at once. Having started in 2014, the requirements have been gradually tightened, mostly before 2019, until the Basel III migration process was completed.

CRD IV has not only resulted in new quantitative requirements but has also led to the setting of new standards and evolving regulatory and supervisory expectations in the area of governance, including with regard to topics like conduct and culture, strategy and business models, outsourcing and reporting accuracy.

CRRII / CRD V and BRRDII

On 27 June 2019, a series of measures referred to as the Banking Reform Package (including certain amendments to CRR and CRDIV commonly referred to as 'CRR II' and CRD V') came into force, subject to various transitional and staged timetables. The adoption of the Banking Reform Package concluded a process that began in November 2016 and marks an important step toward the completion of the European post-crisis regulatory reforms, drawing on a number of international standards agreed by the Basel Committee, the Financial Stability Board and the G20. CRDV was implemented in Dutch law in 2020. The Banking Reform Package updates the framework of harmonized rules established following the financial crisis of 2008 and introduces changes to the CRR, CRDIV, the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism Regulation (SRMR). The Banking Reform Package covers multiple areas, including the Pillar 2 framework, the introduction of a leverage ratio requirement of 3% and a leverage ratio buffer requirement of 50% of the G-SIB buffer requirement (applicable per 1 January 2023), a binding Net Stable Funding (NSFR) ratio based on the Basel NSFR standard but including adjustments with regard to e.g. pass-through models and covered bonds issuance, mandatory restrictions on distributions, permission for reducing own funds and eligible liabilities, macroprudential tools, a new category of 'non-preferred' senior debt, the minimum requirement for own funds and eligible liabilities (MREL) and the integration of the TLAC standard into EU legislation. Further, the EBA obtained a mandate to investigate how to incorporate environmental, social, and governance (ESG) risks into the supervisory process and what the prudential treatment of assets associated with environmental or social objectives should look like.

Whilst the Banking Reform Package was being developed, the ECB introduced the Targeted Review of Internal Models (TRIM) in June 2017 to assess reliability and comparability between banks' models for calculating each bank's risk-weighted assets ('RWA') used for determining certain of such bank's capital requirements. In July 2019, the ECB published the final chapters of the guide to internal models, covering credit risk, market risk and counterparty credit risk. These risk type-specific chapters are intended to ensure a common and consistent approach to the most relevant aspects of the regulations on internal models for banks directly supervised by the ECB. Additionally, they provide transparency on how the ECB understands the regulations on the use of internal models to calculate own funds requirements for the three risk types. Impact on ING is through more stringent regulation on the end-to-end process and governance around internal models as well as an increase of risk weighted assets (RWA).

In 2020, the last TRIM ECB inspection ended. The ECB has sent final TRIM decision letters, which include certain obligations. Also certain limitations have been put in place until these obligations are fully addressed. ING is working on closing the respective obligations.

Final Basel III reforms

In December 2017 the Basel Committee finalised its Basel III post-crisis reforms with the publication of the revisions to the prudential standards for credit, operational and credit valuation adjustment (CVA) risk as well as the introduction of an output floor. This package of reforms aims to increase consistency in risk-weighted asset calculations and improve the comparability of banks' capital ratios. The use of internal models will be reduced and the standardised approaches will be made more risk-sensitive and granular.

Following a one-year deferral due to COVID-19, these reforms will take effect from 1 January 2023 and will be phased in over five years. The implementation of the EU/Basel III reforms will have impact on ING's risk-weighted assets and capital ratios, but it is expected that other new banking regulations and model reviews bring forward a significant part of this impact before the EU implementation date.

CRR "quick fix" in response to the Covid-19 pandemic

On 26 June 2020 Regulation (EU) 2020/873 of the European Parliament and of the Council of 24 June 2020 amending Regulations CRR as regards certain adjustments in response to the COVID-19 pandemic (commonly referred to as CRR "quick fix") was published.

The CRR "quick fix" is part of a series of measures taken by European institutions to mitigate the impact of the COVID-19 pandemic on institutions across EU Member States. In addition to the flexibility already provided in the existing rules, the CRR 'quick fix' introduces certain adjustments to the CRR, including temporary measures and measures that early adopt changes in the regulations that were intended to become effective at a future date. This notably included reduced capital requirement for certain exposures to small- and medium sized enterprises (SMEs), a more favourable prudential treatment for certain software assets, one year delay in the application of the leverage ratio buffer requirement of 50% of the G-SIB buffer (to 1 January 2023). Also the following adjustments were introduced and have an impact on disclosures:

- frontloading from CRR2 the possibility of temporarily excluding certain exposures to central banks from the calculation of an institution's total exposure measure (Article 500b of CRR);
- extending by 2 years transitional arrangements for mitigating the impact on own funds of the introduction of IFRS 9 (Article 473a (8) of CRR).

CRRIII / CRD VI

On 27 October 2021, the European Commission published a legislative proposal to review the EU's CRD/CRR framework. The review consists of the following legislative elements: a proposal to amend CRD V, a proposal to amend CRR II, and a separate, targeted proposal to amend CRR II in the area of resolution (the so-called 'daisy chain'-proposal). The package is now being negotiated by the Council of the EU and the European Parliament.

This proposed legislative review's key aim is to implement the final Basel III framework – agreed at the end of 2017 - in the EU. It is meant to ensure banks remain resilient and capable of withstanding future crises The proposed revisions mainly relate to the prudential standards for credit, market, operational and credit valuation adjustment (CVA) risk as well as the introduction of an output floor. Key changes comprise the reduced use of internal models and more risk-sensitive and granular standardised approaches. It aims to increase consistency in risk-weighted asset calculations and improve comparability of bank capital ratios. The Commission's proposal remains close to the 2017 Basel agreement, but in some areas (temporarily) includes targeted measures to account for specificities of the EU banking sector. These measures relate to topics such as the calculation of the output floor, lending to unrated corporates, specialized lending, property lending and counterparty credit risk. The European Commission expects that overall risk-weighted assets will not increase significantly, on average, less than 10% for EU banks at the end of the transition period.

The proposed implementation date by the European Commission is set at 1 January 2025 for most provisions under review, with a phase-in period for the output floor of five years. This is two years later than the BCBS's deadline. The European Commission also proposes a number of other targeted transitional requirements, phasing out by 2032 at the latest.

It should be noted that final substance and timing of this review are still uncertain as the European Parliament and Council of the EU have just started their negotiations where they can amend the European Commission proposal before it becomes law.

Capital requirements applicable to ING Group at a consolidated level

In accordance with the CRR the minimum Pillar I capital requirements applicable to ING Group are: a Common Equity Tier 1 (CET1) ratio of 4.5%, a Tier 1 ratio of 6% and a Total capital ratio of 8% of risk-weighted assets.

In 2020, as a reaction to the COVID-19 pandemic, relevant regulators introduced a number of changes to the Pillar II capital requirements and the capital buffer requirements applicable to ING, including structural reductions. The structural reductions of these capital requirements reflect the application of Art.104a in CRD V, which allowed ING to replace CET1 capital with additional Tier 1 / Tier 2 securities to meet Pillar II requirement, and a reduction in the overall systemic buffer (i.e. the Systemic Risk Buffer plus the highest of the O-SII and G-SII buffer) by the Dutch National Bank from 3% to 2.5%. Similarly, various competent authorities changed or removed their Countercyclical Buffer (CCyB) requirements. The CCyB for ING was 3 basis points at the end of 2021 (2 basis points at the end of 2020). In December 2021, the De Nederlandsche Bank (DNB) started consultation on the revised countercyclical capital buffer framework with the intention to apply a 2% CCyB in a standard risk environment.

As a consequence, the CET1 requirement, including buffers, for ING Group at a consolidated level was 10.51% in 2021. This requirement is the sum of a 4.5% Pillar I requirement, a 0.98% Pillar II requirement (2020: 0.98%), a 2.5% Capital Conservation Buffer (CCB), a 0.03% Countercyclical Buffer (CCyB) (based on December 2021 positions) and a 2.5% O-SII buffer that is set separately for Dutch systemic banks by the Dutch Central Bank (De Nederlandsche Bank). This requirement excludes the Pillar II guidance, which is not disclosed.

The Maximum Distributable Amount (MDA) trigger level stood at 10.51% in 2021 for CET1, 12.33% for Tier 1 Capital and 14.77% for Total Capital (after the application of Art.104a of CRDV), based on stable Pillar II capital requirements. In the event that ING Group breaches the MDA level, ING will face restrictions on dividend payments, AT1 instruments coupons and payment of variable remuneration.

Covid-19 pandemic

Various countries and local governmental authorities across the world have introduced measures aimed at preventing the further spread of Covid-19.

In addition, governments in various countries have introduced measures aimed at mitigating the economic consequences of the outbreak. For example, the Dutch government has announced economic measures aimed at protecting jobs, households' wages and companies, e.g., by way of tax payment holidays, guarantee schemes and a compensation scheme for heavily affected sectors in the economy. These announced measures and any additional measures, including any payment holidays with respect to mortgages or other loans, have had and may continue to have a significant impact on ING's customers and other counterparties.

The various measures by governments and ING to alleviate the impact of Covid-19 also impact the loan classification in terms of forbearance and consequently IFRS 9 staging. In light of this, the EBA has provided guidelines that expired on 30 September 2020, which defined eligibility criteria for a payment holiday arrangement offered to a large group of customers to be classified as a “general payment moratorium”. Based on these guidelines, customers that were granted the payment holidays did not lead to a forbearance classification. Therefore it did not automatically trigger recognition of lifetime Expected Credit Loss (ECL) either. ING followed the EBA guidelines and when a payment holiday was provided to a customer as part of a “general payment moratorium”, ING did not consider this measure to classify as forbearance. EBA further extended these guidelines in the first week of December 2020, valid until 31 March 2021, with certain extra conditions. Regarding these extensions, ING has taken a prudent decision to treat all payment holiday requests under new or extended schemes (after September 2020) as stage 2 or stage 3 exposures.

Bank recovery and resolution directive

Since its adoption by the European Parliament in 2014, the Bank recovery and resolution directive (BRRD) has become effective in all EU countries after transposition into national law, including in the Netherlands. The BRRD aims to safeguard financial stability and minimise the use of public funds in case banks face financial distress or fail to comply with the BRRD. Banks across the EU need to have recovery plans in place and need to cooperate with resolution authorities to determine, and make feasible, the preferred resolution strategy. The banking reform which came into force on 27 June 2019 includes changes to the minimum requirement for own funds and eligible liabilities (MREL) to ensure an effective bail in process. It also includes new competences for resolution authorities and requires G-SIBs and other banks to build up loss-absorbing and recapitalization capacity.

ING has had a recovery plan in place since 2012. The plan includes information on crisis governance, recovery indicators, recovery options, and operational stability and communication measures. The plan enhances the bank’s readiness and decisiveness in case of a financial crisis. The plan is updated annually to make sure it stays fit for purpose. The completeness, quality and credibility of the updated plan is assessed each year by ING’s regulators.

The Single Resolution Board (SRB) confirmed to ING in 2017 that a single-point-of-entry (SPE) strategy is ING’s preferred resolution strategy, with ING Groep N.V. as the resolution entity.

In 2021, ING Group received an updated formal notification from De Nederlandsche Bank (DNB) of its MREL requirements. The MREL requirement has been established to ensure that banks in the European Union have sufficient own funds and eligible liabilities to absorb losses and to recapitalize bank in the case of a resolution. The MREL requirement is set for ING Group at a consolidated level, as determined each year by the Single Resolution Board (SRB). The following requirements replaced previously communicated total liabilities and own funds (TLOF) requirement for ING Group as from 1-1-2022: 27.32% of RWA (M-MDA trigger) and 5.97% of LR exposure.

Above M-MDA trigger assumes a combined buffer requirement (CBR) of 5.03% (as of 31 December 2021). In the event that ING Group breaches the M-MDA trigger, ING may face restrictions on dividend payments, AT1 instruments coupons and payment of variable remuneration. Apart from the requirements for the Group on a consolidated level, the internal MREL requirements are also set for individual ING subsidiaries in EU.

ING has been replacing, and will continue to replace, maturing ING Bank N.V. debt with ING Groep N.V. instruments. In order to build up our MREL capacity, ING Groep N.V. issued multiple transactions. These transactions will not only allow us to support business growth, but will also help to meet future MREL and TLAC requirements with ING Groep N.V. instruments only.

CRR II implements the Financial Stability Board’s total loss absorbing (TLAC) requirement for Global Systemically Important Institutions (G-SII), which is the EU equivalent of a G-SIB. The transitional requirement—the higher of 16% (M-MDA-trigger of 21.03% with CBR) of the resolution group’s RWA or 6% of the leverage ratio exposure measure—applies immediately. The higher requirement—18% (M-MDA trigger of 23.03% with CBR) and 6.75%, respectively—comes into effect as of 1 January, 2022. As a G-SII ING is expected to meet the TLAC requirement alongside the other minimum regulatory requirements set out in EU regulation.

Stress testing

Stress testing is an integral component of our risk and capital management framework. It allows us to (i) assess potential vulnerabilities in our businesses, business model, and/or portfolios; (ii) understand the sensitivities of the core assumptions in our strategic and capital plans; and (iii) prepare and assess management actions that can reduce or mitigate the impact of adverse scenarios.

In addition to running internal stress test scenarios to reflect the outcomes of the annual risk assessment, ING also participates in regulatory stress test exercises. ING participated in the 2021 EU-wide stress test conducted by the EBA in cooperation with the European Central Bank (ECB) and the European Systemic Risk Board (ESRB). The baseline scenario was developed by the ECB and the adverse stress test scenario by the ESRB, both cover a three-year time horizon (2021-2023).

The 2021 EU-wide stress test exercise was carried out applying a static balance sheet assumption as of December 2020, and therefore does not take into account current or future business strategies and management actions. The results of the EBA stress test reaffirmed the resilience of our business model and the strength of ING's capital base. Our commitment to maintain a robust, fully-loaded Group common equity Tier 1 (CET1) ratio in excess of prevailing requirements remains. Under the hypothetical baseline scenario and EBA's methodological instructions, ING Group would have a fully loaded common equity Tier 1 capital ratio (CET1) of 16.06% in 2023. Under the hypothetical adverse scenario and EBA's methodological instructions, ING Group would have a fully loaded CET1 ratio of 10.99% in 2023. ING Group published an actual CET1 ratio of 15.45% per 31 December 2020. The next EBA EU-wide stress test will be held in 2023.

An emerging topic in the area of stress testing are climate risk analyses. ING started with climate risk stress testing in 2019 to assess the effect of transition risk and physical risk on the financial position of ING Group. In the second half of 2021, ING started preparing for the regulatory climate risks stress test scenario, which will be assessed in 2022 as part of the bi-annual ECB Single Supervisory Mechanism (SSM) stress test. This regulatory stress test, combined with internal analyses done on climate risk, will be used to enhance ING's internal climate risk stress testing.

Deposit Schemes

In the Netherlands and other jurisdictions, deposit guarantee schemes and similar funds ('Compensation Schemes') have been implemented from which compensation may become payable to customers of financial services firms in the event the financial service firm is unable to pay, or unlikely to pay, claims against it. In many jurisdictions in which we operate, these Compensation Schemes are funded, directly or indirectly, by financial services firms which operate and/or are licensed in the relevant jurisdiction. ING Bank is a participant in the Dutch Deposit Guarantee Scheme ('DGS'), which guarantees an amount of EUR 100,000 per person per bank (regardless of the number of accounts held). On the basis of the EU Directive on deposit guarantee schemes, ING pays quarterly risk-weighted contributions into a DGS-fund. The DGS-fund is to grow to a target size of 0.8% of all deposits guaranteed under the DGS, which is expected to be reached in July 2024. In case of failure of a Dutch bank, depositor compensation is paid from the DGS-fund. If the available financial means of the fund are insufficient, Dutch banks, including ING, may be required to pay extraordinary ex-post contributions not exceeding 0.5% of their covered deposits per calendar year. In exceptional circumstances and with the consent of the competent authority, higher contributions may be required. However, extraordinary ex-post contributions may be temporarily deferred if, and for so long as, they would jeopardise the solvency or liquidity of a bank.

Since 2015, the EU has been discussing the introduction of a pan-European deposit guarantee scheme ('EDIS'), (partly) replacing or complementing national compensation schemes in two or three phases. Proposals contain elements of (re)insurance, mutual lending and mutualisation of funds. The new model is intended to be 'overall cost-neutral'. In February 2021, the European Commission issued a public consultation on the review of the bank crisis management and deposit insurance (CMDI) framework, with a focus on three EU legislative texts: the Bank Recovery and Resolution Directive (BRRD), the Single Resolution Mechanism Regulation (SRMR), and the Deposit Guarantee Schemes Directive (DGSD). The anticipated revision of the CMDI framework is part of the debate on the completion of the Banking Union and in particular its third and missing pillar EDIS. The consultation period ran until May 2021. It is uncertain when the next steps towards revision of the CMDI framework, including EDIS, can be expected.

Payment Services Directive 2 (PSD2)

PSD2 entered into force in January 2018 and responds to technical change and a variety of developments in the payments domain. It fosters innovation and competition by promoting non-discriminatory access to payment systems and accounts, including the newly introduced account information services and payment initiation services. Customers benefit from greater transparency of costs and charges, PSD2's extended geographical reach and being applicable to transactions in any currency, a reduction of the maximum liability for unauthorized transactions and a backstop date for complaint resolution. Finally, to combat cybercrime and online fraud, PSD2 continues the trend towards enhancing the security around the making of payments, e.g. by the introduction of strong customer authentication. It consists of two factor authentication, to be performed every time a payer accesses its payment account online or initiates electronic remote payment transactions. The Regulatory Technical Standards for strong customer authentication and common and secure communication provide further requirements to implement the strict security requirements for payment service providers in the EU.

Benchmarks Regulation

Benchmarks, such as the London Interbank Offered Rate (‘LIBOR’), the Euro Overnight Index Average (‘EONIA’), the Euro Interbank Offered Rate (‘EURIBOR’) and other interest rates, as well as commodity benchmarks or other types of rates and indices which are deemed to be ‘benchmarks’ are the subject of ongoing national and international regulatory reform.

In 2016, the EU adopted a Regulation (the ‘Benchmarks Regulation’ or ‘BMR’) on indices used in the EU as benchmarks in financial contracts and financial instruments. The Benchmarks Regulation became effective on 1 January 2018.

The BMR among others requires that supervised entities may only use benchmarks in the EU if these benchmarks are provided by administrators that are registered with the European Securities and Markets Authority (‘ESMA’).

Benchmarks that are based on input from contributors shall have a code of conduct in place designed primarily to ensure reliability of input data, governing issues such as conflicts of interest, internal controls and benchmark methodologies. Financial contracts and financial instruments in which benchmarks are used by supervised entities require to have robust fall back wording included in their documentation.

For qualitative and quantitative disclosures on IBOR transition refer to “Additional information – ING Group Risk Management – Market Risk” and Note 40 “Derivatives and hedge accounting”.

Financial Transaction Taxes

In February 2013, the EC adopted a proposal setting out the details of a financial transaction tax (‘FTT’) under the enhanced cooperation procedure, to be levied on transactions in financial instruments by financial institutions if at least one of the parties to the transaction is established in the financial transaction tax zone (‘FTT-Zone’) or if the instrument which is the subject of the transaction is issued within the territory of a Member State in the FFT-Zone. 10 Member States have indicated they wish to participate in the FTT (Austria, Belgium, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia and Spain). The initial proposal contemplated that the FTT would enter into effect on 1 January 2014, which would have then required us to pay a tax on transactions in financial instruments with parties (including Group affiliates) located in such FTT-zone. However, the FTT remains subject to negotiation between the participating Member States and currently it is uncertain whether and in what form and by which Member States the FTT will be adopted. The implementation date of any FTT will thus depend on the future approval by participating Member States in the Council, consultation of other EU institutions, and the subsequent transposition into local law.

KYC Requirements

Financial institutions continue to face new and increasingly complex regulatory requirements, contributing to increasing costs of compliance, in the context of heightened regulatory scrutiny. Generally, we expect the scope and extent of regulations in the jurisdictions in which we operate to continue to increase.

The evolving regulatory landscape drives the need for continuous change in the various processes, procedures and systems of the bank. Where the timeline for implementation of new or revised requirements is sometimes quite short, this presents challenges to financial institutions in general, but especially in relation to IT development. In addition, in some instances, the complexity of the regulatory landscape gives rise to potential tension between applicable laws and regulations at a local and/or global level. For example, potential tension between data privacy (GDPR) and AML/CFT and anti-corruption laws and regulations; including the requirement to share information relating to financial crime concerns to manage risk exposure across the group, while complying with the legislative requirements relating to data, which can differ significantly depending on jurisdiction.

ING is focussed on continuing to embed processes and procedures reflecting applicable requirements within the bank, including in our IT systems and data sources, in a robust and sustainable way; driving a business environment which is compliant by desire and design. The bank also executes ongoing training and awareness to develop its people to have the right knowledge and skills.

In addition, ING aims to continuously monitor regulatory developments, as well as considering emerging and evolving risks. This supports assessment of the risks that ING may be exposed to and of the associated controls and processes ING has in place, so we can appropriately manage these risks in accordance with our risk appetite. In particular, the rise in price and use of virtual assets, accompanied by the growth of virtual assets service providers was a key theme in 2020 that continued to attract regulatory attention in 2021 for potential money laundering, tax evasion and terrorist financing.

5th AML Directive and the European Commission legislative package

In 2021, ING focussed on the implementation of the requirements of the EU 5th AML Directive, as well as considering the EBA's MT/TF risk factor guidelines published on 1 March 2021 and other relevant guidance documents. On 20 July 2021, the European Commission presented a package of legislative proposals (including a proposal for a 6th AML Directive) to strengthen the EU's anti-money laundering and countering the financing of terrorism (AML/CFT) rules. The proposed main changes include the creation of a European AML/CTF supervisory authority and the adoption of a "single rulebook'", with directly applicable rules, including in the areas of customer due diligence and beneficial ownership. The Regulation also includes the introduction of an EU-wide limit of €10,000 to large cash payments.

ING welcomes the proposals to further strengthen the regulatory framework aimed at the prevention of money laundering and terrorism financing. Harmonisation of key requirements is welcomed especially because of ING's large presence in the EU. Considering that the texts of the proposals are still in draft and relatively conceptual at this point in time, ING is in active dialogue with internal and external stakeholders and it participates in relevant workstreams of banking associations such as the Dutch Banking Association, to formulate its position and provide further recommendations and feedback to the European Commission's consultation. This assists ING in assessing and adequately managing the impact of the AML legislative package on the bank.

Policy with respect to certain countries

As a result of frequent evaluation of all businesses from economic, strategic and risk perspective ING continues to believe that for business reasons doing business involving certain specified countries should be discontinued. In that respect, ING has a policy not to enter into new relationships with clients from these countries and processes remain in place to discontinue existing relationships involving these countries. At present these countries are Cuba, Iran, North Korea, Sudan and Syria, as well as the Crimea region.

ING Group maintains a limited legacy portfolio of guarantees, accounts, and loans that involve various entities with a connection to Iran. These positions remain on the books but certain accounts related thereto are 'frozen' where prescribed by applicable laws and procedures and in all cases subject to increased scrutiny within ING Group. ING Group may receive loan repayments, duly authorised by the relevant competent authorities where prescribed by applicable laws. For the calendar year 2021, ING Group had revenues of approximately USD 257 thousand. ING Group estimates that it had a net profit of approximately USD 4 thousand.

Sanctions related developments

2021 saw ongoing geopolitical tensions notably between US and China, and increasing tensions between US and EU in relation to Russia. ING and its customers are impacted by such geopolitical tensions when new sanctions and restrictive measure are promulgated by relevant authorities. Such sanctions and restrictive measures may impact the products, services, and customers that ING can service. Increasing sanctions and counter sanctions, together with any notable difference in various sanctions programmes, especially between the EU and US, increases complexities and potential reputational risks in operationalising uniform sanctions controls.

In 2021, the EU and the US continued sanctions programs with respect to several regions and countries, including Ukraine/Russia, Iran, China, Venezuela and Syria.

The international community is leveraging their sanction tools in response to the escalation of Russia's invasion of Ukraine. Accordingly, as part of ING's know your customer and compliance risk governance and procedures, ING is continuously monitoring the situation to stay abreast on all relevant updates to implement effective and appropriate additional control measures and to manage the increased risk and financial impacts of these developments.

For additional information regarding regulatory developments, see also this Form 20F 2021, under "Additional Information – ING Group Risk Management- Compliance Risk".

For a description of our segments including a breakdown of total revenues by category for the last three financial years, refer to Item 5. "Operating and financial review and prospects - Segment reporting".

C. Organisational structure

ING Groep N.V., a publicly-listed company, is the parent of one main legal entity: ING Bank N.V. (ING Bank). ING Bank is the parent company of various Dutch and foreign banking and other subsidiaries.

Reference is made to Exhibit 8 “List of subsidiaries of ING Groep N.V.” for a list of principal subsidiaries of ING Groep. N.V. For the majority of ING’s principal subsidiaries, ING Groep N.V. has control because it either directly or indirectly owns more than half of the voting power. For subsidiaries in which the interest held is below 50%, control exists based on the combination of ING’s financial interest and its rights from other contractual arrangements which result in control over the operating and financial policies of the entity.

D. Property, plants and equipment

ING predominantly leases the land and buildings used in the normal course of its business. In addition, ING has invested in land and buildings. Management believes that ING’s facilities are adequate for its present needs in all material respects.

For information on property, plants and equipment, reference is made to Note 9 ‘Property and equipment’, for information on lease liabilities reference is made to Note 16 ‘Other liabilities’ and for information on investment properties reference is made to Note 11 ‘ Other assets’ in the consolidated financial statements.

Item 4A. Unresolved Staff comments

Not applicable.

Item 5. Operating and financial review and prospects

The following operating and financial review and prospects should be read in conjunction with the consolidated financial statements and the related Notes thereto included elsewhere herein. The consolidated financial statements have been prepared in accordance with IFRS-IASB. Unless otherwise indicated, financial information for ING Group included herein is presented on a consolidated basis under IFRS-IASB.

A. Operating results

Our business is shaped by events and developments in the world around us and our operating results for the financial year should be viewed in the context of these event and developments. The biggest of these in 2021 continued to be the coronavirus pandemic, which was first and foremost a human tragedy, but which also impacted governments, economies, supply chains and jobs.

ING has had to adapt to the practical implications this had for customers and employees, as well as to the new market trends and stakeholder expectations. At the same time, our business continues to be affected by regulatory changes and the persistent low interest rate environment. For further information on regulatory changes reference is made to “Item 4. Information on the Company – Regulation and Supervision”.

ING is also closely monitoring the situation in Ukraine from a financial, operational and security perspective, with the safety and wellbeing of employees our top priority. We strongly condemn Russia’s invasion of Ukraine in February 2022 and are deeply concerned by its devastating impact and the threat to international stability and security. ING has been providing Wholesale Banking services in Ukraine and Russia for almost 30 years. As of 28 February 2022, ING’s total Russia-related exposure was approximately €6.7 billion (representing around 0.9% of our total loan book), of which around 700 million was affected by new sanctions. We have around €500 million exposure in Ukraine. In March 2022, we decided to not do new business with Russian companies. Read more in Risk management.

Other material events and uncertainties that have an impact on our operating results are:

- Covid-19 and inflation
- Macroeconomic developments
- Climate change
- Climate risk
- Anti-money laundering
- Cybersecurity and fraud
- Fluctuations in equity markets, interest rates and foreign exchange rates

For further information on other factors that can impact ING Group’s results of operations, reference is made to “Item 3. Key information - Risk Factors”.

Covid-19 and inflation

Economic growth picked up this year, helped by strong policy support, the deployment of vaccine programmes and the reversal of lockdown measures, although these were reintroduced in some countries at the end of the year prompted by an increase in infections, and the emergence of a new variant of the Covid-19 virus. The global economy surpassed its pre-pandemic level, but many countries are still operating below pre-Covid levels, particularly emerging markets and developing economies with lower vaccination rates and less government support. China and Australia had already recovered in 2020; the US and the eurozone caught up in 2021.

A resurgence of Covid-19 cases and supply disruptions began to negatively impact economic momentum in the second half of the year. In particular, US consumption softened in the third quarter and German industry had to scale back because of shortages of key inputs. The economic impact of the Delta variant, especially in countries with low vaccination rates, added to pressures on global supply chains and costs. Supply disruptions were often longer than expected and fed inflation in many countries. Higher commodity prices and the rise in consumer demand as economies thawed caused consumer price inflation to increase rapidly, most significantly in the US, Canada and the UK, although other advanced economies in Europe and Asia also saw inflation picking up.

Against the background of economic recovery and increased inflationary pressures, the Federal Reserve started to taper its bond buying purchasing programme. The European Central Bank (ECB) also announced a reduction in bond purchases, but is set to move slower. The ECB plans to end its Pandemic Asset Purchase Programme by Q2 2022 and expects to have reduced asset purchases, under the Asset Purchase Programme, to € 20 billion per month by the end of the year. Together these factors drove up longer-term interest rates and steepened yield curves. With interest rates remaining at low levels and government policies staying growth-supportive, house prices continued to rise.

Macroeconomic developments

These were significant macroeconomic developments that impacted our own organisation as well as our customers, employees, shareholders and other stakeholders. Despite the economic thaw, the normal flow of business in countries where ING operates remained disrupted to a greater or lesser extent throughout 2021. The German elections, continuing China/US tensions, continued uncertainty around the full impact of Brexit all added to the volatility of our external environment. As a global financial services company, with our profitability, solvency and liquidity linked heavily to the state of the economy and the market environment, we remained alert to this volatility's potential to impact our performance.

Climate change

Although the threat of climate change has been signalled for some time by the scientific community, its impact is intensifying and it's happening faster than previously predicted. The flooding, wildfires and heatwaves experienced this year are expected to occur more frequently due to climate change. This formed the backdrop to the 2021 report from the United Nation's Intergovernmental Panel on Climate Change (IPCC), which flagged climate change as a 'code red' for humanity, requiring urgent intervention from all sectors of society.

This urgency was underlined at the New York Climate Week in September 2021, where it was reinforced that accelerated action now and in the coming years can positively affect our transition towards a more carbon-neutral future. In November 2021, at the 26th UN Climate Change Conference (COP26) in Glasgow, agreements were reached on important steps towards net-zero emissions in 2050, such as shifting away from coal and a pledge to halt deforestation. But this is not yet enough to get us into the safe zone; these pledges add up to an average global warming of 1.8°C at best. There was agreement on countries having to accelerate and strengthen their 2030 targets, and a framework for a global carbon market was drawn up, which is expected to trigger a surge of green projects. As always the proof is in the action and real impact on the ground. COP27 will be crucial – again. Not only for limiting greenhouse gas emissions far more drastically, but also for agreements on climate adaptation and the social impact of climate change, both of which affect developing countries disproportionately.

We believe ING can have the biggest impact in mitigating the effect of climate change through our financing. We work with our clients to finance and facilitate their transition to low-carbon technologies and offer a growing suite of sustainability products and services to help them, including sustainability-linked loans and 'green' bonds.

The popularity of sustainability-linked financing is growing, partly fuelled by companies facing pressure from investors and regulators to 'go green'. To protect the integrity of this fast-growing market, which we pioneered back in 2017, ING published a position paper in October calling for linked sustainability targets to be ambitious, recognised industry-wide and verified by a reputable, independent party. This will help to retain the credibility of the market by ensuring companies tackle the most difficult and urgent climate issues first. Ambition levels that are too low will not make the impact these products are designed for.
While ING can voice its opinion on all transactions, and we can use our influence to steer clients towards credible targets on those we structure ourselves, market dynamics don't always allow us to put the proper structures in place if we're not in a leading role. We believe regulatory developments like the European Commission's green bond standard will help to improve the quality of the market as it evolves.

The role that regulators and governments play in supporting and facilitating the road to a net-zero emission world cannot be underestimated. To this end, the EU presented its net-zero targets with ambitious legislative proposals to cut emissions by 55% by 2030 ('Fit for 55'), and we look forward to seeing ambitious national policies that align with this goal. In the meantime, ING is working on its own action plans as new climate scenarios and expectations emerge, and we present these, and our progress on them, in our integrated climate report on ing.com.

Climate risk

According to the European Central Bank, climate change will be a major source of systematic risk to banks if no action is taken. A recent ECB study showed banks in the eurozone would have an 8% higher chance of loan defaults by 2050 if nothing is done about global warming, with the risk rising to 30% for banks in southern Europe. The physical risk from climate change is tangible – fires, floods and rising sea levels affect people's lives, livelihoods, assets and businesses. There is also transition risk such as carbon pricing and shifting consumer preferences, which can leave manufacturers with stranded assets if they don't adapt to market demands for greener products.

ING strives to identify and understand these risks as part of our integrated approach to climate action. We do this to build resilience to these risks in our own organisation as well as to prepare for their potential impact on clients and other stakeholders and this helps shape our strategy. As such, climate risk will be included in our risk management framework in a forward-looking approach. Our climate risk programme helps measure the impact of climate change on our loan book. We follow guidance from the ECB and the Taskforce for Climate-Related

Financial Disclosure on how banks are expected to prudently manage and transparently disclose climate-related and environmental risks under current prudential rules.

Anti-money laundering

As a gatekeeper to the financial system, we have an important role in protecting society against all types of financial crime. Money laundering is one such crime, existing in and of itself and as a facilitator of other crimes such as people trafficking and drug smuggling.

To be more effective in our efforts to fight financial economic crime, we work closely with our peers, regulators and law enforcement. This includes initiatives with other banks in the Netherlands and Germany to jointly monitor transactions and share intelligence, and further professionalising our KYC organisation by means of internationally recognised certifications.

In June 2021, the EU presented its action plan for know your customer/anti-money laundering (AML). This aims to increase harmonisation of rules across member states and proposes direct supervision at EU level for those banks exposed to the highest AML risk. We welcome these reforms as they will help improve the current framework and help us with the operationalisation of new AML measures across our network.

ING is looking into how to deal with the issue of customer tax integrity, (a process accelerated by the Pandora Papers investigation in October), where customer transactions may be legal but are ethically undesirable. We are exploring different approaches regarding the execution of our risk judgement processes in this area.

Cybersecurity and fraud

Digital technology has connected the world in an unprecedented way. The pandemic has highlighted just how much people rely on the internet to work, socialise and shop. With this increased reliance, comes an increasing risk that some of these digital interactions will be used for criminal purposes. As a result, there are growing societal concerns about increasingly sophisticated cyberattacks as well as around data privacy and protection.

Cybercrime is a growing threat to society and companies in general, and to the financial system in particular, with scams that aim to trick people out of their money. One such scam involves fake bank employees tricking customers into redirecting their savings into a ‘safe’ account, while phishing scams have evolved from emails to text messages as fraudsters become ever more inventive.

Falling victim to bank fraud can have devastating consequences for customers, not just financially but also on their confidence, mental health and relationships. Raising awareness among customers and employees is an important step in protecting people against crimes like, phishing, spoofing and hacking.

At ING too, there is an increased risk of criminals trying to gain unauthorised access to the bank, whether that’s through malware, phishing attacks, identity theft or online fraud. To stay resilient to these increasingly sophisticated crimes, we take a multi-faceted approach that aims to anticipate threats, prevent them from becoming reality and so protect our customers. Through collaboration with governments, fintechs and our peers, we share knowledge and facilitate security innovation for the bank, our industry and society.

Fluctuations in equity markets

Our banking operations are exposed to fluctuations in equity markets. ING maintains an internationally diversified and mainly client-related trading portfolio. Accordingly, market downturns are likely to lead to declines in securities trading and brokerage activities which we execute for customers and therefore to a decline in related commissions and trading results. In addition to this, ING also maintains equity investments in its own non-trading books. Fluctuations in equity markets may affect the value of these investments.

Fluctuations in interest rates

Our banking operations are exposed to fluctuations in interest rates. Mismatches in the interest re-pricing and maturity profile of assets and liabilities in our balance sheet can affect the future interest earnings and economic value of the bank's underlying banking operations. In addition, changing interest rates may impact the (assumed) behavior of our customers, impacting the interest rate exposure, interest hedge positions and future interest earnings, solvency and economic value of the bank’s underlying banking operations. In the current low (and in some cases negative) interest rate environment, the stability of future interest earnings and margin also depends on the ability to actively manage pricing of customer assets and liabilities. Especially, the pricing of customer savings portfolios in relation to re-pricing customer assets and other investments in our balance sheet is a key factor in the management of the bank’s interest earnings.

Fluctuations in exchange rates

ING Group is exposed to fluctuations in exchange rates. Our management of exchange rate sensitivity affects the results of our operations through the trading activities (which includes local country versus international transactions) and because we prepare and publish our consolidated financial statements in Euros. Because a substantial portion of our income, expenses and foreign investments is denominated in currencies other than Euros, fluctuations in the exchange rates used to translate foreign currencies, particularly the U.S. Dollar, Pound Sterling, Turkish Lira, Chinese Renminbi, Australian Dollar, Japanese Yen, Polish Zloty, Korean Won, Brazilian Real, Singapore Dollar, Thai Baht and Russian Ruble into Euros can impact our reported results of operations, cash flows and reserves from year to year. Fluctuations in exchange rates will also impact the value (denominated in Euro) of our investments in our non-Euro reporting subsidiaries. The impact of these fluctuations in exchange rates is mitigated to some extent by the fact that income and related expenses, as well as assets and liabilities, of each of our non-Euro reporting subsidiaries are generally denominated in the same currencies. FX translation risk is managed by taking into account the effect of translation results on the Common Equity Tier 1 ratio (CET1).

Consolidated result of operations

ING Group monitors and evaluates the performance of ING Group at a consolidated level and by segment using results based on figures according to IFRS as adopted by the European Union (IFRS-EU). The Executive Board and the Management Board Banking consider this measure to be relevant to an understanding of the Group's financial performance, because it allows investors to understand the primary method used by management to evaluate the Group's operating performance and make decisions about allocating resources. In addition, ING Group believes that the presentation of results in accordance with IFRS-EU helps investors compare its segment performance on a meaningful basis by highlighting result before tax attributable to ongoing operations and the profitability of the segment businesses. IFRS-EU result is derived by including the impact of the IFRS-EU 'IAS 39 carve out' adjustment from IFRS-IASB.

The IFRS-EU 'IAS 39 carve-out' adjustment relates to fair value portfolio hedge accounting strategies for the mortgage and savings portfolios in the Benelux, Germany and Other Challengers that are not eligible under IFRS-IASB. As no hedge accounting is applied to these mortgage and savings portfolios under IFRS-IASB, the fair value changes of the derivatives are not offset by fair value changes of the hedge items (mortgages and savings).

Segment Reporting

The published 2021 Annual Accounts of ING Group includes financial information in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU). The segment reporting in the annual report on Form 20-F has been reconciled with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS-IASB) for consistency with the other financial information contained in this report. The difference between the accounting standards is reflected in the Wholesale Banking segment, and in the geographical split of the segments in the Netherlands, Belgium, Germany and Other Challengers. Reference is made to Note 1 'Basis of preparation and significant accounting Policies' for a reconciliation between IFRS-EU and IFRS-IASB.

ING Group's segments are based on the internal reporting structure by lines of business.

The Executive Board of ING Group and the Management Board Banking (together the Chief Operating Decision Maker (CODM)) set the performance targets, approve and monitor the budgets prepared by the business lines. Business lines formulate strategic, commercial, and financial plans in conformity with the strategy and performance targets set by the CODM.

Recognition and measurement of segment results are in line with the accounting policies as described in Note 1 'Basis of preparation and significant accounting policies'. The results for the period for each reportable segment are after intercompany and intersegment eliminations and are those reviewed by the CODM to assess performance of the segments. Transfer prices for inter-segment transactions are set at arm's length. Corporate expenses are allocated to business lines based on time spent by head office personnel, the relative number of staff, or on the basis of income, expenses and/or assets of the segment. Total assets by country, as presented in Note 36 'Information on geographical areas', does not include intercompany balances and reconciles to the total assets in the consolidated statement of financial position of ING Group.

The following overview specifies the segments by line of business and the main sources of income of each of the segments:

Retail Netherlands (Market Leaders)

Income from retail and private banking activities in the Netherlands, including the SME and mid-corporate segments, and the Real Estate Finance portfolio related to Dutch domestic mid-corporates. The main products offered are current and savings accounts, business lending, mortgages and other consumer lending in the Netherlands.

Retail Belgium (Market Leaders)

Income from retail and private banking activities in Belgium (including Luxembourg), including the SME and mid-corporate segments. The main products offered are similar to those in the Netherlands.

Retail Germany (Challengers and Growth Markets)

Income from retail and private banking activities in Germany (including Austria). The main products offered are current and savings accounts, mortgages and other customer lending.

Retail Other (Challengers and Growth Markets)

Income from retail banking activities in the rest of the world, including the SME and mid-corporate segments in specific countries. The main products offered are similar to those in the Netherlands.

Wholesale Banking

Income from wholesale banking activities. The main products are: lending, debt capital markets, working capital solutions, export finance, daily banking solutions, treasury and risk solutions, and corporate finance.

Corporate Line

In addition to these segments, ING Group reconciles the total segment results to the total result using Corporate Line. The Corporate Line is a reflection of capital management activities and certain income and expense items that are not allocated to the banking businesses, including the recognition of value-added tax (VAT) refunds in the Netherlands (recorded under expenses). In 2021, income was supported by a EUR 143 million conditional TLTRO III benefit and the recognition of a EUR 72 million receivable related to the insolvency of a financial institution, while expenses included EUR 87 million of regulatory costs due to an incidental 50% increase in the Dutch bank tax as well as a significantly lower VAT refund compared with the previous year. In 2020, net interest income on the Corporate Line sharply declined, mainly due to lower interest results from foreign currency hedging due to lower interest rate differentials. In 2019, a EUR 119 million gain from the release of a currency translation reserve following the sale of ING's stake in Kotak Mahindra Bank was included, and the recognition of a EUR 79 million receivable related to the insolvency of a financial institution (both recorded under income). Furthermore, the Corporate Line includes the isolated legacy costs (mainly negative interest results) caused by the replacement of short-term funding with long-term funding during 2013 and 2014. ING Group applies a system of capital charging for its banking operations in order to create a comparable basis for the results of business units globally, irrespective of the business units' book equity and the currency they operate in.

Total Operations

The following table sets forth the contribution of ING's business lines and the corporate line to the net result for each of the years 2021, 2020 and 2019.

Total operations

1 January to 31 December 2021 Amounts in millions of euros	Retail Banking Netherlands	Retail Banking Belgium	Retail Banking Germany	Retail Other	Wholesale Banking	Corporate Line	Total
Income:							
- Net interest income	3,290	1,747	1,447	2,712	4,151	267	13,615
- Net fee and commission income	771	519	497	530	1,197	3	3,517
- Total investment and other income	201	209	65	361	568	-45	1,359
Total income	**4,262**	**2,475**	**2,009**	**3,602**	**5,916**	**226**	**18,490**
Expenditure:							
- Operating expenses	2,403	1,667	1,174	2,452	2,926	570	11,192
- Additions to loan loss provision	-76	225	49	202	117	0	516
Total expenditure	**2,326**	**1,892**	**1,223**	**2,654**	**3,042**	**570**	**11,708**
Result before taxation	**1,936**	**583**	**786**	**949**	**2,874**	**-345**	**6,782**
Taxation	499	146	252	212	703	65	1,877
Non-controlling interests	0	0	4	98	26	0	128
Net result IFRS-EU	**1,437**	**437**	**529**	**639**	**2,144**	**-410**	**4,776**
Adjustment of the EU 'IAS 39 carve-out'					1,174		1,174
Net result IFRS-IASB	**1,437**	**437**	**529**	**639**	**3,318**	**-410**	**5,951**

Total operations

1 January to 31 December 2020 Amounts in millions of euros	Retail Banking Netherlands	Retail Banking Belgium	Retail Banking Germany	Retail Other	Wholesale Banking	Corporate Line	Total
Income:							
- Net interest income	3,511	1,816	1,587	2,760	3,718	212	13,604
- Net fee and commission income	681	413	437	412	1,069	-1	3,011
- Total investment and other income	279	145	93	89	609	-192	1,022
Total income	**4,471**	**2,373**	**2,117**	**3,261**	**5,396**	**18**	**17,637**
Expenditure:							
- Operating expenses	2,236	1,737	1,110	2,469	3,218	383	11,153
- Additions to loan loss provision	157	514	57	593	1,351	2	2,675
Total expenditure	**2,393**	**2,251**	**1,167**	**3,063**	**4,568**	**385**	**13,828**
Result before taxation	**2,078**	**122**	**950**	**199**	**827**	**-367**	**3,809**
Taxation	523	51	331	105	295	-58	1,246
Non-controlling interests	-1	0	4	55	20	0	78
Net result IFRS-EU	**1,556**	**71**	**615**	**39**	**512**	**-308**	**2,485**
Adjustment of the EU 'IAS 39 carve-out'					-234		-234
Net result IFRS-IASB	**1,556**	**71**	**615**	**39**	**278**	**-308**	**2,250**

Total operations

1 January to 31 December 2019 Amounts in millions of euros	Retail Banking Netherlands	Retail Banking Belgium	Retail Banking Germany	Retail Other	Wholesale Banking	Corporate Line	Total
Income:							
- Net interest income	3,541	1,907	1,579	2,787	3,794	470	14,079
- Net fee and commission income	674	374	268	423	1,135	-6	2,868
- Total investment and other income	290	161	138	298	369	103	1,360
Total income	**4,505**	**2,442**	**1,985**	**3,509**	**5,298**	**568**	**18,306**
Expenditure:							
- Operating expenses	2,210	1,609	1,080	2,210	2,937	307	10,353
- Additions to loan loss provision	91	186	-53	364	532	-0	1,120
Total expenditure	**2,301**	**1,794**	**1,027**	**2,574**	**3,469**	**307**	**11,472**
Result before taxation	**2,204**	**647**	**957**	**935**	**1,830**	**261**	**6,834**
Taxation	558	192	328	234	464	179	1,955
Non-controlling interests	-0	0	3	82	14	-0	99
Net result IFRS-EU	**1,646**	**455**	**627**	**619**	**1,352**	**82**	**4,781**
Adjustment of the EU 'IAS 39 carve-out'					-878		-878
Net result IFRS-IASB	**1,646**	**455**	**627**	**619**	**474**	**82**	**3,903**

Year ended 31 December 2021 compared to year ended 31 December 2020

ING's net result (including the adjustment of the EU 'IAS 39 carve-out') increased by EUR 3,701 million, or 164.5%, to EUR 5,951 million compared with EUR 2,250 million in 2020. The net result was affected by a EUR 1,174 million positive contribution of fair value changes on derivatives related to asset-liability-management activities for the mortgage and savings portfolios in the Benelux, Germany, France and Czech Republic, versus a EUR 234 million negative contribution in 2020. These fair value changes were mainly caused by changes in market interest rates. No hedge accounting is applied to these derivatives under IFRS-IASB.

ING's IFRS-EU net result (before adjustment of the EU 'IAS 39 Carve-out') rose to EUR 4,776 million from EUR 2,485 million in 2020. The effective tax rate in 2021 was 27.7%, down from 32.7% in 2020. The lower effective tax rate was mainly caused by the reduced impact of non-deductible amounts, whereas 2020 had included the non-deductible impairments on goodwill and on our stake in TTB (previously referred to as TMB).

The result before tax increased 78.1% to EUR 6,782 million in 2021 from EUR 3,809 million in 2020, predominantly due to lower risk costs reflecting improved macroeconomic indicators, as well as higher income. Net core lending growth (adjusted for currency impacts, and excluding Treasury and the run-off portfolios) was EUR 30.6 billion, and net core deposits growth was EUR 10.3 billion. At year-end, the global retail customer base declined to 38.2 million, mainly by exiting the Austrian and Czech retail banking markets. The number of primary customers, however, rose during the year by 481,000 to 14.3 million.

Income rose 4.8% to EUR 18,490 million in 2021 from EUR 17,637 million in 2020. Income was supported by the recognition of a EUR 483 million conditional TLTRO III benefit, which also included the impact of the retroactive adjustment in the ECB funding rate as from 24 June 2020. The increase in income was mainly in Wholesale Banking, due to higher revenues in all product groups, while the higher income in Corporate Line was supported by the recognition of EUR 72 million receivable related to the insolvency of a financial institution in the Netherlands and higher interest results from foreign currency ratio hedging. Income at Retail Banking slightly increased as strong growth in fee income and the impact of the impairment on ING's equity stake in TTB recorded in 2020, was largely offset by the continued margin pressure on liabilities.

Net interest income increased 0.1% to EUR 13,615 million, and was supported by the EUR 483 million conditional TLTRO III benefit. Higher interest results were recorded on lending products (driven by a higher total lending margin), but also in Treasury, Financial Markets and Corporate Line. These increases were offset by lower revenues on current accounts and savings, reflecting continued liability margin pressure. ING Bank's overall net interest margin declined to 1.39% from 1.43% in 2020.

Net fee and commission income increased 16.8% to EUR 3,517 million from EUR 3,011 million in 2020. In Retail Banking, net fee and commission income rose by EUR 374 million, or 19.2%. This increase was mainly in daily banking, reflecting higher packages fees, recovery of payment transactions and new fee introductions, as well as higher fees from investment products due to new account openings, a higher number of trades and higher assets under management. Total fee income in Wholesale Banking increased by EUR 128 million, or 12.0%, mainly in Trade & Commodity Finance as a result of higher average oil prices as well as increased daily banking fees and higher fee income in Global Capital Markets and Corporate Finance.

Total investment and other income rose to EUR 1,359 million in 2021 from EUR 1,022 million in 2020. The increase was mainly caused by the recognition of a EUR 72 million receivable (recorded in Corporate Line) related to the expected recovery of the insolvency of a financial institution in the Netherlands, while previous year included the EUR 230 million impairment on ING's equity stake in TTB (recorded in Retail Banking) as well as a EUR 58 million decrease of the NN Group indemnity receivable following the settlement of a tax dispute in Australia, which was offset by an comparable amount in the tax line (recorded in Corporate Line).

Operating expenses increased by EUR 39 million, or 0.3%, to EUR 11,192 million. Expenses in 2021 included EUR 1,265 million of regulatory costs, up from EUR 1,105 million in previous year, among others due to an incidental 50% increase in the Dutch bank tax for 2021. Expenses in 2021 furthermore included EUR 522 million of incidental items, mainly reflecting a EUR 180 million provision for compensation to Dutch customers with certain consumer credit products, redundancy provisions and impairments related to the announced exit of the retail banking markets in France and Czech Republic, the accelerated closure of branches in the Netherlands, and some other impairments. Incidental items in 2020 amounted to EUR 673 million, mainly reflecting EUR 310 million of goodwill impairments and several restructuring provisions and impairments related to the review of activities and measures announced (including those on Wholesale Banking and the Maggie project). Expenses excluding regulatory costs and incidental items increased by EUR 30 million, or 0.3%, as the impact of collective-labour-agreement (CLA) salary increases and higher performance-related expenses and IT costs was largely offset by the impact of continued cost-efficiency measures. The cost/income ratio was 60.5% in 2021 versus 63.2% in 2020.

Net additions to loan loss provisions declined to EUR 516 million, or 8 basis points of average customer lending, compared with EUR 2,675 million, or 43 basis points, in 2020. Risk costs in 2021 were primarily driven by additions to Stage 3 provisions and included several model updates in Retail Belgium as well as additional provisioning from updated recovery scenarios of existing, mainly Wholesale Banking clients, reflecting uncertainty on recovery scenarios and valuation in certain asset classes. Provisioning in Stage 1 and 2 was reduced, mainly due to releases from management adjustments taken in previous year. It further reflects clients being removed from the watch list and moving back to Stage 1.

Year ended 31 December 2020 compared to year ended 31 December 2019

ING's net result (including the adjustment of the EU 'IAS 39 carve-out') decreased by EUR 1,653 million, or 42.4%, to EUR 2,250 million compared with EUR 3,903 million in 2019. The net result was affected by a EUR 234 million negative contribution of fair value changes on derivatives related to asset-liability-management activities for the mortgage and savings portfolios in the Benelux, Germany, France and Czech Republic, versus a EUR 878 million negative contribution in 2019. These negative fair value changes were mainly caused by changes in market interest rates. No hedge accounting is applied to these derivatives under IFRS-IASB.

The IFRS-EU net result (before adjustment of the EU 'IAS 39 carve-out') fell 48.0% to EUR 2,485 million from EUR 4,781 million in 2019. The effective tax rate in 2020 was relatively high at 32.7% (versus 28.6% in 2019) and was mainly caused by the lower result before tax, which included higher non-deductible amounts like the impairments on goodwill and on our stake in TTB.

The result before tax declined 44.3% to EUR 3,809 million in 2020 from EUR 6,834 million in 2019, primarily caused by elevated risk costs reflecting the (expected) economic impact of the Covid-19 pandemic, combined with impairments on goodwill, restructuring provisions and other impairments. Net core lending (adjusted for currency impacts, and excluding Treasury and the run-off portfolios) declined by EUR 2.5 billion in 2020, while net customer deposit inflow was high at EUR 41.4 billion. The global retail customer base grew to 39.3 million at year-end, and the number of primary customers rose during the year by 578,000 to 13.9 million.

Income declined 3.7% to EUR 17,637 million from EUR 18,306 million in 2019. The decline was mainly in the Corporate Line due to lower interest results from foreign currency ratio hedging and to some positive one-offs recorded in 2019. Income at Retail Banking decreased due to an impairment on our equity stake in TMB, whereas income in Wholesale Banking (mainly in Financial Markets) increased.

Net interest income decreased 3.4% to EUR 13,604 million. The decline was largely due to lower interest results on current accounts and savings, reflecting the continued pressure on liability margins, combined with lower interest results from foreign currency ratio hedging due to lower interest rate differentials. This decline was largely offset by higher interest results at Treasury (supported by the introduction of the ECB's two-tiering system at the end of October 2019) and, to a lesser extent, on lending products, reflecting a slight increase in the total lending margin. ING's overall net interest margin declined to 1.44% from 1.54% in 2019.

Net fee and commission income increased 5.0% to EUR 3,011 million from 2,868 million in 2019. In Retail Banking, net fee and commission income rose by EUR 204 million, or 11.7%. This was mainly driven by higher fee income on investment products, predominantly in Germany, whereas daily banking fees slightly increased supported by increased package fees, which countered the impact of a drop in payment transactions due to lockdown measures and travel restrictions. Total fee income in Wholesale Banking declined by EUR 66 million, or 5.8%, predominantly in Trade & Commodity Finance as a result of lower average oil prices as well as lower syndicated deal activity in Lending.

Total investment and other income decreased to EUR 1,022 million 2020 from EUR 1,360 million in previous year. The decline was mainly in Retail Banking, largely due to a EUR 230 million impairment related to ING's stake in TTB, and in the Corporate Line. In 2019, the latter had included a EUR 119 million one-off gain from the release of a currency translation reserve related to the sale of ING's stake in Kotak Mahindra Bank and a EUR 79 million receivable related to the insolvency of a financial institution. These declines were partly offset by Wholesale Banking, predominantly in Financial Markets due to a positive swing in valuation adjustments.

Operating expenses increased by EUR 800 million, or 7.7%, to EUR 11,153 million. Expenses in 2020 included EUR 1,105 million of regulatory costs, compared with EUR 1,021 million previous year. The increase was furthermore caused by EUR 673 million of incidental items recorded in 2020, mainly reflecting EUR 310 million of goodwill impairments and several restructuring provisions and impairments related to the review of activities and measures announced (including those on Wholesale Banking and the Maggie project). Excluding regulatory costs and these incidental items, expenses increased by EUR 43 million, or 0.5%, as the impact of collective-labour-agreement (CLA) salary increases and higher IT expenses, was largely offset by the impact of continued cost-efficiency measures (including lower marketing and travel costs as a result of the Covid-19 restrictions). The cost/income ratio was 63.2% versus 56.6% in 2019.

Net additions to loan loss provisions were EUR 2,675 million, or 43 basis points of average customer lending, compared with EUR 1,120 million, or 18 basis points, in 2019. The increase was mainly due to various Individual Stage 3 provisions, including a sizeable provision for an alleged external fraud case in 2020, and high collective Stage 1 and Stage 2 provisioning as a result of the economic impact of the Covid-19 pandemic. Risk costs in 2020 included EUR 590 million of collective provisions related to the worsened macro-economic indicators, including provisioning related to loans subject to a payment holiday.

Retail Netherlands

Retail Netherlands			
Amounts in millions of euros	2021	2020	2019
Income:			
Net interest income	3,290	3,511	3,541
Net fee and commission income	771	681	674
Investment income and other income	201	279	290
Total income	**4,262**	**4,471**	**4,505**
Expenditure:			
Operating expenses	2,403	2,236	2,210
Additions to the provision for loan losses	–76	157	91
Total expenditure	**2,326**	**2,393**	**2,301**
Result before tax	**1,936**	**2,078**	**2,204**
Taxation	499	523	558
Non-controlling interests	0	–1	–0
Net result IFRS-IASB	**1,437**	**1,556**	**1,646**

Year ended 31 December 2021 compared to year ended 31 December 2020

The net result of Retail Netherlands decreased by EUR 119 million, or 7.6%, to EUR 1,437 million in 2021 from EUR 1,556 million in 2020.

The result before tax declined 6.8% to EUR 1,936 million from EUR 2,078 million in 2020. This decline was caused by lower income mainly due to lower margins on customer deposits combined with higher expenses which included several incidental cost items, partly offset by lower risk costs.

Total income declined by EUR 209 million, or 4.7%, to EUR 4,262 million compared with EUR 4,471 million in 2020. Net interest income declined 6.3%, despite the recognition of a EUR 53 million conditional TLTRO III benefit and an increased charging on negative interest rates. This decline was predominantly due to continued margin pressure on savings and current accounts combined with lower interest results from lending products. Net core lending (which excludes Treasury products and a EUR 1.1 billion decline in the WUB run-off portfolio) grew by EUR 0.8 billion in 2021, of which EUR 1.5 billion was in residential mortgages and EUR -0.7 billion in other lending. Net core deposits growth (excluding Treasury) was EUR 14.8 billion, predominantly in current accounts. Net fee and commission income increased by EUR 90 million, or 13.2%, mainly due to higher fee income in daily banking products, supported by increased fees for payment packages, and higher fees on investment products. Investment and other income was EUR 78 million lower, mainly attributable to lower results from Treasury-related products.

Operating expenses rose by EUR 167 million, or 7.5%, to EUR 2,403 million from EUR 2,236 million in 2020. The increase was mainly due to a EUR 180 million provision for compensation to customers with certain consumer credit products, and EUR 109 million of redundancy provisions and costs related to the retail advice organization in the Netherlands and the accelerated closure of branches, while 2020 included EUR 29 million of provisions. Excluding these incidental items, expenses declined by EUR 93 million, or 4.2%, mainly due to lower external staff costs and lower allocated group overhead expenses, partly offset by increased regulatory costs.

The addition to loan loss provisions was a net release of EUR 76 million, or -5 basis points of average customer lending, compared with a net addition of EUR 157 million, or 10 basis points, in previous year. In 2021, net releases in the mortgage and business lending portfolios, more than offset a net addition in the consumer lending portfolio.

Year ended 31 December 2020 compared to year ended 31 December 2019

The net result of Retail Netherlands decreased by EUR 90 million, or 5.5%, to EUR 1,556 million in 2020 from EUR 1,646 million in 2019.

The result before tax of Retail Netherlands decreased 5.7% to EUR 2,078 million from EUR 2,204 million in 2019. This decline was mainly attributable to higher risk costs reflecting the worsened macro-economic environment and an increase in regulatory costs.

Total income declined by EUR 34 million, or 0.8%, to EUR 4,471 million, compared with EUR 4,505 million in 2019. Net interest income declined 0.8%, mainly due to lower margins on savings and current accounts, combined with a decline in average lending volumes, which was largely offset by higher Treasury- related revenues. Net core lending (which excludes Treasury products and a EUR 1.1 billion decline in the WUB run-off portfolio) decreased by EUR 3.2 billion in 2020, of which EUR 0.8 billion was in residential mortgages and EUR 2.4 billion in other lending. Net customer deposits (excluding Treasury) grew by EUR 15.3 billion, predominantly in current accounts. Net fee and commission income increased by EUR 7 million, or 1.0%, primarily due to higher investment product fees. Investment and other income was EUR 11 million lower.

Operating expenses rose by EUR 26 million, or 1.2%, to EUR 2,236 million from EUR 2,210 million in 2019, of which EUR 65 million was caused by higher regulatory costs to EUR 255 million from EUR 190 million in 2019. Expenses excluding regulatory costs declined 1.9% as the impact of CLA salary increases, higher IT expenses as well as provisions related to redundancies and customer claims, were more than offset by lower external staff costs and lower marketing and travel expenses.

The net addition to loan loss provisions was EUR 157 million, or 10 basis points of average customer lending, compared with EUR 91 million, or 6 basis points, in 2019. Risk costs in 2020 included EUR 118 million of collective provisions related to the worsened macro-economic indicators, including provisioning related to loans subject to a payment holiday.

Retail Belgium

Retail Belgium			
Amounts in millions of euros	**2021**	**2020**	**2019**
Income:			
Net interest income	1,747	1,816	1,907
Net fee and commission income	519	413	374
Investment income and other income	209	145	161
Total income	**2,475**	**2,373**	**2,442**
Expenditure:			
Operating expenses	1,667	1,737	1,609
Additions to the provision for loan losses	225	514	186
Total expenditure	**1,892**	**2,251**	**1,794**
Result before tax	**583**	**122**	**647**
Taxation	146	51	192
Net result IFRS-IASB	**437**	**71**	**455**

Year ended 31 December 2021 compared to year ended 31 December 2020

The net result of Retail Belgium (including ING in Luxembourg) increased by EUR 366 million to EUR 437 million in 2021 from EUR 71 million in 2020.

The result before tax of Retail Belgium rose to EUR 583 million, compared with EUR 122 million in 2020. The increase was attributable to lower risk costs, combined with higher income and lower expenses.

Income rose by EUR 102 million, or 4.3%, to EUR 2,475 million from EUR 2,373 million in 2020. Net interest income was 3.8% lower at EUR 1,747 million, despite the recognition of a EUR 76 million conditional TLTRO III benefit and the introduction of negative interest rates. The decline reflects lower margins on savings and current accounts and lower interest result from lending products. Net core lending (excluding Treasury) increased by EUR 0.4 billion in 2021, of which EUR 0.9 billion was in mortgages, and EUR -0.5 billion in other lending. Net core deposits (excluding Treasury) declined by EUR 2.6 billion, predominantly in savings and deposits. Net fee and commission income rose by EUR 106 million, or 25.7%, mainly driven by higher daily banking fees and the strong performance in investment products. Investment and other income increased by EUR 64 million, mainly due to positive treasury-related fair value adjustments and a EUR 25 million capital gain on the sale of an associate.

Operating expenses declined by EUR 70 million, mainly due to a EUR 43 million goodwill impairment and EUR 40 million of restructuring costs, both recorded in 2020. Excluding these incidental items, expenses increased by 0.8%, mainly due to higher regulatory costs, partly offset by lower staff expenses.

The addition to the provision for loan losses declined to EUR 225 million, or 25 basis points of average customer lending, from EUR 514 million, or 57 basis points, in 2020. Risk costs in 2021 mainly included collective provisioning to accommodate for an update of models and Stage 3 additions for specific files, partly offset by a partial release of management adjustment applied in 2020.

Year ended 31 December 2020 compared to year ended 31 December 2019

The net result of Retail Belgium (including ING in Luxembourg) declined by EUR 384 million to EUR 71 million in 2020 from EUR 455 million in 2019.

The result before tax of Retail Belgium fell to EUR 122 million, compared with EUR 647 million in 2019. The decline was attributable to higher risk costs reflecting the worsened macro-economic environment, combined higher expenses and lower income.

Income declined by EUR 69 million, or 2.8%, to EUR 2,373 million from EUR 2,442 million in 2019. Net interest income was 4.8% down to EUR 1,816 million, mainly reflecting lower margins on savings and current accounts, and lower Treasury related revenues, partly offset by higher interest results from mortgages. Net core lending (excluding Treasury) decreased by EUR 1.5 billion in 2020, evenly spread over mortgages and other lending. Net customer deposits (also excluding Treasury) grew by EUR 4.0 billion, predominantly in current accounts. Net fee and commission income rose by EUR 39 million, or 10.4%, mainly due to higher fee income on investment products and mortgages. Investment and other income declined by EUR 16 million, mainly from Financial Markets.

Operating expenses rose by EUR 128 million, of which EUR 43 million was due to a goodwill impairment related to an acquisition in the past by ING Belgium and EUR 40 million related to restructuring costs recorded in the fourth quarter of 2020. The remaining increase was mainly due to higher regulatory costs and IT expenses.

The net addition to the provision for loan losses increased to EUR 514 million, or 57 basis points of average customer lending, from EUR 186 million, or 21 basis points, in 2019. Risk costs in 2020 included EUR 158 million of collective provisions related to the worsened macro-economic indicators, including provisioning related to loans subject to a payment holiday. The remaining risk costs were mainly related to business lending, including provisioning on a number of individual files.

Retail Germany

Retail Germany			
Amounts in millions of euros	**2021**	**2020**	**2019**
Income:			
Net interest income	1,447	1,587	1,579
Net fee and commission income	497	437	268
Investment income and other income	65	93	138
Total income	**2,009**	**2,117**	**1,985**
Expenditure:			
Operating expenses	1,174	1,110	1,080
Additions to the provision for loan losses	49	57	–53
Total expenditure	**1,223**	**1,167**	**1,027**
Result before tax	**786**	**950**	**957**
Taxation	252	331	328
Non-controlling interests	4	4	3
Net result IFRS-IASB	**529**	**615**	**627**

Year ended 31 December 2021 compared to year ended 31 December 2020

The net result of Retail Germany (including ING in Austria) decreased by EUR 86 million, or 14.0%, to EUR 529 million in 2021 from EUR 615 million in 2020.

The result before tax declined 17.3% to EUR 786 million, compared with EUR 950 million in 2020, mainly due to lower income and increased expenses.

Total income fell 5.1% to EUR 2,009 million from EUR 2,117 million in 2020. Net interest income declined 8.8% as higher revenues from lending products and the recognition of a EUR 16 million conditional TLTRO III benefit was more than offset by the impact of the continued margin pressure on savings and current accounts. In 2021, net core lending growth (which excludes Treasury products, and the Austrian run-off portfolio as from the second quarter of 2021) was EUR 7.8 billion, of which EUR 6.8 billion was in residential mortgages and EUR 0.9 billion in consumer lending. Net core deposits declined by EUR 3.8 billion due to net outflows in the second half of the year, primarily reflecting the impact of the introduction of negative interest rate charging to clients with liability balances above EUR 50,000 as of November 2021. Net fee income rose by EUR 60 million, or 13.7%, predominantly on investment products, reflecting higher assets under management, new account openings and higher number of brokerage trades. Investment and other income declined by EUR 28 million due to a EUR 26 million one-off loss related to the transfer of the Austrian retail banking activities to bank99 in December 2021.

Operating expenses increased by EUR 64 million, or 5.8%, to EUR 1,174 million in 2021, of which EUR 36 million was due to higher regulatory costs, which included a catch-up following the Greensill insolvency. The remaining cost increase was mainly due to higher staff expenses and costs related to the discontinuation of the Austrian retail banking activities.

The addition to the provision for loan losses was EUR 49 million, or 5 basis points of average customer lending, compared with EUR 57 million, or 6 basis points, in 2020.

Year ended 31 December 2020 compared to year ended 31 December 2019

The net result of Retail Germany (including ING in Austria) decreased by EUR 12 million, or 1.9%, to EUR 615 million in 2020 from EUR 627 million in 2019.

The result before tax declined 0.7% to EUR 950 million, compared with EUR 957 million in 2019, as higher income largely offset the impact of higher risk costs (after a net release in 2019) and increased expenses.

Total income rose 6.6% to EUR 2,117 million from EUR 1,985 million in 2019. The increase was driven by EUR 169 million higher fee income, predominantly on investment products due to higher assets under management, new account openings and a higher number of brokerage trades in volatile markets. Net interest income increased 0.5% to EUR 1,587 million, as higher interest results from lending and accounting asymmetry in Treasury (with an offset in other income), was largely offset by margin pressure on savings and current accounts. In 2020, net core lending (which excludes Treasury products) increased EUR 4.5 billion, of which EUR 4.2 billion was in residential mortgages and EUR 0.3 billion in consumer lending. Net customer deposits (excluding Treasury) increased by EUR 5.8 billion, largely in current accounts. Investment and other income declined by EUR 45 million, mainly due to the aforementioned accounting asymmetry and lower capital gains.

Operating expenses increased by EUR 30 million, or 2.8%, to EUR 1,110 million in 2020. The increase was mainly due to investments to support business growth as well as the consolidation of a subsidiary as from the first quarter of 2020, while previous year included a EUR 36 million restructuring provision.

The net addition to the provision for loan losses was EUR 57 million, or 6 basis points of average customer lending, compared with a net release of EUR 53 million in 2019, which had included model updates on mortgages. Risk costs in 2020 included EUR 8 million of collective provisions related to the worsened macro-economic indicators.

Retail Other

Retail Other			
Amounts in millions of euros	**2021**	**2020**	**2019**
Income:			
Net interest income	2,712	2,760	2,787
Net fee and commission income	530	412	423
Investment income and other income	361	89	298
Total income	**3,602**	**3,261**	**3,509**
Expenditure:			
Operating expenses	2,452	2,469	2,210
Additions to the provision for loan losses	202	593	364
Total expenditure	**2,654**	**3,063**	**2,574**
Result before tax	**949**	**199**	**935**
Taxation	212	105	234
Non-controlling interests	98	55	82
Net result IFRS-IASB	**639**	**39**	**619**

Year ended 31 December 2021 compared to year ended 31 December 2020

Retail Other consists of the Other Challengers & Growth Markets, including the bank stakes in Asia. The net result of Retail Other increased to EUR 639 million in 2021, from EUR 39 million in 2020.

Retail Others' result before tax rose to EUR 949 million, from EUR 199 million in 2020, mainly reflecting higher income, driven by strong fee income growth, whereas 2020 included a EUR 230 million impairment on ING's equity stake in TTB (Thailand) and lower risk costs.

Total income rose by EUR 341 million to EUR 3,602 million from EUR 3,261 million in 2020. Excluding the impairment on TTB, total income increased by EUR 111 million, or 3.2%. Net interest income was down 1.7% to EUR 2,712 million, mainly reflecting lower margins on savings and current accounts, partly offset by higher interest results from lending products and a EUR 7 million TLTRO III benefit. Net customer lending (adjusted for currency effects and Treasury) grew by EUR 8.5 billion in 2021, with growth in all countries, except Italy. Net core deposits growth, also adjusted for currency impacts and Treasury as well as the Czech Republic run-off portfolio, was EUR 4.4 billion, driven by net inflows in the non-eurozone countries with the largest increase in Poland. Net fee and commission income rose by EUR 118 million, or 28.6%, to EUR 530 million in 2021. The increase was mainly due to higher fee income from daily banking, investment and insurance products, and was mainly visible in Spain, Poland and Romania. Excluding the aforementioned impairment on TTB in 2020, investment and other income increased by EUR 42 million, mainly due to higher revenues from Financial Markets-related products.

Operating expenses declined by EUR 17 million, or 0.7%, to EUR 2,452 million from EUR 2,469 million in 2020. In 2021, expenses included EUR 166 million of incidental items, mainly consisting of restructuring provisions and impairments related to the announcements that ING will exit the retail banking markets in France and the Czech Republic, while 2020 included EUR 167 million of impairments and restructuring provisions mainly related to the Maggie programme. Excluding these incidental items, expenses declined by EUR 16 million as higher staff expenses and legal provisions, were more than offset by among others lower IT and marketing expenses as well as lower regulatory costs.

The addition to loan loss provisions declined by EUR 391 million on 2020 to EUR 202 million, or 20 basis points of average customer lending. The 2021 risk costs mainly reflect net additions in Poland and Spain, partly offset by a net release in Australia.

Year ended 31 December 2020 compared to year ended 31 December 2019

Retail Other consists of the Other Challengers & Growth Markets, including the bank stakes in Asia. The net result of Retail Other decreased to EUR 39 million in 2020, from EUR 619 million in 2019.

Retail Others' result before tax fell to EUR 199 million, from EUR 935 million in 2019, mainly reflecting impairments on TTB and the Maggie project as well as higher risk costs.

Total income declined by EUR 248 million to EUR 3,261 million in 2020, of which EUR 230 million related to an impairment on ING's equity stake in TTB. Excluding this impairment, total income decreased by EUR 18 million, or -0.5%. Net interest income was down 1.0% to EUR 2,760 million, reflecting margin pressure on savings and current accounts, largely offset by higher interest results from lending products and Treasury. Net customer lending (adjusted for currency effects and Treasury) grew by EUR 2.6 billion in 2020, with growth in all countries, except Italy. The net inflow in customer deposits, also adjusted for currency impacts and Treasury, was EUR 11.9 billion, with largest increases in Poland and Spain. Net fee and commission income declined 2.6% to EUR 412 million, largely due to a decline in Turkey, which was partly offset by increases in most of the other countries. Excluding the aforementioned impairment, investment and other income rose by EUR 21 million.

Operating expenses increased by EUR 259 million, or 11.7%, to EUR 2,469 million from EUR 2,210 million in 2019, of which EUR 140 million related to an impairment on capitalised software following the decision to stop the Maggie transformation programme (previously called Model Bank) and EUR 27 million of restructuring provisions and impairments related to the project and some other countries. Excluding these incidental items, expenses increased by EUR 92 million, or 4.2%, mainly due to higher regulatory costs, investments in business growth and lower capitalization of costs following the decision on Maggie. These increases were partly offset by lower legal provisions as well as lower marketing and travel expenses.

The net addition to loan loss provisions increased by EUR 229 million on 2019 to EUR 593 million, or 61 basis points of average customer lending. Risk costs in 2020 included EUR 114 million of collective provisions related to the worsened macro-economic indicators, including provisioning related to loans subject to a payment holiday, as well as a EUR 59 million Stage 3 provision for expected losses on CHF-indexed mortgages in Poland. The increase versus 2019 was mainly visible in Poland, Romania and Australia, whereas risk costs in Turkey declined.

Wholesale Banking

Wholesale Banking			
Amounts in millions of euros	**2021**	**2020**	**2019**
Income:			
Net interest income	4,151	3,718	3,794
Net fee and commission income	1,197	1,069	1,135
Investment income and other income	568	609	369
Total income	**5,916**	**5,396**	**5,298**
Expenditure:			
Operating expenses	2,926	3,218	2,937
Additions to the provision for loan losses	117	1,351	532
Total expenditure	**3,042**	**4,568**	**3,469**
Result before tax	**2,874**	**827**	**1,830**
Taxation	703	295	464
Non-controlling interests	26	20	14
Net result IFRS-EU	**2,144**	**512**	**1,352**
Adjustment of the EU 'IAS 39 carve-out'	1,174	–234	–878
Net result IFRS-IASB	**3,318**	**278**	**474**

Year ended 31 December 2021 compared to year ended 31 December 2020

The net result of Wholesale Banking increased to EUR 3,318 million in 2021 compared with EUR 278 million in 2020. The adjustment of the EU ‘IAS 39 carve-out’, included in the net result, was EUR 1,174 million in 2021, compared with EUR -234 million in 2020, due to fair value changes on derivatives related to asset-liability-management activities for the mortgage and savings portfolios in the Benelux, Germany, France and Czech Republic. These fair value changes were mainly a result of changes in market interest rates. No hedge accounting is applied to these derivatives under IFRS-IASB.

The 2021 result of Wholesale Banking also strongly recovered from the previous year when results were negatively affected by the impact of the Covid-19 pandemic. The IFRS-EU net result, which is before the adjustment of the EU ‘IAS 39 carve-out’, increased to EUR 2,144 million from EUR 512 million in 2020. The result before tax rose 247.5% to EUR 2,874 million from EUR 827 million in 2020. The increase was predominantly due to lower risk costs and higher income, while operating expenses declined due to lower incidental cost items.

Total income rose 9.6% to EUR 5,916 million in 2021, compared with EUR 5,396 million in 2020, reflecting higher revenues in all product groups, with the largest increases in Lending, and Daily Banking & Trade Finance. Net interest income increased by EUR 433 million, or 11.6%, and was supported by a EUR 188 million conditional TLTRO III benefit. The increase was mainly due to higher margins on lending products and increased interest results from Treasury and Financial Markets, while the margin on customer deposits stabilised due to the increased charging of negative interest rates. The net core lending book (adjusted for currency impacts and excluding Treasury and the Lease run-off portfolio) grew by EUR 13.1 billion in 2021, mainly in Lending, primarily reflecting growth in term loans, and higher short-term facilities in Financial Markets. Net core deposits (excluding currency impacts and Treasury) decreased by EUR 2.6 billion. Net fee and commission income rose by EUR 128 million, or 12.0%, on 2020, mainly due to higher fee income in Trade & Commodity Finance on the back of higher oil prices, various fee and pricing initiatives in Payments & Cash Management and higher deal flows in Global Capital Markets and Corporate Finance. Investment and other income decreased by EUR 41 million, primarily due to lower valuation results in Financial Markets, partly offset by higher income in Corporate Investments.

Operating expenses declined 9.1% to EUR 2,926 million from EUR 3,218 million in 2020. Expenses in 2021 included a EUR 44 million impairment on Payvision, while 2020 included a EUR 260 million goodwill impairment and EUR 124 million of restructuring provisions and impairments. Excluding these incidental items, expenses increased 1.7%, mainly due to higher performance-related staff expenses and increased costs for legal provisions and IT, partly offset by the impact of continued cost-efficiency measures.

The net addition to loan loss provisions fell to EUR 117 million, or 7 basis points of average customer lending, compared with EUR 1,351 million, or 75 basis points, in 2020. Risk costs in 2021 mainly reflect individual Stage 3 provisioning for existing files, including the impact of updated scenarios reflecting uncertainty in recovery scenarios and valuations in certain asset classes. This was partly offset by releases in management adjustments caused by improved macroeconomic indicators.

Lending posted a result before tax of EUR 2,141 million, up from EUR 691 million in 2020, predominantly due to lower risk costs compared with the elevated level in 2020. Lending income rose by EUR 231 million, or 8.0%, and was supported by the recognition of a EUR 100 million conditional TLTRO III benefit. The increase was mainly due to higher lending margins and increased syndicated deal activity. Expenses increased 0.4% to EUR 983 million as higher performance-related staff expenses were offset by the impact of cost-efficiency measures.

The result before tax from Daily Banking & Trade Finance rose to EUR 375 million from EUR 246 million in 2020. This increase was due to higher income, supported by the recognition of a EUR 24 million conditional TLTRO III benefit, partly offset by higher expenses and risk costs. Income increased 13.3%, mainly in Trade & Commodity Finance on the back of higher average oil prices and in Payments & Cash Management following various fee and pricing initiatives. Expenses rose 2.6%, mainly due to higher regulatory costs, partly offset by lower staff and IT expenses.

Financial Markets recorded a result before tax of EUR 278 million, compared with EUR 230 million in 2020. The increase was mainly due to higher income, which was supported by the recognition of a EUR 60 million conditional TLTRO III benefit and higher net fee income, partly offset by lower valuation results. The increase in income was partly offset by higher expenses, mainly due to higher performance-related staff expenses.

The result before tax of Treasury & Other was EUR 80 million compared with a loss of EUR 339 million in 2020. The improvement was mainly due to lower expenses, as 2020 included a EUR 260 million goodwill impairment and EUR 95 million of restructuring provisions and related impairments following the announced refocusing of activities. Excluding these incidental items, result before tax rose by EUR 64 million, mainly due to higher Treasury income as well as higher income in Corporate Investments, which was supported by a EUR 28 million gain on an investment in an associate, and Corporate Finance.

Year ended 31 December 2020 compared to year ended 31 December 2019

The net result of Wholesale Banking declined to EUR 278 million in 2020 compared with EUR 474 million in 2019. The adjustment of the EU ‘IAS 39 carve-out’, included in the net result, was EUR -234 million in 2020, compared with EUR -878 million in 2019, due to fair value changes on derivatives related to asset-liability-management activities for the mortgage and savings portfolios in the Benelux, Germany, France and Czech Republic. These fair value changes were mainly a result of changes in market interest rates. No hedge accounting is applied to these derivatives under IFRS-IASB.

The IFRS-EU net result, which is before the adjustment of the EU ‘IAS 39 carve-out’, declined to EUR 512 million from EUR 1,352 million in 2019.

The full-year 2020 results for Wholesale Banking were also strongly affected by the impact of the Covid-19 pandemic. The result before tax dropped 54.8% to EUR 827 million, down from EUR 1,830 million in 2019. The decline was predominantly due to elevated risk costs and higher expenses (including impairments and restructuring provisions), partly offset by higher income.

Total income rose 1.8% to EUR 5,396 million in 2020, compared with EUR 5,298 million in 2019, reflecting higher revenues in Financial Markets and Treasury & Other, partly offset by lower income in Daily Banking & Trade Finance and Lending. The net core lending book (adjusted for currency impacts and excluding Treasury and the Lease run-off portfolio) declined by EUR 4.9 billion in 2020. The inflow in net customer deposits (excluding currency impacts and Treasury) was EUR 4.4 billion. Net interest income decreased 2.0%, mainly due to lower margins on current accounts and lower average lending volumes. This decline was largely offset by higher interest results from Treasury (with an offset in other income). Net fee and commission income decreased 5.8% on 2019, mainly due to lower syndicated deal activity in Lending and lower fees in Trade & Commodity Finance. Investment and other income rose by EUR 240 million, primarily due to higher valuation results in Financial Markets, partly offset by Treasury.

Operating expenses rose 9.6% to EUR 3,218 million from EUR 2,937 million in 2019, mainly due to a EUR 260 million goodwill impairment and EUR 124 million of restructuring provisions and impairments recorded in the fourth quarter of 2020, following the announced refocusing of activities, including an additional impairment on Payvision. Excluding the aforementioned incidental items, expenses decreased 3.5%, mainly due to lower regulatory costs and the impact of continued cost-efficiency measures as well as lower travel expenses as a result of the Covid-19 restrictions.

The net addition to loan loss provisions rose to EUR 1,351 million, or 75 basis points of average customer lending, compared with EUR 532 million, or 29 basis points, in 2019. The increase was predominantly due to various Individual Stage 3 provisions, including a sizeable provision for an alleged external fraud case in 2020, and high collective Stage 1 and Stage 2 provisions as a result of the economic impact of the Covid-19 pandemic, including EUR 192 million of collective provisions related to the worsened macro-economic indicators.

Lending posted a result before tax of EUR 691 million, down 56.7% compared with EUR 1,597 million in 2019, predominantly due to elevated risk costs. Risk costs in 2020 were primarily impacted by various large individual files, including a sizeable provision for an alleged external fraud case, as well as the economic impact of the Covid-19 pandemic. Lending income declined 3.2%, reflecting lower lending margins and lower syndicated deal activity. Expenses declined 3.1%, mainly due to lower regulatory costs.

The result before tax from Daily Banking & Trade Finance fell to EUR 246 million from EUR 476 million in 2019. This decline was due to lower income and higher expenses, partly offset by lower risk costs as previous year included a sizeable provision for an external fraud case. The decline in income mainly reflect lower margins on current accounts as well as lower fee income, mainly in Trade & Commodity Finance as a result of lower average oil prices. Expenses rose 9.8%, mainly due to impairments on Payvision’s intangible assets.

Financial Markets recorded a result before tax of EUR 230 million, compared with a loss of EUR 121 million in 2019. The increase was predominantly due to higher income, which included EUR 73 million of positive valuation adjustments versus EUR -228 million in 2019, and lower expenses in part due to lower staff expenses and regulatory costs. Excluding valuation adjustments, pre-tax result rose by EUR 50 million compared with 2019, mainly in the Global Capital Markets business.

The result before tax of Treasury & Other was EUR -339 million compared with EUR -123 million in 2019. This decline was mainly explained by a EUR 260 million goodwill impairment and EUR 95 million of restructuring provisions and related impairments following the announced refocusing of activities, partly offset by higher Treasury income.

B. Liquidity and capital resources

ING believes that its working capital is sufficient for its present requirements.

For information regarding our material short and long- term cash requirements from known contractual and other obligations, see “Additional information – ING Group Risk Management section Funding and liquidity risk” and “Note 51 – Capital Management” in the consolidated financial statements.

For information on legal or economic restrictions on the ability of subsidiaries to transfer funds to the company in the form of cash dividends, loans or advances, see “Note 19 – Equity” in the consolidated financial statements.

For information on the maturity profile of borrowings and a further description of the borrowings, please see “Note 17 - Debt securities in issue”, “Note 18 - Subordinated Loans” and “Note 42 – Liabilities and off-balance sheet commitments by maturity” in the consolidated financial statements.

For information on currency and interest rate structure, see “Additional information – ING Group Risk Management section Market risk” and “Additional information – ING Group Risk Management section Funding and liquidity risk”.

For information on the use of financial instruments for hedging purposes, please see “Note 40 - Derivatives and hedge accounting” in the consolidated financial statements.

ING Group Consolidated Cash Flows

cash and cash equivalents			
Amounts in millions of euros	2021	2020	2019
Treasury bills and other eligible bills	23	0	43
Amounts due from/to banks	1,122	478	786
Cash and balances with central banks	106,520	111,087	53,202
Cash and cash equivalents at end of year	**107,665**	**111,566**	**54,031**

Year ended 31 December 2021 compared to year ended 31 December 2020

Net cash flow from operating activities amounts to EUR -14,943 million for the year-end 2021, compared to EUR 101,243 million at 31 December 2020. The decrease in cash flow from operating activities of EUR 116,186 million in 2021 is explained by lower cash inflows from Loans and advances to/from banks (EUR 44,378 million), higher cash outflows to loans and advances to customers (EUR 30,736 million), lower cash inflows from customer deposits (EUR 29,401 million) and higher cash outflows to Trading assets and liabilities (EUR 8,186 million).

Net cash flow from investing activities amounts to EUR 6,220 million for the year-end 2021 compared to EUR -8,487 million in 2020. The net cash flow from investing activities increased by EUR 14,707 million and is explained by a net increase from Securities at amortised costs of EUR 7,592 million and from Financial assets at fair value through OCI of EUR 6,942 million.

Net cash flow from financing activities amounts to EUR 5,387 million in 2021, compared to EUR -34,796 million in 2020. The increase of EUR 40,183 million is explained by a net increase of EUR 42,867 million of debt securities offset by higher dividend payments of EUR 2,379 million and the share buyback programme for an amount of EUR 1,604 million at year-end 2021.

The operating, investing and financing activities described above result in a decrease of EUR 3,335 million in cash and cash equivalents to EUR 107,665 at year end 2021 including exchange rate effect on cash and cash equivalents of EUR -565 million.

Year ended 31 December 2020 compared to year ended 31 December 2019

Net cash flow from operating activities amounts to EUR 101,243 million for the year-end 2020, compared to EUR 13,055 million at 31 December 2019. The increase in cash flow from operating activities of EUR 88,187 million is explained by higher cash inflows from Loans and advances to banks (increase of EUR 56,989 million to EUR 53,078 million in 2020 due to new TLTRO III as the ECB modified the terms and conditions of its TLTRO programm to further support the provision of credit to households and firms in view of the COVID-19 pandamic) and Customer deposits (increase of EUR 21,700 million to EUR 39,740 million in 2020) as well as lower cash outflows of Loans and advances to Customers (decrease of EUR 19,563 million to EUR 2,876 in 2020) and Trading assets and liabilities (decrease of EUR 5,134 million to EUR 2,566 in 2020). The increases are partly offset by lower cash inflows from (reverse) repurchase transactions (decrease EUR 12,041 to EUR -933 million in 2020).

Net cash flow from investing activities amounts to EUR -8,487 million compared to EUR -2,495 million in 2019 the net cash flow from investing activities decreased by EUR 5,992 million. The movement is explained by a net increase in Securities at amortised costs of EUR 6,337 million.

Net cash flow from financing activities amounts to EUR -34,796 million in 2020, compared to EUR -4,154 million in 2019. The decrease of EUR 30,642 million is explained by a net decrease of EUR 30,200 million of debt securities and EUR 3,117 million of subordinated loans offset by lower dividend payments of EUR 2,676 million.

The operating, investing and financing activities described above result in an increase of EUR 57,960 million in cash and cash equivalents to EUR 111,566 at year end 2020. The increase in cash and cash equivalent was supported by the combination of lower demand for credit and the continued inflow of customer deposits as result of Covid-19, as well as the TLTRO III participation.

C. Research and development, patents and licenses, etc.

Not applicable.

D. Trend information

For information regarding trend information, see Item 5.A of this Form 20-F.

E. Critical Accounting Estimates

Reference is made to Note 1 ‘Basis of preparation and significant accounting policies' to the consolidated financial statements for detailed information on Critical Accounting Estimates.

Item 6. Directors, Senior Management and Employees

A. Directors and senior management

Executive Board

Roles and responsibilities

The Executive Board is entrusted with the management of ING. This includes the day-to-day management of the business and strategy of ING (including long-term value creation), which responsibility is vested in the members of the Executive Board collectively. The organisation, main roles and responsibilities of the Executive Board are set out in the Management Board Charter, available on ing.com.

The Executive Board performs its activities under the supervision of the Supervisory Board. The Articles of Association, the Management Board Charter and the Supervisory Board Charter outline which resolutions of the Executive Board are subject to approval by the Supervisory Board.

ING Group indemnifies the members of the Executive Board against direct financial losses in connection with claims from third parties filed, or threatened to be filed, against them by virtue of their service as a member of the Executive Board, as far as permitted by law, on the conditions laid down in the Articles of Association and their commission contract. ING Group has taken out liability insurance for the members of the Executive Board.

Composition and diversity

ING's Executive Board consists of the chief executive officer (CEO), the chief financial officer (CFO) and the chief risk officer (CRO). The Executive Board is composed to be adequate and balanced, with a diverse selection of persons with knowledge, skills and executive experience, preferably gained in the banking sector, experience in corporate governance of large stock-listed companies and experience in the political and social environment in which such companies operate. In addition, there should be a good balance in the experience of and affinity with the desired nature and culture of the business of ING. ING also takes account of factors such as nationality, gender, age and education for the composition of the Executive Board.

The Supervisory Board is responsible for selecting and nominating candidates to the General Meeting for appointment or reappointment to the Executive Board, among others based on the Executive Board profile, which is available on ing.com. The Supervisory Board regularly assesses the composition of the Executive Board.

As part of this:
(i) bench strength and succession planning for Executive Board positions are continuous attention points, as part of which the career development of potential internal candidates for such a role is complemented with potential talent from outside the bank.
(ii) a long-term view is taken including steps to improve the appointment of women in senior positions throughout the bank, in line with the adopted diversity and inclusion principle.

The above was also applied when looking at the Executive Board composition changes in 2021, when the CRO position became vacant with the position change of Steven van Rijswijk – from CRO to CEO – on 1 July 2020. The Supervisory Board initiated the succession planning for a new CRO, resulting in Ljiljana Čortan being appointed as the CRO of ING Bank and member of the Management Board Banking as of 1 January 2021. Furthermore, the Supervisory Board proposed to appoint her as member of the Executive Board at the General Meeting 2021. The General Meeting approved this proposal. In terms of the dimensions of diversity, Ljiljana Čortan added both nationality and gender diversity to the Executive Board and Management Board Banking.

The Gender Diversity Act, which entered into force in the Netherlands on 1 January 2022, requires ING to set appropriate and ambitious targets for gender diversity in its Executive Board and senior management. ING's target for gender diversity in the Executive Board is set at 30%.

Appointment, suspension and dismissal

(Proposed) members of the Executive Board are appointed, suspended and dismissed by the General Meeting. Candidates for appointment to the Executive Board are assessed by the Dutch Central Bank and European Central Bank (DNB and ECB) for suitability and reliability and must continue to meet these criteria while in function.

For the appointment of Executive Board members, the Supervisory Board may draw up a binding list of candidates, which may be rendered non-binding by the General Meeting. A resolution of the General Meeting to render this list non-binding, or to suspend or dismiss Executive Board members without this being proposed by the Supervisory Board, requires an absolute majority of the votes cast. Additionally, this majority must represent more than half of the issued share capital. The quorum requirement cannot be waived in a second General Meeting. This ensures that significant shareholder proposals cannot be adopted in a General Meeting with a low attendance rate and can only be adopted with substantial support of ING Group’s shareholders.

Remuneration and share ownership

Details of the remuneration of members of the Executive Board, including shares granted to them, are set out in the ‘Remuneration report’.

Members of the Executive Board are permitted to hold shares in the share capital of ING Group for long-term investment purposes. Transactions by members of the Executive Board in these shares need to comply with the ING regulations for insiders, which are available on ing.com.

Ancillary positions

Members of the Executive Board may hold other positions. No member of the Executive Board has corporate directorships at listed companies outside ING.

Transactions involving actual or potential conflicts of interest

In accordance with the DCGC, transactions with members of the Executive Board in which there are significant conflicts of interest are disclosed in the Annual Report.

If a member of the Executive Board obtains financial products and services, other than loans, which are provided by ING Group subsidiaries in the ordinary course of business on terms that apply to all employees, this is not considered a significant conflict of interest and is not reported. Banking and financial products in which the granting of credit is of a secondary nature, e.g., credit cards and overdrafts in current account, are not considered a loan for this purpose and therefore not reported.

For an overview of loans granted to members of the Executive Board, see the ‘Remuneration report’.

Information on the members of the Executive Board on 31 December 2021

Steven van Rijswijk
Chief executive officer

- Born: 1970
- Nationality: Dutch
- Gender: Male
- Appointed: 2017
- Term expires: 2025

Steven van Rijswijk was appointed as CEO and chairman of the Executive Board and the Management Board Banking with effect from 1 July 2020. He has been a member of the Executive Board since 8 May 2017. Before his appointment as CEO, he was ING's CRO. The Supervisory Board proposed to the shareholders to reappoint him as member of the Executive Board of ING Group at the General Meeting 2021, since his term of appointment as a member of the Executive Board expired at the end of the General Meeting 2021. He is responsible for the proper functioning of the Executive Board and Management Board Banking; formulating, communicating and delivering ING's strategy, including environment, social and governance (ESG); and the communication with the Supervisory Board.

Steven van Rijswijk joined ING in 1995 in the Corporate Finance department holding various positions in the areas of Mergers and Acquisitions and Equity Markets. Before becoming a member of the Executive Board, he was global head of Client Coverage at Wholesale Banking.

Steven holds a master's degree in business economics from Erasmus University Rotterdam (the Netherlands).

Relevant positions pursuant to CRD IV

CEO and chairman of the Executive Board of ING Groep N.V. and the Management Board Banking of ING Bank N.V.

Other relevant ancillary positions

Member of the management board of the Dutch Banking Association (Nederlandse Vereniging van Banken), member of the board of directors of the Institute of International Finance, Inc.

Tanate Phutrakul
Chief financial officer

- Born: 1965
- Nationality: Thai
- Gender: Male
- Appointed: 2019
- Term expires: 2023

Tanate Phutrakul was appointed as CFO and member of the Management Board Banking with effect from 7 February 2019 and as a member of the Executive Board of ING Groep N.V. at the General Meeting 2019. He is responsible for formulating and communicating ING's financial strategy (including internal and external financial reporting), budgeting, cost control and the financing of the company; business performance reporting and analysis, among which measuring adherence to financial targets; capital and liquidity management; investor relations; regulatory & international affairs; global economic research; and the communication to the Audit Committee and Supervisory Board on the aforementioned topics.

Before his appointment to the Executive Board, he was ING Group controller in Amsterdam and between 2015-2018 he was the chief financial officer of ING in Belgium.

Tanate holds a master's degree in Engineering from Imperial College, University of London, and an MBA from Harvard Business School.

Relevant positions pursuant to CRD IV

CFO and member of the Executive Board of ING Groep N.V. and the Management Board Banking of ING Bank N.V.

Other relevant ancillary positions

None.

Ljiljana Čortan was appointed as CRO and member of the Management Board Banking with effect from 1 January 2021. At the General Meeting 2021, Ljiljana Čortan was appointed as a member of the Executive Board. She is responsible for formulating ING's risk framework and risk appetite; assessing, creating and maintaining risk awareness; developing financial and non-financial risk governance, policies, methodologies and guidance; managing risk model landscape and developing analytics capabilities; monitoring compliance, risk management, the execution of control activities and risk behaviour; and risk reporting.

Prior to her appointment at ING, she was a member of the management board and chief risk officer at HypoVereinsbank (HVB) - UniCredit Bank in Germany.

Ljiljana holds a master's degree in business finance from the University of Zagreb.

Relevant positions pursuant to CRD IV

CRO and member of the Executive Board of ING Groep N.V. and the Management Board Banking of ING Bank N.V.

Other relevant ancillary positions

None.

Supervisory Board

Roles and responsibilities

The Supervisory Board supervises (i.e. assesses, oversees, monitors, constructively challenges, scrutinises and discusses) the policy *(beleid)* of the Executive Board and the general course of affairs of ING and the business connected with it. The Supervisory Board provides the Executive Board with advice. The responsibility for supervising and advising the Executive Board is vested in the Supervisory Board collectively. The organisation, powers and *modus operandi* of the Supervisory Board are set out in the Charter of the Supervisory Board, available on ing.com.

In performing their duties, the members of the Supervisory Board are required to:

- be guided by the interest of ING and the business connected with it, thereby carefully balancing the interests of all stakeholders of ING and in this consideration give paramount importance to the customer's interest, as set out in the Dutch Banker's Oath;
- foster a culture focused on long-term value creation, financial and non-financial risk awareness, compliance with ING's risk appetite, responsible and ethical behaviour and stimulate openness and accountability within ING and its subsidiaries;
- act without mandate and independent of any interest in the business of ING; and
- ensure that the Supervisory Board functions effectively.

The Articles of Association, the Management Board Charter and the Supervisory Board Charter outline which resolutions of the Executive Board are subject to approval by the Supervisory Board.

In accordance with the Articles of Association ING Group indemnifies the members of the Supervisory Board as far as legally permitted against direct financial losses in connection with claims from third parties filed or threatened to be filed against them by virtue of their service as a member of the Supervisory Board.

Composition and diversity

ING's Supervisory Board is composed to be adequate and balanced, with a mix of persons with knowledge, skills and executive experience, preferably gained in the banking sector, experience in corporate governance of large stock-listed companies and experience in the political and social environment in which such companies operate. In the selection of Supervisory Board members, ING strives for a balance in nationality, gender, age, and educational and work background. In addition, there should be a balance in the experience and affinity with the nature and culture of the business of ING and its subsidiaries.

The Supervisory Board is responsible for selecting and nominating candidates for appointment or reappointment to the Supervisory Board, among others based on the Supervisory Board profile, which is available on ing.com. The Supervisory Board regularly assesses the composition of the Supervisory Board.

ING believes that former members of the Executive Board can make a valuable contribution to the Supervisory Board. It has therefore been decided, also taking into account the size of the Supervisory Board and ING's wide range of activities, that they may become members of the Supervisory Board of ING Group, but not in the position of chairman or vice-chairman. Former Executive Board members must wait at least one year before becoming eligible for appointment to the Supervisory Board.

After a former member of the Executive Board has been appointed to the Supervisory Board, this member may also be appointed to one of the Supervisory Board's committees. Appointment to the Audit Committee is only possible if the individual in question resigned from the Executive Board at least three years prior to such appointment.

In 2021, three out of nine members of the Supervisory Board were female. We believe the Supervisory Board is also well-balanced in terms of other relevant diversity aspects. Overall, the preferred emphasis on members with a financial or banking background has been maintained. In terms of nationality, the ratio between Dutch and non-Dutch nationalities in 2021 was 56 - 44%.

According to the Gender Diversity Act, which entered into force in the Netherlands on 1 January 2022, ING is required to comply with a gender diversity quota of one third male and one third female for its Supervisory Board. Currently, the Supervisory Board is compliant.

Appointment, suspension and dismissal

Members of the Supervisory Board are appointed, suspended and dismissed by the General Meeting. Candidates for appointment to the Supervisory Board are assessed by DNB and the ECB for suitability and reliability and must continue to meet these criteria while in function.

For the appointment of Supervisory Board members, the Supervisory Board may draw up a binding list of candidates, which may be rendered non-binding by the General Meeting. A resolution of the General Meeting to render this list non-binding, or to suspend or dismiss Supervisory Board members without this being proposed by the Supervisory Board, requires an absolute majority of the votes cast. Additionally, this majority must represent more than half of the issued share capital. The quorum requirement cannot be waived in a second General Meeting. This ensures that significant proposals of shareholders cannot be adopted in a General Meeting with a low attendance rate and can only be adopted with substantial support of ING Group's shareholders.

Term of appointment of the Supervisory Board members

As a general rule, Supervisory Board members step down from the Supervisory Board in the fourth, eighth, tenth or twelfth year after their initial appointment. They are eligible for re-appointment in the fourth year after their initial appointment and, with explanation, also in the eighth and tenth years.

The Supervisory Board may deviate from this general rule under special circumstances and with explanation, for instance to maintain a balanced composition of the Supervisory Board and/or to preserve valuable expertise and experience. The retirement schedule is available on ing.com.

Ancillary positions/conflicting interests

Members of the Supervisory Board may hold other positions, including directorships, either paid or unpaid.

CRD IV restricts the total number of supervisory board positions or non-executive directorships with commercial organisations that may be held by a Supervisory Board member to four, or to two, if the Supervisory Board member also has an executive board position. The ECB may, under special circumstances, permit a Supervisory Board member to fulfil an additional supervisory board position or non-executive directorship. Positions with, inter alia, subsidiaries or qualified holdings are not taken into account in the application of these restrictions.

Such positions may not conflict with the interests of ING Group. It is the responsibility of the individual member of the Supervisory Board and the Supervisory Board collectively to ensure that the directorship duties are performed properly and are not affected by any other positions that the individual may hold outside ING Group.

Members of the Supervisory Board are to disclose any potential conflicts of interest (including potential conflicts of interest) and to provide all relevant information relating to them. The Supervisory Board – excluding the member concerned – decides whether a conflict of interest exists.

In case of a conflict of interest, the relevant member of the Supervisory Board abstains from discussions and decision-making on the topic or the transaction in relation to which he or she has a conflict of interest with ING Group.

Transactions involving actual or potential conflicts of interest

In accordance with the DCGC, transactions with members of the Supervisory Board in which there are material conflicting interests will be disclosed in the Annual Report.

If a member of the Supervisory Board obtains financial products and services, other than loans, which are provided by ING Group subsidiaries in the ordinary course of business on terms that apply to all employees, this is not considered to be a material conflicting interest. Banking and financial products in which the granting of credit is of a secondary nature, e.g., credit cards and overdrafts in current account are not considered a loan for this purpose and are therefore not disclosed.

For an overview of loans granted to members of the Supervisory Board, see the ‘Remuneration report’.

Independence

The members of the Supervisory Board are requested to assess annually whether or not they are independent as set out in the DCGC and to confirm this in writing. On the basis of these criteria, all members of the Supervisory Board are to be regarded as independent on 31 December 2021. On the basis of the NYSE listing standards, all members of the Supervisory Board are also to be regarded as independent.

Permanent committees of the Supervisory Board

On 31 December 2021, the Supervisory Board had four permanent committees: the Risk Committee, the Audit Committee, the Nomination and Corporate Governance Committee and the Remuneration Committee.

Separate charters have been drawn up for the Risk Committee, the Audit Committee, the Nomination and Corporate Governance Committee and the Remuneration Committee. These charters are available on ing.com.

Read more about the composition and the duties of the committees in ‘Supervisory Report’ and on ing.com.

Remuneration and share ownership

Remuneration of the members of the Supervisory Board is determined by the General Meeting and does not depend on the results of ING Group. Details of remuneration are set out in the ‘Remuneration report’. Members of the Supervisory Board are permitted to hold shares in the share capital of ING Group for long-term investment purposes. Details are given in the ‘Remuneration report’. Transactions by members of the Supervisory Board in these shares need to comply with the ING insider regulations, which are available on ing.com.

Information on the members of the Supervisory Board on 31 December 2021

G.J. (Hans) Wijers (chairman)
Born 1951, Dutch nationality, male; appointed in 2017, current term expires in 2025
Former position: chief executive officer and member of the Executive Board of AkzoNobel N.V.

Relevant positions pursuant to CRD IV
Chairman of the Supervisory Board of ING Groep N.V./ING Bank N.V. and supervisory board member of HAL Holding N.V.

Other relevant ancillary positions
Member of the Temasek European Advisory Panel of Temasek Holdings Private Limited and Chairman of the Supervisory Council of SEO Amsterdam Economics.

A.M.G. (Mike) Rees
Born 1956, British nationality, male; appointed in 2019, current term expires in 2023
Former position: Deputy CEO of Standard Chartered Bank PLC.

Relevant positions pursuant to CRD IV
Vice-chairman of the Supervisory Board of ING Groep N.V./ING Bank N.V., non-executive chairman of Athla Capital Management Limited, non-executive chairman of Travelex Topco Limited and non-executive chairman of the board of Satsanga Fintech Holdings.

Other relevant ancillary positions
Non-executive chairman of Mauritius Africa FinTech Hub.

J. (Juan) Colombás
Born 1962, Spanish nationality, male; appointed in 2020, current term expires in 2024
Former position: chief operating officer and executive board member of the board of directors of Lloyds Banking Group.

Relevant positions pursuant to CRD IV
Member of the Supervisory Board of ING Groep N.V./ING Bank N.V. and non-executive member of the board of directors and member of the audit committee, the compensation committee and the risk committee of Credit Suisse Group AG and Credit Suisse AG.

Other relevant ancillary positions
None.

M. (Mariana) Gheorghe
Born 1956, Romanian / British nationality, female; appointed in 2015, current term expires in 2023. Former position: CEO of OMV Petrom SA.

Relevant positions pursuant to CRD IV
Member of the Supervisory Board of ING Groep N.V./ING Bank N.V. and non-executive director of ContourGlobal Plc.

Other relevant ancillary position
Member of the Advisory Council of the Bucharest Academy of Economic Studies, Romania, member of the board of Envisia – Boards of Elite and member of the board of Teach for Romania.

M. (Margarete) Haase
Born 1953, Austrian nationality, female; appointed in 2017, current term expires in 2025
Former position: CFO of Deutz AG.

Relevant positions pursuant to CRD IV

Member of the Supervisory Board of ING Groep N.V./ING Bank N.V., member of the supervisory board and chairwoman of the audit committee of Fraport AG, member of the supervisory board and member of the audit committee of AMS AG, and member of the supervisory board of Marquard & Bahls AG.

Other relevant ancillary positions

Chairwoman of the Employers Association of Kölnmetall and member of the German Corporate Governance Commission.

L.J. (Lodewijk) Hijmans van den Bergh
Born 1963, Dutch nationality, male; appointed in 2021, current term expires in 2025
Former position: partner/member of the management committee of De Brauw Blackstone Westbroek N.V.

Relevant positions pursuant to CRD IV

Member of the Supervisory Board of ING Groep N.V./ING Bank N.V., deputy chairman of the supervisory board of HAL Holding N.V., chairman of the supervisory board of BE Semiconductor Industries N.V. and non-executive chairman of the board of directors of Fortino Capital Partners N.V.

Other relevant ancillary positions

Chairman of the board of Utrecht University Fund (the Netherlands), chairman of the executive committee of Vereniging Aegon and external advisor to the management committee of De Brauw Blackstone Westbroek N.V.

H.A.H. (Herman) Hulst
Born 1955, Dutch nationality, male; appointed in 2020, current term expires in 2024
Former position: global vice chair EY Japan.

Relevant positions pursuant to CRD IV

Member of the Supervisory Board of ING Groep N.V./ING Bank N.V.

Other relevant ancillary positions

None.

H.H.J.G. (Harold) Naus
Born 1969, Dutch nationality, male; appointed in 2020, current term expires in 2024
Former position: global head of Trading Risk Management and general manager Market Risk management of ING Bank N.V.

Relevant positions pursuant to CRD IV

Member of the Supervisory Board of ING Groep N.V./ING Bank N.V., CEO of Cardano Risk Management B.V. and CFO of Cardano Holding Limited.

Other relevant ancillary positions

Chairman of the Curatorium VU Amsterdam “Risk Management for Financial Institutions”.

H.W.P.M.A. (Herna) Verhagen
Born 1966, Dutch nationality, female; appointed in 2019, current term expires in 2023
Former position: member of the Supervisory Board of SNS Reaal N.V. (now: SRH N.V.).

Relevant positions pursuant to CRD IV

Member of the Supervisory Board of ING Groep N.V./ING Bank N.V. and CEO of PostNL N.V.

Other relevant ancillary positions

Member of the supervisory board, member of the audit committee of Het Concertgebouw N.V, member of the advisory council of Goldschmeding Foundation and member of the Board of VNO-NCW (inherent to her position at Post NL N.V.).

B. Compensation

Remuneration report

FOR INFORMATION ONLY

Covid-19 continued to affect our business and our customers throughout 2021, despite signs of economic recovery. Towards the end of the year, new waves of outbreaks brought new uncertainties. This, along with developments such as supply chain disruptions, rising energy prices and rising inflation, all had an influence on our customers, our employees and our performance. Yet ING achieved good results.

Both financial and non-financial performance are important factors in our assessment of recognition and rewards for our employees, including our senior management and Executive Board. To the latter, ING welcomed Ljiljana Čortan as chief risk officer in 2021. Ljiljana joined ING on 1 January from HypoVereinsbank-Unicredit in Germany and was formally appointed by shareholders at the Annual General Meeting in April. We're delighted to have her in our Executive Board.

Our view on remuneration

ING's remuneration approach is designed to attract, motivate and retain colleagues who have the skills, abilities, values and behaviours needed to deliver on our purpose and strategy. We seek to effectively reward success and avoid rewarding for failure.

We aim to offer well-balanced remuneration that focuses on creating short- and long-term value for our stakeholders and on contributing to the long term performance of the company, where achieving targets in areas such as customer centricity, risk and regulatory, sustainability, and people, are just as important as financial results. Achieving the balance between our function as a bank and managing the inherent risks this brings is also reflected in our remuneration approach.

To ensure our approach to remuneration is aligned with the views of our stakeholders, we have an ongoing dialogue with regulators, customers, shareholders, works councils and other stakeholder groups about our remuneration approach, strengthening the link between performance and remuneration outcomes. In 2021, these discussions included the application of ING's remuneration approach in relation to the impact of Covid-19 on ING and its stakeholders. We also consider the feedback received as part of our regular contacts with our stakeholders, for example around increased transparency on how performance impacts variable remuneration. These interactions will continue in 2022, also in relation to determining the topics that are most material to our stakeholders.

Environmental, social and governance

One topic gaining increasing prominence in these stakeholder dialogues, is ING's environmental, social and governance (ESG) approach and performance. Recognising the urgency to accelerate climate action, and building on our experience in the field, we are working on plans to align the targets for our lending portfolio to our net-zero ambition and to fully embed climate risk into our risk framework.

These are also two of the 2021 performance indicators on which the Executive Board members are assessed. Other environmental performance indicators in 2021 relate to increasing the number of green and sustainable transactions and growing the sustainable part of the investment portfolio. Of course, ESG is more than just climate, and for 2022 we've created an ESG target that incorporates sustainability, risk and regulations and people metrics.

Diversity

As an employer, ING strives to create a diverse workplace where everyone feels included and has access to the same opportunities. Collectively, ING meets the core principle of our diversity policy for no group or level to comprise more than 70% of the same gender, nationality or age. However, within individual teams and on a country level there are different and complex challenges in achieving the diversity we aim for. Finding the right people for leadership positions is especially challenging – not only for ING.

New legislation in the Netherlands will require listed companies to improve the gender diversity in their boardrooms. From 1 January 2022, there are quota for new Supervisory Board appointments to ensure men and women each hold at least one third of seats. The second measure requires companies to set 'appropriate and ambitious' targets for improving gender diversity on their management boards and at senior management levels and to report annually on their progress.

At Board level, we look at diversity in a broad sense. After the appointment of Ljiljana Čortan as chief risk officer, our Executive Board is now 33% female. At Supervisory Board and Executive Board level, ING is one of only 16 companies in the Dutch Female Board index to achieve this, and the highest-ranking Dutch bank.

At Management Board Banking level, 25% of members are women following the restructuring of the board in 2021 to split the roles of operations and technology, which introduced an additional (male) board member. More broadly, the number of women in management remained stable at 37% of managers and 30% managers of managers – similar to 2020. ING is committed to redressing the imbalances that still exist, for example by accelerating the development of internal successors and attracting more diverse candidates from the external market. Going forward, ING will report on gender diversity for senior management at job levels 22 and above in its new global job architecture (GJA) classification introduced at the end of 2021.

On the topic of equal pay, the GJA will support us in our analysis to ensure men and women are paid the same for doing work of equal value. It's a principle of ING's Remuneration Regulations Framework. Further in this report we explain our Gender Pay Project. The gender pay gap is a societal issue that has long affected women in the workplace, and policies alone will not bring about change. There needs to be a greater understanding of the social dynamics behind the reasons for the differences in earning power in order to bring about real change. ING's new GJA will help us to compare and match capabilities across the organisation and provide greater transparency into remuneration. ING is also committed to analysing gender pay and disclosing annually on progress towards closing the gap starting in our 2022 Annual Report.

This report

The 2021 Remuneration Report reflects the remuneration policies introduced in 2020 for the Executive Board and Supervisory Board members. These were drawn up in close consultation with our various stakeholder groups and approved by shareholders at the 2020 AGM. The policies are in line with the Dutch Banking Code. Total direct compensation of the Executive Board is below the median of the peer group of eight comparable Dutch companies and eight relevant European financial services providers.

In preparing this report, we took notice of the draft (non-binding) 'Guidelines on the standardised presentation of the remuneration report' from the European Commission published in March 2019.

The 2021 Remuneration Report is subject to an advisory vote at the Annual General Meeting in April 2022. In it, we look back on the year 2021 and report on ING's performance, as well as the factors that influenced its business results and subsequently remuneration. We explain how we implement the remuneration policies for members of the Executive and Supervisory Boards and share details of the remuneration awarded to these members in 2021. We also set out the key performance indicators for the year ahead, particularly with regard to non-financial performance in ESG areas.
In line with ING's commitment to increase transparency and accountability, we provide insight into the organisational and personal performance objectives of the Executive Board members. We aim to clarify the performance metrics used for awarding variable remuneration, how targets are set and achievements are measured, as well as the risk assessment process pre- and post-award, which can influence remuneration.

In addition, we set out the remuneration approach that applies to all other ING employees, including the principles for remuneration, the performance management process and how it links to remuneration.

Performance year 2021

Despite challenging conditions, commercial lending margins improved in 2021, and we saw strong fee growth in daily banking activities and investment products. We were able to release some of the Covid-19-related provisions taken earlier and resumed capital distribution to shareholders via dividends and a share buyback programme. At the same time, we decided to discontinue several activities we believe will not achieve the required scale in a reasonable time and to exit the Retail markets in Austria, Czech Republic and France. This was part of an ongoing assessment to ensure we're using our capital effectively in areas with the most growth potential and viable returns. Overall, ING's full-year 2021 result before tax rose 78%.
The Supervisory Board agreed that the Executive Board did well to deliver these results, while also growing primary customer numbers and executing on making ING safe, secure and compliant, a healthy business, data-driven digitalisation and sustainability. Based on a thorough and balanced assessment of the performance of each Executive Board member against their objectives, ING's results, their behaviour and risk and compliance matters, the Supervisory Board decided to award variable remuneration at 17% of the maximum 20% cap to the chief executive office and chief risk officer and 18% for the chief financial officer. No increase is proposed to their fixed remuneration for 2022, in context of the broader workforce dynamics and taking into consideration our stakeholder perspectives.

For all other eligible staff, variable remuneration can be discretionary or collective and is awarded based on criteria for overall group performance, business line and individual performance. At least half of these targets must be non-financial. In 2021, the total amount awarded was higher than the previous year, reflecting ING's good results amidst growing confidence in the economy.

Looking ahead at 2022, we will continue to engage with stakeholders on the topic of remuneration, and in particular with regard to variable compensation and the achievement of ESG-related non-financial targets.

In closing, I want to thank all ING employees for their continuing support and dedication to ING, our customers and other stakeholders. It hasn't always been easy, yet they remain the power behind ING's purpose.

Herna Verhagen
Chair of the Supervisory Board Remuneration Committee

Remuneration report Executive Board and Supervisory Board

FOR ADVISORY VOTE AT 2022 ING GROEP N.V. ANNUAL GENERAL MEETING (AGM)

About this report

This Remuneration Report is based on the remuneration policies for the Executive Board and Supervisory Board. This section of the report is the Remuneration Report as referred to in the Dutch act implementing the Shareholder Rights Directive II (SRD II). It will be presented to shareholders at the 2022 AGM for an advisory vote. An explanation of how the results of this vote are taken into account will be included in the 2022 Remuneration Report.

With this Remuneration Report we provide greater transparency compared to previous years on the non-financial performance elements of the Executive Board members and their variable remuneration awards related to performance year 2021. We also disclose the target setting for non-financial performance KPIs (key performance indicators) for the Executive Board members and weightings of 2022 financial and non-financial measures.

2021 AGM

The 2020 Remuneration Report was presented for an advisory vote at the AGM held on 26 April 2021 (hereafter called the 2021 AGM). The outcome was that 98.19% of shareholders were in favour of the report. There were no specific requests from shareholders.

We recognise that remuneration is an important topic for many stakeholder groups and that viewpoints on the topic may vary. The Supervisory Board is fully committed to ensuring that our approach to remuneration achieves a balance between the best interests of ING and the viewpoints of our stakeholders. Stakeholder engagement is a key element in the formulation of our remuneration policies. The Supervisory Board will continue to foster a transparent dialogue on remuneration and future policy amendments.

Board changes and business events in 2021

Steven van Rijswijk was reappointed as a member of the Executive Board at the 2021 AGM for another four-year period lasting until the end of the 2025 AGM.

Ljiljana Čortan was appointed as chief risk officer (CRO) of ING Bank N.V. and a member of the Management Board Banking from 1 January 2021. At the 2021 AGM, shareholders appointed Ljiljana Čortan to the Executive Board for a four-year period. Following this appointment, she also became the chief risk officer of ING Group. Her remuneration package is in line with the Executive Board remuneration policy and is similar to the remuneration package of the previous CRO.

Shareholders at the 2021 AGM also approved the reappointment of Hans Wijers and Margarete Haase to the Supervisory Board for another four-year period. In addition, shareholders approved the appointment of Lodewijk Hijmans van den Bergh as a new member to the Supervisory Board for a four-year period.

Main decisions on the remuneration of the Executive Board and Supervisory Board for 2022

The following decisions were taken in relation to remuneration for 2022:

- no changes to the Executive Board and Supervisory Board remuneration policies will be proposed;
- the Supervisory Board and Executive Board jointly agreed that the Executive Board would forgo an increase in their fixed remuneration for 2022, taking into consideration our various stakeholder perspectives as well as the broader workforce dynamics. At the same time, the Supervisory Board is aware this will be the second year of no increase and will keep a close eye on this in 2023, also in the context of broader inflationary and economic developments; and
- no changes to the applicable fees for the Supervisory Board members will be made for 2022.

Remuneration Executive Board

Executive Board remuneration policy

The Executive Board remuneration policy complies with applicable laws and regulations and is in line with the remuneration principles that apply to all ING employees.

The Executive Board remuneration policy, which was adopted by shareholders during the 2020 AGM, is disclosed in full on ing.com under the section ‘Remuneration’. In line with this policy, the remuneration of the Executive Board members is designed to attract, motivate and retain leaders. Retention is an important goal since this contributes to long-term performance.

Should policy changes be proposed, we will first consult with our stakeholders about the proposed changes, after which a revised version of the Executive Board remuneration policy will be submitted for adoption by shareholders at the General Meeting before it becomes effective. For 2022, no changes are proposed. Please note that the following paragraphs, present a brief summary of the current applicable Executive Board remuneration policy.

Total direct compensation

Total direct compensation is the total of fixed and variable remuneration, excluding benefits such as pension and allowances.

Total direct compensation for the Executive Board members is determined and reviewed annually by the Supervisory Board. In line with the Executive Board remuneration policy, the Executive Board’s total direct compensation for 2021 was compared to a peer group as formulated in the Executive Board remuneration policy. The peer group is based on five guiding principles, reflecting ING’s current profile, and further explained in the Executive Board remuneration policy. In short, these principles can be described as follows.

Guiding principle	Short description
Geography	ING is headquartered in the Netherlands and has an international profile
Talent market	ING is increasingly experiencing a cross-pollination of talent across sectors/industries, not limited to traditional banking competitors
Size	ING acknowledges the importance of including companies that are broadly comparable in terms of size and complexity
Governance framework	ING is subject to the Dutch (financial services) regulatory framework and operates within a Dutch stakeholder environment
Balancing	ING acknowledges the importance of retaining sight of relevant peer companies that do not match on the other criteria

In line with the Dutch Banking Code, the peer group consists of both financial and non-financial companies, taking into account the relevant international context. In addition, the Supervisory Board decided to exclude the UK and Switzerland from our peer group, due to different pay structures in their financial sectors. Substantially smaller banks and companies were also excluded because these are less complex compared to large financial institutions like ING. The composition of the peer group is explicitly not included in the Executive Board remuneration policy. Following an external and independent review in line with the Executive Board remuneration policy in 2021, the current peer group composition remains unchanged and comprised:[1]

ABN AMRO	Ahold Delhaize	BBVA	Deutsche Bank
Aegon	ASML	Banco Santander	Intesa Sanpaolo
NN Group	Heineken	BNP Paribas	Société Générale
Rabobank	Philips	Crédit Agricole	UniCredit

In line with the requirements laid down in the Dutch Banking Code the actually earned total direct compensation of the Executive Board members under the Executive Board remuneration policy should be below the market median of the peer group. The calculation of pay positioning of the Executive Board members against the peer group is performed on that basis (i.e. actual fixed salary plus actual variable remuneration). The Executive Board members are paid well below the median.

1 The exact composition of the peer group is disclosed in the Annual Report retroactively.

Fixed remuneration

The individual base salaries are set according to the role, responsibilities and experience of each Executive Board member with reference to market practice. The Remuneration Committee reviews the individual base salaries of the Executive Board members annually and advises the Supervisory Board on this. The Supervisory Board has the discretion to increase the individual base salaries. The below factors are given consideration in determining their base salaries:

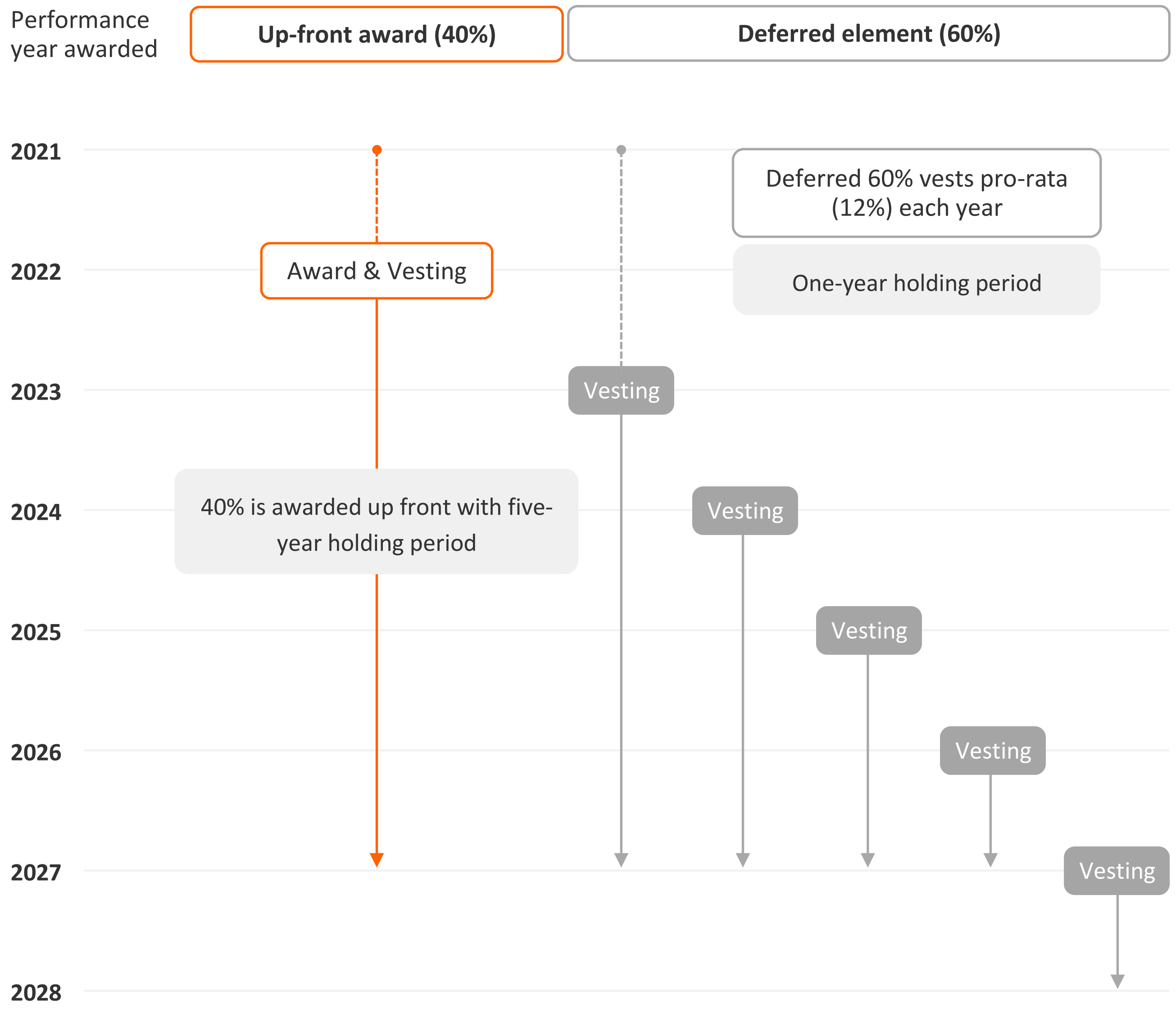
- the individual's level of skill and performance;
- internal pay ratios and salary increases for other employees within ING;
- remuneration level at the external peer group;
- public indexation reference points (e.g. consumer price index); and
- stakeholder views.

Variable remuneration

Variable remuneration for Executive Board members is limited to a maximum of 20% of base salary in line with legislative requirements. At least 50% of this is based on non-financial performance criteria. The Executive Board remuneration policy provides for an at target variable remuneration of 16% of base salary. If performance criteria are exceeded, the Supervisory Board can increase the variable component to the maximum. If performance is below target, the variable component will be decreased, potentially down to zero. All variable remuneration is awarded fully in shares. There is a minimum holding period of five years from the award date plus an additional holding year as of the vesting date. This combination (i.e. all shares plus a long holding period) fosters alignment with shareholders and a focus on the long term.

The Supervisory Board pre-determines the performance criteria for the Executive Board each year to ensure alignment between ING's strategy, performance objectives and long-term interest.
For further details on the pay-out of variable remuneration please see the Executive Board remuneration policy which is disclosed in full on ing.com under the section 'Remuneration'.
On the right side the pay-out scheme of variable remuneration for Executive Board members is illustrated.

Total variable remuneration relating to performance year 2021 comprises *



* Fully delivered in shares.

Pension

All members of the Executive Board participate in the Collective Defined Contribution pension plan, which is accrued on an annual salary of up to €112,189 for 2021. This is the same as for all employees working in the Netherlands without a supplementary pension scheme. Executive Board members are compensated for the lack of pension accrual above this amount by means of a savings allowance (see 'Benefits'), to be determined annually, on the same terms that apply to other participants in the Dutch pension scheme. The set-up of this compensation for the lack of pension accrual is in line with best practices in the Netherlands.

Benefits

Executive Board members are eligible for additional benefits, such as:

- the use of a company car or driver service;
- contributions to company savings plans;
- individual savings allowance;
- expatriate allowances (if applicable);
- banking and insurance benefits from ING (on the same terms as for other employees of ING in the Netherlands);
- tax and financial planning services to ensure compliance with the relevant legislative requirements.

Tenure

Members of the Executive Board are appointed by shareholders at the General Meeting for a maximum period of four years. They may be reappointed by shareholders at the General Meeting in line with ING's Articles of Association and applicable rules and regulation. Executive Board members have a commission contract for an indefinite period. ING has the option to terminate the contract if a member is not reappointed by shareholders at the General Meeting, or if their membership of the Executive Board is terminated. There is a three-month notice period for individual board members and a six-month notice period for ING. During this time the board member continues to work and in principle remains eligible for all agreed remuneration components.

In the event of an involuntary exit, Executive Board members are eligible for an exit arrangement. If termination of the contract is based on mutual agreement, the Executive Board member is eligible for a severance payment. These arrangements are subject to specific requirements (e.g. limited to a maximum of one year of fixed base salary and under the condition that there should be no reward for failure). Should an Executive Board member depart voluntarily or in circumstances involving fraud, gross negligence, wilful misconduct or any activity detrimental to ING, no severance payment or award of variable remuneration over the performance year will be made and outstanding deferrals will lapse.

Periodic review of the Executive Board remuneration policy and the remuneration awarded

In accordance with the Executive Board remuneration policy, the Supervisory Board annually determines the actual remuneration for members of the Executive Board, based on advice from the Remuneration Committee of the Supervisory Board.

The Remuneration Committee's responsibilities include preparing the Supervisory Board for decisions regarding the individual remuneration of members of the Executive Board. In performing it's tasks the Remuneration Committee takes note of the views of individual Executive Board members with regard to the amount and structure of their own remuneration. Remuneration proposals for individual Executive Board members are drawn up in accordance with the Executive Board remuneration policy and cover the following aspects: remuneration structure, peer group review, the amount of the fixed and variable remuneration components, the performance criteria used, scenario analyses that were carried out and, if and when considered appropriate stakeholder engagement, the pay ratios within the company and its affiliated enterprises. In the performance of its tasks the Remuneration Committee works together with the Risk Committee.

Special employment conditions

In line with the Executive Board remuneration policy, the Supervisory Board may decide to temporarily apply special employment conditions, for example to secure the recruitment of new executives in exceptional circumstances when this is necessary to serve the long-term interests and sustainability of ING as a whole, or to assure its viability. In 2021, there were no such employment conditions granted.

2021 Remuneration Executive Board

This section includes details of remuneration for Executive Board members relating to the period served on the Executive Board in 2021.

In anticipation of the new Dutch Corporate Governance Code and in line with the recommendation of the Monitoring Commission Corporate Governance, ING calculates an internal ratio of remuneration for the chief executive officer (CEO) compared to ING staff, which in 2021 included contractors for the first time. Using the CEO’s total remuneration compared to all ING staff, the ratio in 2021 was 1:28, which is similar to what we disclosed for 2020.

For transparency sake, we also calculated the average ratio of total remuneration for the chief financial officer (CFO) and CRO compared to ING staff. On that basis the average ratio in 2021 for the CFO and CRO was 1:21. The higher ratios for 2021 compared to 2020, is mainly caused by the fact that in 2020 no variable remuneration was awarded.

Remuneration versus company performance and average employee remuneration

Table 1 shows the link between directors’ remuneration (Executive Board and Supervisory Board members), company performance and the average remuneration of an ING employee. This is carried out by showing the development of the remuneration for Executive Board and Supervisory Board members over the last five years presented in percentages.

With respect to the remuneration of the Supervisory Board, it should be noted that there is no link to company performance in order to safeguard its independent role. No component of the remuneration of the Supervisory Board members is linked to company performance, since this is all and only dependant on attendance.

The relative performance of the company is presented on three different metrics over the last five years. The metrics consist of:

- Retail primary relationships
- Profit before tax for ING Group
- Return on equity based on IFRS-EU equity.

Finally, we present the development of the remuneration on average (per employee). For this number we use the same data as for the internal ratio.

1. Development of directors' remuneration, company performance and employee remuneration [1]						
Amount in thousands of euros unless otherwise stated	FY 2021	FY 2021 vs FY 2020	FY 2020 vs FY 2019	FY 2019 vs FY 2018	FY 2018 vs FY 2017	FY 2017 vs FY 2016
Directors remuneration (Executive Board) [2, 3, 4, 5, 6]						
Steven van Rijswijk	2,077	38.6%	7.2%	16.2%	-	-
Tanate Phutrakul	1,440	17.9%	25.6%	-	-	-
Ljiljana Čortan [7]	982	-	-	-	-	-
Company's performance						
Retail primary relationships (in mln)	14.3	3%	5%	7%	10%	9%
Profit before Tax ING Group (in mln)	6,782	78%	-44%	0%	-6%	23%
Return on equity based on IFRS-EU equity	9.2%	92%	-49%	-4%	-3%	6%
Average employee remuneration [8]						
Average fixed and annual variable remuneration	70	4%	-	-	-	-
Directors remuneration (Supervisory Board) [9, 10]						
Hans Wijers	184	-11.9%	3.5%	9.2%	-	-
Mike Rees	129	0%	-	-	-	-
Jan Peter Balkenende	31	-	-2.0%	0.0%	-	-
Juan Colombás	94	-	-	-	-	-
Mariana Gheorghe	102	-5.6%	-8.5%	12.4%	11.7%	-4.1%
Margarete Haase	104	-1.0%	7.1%	55.6%	-	-
Lodewijk Hijmans van den Bergh	60	-	-	-	-	-
Herman Hulst	95	-	-	-	-	-
Harold Naus	95	-	-	-	-	-
Herna Verhagen	100	-17.4%	-	-	-	-

1. For consistency reasons this table only makes a comparison between two full financial years in which the respective Executive Board or Supervisory Board member served in their role.
2. The remuneration of the Executive Board consists of base salary and variable remuneration (total direct compensation).
3. Variable remuneration for the Executive Board is included in the year in which the performance was delivered i.e. prior to the year in which it is paid out.
4. Fixed remuneration for the Executive Board did not change in 2019. The relative total compensation increase from 2018 to 2019 is fully attributable to the fact that no variable remuneration was awarded for performance year 2018.
5. Fixed remuneration for Executive Board members is not linked to company performance but is predominantly based on a benchmark exercise. Total direct compensation of Executive Board members should stay below the median of the benchmark, in line with the Dutch Banking Code. This has a mitigating effect on the correlation with company performance.
6. The relative total compensation increase from 2020 to 2021 is mainly caused by the fact that no variable remuneration was awarded for the performance year 2020.
7. The amount included reflects the period as of her appointment as CRO at the AGM on 26 April 2021.
8. In 2021, the methodology to calculate the average employee remuneration has been updated. Comparatives have been updated accordingly.
9. There is no correlation between Supervisory Board remuneration and company performance. Supervisory Board members do not receive any variable remuneration. Their remuneration is based on fixed fees related to their role and number of meetings. The high fluctuations are caused by role changes during the year and differences in the number of meetings.
10. The comparison FY 2021 vs FY 2020 for the Supervisory Board is influenced due to the fact the VAT regime has changed after the first quarter of 2021. VAT is no longer due for remuneration of Dutch based Supervisory Board members.

2021 Executive Board performance assessment & reward process

The Executive Board performance assessment & reward process includes a number of key steps. This process serves as the foundation to determine the variable remuneration for Executive Board members.

Target setting before the start of the financial year	**Check-ins** quarterly during the financial year	**Year-end review** after the end of the financial year	**Risk assessment** after the end of the financial year

At the start of the performance year, the Supervisory Board approves the financial, non-financial and risk performance targets applicable to Executive Board members for that year:

- **Financial performance target areas** include profit-based and return-based targets.
- **Non-financial performance target areas** include customer, risk and regulatory, people, strategy and sustainability targets

Each performance target area is weighted and together they total 100%. The Dutch Remuneration Policy for Financial Enterprises Act (Wet Beloningsbeleid Financiële Ondernemingen, WBFO) specifies that at least 50% of variable remuneration metrics must be based on non-financial targets. The performance targets for the CEO and CFO are based on group performance. The non-financial targets for the CRO are predominantly based on key performance indicators (KPIs) that are linked to the role.

The target areas, targets and weighting are included in the performance target cards for each Executive Board member. The performance target card consists of both quantitative and qualitative-based targets in order to achieve a balanced and holistic assessment. Quantitative-based targets are measured primarily on a formulaic basis where the expected target performance level must be achieved before the on-target pay-out can be earned. Qualitative targets are clearly defined with descriptors of levels of what is expected of the performance, for example speed of delivery, quality of delivery, ways of working. Qualitative targets are assessed using a standard three-point rating scale:
1 = maximum = exceeding expectations; 2 = target = meeting expectations; 3 = threshold = not meeting expectations.
The overall outcome of the performance target card assessment described above is the ‘starting point’ for determining the variable remuneration of the Executive Board members. Each member of the Executive Board has a starting target variable remuneration of 16% of their annual base salary for a given performance year.

Throughout the year, regular conversations take place between the Supervisory Board and the Executive Board to review their performance. While no formal assessments are completed, progress of performance measures is discussed and the extent to which progress is on track.

The Nomination and Corporate Governance Committee also takes an active role in assessing the performance of individual Management Board members, and reports on this to the Supervisory Board.

At the end of the year, the Risk Committee and Remuneration Committee are responsible for providing input and assessing the performance of the Executive Board members to determine the variable remuneration to be awarded. They jointly advise the Supervisory Board on the recommendations to get final approval of the awards. This follows a multi-step and integrated process that closely aligns with the way that variable remuneration is determined for the wider ING workforce. The process covers an assessment of their performance, based on individual performance target cards. It includes targets and ranges agreed at the beginning of the performance year, along with risk assessments measured on an ex-ante and ex-post risk adjustment basis.

The integrated performance assessment process for determining variable remuneration also takes into account financial and operational performance, risk and compliance, as well as behaviour and conduct of each Executive Board member. This is supported by a robust framework for considering risk and conduct, which is in line with regulations. It includes the following elements:

- **Performance hurdles** – Executive Board members are only eligible for consideration for variable remuneration if both of the performance hurdles are met. This is in line with all employees who are eligible for discretionary variable remuneration. See 'Performance hurdles' for further details. In addition, where capital (CET1) is below risk appetite a downward adjustment may be considered at the discretion of the CRO to reduce the variable remuneration up to zero.
- **Risk and regulatory adjustments** – Performance against risk and regulatory targets within the core performance target cards are made including an assessment of financial risks, non-financial risks and regulatory targets measured on an ex-ante basis. The targets and ranges are set at the beginning of the financial year, taking into account ING's risk appetite statement framework. Performance against these risk and regulatory targets may lead to a downward or upward modification in variable remuneration.
- **Additional risk adjustments** – Further downward risk adjustments may also be made to variable remuneration based on broader risk management performance not within risk appetite, including additional ex-ante risk performance that needs to be considered and/or ex-post risk events that may lead to a financial or reputational impact on ING. Risk and Human Resources also assess potential holdbacks or clawbacks impacting variable remuneration.

The CRO is responsible for recommending any risk-adjustments to variable remuneration awards for the CEO and CFO. The Risk Committee is responsible for recommending this for the CRO. The final decision is made by the Supervisory Board. The Supervisory Board, based on the advice of the Remuneration Committee and Risk Committee, decides on any risk adjustments (potentially to zero) to variable remuneration for Executive Board members.

As a final step in the process, in exceptional circumstances the Supervisory Board may apply its discretion to adjust upwards or downwards the variable remuneration of Executive Board members.

2021 Executive Board base salary

The base salary for all roles of the Executive Board remained unchanged for 2021 as disclosed in our 2020 Remuneration Report.

2021 Executive Board performance evaluation

The Executive Board is evaluated on the following performance target areas:

Financial

- Profit before tax
- Return on equity
- Operational expenses
- Cost control (FTE)

Non-financial

- Customer (except the CRO)
- Risk and regulatory
- Strategy
- Sustainability
- People

This section includes more details on the financial and non-financial performance of the Executive Board members. Key financial achievements, collectively accomplished by the Executive Board in 2021 in the predefined target areas are summarised in one table. This has been discussed and approved by the Supervisory Board. The non-financial, individual performance of each Executive Board member is summarised in a separate overview per board member.

2. Financial performance

Measure	Target - minimum	Target - maximum	Performance
Profit before tax (CEO/CFO weight 12.5%, CRO 6.3%)	4,187	6,280	6,782
Return on equity (CEO/CFO weight 12.5%, CRO 6.3%)	5.6%	8.4%	9.2%
Operational expenses (CEO/CFO weight 12.5%, CRO 6.3%)	11,207	10,140	11,192
Cost control (FTE) (CEO/CFO weight 12.5%, CRO 6.3%)	68,026	61,547	62,132

* FTE numbers include externals. CRO target relates to risk organisation.

Chief executive officer
Steven van Rijswijk

Target

Customer
- Increase primary customers
- Increase mobile sales
- Increase share of wallet

Performance

The number of primary customers grew by 3.5% to 14.3 million in 2021. This was lower than projected as the focus shifted to improve mobile sales and X-buy with existing customers and pricing actions were introduced on savings.
At the same time, the pandemic served as a catalyst for more consumers to shift to mobile banking, leading to a strong upward trend in mobile sales and share of wallet.

Risk and regulatory
- Deliver on risk performance targets

Performance

Credit risk, market risk and non-financial risk were managed within ING's risk appetite profile.
The financial crime risk management framework was strengthened in order to support improvement of ING's AML operations, including:
- The roll-out of continuous adverse media screening tooling and global transaction monitoring tooling
- Enhancement of the screening control environment
- Strengthening the skills and knowledge of employees
- The execution of behavioural risk assessment to continuously improve our risk culture and behaviour.

Continuous learning and improvement on AML will continue to be a main focus area.
Delivered identified regulatory commitments related to implementation of new regulations on time and at the required levels.

Strategy
- Deliver on digitalisation and innovation initiatives

Performance

Digitalisation initiatives
- Increased the share of mobile-only customers to 51%.
- Increased the number of mobile interactions, growing to a 91% share of total interactions.
- Utilised the Touchpoint platform to digitalise and standardise ING's offering for over 1.7 million SMEs and self-employed customers in 7 countries.
- Improved straight through processing (STP) rate in Wholesale lending.
- Data quality levels improved by progressing on the rollout of ING's standardised data model.

Innovation initiatives:
- Global roll-out to customers of Blacksmith and CoorpID enabling digitalisation of KYC processes.
- Extended roll-out of Dealwise, ING's smart shopping platform, to Germany and Belgium.

Sustainability
- Steer portfolio in line with Terra targets
- Integrated climate risk strategy

Performance

- Five of the nine sectors in scope for Terra (power generation, automotive, residential real estate, shipping and fossil fuel) are on track with existing climate-alignment pathways. Steel, cement and commercial real estate are all within 5% of their scenario and aviation was well above the pathway due to the extraordinary impact of Covid-19 on the sector.
- Publication of integrated climate report providing an integrated overview of all of the elements of ING's climate action approach related to:
  - how ING's financing impacts climate change; and
  - how climate change impacts ING's business.

People
- Organisational health on three priorities
- Talent and diversity

Performance

- The overall organisational health score improved compared to the last full OHI in 2019. In 2021 action plans were developed for three focus areas: direction, leadership, and innovation and learning. The November 2021 pulse survey showed improvements in the key practices around direction and leadership.
- Improved succession planning process in place, including having a more diverse and gender balanced pipeline.
- At MBB and senior management level further progress still needs to be made to reach our diversity targets.

Chief financial officer
Tanate Phutrakul

Target

Customer
- Increase primary customers
- Increase mobile sales
- Increase share of wallet

Performance

The number of primary customers grew by 3.5% to 14.3 million in 2021. This was lower than projected as the focus shifted to improve mobile sales and X-buy with existing customers and pricing actions were introduced on savings.
At the same time, the pandemic served as a catalyst for more consumers to shift to mobile banking, leading to a strong upward trend in mobile sales and share of wallet.

Risk and regulatory
- Deliver on risk performance targets

Performance

Credit risk, market risk and non-financial risk were managed within ING's risk appetite profile.
Delivered identified regulatory commitments related to implementation of new regulations on time and at the required levels.

Strategy
- Deliver on digitalisation initiatives

Performance

Digitalisation initiatives
- Increased the share of mobile-only customers to 51%.
- Increased the number of mobile interactions, growing to a 91% share of total interactions.
- Utilised the Touchpoint platform to digitalise and standardise ING's offering for over 1.7 million SMEs and self-employed customers in 7 countries.
- Improved straight-through processing (STP) rate in Wholesale lending.
- Data quality levels improved by progressing on the rollout of ING's standardised data model.

Sustainability
- Green issuance

Performance

In 2021, issuance in green format was a key priority with a focus on different currencies and across the capital structure, leading to:
- An issuance of €500 mln Tier 2 bonds from ING Group
- An issuance of £800 mln Senior HoldCo from ING Group
- An issuance of €1.5 bln Pfandbrief from ING DiBa.

People
- Organisational health on three priorities
- Talent and diversity

Performance

- The overall organisational health score improved compared to the last full OHI in 2019. In 2021 action plans were developed for three focus areas: direction, leadership, and innovation and learning. The November 2021 pulse survey showed improvements in the key practices around direction and leadership.
- Improved succession planning process in place, including having a more diverse and gender balanced pipeline.
- At MBB and senior management level further progress still needs to be made to reach our diversity targets.

Chief risk officer
Ljiljana Čortan

Target

Risk and regulatory
- Deliver on risk performance targets

Performance

Credit risk, market risk and non-financial risk were managed within ING's risk appetite profile.
The financial crime risk management framework was strengthened in order to support improvement of ING's AML operations, including:
- The rollout of continuous adverse media screening tooling and global transaction monitoring tooling
- Enhancement of the screening control environment
- Strengthening the skills and knowledge of employees
- The execution of behavioural risk assessment to continuously improve our risk culture and behaviour.

Continuous learning and improvement on AML will continue to be a main focus area.
Delivered identified regulatory commitments related to implementation of new regulations on time and at the required levels.

Strategy
- Deliver on digitalisation and innovation initiatives

Performance

Digitalisation initiatives
- Data quality levels improved by progressing on the rollout of ING's standardised data model.

Innovation initiatives:
- Global roll-out to customers of Blacksmith and CoorpID enabling digitalisation of KYC processes.

Sustainability
- Climate risk appetite framework

Performance

Climate risk has been integrated in ING's credit risk appetite framework. Climate risk is one of the elements taken into account when credit concentration limits are set for the various sectors that ING has exposures in.

People
- Organisational health on three priorities
- Talent and diversity

Performance

- The overall organisational health score improved compared to the last full OHI in 2019. In 2021 action plans were developed for three focus areas: direction, leadership, and innovation and learning. The November 2021 pulse survey showed improvements in the key practices around direction and leadership.
- Improved succession planning process in place, including having a more diverse and gender balanced pipeline.
- At MBB and senior management level further progress still needs to be made to reach our diversity targets.

3. Outcome performance assessment	CEO			CFO			CRO		
	Weighting (%)	Assessment (%)	Outcome (%)	Weighting (%)	Assessment (%)	Outcome (%)	Weighting (%)	Assessment (%)	Outcome (%)
Profit before tax	12.5%	100%	12.5%	12.5%	100%	12.5%	6.3%	100%	6.3%
Return on equity	12.5%	100%	12.5%	12.5%	100%	12.5%	6.3%	100%	6.3%
Operational expenses	12.5%	60.6%	7.6%	12.5%	60.6%	7.6%	6.3%	60.6%	3.8%
Cost control (FTE)	12.5%	96.4%	12.0%	12.5%	96.4%	12.0%	6.3%	100%	6.3%
Customer	2.5%	60.0%	1.5%	2.5%	60.0%	1.5%	-	-	-
Risk and regulatory	15.0%	83.3%	12.5%	15.0%	91.1%	13.7%	50.0%	84.7%	42.3%
Strategy	17.5%	83.3%	14.3%	17.5%	90.0%	17.0%	10.0%	80.0%	8.0%
Sustainability	5.0%	80.0%	4.0%	5.0%	80.0%	4.0%	5.0%	80.0%	4.0%
People	10.0%	79.2%	7.9%	10.0%	85.0%	8.5%	10.0%	91.7%	9.2%
Total	**100%**		**85%**	**100%**		**89%**	**100%**		**86%**

* Due to rounding, percentages presented in the table may not add up precisely to the total percentages provided.

2021 variable remuneration outcome

In 2021, ING continued to be impacted by Covid-19 and other challenges affecting customers and society, such as rising energy prices and inflation. Despite this, there was significant progress in our business performance. Our financial results – especially profit before tax and return on equity – outperformed both the business plan and the prior year, mainly due to higher revenues, moderate risk costs from having a good quality credit book, and a focus on underlying cost management. In addition, non-financial performance is evidenced by effective risk management and solid progress on the digitalisation and innovation initiatives.

Variable remuneration awarded to Executive Board members reflects the Supervisory Board's assessment of the performance of each of the Executive Board member against the objectives in their performance target cards, as outlined in the previous section.

Both CEO Steven van Rijswijk and CFO Tanate Phutrakul served in their roles for the full year. The variable remuneration award for Ljiljana Čortan is for the period since her appointment as CRO at the AGM on 26 April 2021.

Following achievement against the performance hurdles, the Supervisory Board conducted a thorough and balanced performance assessment. Based on the outcomes of this and their overall achievements, the Supervisory Board concluded that the Executive Board members had delivered strong results in 2021.

Furthermore, the Supervisory Board considered whether any discretionary adjustment was required and determined both the financial and non-financial results speak for themselves in the current environment. The Supervisory Board also considered the behaviour of the Executive Board members and saw no reason to apply any discretionary adjustments.

In the final step, the Supervisory Board took into consideration the feedback of the CRO and Risk Committee on risk and compliance matters. Here, there was no reason to apply any individual additional risk adjustments in accordance with ING's Remuneration Regulations Framework (IRRF).[2]

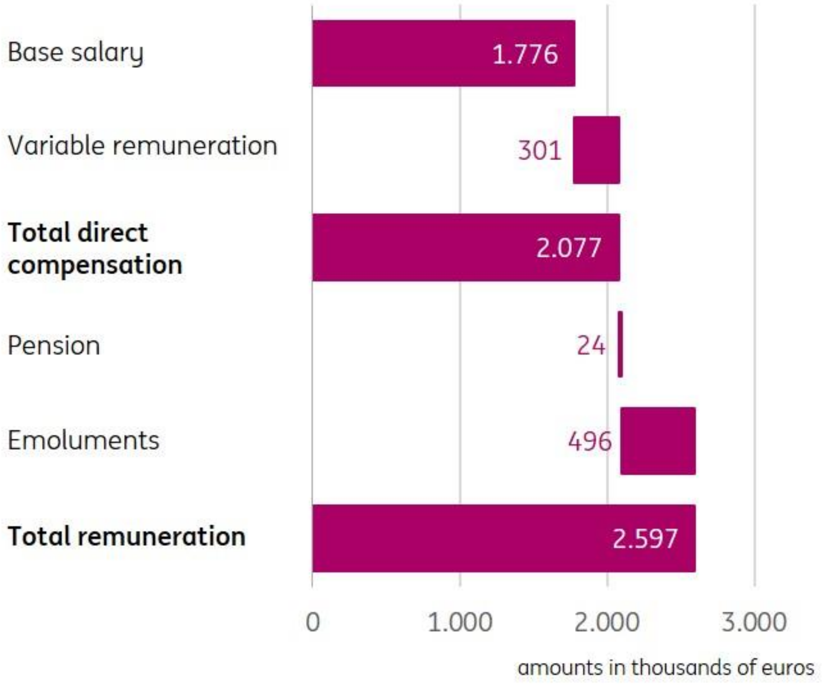
Following this performance assessment process the resulting variable remuneration award for Steven van Rijswijk is €301,199; for Tanate Phutrakul €218,151; and for Ljiljana Čortan €144,121 (for the period she's been an Executive Board member).

For the CEO, this equates to a variable remuneration award at 17% of the maximum 20% cap. For the CFO it represents 18% of the maximum 20% cap and for the CRO it represents 17% of the maximum 20% cap.

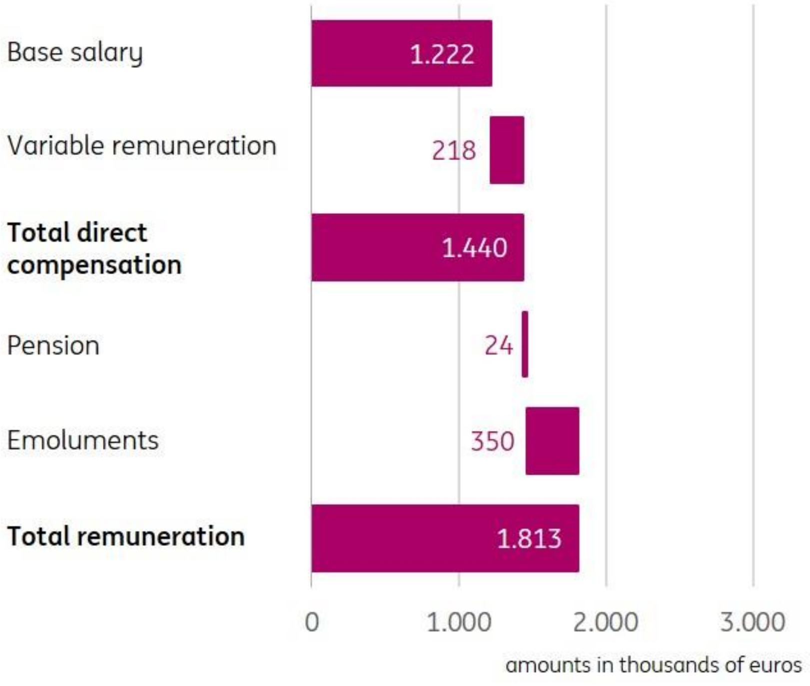
[2] The IRRF consists of the most important regulatory requirements with respect to remuneration to which all remuneration policies of majority owned entities have to adhere to. Furthermore, it consists of our general remuneration principles that apply to all staff globally working under the responsibility of ING.

2021 Executive Board remuneration

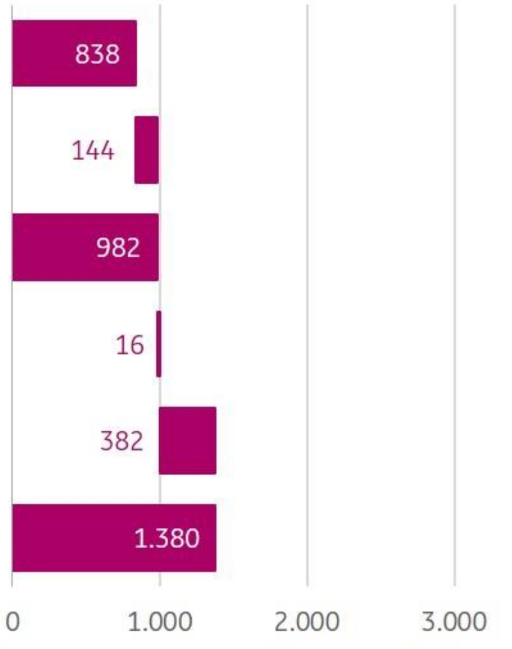
Chief executive officer
Steven van Rijswijk



Chief financial officer
Tanate Phutrakul



Chief risk officer
Ljiljana Čortan



* Earned in her capacity as CRO

As recognised in the profit or loss statement of 2021, the expenses for each Executive Board member (active on 31 December 2021), relating to their role on the Executive Board, amount to €2.3 million for the CEO, €1.6 million for the CFO and €1.2 million for the CRO. These amounts include deferred elements from previous years, paid out in 2021.

The following paragraphs (i.e. total direct compensation, pension costs and other emoluments) show the remuneration awarded to individual Executive Board members with respect to the performance years 2021 and 2020.[3]

All Executive Board remuneration is paid directly by ING.

4. Total direct compensation for (active) Executive Board members

	2021		2020	
Amounts in euros (rounded figures)	Amount	Number of shares	Amount	Number of shares
Steven van Rijswijk				
Base salary [1]	1,776,300		1,498,900	
Variable remuneration (fully in shares) [2]	301,199	22,975	-	-
Tanate Phutrakul				
Base salary	1,221,700		1,221,700	
Variable remuneration (fully in shares) [2]	218,151	16,641	-	-
Ljiljana Čortan				
Base salary [3]	837,600		-	
Variable remuneration (fully in shares) [2]	144,121	10,994	-	-
Total aggregated base salary	3,835,600		2,720,600	
Total aggregated variable remuneration [4]	663,471		-	-
Total aggregated number of shares [2]		50,610		

1. The base salary in 2020 reflects the aggregated base salary earned in his capacity as CRO and CEO.
2. The number of shares is based on the average ING share price (€13,11) on the day the year-end results were published.
3. The base salary reflects the period as of her appointment as CRO at the AGM on 26 April 2021.
4. The variable remuneration percentage for the Executive Board members are as follows: CEO 17%, CFO 18% and CRO 17%. Thus the ratio between base salary and total direct compensation is as follows: CEO 85.5%, CFO 84,8% and CRO 85.3%.

Pension costs

Members of the Executive Board participate in the Collective Defined Contribution (CDC) pension plan. In 2021, pension accrual applied to salary up to an amount of € 112,189. In addition, the individual members of the Executive Board received a savings allowance to compensate for the loss of pension above € 112,189. The table below shows the pension costs of the individual members of the Executive Board in 2021 and 2020.

5. Pension costs for individual Executive Board members [1]

Amounts in euros (rounded figures)	2021	2020
Steven van Rijswijk [2]	23,700	23,300
Tanate Phutrakul	23,700	23,300
Ljiljana Čortan [3]	16,200	-

1. Pension accrual only applies to salary up to an annually set amount (i.e. €110,111 for 2020 and €112,189 for 2021).
2. In 2020 the pension accrual reflects the aggregated costs in his capacity as CRO and CEO.
3. The pension accrual reflects the period as of the appointment of CRO at the AGM dated 26 April 2021.

Benefits

The individual members of the Executive Board receive other emoluments. The other emoluments in 2021 and 2020 amounted to the following costs.

6. Other emoluments

Amounts in euros (rounded figures)	2021	2020
Steven van Rijswijk [1]	495,500	411,000
Tanate Phutrakul	349,800	358,500
Ljiljana Čortan [2]	382,200	-

1. The amount of emoluments in 2020 reflects the aggregated amount in his capacity as CRO and CEO.
2. The amount of emoluments reflects the period as of her appointment as CRO at the AGM on 26 April 2021.

3 In addition, ING Group offers a Directors & Officers indemnity (please refer to 'Executive Board – Roles and responsibilities' and article 26 of our Articles of Association), under which genuine expenses are provided.

7. Breakdown of other emoluments paid in 2021			
Amounts in euros (rounded figures)	Steven van Rijswijk	Tanate Phutrakul	Ljiljana Čortan [1]
Contribution individual savings	62,200	42,800	29,300
Individual savings allowance	385,900	257,300	176,500
Travel and accident insurance	15,000	15,000	10,200
Other amounts [2]	32,500	34,800	166,100

1. The amount of emoluments reflects the period as of her appointment as CRO at the AGM on 26 April 2021.
2. This includes amongst others: housing, school/tuition fees, international health insurance, relocation costs and tax and financial planning.

Long-term incentives awarded in previous years

Long-term incentives awarded to the Executive Board members in previous years (prior to 2019) are disclosed in the table 'ING shares held by Executive Board members'. In line with the current Executive Board remuneration policy we no longer operate long-term incentive plans.

Employee stock options

All unexercised options lapsed in 2020 when the applicable stock option plans reached the end of their 10-year lifespan. Therefore we have no outstanding employee stock options to report for this year.

Shares

Deferred shares are shares conditionally granted subject to a tiered vesting over a period of five years (for awards in 2021 and before), with the ultimate value of each deferred share based on ING's share price on the vesting date. This is conditional on there being no holdback.
The main condition for vesting is that these require continued employment through vesting date.

8. Shares vested for Executive Board members during 2021								
Number of shares	Shares[1]	Grant date	Vesting date	End date of retention period	No. of shares granted[2]	No. of shares vested	Vesting price in euros	No. of unvested shares remaining
Steven van Rijswijk	LSPP	27 March 2018	27 March 2021	27 March 2022	3,460	346	10.1	692
	LSPP	10 May 2018	11 May 2021	10 May 2023	6,584	790	10.82	1,580
	LSPP	11 May 2020	11 May 2021	11 May 2025	18,858	2,263	10.82	9,052
Tanate Phutrakul	LSPP Units	27 March 2017	27 March 2021	N/A	6,032	482	10.1	967
	LSPP Units	27 March 2018	27 March 2021	N/A	4,972	397	10.1	1,195
	LSPP	27 March 2019	27 March 2021	27 March 2022	2,837	227	10.1	681
	LSPP	11 May 2020	11 May 2021	11 May 2025	17,694	2,123	10.82	8,493
Ljiljana Čortan	-	-	-	-	-	-	-	-

1. All current Executive Board members participate in the ING Group Long-term Sustainable Performance Plan (LSPP) and receive their shares under its plan rules.
2. Number of shares granted includes both the deferred and upfront part awarded at the granting date.

9. Total value of vested and unvested shares of Executive Board members - 2021				
Amounts in euros (rounded figures)	Vested shares	Unvested shares	Share price in euros[1]	Total value in euros
Steven van Rijswijk	3,399	11,324	12.26	180,504
Tanate Phutrakul	3,229	11,336	12.26	178,567
Ljiljana Čortan	-	-	-	-

1. The opening share price on 31 December 2021.

Loans and advances to Executive Board members

Executive Board members may obtain banking and insurance services from ING Group (and) its subsidiaries in the ordinary course of their business and on terms that are customary in the sector. The Executive Board members do not receive privileged financial services. On 31 December 2021, there were no loans and advances outstanding to the Executive Board members.

ING shares held by Executive Board members

Executive Board members are encouraged to hold ING shares as a long-term investment to maintain alignment with ING. The table below shows an overview of the shares held by members of the Executive Board on 31 December 2021 and 2020.

10. ING shares held by Executive Board members

Numbers of shares	2021	2020
Steven van Rijswijk	77,324	75,490
Tanate Phutrakul	14,529	13,251
Ljiljana Čortan	-	-

2022 Executive Board remuneration

The Supervisory Board decided not to increase the base salary of the Executive Board members from 1 January 2022.

For 2022 the following target areas will be taken into account:

Financial

- Profit before tax
- Return on equity
- Operational expenses
- Cost control (FTE)

Non-financial

- Customer (except the CRO)
  - Increase number of primary customers, as it leads to deeper relationships, greater customer satisfaction and, ultimately, customers choosing ING for more of their financial needs.
  - Increase customer satisfaction by increasing NPS.
- Risk and regulatory
  - Manage credit, market and non-financial risk within risk appetite
  - Deliver on regulatory programs including KYC
- Strategy
  - Deliver on digitalisation initiatives
  - Deliver on data initiatives
- ESG
  - Sustainability
    - Increase level of sustainable loans
    - Development and introduction of sustainable products for our retail customers
    - Reach net-zero emissions for ING's own footprint
  - People
    - Strengthen organisational health with a focus on four priority areas: strategic clarity, shared vision, employee involvement & role clarity
    - Increase gender balance in ING's leadership cadre

A new combined environment, social and governance (ESG) target area will be created consisting of people, KYC/regulatory requirements and sustainability targets.

ING's ESG focus supports a future proof ING and drives long-term value creation:

- Environmental: A focused approach to the environmental and social transition enables us to capture opportunities and manage risk related to climate change and human rights

- Social: A diverse and engaged workforce makes us more adaptive and inventive, and enables us to better serve our diverse customer base

- Governance: A strong governance structure drives the right behaviour, delivers on evolving regulatory requirements and protects our employees, customers and society.

Remuneration Supervisory Board

Supervisory Board remuneration policy

The Supervisory Board remuneration policy is disclosed in full on ing.com in the section ‘Remuneration’.

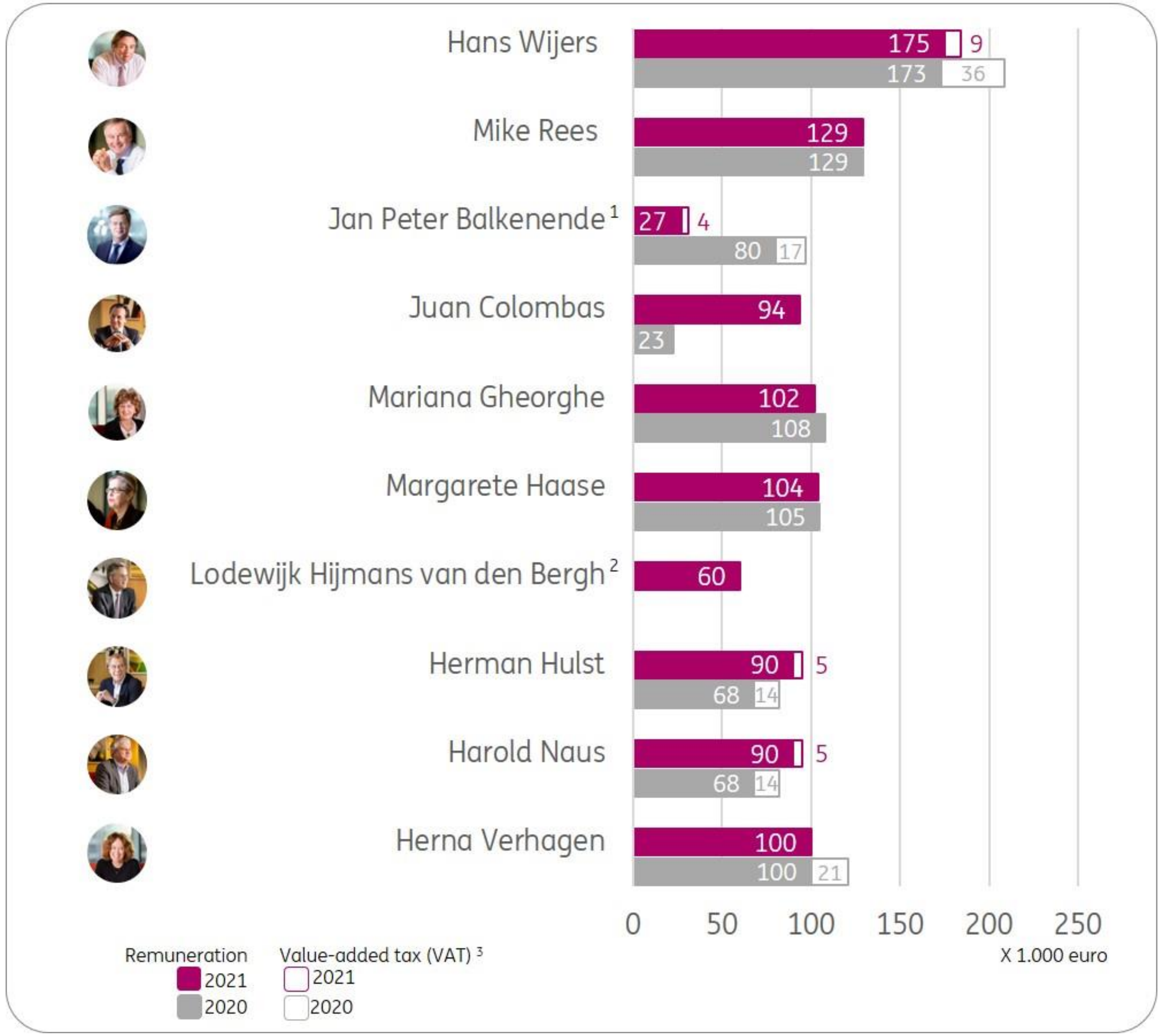
The Supervisory Board remuneration levels for 2021, similar to 2020, are shown below:

11. Supervisory Board remuneration structure	
Annual fees in euros	2021
Chair	125,000
Vice-chair	95,000
Member	70,000
Committee fees (annual amounts)	
Committee chair	20,000
Committee member	10,000
Attendance fees (per event)	
Attendance fee outside country of residence	2,000
Attendance fee outside continent of residence	7,500

All fees are paid fully in cash. No variable remuneration is provided to ensure that the Supervisory Board members remain independent. The Supervisory Board members are not eligible for retirement benefits nor any other benefits in relation to their position on the Supervisory Board. Members of the Supervisory Board are reimbursed for their travel and ING-related business expenses.

2021 Remuneration Supervisory Board

The image on the right side shows the remuneration, including attendance fees for each Supervisory Board member. All fees for the Supervisory Board are paid directly by ING.



1. Jan-Peter Balkenende retired after the AGM on 26 April 2021. The remuneration figures for 2021 reflect a partial year as a member of the Supervisory Board.
2. Lodewijk Hijmans van den Bergh was appointed to the Supervisory Board by the AGM on 26 April 2021 with effect from that date.
3. The VAT regime changed after the first quarter of 2021. VAT is no longer due for remuneration of Dutch based Supervisory Board members.

Compensation of former members of the Supervisory Board not included in the image on the previous page amounted to nil in 2021 and €86,000 in 2020.

Loans and advances to Supervisory Board members

Supervisory Board members may obtain banking and insurance services from ING and its subsidiaries in the ordinary course of their business and on terms that are customary in the sector. The Supervisory Board members do not receive privileged financial services. On 31 December 2021, there were no loans and advances outstanding to Supervisory Board members.

ING shares and employee stock options held by Supervisory Board members

Supervisory Board members are permitted to hold ING shares as a long-term investment. The table below shows the holdings by members of the Supervisory Board on 31 December 2021 and 2020.

12. ING shares held by Supervisory Board members

Numbers of shares	2021	2020
Herman Hulst	3,650	3,650
Harold Naus	1,645	1,645

2022 Remuneration Supervisory Board

The fee levels of the Supervisory Board have been benchmarked to ensure they are in line with the peer group. The Supervisory Board decided not to change the fees for 2022.

General information for all staff

FOR INFORMATION ONLY AT 2022 ING GROEP N.V. ANNUAL GENERAL MEETING (AGM)

The primary objective of ING's remuneration principles is to attract, motivate and retain qualified and expert leaders as well as senior staff (including Executive Board members) and other highly qualified staff who have the desired Orange Code values and behaviours, skills and knowledge to deliver on ING's purpose in a sustainable way.

The remuneration principles are an integral part of ING's strategy and risk profile. They maintain a sustainable balance between short and long-term value creation and build on ING's long-term responsibility towards its employees, customers, shareholders and other stakeholders. Our approach to the remuneration principles did not change in 2021.

Our remuneration principles apply to all staff and are embedded in ING's Remuneration Regulations Framework (IRRF) and our people offer (OPO). Introduced in 2020, OPO sets out ING's differentiating offer as an employer in the job market and states what we ask from our people in return. It gives guidance to our global people practices, while supporting our strategy. The IRRF and OPO comply with relevant international and local legislation and regulations.

Global job architecture

The Global Job Architecture (GJA), categorises all 1,425 jobs within ING in a standardised and simple way, using common language that makes it easier to compare and match capabilities across borders and business lines. Each profile has a job purpose and a clear description of its responsibilities and required competencies, education and experience. The GJA is classified according to Korn Ferry Hay methodology and job profiles are linked to global career groups to enable to common understanding for our employees of job sizes across ING.

The GJA is foundational for integrating our people activities. It also supports our remuneration structure in terms of benchmarking and providing consistency, specific to each country, for compensation and benefit programmes. These structures ultimately provide our employees with greater transparency into how they are remunerated, which in turn instils a sense of fairness in our remuneration programmes.

Gender-neutral pay project

The gender pay gap is a prevalent societal issue and represents the average difference between the remuneration of men and women, whereby women are generally considered to earn less than men. Following the implemenation of the GJA, ING introduced the gender-neutral pay project, which aims to define, build and deliver going forward a standardised, replicable, annual process and accompanying tool for ING countries to determine whether men and women in the same job family and at the same job level are earning equal pay for equal work. All employees in the same job family and at the same job level within a country will be compared using gender-neutral characteristics (e.g., tenure, education, etc). When all of these are equal but the remuneration is not, this will be flagged and the reason investigated. If there is no gender-neutral explanation for the remuneration difference, ING will take appropriate measures. This tool will also calculate ING's annual global gender pay gap. ING is committed to publishing the average pay of all men vs. the average pay of all women, expressed in the form of a percentage, in the 2022 Annual Report.

Our remuneration principles

Our remuneration principles apply to all employees and comprise the following:

Aligned with business strategy ING's remuneration principles are aligned with the business strategy and company goals.
Creates long-term value ING's remuneration principles contribute to long-term value creation and support a focus on the long-term interests of its stakeholders, including employees, customers and shareholders.
Responsible and fair In line with our Orange Code values and behaviours, ING acts responsibly and treats staff fairly across the globe.
Mitigates risk Risk management is an enabler of long-term value creation. ING ensures its remuneration principles are properly correlated with its risk profile and stakeholder interests.
Performance driven ING operates a fair, objective and transparent performance management process linked to remuneration to steer and motivate all employees to deliver on its strategic goals, aiming to reward success and prevent rewarding for failure.
Gender-neutral All staff members will be equally remunerated for equal work or work of equal value, irrespective of their gender.
Sustainable ING supports the sustainable recruitment, engagement and retention of all employees.

Performance management

We aim to reward for success and avoid rewarding for failure. That is why ING's remuneration approach is strongly linked to a robust and transparent performance management process. Outcomes of performance evaluations (including collective and individual risk assessments) provide input for remuneration. As not all employees are eligible for variable remuneration there is not necessarily a link to financial performance. In the Netherlands, for example the vast majority of the employees do not receive any individual variable remuneration.

Step Up Performance Management is our global performance management approach applicable to almost all employees. It aims to improve people's individual performance and thereby team performance and ultimately ING's performance. Step Up Performance Management is one of our people practices that help to increase focus, alignment and transparency. We do this through continuous conversations between managers, employees and teams. To support these conversations, there are three formal moments to discuss performance during the year: target setting, mid-year review and year-end evaluation.

The Step Up Performance Management approach consists of three dimensions:
- **Job:** the impact employees have in their daily work on an individual and team level, based on factors such as qualitative job description, dynamic planning and specific selected quantitative priorities.
- **Orange Code behaviours:** how employees do their work and how effective their behaviour is as a professional and colleague. We expect all employees to act in line with ING's Orange Code.
- **Stretch ambitions:** at ING, we believe high performance requires stretch and investment (to achieve the stretch). Therefore we ask people to set ambitions, describing how to contribute beyond the day-to-day role, focusing on the main priorities and long-term success of ING.

All targets are agreed between the employee and their manager, as well as within management teams, to ensure consistency across the organisation. ING uses three labels to evaluate performance: excellent, well done and improvement required.

Step Up Performance Management does not prescribe the targets employees should set. However, the following regulatory requirements apply to specific groups:
- For employees eligible for variable remuneration, a minimum of 50% non-financial priorities.
- For all employees in control functions (Risk, Compliance and Audit), no individual (commercial) financial KPIs are allowed, unless required by local law.
- For identified risk takers, risk mitigation measures may lead to a downwards adjustment of the performance outcome and negatively affect variable remuneration (a risk modifier can be applied).

Total direct compensation

ING aims to provide total direct compensation for expected business and individual performance which, on average, are at the median of the markets in which we operate, benchmarked against relevant peer groups.

Fixed remuneration represents a sufficiently high proportion, in line with the level of expertise and skills, and allows a fully flexible variable remuneration award. When no variable remuneration is awarded, the compensation level is still enough for a decent standard of living. Variable remuneration is performance driven, subject to regulatory caps and prevents excessive risk taking.

The comprehensive process around variable remuneration

The awarding of variable remuneration, where applicable, is based on group, business line and individual performance criteria unless local legislation prescribes otherwise. In all ING countries, we adhere to the applicable variable remuneration caps.

For Identified Staff (i.e. staff considered to have a material impact on ING's risk profile), at least 40% of variable remuneration is deferred over a period of four or five years (depending on the level of seniority) with a tiered vesting schedule. Furthermore, at least 50% of variable remuneration is awarded in equity (or equity-linked instruments unless local legislation prescribes otherwise).

The award of discretionary variable remuneration is based on a clear, transparent and verifiable mechanism for measuring performance and applying adjustments for risks (the Variable Remuneration Accrual Model or VRAM). The VRAM construct follows a five-step process leading to risk-adjusted variable remuneration pools determined at a Group and business line level. The 2021 VRAM set-up was approved by the Management Board and Supervisory Board.

Step one of the VRAM is an aggregate of the individual target variable remuneration amounts for all eligible employees across ING, which provides the ''starting point'' or target VR pool baseline.

Step two of the VRAM are the performance hurdles, which must be met in order to unlock the discretionary variable remuneration pools. These are:
- The Common Equity Tier 1 (CET1) ratio must be at or above the threshold established by applicable regulations;
- The return on equity (reported RoE) is equal to or higher than the percentage determined at the beginning of each performance year by the Management Board Banking and the Supervisory Board. Underlying RoE, in line with the VRAM Policy and approved by governing bodies, can be adjusted due to one-time charges or infrequent occurrences not linked to the normal course of business, such as but not limited to macro-economic events and pandemic events, during a given performance year.

An additional assessment of whether CET1 is within risk appetite is also undertaken in step two to ensure protection of a sound capital base before variable remuneration is paid out. In the situation where CET1 falls below ING's risk appetite level, the CRO can recommend reducing the variable remuneration pools (potentially down to zero). The hurdles and results are defined in the VRAM policy and subject to Supervisory Board approval.

Step three is based on a holistic assessment of financial and non-financial and risk performance. Within each of these dimensions specific measures are used to assess a balanced mix of performance. Financial measures (e.g. profit, return on equity) are used to drive long-term growth, financial strength and affordability. In addition, different types of non-financial performance measures (e.g. customer, strategy, financial and non-financial risks) are also taken into consideration. Here, ESG related measures are also a key area of focus in the target cards and include people, sustainability and regulatory commitments with a combined weighting around 40%. Risk and regulatory measures are also assessed across both financial and non-financial risks on an ex-ante basis and can lead to downward or upward modifications to the variable remuneration pools.

Step four relates to CEO discretion to adjust the proposed variable remuneration pool. The CEO considers several performance factors when making this decision. This discretion is checked by the Supervisory Board and requires its approval.

The last step is a final and independent, multi-stage approach to assess whether risk adjustments are made by the CRO to the variable remuneration pools and/or individual variable remuneration awards.

The CRO may recommend risk adjustments to variable remuneration pools (and potentially to zero) at a group, business line, entity and country level across additional ex-ante and ex-post risk adjustment measures. All relevant financial and non-financial risks will be considered within this step, both on a current and future risk basis, to ensure the VRAM outcome is appropriate in the context of overall risk performance. In addition, ex-post risk adjustments including collective or one-off risk events are a key element in the process of determining variable remuneration pools. The ex-ante and/or ex-post risk adjustments require Supervisory Board approval, taking into account the input of the Risk and Finance functions and the advice of the Risk Committee and Remuneration Committee.

The final risk adjustment measure lies in the individual performance assessment itself. An employee's performance is extensively assessed before variable remuneration is proposed and awarded. Every manager carefully assesses the performance delivered by their individual team members on the basis of pre-agreed performance priorities and in line with the Step Up Performance Management framework. In addition, managers have discretion to lower the proposed variable remuneration if risk-taking is perceived as inappropriate. In this way, variable remuneration is aligned with any additional risks identified on an individual basis during the performance year.

Additional risk requirements apply to Identified Staff who are considered risk takers in accordance with Capital Rights Directive IV. These risk requirements set the minimum standards to be met during the performance year. Deviation from these standards may lead to downward adjustment of the variable remuneration, a so-called risk modifier. This process is run independently by the Risk function for which the CRO is ultimately responsible. Within the Executive Board, risk modifiers are only applicable for the CEO as neither the CFO nor CRO are considered risk takers. The Supervisory Board, advised by its Risk Committee, is responsible for risk modifiers within the Management Board Banking.

Finally, a post-award risk assessment can be applied. This assessment analyses whether any events or findings occurred that should lead to a downward adjustment of variable remuneration of previous years by applying a holdback (i.e., forfeiture of up to 100% of the awarded, but unvested, variable remuneration) or clawback (surrender of up to 100% of the paid or vested variable remuneration).

ING's remuneration policies comply with international and local legislation and regulations. Under the Dutch WBFO (which sets various requirements on remuneration), financial institutions are permitted to set a variable remuneration cap higher than 100% (but not higher than 200%) of fixed remuneration for employees outside of the European Economic Area (EEA), provided that the higher cap is approved by shareholders and does not conflict with ING's capital adequacy requirements.

At the 2021 AGM, shareholders approved to apply an increased maximum percentage of up to 200% for employees outside the EEA for a period of five performance years until end-2026. For 2021, it was applied to 12 employees worldwide. This is a renewal of the mandate obtained at the 2017 AGM for five performance years. This mandate is rarely used by ING and in 2018, 2019 and 2020 applied to zero employees worldwide.

2021 specifics

ING awards variable remuneration across the global organisation in line with our remuneration principles, global and local legislation and market practices. The awarding of variable remuneration, where applicable, is based on group, business line and individual performance criteria, both financial, non-financial and risk based, and comes in the form of both discretionary and collective variable remuneration.

Collective variable remuneration is based on collective labour agreements and/or profit sharing schemes that are driven by regulation, law and/or workers council agreements in various countries. Over the past years the total amount of collective variable remuneration has been relatively stable and typically accounts for around 25% of the total spend on variable remuneration.

In 2021 the impact of Covid-19 continued to present challenges for ING. Despite this, there was significant progress in business performance. In contrast to 2020, financial results – especially profit before tax and return on equity – outperformed the business plan and prior year mainly due to improvement in revenues, moderate risk costs due to good credit book quality, as well as focus on underlying cost management. Non-financial performance was also good with effective risk management and positive employee engagement outcomes. Overall, this resulted in a risk-adjusted discretionary Group VR pool at €312.8million, equating to a 5.2% increase from target discretionary VR baseline ("starting point'') and 41.7% versus the previous performance year.

The total actual amount of both discretionary and collective variable remuneration awarded to all eligible employees globally for 2021 was €417.8 million (€105.0 million in collective variable remuneration), compared to total staff expenses of €5,941 million. For 2020, the total amount was €314.2 million (€93.6 million in collective variable remuneration) on €5,812 million staff expenses.

In 2021, five employees – excluding members of the Management Board Banking – were awarded total annual remuneration (including employer pension contributions and excluding severance payments made) of €1 million or more. Please see our CRR disclosure for further details on ing.com under the section 'Annual reports'.

C. Board practices

For information regarding board practices, see Item 6.A

Severance payments to members of the Executive Board

The contracts entered into with the members of the Executive Board provide for severance payments that become due upon termination of the applicable Executive Board member's contract, including if termination occurs in connection with a public bid as defined in section 5:70 of the Dutch Financial Supervision Act. For purposes of calculating the amounts due, it is not relevant whether or not termination of the employment or commission contract is related to a public bid. Severance payments to the members of the Executive Board are limited to a maximum of one year's fixed salary, in line with the Dutch Financial Supervision Act and the Corporate Governance Code.

D. Employees

The average number of internal employees at a full time equivalent basis was 57,660 at the end of 2021, of which 15,138 or 26%, were employed in the Netherlands. Substantially all of the Group's Dutch employees are subject to a collective labor agreement covering ING in the Netherlands.

The distribution of employees with respect to the Group's continuing operations for the years 2021, 2020 and 2019 were as follows:

Number of employees	Netherlands			Rest of the world			Total		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
Total average number of internal employees at full time equivalent basis	15,138	15,201	14,415	42,523	40,701	39,016	57,660	55,901	53,431

The Group employs a significant numbers of temporary employees. The average number of temporary employees, not included in the table above, at a full time equivalent basis was 5,376 at the end of 2021.

E. Share ownership

For information regarding share ownership, see Item 6.B of this Form 20-F and Note 27 'Staff expenses' to the consolidated financial statements.

Item 7. Major shareholders and related party transactions

A. Major shareholders

ING Group ordinary shares are listed on the stock exchanges of Amsterdam (Euronext Amsterdam) and Brussels (Euronext Brussels). ING Group American Depositary Shares (“ADSs”) are listed on the New York Stock Exchange (NYSE). Options on ING Group ordinary shares or in the form of American depository receipts (ADRs) are traded on the Euronext Amsterdam Derivative Markets and the Chicago Board Options Exchange.

Major shareholders as filed with SEC

According to the U.S. Securities and Exchange Commission, shareholders in a company which have registered a class of their equity securities under the Exchange Act, are required to file beneficial owner reports if the ownership exceeds more than 5% of the outstanding shares of that class. The shareholder is obliged to file Schedule 13D or 13G until their holdings drop below 5%.

To the best of our knowledge, as of 31 December 2021, no holder of ordinary shares or ADSs, other than BlackRock Inc. and Capital Research Global Investors held 5% or more of ING Group’s issued share capital.

On 5 February 2020, BlackRock, Inc. disclosed by way of a Schedule 13G filed with the SEC, beneficial ownership of 259,231,767 ordinary shares of ING Group as of 31 December 2019, representing 6.7% of ING Group’s issued share capital. On 29 January 2021, BlackRock, Inc. disclosed by way of a Schedule 13G filed with the SEC, beneficial ownership of 289,185,500 ordinary shares of ING Group as of 31 December 2020, representing 7.4% of ING Group’s issued share capital. On 1 February 2022, BlackRock, Inc. disclosed by way of a Schedule 13G filed with the SEC, beneficial ownership of 292,129,468 ordinary shares of ING Group as of 31 December 2021, representing 7.5% of ING Group’s issued share capital. On 11 February 2022, Capital Research Global Investors disclosed by way of a Schedule 13G filed with the SEC, beneficial ownership of 224,540,855 ordinary shares of ING Group as of 31 December 2021, representing 5.8% of ING Group’s issued share capital.

Major shareholders as filed with AFM

Pursuant to section 5.3 of the Dutch Financial Supervision Act (“Major Holdings Rules”), any person who, directly or indirectly, acquires or disposes of an interest in the voting rights and/or the capital of (in short) a public limited company incorporated under the laws of the Netherlands with an official listing on a stock exchange within the European Economic Area, as a result of which acquisition or disposal the percentage of his voting rights or capital interest - whether through ownership of shares, American depositary receipts (ADRs) or any other financial instrument, whether stock-settled or cash-settled, such as call or put options, warrants, swaps or any other similar contract - reaches, exceeds or falls below the threshold levels of 3%, 5%, 10%, 15%, 20%, 25%, 30%, 40%, 50%, 60%, 75% and 95% is required to provide updated information on its holdings and are recorded in the Dutch AFM (Authority for the Financial Markets) register (http://www.afm.nl/nl-en/professionals/registers/meldingenregisters/substantiele-deelnemingen).

Based on the AFM register shareholders with holdings of 3% or more are BlackRock, Inc. (5.07% interest and 6.06% voting rights reported on 13 July 2020) and Capital Research and Management Company (5.09% voting rights reported on 3 September 2021). The AFM register also shows a notification by ING Group on 20 December 2021 of a holding of 3.10% in its own share capital (no voting rights).

As a result, other than based on information available from public filings available under the applicable laws of any other jurisdiction, ING Groep N.V. is not aware of any changes in the ownership of ordinary shares or ADSs between the thresholds levels mentioned in the previous sentence.

On 31 December 2021, ING Groep N.V. and its subsidiaries held 128,301,231 ordinary shares or ADSs, representing 3.29% of ING Group’s issued share capital. ING Groep N.V. does not have voting rights in respect of shares and ADSs it holds or which are held by its subsidiaries.

On 31 December 2021, no person is known to ING Groep N.V. to be the owner of more than 10% of the ordinary shares or ADSs. As of 31 December 2021, members of the Supervisory Board and their related third parties held 5,295 Ordinary Shares. Members of the Supervisory Board do not hold ING options.

As at 31 December 2021, members of the Executive Board and their related third parties held 91,853 ordinary shares.

As at 31 December 2021 ING Groep N.V. was not a party to any material agreement that becomes effective, or is required to be amended or terminated in case of a change of control of ING Groep N.V. following a public bid as defined in the Dutch Financial Supervision Act. ING Groep N.V.'s subsidiaries may have customary change of control arrangements included in agreements related to various business activities, such as joint venture agreements, letters of credit and other credit facilities, ISDA-agreements, hybrid capital and debt instruments, reinsurance contracts and futures and option trading agreements. Following a change of control of ING Groep N.V. (as the result of a public bid or otherwise), such agreements may be amended or terminated, leading, for example, to an obligatory transfer of the interest in the joint venture, early repayment of amounts due, loss of credit facilities or reinsurance cover and liquidation of outstanding futures and option trading positions.
As of 31 December 2021 ING Groep N.V. was not aware of any arrangements the operation of which may result in a change of control of ING Groep N.V.

B. Related Party Transactions

In the normal course of business, ING Group enters into various transactions with related parties. Parties are considered to be related if one party has the ability to control or exercise significant influence over the other party in making financial or operating decisions. Related parties of ING Group include, among others, its subsidiaries, associates, joint ventures, key management personnel, and various defined benefit and contribution plans. Transactions between related parties include rendering or receiving of services, leases, transfers under finance arrangements and provisions of guarantees or collateral. There are no significant provisions for doubtful debts or individually significant bad debt expenses recognised on outstanding balances with related parties.

ING Group has entered into various transactions with related parties. For more information, reference is made to Note 50 "Related parties" in the consolidated financial statements.

As described under "Item 6. Directors, Senior Management and Employees", some members of the Supervisory Board are current or former senior executives of leading multi-national corporations based primarily in the Netherlands. ING Group may at any time have lending, investment banking or other financial relationships with one or more of these corporations in the ordinary course of business on terms which we believe are no less favorable to ING than those reached with unaffiliated parties of comparable creditworthiness.

C. Interests of experts and counsel

This item does not apply to annual reports on Form 20-F.

Item 8. Financial information

A. Consolidated statements and other financial information

Consolidated statements

For information regarding consolidated statements and other financial information, see Item 18 of this Form 20-F.

Legal Proceedings

For a description of ING's legal proceedings, see Note 46 'Legal proceedings' in the consolidated financial statements.

Policy on dividend distribution

ING's distribution policy is a pay-out ratio of 50% of resilient net profit and additional return of structural excess capital. For detailed information on ING's 2021 dividend, reference is made to Note 51 'Capital Management'.

Cash distributions on ING Groups ordinary shares are generally paid in Euros. However, the Executive Board may decide, with the approval of the Supervisory Board, to declare dividends in the currency of a country other than the Netherlands in which the shares are traded. Amounts payable to holders of ADSs that are paid to the Depositary in a currency other than dollars will be converted to dollars and subjected to a charge by the Depositary for any expenses incurred by it in such conversion.

If the Executive Board has been designated as a body authorised to resolve to issue shares, it may decide, with the approval of the Supervisory Board, that a distribution on ordinary shares shall be made in the form of ordinary shares instead of cash or to determine that the holders of ordinary shares shall be given the choice of receiving the distribution in cash or in the form of ordinary shares on such terms as the Executive Board, with the approval of the Supervisory Board, may decide.

The right to dividends and distributions in respect of the ordinary shares will lapse if such dividends or distributions are not claimed within five years following the day after the date on which they were made available.

There are no legislative or other legal provisions currently in force in the Netherlands or arising under ING Groups' Articles of Association restricting the remittance of dividends to holders of ordinary shares, or ADSs not resident in the Netherlands. Insofar as the laws of the Netherlands are concerned, cash dividends paid in Euro may be transferred from the Netherlands and converted into any other currency, except that for statistical purposes such payments and transactions must be reported by ING Group to DNB and, further, no payments, including dividend payments, may be made to jurisdictions or persons, that are subject to certain sanctions, adopted by the Government of the Netherlands, implementing resolutions of the Security Council of the United Nations, or adopted by the European Union.

Dividends are subject to withholding taxes in the Netherlands as described under Item 10, "Additional Information - Taxation - Netherlands Taxation".

ING's distribution policy may be changed at any time and there is no guarantee that any dividends or other distributions will be made in accordance with the distribution policy in effect from time to time or at all.

B. Significant changes

For information on subsequent events reference is made to Note 52 'Subsequent events' of the consolidated financial statements.

Since 31 December 2021, until the filing of this report, no other significant changes have occurred in the financial statements of the Group included in "Item 18 Consolidated Financial Statements" of this document.

Item 9. The offer and listing

A. Offer and listing details

Ordinary Shares (nominal value EUR 0.01 per share) are traded on Euronext Amsterdam, the principal trading market for the Ordinary Shares, under the symbol “INGA”. The Ordinary Shares are also listed on the stock exchange of Euronext Brussels, under the symbol “INGA”. ADSs, representing an equal number of Ordinary Shares, are traded on the New York Stock Exchange under the symbol “ING”.

B. Plan of distribution

This item does not apply to annual reports on Form 20-F.

C. Markets

For information regarding markets, see Item 9.A of this Form 20-F.

D. Selling shareholders

This item does not apply to annual reports on Form 20-F.

E. Dilution

This item does not apply to annual reports on Form 20-F.

F. Expenses of the issue

This item does not apply to annual reports on Form 20-F.

Item 10. Additional information

A. Share capital

This item does not apply to annual reports on Form 20-F.

B. Memorandum and articles of association

For a description of ING's memorandum and articles of association, please see Exhibit 2.1 "Description of Securities Registered under Section 12 of the Exchange Act", which is incorporated by reference herein.

Reference is made to Exhibit 1.1 to this Form 20-F for the articles of association.

C. Material contracts

There have been no material contracts outside the ordinary course of business to which ING Groep N.V. or any of its subsidiaries is a party in the last two years.

D. Exchange controls

Cash distributions, if any, payable in Euros on Ordinary Shares and ADSs may be officially transferred from the Netherlands and converted into any other currency without violating Dutch law, except that for statistical purposes such payments and transactions must be reported by ING Groep N.V. to the Dutch Central Bank and, further, no payments, including dividend payments, may be made to jurisdictions or persons subject to certain sanctions, adopted by the government of the Netherlands or the European Union.

E. Taxation

The following is a summary of certain Netherlands tax consequences, and the United States federal income tax consequences, of the ownership of our Ordinary Shares or American Depositary Shares ("ADSs") by U.S. Shareholders (as defined below) who hold Ordinary Shares or ADSs as capital assets.

For the purposes of this summary, a "U.S. Shareholder" is a beneficial owner of Ordinary Shares or ADSs that is:

- an individual citizen or resident of the United States,
- a corporation organized under the laws of the United States or of any state of the United States, or any entity taxable as United States corporation,
- an estate, the income of which is subject to United States federal income tax without regard to its source, or
- a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust.

Further, this summary is limited to U.S. Shareholders who are not, and are not deemed to be, a resident of the Netherlands for Dutch tax purposes.

This summary is based on the United States Internal Revenue Code of 1986 and the laws of the Netherlands, each as amended, their legislative history, existing and proposed regulations, published rulings and court decisions, and the tax treaty between the United States and the Netherlands for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income ("Treaty"), all as of the date hereof. These laws are subject to change, possibly on a retroactive basis. The information provided below is neither intended as tax advice nor purports to describe all of the tax considerations that may be relevant to investors and prospective investors. It should not be read as extending to matters not specifically discussed, and investors should consult their own advisors as to the tax consequences of their ownership and disposal of Ordinary Shares or ADSs. In particular, the summary does not take into account the specific circumstances of particular investors (such as tax-exempt organizations, banks, insurance companies, dealers in securities, traders in securities that elect to mark-to-market their securities holdings, investors liable for alternative minimum tax, investors whose functional currency is not the U.S. dollar, investors that actually or constructively own 10% or more of the combined voting power of the voting stock or of the total value of ING Groep N.V., investors that hold Ordinary Shares or ADSs as part of a straddle or a hedging or conversion transaction, investors that acquired or dispose of Ordinary Shares or ADSs as part of a wash sale, or investors that own Ordinary Shares or ADSs through a partnership), some of which may be subject to special rules.

Moreover, this summary does not discuss the Dutch tax treatment of a holder of Ordinary Shares or ADSs that is an individual who receives income or capital gains derived from the Ordinary Shares and ADSs if such income received or capital gains derived is attributable to the past, present or future employment activities of such holder.

The summary is based in part upon the representations of the Depositary and the assumption that each obligation in the Deposit Agreement and any related agreement will be performed in accordance with its terms. In general, for United States federal income tax and Netherlands tax purposes, holders of ADSs will be treated as the owners of the Ordinary Shares underlying the ADSs, and exchanges of Ordinary Shares for ADSs, and exchanges of ADSs for Ordinary Shares, will not be subject to United States federal income tax or Netherlands income tax. References to Ordinary Shares in this section include references to ADSs.

It is assumed, for purposes of this summary, that a U.S. Shareholder is eligible for the benefits of the Treaty and that a U.S. Shareholder's eligibility is not limited by the limitation on benefits provisions of the Treaty.

Netherlands Taxation

Withholding tax on dividends

The Netherlands imposes a withholding tax on a distribution of a dividend at the statutory rate of 15%. Dividends include:

i. dividends paid in cash and in kind;
ii. deemed and constructive dividends;
iii. the consideration for the repurchase or redemption of shares in excess of the qualifying average paid-in capital unless such repurchase is made for temporary investment purposes or is exempt by law;
iv. any (partial) repayment of paid-in capital not qualifying as capital for Dutch dividend withholding tax purposes;
v. liquidation proceeds in excess of the qualifying average paid-in capital for Dutch dividend withholding tax purposes; and
vi. stock dividends up to their nominal value (unless distributed out of ING Groep N.V.'s qualifying paid-in capital).

Reduction of Dutch dividend withholding tax based on Dutch law

Under certain circumstances, a reduction of Dutch dividend withholding tax can be obtained based on Dutch law:

i. An exemption at source is available if the Dutch participation exemption applies and the Ordinary Shares or ADSs are attributable to a business carried out in the Netherlands. To qualify for the Dutch participation exemption, the U.S. Shareholder must generally hold at least 5.0 percent of our nominal paid-in capital and meet certain other requirements.
ii. An exemption at source is available for dividend distributions to certain qualifying corporate U.S. Shareholders owning our Ordinary Shares or ADSs if such shareholder would have been able to apply the Dutch participation exemption if it would have been resident of the Netherlands, unless such shareholder holds the Ordinary Shares or ADSs with the primary aim or one of the primary aims to avoid the levy of Dutch dividend withholding tax at the level of another person and the Ordinary Shares or ADSs are not held for valid commercial reasons that reflect economic reality.
iii. Certain tax exempt organizations (e.g. pension funds and excluding collective investment vehicles) may be eligible for a refund of Dutch dividend withholding tax upon their request. Based on domestic law not yet entered into force, in those circumstances, an exemption at source may also become available upon request.
iv. Upon request and under certain conditions, certain qualifying individual and corporate U.S Shareholders of Ordinary Shares or ADSs which are not subject to personal or corporate income tax in the Netherlands may request a refund of Dutch dividend withholding tax insofar the withholding tax withheld on the gross dividend is higher than the personal or corporate income tax which would have been due on the net dividend if they were resident or established in the Netherlands. This refund is however not applicable when, based on the Treaty, the Dutch dividend withholding tax can be fully credited in the United States by the U.S. Shareholder. However, it is unclear whether (i) which (financing) costs can be taken into account when determining the hypothetical personal or corporate income tax due on the net income (ii) or how the Netherlands would determine whether, based on the double taxation convention, a full credit is available in the country of residence of the holder for purposes of this refund. See "United States Taxation—Taxes on dividends" for more information. The provision in essence is intended to be a codification of certain judgments by both the European Free Trade Association Court of Justice and the European Court of Justice that already indicated that in certain circumstances a refund should be available prior to the introduction of the provision in Dutch law. It is possible that this provision is an insufficient codification of these judgments and that based on EU law a larger refund should be provided.

Reduction of Dutch dividend withholding tax based on the Treaty

Pursuant to the provisions of the Treaty, certain corporate U.S. Shareholders owning directly at least 10% of our voting power are eligible for a reduction to 5% Dutch dividend withholding tax provided that the U.S. Shareholder is the beneficial owner of the dividends received and does not have an enterprise or an interest in an enterprise that is, in whole or in part, carried on through a permanent establishment or permanent representative in the Netherlands to which the dividends are attributable. The Treaty also provides for a dividend withholding tax exemption on dividends, but only for a shareholder owning directly at least 80.0 percent of our voting power and meeting all other requirements.

Provided that certain conditions are met, under the Treaty dividends paid to qualifying exempt pension trusts and other qualifying exempt organizations, as defined in the Treaty, are exempt from Dutch dividend withholding tax. To obtain a refund of the tax withheld such qualifying exempt pension trusts are required to file a request. Only if certain conditions are fulfilled, such qualifying exempt pension trusts may be eligible for relief at source upon payment of the dividend. Qualifying exempt organizations (other than qualifying exempt pension trusts) can only file for a refund of the tax withheld.

Anti-dividend stripping rules

Pursuant to the Dutch anti-dividend stripping rules, in the case of dividend-stripping, the 15% dividend withholding tax cannot be reduced or refunded. Dividend-stripping is deemed to be present if the recipient of a dividend is, contrary to what has been assumed above, not the beneficial owner thereof and is entitled to a larger credit, reduction or refund of dividend withholding tax than the beneficial owner of the dividends. Under these rules, a recipient of dividends will not be considered the beneficial owner thereof if as a consequence of a combination of transactions a person other than the recipient wholly or partly benefits from the dividends, whereby such person retains, whether directly or indirectly, an interest similar to the shares on which the dividends were paid.

Credit for ING Groep N.V.

ING Groep N.V. may, with respect to certain dividends received from qualifying non-Netherlands subsidiaries, credit taxes withheld from those dividends against the Netherlands withholding tax imposed on certain qualifying dividends that are redistributed by ING Groep N.V., up to a maximum of the lesser of:

3% of the amount of qualifying dividends redistributed by ING Groep N.V.; and

3% of the gross amount of certain qualifying dividends received by ING Groep N.V.

The reduction is applied to the Dutch dividend withholding tax that ING Groep N.V. must pay to the Dutch tax authorities and not to the Dutch dividend withholding tax that ING Groep N.V. must withhold.

Taxes on income and capital gains

Income and capital gains

Income and capital gains derived from the Ordinary Shares or ADSs by an individual or corporate U.S. Shareholder are generally not subject to Netherlands income tax or corporation tax, unless:

i. such income and gains are attributable to a (deemed) permanent establishment or (deemed) permanent representative in the Netherlands of the U.S. Shareholder; or
ii. the shareholder is entitled to a share in the profits of an enterprise or (in case of a non-Dutch resident corporate shareholder only) a co-entitlement to the net worth of an enterprise, that is effectively managed in the Netherlands (other than by way of securities) and to which enterprise the Ordinary Shares or ADSs are attributable; or
iii. such income and capital gains are derived from a direct, indirect or deemed substantial interest in the share capital of ING Groep N.V. (such substantial interest not being a business asset), and in the case of a non-Dutch resident corporate shareholder only, that substantial interest is being held with the primary aim or one of the primary aims to avoid the levy of income tax from another person and is put in place without valid economic reasons that reflect economic reality;
iv. in case of a non-Dutch resident corporate shareholder, such shareholder is a resident of Aruba, Curacao or Saint Martin with a permanent establishment or permanent representative in Bonaire, Eustatius or Saba to which the Ordinary Shares or ADS are attributable, while the profits of such shareholder are taxable in the Netherlands pursuant to Article 17(3)(c) of the Dutch Corporate Tax Act 1969; or
v. in case of a non-Dutch resident individual, such individual derives income or capital gains from the Ordinary Shares or ADSs that are taxable as benefits from ‘miscellaneous activities’ in the Netherlands (‘resultaat uit overige werkzaamheden’, as defined in the Dutch Income Tax Act 2001), which includes the performance of activities with respect to the Ordinary Shares or ADSs that exceed regular portfolio management.

Substantial interest

Generally speaking, for Dutch tax purposes, an interest in the share capital of ING Groep N.V., should not be considered a substantial interest if the holder of such interest, and, in case of an individual, his or her spouse, registered partner, certain other relatives or certain persons sharing the holder's household, alone or together, does or do not hold, either directly or indirectly, the ownership of, or certain rights over, shares or rights resembling shares representing 5% or more of the total issued and outstanding capital, or the issued and outstanding capital of any class of shares, of ING Groep N.V.

Gift or inheritance tax

No Netherlands gift or inheritance tax will be imposed on the transfer or deemed transfer of the Ordinary Shares or ADSs by way of a gift by or on the death of a U.S. Shareholder if, at the time of the gift or the death of that shareholder, such shareholder is not a (deemed) resident of the Netherlands.

Netherlands inheritance or gift taxes (as the case may be) are due, however, if the transfer of the Ordinary Shares or ADSs is construed as an inheritance or as a gift made by or on behalf of a person who, at the time of the gift or death, is deemed to be a resident of the Netherlands. For the purposes of Netherlands gift or inheritance tax, an individual of Dutch nationality is deemed to be a resident of the Netherlands if he or she has been a resident thereof at any time during the ten years preceding the time of the gift or death. For the purposes of Netherlands gift tax, any person is deemed to be a resident of the Netherlands if he or she has resided therein at any time in the twelve months preceding the gift.

United States Taxation

Taxes on dividends

The tax treatment of owning Ordinary Shares or ADSs will depend in part on whether or not ING Groep N.V. is classified as a passive foreign investment company, or PFIC, for United States federal income tax purposes. Except as discussed below under "-PFIC Rules", this discussion assumes that we are not classified as a PFIC for United States federal income tax purposes.

Under the United States federal income tax laws, a U.S. Shareholder will be required to include in gross income the full amount of a cash dividend (including any Netherlands withholding tax withheld) as ordinary income when the dividend is actually or constructively received by the U.S. Shareholder. For this purpose, a "dividend" will include any distribution paid by ING Groep N.V. with respect to the Ordinary Shares or ADSs, but only to the extent such distribution is not in excess of ING Groep N.V.'s current and accumulated earnings and profits as determined for United States federal income tax purposes. Distributions in excess of current and accumulated earnings and profits, as determined for United States federal income tax purposes, will be treated as a non-taxable return of capital to the extent of a U.S. Shareholder's basis in the Ordinary Shares or ADSs and thereafter as capital gain. Because ING Groep N.V. does not keep account of its earnings and profits, as determined for United States federal income tax purposes, U.S. Shareholders should generally expect to treat any distribution as a dividend for U.S. federal income tax purposes.

For foreign tax credit purposes, dividends will generally be income from sources outside the United States and will, depending on the circumstances of the U.S. Shareholder, generally be "passive" income for purposes of computing the foreign tax credit allowable to the shareholder. A dividend will not be eligible for the dividends received deduction generally allowed to U.S. corporations in respect of dividends received from other U.S. corporations. Dividends paid to a non-corporate U.S. Shareholder that are considered qualified dividend income will be taxable to the shareholder at preferential rates applicable to long-term capital gains provided that the shareholder holds the Ordinary Shares or ADSs for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date and meets other holding period requirements. Dividends paid by ING Groep N.V. with respect to the Ordinary Shares or ADSs generally will be qualified dividend income, provided that, in the year that you receive the dividend, we are eligible for the benefits of the Treaty. We believe that we are currently eligible for the benefits of the Treaty and we therefore expect that dividends on the Ordinary Shares or ADSs will be qualified dividend income, but there can be no assurance that we will continue to be eligible for the benefits of the Treaty.

Subject to certain limitations, a U.S. Shareholder may generally deduct from income, or credit against its United States federal income tax liability, the amount of any Netherlands withholding taxes under the Treaty. The Netherlands withholding tax will likely not be creditable against the U.S. Shareholder's United States tax liability, however, to the extent that ING Groep N.V. is allowed to reduce the amount of dividend withholding tax paid over to the Netherlands Tax Administration by crediting withholding tax imposed on certain dividends paid to ING Groep N.V. In addition, special rules apply in determining the foreign tax credit limitation with respect to dividends that are subject to preferential rates. To the extent a reduction or refund of the tax withheld is available to you under Dutch law or under the Treaty, the amount of tax withheld that could have been reduced or is refundable will not be eligible for credit against your United States federal income tax liability. In addition, to the extent an amount of Dutch tax withheld is contingent on the availability of a credit against the amount of income tax owed to another country, that amount of Dutch tax withheld will not be eligible for a credit against your United States federal income tax liability. It is unclear whether or how the Netherlands would apply this rule in determining whether, based on the Treaty, a credit is available in the United States for purposes of the dividend withholding tax refund provision described in Section IV under “Netherlands Taxation—Withholding tax on dividends—Reduction of Dutch dividend withholding tax based on Dutch law”.

Since payments of dividends with respect to Ordinary Shares or ADSs will be made in Euros, a U.S. Shareholder will generally be required to determine the amount of dividend income by translating the Euro into United States dollars at the “spot rate” on the date the dividend is distributed, regardless of whether the payment in in fact converted into U.S. dollar. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date the dividend is distributed to the date such payment is converted into U.S. dollars will be treated as ordinary income or loss and will not be eligible for the special tax rate applicable to qualified dividend income. Such gain or loss will generally be income or loss from sources within the United States for foreign tax credit limitation purposes.

Taxes on capital gains

Gain or loss on a sale or exchange of Ordinary Shares or ADSs by a U.S. Shareholder will generally be a capital gain or loss for United States federal income tax purposes. If such U.S. Shareholder has held the Ordinary Shares or ADSs for more than one year, such gain or loss will generally be long-term capital gain or loss. Long-term capital gain of a non-corporate U.S. Shareholder is generally taxed at preferential rates. In general, gain or loss from a sale or exchange of Ordinary Shares or ADSs by a U.S. Shareholder will be treated as income or loss from sources within the United States for foreign tax credit limitation purposes.

PFIC rules

ING Groep N.V. believes it is not a PFIC for United States federal income tax purposes, and it does not expect to become a PFIC in the foreseeable future. However, this conclusion is a factual determination that must be made annually and thus may be subject to change. It is therefore possible that we could become a PFIC in a future taxable year

If ING Groep N.V. were to be treated as a PFIC, unless a U.S. Shareholder made an effective election to be taxed annually on a mark-to-market basis with respect to the Ordinary Shares or ADSs, any gain from the sale or disposition of Ordinary Shares or ADSs by a U.S. Shareholder would be allocated ratably to each year in the holder’s holding period and would be treated as ordinary income. Tax would be imposed on the amount allocated to each year prior to the year of disposition at the highest rate in effect for that year, and interest would be charged at the rate applicable to underpayments on the tax payable in respect of the amount so allocated. The same rules would apply to “excess distributions”, defined generally as distributions in a single taxable year exceeding 125% of the average annual distribution made by ING Groep N.V. over the shorter of the three preceding taxable years or the portion of the holder’s holding period that preceded the current taxable year. Dividends received by a U.S. Shareholder will not be eligible for the special tax rates applicable to qualified dividend income if ING Groep N.V. were to be treated as a PFIC with respect to the shareholder either in the taxable year of the distribution or the preceding taxable year, but instead will be taxable at rates applicable to ordinary income.

A U.S. Shareholder who owns Ordinary Shares or ADSs during any year that ING Groep N.V. is a PFIC may be required to file Internal Revenue Service Form 8621.

F. Dividends and paying agents

This item does not apply to annual reports on Form 20-F.

G. Statement by experts

This item does not apply to annual reports on Form 20-F.

H. Documents on display

ING Groep N.V. is subject to the informational requirements of the Securities Exchange Act of 1934, as amended. In accordance with these requirements, ING Groep N.V. files reports and other information with the Securities and Exchange Commission (”SEC”). These materials, including this Annual Report and its exhibits, may be inspected and copied on the SEC’s website at www.sec.gov. You may also inspect ING Groep N.V.’s SEC reports and other information on the website of ING Groep N.V. (www.ing.com).

I. Subsidiary information

This item does not apply to annual reports on Form 20-F.

Item 11. Quantitative and Qualitative Disclosure of Market Risk

See “Item 5. Operating and Financial Review and Prospects – Factors Affecting Results of Operations” and “Additional information - ING Group Risk Management” for these disclosures, including disclosures relating to operational, compliance and other non-market-related risks.

Item 12. Description of Securities Other Than Equity Securities

A. Debt securities

This item does not apply to annual reports on Form 20-F.

B. Warrants and rights

This item does not apply to annual reports on Form 20-F.

C. Other securities

This item does not apply to annual reports on Form 20-F.

D. American depositary shares

Fees and Charges Payable by a Holder of ADSs

JPMorgan Chase Bank, N.A., as ADR depositary, may collect fees for, among other things, the delivery and surrender of ADSs directly from investors, or from intermediaries acting for them, depositing Ordinary Shares or surrendering ADSs for the purpose of withdrawal.

The charges of the ADR depositary payable which may be payable by investors are as follows:

Type of Service	ADR Depositary Actions	Fee Payable
Depositing or substituting the underlying Ordinary Shares	Issuance of ADSs against the deposit of Ordinary Shares, including deposits and issuances in respect of: · share distributions, rights and other distributions. · a stock dividend or stock split. · a merger, exchange of securities or other transactions or events affecting the ADSs or the underlying Ordinary Shares.	$5.00 for each 100 ADSs (or portion thereof) issued, delivered or upon which a share distributive or elective distribution is made or offered. The ADR depositary may sell sufficient securities or property received in respect of share distributions, rights and other distributions prior to such deposit to pay such charge.
Receiving or distributing cash dividends	Distribution of cash dividends or other cash distributions, or offering of elective cash/stock dividends.	$0.05 or less per ADS held.
Selling or exercising rights	· additional ADRs resulting from a dividend or free distribution consisting of Ordinary Shares, or U.S dollars resulting from sales of Ordinary Shares received in a distribution. · Instruments representing rights to acquire additional ADRs as a result of distribution on Ordinary Shares, or U.S dollars resulting from sales of such rights. · other securities available to the ADR depositary resulting from any distribution on the deposited Ordinary Shares, or U.S dollars resulting from sales of such other securities.	An amount equal to the fee for the execution and delivery of ADSs which would have been charged as a result of the deposit of such securities.
Withdrawing an underlying Ordinary Share	Acceptance of ADSs surrendered for withdrawal of deposited Ordinary Shares	$5.00 for each 100 ADSs (or portion thereof) reduced, cancelled or surrendered.

Type of Service	ADR Depositary Actions	Fee Payable
Transferring, splitting or grouping of ADRs	Registration, registration of transfer, combination and split-up of ADRs in the ADR register as evidenced by the ADRs surrendered or upon delivery of proper instruments of transfer	$1.50 per ADR.
General depositary services, particularly those charged on an annual basis	Other services performed by the ADR depositary in administering the ADR program	$0.05 per ADS per calendar year (or portion thereof), which may be charged on a periodic basis during each calendar year against holders of the record date(s) set by the ADR depositary and shall be payable at the sole discretion of the ADR depositary by billing such holders or deducting such charge from one or more cash distributions.
Reimbursement of fees, charges and expenses of the ADR depositary	The ADR depositary and/or any of its agents may incur fees, charges and expenses (including expenses incurred on behalf of holders of ADRs in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the underlying Ordinary Shares or other deposited securities, the sale of securities (including, without limitation, deposited securities), the delivery of deposited securities or otherwise in connection with the ADR depositary's compliance with applicable law, rule or regulation.	Fees and charges shall be assessed on a proportionate basis against holders of ADRs as of the record date or dates set by the ADR depositary and shall be payable at the sole discretion of the ADR depositary by billing such holders of ADRs or by deducting such charge from one or more cash dividends or other cash distributions.
Type of Service	**ADR Depositary Actions**	**Fee Payable**
Other charges and expenses of the ADR depositary	The ADR depositary may incur charges and expenses on behalf of holders in connection with: · stock transfer or other taxes and other governmental charges. · SWIFT, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or holders of ADRs delivering underlying Ordinary Shares, ADRs or deposited securities. · transfer or registration fees for the registration or transfer of deposited securities.	Payable by holders or persons depositing Ordinary Shares. Payable by persons depositing, or holders of ADRs delivering underlying Ordinary Shares, Ads or deposited securities. Payable by persons depositing or withdrawing deposited securities.

Fees and Payments made by the ADR depositary to ING

In consideration for acting as depositary, the ADR depositary has agreed to provide ING with certain amounts on an annual basis. In the year ended 31 December 2021, the ADR depositary paid aggregate fees and made other direct and indirect payments to ING in an amount of USD 10,498,456.

Under certain circumstances, including removal of the ADR depositary or termination of the ADR program by ING, ING is required to repay the ADR depositary certain amounts reimbursed and/or expenses paid to or on behalf of ING.

PART II.

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15. Controls and Procedures

Internal control over financial reporting

Due to the listing of ING shares on the New York Stock Exchange, ING Group is required to comply with the SEC regulations adopted pursuant to Section 404 of the Sarbanes-Oxley Act (SOX 404). These regulations require that the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO") of ING Group report and certify on an annual basis on the effectiveness of ING Group's internal control over financial reporting. Moreover, the external auditors are required to provide an opinion on the effectiveness of ING Group's internal control over financial reporting.

SOX 404 activities are organised along the lines of the governance structure, and involve the participation of senior management across ING. Following the SOX 404 process, ING is in the position to publish an unqualified statement that the Company's internal control over financial reporting was effective as of 31 December 2021. The SOX 404 statement by the Executive Board is included on this page, followed by the report of the external auditor as issued on Form 20-F.

Disclosure Controls and Procedures

The Company's management, under the supervision and with the participation of the CEO and CFO, has performed an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, the CEO and CFO concluded that the Company's disclosure controls and procedures were effective as of December 31, 2021, the end of the period covered by the 2021 Form 20-F.

Report of the Executive Board on Internal Control Over Financial Reporting

The Executive Board is responsible for establishing and maintaining adequate internal control over financial reporting. ING's internal control over financial reporting is a process designed under the supervision of our principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets of ING;

- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorisations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Executive Board assessed the effectiveness of internal control over financial reporting as of 31 December 2021. In making this assessment, the Executive Board performed tests based on the criteria of the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in Internal Reporting – Integrated Framework (2013 Framework). Based on the Executive Board’s assessment and those criteria, the Executive Board concluded that the Company’s internal control over financial reporting was effective as of 31 December 2021.

Attestation Report of the Registered Public Accounting Firm

Our independent registered public accounting firm has audited and issued their report on ING’s internal control over financial reporting, which appears on the page below.

Changes in Internal Controls over Financial Reporting

There have been no changes in the Company’s internal controls over financial reporting during the period covered by this Annual Report that have materially affected or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Supervisory Board
ING Groep N.V.:

Opinion on Internal Control Over Financial Reporting

We have audited ING Groep N.V. and subsidiaries’ (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements of financial position of the Company as of December 31, 2021 and 2020, the related consolidated statements of profit or loss, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2021, the related notes and the specific disclosures described in Note 1 as being part of the consolidated financial statements (collectively, the consolidated financial statements), and our report dated March 7, 2022 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of the Executive Board on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Accountants N.V.

Amstelveen, The Netherlands
March 7, 2022

Item 16A. Audit Committee Financial Expert

The Supervisory Board has determined that Margarete Haase, who is a member of the Supervisory Board, qualifies as an "audit committee financial expert" as defined by the SEC pursuant to section 407 of the Sarbanes-Oxley Act of 2002. The Supervisory Board has further determined that Margarete Haase is "independent", as defined in Rule 10A-3 under the U.S. Securities Exchange Act of 1934. She was appointed as a member of the Supervisory Board at the General Meeting in May 2017 and her appointment became effective as per 1 May 2018, as decided by the Supervisory Board in January 2018. Margarete Haase is chairwoman of the Audit Committee.

Item 16B. Code of Ethics

How we work

Our culture, including our risk culture, starts with the Orange Code values and behaviours we share across our organisation, helping us to make responsible decisions – for ourselves and for our customers. A sound risk culture is paramount at ING as it determines the way in which employees identify, understand, discuss and act on the risks we are confronted with and the risks we take. The proper embedding of our Global Code of Conduct, Orange Code and the Whistleblower policy into our processes is key to managing our culture and ethics risk.

The Orange Code

The Orange Code is a declaration of who we are. It describes what we can expect from each other when we turn up to work each day. It is a set of standards that we collectively value, strive to live up to, and invite others to measure us by. The Orange Code is the sum of two parts, the ING values and ING behaviors, with "**Integrity above all**" being the overarching principle.

Our values. The non-negotiable promises we make to the world no matter what.

- We are honest.
- We are responsible.
- We are prudent.

Our behaviours. The commitments we make to each other and the standards by which we measure each other's performance:

- You take it on and make it happen.
- You help others to be successful.
- You are always a step ahead.

Our business centers on people and trust. People trust us with their money and with their data. Maintaining this trust is crucial. Everything we do at ING is guided by our Orange Code, a declaration that describes our way of working, putting integrity above all. We expect everyone to demonstrate our Orange Code standards, values and behaviours every day. Not doing so could potentially put our customers at risk, erode the public's confidence in our bank and damage our reputation. That's why integrity is at the very foundation of our culture.

Employees are introduced to the Orange Code early with new joiners invited to complete a global online e-learning introduction module that explains more about ING's culture, how we work and what we expect from employees.

Our Orange Code is included within Step Up Performance Management, our global performance management approach, and discussed throughout the year. It is also linked to our Our People Offer, our Employee Value Proposition, which forms the basis of all people-related programmes. Through these activities, our aim is to develop a culture that is focused on long-term value creation.

The Orange Code applies to all employees worldwide, including the principal executive, financial and accounting officers. The values and behaviours of the Orange Code are available on the ING website at https://www.ing.jobs/Global/Careers/Orange-code.htm.
In 2021, there were no amendments to the Orange Code. ING did not grant any waivers (including implicit waivers) under the Orange Code to the principal executive, financial or accounting officers in 2021.

Global Code of Conduct
Building on the Orange Code is ING's Global Code of Conduct (launched in 2020) which outlines the 10 core principles we expect from our employees. These principles build on the values and behaviors of the Orange Code and are based on ING's existing policies, minimum standards and guidelines.
All ING new joiners are requested to complete the Global Code of Conduct e-learning upon onboarding.

Whistleblower Policy
Two of the important Global Code of Conduct elements are the 'speak-up' principle, which encourages employees to report any form of misconduct, and the principle that every ING employee is entitled to a safe working environment. ING does not tolerate discrimination, harassment, bullying, sexual or other forms of intimidation, aggression or violence. Furthermore, all persons in scope of the Whistleblower Policy are encouraged to raise concerns about suspected or actual criminal conduct, unethical conduct or other misconduct by or within ING.

In 2021, minor changes were made to the Whistleblower Policy to remain a safe and compliant bank. The changes include an extension of the scope of the Policy. The Policy now covers any natural person working for, having worked for or is in the process of being hired to work for or on behalf of ING, on contract or temporary, including Senior Management and members of the Executive Board, Management Board Banking and the Supervisory Board, persons on secondment, paid and unpaid interns, volunteers or trainees, and persons hired as external employees, including self-employed workers, the principal executive, financial and accounting officers. The updated Whistleblower Policy is available on the ING website at www.ing.com/About-us/Compliance/ING-Group-Whistleblower-Policy.htm.

ING granted ING Turkey a waiver, because its local regulation was stricter than the ING Whistleblower Policy. No further waivers were granted (including implicit waivers) under the Whistleblower Policy to the principal executive, financial or accounting officers in 2021.

Orange Code Decision Making
To enhance risk awareness, support moral learning, and enable people to perform proper risk judgement, the Orange Code Decision Making model (introduced in 2017) targets to support our employees in dealing with dilemmas via workshops and dialogue sessions. This four-step approach supports balanced decision-making by weighing the rights and interest of all stakeholders involved. Compliance organizes ongoing training for local Compliance experts so that they can properly apply the model in their respective countries. Moreover, the model has been embedded into other decision making processes, such as the data ethics governance process and the global Product Approval and Review Process.

Conflicts of Interest
Regarding the management of actual or potential conflicts of interest, ING maintains a policy on Conflicts of Interests which applies to all employees worldwide, including the principal executive, financial and accounting officers. A description of the policy on Conflicts of Interest is available to view on the ING website at https://www.ing.com/About-us/Compliance/Conflicts-of-interest-and-confidential-information.htm.

The Conflict of Interest Policy "aims to identify, assess, manage and mitigate or prevent actual and potential conflicts between ING customers and between the interests of ING an the private interests of ING employees, including members of ING's senior management which could adversely influence the performance of their duties and responsibilities".

ING did not grant any waivers (including implicit waivers) under the Conflicts of Interest Policy to the principal executive, financial or accounting officers in 2021. In 2021 the Conflicts of Interest Policy was revised to further align with the standards as defined by enterprise risk management and to incorporate key requirements for both personal and organizational conflicts of interest in line with the European Bank Association Guidelines on Internal Governance. The policy will become effective in April 2022.

Banker's Oath

All employees working for ING in the Netherlands (including ING's principal executive, financial or accounting officers) take the Banker's Oath. The Oath contains a set of principles affirming the banking industry's commitment to maintain high standards of ethical behaviour. Accountability and a disciplinary sanction mechanism are linked to breaches of these principles.
Compliance is trained to support employees in dealing with dilemmas via workshops and dialogue sessions, using the Orange Code Decision Making model (a so-called "four-step approach" weighing the rights and interest of stakeholders involved).

In 2021, there were no amendments to the Banker's Oath. ING did grant waivers under the Banker's Oath, but not to principal executives, financial or accounting officers in 2021 (unless they were not in scope of the Banker's Oath obligation according to ING's Banker's Oath Guidelines). The text of the Banker's oath can be found here: https://www.ing.com/About-us/Corporate-governance/Dutch-Banking-Code.htm

Item 16C. Principal Accountant Fees and Services

At the Annual General Meeting held on 23 April 2019, KPMG (KPMG Accountants N.V. in Amstelveen, the Netherlands – PCAOB ID: 1012) was re-appointed as the external audit firm for ING Group for the financial years 2020 through 2023. This appointment includes the responsibility to provide an audit opinion on the financial statements and internal control over financial reporting on 31 December 2021 and to report on the outcome of these audits to the Executive Board and the Supervisory Board.

The external auditor may be questioned at the Annual General Meeting in relation to its audit opinion on the financial statements. The external auditor will therefore attend and be entitled to address this meeting. The external auditor attended the meetings of the Risk Committee and of the Audit Committee and attended and addressed the 2020 Annual General Meeting, at which the external auditor was questioned about its audit opinion.

The external auditor may only provide services to ING Group and its subsidiaries with the permission of the Audit Committee, in line with the ING Group Policy on External Auditors' Independence. All services were approved by the Audit Committee.

More information on the ING Group Policy on External Auditors' Independence is available on the website of ING Group www.ing.com.

Audit fees

Audit fees were paid for audit and assurance services provided by the auditors. The services provided include the audit of ING Group's consolidated financial statements and Form 20-F. Moreover, these services include the audits of the statutory financial statements of its subsidiaries. And, it includes assurance services provided by the auditor regarding other filings for regulatory and supervisory purposes as well as the review on interim financial statements. Furthermore, it includes the assurance services relating to comfort letters issued in connection with prospectuses and reviews of SEC product filings.

Audit-related fees

Audit-related fees were paid for assurance and related services that are reasonably related to the performance of the audit or review of the consolidated financial statements not reported under the audit fee item above. These services consisted primarily of specific agreed-upon procedure engagements and assurance engagements for third parties.

Tax fees

Over 2021 no tax fees were paid. Under the current ING Group Policy on External Auditors' Independence most tax services are prohibited. Some tax services are only allowed after specific approval under an 'exception procedure'.

Reference is made to Note 29 'Audit fees' in the consolidated financial statements for audit, audit-related, tax and all other fees paid to the external auditors in 2021, 2020 and 2019.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

On 1 October 2021, ING announced a share buyback programme under which it repurchases ordinary shares of ING Groep, with a maximum total value of EUR 1,744 million and for a number of shares not exceeding the authority granted by the general meeting of shareholders (10% of the issued shares). The share buyback programme has commenced on 5 October 2021 and was completed on 28 February 2022. The total number of shares repurchased under the programme is 139,711,040 ordinary shares at an average price of EUR 12.47 for a total consideration of EUR 1,742 million. The purpose of the share buyback programme is to reduce the share capital of ING.

The share buyback programme has been approved by the ECB and is executed within the limitations of the existing authority granted by the general meeting of shareholders on 26 April 2021 and in compliance with the Market Abuse Regulation. ING has entered into a non-discretionary arrangement with a financial intermediary to conduct the buyback.

There were no purchases by us or any of our affiliated purchasers of any of our equity securities registered pursuant to Section 12 of the U.S. Securities Exchange Act of 1934 during the fiscal years ended December 31, 2020 and 2019.

Purchases of Equity Securities by the Issuer and affiliated Purchasers

Month of purchase	Total number of shares purchased[1]	Average price paid per share in EUR	Total number of shares purchased as part of publicly announced plans or programmes[2]	Maximum Value of shares that may yet be purchased under the plans or programmes in EUR million
October 2021	31,584,782	12.86	31,584,782	1,338
November 2021	43,158,794	12.85	43,158,794	783
December 2021	52,884,224	12.17	52,884,224	140
Total	**127,627,800**	**12.57**	**127,627,800**	**140**
Of which:				
Purchased in the open market	127,627,800	12.57	127,627,800	1,604
Acquired through exercise of call options / settlement of forward contracts	n.a.	n.a.	n.a.	n.a.

1 The table excludes purchases for market-making in ING Groep N.V. shares.

2 On 1 October 2021, ING Groep N.V. announced a share buyback programme for EUR 1,744 million. The programme was initiated on 5 October 2021 and is expected to end no later than 5 May 2022. The share buyback programme was completed on 28 February 2022. The programme is executed by an intermediary to allow for purchases in the open market during both open and closed periods. As the programme was initiated for capital reduction purposes, ING Groep N.V. intends to cancel all of the shares acquired under the programme. ING Groep N.V. has no other publicly announced plans or programmes to repurchase shares. No publicly announced plans or programmes expired during 2021. In 2021, ING Groep N.V. did not determine to terminate any publicly announced plans or programmes prior to expiration, or determine that it intends not to make any further purchases under any publicly announced plans or programmes.

Item 16F. Changes in Registrant’s Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

Dutch Corporate Governance Code and Banking Code

As ING Group is established and listed in the Netherlands, it must comply with Dutch laws and regulations and is subject to the Dutch Corporate Governance Code (the DCGC).

The DCGC provides guidance for ING’s corporate governance structure and practices. ING strongly supports the DCGC and its principles to ensure sound corporate governance. ING’s application of the DCGC is described in the 2021 ‘Application of the Dutch Corporate Governance Code by ING Groep N.V.’, 10 March 2022, available on ing.com.

The DCGC can be downloaded from the website mccg.nl.

The Dutch Banking Code (the Banking Code) is only applicable to ING Bank, but ING Group voluntarily applies the principles of the Banking Code on remuneration for its Executive Board members and senior management.

The Banking Code can be downloaded from the website nvb.nl/english/.

This chapter, including the parts of this Annual Report incorporated by reference, along with the publication ‘Application of the Dutch Corporate Governance Code by ING Groep N.V.’, comprise the Corporate Governance Statement.

Differences between Dutch and US corporate governance practices

ING Group qualifies as a foreign private issuer under the US Securities and Exchange Commission (SEC) rules and is permitted to follow home-country practice in some circumstances, in lieu of certain corporate governance standards required by the New York Stock Exchange (NYSE) applicable to US domestic companies. Accordingly, ING Group must disclose in its Annual Report on Form 20-F any significant differences between its corporate governance practices and those applicable to US companies under NYSE listing standards. ING Group believes there differences are the following:

- ING Group has a two-tier board structure, in contrast to the one-tier board structure used by most US companies. In the Netherlands, a public limited liability company with a two-tier board structure has an executive board as its management body and a supervisory board that advises and supervises the executive board. Supervisory board members are often former state or business leaders and sometimes former members of the executive board. A member of the executive board or other officer or employee of the company cannot simultaneously be a member of the supervisory board. The supervisory board must approve specified decisions of the executive board.

- Under the DCGC, all members of the supervisory board, with the exception of not more than one person, should be ‘independent’ as determined under the DCGC. However, the definition of ‘independent’ under the DCGC differs in its details from the definition of ‘independent’ under the NYSE listing standards. All members of ING’s Supervisory Board, are independent as determined under the DCGC.

- NYSE listing standards require a US company to have a compensation committee and a nominating/corporate governance committee, each composed entirely of independent directors (as determined under the NYSE listing standards). ING’s Nomination and Corporate Governance Committee and Remuneration Committee are composed entirely of members of the Supervisory Board who are independent as determined under the DCGC.

- NYSE listing standards require that, when a member of the audit committee of a US company serves on four or more audit committees of public companies, the company should disclose (on its website, in its annual proxy statement or in its annual report filed with the SEC) that the board of directors has determined this simultaneous service would not impair the director’s service to the company. Dutch law does not require the Supervisory Board to make such a determination.

- In contrast to the NYSE listing standards, the DCGC contains an ‘apply-or-explain’ principle, offering the possibility of deviating from the DCGC. For any deviations by ING Group, please refer to the paragraph ‘Dutch Corporate Governance Code and Banking Code’.

- NYSE listing standards require external auditors to be appointed by the audit committee. By contrast, Dutch law requires ING Group’s external auditors to be appointed by the General Meeting and not by the Audit Committee. The Audit Committee is responsible for preparing the Supervisory Board’s nomination to the General Meeting for the appointment and remuneration of ING Group’s external auditor, and annually evaluates the independence and functioning of, and developments in the relationship with, ING Group’s external auditor and informs the Supervisory Board of its findings and proposed measures.

- Under NYSE listing standards, shareholders of US companies must be given the opportunity to vote (of which the result is advisory in nature) on all equity compensation plans applicable to any employee, director or other service provider of a company (or on material revisions thereto), with limited exceptions set forth in the NYSE rules. Under Dutch law and the DCGC, binding shareholder approval is only required for equity compensation plans (or changes thereto) for members of the executive board and supervisory board, and not for equity compensation plans for other groups of employees.

- The NYSE listing standards require certain transactions with related parties to be reviewed by a company’s audit committee or another independent body of the board of directors for potential conflicts of interest, and for the audit committee or other independent body to prohibit such a transaction if it determines it to be inconsistent with the interests of the company and its shareholders. However, foreign private issuers can rely on home country practice with respect to review and approval of related party transactions. ING has adopted internal policies and procedures for the purposes of identifying, assessing, and recording conflicts of interest, including with respect to whether related party transactions are on customary or arm’s length terms. These policies and procedures are intended, if and to the extent required under applicable law, prudential rules and other applicable guidelines, to enable the Management Board and Supervisory Board to assess the terms of these intended transactions.

Item 16H. Mine Safety Disclosure

Not applicable.

Item 16I. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III.

Item 17. Consolidated Financial Statements

Not applicable.

Item 18. Consolidated Financial Statements

Reference is made to the Consolidated financial statements of ING Group on page F-258.

Item 19. Exhibits

The following exhibits are filed as part of this Annual Report:

Exhibit 1.1	Amended and Restated Articles of Association of ING Groep N.V., dated 29 June 2021 (incorporated by reference to Exhibit 99.1 of ING Groep N.V.'s Report on Form 6-K filed on 8 March 2022)
Exhibit 2.1	Description of Securities Registered under Section 12 of the Exchange Act
Exhibit 2.2	Subordinated Indenture, dated 18 July 2002, between the Company and The Bank of New York (incorporated by reference to Exhibit 2.1 of ING Groep N.V.'s Annual Report on Form 20-F for the year ended 31 December 2002, File No. 1-14642 filed on 27 March 2003)
Exhibit 2.3	Third Supplemental Indenture, dated 28 October 2003, between the Company and The Bank of New York (incorporated by reference to Exhibit 2.4 of ING Groep N.V.'s Annual Report on Form 20-F for the year ended 31 December 2003, File No. 1-14642 filed on 30 March 2004)
Exhibit 2.4	Fourth Supplemental Indenture, dated 26 September 2005, between the Company and The Bank of New York (incorporated by reference to Exhibit 4.2 of ING Groep N.V.'s Report on Form 6-K filed on 23 September 2005)
Exhibit 2.5	Sixth Supplemental Indenture, dated 13 June 2007, between the Company and The Bank of New York (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 12 June 2007)
Exhibit 2.6	Indenture, dated as of April 16, 2015, between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 16 April 2015)
Exhibit 2.7	First Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 16 April 2015, in respect of 6.000% Perpetual Additional Tier 1 Contingent Convertible Capital Securities (incorporated by reference to Exhibit 4.2 of ING Groep N.V.'s Report on Form 6-K filed on 16 April 2015)
Exhibit 2.8	Second Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 16 April 2015, in respect of 6.500% Perpetual Additional Tier 1 Contingent Convertible Capital Securities (incorporated by reference to Exhibit 4.3 of ING Groep N.V.'s Report on Form 6-K filed on 16 April 2015)
Exhibit 2.9	Senior Debt Securities Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as Trustee, dated 29 March 2017 (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 29 March 2017)
Exhibit 2.10	First Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 29 March 2017, in respect of 3.150% Fixed Rate Senior Notes due 2022, 3.950% Fixed Rate Senior Notes due 2027 and Floating Rate Senior Notes due 2022 (incorporated by reference to Exhibit 4.2 of ING Groep N.V.'s Report on Form 6-K filed on 29 March 2017)
Exhibit 2.11	Second Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 2 October 2018, in respect of 4.100% Fixed Rate Senior Notes due 2023, 4.550% Fixed Rate Senior Notes due 2028 and Floating Rate Senior Notes due 2023 (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 2 October 2018)
Exhibit 2.12	Third Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 9 April 2019, in respect of 3.550% Fixed Rate Senior Notes due 2024 and 4.050% Fixed Rate Senior Notes due 2029 (incorporated by reference to Exhibit 4.1 of ING Groep N.V's Report on Form 6-K filed on 9 April 2019)

Exhibit 2.13	Third Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated 10 September 2019, in respect of 5.750% Perpetual Additional Tier 1 Contingent Convertible Capital Securities (incorporated by reference to Exhibit 4.1 of ING Groep N.V's Report on Form 6-K filed on 10 September 2019)
Exhibit 2.14	Fourth Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated April 1, 2021, in respect of 1.726% Callable Fixed-to-Floating Rate Senior Notes due 2027, 2.727% Callable Fixed-to-Floating Rate Senior Notes due 2032 and Callable Floating Rate Senior Notes due 2027 (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 1 April 2021)
Exhibit 2.15	Fourth Supplemental Indenture between ING Groep N.V. and The Bank of New York Mellon, London Branch, as trustee, dated September 14, 2021, in respect of 3.875% Perpetual Additional Tier 1 Contingent Convertible Capital Securities and 4.250% Perpetual Additional Tier 1 Contingent Convertible Capital Securities (incorporated by reference to Exhibit 4.1 of ING Groep N.V.'s Report on Form 6-K filed on 14 September 2021)
Exhibit 8	List of Subsidiaries of ING Groep N.V.
Exhibit 12.1	Certification of the Registrant's Chief Executive Officer pursuant to Section 302 of the Sarbanes Oxley Act of 2002
Exhibit 12.2	Certification of the Registrant's Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
Exhibit 13.1	Certification of the Registrant's Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 13.2	Certification of the Registrant's Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 15.1	Consent of KPMG Accountants
Exhibit 101	Inline eXtensible Business Reporting Language (Inline XBRL)
Exhibit 104	Cover Page Interactive Datafile (embedded in Exhibit 101)

SIGNATURES

The registrant hereby certifies that it meets all the requirements for filing on Form 20-F and that it has duly caused and authorised the undersigned to sign this annual report on its behalf.

ING Groep N.V.
(Registrant)

By:/s/T. Phutrakul
T. Phutrakul
Chief Financial Officer

Date: March 7, 2022

Risk management

The Covid-19 pandemic continued to have a negative impact on the global economy. Although economic activity continued to recover in 2021, strains on supply chains and inflation hamper the recovery. This section explains ING's approach towards risk management and how this was impacted by the Covid-19 pandemic.

As a global financial institution with a strong European base, offering banking services, ING is exposed to a variety of risks. We manage these risks through a comprehensive risk management framework that integrates risk management into daily business activities and strategic planning. This aims to safeguard ING's financial strength and reputation by promoting the identification, measurement and management of risks at all levels of the organisation. Taking measured risks aligned with its Risk Appetite is core to ING's business.

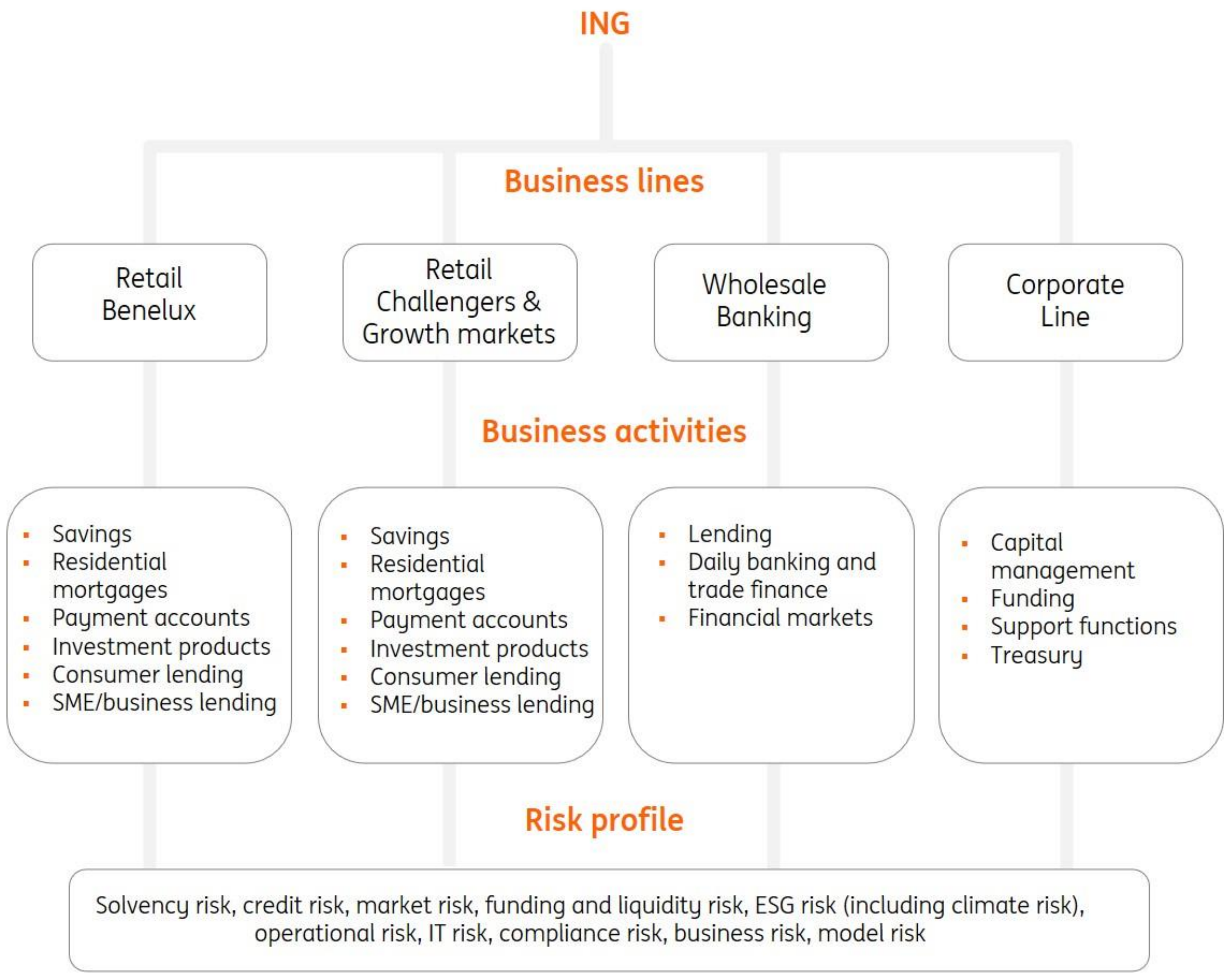
The risk management function supports the Executive Board in formulating the risk appetite, strategies, policies and limits. It provides oversight, challenges and controls throughout ING on risk-related items.

This section sets out how ING manages its risks on a day-to-day basis. It explains how the risk management function is embedded within the organisation based on the 'three lines of defence' model. It describes the key risks that arise from ING's business model and how these are managed by dedicated risk management departments, with various specific areas of expertise. The section provides qualitative and quantitative disclosures about solvency, credit, market, funding and liquidity, ESG and climate change, business, operational, IT, compliance and model risks.

Risk profile

This chart provides high-level information on the risks arising from ING's business activities:

Risk profile



Risk categories

ING's main risks are described in the categories below. The chapters in the risk management section are based on how risks are managed internally. Operational and IT risk are part of the NFR chapter.

Overview of Risk Categories

Risk Categories	Sub-categories	defined as:
Financial Risk	Solvency risk	The risk of lacking sufficient capital to fulfil business objectives, regulatory requirements or market expectations. A bank that is completely insolvent is unable to pay its debts and will be forced into bankruptcy.
	Credit risk	The risk of potential loss due to default by ING's debtors (including bond issuers) or trading counterparties.
	Market risk	The risk of potential loss due to adverse movements in market variables.
	Funding and liquidity risk	The risk that ING cannot meet financial liabilities when they become due at reasonable cost and in a timely manner.
Non-Financial Risks	Operational risk	The risk of direct or indirect loss arising from inadequate or failed internal processes, people and systems or from external events.
	Information (Technology) risk	The risk of financial loss, regulatory sanction and/or reputational damage due to ineffectively utilising information, or inappropriately protecting information.
	Compliance risk	A threat posed to ING's standing resulting from failure to act in line with applicable laws and regulations, internal rules (including ING's Orange Code and global Code of Conduct) and/or societal expectations.
Overarching Risks	ESG risk (including climate risk)	ESG is the risk that environmental, social and governance issues stemming from the banks clients result in reputational damages and/or financial losses for ING. Climate risk is the risk that a financial loss will be incurred due to climate change events, either through physical risk (eg flooding) or transition risk (eg solar energy instead of gas).
	Business and strategy risk	The value or earnings loss due to business and strategic decisions that do not materialise as planned. This risk can be expressed in terms of volumes, margins, expenses and fees and commissions.
	Model risk	The risk that the financial or reputational position of ING is negatively impacted as a consequence of the use of models. Model risk can arise from errors in the development, implementation, use or interpretation of models, or from incomplete or wrong data etc., leading to inaccurate, noncompliant or misinterpreted model outputs.

Basis of disclosures (*)

The risk management section contains information relating to the nature and extent of the risks of financial instruments as required by International Financial Reporting Standards (IFRS) 7 'Financial Instruments: Disclosures'. These disclosures are an integral part of ING Group Consolidated financial statements and are indicated by the symbol (*). This is applicable for the chapters, paragraphs, graphs or tables within the risk management section that are indicated with this symbol in the respective headings or table header.

This risk management section also includes additional disclosures beyond those required by IFRS standards, such as certain legal and regulatory disclosures. Not all information in this section can be reconciled back to the primary financial statements and corresponding notes, as it has been prepared using risk data that differs to the accounting basis of measurement. Examples of such differences include the exclusion of accrued interest and certain costs and fees from risk data, and timing differences in exposure values (IFRS 9 models report expected credit loss on underlying exposures). Disclosures in accordance with Part Eight of the CRR2 and CRD V, and as required by the supervisory authority, are published in our 'Additional Pillar III Report', which can be found on our corporate website ing.com.

Top and emerging risks

The risks listed below are defined as existing and emerging risks which could cause the actual results to differ, in some instances materially, from those anticipated. They may have a material impact on the reputation of the company, introduce volatility in future operating results, or impact ING's medium and long-term strategy including the ability to pay dividends, maintain appropriate levels of capital or meet liquidity and funding targets. An emerging risk is defined as a risk that has the potential to have a significant negative effect on our performance, but whose impact on the organisation is currently more difficult to assess than other risk factors that are not identified as emerging risks.

The topics have emerged as part of the annual risk assessment that is performed as part of the Stress Testing Framework and the Risk Appetite Framework. The sequence in which the risks are presented below is not indicative of their likelihood of occurrence or the potential magnitude of their financial consequences.

The 2021 risk assessment confirmed our top and emerging risks. The top risks in 2021 are related to cybercrime, data risk management and a persistent low interest rate environment. On top of that, the Covid-19 pandemic continued to impact our business environment. Climate change risk remains an emerging risk, reflecting the impact that climate change may have for the financial position and/or reputation of ING.

The Russian invasion of Ukraine

The Russian invasion of Ukraine and rapidly escalating events in late February and early March 2022 is a significant tragedy to the people and is causing disruption to business and economic activity in the region and worldwide. Subsequently, the United States, United Kingdom and Europe initiated sanctions against Russia in late February and early March 2022. In response, the Russian central bank enforced liquidity and currency controls.

On sanctions

The international community is leveraging their sanction tools in response to the escalation of Russia's invasion of Ukraine. Accordingly, as part of ING's know your customer and compliance risk governance and procedures, ING is continuously monitoring the situation to stay abreast on all relevant updates to implement effective and appropriate additional control measures and to manage the increased risk and financial impacts of these developments.

Our exposures

ING has wholesale banking activities in both Russia and Ukraine, as well as investments in Russia, some of which are denominated in local currency. As a result of the Russian invasion of Ukraine and related international response measures, including sanctions and capital controls, we may be exposed to increased risk of default of counterparties located in Russia and Ukraine, counterparties of which the ultimate parent is located in Russia or may be considered effectively controlled or influenced through Russian involvement, and other counterparties in sectors affected by the international response measures. Furthermore, we have counterparty exposure to Russian entities in connection with foreign exchange derivatives for future receipt of foreign currencies against RUB.

As of 28 February 2022, ING's total Russia-related exposure was approximately €6.7 billion (~0.9% of our total loan book), mainly consisting of liquidity facilities and pre-export financing. In Ukraine, our exposure was approximately €500 million mainly with liquidity facilities and other lending. Around €700 million exposure to Russian clients was affected by new sanctions. Early March 2022, we announced our decision to not do any new business with Russian companies.

The impact on our business is being monitored on a continuous basis. A central team was established for daily monitoring and we intensified monitoring of our counterparties. Furthermore, we are working together with counterparties, both onshore and offshore, to limit risks associated with derivatives exposures.

Below table illustrates our exposure to Russia per 28 February 2022. Compared to year-end 2021, as disclosed in the credit risk portfolio section, the exposure to Russian borrowers of €4.8 billion increased with approximately €500 million due to central bank placements of deposits received and (limited) drawings under committed facilities.

Russia exposure[1]

in EUR billion	28 Feb 2022
Russian borrowers[2]	5.3
Non-Russian borrowers with Russian ownership	1.5
Total	**6.7**
Of which covered by ECA (0.9), CPRI (1.3) and European parent guarantees (0.3)[3]	*2.5*
Total booked at ING in Russia[4]	1.3
Of which covered by European parent guarantees	*0.3*

1 Credit outstandings of lending, pre-settlement (including lending related derivatives), money market and investment activities, excluding off-balance sheet positions such as undrawn committed exposures of €0.6 billion
2 Includes Russian borrowers with non-Russian (ultimate) ownership
3 Refers to Export Credit Agency (ECA) and Credit and Political Risk Insurance (CPRI)
4 Exposures booked at ING in Russia are partly supported by Legal lending limit guarantees from ING Bank N.V.. These guarantees cover current outstandings of approximately €150 million

Below table illustrates our exposure to Ukraine per 28 February 2022.

Ukraine exposure[1]

in EUR billion	28 Feb 2022
Booked at ING in Ukraine	0.4
Booked at other ING entities	0.2
Total	**0.5**
Of which covered by (European) parent guarantees	*0.2*

1 Credit outstandings of lending, pre settlement, money market and investment activities. Off-balance positions are not included but are negligible

Covid-19 pandemic

In 2021, the Covid-19 pandemic continued to have an impact on people, businesses and the economy. While vaccination rates continued to increase and Covid-19 related restrictions were lifted in some jurisdictions in the first part of 2021, the end of 2021 was again marked by new waves of infections. Uncertainty concerning the ongoing pandemic remains and we therefore continue to be cautious and remain ready to support our clients when they need it. Further, the economic environment in 2021 was marked by supply chain disruptions, rising energy and commodity prices, significantly increasing house prices and increasing inflation impacting companies and consumers.

ING is carefully monitoring the Covid-19 pandemic and the impact on its people and business. A central ING team monitors the situation globally and provides guidance on health and safety measures, travel advice, and business continuity for our company. In addition, a situation in which most or some of ING’s employees continue working from home may raise operational risks, including with respect to information security, data protection, availability of key systems and infrastructure integrity.

Increased attention is being paid to our financial risks. ING performed several types of stress tests and sectoral reviews to assess the potential impact of the covid-19 pandemic and the uncertainties of the current economic environment (e.g. inflation risk stress test) on its financial position. These stress tests and reviews helped ING to get further insights into the potential impact and to define appropriate mitigating actions.

Potential economic implications for the countries and sectors where ING is active, which could have a material adverse effect on ING's business and operations, are continuously being identified, assessed and monitored in order to execute possible mitigating actions.

Financial crime

We're committed to fulfilling our role as a gatekeeper to the financial system, in order to protect our customers, society and our bank from the corrosive effects of financial crimes such as money laundering, terrorist financing, bribery and corruption, sanctions evasion and tax offences. It's our intention to not just comply with applicable laws and regulations in relation to financial crime, but also to continue to strengthen our financial crime control framework in a robust and sustainable way to prevent, detect and respond to illicit activity. We continue to seek to harness new and innovative technological capabilities in order to create a safer environment for our customers, our bank and society. In 2021, we adjusted our financial crime risk appetite and framework of policies and procedures to reflect changes in the risk environment and responded to external developments; including the Pandora Papers release. We also sought to further empower our people with the skills and knowledge to fight financial crime; sharing insights with them about emerging and evolving threats (including in relation to financial crime risks linked to or heightened by the Covid-19 pandemic) and enhancing our training framework.

However, fighting financial crime and protecting the integrity of the financial system is a challenge for all banks, given the constantly changing environment and pace at which criminals evolve their methods. We believe we can be more effective in our efforts if we collectively join forces and share intelligence with other banks and with national, European and international authorities and law enforcement to combat financial crime. We therefore continue to proactively participate in public-private partnerships, such as Transaction Monitoring Netherlands and Germany's Anti-Financial Crime Alliance, and to collaborate with other banks.

Cybercrime

Cybercrime remains a continuous threat to companies in general and to financial institutions in particular. Both the frequency and the intensity of attacks are increasing on a global scale. The sophistication and implications of ransomware attacks are a growing concern in the threat landscape.
The continuous enhancement of the control environment to protect from, and detect and respond to, e-banking fraud, DDoS, targeted attacks and more specific ransomware attacks is of the highest priority. Additional controls continue to be embedded in the organisation as part of the overall internal control framework and are continuously re-assessed against existing and new threats. In addition, ING continues to strengthen its global cybercrime and fraud resilience through extensive collaboration across the globe with financial industry peers, law enforcement authorities, government (e.g. National Cybersecurity Center) and Internet Service Providers (ISPs).

Data risk management

Data, whether customer, financial, risk or other busines data, is at the core of the ING's purpose: data leads to insights and insights empower people to stay a step ahead in life and in business. The ING Data Strategy is creating a single vision and governance, empowering business users and building a harmonised foundation regarding data. This encompasses further embedding data functions and improving (bank-wide) data operations, and simplifying, standardising and modernising its technology and data platforms. Recognising that data risk is one of the top risks of the bank, ING is creating a holistic view on how ING manages risk around data including personal data protection, data security, data quality and data ethics.

Low/negative interest rate environment

The persistent low/negative interest rate environment, with central banks holding their rates at negative or low levels, continued to negatively impact short-term as well as long-term market rates. The Covid-19 pandemic intensified the low/negative interest rate environment. Interest rates are expected to remain at current levels for some time. This is posing a challenge for bank business models that earn net interest income from traditional savings activities. In addition, loans are being repriced at lower rates which is putting more pressure on margins and impacting long-term profitability. ING is continuously assessing this market environment. ING has introduced negative interest rate charging and is reducing thresholds for charging negative interest rates. Further, ING is expanding other sources of income such as net fee and commission income.

Sourcing risk

The scope of functions and services that ING businesses source to third parties and internal parties has risen in recent years. As such sourcing has evolved from being a means to control costs to a mechanism for building centres of excellence internally and external partnerships that can add real strategic value. Apart from the clear tangible benefits sourcing adds to ING, it also raises new risks for the bank. Primarily these are operational risks associated with third parties performing (parts of) functions and services, and range from underperformance and data privacy to business continuity and cybercrime.

With growing reliance on sourcing, ING's Sourcing Policy is baselining the requirements in terms of controls when sourcing. The Sourcing Policy which is, at least in part, based on regulatory requirements allows ING to implement the required control assurance over the functions and activities sourced to third parties and internal parties, throughout the entire sourcing lifecycle.

Climate change risk

ING is increasingly aware of the risks associated with climate change and how these can impact our clients and their financial stability. This includes physical risk and transition risk. Physical risk can be acute, such as flood and wildfires, or chronic, such as increased temperature and rising sea levels. Transition risk can be driven by policy, technological or market changes as we shift towards a low-carbon global economy and potentially lead to stranded assets.

In addition to our Climate Expert Group (CEG) and Climate Change Committee (CCC), an internal programme was launched in 2020 to address the impacts resulting from climate change. In 2021, this programme was brought under ING's global oversight of regulatory programs. The governance of the programme was recently strengthened with clear allocation of responsibilities for oversight and execution. As such, climate risk will be included in our risk management framework in a forward-looking approach. In our integrated climate report on ing.com we report on our progress until end-2020. The report details our approach and sector-specific insights.

Risk governance (*)

Effective risk management requires firm-wide risk governance. ING's risk and control structure is based on the 'three lines of defence' governance model. Each line has a specific role and defined responsibilities, with the execution of tasks being distinct from the control of these same tasks. The three lines work closely together to identify, assess, and mitigate risks.

This governance framework is designed in such a way that risk is managed in line with the risk appetite approved by the Management Board Banking (MBB), the Executive Board (EB) and the Supervisory Board (SB); and this approach is cascaded throughout ING. The MBB is composed of the EB of ING Group, the heads of the business lines, the chief technology officer (CTO) and the chief operations and transformations officer (COO).

The heads of ING's banking business and support functions and the heads of the country units, or their delegates, are the first line of defence. They have primary ownership, and accountability and responsibility for assessing, controlling and mitigating all financial and non-financial risks affecting their businesses, as well as for the completeness and accuracy of the financial statements and risk reports with respect to their responsible areas. The CTO is responsible and accountable for proper security and controls on global applications and IT platforms servicing the bank and implementing proper processes.

The second line of defence consists of oversight and specialised functions in risk management and compliance. They (i) have co-responsibility for risk management, through articulating and translating the risk appetite into methodologies and policies to support and monitor business management's control of risk, (ii) objectively challenge risk management execution and control processes and coordinate the reporting of risks and controls by the first line of defence, (iii) advise management on risk management and compliance and have decision-making power in relation to business activities that are judged to present unacceptable risks to ING and (iv) can set minimum requirements in terms of quality and quantity of global resourcing in the risk management and compliance functions.

The internal audit function forms the third line of defence. It provides independent assurance to the Audit Committee (part of the SB), the EB and the MBB on the quality and effectiveness of ING's internal control, risk management, governance and implemented systems and processes in both the first and second lines of defence. To protect its independent nature, decisions regarding the appointment, re-appointment or dismissal from office as well as the remuneration package of the head of the internal audit function require SB approval.

Board-level risk oversight (*)

ING has a two-tier board structure consisting of a management board (EB for ING Group and MBB for ING Bank), and an SB; both tiers play an important role in managing and monitoring the risk management framework.

- The SB is for risk management purposes advised mainly by the Risk Committee, which assists and advises in monitoring the risk profile and approving the overarching risk appetite of the company as well as the structure and effective operation of the internal risk management and control systems.
- The EB is responsible for managing risks associated with all activities of ING Group, whereas the MBB is responsible for managing risks associated with all activities of ING Bank. The EB and MBB responsibilities include ensuring that internal risk management and control systems are effective and that ING Group and ING Bank comply with relevant legislation and regulations. On a regular basis, the EB and MBB report on these issues and discuss the internal risk management and control systems with the SB. On a quarterly basis, the EB and MBB report on ING's risk profile versus its risk appetite to the Risk Committee, explaining changes in the risk profile.

As a member of the EB and the MBB, the CRO is responsible for ensuring that risk management issues are heard and discussed at the highest level. The CRO steers a risk organisation both at head-office and business-unit levels, which participates in commercial decision-making, bringing countervailing power to keep the risk profile within the agreed risk tolerance. The CRO reports to the SB risk committee on ING's risk appetite levels and on ING's risk profile at least quarterly. In addition, the CRO briefs them on developments in internal and external risk-related issues and seeks to ensure they understand specific risk concepts.

Executive level (*)

The key risk committees described below act within the overall risk policy and delegated authorities granted by the MBB:

- Global Credit and Trading Policy Committee (GCTP) discusses and approves policies, methodologies, and procedures related to credit, trading, country, and reputation (i.e. environmental and social risk or ESR) risks. The GCTP meets monthly. After the MBB and the GCTP, the Credit and Trading Risk Committee (CTRC) is the highest level body authorised to discuss and approve policies, methodologies, and procedures related to credit and trading risk.
- Global Credit Committee – Transaction Approval (GCC(TA)) discusses and approves transactions that entail taking credit risk (including investment risk), country, legal, and environmental and social risk. The GCC(TA) meets twice a week.
- Asset and Liability Committee Bank (ALCO Bank) discusses and steers, on a monthly basis, the overall risk profile of all ING Bank's balance sheet and capital management risks. ALCO Bank discusses and approves policies, methodologies and procedures regarding solvency, market risk in the banking book and funding and liquidity risks.
- Non-Financial Risk Committee Bank (NFRC Bank) is accountable for the design and maintenance of the Non-financial risk management framework including operational risk management, compliance and legal policies, minimum standards, procedures and guidelines, development of tools, methods, and key parameters (including major changes) for risk identification, measurement, mitigating and monitoring/reporting. NFRC Bank meetings are held at least quarterly.
- The Model Risk Management Committee (MoRMC) discusses and steers, on a monthly basis, the overall model strategy. MoRMC discusses and approves policies and methodologies related to model risk management.
- Climate Change Committee (CCC) is responsible for mandating processes for identifying and managing climate-related risks and opportunities, guiding climate-related policies, strategy, objective-setting and performance monitoring. Further, it is responsible for monitoring and overseeing progress on relevant goals and targets. The CCC meets six times a year.

Regional and business unit level (*)

ING's regional and/or business unit management have primary responsibility for the management of risks (credit, market, funding and liquidity, operational, IT, compliance and model) that arise in their daily operations. They are accountable for the implementation and execution of appropriate risk frameworks affecting their businesses in compliance with procedures and processes at the corporate level. Where necessary, the implementation is adapted to local requirements.

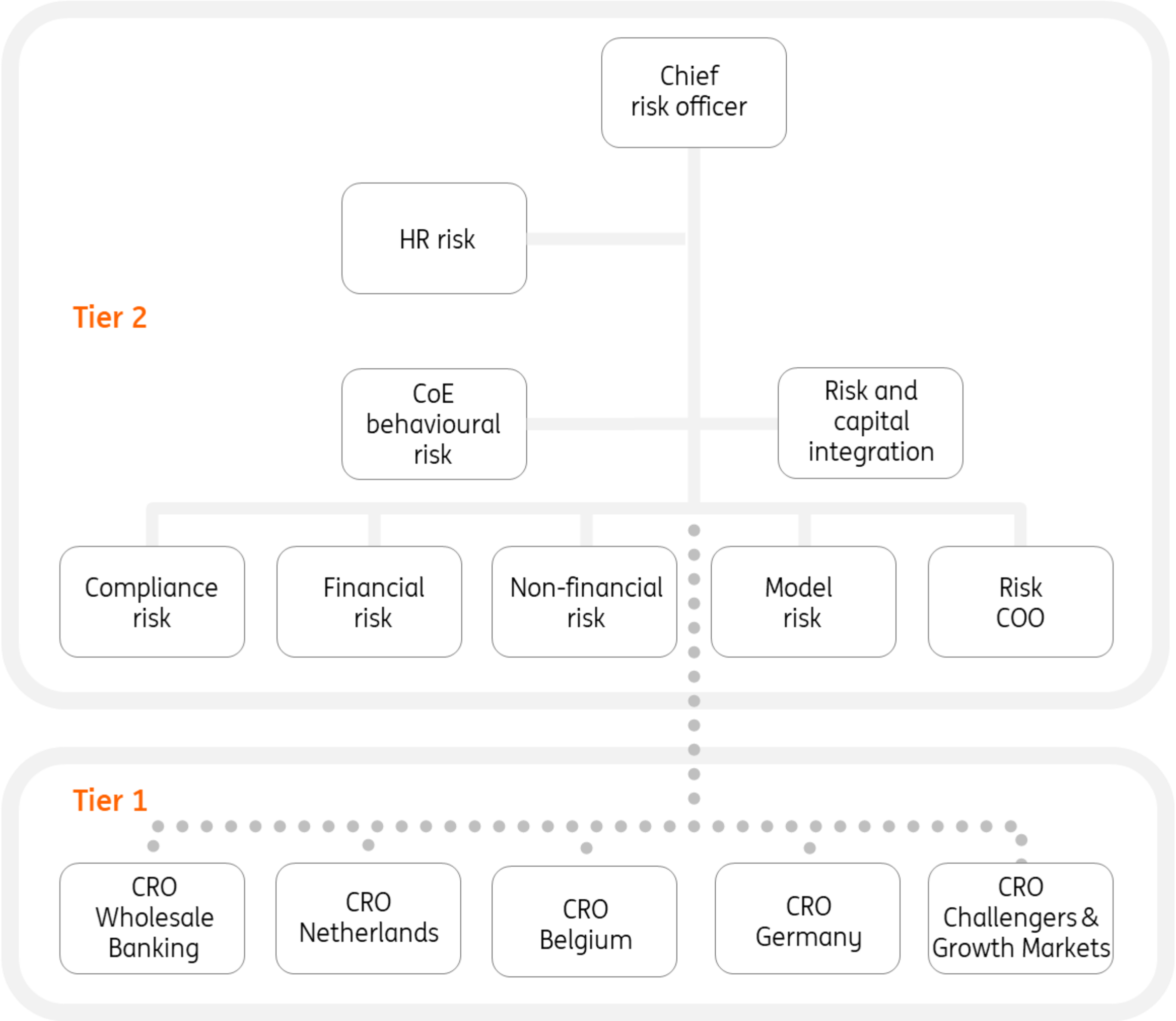
The regional and/or business unit (BU) CROs are involved in these activities. The local (regional and BU) CRO is responsible for the analysis, monitoring and management of risks across the whole value chain (from front to back office). The local risks are discussed in local risk committees that roll up to the key risk committees at executive level. Local Client Integrity Risk Committees (CIRCs) assess client integrity risk and they have a final decision on client acceptance or client off-boarding, from a risk-based perspective, in the areas of financial crime, Foreign Account Tax Compliance Act (FATCA), Common Reporting Standard (CRS) and ESR.

Organisational structure (*)

The Risk Management function consists of corporate risk departments headed by General Managers directly reporting to the CRO and regional/business unit CROs functionally reporting to the CRO. The corporate risk departments support the CRO to set the Bank's risk appetite, develop the corporate policies, rules and global procedures and infrastructures.

In 2021, the CRO for ING in Germany started to report functionally to the Group CRO, instead of the CRO C&G, seen the importance of the German market. The following organisation chart illustrates the reporting lines in 2021 for the risk management organisation:

(*)
Risk function



The banking industry has been re-assessing the business environment it operates in and the pandemic has accelerated a number of trends, which have an impact on the types of risks we manage as a bank. Consequently, ING has reviewed its risk organisational structure, looking to improve governance with a more holistic and integrated approach towards risk management by strengthening group risk steering and further simplification and automation of processes.

With the strategic review of the risk organisational structure, that will start as of March 2022, the following corporate departments will be created:

- **'Credit risk'** will set the credit risk strategy for ING and will ensure credit risk and credit restructuring will be managed from an overarching point of view, rather than per business line.
- **'Integrated risk'** will have central ownership on bank-wide risk topics that are not exclusively related to one risk type, in order to ensure that a consistent approach and interdependencies between the various risk types are taken into account. The current Risk & Capital Integration department will move into Integrated Risk, just as Model Development from Financial Risk and the Professional Practice Unit from NFR. An Environment, Society & Governance Risk team will also be introduced.
- **'Risk Culture & Behavioural risk'** will put risk culture on the agenda of the bank globally, provides a clear vision, aligned strategy and methodological approach in order to identify, assess and bring change with regards to how ING employees act on risks.

Risk policies, procedures and standards (*)

ING has a framework of risk management policies, procedures, and minimum standards in place to create consistency throughout the organisation, and to define requirements that are binding for all business units. The goal of the governance framework of the local business units is to align with ING's framework and to meet local (regulatory) requirements. Senior management is responsible for the implementation of and adherence to policies, procedures and standards. Policies, procedures and standards are regularly reviewed and updated via the relevant risk committees to reflect changes in requirements, markets, products and practices.

Internal control framework

In its Enterprise Risk Management (ERM) Framework, ING has explained the approach to mitigate risk outside ING's risk appetite. The internal control framework (ICF) is thereby translating regulations and internal requirements into policies articulating specific risks and control objectives. These policies form the basis for translation into process control standards, which are used by the business to support and promote an effective risk and control environment. The ICF includes binding principles, definitions, process steps, and roles and responsibilities to create consistent bank-wide policies and control standards.

Global policies and control standards are developed and maintained or updated within the ICF. These global documents are designed by head-office functions and are to be adhered to by all ING entities and support functions. In line with the ERM approach, ownership for policies will be with the 2nd line of defence (2nd LoD), while control standards are to be owned by the 1st line of defence (1st LoD). Global policy and control standard documents are approved by relevant approval bodies (e.g. SB, EB, MBB and Bank NFRC).

The policies are based on the risk taxonomy, which is designed to prevent overlaps in policy control objectives. The control standard owners are responsible for defining the key controls that mitigate the critical and high inherent risks in the business processes.

The process of developing policy and process control standard documents includes the following steps: identify the document owner, determine the relevant stakeholders, define a risk-based approach, perform an impact assessment, involve relevant stakeholders and (local) entities for sounding on key and expected controls, and determine an approval body.

The principal role of the gatekeepers is to provide quality assurance and to advise on the relevant approval bodies. The ICF gatekeepers challenge document owners on the alignment of internal control documents with the agreed methodology and risk taxonomy, and verify that the development and communication of those documents are in line with the agreed process. All policies, control standards, and procedures are published on ING's intranet. New and updated documents are periodically communicated by means of a dedicated policy update bulletin to the country managers and senior heads of business departments.

Risk culture

At ING we attach great importance to a sound risk culture, which is essential for performing our role in society responsibly and to keep the bank safe, secure and compliant. Our risk culture determines the way in which employees identify, understand, discuss, and act on the risks we are confronted with and the risks we take. In 2021, we drove several enhancement projects based on our 2020 assessment of our risk culture. Most notably, enhancing our risk culture monitoring activities and bringing non-financial risk to life.

Orange Code and the global Code of Conduct

The Orange Code and the global Code of Conduct are the foundation of ING's risk culture. The global Code of Conduct defines the most essential conduct principles expected from ING employees in their daily activities, to create additional risk awareness and better meet expectations stated in external rules and guidelines. In 2021, the global Code of Conduct has been embedded into our employees' performance management cycle to ensure continuous attention to the Global Code of Conduct, and dialogue on how to apply it in our daily work practice.

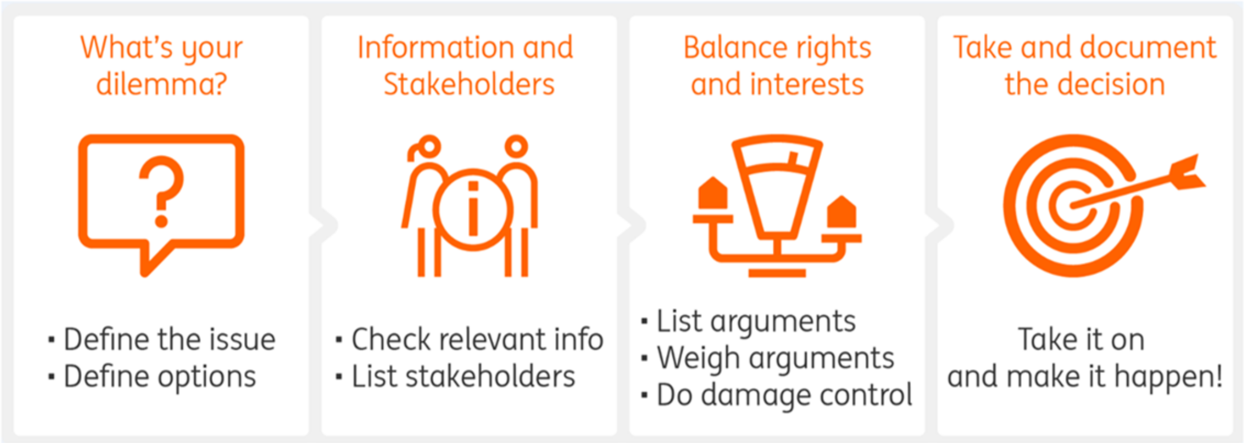
The Orange Code is a declaration of who we are. It describes what we can expect from each other when we turn up to work each day. It is a set of standards that we collectively value, strive to live up to, and invite others to measure us by.

The Orange Code is the sum of two parts, the ING values and ING behaviours, with integrity being the overarching principle. The ING values (being honest, prudent and responsible) are non-negotiable promises we make to the world, principles we seek to stick to, no matter what. The ING behaviours (take it on and make it happen, help others to be successful, and always be a step ahead) represent our way to differentiate ourselves. The Orange Code is embedded in commitments we make to each other and the standards by which we measure each other's performance.

Orange Code decision-making

To enhance risk awareness, we continued to support monitoring risk culture and compliance risk in the business. This included training by compliance and data experts to enhance balanced decision-making in line with the Orange Code decision-making model to support moral learning and well-balanced decision-making. A four-step model aims to find out where the moral weight lies for a potential decision.

Following the incorporation of the model in the global Product and Approval Process (PARP) policy in 2020 it has been embedded in several local PARP policies in 2021. Compliance is continuing to train experts in this area within the local Compliance teams to support the organisation in properly applying the model in practice in their respective countries.



Learning

In 2021, we continued to strengthen and expand our learning offering on risk topics and the governance around this. The learning focuses on compliance, non-financial risk and financial risk.

We established a board to approve and monitor progress on the required learning that is taken by all staff. This will ensure more attendance by the learners, bank-wide alignment, and connection between learning, business impact and management actions. It has also improved feedback and evidencing of outputs. The board brings together content owners, learning experts and corporate communications to ensure the best fit for the training need.

We also took steps to expand our learning for risk professionals, with the Risk Academy which provides focused learning for Risk staff. These take the form of various online learning modules and frameworks that support employees in developing their knowledge, skills and behaviours.

Dutch Banker's Oath

In the Netherlands, all employees of ING take the Bankers' Oath and pledge this promise in a meaningful ceremony. The Oath came into force in the Netherlands on April 1st of 2015, as part of a joint approach from all banks, aimed at introducing social regulations, a revised Dutch Banking Code implementing an oath with associated rules of conduct and disciplinary law. This way the Dutch banks show society what they stand for and are accountable for, both as individual banks and as a sector. In 2021, due to the Covid-19 pandemic, ING NL changed to virtual Bankers' Oath ceremonies via Teams, instead of the former physical ones, to ensure that all new employees (around 400 a month) can still take the Bankers' Oath in time and in a meaningful ceremony. Before taking the Oath, an e-learning is followed and the importance of the Oath is discussed. Also, dilemmas that the employees may come across in their daily work are shown, to ensure careful balancing of the interests of all our stakeholders, in the decisions we make. In 2020 and 2021 the whole Bankers' Oath programme for new joiners was revised and updated, to ensure that all elements still align with the current developments, both internally and externally.

Remuneration

ING aims to align its remuneration policy with its risk profile and the interests of all stakeholders. For more information on ING's compensation and benefits policies and its relation to the risk taken, please refer to the Capital Requirements Regulation (CRR) Remuneration Disclosure published on the corporate website ing.com.

Centre of Expertise on Behavioural Risk Management (BRM)

Behavioural risk is an increasingly important risk area for ING and across the financial industry. It arises when behavioural patterns are at the root of financial and non-financial risks in the organisation.

The complexity of this type of risk is that it is less tangible compared to other risk areas because it focuses on behavioural patterns and their drivers. There are patterns in how decisions are made, how people communicate and whether they can take ownership. Behaviour is driven by formal and informal mechanisms. Examples of formal drivers are the processes ING applies and how its governance is structured. Informal drivers are less tangible; such as group dynamics or underlying beliefs that influence behaviour.

At ING, BRM is positioned in the second line of defence, reporting directly to the CRO. The global BRM Centre of Expertise not only assesses behavioural risk in the organisation, but also has the mandate to direct, challenge and support business owners to intervene on behavioural patterns and their underlying drivers.

Behavioural risk assessments

Behavioural risk assessments (BRAs) identify and analyse undesired behaviours within ING and provide management with specific direction on how to change these behaviours. They focus on the effectiveness of groups rather than individuals, the role of leadership and on less visible aspects such as team dynamics and unwritten social norms. The goal is to understand and systematically assess what drives undesired habits at ING. The BRM model of behavioural risk is used as the standard across ING to signal behavioural risks going forward.

Behavioural risk interventions

Based on the results of the executed behavioural risk assessments, BRM mitigates behavioural risk in a focused manner. Effective mitigation requires a deep understanding of what drives undesired behaviours. Behavioural and organisational science theories and evidence-based techniques and tools play an important role in designing and facilitating interventions. Given the crucial role of leaders in creating the right conditions for employees, interventions are first initiated at leadership level. These include leadership labs, which address topics such as 'connection, alignment and trust', as well as bringing together the 'whole system in the room'. Here senior leaders delve into the outcomes of the assessments, identifying deeply rooted and often complex issues for improvement.

In addition, interventions are also set in motion that focus on enabling employees to build awareness on behavioural risk and support them in initiating solutions to mitigate the potential behavioural risks. After each assessment the results are shared with the management teams of the assessed units and with the participants of the BRA in a feedback session. This is followed up with a dialogue starter toolkit, enabling teams to reflect on the results, discuss opportunities for improvement and call for first steps towards sustainable solutions.

In 2021, BRM pioneered a new approach to address behavioural risk challenges related to decision-making, ownership and group dynamics behavioural challenges on a wider scale. The used approach is a 'World Cafe' – a large group intervention that drives common understanding, engagement and ownership and enhances learning and behavioural change.

The BRM team works closely with the business units and departments such as HR, Internal Audit, and Compliance to align on and embed desired leadership and risk behaviours (i.e. speak up, psychological safety, communication, guiding leadership).

Risk cycle process

ING uses a step-by-step risk management approach to identify, manage and mitigate its financial and non-financial risks. The approach consists of a cycle of five recurrent activities: risk identification, risk assessment, risk control, risk monitoring, and risk reporting. The cycle is designed to determine what the risks are, assess which of these risks can really do harm, take mitigating measures to control these risks, monitor the development of the risk to see if the measures taken are effective, and report the findings to management at all relevant levels to enable them to take action when needed.

The cycle recurs in two ways. First, the identification, assessment, review, and update of mitigating measures are repeated periodically. Second, this periodic monitoring exercise may indicate emerging risks, known risks that are changing, risk levels that are changing, or current control measures that are not effective enough. Further analyses of these findings may then result in renewed and more frequent risk identification, and/or assessment, and/or change of mitigating measures.

Risk identification

Risk identification is a joint effort of the business and the risk management functions. Its goal is to detect potential new risks and determine changes in known risks. Regular risk identification is essential for effective risk management. Potential risks that are not identified, will not be controlled and monitored and may lead to surprises later. Known risks may have changed over time and as a consequence the existing mitigating measures and monitoring may be inadequate or obsolete.

Risk identification is performed periodically. In case of material internal or external change, additional ad hoc risk identification can be performed.

Risk assessment

Each identified risk is assessed qualitatively or quantitatively to determine its importance. This enables ING to decide which of the identified risks need control measures and how strict or tolerant these measures should be. Known risks are re-assessed to detect any change in the risk level.

The importance of a risk is based on both the likelihood that the risk materialises and the subsequent financial or reputational impact that may occur should the risk arise. Unlikely risks with a potentially high impact need to be controlled. A risk that is likely to happen regularly but expected to have a modest financial impact may not need to be mitigated if the consequences are accepted by management.

Risk control

Risks can be controlled by mitigating measures that lower the likelihood the risk occurs, lower the impact when it occurs or both. The ultimate measure to lower a risk is to stop the activity or service that causes the risk (risk avoidance). Risk control and mitigation measures are defined and maintained both bank-wide and at the local level.

Monitoring and reporting

ING monitors the risk-control measures by checking if they are executed, complied with and have the expected mitigating effects and by following the development of the risks and their risk levels. Risk reporting provides senior and local management with the information they need to manage risks.

Risk Appetite Framework

The Risk Appetite Framework (RAF) is one of the foundation pillars of the ERM Framework. Its objective is to set the appropriate risk appetite at the consolidated level across the different risk categories and to allocate the risk appetite throughout the organisation.

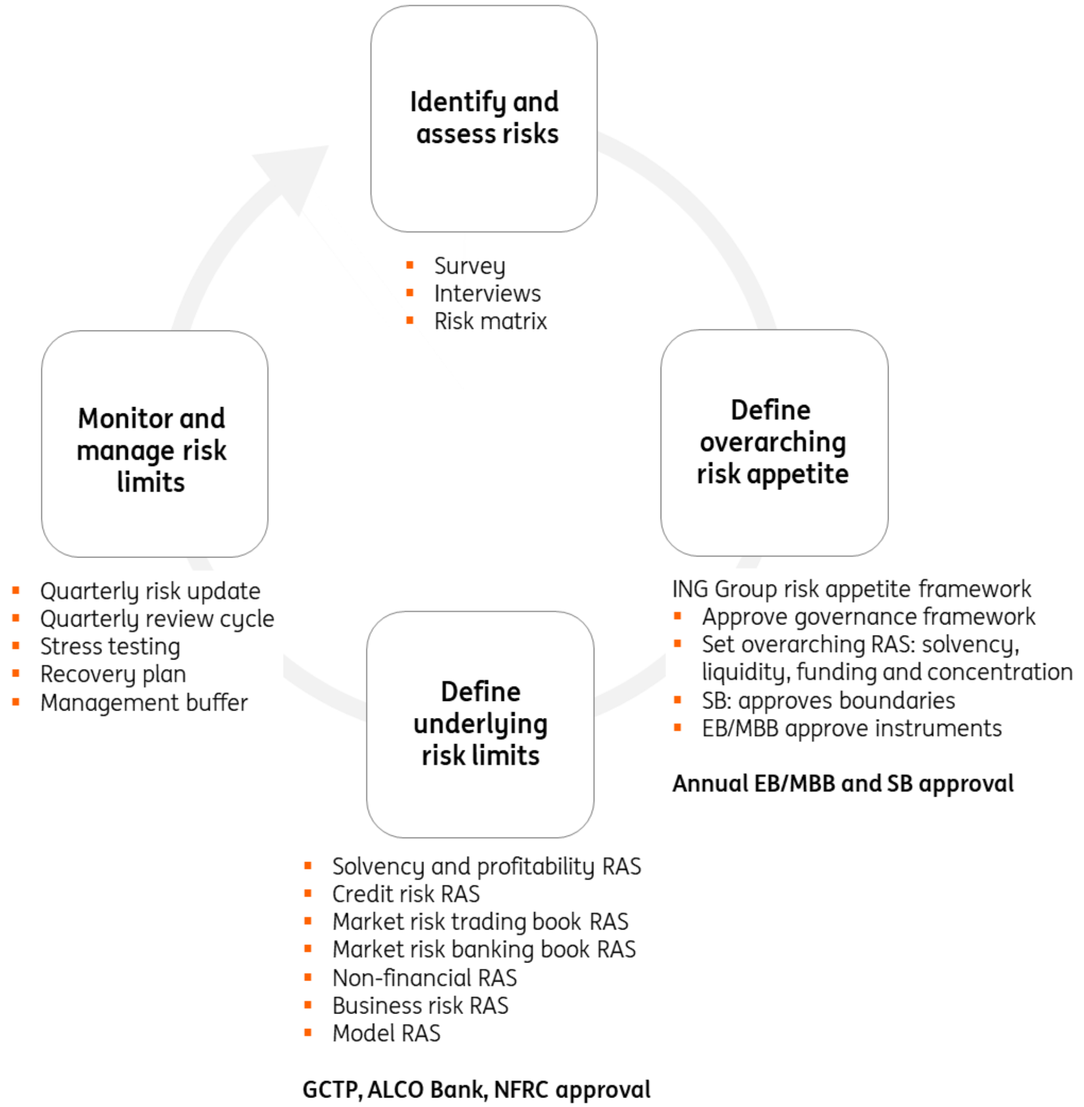
Policy

The RAF policy states the overarching global risk appetite. Within the RAF, ING monitors a range of financial and non-financial risk metrics to ensure that our risk profile is in line with our risk appetite while executing our strategy. ING’s RAF, which is approved by the SB, defines the desired risk profile that is to be integrated in the strategic decision-making and financial planning process. It is designed to be able to withstand market volatility and stress, while meeting regulatory requirements. The framework, including underlying assumptions and metrics, is regularly reviewed so that it remains relevant. The RAF combines various financial and non-financial risk appetite statements (RASs) into a single, coordinated approach to provide the business with a clear overview of the relevant risks and the tools to manage them. This view allows the EB, the MBB and senior management to form an opinion on the adequacy of internal risk management and control systems for the risks ING faces while pursuing its strategy.

Process

The RAF is focused on setting the risk appetite at the consolidated level and across the different risk categories, and provides the principles for cascading this risk appetite down into the organisation. The RAF and underlying limit allocation are reviewed on an annual basis, or more frequently if necessary, based on their quarterly review in the EB, the MBB and the SB. It is therefore a top-down process, which bases itself on the ambition of the bank in terms of its risk profile, the regulatory environment and the economic context. The set of limits used is split according to the approval levels needed for them. Limits that need SB approval are called boundaries and the underlying metrics supporting the boundaries which need EB and MBB approval are called instruments.

Risk appetite framework process



Step 1. Identify and assess ING’s key risks

The outcome of the risk identification and risk assessment process is used as the starting point for the review of the RAF. Within this step, the risks ING faces when executing its strategy are identified in the context of the current economic, political, social, regulatory and technological environment. The assessment identifies whether the potential impact is material and if it is sufficiently controlled within ING’s risk management function. It benchmarks the current risk framework against regulatory developments. Known risks are re-assessed either to confirm risk levels or to take account of potential changes. The assessment is contextualised by the current set of risk appetite statements.

Step 2. Set Risk Appetite Framework

Based on ING’s risk assessment and risk purpose, boundaries for the overarching risk frameworks are set. Once the overarching risk appetite thresholds have been set and approved by EB/MBB and subsequently by SB, the statements are translated into risk-type-specific statements and lower level thresholds which are set and approved by senior risk committees, ALCO Bank, GCTP and Bank NFRC. Cascading is done via a number of detailed risk appetite statements which have been defined per risk type, the combination of which ensures compliance with the overarching solvency, concentration and funding and liquidity RASs.

Examples of underlying risk metrics include:

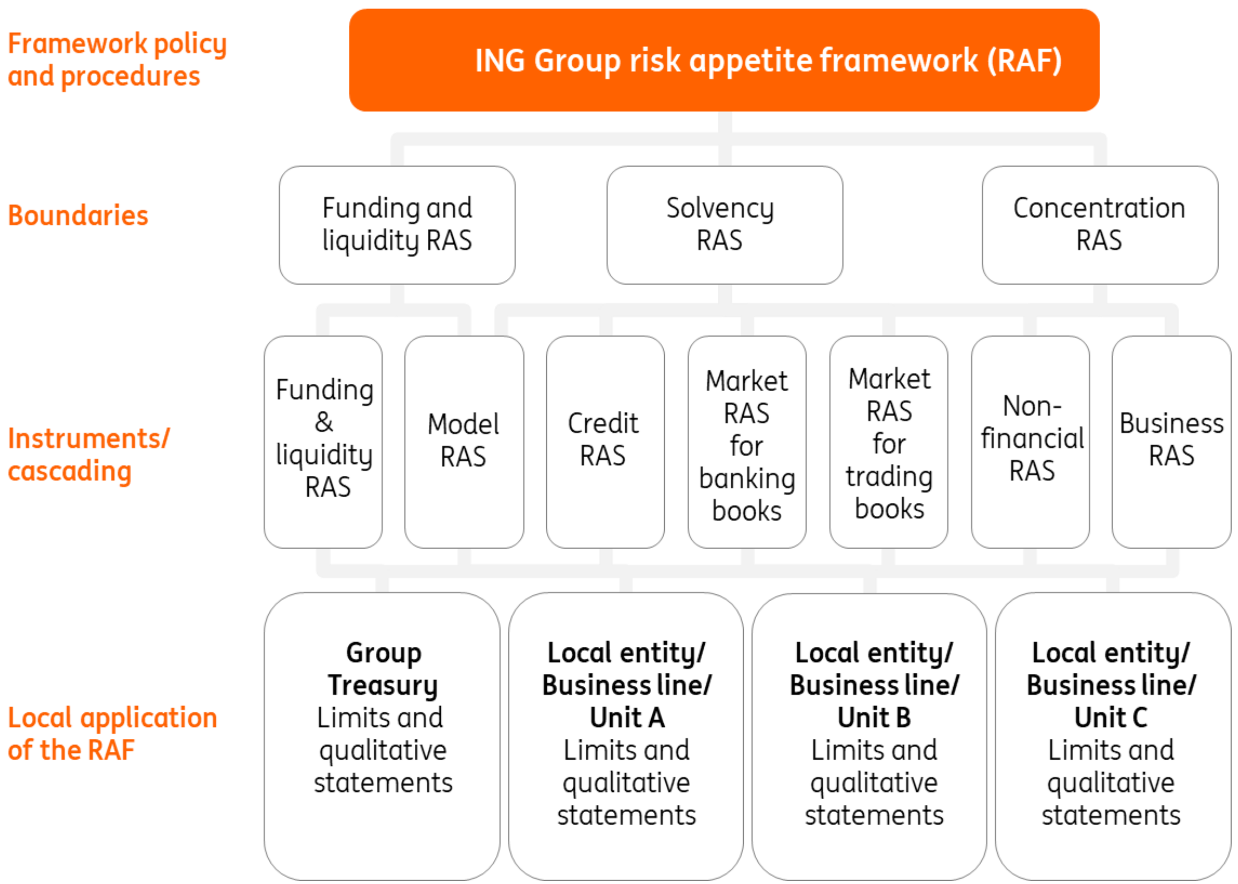
- Solvency and Profitability (e.g. IFRS P&L-at-Risk and FX translation risk)
- Funding and liquidity (e.g. Liquidity coverage ratio (LCR) and Net Stable Funding Ratio (NSFR))
- Credit risk (Exposure at Default (EAD) and Risk Weighted Assets (RWA))
- Market risk trading book (e.g. Event risk, historical value at risk (HVaR))
- Market risk banking book (Net interest income (NII)-at-Risk and Revaluation-Reserve-at Risk)
- Non-financial risk (eg. Expected loss tolerance and management of audit issues)
- Business risk (e.g. IFRS P&L-at-Risk and Economic Capital)
- Model risk (e.g. Number of inadequate Pillar 1 models)

ING has started including climate risk into its Risk Appetite Framework by a.o. introducing climate risk as one of the dimensions to determine sector concentration as part of the credit risk appetite statements. In the coming years, ING will extend the climate risk impact to other risk types to ensure that the potential risks stemming from e.g. transition risk and physical risk are properly captured in the Risk Appetite Framework.

Step 3. Cascade into statements per risk type and business unit

The bank-wide risk appetite is translated per risk type, which is further cascaded into the organisation. Risk appetite statements are then translated into dedicated underlying risk limits that are used for the day-to-day monitoring and management of ING’s risks. The risk appetite statements serve as inputs for the quarterly planning process as well as for the establishment of key performance indicators and targets for senior management.

Risk appetite framework policy



Step 4. Monitor and manage underlying risk limits

To verify that it remains within the Risk Appetite Framework, ING reports its risk positions vis-à-vis its limits on a regular basis to senior management committees. The Quarterly Risk Update reflecting the exposure of ING against the risk appetite is submitted quarterly to the EB and the MBB and to the (Risk Committee of the) SB. Moreover every quarter the financial plan is checked for potential limit breaches within a one-year horizon, where in the strategic dialogue the MBB can take mitigating measures or adjustments to the dynamic plan can be made.

Stress testing

Stress testing is an important risk management tool that provides input for strategic decisions and capital planning. The purpose of stress testing is to assess the impact of plausible but severe stress scenarios on ING's capital and liquidity position. Stress tests provide complementary and forward-looking insights into the vulnerabilities of certain portfolios, with regards to adverse macroeconomic circumstances, stressed financial markets, and changes in the (geo)political climate. Since the outbreak of the Covid-19 pandemic, ING assessed the potential impact on its financial position via different types of stress tests. In addition to assessing P&L, capital and liquidity position of ING for a range of different scenarios, idiosyncratic risks were also included. The outcome of these Covid-19 stress tests helped management to get insight into the potential impact and to define actions to mitigate this potential impact.

In the second half of 2021, ING started preparing for the regulatory climate risks stress test scenario, which will be assessed in 2022 as part of the bi-annual ECB Single Supervisory Mechanism (SSM) stress test. This regulatory stress test, combined with internal analyses done on climate risk, will be used to enhance ING's internal climate risk stress testing.

Types of stress tests

Within ING, different types of stress tests are performed. The most comprehensive type of stress tests are the firm-wide scenario analyses, which involve setting scenario assumptions for all the relevant macroeconomic and financial market variables in all countries relevant to ING. These assumptions usually follow a qualitative narrative that provides a background to the scenario. In addition to firm-wide scenario analyses, ING executes scenario analyses for specific countries or portfolios. Furthermore, sensitivity analyses are performed, which focus on stressing one or more risk drivers; usually without an underlying scenario narrative. Finally, ING performs reverse stress tests, which aim to determine scenarios that could lead to a pre-defined severe adverse outcome.

Process

The stress testing process of ING consists of several stages, which are:

- Risk identification and risk assessment: It identifies and assesses the risks ING or the relevant entity is facing when executing its strategy based on the current and possible future economic, political, regulatory and technological environment. It provides a description of the main risks and risk drivers related to the nature of ING's business, activities and vulnerabilities.
- Scenario definition and parameterisation: Based on the outcome of the previous step, a set of scenarios is determined with the relevant scope and set of risk drivers for each scenario, as well as its severity, the key assumptions and input parameters. The output of this phase includes a quantitative description of the stress scenarios to be analysed, the relevant output metrics and, when applicable, a narrative description.
- Impact calculation and aggregation: Based on the quantitative description of the stress scenarios determined in the previous step, the impact is determined for the relevant scenario, scope and horizon. The impact calculation and aggregation can be part of a recurring process or part of a specific process set-up for one-off stress tests.
- Scenario reporting: For each stress test, a report is prepared after each calculation which describes the results of the scenario and gives a recap of the scenario with its main assumptions and parameters. The stress-test report is sent to the relevant risk committees and/or senior management. It is complemented, if needed, with advice for management action based on the stress-testing results.
- Scenario control and management assessment: Depending on the outcomes of the stress test and the likelihood of the scenario, mitigating actions may be proposed. Mitigating actions may include, but are not limited to, sales or transfers of assets and reductions of risk limits.

Methodology

Detailed and comprehensive models are used to calculate the impact of the scenarios. In these models, statistical analysis is combined with expert opinion to make sure that the results adequately reflect the scenario assumptions. The methodologies are granular and portfolio-specific and use different macroeconomic and market variables as input variables. The calculations are in line with our financial and regulatory reporting frameworks. The stress-testing models are subject to review by Model Risk Management.

Developments in the regulatory environment

Basel III revisions and upcoming regulations

In December 2017, revisions to Basel III were formally announced by the Basel Committee. These revisions to Basel III establish new prudential rules for banks, including a revision to the standardised approach to credit risk, the introduction of a capital floor based on standardised approaches, the use of internal models, limitation of options for modelling operating risks, and new rules for the establishment of risk-weighted items and unused credit lines at the banks. Such revisions have a long implementation phase and are not yet fully transposed into EU regulation. The revisions are commonly referred to as Banking Reform package. In Europe, this has been partly implemented in the CRR II / CRD V (see below) and it will be implemented further through the CRR III / CRD VI in the coming years. A draft was published in October 2021 and implementation is expected as of 1 January 2025.

CRRII/CRDV and BRRDII

On 27 June 2019, a series of measures referred to as the Banking Reform Package (including certain amendments to CRR and CRD IV, commonly referred to as CRR II and CRD V) came into force, subject to various transitional and staged timetables. The adoption of the Banking Reform Package concluded a process that began in November 2016 and marks an important step toward the completion of the European post-crisis regulatory reforms, drawing on international standards agreed by the Basel Committee, the Financial Stability Board and the G20. CRD V was implemented in Dutch law in 2020. The Banking Reform Package updates the framework of harmonised rules established following the financial crisis of 2008 and introduces changes to the CRR, CRD IV, the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism Regulation (SRMR). The Banking Reform Package covers multiple areas, including the Pillar 2 framework, the introduction of a leverage ratio requirement of 3% and a leverage ratio buffer requirement of 50% of the global systemically important banks (G-SIB) buffer requirement (applicable per 1 January 2023), a sectoral systemic risk buffer, a binding NSFR ratio based on the Basel NSFR standard but including adjustments with regard to e.g. pass-through models and covered bonds issuance, mandatory restrictions on distributions, permission for reducing own funds and eligible liabilities, macroprudential tools, a new category of 'non-preferred' senior debt, the minimum requirement for own funds and eligible liabilities (MREL) and the integration of the TLAC standard into EU legislation. Further, the

EBA obtained a mandate to investigate how to incorporate ESG risks into the supervisory process and what the prudential treatment of assets associated with environmental or social objectives should look like.

Solvency risk

Introduction

Solvency risk is the risk of lacking sufficient capital to fulfil the business objectives, regulatory requirements or market expectations. A bank that is insolvent is unable to pay its debts and will be forced into bankruptcy.

The level and quality of capital is crucial for the resilience of individual banks. Banks are expected to assess the risks they face, and in a forward-looking manner ensure that all material risks are identified, managed and covered sufficiently by loss-absorbing capital to ensure continuity in case of materialisation of unexpected risks in times of stress. Given the interdependencies to other financial and non-financial risks this balancing act of capital adequacy needs to be done within a sound and integrated management approach coherently linking all moving parts of the bank in line with the long-term business strategy.

Solvency risk management

ICAAP Framework

ING's Internal Capital Adequacy Assessment Processes (ICAAP) aims to ensure that capital levels are adequate to cover all material risks at all levels and to ensure compliance with regulations. ING follows an integrated approach to assess the adequacy of its capital position in relation to its business activities, underlying business strategy, market positioning risk profile and operating environment. This implies taking account of the interests of its various stakeholders such as regulators, shareholders, investors, rating agencies and customers.

The continued strength of ING's capital position, the adequacy of the financial position and risk management effectiveness are essential for achieving the strategy. ING's ICAAP ultimately supports this strategy and contributes thereby to the continuity of ING Group, ING Bank and all its business units.

Managing ING's capital requirements and allocation entails finding a balance between the forces governing supply and demand. The uncertainties surrounding these factors reflect changing market circumstances and continuous unpredictability in regulatory and macroeconomic forces. The process of balancing these strategic goals is captured in the ICAAP framework and enabled by the building blocks and elements facilitating the ICAAP. The following building blocks have been defined in the ICAAP Framework, which are applied for both the 'normative' and 'economic' perspective as defined in the ECB Guide to ICAAP, published in November 2018:

- Risk identification and assessment
- Risk appetite
- Capital planning
- Capital management
- Stress testing
- Continuity

Solvency risk related to Covid-19

Since the outbreak of Covid-19 several stress-test analyses have been done to assess the potential impact of the virus on the actual and future solvency position, whereby also potential risks are taken into account. For instance, in 2021 ING performed stress tests whereby the combination of inflation and Covid-19 risks was assessed in several scenarios and sensitivity analyses. These stress tests were used to prepare potential mitigating actions, but also served as starting point for the review of ING's risk appetite and of the financial and capital planning. In light of this, ING also updated the management actions in the Contingency Capital and Funding Plan and the Recovery Plan and assessed potential additional mitigating actions to counter this very specific crisis.

Risk identification and assessment

ING's capital management and solvency risk management starts with the risk identification and risk assessment process. Its main purpose is to detect potential new risks and to identify changes in the potential impact of known risks. On an annual basis, ING performs a thorough review of its solvency risks or risks to capital. Within this assessment, bottom-up assessments are combined with top-down assessments, including a questionnaire and interviews with senior management. The results of the risk assessment are discussed in ALCO Bank which comprises almost the full MBB. Once approved, the conclusions of the risk assessment feed into the annual review of the Risk Appetite Framework, the Stress Testing Framework and the Economic Capital Framework. In addition to this annual process, ING also re-assesses its risks as part of its Capital Adequacy Statement, a quarterly process to assess ING's capital adequacy.

Solvency risk appetite

As explained in the Risk Appetite Framework section in the previous chapter, ING has established overarching solvency risk boundaries. Boundaries are risk appetite statements that are essential for risk management activity, making it of paramount importance to keep these boundaries within the defined level. The SB is responsible for approving and monitoring the boundaries. These boundaries are complemented by a sequence of risk-type-specific instruments (risk appetite statements). These underlying risk appetite statements are cascaded down into the organisation and dedicated risk thresholds are set that are used for day-to-day monitoring and management of ING's risks. ING has solvency risk appetite statements in place for the following metrics: CET1 ratio, total capital ratio, leverage ratio, total loss-absorbing capacity (TLAC) & minimum requirement for own funds and eligible liabilities (MREL) based on RWA/leverage ratio and economic capital adequacy.

Capital planning

The capital and funding plan is an integral part of the dynamic plan, ING's financial and business planning process. Its objective is to inform and advise the management on the capital development and need of ING Group and ING Bank, under base case and adverse scenarios. It describes how ING shall finance the expected capital constraints taking into consideration growth projections, capital and risk evolution, macro and market conditions, both under the normative and economic perspective. The capital and funding plan is discussed and approved by ALCO Bank and updated at least twice a year. Within these updates, ING takes account of recent market and risk developments and ensures that capital planning adheres to the solvency risk appetite set by the SB.

Capital management

Formulation of the CET1 ambition is a key element in solvency risk management. The target ratio, based on the management buffer concept, enables ING's senior management to steer, benchmark and assess the bank's current and future capital levels much more efficiently while the ambition level clearly supports trust building among ING's key stakeholders (e.g. regulators, investors and customers).

The capital management buffer aims to protect the interests of key stakeholders and plays an important role in the overall capital adequacy governance. The rationale behind the concept of the management buffer is that it provides an additional cushion on top of the (local) regulatory minimum requirements (e.g. Supervisory Review and Evaluation Process (SREP) requirements) to withstand a certain level of stress and to facilitate awareness and preparedness to take management actions. ING reviews its capital management buffer on a regular basis to determine its effectiveness and robustness, updating it as appropriate.

Stress testing

Solvency stress testing allows ING to examine the effect of plausible but severe stress scenarios on the solvency position and provides insight into which entities or portfolios are vulnerable to which type of risks or in which type of scenarios. Solvency stress testing is an important tool in identifying, assessing, measuring and controlling risks to capital, providing a complementary and forward-looking perspective to other solvency risk management tools. For solvency stress testing, ING follows the same process steps that are described in the overall section on stress testing.

ING distinguishes the following three types of stress test analyses:

- Sensitivity analysis: Within these analyses, ING assesses the impact of a pre-defined shock in one or more risk drivers. The key purpose of sensitivity analyses is to monitor the impact of this pre-defined (or standardised) shock over time to get an understanding of how the risk profile of the bank has developed.
- Scenario analysis: Scenario analyses are used to assess an integral impact of historical, statistical and/or hypothetical circumstances on the financial position of ING. These stress tests often build on a qualitative scenario narrative and reflect risk topics that are deemed relevant for ING given, for example, its business model. Scenarios can be derived from historical realisations, but also reflect e.g. potential macroeconomic, geopolitical or climate risk related events. These scenarios can be used for one-off analyses. They can also be translated into a set of regular or standardised stress tests that are assessed on a quarterly basis.
- Reverse stress testing: The purpose of reverse stress testing is to identify scenarios that could lead to a pre-defined outcome. This could for example be a pre-defined solvency level. The added value of reverse stress testing is to explore risk drivers and stress scenarios outside the existing range.

The outcomes of solvency stress test analyses are taken into account in capital planning, but also for setting risk appetite statements and the capital management buffer.

Contingency and Recovery Planning

Contingent capital events are unexpected situations or business conditions that may increase the risk with respect to ING's capital position. These events may be ING-specific, or arise from external factors. The Contingency Capital and Funding Plan (CCFP) sets out the organisation and actions in case of contingency events. The CCFP has a suite of monitoring metrics that are aligned with the risk appetite statements that are in place for managing ING's capital, liquidity and funding position. The Recovery Plan is designed by ING to detect and act upon possible major and unforeseen deterioration of its solvency position in a timely fashion. This plan has integrated several risk appetite statements to allow timely identification of possible stress on the company. Incorporating risk appetite statements into both plans ensures a seamless continuum between the ING's business-as-usual management and its contingency or recovery management.

Assessing capital adequacy: Capital Adequacy Statement (CAS)

The CAS is ING Group's quarterly assessment of its capital adequacy and takes into account different elements with respect to its capital position. The degree to which ING's capital position is considered adequate depends on a variety of internal and external drivers:

- Current supervisory requirements and (expected) requirements going forward;
- Current internal requirements and (expected) requirements going forward;
- Coherence of the available capital with the (realisation of) strategic plans; and
- The ability to meet internal and external requirements in the case of stressed events or should a risk materialise.

The CAS assesses the adequacy of ING's capital position in relation to above-mentioned drivers and states the extent to which the capital position consequently is considered as adequate. On a quarterly basis the CAS document is prepared. Additionally each year, the EB/MBB signs and provides a comprehensive assessment of ING's capital adequacy, supported by the ICAAP outcomes, in the form of a Capital Adequacy Statement.

Credit risk

Introduction

Credit risk is the risk of loss from the default and/or credit rating deterioration of clients. Credit risks arise in ING's lending, financial markets and investment activities. The credit risk section provides information on how ING measures, monitors and manages credit risk and gives an insight into the portfolio from a credit risk perspective.

Governance (*)

ING's credit risk strategy is to maintain an internationally diversified loan and bond portfolio, while avoiding large risk concentrations. The emphasis is on managing business developments within the business lines by means of a top-down risk appetite framework, which sets concentration limits for countries, individual clients, sectors, products, secondary risk (collateral/guarantees) and investment activities. The aim is to support relationship-banking activities, while maintaining internal risk/reward guidelines and controls.

ING has organised support functions at two levels: Tier 1, operational unit level, and Tier 2, head office level. Credit risk is a Tier 1 level risk function within ING and is part of the second line of defence. It is managed by regional and/or business unit CROs. The CRO Wholesale Banking (WB), CRO Challengers & Growth Markets (C&G), CRO Netherlands, CRO Belux and CRO Germany focus on specific risks in the geographical and/or business areas of their responsibilities. The Financial Risk department is a Tier 2 level risk function, which is responsible for the consolidated risk appetite setting, risk frameworks, model development and policies.

The credit risk function encompasses the following activities:

- Measuring, monitoring and managing credit risks in the bank's portfolio, including the measures taken since the start of the Covid-19 crisis;
- Challenging and approving new and modified transactions and borrower reviews;
- Managing the levels of provisioning and risk costs, and advising on impairments; and
- Providing consistent credit risk policies, systems and tools to manage the credit lifecycle of all activities.

Credit risk categories (*)

Credit risk uses the following risk categories to differentiate between the different types of credit risk:

- **Lending risk:** is the risk that the client (counterparty, corporate or individual) does not pay the principal, interest or fees on a loan when they are due, or on demand for letters of credit (LCs) and guarantees provided by ING.
- **Investment risk**: is the credit default and risk rating migration risk that is associated with ING's investments in bonds, commercial paper, equities, securitisations, and other similar publicly traded securities. This can be viewed as the potential loss that ING may incur from holding a position in underlying securities whose issuer's credit quality deteriorates or defaults. All investments in the banking book are classified in the investment risk category. The primary purpose of ING's investments in the banking books is for liquidity management.
- **Money market risk**: arises when ING places short-term deposits with a counterparty in order to manage excess liquidity. In the event of a counterparty default, ING may lose the deposit placed.
- **Pre-settlement risk**: arises when a client defaults on a transaction before settlement and ING must replace the contract by a trade with another counterparty at the then prevailing (possibly unfavourable) market price. This credit risk category is associated with derivatives transactions (exchange-traded derivatives, over-the-counter (OTC) derivatives and securities financing transactions).
- **Settlement risk**: arises when there is an exchange of value (funds or instruments) and receipt from its counterparty is not verified or expected until after ING has given irrevocable instructions to pay or has paid or delivered its side of the trade. The risk is that ING delivers but does not receive delivery from its counterparty. ING manages settlement risk in the same way as other credit risks by setting a risk limit per client. Due to the short-term nature (typically one day), ING does not hold provisions for settlement risk. Although a relatively low risk, ING increasingly uses DVP (delivery versus payment) and safe settlement payment techniques to reduce settlement risk.

For the reconciliation between credit risk outstandings categories and financial assets, refer to the table below:

Reconciliation between credit risk categories and financial position (*)

Credit risk categories	Mainly relates to:	Notes in the financial statements		
Lending risk	-Cash and balances with central banks	Note	2	Cash and balances with central banks
	-Loans and advances to banks	Note	3	Loans and advances to banks
	-Loans and advances to customers	Note	4	Financial assets at fair value through profit or loss
	-Off-balance sheet items e.g. obligations under financial guarantees and letters of credit and undrawn credit facilities	Note	5	Financial assets at fair value through other comprehensive income
		Note	7	Loans and advances to customers
		Note	45	Contingent liabilities and commitments
Investment risk	-Debt securities	Note	4	Financial assets at fair value through profit or loss
	-Equity securities	Note	5	Financial assets at fair value through other comprehensive income
		Note	6	Securities at amortised cost
Money market risk	-Cash and balances with central banks	Note	2	Cash and balances with central banks
	-Loans and advances to banks	Note	3	Loans and advances to banks
	-Loans and advances to customers	Note	7	Loans and advances to customers
Pre-settlement risk	-Financial assets at fair value through profit or loss (trading assets and non-trading derivatives)	Note	4	Financial assets at fair value through profit or loss
	-Financial liabilities at fair value through profit or loss (trading assets and non-trading derivatives)	Note	14	Financial liabilities at fair value through profit or loss
	-Securities financing	Note	44	Offsetting financial assets and liabilities
Settlement risk	-Financial assets at fair value through profit or loss (trading assets and non-trading derivatives)	Note	4	Financial assets at fair value through profit or loss
	-Financial liabilities at fair value through profit or loss (trading assets and non-trading derivatives)	Note	11	Other assets
	-Amounts to be settled	Note	14	Financial liabilities at fair value through profit or loss
		Note	16	Other liabilities

Credit risk appetite and concentration risk framework (*)

The credit risk appetite and concentration risk framework is designed to prevent undesired high levels of credit risk and credit concentrations within various levels of the ING portfolio. It is derived from the concepts of boundaries and instruments as described in the ING Risk Appetite Framework.

Credit risk appetite is the maximum level of credit risk ING is willing to accept for growth and value creation. The credit risk appetite is linked to the overall bank-wide risk appetite framework. The credit risk appetite is expressed in quantitative and qualitative measures. Having a credit risk appetite provides:

- Clarity about the credit risks that ING is prepared to assume, target setting and prudent risk management;
- Consistent communication to different stakeholders;
- Guidelines on how to align reporting and monitoring tools with the organisational structure and strategy; and
- Alignment of business strategies and key performance indicators of business units with ING's credit risk appetite through dynamic planning.

Credit risk appetite is set at different levels within ING and specifies the scope and focus of the credit risk which ING takes, and the composition of the credit portfolio, including its concentration and diversification objectives in relation to business lines, sectors and products. The introduction of climate risk via sectors is a first important step with the objective to promote ING's Terra approach, focusing on sectors' necessary pathway to contribute to a low-carbon world and also mitigate potential climate and environmental risks to ING and its business environment.

The credit risk appetite and concentration risk framework is composed of:

- **Country risk concentration**: Country risk is the risk that arises due to events in a specific country (or group of countries). In order to manage the maximum country event loss ING is willing to accept, boundaries are approved by the SB. The estimated level is correlated to the risk rating assigned to a given country. Actual country limits are set by means of country instruments, which are reviewed monthly and updated when needed. For countries with elevated levels of geopolitical or severe economic cycle risk, monitoring is performed on a more frequent basis with strict pipeline and exposure management.
- **Single name and industry sector concentration**: ING has established a credit concentration risk framework to identify, measure and monitor single name concentration and industry sector concentration (systemic risk). The same concept of boundaries and instruments is applicable.
- **Product and secondary risk concentration**: ING has established a concentration framework to identify, measure and monitor product concentration and secondary risk.
- **Scenarios and stress tests**: Stress testing evaluates ING's financial stability under severe, but plausible stress scenarios, and supports decision-making that assures ING remains a financially going concern even after a severe event occurs. In addition to the bank-wide stress testing framework described above, ING performs sensitivity analyses regularly to assess portfolio risks and concentrations. These sensitivity analyses are consistent with the stress scenario established in the Group-wide credit risk appetite framework. In light of Covid-19 ING incorporated pandemic specific scenarios for the stress tests to gain insight into the potential effects of Covid-19 on the credit risk in the portfolios.
- **Product approvals**: The product approval and review process (PARP) assesses and manages risks associated with the introduction of new or modified products. It ensures that sound due diligence is performed by relevant stakeholders and the relevant risks (credit, operational, compliance, etc.) are addressed appropriately.
- **Strategy and risk appetite papers**: These are detailed analyses of defined products and/or industries. They identify the major risk drivers and mitigants, the internal business mandate, and propose the risk (including business) parameters – and potentially the maximum product and/or portfolio limit - to support that business. A strategy and risk appetite paper is always prepared by the front office responsible for the internal business mandate and requires an approval from the designated approval authority. Strategy and risk appetite papers may also have geographical and/or business limitations (e.g. local vs. global).
- **Credit approval process**: The purpose of the credit approval process is that individual transactions and the risk associated with these transactions are assessed on a name-by-name basis. For each type of client there is a dedicated process with credit risk managers specialised along the business lines of ING, including the use of automated decision-making in certain cases. The credit approval process is supported by a risk rating system and exposure monitoring system. Risk ratings are used to indicate a client's creditworthiness which translates into a probability of default. This is used as input to determine the maximum risk appetite that ING has for a given type of client (reference benchmark). The determination of the delegated authority (the amount that can be approved at various levels of the organisation) is a function of the risk rating of the client and ING's credit risk exposure on the client.

Where necessary, underwriting standards have been reviewed and refined to limit the credit risk to portfolios particularly sensitive to Covid-19.

Credit risk models (*)

Within ING, internal Basel-compliant models are used to determine probability of default (PD), exposure at default (EAD) and loss given default (LGD) for regulatory and economic capital purposes. These models also form the basis of ING's IFRS 9 loan loss provisioning (see 'IFRS 9 models' below). Bank-wide, ING has implemented approximately 100 credit risk models, for regulatory capital, economic capital and loan loss provisioning purposes.

There are two main types of PD, EAD and LGD models used throughout the Bank:

- **Statistical models** are created where a large set of default or detailed loss data is available. They are characterised by sufficient data points to facilitate meaningful statistical estimation of the model parameters. The model parameters are estimated with statistical techniques based on the data set available;
- **Hybrid models** contain characteristics of statistical models combined with knowledge and experience of experts from risk management and front-office staff, literature from rating agencies, supervisors and academics. These models are especially appropriate for 'low default portfolios', where limited historical defaults exist.

Credit risk rating process (*)

In principle, all risk ratings are based on a Risk Rating (PD) Model that complies with the minimum requirements detailed in CRR/CRDIV, ECB Supervisory Rules and European Banking Authority (EBA) guidelines. This concerns all borrower types and segments.

ING's PD rating models are based on a 1-22 scale (1=highest rating; 22=lowest rating) referred to as the 'Master scale', which roughly corresponds to the rating grades that are assigned by external rating agencies, such as Standard & Poor's, Moody's and Fitch. For example, an ING rating of 1 corresponds to an S&P/Fitch rating of AAA and a Moody's rating of Aaa; an ING rating of 2 corresponds to an S&P/Fitch rating of AA+ and a Moody's rating of Aa1, and so on.

The 22 grades are composed of the following categories:

- Investment grade (risk rating 1-10);
- Non-investment grade (risk rating 11-17);
- Sub-standard (risk rating 18-19); and
- Non-performing (risk rating 20-22).

The first three categories (1-19) are risk ratings for performing loans. The ratings are calculated in IT systems with internally developed models based on manually or automatically fed data. Under certain conditions, the outcome of a manually fed model can be challenged through a rating appeal process. Risk ratings for non-performing loans (NPL) (20-22) are set by the global or regional credit restructuring department. For securitisation portfolios, the external ratings of the tranche in which ING has invested are leading indicators.

Risk ratings assigned to clients are reviewed at least annually, with the performance of the underlying models monitored regularly. Some of these models are global in nature, such as those for large corporates, commercial banks, insurance companies, central governments, local governments, funds, fund managers, project finance and leveraged companies. Other models are more regional- or country-specific: there are PD models for small medium enterprise (SME) companies in Central Europe, the Netherlands, Belgium, Luxembourg, as well as residential mortgage and consumer loan models in the various retail markets.

Rating models for retail clients are predominantly statistically driven and automated, such that ratings can be updated on a monthly basis. Rating models for large corporates, institutions and banks include both statistical characteristics and manual input, with the ratings being manually updated at least annually. Since 2020, portfolios and clients most at risk of being affected by the pandemic were subject to more frequent (e.g. quarterly) reviews.

After the introduction of IFRS9 in 2018 and introduction of the new definition of default (DoD) in 2020, we're now updating the credit models.

Credit risk systems

Credit risk tools and data standards

The acceptance, maintenance, measurement, management and reporting of credit risks at all levels of ING is executed through single, common credit risk data standards using shared credit risk tools that support standardised and transparent credit risk practices. ING has chosen to develop credit risk tools centrally with the philosophy of using a single source of data in an integrated way. This includes applying a combination of the ING policy, the regulatory environment in which we operate and the daily processes that are active throughout the Group. Disciplined application in these three areas is essential for achieving high data quality standards.

The Credit Risk Control Unit (CRCU), which is part of the Financial Risk department, ensures compliant and continuously improving rating systems.

Credit risk portfolio (*)

ING's credit exposure is mainly related to lending to individuals and businesses followed by investments in bonds and securitised assets, and money market. Loans to individuals are mainly mortgage loans secured by residential property. Loans (including guarantees issued) to businesses are often collateralised, but may be unsecured based on the internal analysis of the borrower's creditworthiness. Bonds in the investment portfolio are generally unsecured, but predominantly consist of bonds issued by central governments and EU and/or OECD based financial institutions. Secured bonds, such as mortgage-backed securities and asset-backed securities are secured by the underlying diversified pool of assets (commercial or residential mortgages, car loans and/or other assets) held by the securities issuer. For money market, exposure is mainly deposits to Central Banks. The last major credit risk source involves pre-settlement exposures which arise from trading activities, including derivatives, repurchase transactions and securities lending/borrowing transactions. This is also commonly referred to as counterparty credit risk.

Portfolio analysis per business line (*)

Outstandings per line of business (*)[1, 2, 3]

in EUR million		Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Rating class		**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Investment grade	1 (AAA)	81,615	74,735	331	357	27,089	34,782	2,363	2,375	111,398	112,248
	2-4 (AA)	56,982	63,239	5,863	6,119	41,646	38,586	15	18	104,506	107,961
	5-7 (A)	72,052	66,537	28,456	23,143	59,040	54,381	394	349	159,941	144,409
	8-10 (BBB)	124,622	104,987	125,469	120,714	57,394	53,346	2,502	2,692	309,986	281,738
Non-Investment grade	11-13 (BB)	61,996	65,832	60,296	61,797	42,554	39,823	353	0	165,199	167,451
	14-16 (B)	16,699	20,925	14,560	17,759	10,800	10,299	-	-	42,059	48,983
	17 (CCC)	1,712	1,822	2,158	2,543	731	844	178	128	4,779	5,338
Substandard grade	18 (CC)	865	1,690	904	1,170	477	514	-	-	2,245	3,374
	19 (C)	126	518	1,162	1,306	451	600	-	-	1,739	2,423
Non-performing loans	20-22 (D)	3,937	4,415	5,035	5,614	3,153	3,203	-	295	12,124	13,526
Total		**420,606**	**404,699**	**244,232**	**240,520**	**243,334**	**236,377**	**5,805**	**5,857**	**913,977**	**887,454**
Industry											
Private Individuals		30	25	161,125	160,884	184,810	172,390	-	-	345,965	333,299
Central Banks		83,878	84,697	-	-	22,573	27,921	643	632	107,094	113,250
Real Estate		26,472	26,271	22,691	24,064	3,536	3,297	-	-	52,699	53,632
Commercial Banks		39,581	42,088	230	201	6,390	8,211	2,917	3,010	49,119	53,509
Central Governments		40,530	43,753	1,730	1,691	3,686	4,482	1,696	1,697	47,642	51,623
Natural Resources		51,937	43,905	1,225	1,090	692	553	-	-	53,855	45,549
Non-Bank Financial Institutions		46,597	40,581	1,473	1,488	395	323	441	456	48,906	42,848
Transportation & Logistics		24,123	24,692	4,206	3,571	1,269	696	-	-	29,597	28,960
Food, Beverages & Personal Care		14,003	14,706	6,926	6,162	2,411	1,975	-	-	23,340	22,843
Services		9,449	8,878	11,290	11,302	974	808	30	4	21,743	20,993
Lower Public Administration		6,163	5,698	5,079	4,756	8,029	9,010	-	-	19,271	19,464
Utilities		22,452	17,062	1,370	1,358	113	136	-	-	23,935	18,556
General Industries		11,487	10,943	5,554	4,346	3,086	2,359	-	-	20,127	17,648
Other		43,903	41,398	21,333	19,607	5,369	4,214	77	58	70,682	65,279
Total		**420,606**	**404,699**	**244,232**	**240,520**	**243,334**	**236,377**	**5,805**	**5,857**	**913,977**	**887,454**

Outstandings per line of business (*) - continued[1, 2, 3]

in EUR million		Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Region		**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Europe	Netherlands	74,175	72,236	152,597	149,686	173	645	2,738	2,965	229,682	225,532
	Belgium	32,205	36,517	84,748	84,104	948	642	19	19	117,919	121,282
	Germany	22,669	21,102	508	542	118,734	119,032	46	45	141,956	140,722
	Poland	15,454	18,296	45	55	26,560	20,750	4	-	42,063	39,101
	Spain	10,130	9,157	83	66	27,294	25,255	35	35	37,542	34,512
	United Kingdom	28,193	30,582	187	193	109	170	78	73	28,567	31,018
	Luxemburg	26,632	20,080	4,769	4,373	468	864	18	13	31,887	25,330
	France	18,786	15,651	606	618	7,123	6,447	3	6	26,517	22,721
	Rest of Europe	64,028	61,213	364	525	17,826	20,573	16	13	82,233	82,324
America		71,471	64,688	186	210	1,559	1,535	351	312	73,567	66,745
Asia		45,439	44,961	91	91	132	166	2,498	2,376	48,159	47,594
Australia		8,957	8,134	18	22	42,405	40,294	1		51,382	48,451
Africa		2,467	2,082	31	36	4	3	-	-	2,501	2,121
Total		**420,606**	**404,699**	**244,232**	**240,520**	**243,334**	**236,377**	**5,805**	**5,857**	**913,977**	**887,454**

1 Based on credit risk measurement contained in lending, pre-settlement, money market and investment activities.

2 Based on the total amount of credit risk in the respective column using ING's internal credit risk measurement methodologies. Economic sectors (industry) below 2% are not shown separately but grouped in Other.

3 Geographical areas are based on country of residence, except for private individuals for which the geographical areas are based on the primary country of risk.

Overall portfolio (*)

During 2021, ING's portfolio size increased by €26.5 billion (+ 2.99%) to €914.0 billion outstandings. The net volume growth was concentrated in the Lending risk categories in Wholesale Banking and growth in exposures to Private Individuals.

Foreign exchange rate changes had a positive impact on portfolio growth and increased total outstanding by €11.5 billion. This was driven by the appreciation of the US Dollar (+8.3%), the British Pound (+7.0%), and the Australian Dollar (+1.8%) partly offset by the depreciation of the Turkish Lira (-40.2%) against the Euro.

Rating distribution (*)

Due to the Covid-19 pandemic, governments and banks introduced numerous measures to support individuals and businesses financially. The overall rating distribution in the portfolio has not been materially affected by Covid-19. For details on portfolios most sensitive to Covid-19 see the next paragraph 'Covid-19 sensitive sectors'.

Overall, the rating class concentration slightly improved in 2021. The share of investment grade rating classes increased from 72.8% to 75.0%, while the share of non-investment grade decreased, from 25.0% to 23.2%. Sub-standard grade outstandings decreased from 0.7% to 0.4% of the total portfolio, whereas non-performing loans decreased from 1.5% to 1.3%.

With respect to the rating distribution within the business lines, in Wholesale Banking investment-grade rated assets increased, mainly driven by Natural Resources, Non-Bank Financial Institutions and Utilities, while for non-investment grade assets the outstandings decreased, across multiple sectors.

The rating distribution for Retail Benelux improved mostly because of Dutch residential mortgages, shifting from rating class BB to BBB and A, driven by the continuing increase in the house price index and improving Loan to Values. The rating distribution of residential mortgages in Belgium also improved, reducing concentration in B ratings and lower, while increasing in BBB and BB.

In Retail Challengers & Growth Markets, the distribution across rating classes remained rather stable in 2021. Overall share of investment grade decreased from 76.6% to 76.1%. The increase in non-investment grade is explained primarily by the portfolio in Poland.

Industry (*)

In line with our objective to give stakeholders insight into the portfolio, we present the business lending portfolio per industry breakdown in accordance with the NAICS definition.

The industry composition within Retail is concentrated in private individuals with 66% for Retail Benelux and 76% for Retail Challengers & Growth. In Market Leaders, the overall volumes remained stable throughout 2021 in the Netherlands and in Belgium. In C&G, the increase in volume is in Private Individuals, primarily in Germany, and to a lesser extent in Poland, Spain and Australia.

Within Wholesale Banking, an increase in exposures is noted in Natural Resources of €8.0 billion, notably in Switzerland and in Belux (also as a consequence of higher commodity prices, i.e. financing of same volume requires higher value LC's), in Non-Bank Financial Institutions and in Utilities, compensated to a certain extent by a decrease in Central Governments and Commercial Banks.

Covid-19 sensitive sectors (*)

ING has assessed the elevated risk of our portfolio as a result of the continued impact of the Covid-19 pandemic and the related measures and restrictions. The following sectors are considered to be most impacted (directly or indirectly) by the Covid-19 pandemic, resulting in management adjustments to the model-based Loan Loss Provisions. Refer also to the explanation of the economic sector-based management adjustment in the “management adjustments” section.

Aviation (Transportation & Logistics): exposure decreased to €4.3 billion outstanding in 2021 (0.5% of total portfolio). In terms of rating, the portfolio improved. Main concentration remains in BB and B rating classes. The sub-standard grade outstanding decreased to 0.3% from 1.2% of the Aviation portfolio, and the non-performing grade decreased to 1.9% from 4.5%.

Hospitality & Leisure (Services and Food, Beverages & Personal Care): exposure decreased by €0.6 billion to €5.4 billion outstanding (0.59% of total portfolio). Of the total portfolio, 58.1% is in non-Investment grade. Sub-standard grade decreased to 9.0% from 9.7%, whereas non-performing loans increased to 7.4% from 6.2%.

Non-food retail (Other): exposure increased by €0.5 billion to €7.9 billion (0.87% of total portfolio). Outstanding in investment grade improved from 42.4% to 43.6%, non-investment grade decreased from 53.1% to 50.8%. Sub-standard grade increased to 1.9% from 1.0%, while the non-performing loans remained flat at 3.6%.

Real Estate: credit outstandings slightly decreased and amounted to €52.7 billion as at 31 December 2021 (5.8% of total portfolio) from €53.6 billion (6.0% of total portfolio) in 2020. Rating distribution improved with concentrations increasing in Investment grade and reducing in Speculative grade. The NPL grade increased to 1.3% from 1.2% in 2020, while Substandard grade improved to 0.5% from 1.0%.

Outstandings by economic sectors and geographical area (*) [1]

in EUR million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	Luxemburg	France	Rest of Europe	America	Asia	Australia	Africa	2021
Private Individuals	113,846	42,961	95,583	14,397	23,895	157	3,388	3,115	13,215	167	155	35,058	27	345,965
Central Banks	46,902	18,253	17,811	112	3,027	2,853	8,569	1,039	4,485		2,856	1,168	18	107,094
Real Estate	17,426	10,011	1,520	2,357	1,528	436	4,201	3,254	3,461	3,521	935	4,045	4	52,699
Commercial Banks	1,289	318	3,887	707	392	4,156	3,205	5,520	6,353	7,089	13,526	2,265	413	49,119
Central Governments	4,911	7,396	1,179	7,473	4,417	67	203	2,065	7,695	10,927	299	533	477	47,642
Natural Resources	3,734	1,180	1,208	722	291	4,487	2,497	405	15,471	9,473	12,593	1,013	780	53,855
Non-Bank Financial Institutions	3,043	921	3,146	1,718	72	7,764	4,798	1,790	3,947	18,088	3,209	411		48,906
Transportation & Logistics	4,572	2,209	506	1,177	723	1,760	582	982	6,837	3,410	5,682	645	514	29,597
Food, Beverages & Personal Care	6,581	2,869	616	2,146	489	711	1,600	1,232	2,580	3,131	1,140	235	12	23,340
Services	4,615	9,115	1,105	866	119	523	450	1,470	861	1,539	479	565	36	21,743
Lower Public Administration	343	5,158	5,787	636		-	296	2,732	467	1,197	46	2,608		19,271
Utilities	1,545	1,213	3,024	822	1,270	2,980	397	1,433	4,202	4,106	1,355	1,368	220	23,935
General Industries	5,389	2,891	1,011	2,612	381	395	532	271	3,363	2,116	1,151	15		20,127
Other	15,485	13,424	5,573	6,319	940	2,277	1,168	1,210	9,297	8,803	4,732	1,454		70,682
Total	**229,682**	**117,919**	**141,956**	**42,063**	**37,542**	**28,567**	**31,887**	**26,517**	**82,233**	**73,567**	**48,159**	**51,382**	**2,501**	**913,977**
Rating class														
Investment grade	180,698	78,195	119,311	26,856	29,522	22,820	26,150	20,622	52,875	53,725	36,777	38,200	79	685,831
Non-Investment grade	45,530	35,600	21,250	14,148	7,647	5,234	5,568	5,774	27,993	18,500	10,534	11,998	2,259	212,037
Sub-standard grade	1,230	868	390	290	89	56	81	2	308	203	191	217	58	3,985
Non-performing loans	2,224	3,256	1,006	768	284	458	87	119	1,056	1,139	656	966	105	12,124
Total	**229,682**	**117,919**	**141,956**	**42,063**	**37,542**	**28,567**	**31,887**	**26,517**	**82,233**	**73,567**	**48,159**	**51,382**	**2,501**	**913,977**

1 Geographical areas are based on country of residence, except for private individuals for which the geographical areas are based on the primary country of risk.

Outstandings by economic sectors and geographical area (*) [1]

in EUR million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	Luxemburg	France	Rest of Europe	America	Asia	Australia	Africa	2020
Private Individuals	114,219	42,443	88,178	12,216	21,775	186	3,203	2,644	14,717	169	173	33,346	29	333,299
Central Banks	43,615	22,840	23,601	31	3,058	6,247	3,855	811	3,655	0	4,090	1,424	23	113,250
Real Estate	18,349	10,540	1,374	2,478	1,460	313	3,846	3,511	3,839	2,889	828	4,197	7	53,632
Commercial Banks	1,640	265	4,546	607	468	6,931	3,478	6,218	6,926	7,434	13,222	1,476	298	53,509
Central Governments	6,636	6,762	2,010	8,956	4,435	55	175	2,130	10,020	8,949	344	712	439	51,623
Natural Resources	2,830	1,214	1,102	626	286	3,435	959	316	13,542	8,193	11,442	821	782	45,549
Non-Bank Financial Institutions	2,743	940	3,301	1,502	126	6,348	4,054	1,547	4,096	14,726	3,089	376	0	42,848
Transportation & Logistics	4,162	2,016	1,503	1,018	539	1,934	641	782	6,229	3,628	5,468	743	295	28,960
Food, Beverages & Personal Care	6,623	2,783	306	1,932	515	782	1,663	789	2,202	3,975	1,072	191	10	22,843
Services	4,281	9,307	584	783	159	520	454	411	1,054	2,314	612	515	0	20,993
Lower Public Administration	432	4,875	7,526	721	0	-	583	1,693	528	1,026	30	2,050	0	19,464
Utilities	1,731	1,277	1,815	618	610	2,105	583	402	2,975	3,196	1,716	1,292	237	18,556
General Industries	4,176	2,802	1,030	2,134	252	234	266	194	3,014	2,477	1,053	16	0	17,648
Other	14,094	13,218	3,843	5,478	829	1,926	1,572	1,273	9,527	7,769	4,456	1,293	0	65,279
Total	**225,532**	**121,282**	**140,722**	**39,101**	**34,512**	**31,018**	**25,330**	**22,721**	**82,324**	**66,745**	**47,594**	**48,451**	**2,121**	**887,454**
Rating class														
Investment grade	169,111	78,294	118,082	26,045	26,622	25,924	19,528	16,688	51,233	44,279	35,879	34,545	127	646,357
Non-Investment grade	51,818	38,113	21,185	11,979	7,468	4,837	5,530	5,870	29,051	20,758	10,696	12,651	1,816	221,772
Sub-standard grade	1,794	1,159	516	215	102	101	191	37	679	476	94	349	83	5,798
Non-performing loans	2,808	3,715	939	862	320	156	81	126	1,360	1,232	925	905	95	13,526
Total	**225,532**	**121,282**	**140,722**	**39,101**	**34,512**	**31,018**	**25,330**	**22,721**	**82,324**	**66,745**	**47,594**	**48,451**	**2,121**	**887,454**

1 Geographical areas are based on country of residence, except for private individuals for which the geographical areas are based on the primary country of risk.

Portfolio analysis per geographical area (*)

The portfolio analysis per geographical area re-emphasises the international distribution of ING's credit portfolio. The share of the Netherlands in the overall portfolio decreased to 25.1% (25.4%).

The most noticeable trend in the Netherlands was the increase in exposure with Central Banks. Outstandings to private individuals are stable at 62% (63%) of total outstandings (excl. Central Banks). In Belgium no substantial moves were observed in the portfolio, apart from a decrease in Central Banks (-€4.6 billion).

In Market Leaders, in terms of rating distribution, the share of investment grade increased in both the Netherlands and Belgium. Apart from the increase in investment grade assets, the outstanding with non-investment grade reduced in 2021 for both Netherlands and Belgium. Also, for both countries, the share of sub-standard grade and NPL decreased in 2021. For sub-standard, from 0.8% to 0.5% and from 1.0% to 0.7%. For non-performing loans (NPL), from 1.2% to 1.0% and from 3.1% to 2.8% respectively.

In Challenger & Growth Markets, ING has a strong market position in residential mortgages in Germany, Poland and Spain. Residential mortgage exposures increased in these countries. In Germany, an increase in mortgages is compensated by lower outstandings with the Central bank.

The top five countries within Rest of Europe based on outstanding were: Italy (€16.7 billion), Switzerland (€11.1 billion), Romania (€9.5 billion), Turkey (€8.3 billion) and the Russian Federation (€4.8 billion). Outstandings in Rest of Europe were impacted by the sale of the retail portfolio in Austria (-€1.3 billion), and Turkey (FX impact), compensated by increased outstandings in Romania and Ireland.

In Europe, outside the Benelux, rating distribution in most countries improved. The share of non-investment grade decreased in most countries, apart from Poland (mostly in Natural Resources and in General Industries), and the United Kingdom (increase in Natural Resources). In the UK, a noticeable increase in the share of NPL to 1.6% (from 0.5%), was due mainly to the Food, Beverages and Personal Care sector impacted by a single file, whereas in the other European countries, share of NPL decreased or remained flat.

The increase in exposure in the Americas was mainly driven by FX impact. In Australia, outstanding increased, mostly driven by mortgages (Private individuals).

In terms of rating distribution for America region, an increase in investment grade to 73.0% (from 66.3%), non-investment grade decreased to 25.1% from 31.1%. Sub-standard grade decreased to 0.3%, while NPL slightly improved to 1.5% (from 1.8%).

Australia's rating distribution improved with a shift of outstanding from non-investment to investment grade.

Credit risk mitigation (*)

ING uses various credit risk mitigation techniques and instruments to mitigate the credit risk associated with an exposure and to reduce the losses incurred subsequent to a default by a customer. The most common terminology used in ING for credit risk protection is 'cover'. While a cover may be an important mitigant of credit risk and an alternative source of repayment, generally it is ING's practice to lend on the basis of the customer's creditworthiness rather than exclusively relying on the value of the cover.

Cover forms (*)

Within ING, there are two distinct forms of covers. First, where the asset has been pledged to ING as collateral or security, ING has the right to liquidate it should the customer be unable to fulfil its financial obligation. As such, the proceeds can be applied towards full or partial compensation of the customer's outstanding exposure. This may be tangible (such as cash, securities, receivables, inventory, plant and machinery, and mortgages on real estate properties) or intangible (such as patents, trademarks, contract rights and licences). Second, where there is a third-party obligation, indemnification or undertaking (either by contract and/or by law), ING has the right to claim from that third party an amount if the customer fails on its obligations. The most common examples are guarantees (such as parent guarantees and export credit insurances) or third-party pledged mortgages.

Cover valuation methodology (*)

General guidelines for cover valuation are established to ensure consistent application within ING. These also require that the value of the cover is monitored on a regular basis. Covers are revalued periodically and whenever there is reason to believe that the market is subject to significant changes in conditions. The frequency of monitoring and revaluation depends on the type of cover.

The valuation method also depends on the type of covers. For asset collateral, the valuation sources can be the customer's balance sheet (e.g. inventory, machinery and equipment), nominal value (e.g. cash and receivables), market value (e.g. securities and commodities), independent valuations (e.g. commercial real estate) and market indices (e.g. residential real estate). For third-party obligations, the valuation is based on the value that is attributed to the contract between ING and that third party.

Where collateral values are used in the calculation of stage 3 individual Loan Loss provisions, haircuts may be applied to the valuation in specific circumstances, to sufficiently include all relevant factors impacting the future cash flows. ING increased the haircuts applied to collateral values used in stage 3 individual provisions as at 31 December 2021 to reflect the increased risk of inflated asset prices in certain sectors of the economy. The haircut is applied on real estate, shipping and aviation collateral values used in the calculation of the loss-given-default in recovery scenarios. The haircut reflects the risks of adverse price developments between the moment of valuation of an asset and the actual settlement/cash receipt.

Cover values (*)

This section provides insight into the types of cover and the extent to which exposures benefit from collateral or guarantees. The disclosure differentiates between risk categories (lending, investment, money market and pre-settlement). The most relevant types of cover include mortgages, financial collateral (cash and securities) and guarantees. ING obtains cover that is eligible for credit risk mitigation under CRR/CRDIV, as well as cover that is not eligible. Collateral covering financial market transactions is valued on a daily basis, and as such not included in the following tables. To mitigate the credit risk arising from Financial Markets transactions, the bank enters into legal agreements governing the exchange of financial collateral (high-quality government bonds and cash).

The cover values are presented for the total portfolio of ING, both the performing and non-performing portfolio. Our definition of non-performing is explained in detail in ‘Credit restructuring’ (below). For additional insight, a breakdown of ING’s portfolio by industry and geography is provided.

Exposures are categorised into different value-to-loan (VTL) buckets that give insight in the level of collateralisation of ING’s portfolio. VTL is calculated as the cover value divided by the outstandings at the balance sheet date. The cover values are indexed where appropriate and exclude any cost of liquidation. Covers can either be valid for all or some of a borrower’s exposures or particular outstandings, the latter being the most common. For the purpose of aggregation, over-collateralisation is ignored in the total overview and VTL coverage of more than 100% is reported as fully covered. For VTL coverage in the tables for mortgages, consumer lending and business lending, each cover is subsequently assigned to one of the six defined VTL buckets: no cover, >0% to 25%, >25% to 50%, >50% to 75%, >75% to <100%, and ≥ 100%.

The next table gives an overview of the collateralisation of the ING’s total portfolio.

Cover values including guarantees received (*)

in EUR million		Cover type				Value to Loan		
2021	Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	Partially covered	Fully covered
Consumer Lending	344,188	690,752	6,533	25,688	40,618	6.3%	7.6%	86.1%
Business Lending	413,985	160,694	23,454	112,095	332,989	44.2%	20.2%	35.5%
Investment and Money Market	112,272	43	63	1,100	167	98.9%	0.8%	0.3%
Total Lending, Investment and Money Market	**870,445**	**851,490**	**30,050**	**138,882**	**373,774**	**36.0%**	**12.8%**	**51.2%**
Pre-settlement	43,531							
Total Bank	**913,977**							

Cover values including guarantees received (*)

in EUR million		Cover type				Value to Loan		
2020	Outstandings	Mortgages	Financial Collateral	Guarantees	Other	No Cover	Partially covered	Fully covered
Consumer Lending	331,288	609,967	6,208	26,117	38,438	6.7%	7.5%	85.8%
Business Lending	388,270	161,474	20,431	94,913	302,357	43.1%	21.2%	35.7%
Investment and Money Market	121,809	95	121	782	245	99.2%	0.1%	0.7%
Total Lending, Investment and Money Market	**841,367**	**771,536**	**26,761**	**121,811**	**341,039**	**36.9%**	**12.7%**	**50.4%**
Pre-settlement	46,086							
Total Bank	**887,454**							

In 2021, the collateralisation level of the portfolio increased as a result of an increase in the cover value in lending to private individuals. Excluding the pre-settlement portfolio,51.2% of ING's outstandings were fully collateralised in 2021 (2020: 50.4%). Since investments traditionally do not require covers, the percentage for 'no covers' in this portfolio is above 90%. However, 99% of the investment outstanding is investment grade. Improved economic conditions in ING's main markets contributed to improved collateral valuations, observed in consumer lending. Relative to the overall developments in the housing markets and the impact on provisioning, note the paragraphs on 'management adjustments' in the Loan Loss provisioning section, that were made to reflect potential impact of higher inflation, higher rates and market uncertainty.

Consumer lending portfolio (*)

The consumer lending portfolio accounts for 37.7% (2020: 37.3%) of ING's total outstanding, primarily consisting of residential mortgage loans and other consumer lending loans, which mainly comprise term loans, revolvers and personal loans to consumers. As a result, most of the collateral consists of mortgages. The mortgage values are collected in an internal central database and in most cases external data is used to index the market value. A significant part of ING's residential mortgage portfolio is in the Netherlands (35.3%), followed by Germany (26.9%), Belgium and Luxembourg (13.2%) and Australia (10.9%).

Consumer lending portfolio – cover values (*)

The below tables show the values of different covers and the VTL split between performing and non-performing loans.

Cover values including guarantees received - Consumer lending portfolio (*)

in EUR million

2021	Outstandings	Cover type: Mortgages	Cover type: Financial Collateral	Cover type: Guarantees	Cover type: Other covers	Value to Loan: No Cover	Value to Loan: >0% - 25%	Value to Loan: >25%-50%	Value to Loan: >50% - 75%	Value to Loan: >75% - <100%	Value to Loan: ≥ 100%
Performing											
Residential Mortgages (Private Individuals)	308,023	674,576	5,014	22,379	33,539			–	0.5%	7.6%	91.8%
Residential Mortgages (SME) [1]	5,912	9,520	168	109	1,598		0.2%	0.6%	1.4%	5.4%	92.4%
Other Consumer Lending	25,537	200	1,317	3,085	4,009	79.7%	0.3%	0.1%	0.1%	0.3%	19.5%
Total Performing	**339,472**	**684,296**	**6,499**	**25,573**	**39,146**	**6.0%**	**–**	**0.1%**	**0.5%**	**7.0%**	**86.3%**
Non-performing											
Residential Mortgages (Private Individuals)	3,336	6,149	31	97	1,270	0.4%	–	0.3%	1.0%	4.8%	93.4%
Residential Mortgages (SME) [1]	194	302	1	6	51	0.1%	0.2%	0.7%	1.6%	7.4%	90.0%
Other Consumer Lending	1,186	5	1	12	151	92.3%	0.4%	0.2%	0.4%	0.5%	6.3%
Total Non-performing	**4,716**	**6,456**	**33**	**115**	**1,472**	**23.5%**	**0.1%**	**0.3%**	**0.9%**	**3.8%**	**71.4%**
Total Consumer Lending	**344,188**	**690,752**	**6,533**	**25,688**	**40,618**	**6.3%**	**–**	**0.1%**	**0.5%**	**7.0%**	**86.1%**

1 Consists mainly of residential mortgages to small individual business clients

Cover values including guarantees received - Consumer lending portfolio (*)

in EUR million

2020	Outstandings	Cover type: Mortgages	Cover type: Financial Collateral	Cover type: Guarantees	Cover type: Other covers	Value to Loan: No Cover	Value to Loan: >0% - 25%	Value to Loan: >25%-50%	Value to Loan: >50% - 75%	Value to Loan: >75% - <100%	Value to Loan: ≥ 100%
Performing											
Residential Mortgages (Private Individuals)	294,642	594,073	5,147	23,210	30,927			0.1%	0.7%	7.3%	92.0%
Residential Mortgages (SME) [1]	5,681	9,010	151	126	1,532		0.3%	0.7%	1.4%	6.1%	91.5%
Other Consumer Lending	25,780	197	861	2,619	4,336	81.5%	0.3%	0.1%	0.2%	0.3%	17.6%
Total Performing	**326,103**	**603,281**	**6,160**	**25,955**	**36,795**	**6.4%**	**0.0%**	**0.1%**	**0.7%**	**6.7%**	**86.1%**
Non-performing											
Residential Mortgages (Private Individuals)	3,698	6,379	45	141	1,414	0.2%	0.1%	0.4%	1.2%	5.9%	92.2%
Residential Mortgages (SME) [1]	184	301		9	54	0.1%	0.2%	0.5%	1.8%	7.7%	89.7%
Other Consumer Lending	1,303	6	4	12	175	91.8%	0.3%	0.2%	0.3%	0.6%	6.7%
Total Non-performing	**5,185**	**6,686**	**49**	**162**	**1,643**	**23.2%**	**0.1%**	**0.3%**	**1.0%**	**4.6%**	**70.6%**
Total Consumer Lending	**331,288**	**609,967**	**6,208**	**26,117**	**38,438**	**6.7%**	**0.0%**	**0.1%**	**0.7%**	**6.7%**	**85.8%**

1 Consists mainly of residential mortgages to small individual business clients

The collateralisation levels of the consumer lending portfolio continued to improve during 2021. The rise in collateralisation levels was due to rising housing prices observed in different mortgage markets, specifically noticeable in the Netherlands but also in Belgium, Germany and Australia. Relative to the overall developments in the housing markets driving a decrease of loan loss provisions relating to the mortgages portfolio's, note management adjustments recognised to maintain an appropriate level of provisions. See paragraph on 'management adjustments' in the Loan Loss provisioning section.

ING's residential mortgage outstanding increased mainly in Poland (18.8%), Spain (11.5%) and Germany (8.4%). In 2020 the increases where respectively 10.3%, 7.4% and 4.9%. Mortgage outstanding in the Netherlands decreased slightly (0.2%). For the residential mortgages portfolio, the cover type guarantees relate to mortgages covered by governmental insurers under the Dutch national mortgage guarantee (NHG) scheme in the Netherlands. The NHG guarantees the repayment of a loan in case of a forced property sale.

Business lending portfolio (*)

Business lending accounts for 45.3% of ING's total outstanding (2020: 43.8%). In line with our objective to give stakeholders insight into the portfolio, we present the business lending portfolio per industry breakdown in accordance with the NAICS definition and per region and main market. Business lending presented in this section does not include pre-settlement, investment and money market exposures.

Cover values including guarantees received - Business lending portfolio (*)

in EUR million

2021

		Cover type				Value to Loan					
Industry	Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 100%
Central Banks	81,485		18			100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Real Estate	52,079	103,229	1,096	6,956	32,670	3.6%	0.7%	2.3%	0.9%	4.9%	87.7%
Natural Resources	50,451	1,221	2,470	29,319	33,451	28.9%	14.2%	13.7%	8.9%	11.1%	23.2%
Transportation & Logistics	28,184	3,602	171	8,803	44,881	16.1%	6.4%	2.1%	4.5%	12.2%	58.7%
Non-Bank Financial Institutions	25,656	1,105	13,330	3,970	52,196	40.2%	4.8%	0.4%	2.3%	6.5%	45.8%
Food, Beverages & Personal Care	20,277	8,846	440	12,658	39,597	22.9%	4.6%	5.0%	9.3%	15.9%	42.3%
Services	20,671	10,162	1,814	7,883	23,324	28.1%	5.2%	5.9%	4.9%	9.8%	46.2%
Commercial Banks	19,159	5	276	1,535	3,966	74.6%	3.6%	0.6%	1.5%	5.1%	14.5%
Utilities	21,245	172	997	4,944	11,520	50.5%	15.0%	4.9%	3.9%	3.2%	22.3%
General Industries	19,067	5,447	310	6,592	23,701	33.1%	4.8%	3.9%	7.9%	9.1%	41.1%
Chemicals, Health & Pharmaceuticals	14,384	7,442	185	5,586	11,674	30.6%	6.1%	2.9%	5.8%	12.6%	42.1%
Builders & Contractors	14,089	8,036	208	4,967	17,591	22.7%	6.4%	6.2%	7.2%	11.4%	46.1%
Others [1]	47,237	11,427	2,138	18,881	38,418	44.2%	3.7%	5.2%	3.6%	10.6%	32.7%
Total Business Lending	**413,985**	**160,694**	**23,454**	**112,095**	**332,989**	**44.2%**	**5.0%**	**4.0%**	**3.8%**	**7.3%**	**35.5%**
of which Total Non-performing	***7,264***	***2,649***	***162***	***3,810***	***7,090***	***27.5%***	***5.9%***	***6.0%***	***6.0%***	***17.2%***	***37.4%***

1 'Others' comprises industries with outstandings lower than €10 billion.

Cover values including guarantees received - Business lending portfolio (*)

in EUR million

2020

		Cover type				Value to Loan					
Industry	Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 100%
Central Banks	79,464	–	23	–	–	100.0%	–	–	–	–	–
Real Estate	52,743	99,824	1,176	6,644	28,378	3.3%	0.7%	2.1%	1.5%	7.4%	85.1%
Natural Resources	43,209	1,453	2,192	23,503	35,739	24.5%	14.4%	13.0%	7.2%	15.9%	25.0%
Transportation & Logistics	27,395	7,251	182	7,487	37,220	18.2%	5.1%	2.4%	3.9%	11.7%	58.8%
Non-Bank Financial Institutions	22,225	1,139	10,771	3,766	46,286	42.9%	3.5%	2.3%	3.6%	4.6%	43.2%
Food, Beverages & Personal Care	20,594	8,346	430	9,473	33,918	25.0%	5.1%	5.9%	9.6%	14.0%	40.3%
Services	19,632	10,623	1,855	8,394	23,917	27.9%	5.8%	7.0%	5.3%	7.2%	46.9%
Commercial Banks	17,931	313	107	1,546	3,868	74.8%	1.0%	3.4%	1.7%	8.2%	10.8%
Utilities	16,948	185	1,011	4,464	9,723	42.3%	19.1%	5.2%	4.3%	3.0%	26.0%
General Industries	16,417	5,563	241	5,736	20,781	31.5%	4.0%	5.7%	9.6%	9.9%	39.3%
Chemicals, Health & Pharmaceuticals	14,120	7,558	194	4,391	12,332	26.0%	5.7%	3.6%	7.7%	13.6%	43.5%
Builders & Contractors	13,895	7,583	309	4,490	15,711	26.3%	6.2%	6.4%	8.9%	10.4%	41.7%
Others [1]	43,696	11,635	1,938	15,020	34,484	40.0%	5.1%	4.3%	6.1%	10.5%	34.1%
Total Business Lending	**388,270**	**161,474**	**20,431**	**94,913**	**302,357**	**43.1%**	**4.9%**	**4.2%**	**4.2%**	**7.9%**	**35.7%**
of which Total Non-performing	**8,261**	**3,027**	**230**	**3,803**	**6,915**	**29.1%**	**5.2%**	**5.0%**	**8.5%**	**14.2%**	**38.1%**

1 'Others' comprises industries with outstandings lower than €10 billion.

Cover values including guarantees received - Business lending portfolio (*)

2021			Cover type				Value to Loan					
Region		Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 100%
Europe	Netherlands	107,200	62,780	3,774	12,668	58,622	53.2%	1.7%	2.3%	3.5%	7.6%	31.8%
	Belgium	50,231	36,207	1,219	21,476	56,704	25.5%	1.9%	2.5%	2.9%	5.9%	61.3%
	Germany	31,563	3,168	195	4,443	6,946	75.0%	4.1%	2.0%	1.6%	0.8%	16.5%
	Luxembourg	23,628	9,051	1,083	3,085	33,378	59.5%	1.0%	3.7%	1.3%	4.3%	30.1%
	Poland	18,245	9,349	121	4,046	30,961	30.2%	4.5%	4.2%	6.0%	10.7%	44.4%
	United Kingdom	15,321	1,716	2,901	5,168	12,128	47.8%	17.7%	4.0%	6.4%	7.1%	17.1%
	Switzerland	10,082	78	762	4,469	5,697	23.3%	19.3%	27.1%	13.3%	4.1%	12.9%
	France	10,971	7,144	117	1,598	6,493	43.4%	2.5%	2.4%	3.3%	4.0%	44.3%
	Rest of Europe	50,046	13,206	2,276	24,520	46,560	37.8%	6.9%	3.8%	3.3%	9.2%	39.1%
America		45,472	7,097	9,156	10,898	43,960	37.6%	9.3%	5.8%	3.8%	10.9%	32.6%
Asia		37,978	1,240	1,559	15,215	27,765	40.9%	6.1%	5.8%	6.0%	9.9%	31.3%
Australia		10,805	9,652	242	2,291	3,110	34.3%	6.1%	1.0%	1.4%	2.6%	54.6%
Africa		2,444	6	49	2,219	667	13.9%	9.1%	7.3%	9.7%	22.4%	37.5%
Total Business Lending		**413,985**	**160,694**	**23,454**	**112,095**	**332,989**	**44.2%**	**5.0%**	**4.0%**	**3.8%**	**7.3%**	**35.5%**
of which Non-performing		**7,264**	**2,649**	**162**	**3,810**	**7,090**	**27.5%**	**5.9%**	**6.0%**	**6.0%**	**17.2%**	**37.4%**

Cover values including guarantees received - Business lending portfolio (*)												
2020			Cover type				Value to Loan					
Region		Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 100%
Europe	Netherlands	100,918	61,180	3,298	9,245	59,268	51.6%	1.6%	2.5%	3.9%	8.6%	31.8%
	Belgium	50,245	36,071	1,174	22,424	53,041	24.8%	1.6%	3.0%	3.1%	6.9%	60.7%
	Germany	35,069	3,233	118	2,711	4,788	80.4%	4.0%	2.1%	1.4%	1.2%	10.9%
	Luxembourg	16,332	8,403	1,671	2,849	29,875	46.4%	1.5%	6.0%	1.5%	3.4%	41.1%
	Poland	16,176	9,414	168	3,720	25,652	28.3%	4.5%	3.8%	7.9%	11.3%	44.2%
	United Kingdom	13,864	4,659	1,971	4,028	9,906	44.6%	16.1%	7.2%	3.0%	8.3%	20.8%
	Switzerland	9,544	46	684	3,540	6,980	27.2%	21.7%	16.6%	7.1%	7.2%	20.3%
	France	9,513	7,543	150	2,021	4,096	39.2%	5.1%	4.1%	2.7%	2.0%	46.8%
	Rest of Europe	46,302	13,817	2,460	18,446	41,326	35.4%	7.7%	4.6%	4.7%	9.1%	38.5%
America		40,800	5,967	6,872	7,442	40,815	38.3%	7.3%	6.0%	5.4%	10.2%	32.7%
Asia		37,435	978	1,728	15,174	23,607	40.6%	5.0%	5.5%	6.6%	11.9%	30.5%
Australia		10,019	10,153	83	1,650	2,273	26.4%	7.7%	2.1%	2.4%	4.7%	56.8%
Africa		2,053	10	53	1,661	730	8.0%	6.6%	3.0%	19.9%	26.8%	35.7%
Total Business Lending		**388,270**	**161,474**	**20,431**	**94,913**	**302,357**	**43.1%**	**4.9%**	**4.2%**	**4.2%**	**7.9%**	**35.7%**
of which Non-performing		**8,261**	**3,027**	**230**	**3,803**	**6,915**	**29.1%**	**5.2%**	**5.0%**	**8.5%**	**14.2%**	**38.1%**

The tables above on cover values describe the collateralisation of ING's business lending portfolio. Breakdowns are provided by industry as well as by geographical region or market, based on the residence of the borrowers.

Broken down by industry, the largest increase in outstanding is attributable to Natural Resources (€7.2 billion, 16.8%) followed by Utilities (€4.3 billion, 25.4%). The largest decrease in outstanding was observed in Real Estate (€0.7 billion), where the total cover percentage increased.

The proportion of the business lending portfolio with no cover increased, which was mainly witnessed in the Netherlands to 53.2% (from 51.6%), caused by increased Central Bank outstanding. Most industry types experienced an increase in total covers.

Credit quality (*)

Credit risk categories (*)

	Regular	Watch List	Restructuring [1]	Non-performing [1]
Possible ratings	1–19	1–19	11–20	20-22
Typical ratings	1–14	15–17	18–20	20-22
Deterioration in risk	Not significant	Significant	Significant	Significant
Significant intervention	Not required	Not required	Required	Required
Account Ownership	Front Office	Front Office	Front Office	Front Office
Credit Risk Management	Regular	Regular	Credit Restructuring	Credit Restructuring
Primary Manager	Front Office	Front Office	Credit Restructuring	Credit Restructuring
Accounting provisioning	Stage 1/2	Stage 1/2	Stage 2/3	Stage 3

1 More information on the Restructuring and Non-performing categories can be found in the Credit restructuring section.

Credit quality outstandings (*)[1]

in EUR million	2021	2020
Performing not past due	819,410	786,011
Business lending performing past due	8,121	6,252
Consumer lending performing past due	1,142	953
Non-performing	12,021	13,497
Total lending and investment	**840,694**	**806,713**
Money market	**29,752**	**34,654**
Pre-settlement	**43,531**	**46,086**
Total	**913,977**	**887,454**

1 Past due based on new definition of default, prior period outstandings updated

Past due obligations (*)

Retail Banking continuously measures its portfolio in terms of payment arrears and determines on a monthly basis if there are any significant changes in the level of arrears. This methodology is principally extended to loans to private individuals, such as residential mortgage loans, car loans and other consumer loans, as well as business lending. An obligation is considered 'past due' if a payment of interest or principal is more than one day late. ING aims to help its customers as soon as they are past due by communicating to remind them of their payment obligations. In its contact with the customers, ING aims to solve the (potential) financial difficulties by offering a range of measures (e.g. payment arrangements, restructuring). If the issues cannot be cured, for example because the customer is unable or unwilling to pay, the contract is sent to the recovery unit. The facility is downgraded to risk rating 20 (non-performing) when the facility or obligor – depending on the level at which the non-performing status is applied - is more than 90 days past due and to risk rating 21 or 22 in case of an exit scenario.

ING has aligned the regulatory concept of non-performing with that of the definition of default. Hence, in Wholesale Banking, obligors are classified as non-performing when a default trigger occurs:

- ING believes the borrower is unlikely to pay; the borrower has evidenced significant financial difficulty, to the extent that it will have a negative impact on the future cash flows of the financial asset. The following events could be seen as indicators of financial difficulty:
  - The borrower (or third party) has started insolvency proceedings;
  - A group company/co-borrower has NPL status;
  - Indication of fraud (affecting the company's ability to service its debt);
  - There is doubt as to the borrower's ability to generate stable and sufficient cash flows to service its debt;
  - Restructuring of debt.
- ING has granted concessions relating to the borrower's financial difficulty, the effect of which is a reduction in expected future cash flows of the financial asset below current carrying amount.
- The obligor has failed in the payment of principal, interest or fees, the total past due amount is above the materiality threshold and this remains the case for more than 90 consecutive days.

Further, Wholesale Banking has an individual name approach, using early warnings indicators to signal possible future issues in debt service.

Ageing analysis (past due but performing): Consumer lending portfolio by geographic area, outstandings (*)[1,2,3]

in EUR million

Region		2021					2020				
		Past due for 1–30 days	Past due for 31–60 days	Past due for 61–90 days	Past due for >90 days	Total	Past due for 1–30 days	Past due for 31–60 days	Past due for 61–90 days	Past due for >90 days	Total
Europe	Belgium	599	53	61		714	355	12	4	0	371
	Germany	105	27	11	0	143	73	26	20	32	152
	Poland	35	5	3		43	36	6	5		47
	Netherlands	31	9	3	0	43	24	7	2	8	41
	Luxemburg	73	3	1	1	78	41	0	0		41
	Spain	13	7	5		26	14	10	8	0	33
	France	2	0	0	0	2	1	0	0	0	2
	United Kingdom	0	0	0		1	0	0	0		0
	Rest of Europe	52	9	5		66	61	14	7	0	83
America		0	0	0		0	0	0	0	1	1
Asia		0	0	0		0	1	0	0	0	1
Australia		17	7	1		25	67	15	4	96	182
Total		**927**	**123**	**91**	**1**	**1,142**	**674**	**91**	**50**	**138**	**953**

1 Based on consumer lending. The amount of past due but performing financial assets in respect of non-lending activities was not significant.

2 The absolute and relative materiality thresholds used for determining a defaulted status do not apply for the purposes of classification as past due. Below these thresholds, arrears of more than 90 days are reported as past due.

3 Based on new definition of default, prior period has been adjusted.

The past due but performing outstanding of consumer lending increased by €189 million. The largest increase was observed in Belgium (€343 million), in term loans (€143 million) and in Residential Mortgage (€105 million). The largest decreases are reported by Australia, Rest of Europe and Germany. Australia's decrease (€157 million) is mainly visible in the >90 days past due bucket.

Ageing analysis (past due but performing): Business lending portfolio by geographic area, outstandings (*)[1,2]

in EUR million		2021					2020				
Region		Past due for 1–30 days	Past due for 31–60 days	Past due for 61–90 days	Past due for >90 days	Total	Past due for 1–30 days	Past due for 31–60 days	Past due for 61–90 days	Past due for >90 days	Total
Europe	United Kingdom	1,036	108	16	0	1,159	636	485	4	0	1,124
	Belgium	1,676	178	8	0	1,863	977	60	28	2	1,067
	Netherlands	553	16	4	0	574	532	29	1	4	565
	Luxemburg	586	270	0	1	856	468	73	5	6	553
	Poland	94	5	2	1	102	66	8	4	0	78
	Germany	5	0	2	0	7	45	0	–	0	45
	Spain	95	0	1	0	96	44	–	–	–	44
	France	36	5	0	0	41	30	1	0	0	31
	Rest of Europe	571	57	1	1	629	492	8	2	3	504
America		2,076	71	0	0	2,146	1,595	131	–	–	1,726
Asia		276	–	25	0	302	37	108	–	0	146
Australia		327	17	0	1	345	61	306	1	1	369
Total		**7,331**	**727**	**60**	**3**	**8,121**	**4,983**	**1,209**	**44**	**16**	**6,252**

1 The absolute and relative materiality thresholds used for determining a defaulted status do not apply for the purposes of classification as past due. Below these thresholds, arrears of more than 90 days are reported as past due.

2 Based on new definition of default, prior period has been adjusted.

Total past due but performing outstanding of business lending increased by €1.87 billion. These increases are mainly contributed by increased outstanding in the 1-30 days past due bucket (€2.35 billion), partly offset by decreased outstanding in 31-60 days past due bucket (€482 million). The top 3 areas of increase in the 1-30 days bucket are Belgium (€699 million), America (€481 million) and United Kingdom (€400 million). In 2020, ING recognised management adjustment to cover the elevated risk of clients using payment holiday facilities.

Credit restructuring (*)

Global Credit Restructuring (GCR) is the dedicated and independent department that deals with non-performing loans and loans that hold a reasonable probability that ING will end up with a loss, if no specific action is taken. GCR handles accounts or portfolios requiring an active approach, which may include renegotiation of terms and conditions and business or financial restructuring. The loans are managed by GCR or by units in the various regions and business units.

ING uses three distinct statuses to categorise the management of clients with (perceived) deteriorating credit risk profiles, i.e. there is increasing doubt as to the performance and the collectability of the client's contractual obligations:

- **Watch List**: Usually, a client is first classified as Watch List when there are concerns of any potential or material deterioration in credit risk profile that may affect the ability of the client to adhere to its debt service obligations or to refinance its existing loans. Watch List status requires more than usual attention, increased monitoring and quarterly reviews. Some clients with a Watch List status may develop into a Restructuring status or even a Recovery status.
- **Restructuring**: A client is classified in Restructuring when there are concerns about the client's financial stability, credit worthiness, and/or ability to repay, but where the situation does not require the recall or acceleration of facilities or the liquidation of collateral. ING's actions aim to maintain the going concern status of the client by:
  - Restoring the client's financial stability;
  - Supporting the client's turnaround;

  - Restoring the balance between debt and equity; and
  - Restructuring the debt to a sustainable situation.
- **Recovery**: A client is classified as in Recovery when ING and/or the client concludes that the client's financial situation cannot be restored and a decision is made to end the (credit) relationship or even to enter into bankruptcy. ING prefers an amicable exit, but will enforce and liquidate the collateral or claim under the guarantees if deemed necessary.

Watch List, Restructuring and Recovery accounts are reviewed at least quarterly by the front office, GCR and the relevant credit risk management executives.

Forbearance (*)

Forbearance occurs when a client is unable to meet their financial commitments due to financial difficulties they face or are about to face and ING grants concessions towards them. Forborne assets are assets in respect of which forbearance measures have been granted.

Forbearance may enable clients experiencing financial difficulties to continue repaying their debt.

For business customers, ING mainly applies forbearance measures to support clients with fundamentally sound business models that are experiencing temporary difficulties with the aim of maximising the client's repayment ability and therewith avoiding a default situation or helping the client to return to a performing situation.

For ING retail units, clear criteria have been established to determine whether a client is eligible for the forbearance process. Specific approval mandates are in place to approve the measures, as well as procedures to manage, monitor and report the forbearance activities.

ING reviews the performance of forborne exposures at least quarterly, either on a case-by-case (business) or on a portfolio (retail) basis.

All exposures are eligible for forbearance measures, i.e. both performing (Risk Ratings 1-19) and non-performing (Risk Ratings 20-22) exposures. ING uses specific criteria to move forborne exposures from non-performing to performing or to remove the forbearance statuses that are consistent with the corresponding European Banking Authority (EBA) standards. An exposure is reported as forborne for a minimum of two years. An additional one-year probation period is observed for forborne exposures that move from non-performing back to performing.

Since the outbreak of Covid-19, ING has supported clients affected by the pandemic among others by providing payment holidays. Refer to 'Payment holidays' below for more information on payment holidays.

Summary Forborne portfolio (*)

in EUR million	2021				2020			
Business Line	Outstandings	Of which: performing	Of which: non-performing	% of total portfolio	Outstandings	Of which: performing	Of which: non-performing	% of total portfolio
Wholesale Banking	9,798	7,455	2,343	3.1%	10,176	7,849	2,327	3.2%
Retail Banking	10,018	6,339	3,679	2.1%	9,640	6,341	3,299	2.0%
Total	**19,816**	**13,793**	**6,022**	**2.5%**	**19,816**	**14,190**	**5,626**	**2.5%**

Summary Forborne portfolio by forbearance type (*)

in EUR million	2021				2020			
Forbearance type	Outstandings	Of which: performing	Of which: non-performing	% of total portfolio	Outstandings	Of which: performing	Of which: non-performing	% of total portfolio
Loan modification	18,311	13,128	5,183	2.3%	17,877	12,937	4,940	2.3%
Refinancing	1,505	666	839	0.2%	1,939	1,252	686	0.2%
Total	**19,816**	**13,793**	**6,022**	**2.5%**	**19,816**	**14,190**	**5,626**	**2.5%**

As per 31 December 2021, ING's total forborne assets remained stable at €19.8 billion compared to 31 December 2020. Wholesale Banking decreased by €0.4 billion, whereas Retail Banking increased by €0.4 billion.

Wholesale Banking (*)

As per December 2021, Wholesale Banking forborne assets amounted to €9.8 billion, which represented 3.1% of the total Wholesale Banking portfolio (Lending and Investment credit outstanding).

Wholesale Banking: Forborne portfolio by geographical area (*)

in EUR million		2021			2020		
Region		Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Europe	Netherlands	1,012	811	201	842	700	142
	Belgium	329	321	8	255	175	81
	Germany	868	658	210	845	676	170
	United Kingdom	1,344	913	432	1,738	1,606	132
	Italy	286	261	25	353	317	36
	Norway	79	29	50	78	32	47
	Poland	181	160	21	199	101	98
	Rest of Europe	2,381	2,181	200	2,404	2,149	255
America		1,900	1,326	574	2,338	1,541	796
Asia		685	292	393	555	194	362
Australia		568	416	152	365	251	113
Africa		164	88	76	202	109	94
Total		**9,798**	**7,455**	**2,343**	**10,176**	**7,849**	**2,327**

Wholesale Banking: Forborne portfolio by economic sector (*)

in EUR million	2021			2020		
Industry	Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Natural Resources	2,047	1,177	870	2,370	1,397	973
Transportation & Logistics	1,336	1,061	274	1,453	1,253	201
General Industries	366	321	45	661	605	55
Food, Beverages & Personal Care	1,202	749	452	1,475	1,216	260
Real Estate	1,665	1,570	95	529	365	165
Chemicals, Health & Pharmaceuticals	347	324	22	394	364	30
Builders & Contractors	177	135	41	449	370	78
Utilities	407	271	136	290	141	149
Services	793	687	106	750	643	106
Retail	361	304	57	346	296	49
Automotive	581	535	46	768	714	54
Other	516	318	197	691	485	206
Total	**9,798**	**7,455**	**2,343**	**10,176**	**7,849**	**2,327**

The main concentration of forborne assets in a single country was in the United Kingdom with 14% (2020: 17%) of the total Wholesale Banking forborne assets and 18% (2020: 6%) of the total non-performing forborne assets.

Wholesale Banking forborne assets decreased by €378 million compared to 2020, of which the performing forborne assets decreased by €394 million. The decrease of the performing forborne assets was visible across most industries, offset by an increase for Real Estate. On a regional basis, the decrease was mainly visible in the United Kingdom and America.

Wholesale Banking forborne assets were mainly concentrated in Natural Resources, Real Estate, Transportation & Logistics and Food Beverages & Personal Care. Together they accounted for 64% of the total Wholesale Banking forborne assets and 72% of the total Wholesale Banking non-performing forborne assets. Back in 2020, the main concentration was witnessed Natural Resources, Food Beverages & Personal Care- and Transportation & Logistics with 52% of the total WB forborne. In 2021, a significant increase in forborne assets was visible in Real Estate (+€1.1 billion), offset by a decrease in Natural Resources (-€0.3 billion), General Industries (-€0.3 billion), Food, Beverages & Personal Care (-€0.3 billion) and Builders & Contractors (-€0.3 billion). Relative to the views towards sectors, also note the sector based approach as explained in the Management adjustments paragraph in the Loan Loss Provisioning section.

Retail Banking (*)

As per end of December 2021, Retail Banking forborne assets amounted to a total of €10.0 billion, which represented 2.1% of the total Retail Banking portfolio (Lending and Investment credit outstanding).

Retail Banking: Forborne portfolio by geographical area (*)

in EUR million		2021			2020		
Region		Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Europe	Netherlands	4,171	3,224	947	4,415	3,447	968
	Belgium	3,319	2,035	1,284	2,672	1,621	1,051
	Germany	497	306	191	578	410	168
	Turkey	146	97	49	307	218	89
	Poland	450	152	298	349	112	237
	Romania	115	49	66	114	59	55
	Italy	129	47	82	49	13	37
	Spain	35	11	23	22	10	12
	Rest of Europe	99	68	30	80	42	37
America		9	7	2	10	9	1
Asia		3	1	1	3	1	2
Australia		1,045	340	705	1,041	399	643
Africa		1	0	0	0	0	0
Total		**10,018**	**6,339**	**3,679**	**9,640**	**6,341**	**3,299**

The main concentration of forborne assets in a single country was in the Netherlands with 42% (2020: 46%) of the total Retail Banking forborne assets and 26% (2020: 29%) of the non-performing forborne assets. Then Belgium followed with 33% (2020: 28%) of the total Retail Banking forborne assets. Out of the total of €10.0 billion, an amount of €4.6 billion is related to mortgages (2020: €4.6 billion).

Payment holidays

Globally, 2021 has been still dominated by the Covid-19 pandemic and the distressing human and economic cost thereof. Despite increasing vaccination rates and a further reopening of economies during the year, the end of 2021 was marked again by increasing infection rates due to the spread of new virus variants. In many countries, governments have adopted economic support programs (such as tax advantages, unemployment regulations or guarantees) to address the adverse systemic economic impact of the coronavirus. In addition, various initiatives have been taken by ING to support our clients to manage these extraordinary times by way of granting temporary payment holidays, (guaranteed) new money facilities etc.

Governments in almost all Retail Banking countries have adopted measures providing for payment holidays. During 2020 and 2021, in line with the EBA moratoria guidelines, approximately 137,000 customers had been granted payment holidays under schemes that were eligible under the EBA moratoria guidelines. The total exposure of loans for which a payment holiday was granted amounts to €15.3 billion, of which over 57% were for customers located in the Netherlands and Belgium. At the end of 2021, 99.8% of granted payment holidays had expired.

The payment holiday schemes offered in the various countries differ in terms of scope, benefit duration and key conditions and are mainly applied to business lending, mortgages and consumer loans.

The various measures taken by ING to alleviate the impact of Covid-19 also impacted the loan classification in terms of forbearance and consequently IFRS 9 staging. In light of this, the EBA has provided guidelines that expired on 30 September 2020, which defined eligibility criteria for a payment holiday arrangement offered to a large group of customers to be classified as a “general payment moratorium”. Based on the guidelines, the granting of these payment holidays did not lead to forbearance classifications. A small number of payment holidays were granted outside this scheme and were flagged as forborne. ING followed the EBA guidelines and when a payment holiday was provided to a customer as part of a “general payment moratorium”, ING did not consider this measure to classifiable as forbearance. EBA further extended these guidelines in the first week of December 2020, valid until 31 March 2021, with certain extra conditions. ING decided not to make use of the extension of these guidelines and took the decision to treat exposures subject to a payment holiday under new or extended schemes (after September 2020) as IFRS 9 stage 2 or stage 3 exposures. Limited exceptions, due to local regulatory requirements, were specifically approved by the highest credit policy approval body (GCTP). To address the elevated risk for clients with payment holidays a management adjustment was considered necessary. Please refer to the paragraph on ‘Management adjustments’ in the Loan Loss Provisioning section.

Non-performing loans (*)

ING's loan portfolio is under constant review. Loans to obligors that are considered more than 90 days past due on material exposure are reclassified as non-performing. For business lending portfolios, there generally are reasons for declaring a loan non-performing prior to the obligor being 90 days past due. These reasons include, but are not limited to, ING's assessment of the customer's perceived inability to meet its financial obligations, or the customer filing for bankruptcy or bankruptcy protection.

The table below represents the breakdown by industry of credit risk outstandings for lending and investment positions that have been classified as non-performing.

Non-performing Loans: outstandings by economic sector and business lines (*)[1]

in EUR million	Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Industry	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Private Individuals	-	-	2,424	2,879	2,445	2,480	-	-	4,869	5,359
Natural Resources	1,325	1,434	46	63	27	36	-	-	1,398	1,533
Food, Beverages & Personal Care	681	668	428	420	130	138	-	-	1,239	1,226
Transportation & Logistics	575	786	180	201	52	44	-	-	807	1,031
Services	224	313	499	474	63	58	-	-	786	844
Builders & Contractors	93	148	224	398	112	133	-	-	429	680
Real Estate	132	217	495	416	59	21	-	-	686	655
General Industries	66	138	272	232	123	133	-	-	461	502
Non-Bank Financial Institutions	56	18	24	26	4	3	-	-	85	47
Retail	140	85	103	170	47	54	-	-	290	309
Other[2]	541	579	340	335	90	103	-	295	971	1,312
Total	**3,833**	**4,386**	**5,035**	**5,614**	**3,153**	**3,203**	**-**	**295**	**12,021**	**13,497**

1 Based on Lending and Investment outstandings.

2 Economic sectors not specified in above overview are grouped in Other.

Non-performing Loans: outstandings by economic sectors and geographical area (*)

in EUR million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	France	Luxemburg	Rest of Europe	America	Asia	Australia	Africa	2021
Private Individuals	776	1,578	721	206	232	8	16	35	497	3	4	791	1	4,869
Natural Resources	67	44	-	20	-	27			116	577	421	90	37	1,398
Food, Beverages & Personal Care	299	176	25	111	-	226	7	2	37	228	128	1		1,239
Transportation & Logistics	385	55	1	35	47	20		3	165	29	49	17		807
Services	199	385		45	5	66		4	22	52	6	1		786
Builders & Contractors	43	188	4	83	-	-		2	58	50	-		-	429
Real Estate	167	303	-	61		88	21	21	9	-	-	16	-	686
General Industries	110	173	18	91	-		4	3	34	27	-			461
Non-Bank Financial Institutions	7	8	-	4	-			9	14	8	34	1	-	85
Retail	40	70	34	30	-	-	56	1	21	21	14	2		290
Other [1]	119	275	201	81		12	14	6	83	64		48	67	971
Total	**2,212**	**3,255**	**1,005**	**768**	**284**	**447**	**119**	**87**	**1,056**	**1,060**	**656**	**966**	**105**	**12,021**

1 Economic sectors not specified in above overview are grouped in Other.

Non-performing Loans: outstandings by economic sectors and geographical area (*)

in EUR million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	France	Luxemburg	Rest of Europe	America	Asia	Australia	Africa	2020
Private Individuals	1,040	1,760	712	214	239	7	18	38	555	5	4	766	1	5,359
Natural Resources	75	48	0	20		25	0	0	171	659	394	93	49	1,533
Food, Beverages & Personal Care	324	165	80	114	15	11	68	1	76	240	132	1	0	1,226
Transportation & Logistics	346	54	1	42	47	18	0	3	110	40	352	18	0	1,031
Services	190	495	0	42	5	0	1	4	28	73	6		0	844
Builders & Contractors	66	361	1	93		0	0	4	107	47		0	0	680
Real Estate	144	255		86	15	80	15	17	26			16		655
General Industries	111	161	7	91		0	5	0	93	32	1	1	0	502
Non-Bank Financial Institutions	9	13		3		0	0	4	13	4		1		47
Retail	66	140	0	41		3	6	1	36		13	3	0	309
Other [1]	427	259	138	116	0	12	14	8	143	120	23	7	45	1,312
Total	**2,799**	**3,710**	**939**	**862**	**320**	**156**	**126**	**81**	**1,359**	**1,220**	**925**	**905**	**95**	**13,497**

1 Economic sectors not specified in above overview are grouped in Other.

The non-performing portfolio decreased in 2021, mainly due to decreased outstandings in Private Individuals, in Builders & Contractors and in the Transportation & Logistics industry. The decrease is visible in all businesses and also in almost all sectors. In the Netherlands, the Non Performing in Private Individuals decreased mainly because of cures (ending their default probation).

Loan loss provisioning (*)

ING recognises loss allowances based on the expected credit loss (ECL) model of IFRS 9, which is designed to be forward-looking. The IFRS 9 impairment requirements are applicable to on-balance sheet financial assets measured at amortised cost or fair value through other comprehensive income (FVOCI), such as loans, debt securities and lease receivables, as well as off-balance sheet items such as undrawn loan commitments, certain financial guarantees issued, and undrawn committed revolving credit facilities.
ING distinguishes between two types of calculation methods for credit loss allowances:

- Individual Lifetime ECL for credit-impaired (Stage 3) financial instruments with exposures above €1 million;
- Collective 12-month ECL (Stage 1) and Lifetime ECL (Stage 2) for portfolios of financial instruments, as well as Lifetime ECL for credit impaired exposures (Stage 3) below €1 million.

IFRS 9 models (*)

The IFRS 9 models leverage on the internal rating-based (IRB) models (PD, LGD, EAD), which include certain required conservatism. To include IFRS 9 requirements, such regulatory conservatism is removed from the ECL parameters (PD, LGD and EAD). The IFRS 9 models apply two types of adjustments to the ECL parameters: (1) to economic outlook and (2) for Stage 2 and Stage 3 assets only, to the lifetime horizon. The IFRS 9 model parameters are estimated based on statistical techniques and supported by expert judgement.

ING has aligned the definition of default for regulatory purposes with the definition of 'credit-impaired' financial assets under IFRS 9 (Stage 3). To comply with the new regulatory technical standards (RTS) and EBA guidelines, ING updated its definition of default in the first quarter of 2020. Consequently, ING updated this definition also for IFRS 9 purposes, which accordingly is taken into account in updates of IFRS9 models.

More information can be found in section 1.6 of the Consolidated Financial Statements.

Climate and environmental risks in IFRS 9 models (*)

ING is evolving in its credit risk management framework to develop a better understanding of emerging climate and environmental risks. Banks, including ING, are in the process of collecting and analysing empirical historical data and moving towards embedding these emerging risks into their credit risk management processes and eventually into their IFRS 9 ECL models.

At this point in time it is not yet possible to incorporate climate risk separately into IFRS 9 ECL models given the lack of sufficient empirical historical data. The impact of climate risk is however currently implicitly embedded in ING's ECL models through the macroeconomic forecasts used for both the baseline and two alternative scenarios (downside and upside). In particular, where climate and environmental factors have impacted the economy in the recent past or present, these impacts are reflected in projected macro-economic indicators (e.g. GDP growth and unemployment rates).

We note that ING's ECL models are primarily sensitive to the short-term economic outlook (we use a 3 year time horizon for macroeconomic outlook after which a mean reversion approach is applied), and therefore the longer-term environmental/climate risk is not yet incorporated.

With regard to our evaluation of climate-related matters, where such events have already occurred (e.g. floods), the impact of such events are individually assessed in the calculation of stage 3 Individual provisions and factored into ING's normal credit monitoring and identification processes. For example, we consider whether the affected assets have suffered a significant increase in credit risk (or are credit impaired) and whether the ECL is appropriate.

Reconciliation gross carrying amount (IFRS 9 eligible) and statement of financial position

in EUR million							2021							2020
	Gross Carrying Amount	Allowances for credit losses	Cash and on-demand bank positions	Reverse Repurchase transactions	Cash collateral	other	Statement of financial position	Gross Carrying Amount	Allowances for credit losses	Cash and on-demand bank positions	Reverse Repurchase transactions	Cash collateral	other	Statement of financial position
Amounts held at Central Banks	104,875	-6	1,650			1	106,520	109,242	-3	1,851			-2	111,087
Loans and Advances to Banks	15,213	-22	1,675	3,403	3,287	36	23,592	16,660	-23	2,162	4,869	3,639	-1,943	25,364
Financial Instruments FVOCI Loans	837	-1				3	838	1,053	-2				4	1,056
Financial Instruments FVOCI Debt securities	27,201	-12				150	27,340	32,781	-12				208	32,977
Securities at Amortised Cost	47,358	-19				980	48,319	49,223	-17				1,381	50,587
Loans and Advances to customers	622,327	-5,274		1,487	3,178	3,404	625,122	589,565	-5,779		1,551	4,679	3,954	593,970
Total on-balance (IFRS 9 eligible)	**817,812**	**-5,334**	**3,325**	**4,890**	**6,466**	**4,574**	**831,731**	**798,524**	**-5,836**	**4,012**	**6,420**	**8,319**	**3,603**	**815,041**
Guarantees and irrevocable facilities (IFRS 9 eligible)	134,122	-34						118,418	-17					
Total Gross Carrying Amount (IFRS 9 eligible)	951,934	-5,368						916,942	-5,854					

This table presents the reconciliation between the Statement of Financial Position and the gross carrying amounts used for calculating the expected credit losses. No expected credit loss is calculated for cash, on-demand bank positions, reverse repurchase transactions, cash collateral received in respect of derivatives and other. Therefore these amounts are not included in the total gross carrying amount (IFRS 9 eligible). Other includes value adjustments on hedged items, deferred acquisition cost on residential mortgages and a receivable which is offset against a liquidity facility.

Portfolio quality (*)

The table below describes the portfolio composition over the different IFRS 9 stages and rating classes. The Stage 1 portfolio represents 93.5% (2020: 92.1%) of the total gross carrying amounts, mainly composed of investment grade, while Stage 2 makes up 5.2% (2020: 6.5%) and Stage 3 makes up 1.3% (2020: 1.5%) total gross carrying amounts, respectively.

Gross carrying amount per IFRS 9 stage and rating class (*)[1,2,3]

in EUR million 2021		12-month ECL (Stage 1)		Lifetime ECL not credit impaired (Stage 2)		Lifetime ECL credit impaired (Stage 3)		Total	
Rating class		**Gross Carrying Amount**	**Provisions**	**Gross Carrying Amount**	**Provisions**	**Gross Carrying Amount**	**Provisions**	**Gross Carrying Amount**	**Provisions**
Investment grade	1 (AAA)	107,788	3	0				107,788	3
	2-4 (AA)	106,673	5	197				106,870	5
	5-7 (A)	152,167	17	1,000	1			153,167	17
	8-10 (BBB)	328,301	73	7,232	14			335,533	87
Non-Investment grade	11-13 (BB)	163,228	208	14,679	86			177,908	294
	14-16 (B)	26,852	185	17,931	404			44,783	589
	17 (CCC)	5,377	10	4,354	198			9,730	207
Substandard grade	18 (CC)			2,314	173			2,314	173
	19 (C)			1,769	142			1,769	142
Non-performing loans	20-22 (D)					12,072	3,851	12,072	3,851
Total		**890,386**	**501**	**49,476**	**1,016**	**12,072**	**3,851**	**951,934**	**5,368**

1 Compared to the credit risk portfolio, the differences are mainly undrawn committed amounts (€133.3 billion) not included in Credit outstandings and non-IFRS 9 eligible assets (€95.1 billion, mainly guarantees, letters of credit and pre-settlement exposures) included in Credit outstandings.

2 For a reference to the Notes in the consolidated financial statements, we refer to the table ‘Reconciliation between credit risk categories and financial position’.

3 IAS 37 provisions are established for non-credit replacement guarantees not in the scope of IFRS 9. Total IAS 37 provisions (€114.4 million) are excluded.

Gross carrying amount per IFRS 9 stage and rating class (*)[1,2,3]

in EUR million

2020

Rating class		12-month ECL (Stage 1)[4] Gross Carrying Amount	12-month ECL (Stage 1)[4] Provisions	Lifetime ECL not credit impaired (Stage 2)[4] Gross Carrying Amount	Lifetime ECL not credit impaired (Stage 2)[4] Provisions	Lifetime ECL credit impaired (Stage 3) Gross Carrying Amount	Lifetime ECL credit impaired (Stage 3) Provisions	Total Gross Carrying Amount	Total Provisions
Investment grade	1 (AAA)	109,734	3	46	0	0	0	109,780	3
	2-4 (AA)	108,776	6	646	0	0	0	109,422	6
	5-7 (A)	137,991	27	707	1	0	0	138,698	28
	8-10 (BBB)	297,502	88	4,839	12	0	0	302,341	100
Non-Investment grade	11-13 (BB)	159,076	239	18,513	133	0	0	177,588	372
	14-16 (B)	28,335	208	23,742	570	0	0	52,077	777
	17 (CCC)	2,817	9	5,113	259	0	0	7,930	269
Substandard grade	18 (CC)	0	0	3,384	248	0	0	3,384	248
	19 (C)	0	0	2,323	254	0	0	2,323	254
Non-performing loans	20-22 (D)	0	0	0	0	13,398	3,797	13,398	3,797
Total		**844,231**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,942**	**5,854**

1 Compared to the credit risk portfolio, the differences are mainly undrawn committed amounts (€118.4 billion) not included in Credit outstandings and non-IFRS 9 eligible assets (€89.1 billion, mainly guarantees, letters of credit and pre-settlement exposures) included in Credit outstandings.

2 For a reference to the Notes in the consolidated financial statements, we refer to the table 'Reconciliation between credit risk categories and financial position'.

3 IAS 37 provisions are established for non-credit replacement guarantees not in the scope of IFRS 9. Total IAS 37 provisions (€74.8 million) are excluded.

4 Prior year numbers adjusted reflecting model adjustment in residential mortgages Netherlands.

Changes in gross carrying amounts and loan loss provisions (*)

The table below provides a reconciliation by stage of the gross carrying amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees. The transfers of financial instruments represent the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL. This includes the net-remeasurement of ECL arising from stage transfers, for example, moving from a 12-month (Stage 1) to a lifetime (Stage 2) ECL measurement basis.

The net-remeasurement line represents the changes in provisions for facilities that remain in the same stage.

Please note the following comments with respect to the movements observed in the table below:

- Stage 3 gross carrying amount decreased by €1.3 billion from €13.4 billion as per 31 December 2020 mainly as a result of generally low inflow into NPL in 2021, primarily due to Government support measures;
- Stage 2 gross carrying amount decreased by €9.8 billion from €59.3 billion as per 31 December 2020. This is mainly caused by the Significant Lifetime PD trigger (-/-€7.9 billion) driven by favourable macro-economic forecasts and the Watch List trigger (-/-€6.6 billion), offset by increases in other triggers which are mainly more than 30 Days Past Due (€2.4 billion) and Forbearance (€1.6 billion). For the latter, a 2-year probation period is required before a client can move back to Stage 1;

- Transportation & Logistics (including Aviation), Real Estate, Services and Food, Beverages & Personal Care (latter two including Hospitality & Leisure) were the sectors particularly impacted by the Covid-19 pandemic. In 2021 these sectors showed material releases in Stage 2 amounts compared to 31 December 2020 of €1.0 billion, €1.7 billion, €2.2 billion and €1.3 billion respectively, as the impact of the pandemic turned out to be less harsh than expected last year and several files were being taken off the watchlist. These sectors however still are the largest Stage 2 contributors representing 10%, 9%, 8% and 8% of the total Stage 2 gross carrying amounts respectively;
- Changes in models/Risk parameters is mainly related to the most important redeveloped models in 2021, being Netherlands mortgages, Germany mortgages and the models in Belgium.

Additional information on macroeconomic scenarios is included in the section 'Macro-economic scenarios and sensitivity analysis of key sources of estimation uncertainty'.

Changes in gross carrying amounts and loan loss provisions (*)[1, 2]

in EUR million	12-month ECL (Stage 1)		Lifetime ECL not credit impaired (Stage 2)		Lifetime ECL credit impaired (Stage 3)		Total	
2021	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions
Opening balance	**844,231**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,942**	**5,854**
Transfer into 12-month ECL (Stage 1)	15,157	20	-14,322	-279	-835	-54	-0	-313
Transfer into lifetime ECL not credit impaired (Stage 2)	-19,737	-32	20,537	206	-800	-75	-0	100
Transfer into lifetime ECL credit impaired (Stage 3)	-2,166	-13	-1,589	-96	3,755	820	-0	712
Net remeasurement of loan loss provisions		-130		-228		404		46
New financial assets originated or purchased	208,501	149					208,501	149
Financial assets that have been derecognised	-125,819	-73	-11,935	-104	-1,898	-237	-139,652	-414
Net drawdowns and repayments	-29,781		-2,527		-694		-33,002	
Changes in models/risk parameters		12		41		130		184
Increase in loan loss provisions		**-67**		**-460**		**989**		**462**
Write-offs					-854	-854	-854	-854
Recoveries of amounts previously written off						45		45
Foreign exchange and other movements		-13		1		-125		-138
Closing balance	**890,386**	**501**	**49,476**	**1,016**	**12,072**	**3,851**	**951,934**	**5,368**

1 Stage 3 Lifetime credit impaired provision includes €4 million on Purchased or Originated Credit Impaired.

2 The addition to the loan provision (in the consolidated statement of profit or loss) amounts to € 516 million of which € 462 million related to IFRS-9 eligible financial assets, € 43 million related to non-credit replacement guarantees and € 11 million to modification gains and losses on restructured financial assets.

Changes in gross carrying amounts and loan loss provisions (*)[3]

in EUR million	12-month ECL (Stage 1)[2]		Lifetime ECL not credit impaired (Stage 2)[2]		Lifetime ECL credit impaired (Stage 3)[1]		Total	
2020	**Gross carrying amount**	**Provisions**	**Gross carrying amount**	**Provisions**	**Gross carrying amount**	**Provisions**	**Gross carrying amount**	**Provisions**
Opening balance	**819,810**	**490**	**38,519**	**881**	**10,955**	**3,275**	**869,284**	**4,646**
Transfer into 12-month ECL (Stage 1)	9,139	24	-8,899	-200	-240	-18	0	-194
Transfer into lifetime ECL not credit impaired (Stage 2)	-39,093	-76	39,601	651	-509	-57	0	518
Transfer into lifetime ECL credit impaired (Stage 3)	-3,592	-30	-1,879	-163	5,471	1,518	0	1,325
Net remeasurement of loan loss provisions	0	109	0	450	0	700	0	1,259
New financial assets originated or purchased	161,333	178	0	0	0	0	161,333	178
Financial assets that have been derecognised	-116,035	-85	-6,987	-107	-897	-236	-123,919	-428
Net drawdowns and repayments	12,669	0	-1,043	0	-181	0	11,444	0
Changes in models/risk parameters	0	0	0	7	0	0	0	7
Increase in loan loss provisions	**0**	**119**	**0**	**638**	**0**	**1,908**	**0**	**2,666**
Write-offs	0	0	0	0	-1,200	-1,200	-1,200	-1,200
Recoveries of amounts previously written off	0	0	0	0	0	39	0	39
Foreign exchange and other movements	0	-28	0	-42	0	-226	0	-297
Closing balance	**844,231**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,942**	**5,854**

1 Stage 3 Lifetime credit impaired provision includes €4 million on Purchased or Originated Credit Impaired.

2 Prior year numbers adjusted reflecting model adjustment in residential mortgages Netherlands.

3 The addition to the loan provision (in the consolidated statement of profit or loss) amounts to € 2,675 million of which € 2,666 million related to IFRS-9 eligible financial assets, € -4 million related to non-credit replacement guarantees and € 13 million to modification gains and losses on restructured financial assets.

Exposure per stage, coverage ratio and stage ratio's[2]

in EUR million	2021				2020			
Balance sheet	**Gross Carrying Amount**	**Allowances for credit losses**	**Coverage ratio**	**Stage Ratio**	**Gross Carrying Amount**	**Allowances for credit losses**	**Coverage ratio**	**Stage Ratio**
Loans and advances to Banks (including Central Banks)	**120,089**	**28**	**0.0%**		**125,902**	**26**	**0.0%**	
Stage 1	119,896	24	0.0%	100%	125,643	21	0.0%	100%
Stage 2	193	4	2.0%	0%	259	5	2.0%	0%
Stage 3								
Loans and advances to Customers	**622,327**	**5,274**	**0.8%**		**589,565**	**5,779**	**1.0%**	
of which: Residential mortgages	310,068	513	0.2%		297,145	513	0.2%	
Stage 1	297,915	37	0.0%	96%	283,361	36	0.0%	95%
Stage 2	8,777	128	1.5%	3%	10,065	141	1.4%	3%
Stage 3	3,376	348	10.3%	1%	3,719	336	9.0%	1%
Of which: Consumer Lending (excl. Residential mortgages)	32,423	1,409	4.3%		32,154	1,337	4.2%	
Stage 1	28,554	217	0.8%	88%	27,854	187	0.7%	87%
Stage 2	2,654	367	13.8%	8%	2,866	347	12.1%	9%
Stage 3	1,215	825	67.9%	4%	1,435	802	55.9%	4%
Of which: Loans to public authorities	14,333	12	0.1%		14,335	8	0.1%	
Stage 1	13,906	2	0.0%	97%	14,076	3	0.0%	98%
Stage 2	344	5	1.5%	2%	189	2	1.0%	1%
Stage 3	84	4	5.1%	1%	70	4	5.1%	0%
Of which: Corporate Lending	265,503	3,340	1.3%		245,931	3,921	1.6%	
Stage 1	230,133	185	0.1%	87%	201,297	300	0.1%	82%
Stage 2	28,568	505	1.8%	11%	36,936	977	2.6%	15%
Stage 3	6,801	2,649	39.0%	3%	7,698	2,644	34.4%	3%
Other IFRS 9 Eligible Financial Instruments[1]	**209,518**	**66**	**0.0%**		**201,475**	**48**	**0.0%**	
Stage 1	199,982	35	0.0%	95%	192,000	35	0.0%	95%
Stage 2	8,941	6	0.1%	4%	8,999	3	0.0%	4%
Stage 3	596	24	4.1%	0%	476	10	2.2%	0%
Total Gross Carrying Amount (IFRS 9 eligible)	**951,934**	**5,368**	**0.6%**		**916,942**	**5,854**	**0.6%**	

1 Includes Off balance sheet IFRS 9 eligible guarantees and irrevocable facilities

2 The exposure classification to residential mortgages, consumer lending and corporate lending is aligned to the regulatory definition

Modification of financial assets

The table below provides the following information:
- Financial assets that were modified during the year (i.e. qualified as forborne) while they had a loss allowance measured at an amount equal to lifetime ECL.
- Financial assets that were reclassified to stage 1 during the period.

Financial assets modified (*)		
in EUR million	2021	2020
Financial assets modified during the period		
Amortised cost before modification	2,595	2,840
Net modification results	-47	-144
Financial assets modified since initial recognition		
Gross carrying amount at 31 December of financial assets for which loss allowance has changed to 12-month measurement during the period	448	312

Modifications that have been provided in 2020 and 2021 under general payment moratoria (payment holidays) are not included in this analysis. Refer to 'Payment holidays', above, for details.

Macroeconomic scenarios and sensitivity analysis of key sources of estimation uncertainty (*)

Methodology (*)

Our methodology in relation to the adoption and generation of macroeconomic scenarios is described in this section. We continue to follow this methodology in generating our probability-weighted ECL, with consideration of alternative scenarios and management adjustments supplementing this ECL where, in management's opinion, the consensus forecast does not fully capture the extent of recent credit or economic events. The macroeconomic scenarios are applicable to the whole ING portfolio in the scope of IFRS 9 ECLs.

The IFRS 9 standard, with its inherent complexities and potential impact on the carrying amounts of our assets and liabilities, represents a key source of estimation uncertainty. In particular, ING's reportable ECL numbers are most sensitive to the forward-looking macroeconomic forecasts used as model inputs, the probability-weights applied to each of the three scenarios, and the criteria for identifying a significant increase in credit risk. As such, these crucial components require consultation and management judgement, and are subject to extensive governance.

Baseline scenario (*)

As a baseline for IFRS 9, ING has adopted a market-neutral view combining consensus forecasts for economic variables (GDP, unemployment) with market forwards (for interest rates, exchange rates and oil prices). The Oxford Economics' Global Economic Model (OEGEM) is used to complement the consensus with consistent projections for variables for which there are no consensus estimates available (most notably house prices and – for some countries - unemployment), to generate alternative scenarios, to convert annual consensus information to a quarterly frequency and to ensure general consistency of the scenarios. As the baseline scenario is consistent with the consensus view it can be considered as free from any bias.

The relevance and selection of macroeconomic variables is defined by the ECL models under credit risk model governance. The scenarios are reviewed and challenged by two panels. The first panel consists of economic experts from Global Markets Research and risk and modelling specialists, while the second panel consists of relevant senior managers.

Alternative scenarios and probability weights (*)

Two alternative scenarios are taken into account; an upside and a downside scenario. The alternative scenarios have technical characteristics as they are based on the forecast errors of the OEGEM.

To understand the baseline level of uncertainty around any forecast, Oxford Economics keeps track of all its forecast errors of the past 20 years. The distribution of forecast errors for GDP, unemployment, house prices and share prices is applied to the baseline forecast creating a broad range of alternative outcomes. In addition, to understand the balance of risks facing the economy in an unbiased way, Oxford Economics runs a survey with respondents from around the world and across a broad range of industries. In this survey the respondents put forward their views of key risks. Following the survey results, the distribution of forecast errors (that is being used for determining the scenarios) may be skewed.

For the downside scenario, ING has chosen for the 90th percentile of that distribution because this corresponds with the way risk management earnings-at-risk is defined within the Group. The upside scenario is represented by the 10th percentile of the distribution. The applicable percentiles of the distribution imply a 20% probability for each alternative scenario. Consequently, the baseline scenario has a 60% probability weighting. Please note that, given their technical nature, the downside and upside scenarios are not based on an explicit specific narrative.

Macroeconomic scenarios applied (*)

The loan loss provisions are based on the December 2021 consensus forecasts.

Baseline assumptions (*)

The general picture that the consensus conveys is that supply chain disruption, elevated energy prices as well as covid related mobility restrictions will fade in the course of 2022. While slowing, the economic recovery continues in the period 2022-2024 and inflation peaks in 2021-2022. The monetary policy stance in the US and the eurozone is expected to become gradually less loose. However, with global monetary conditions remaining loose, housing markets remain overall well supported but the rate of increase of house prices is expected to decrease in most markets over the forecast period.

The December 2021 consensus expects global output (ING definition), after a strong rebound in 2021 of 5.7%, to continue to recover. For 2022, a growth rate of 4.1% is being anticipated which is expected to level off to an at or below 3% growth rate for the years thereafter.

Eurozone GDP has reached again its pre-pandemic level in Q4 2021. As for the US, economic momentum in the eurozone is seen gradually normalising after the strong rebound in 2021. Inflationary pressures, supply-side disruptions and a challenging health situation weigh on the outlook.

Elsewhere in Europe, the consensus sees economic growth for Poland in 2022 at 4.9%, below the rate of economic growth in 2021 (5.2%). For the years thereafter some slowing down to 4.2% (2023) and 3.5% (2024) is expected. For Turkey, after strong economic performance in 2021 (9.3%), economic growth is expected to decrease to at or around 3.5% in 2022-2024.

While already running above pre-pandemic levels again, demand in the US economy remains resilient. Consumers may spend down excess savings generated during the episodes of pandemic-related uncertainty. This, together with robust income growth driven by a resilient jobs market should provide support to domestic demand. Elevated job openings, hirings, and quits point to sturdy labour market fundamentals and the consensus expects the labour market to tighten further in 2022 and 2023. However, reduced supply of inputs caused by disruption to global supply chains and increased inflation are weighing on economic activity. As a result, the consensus expects the growth rate of the US economy to level off from 5.6% in 2021 to 4.0% in 2022 and 2.5% or below in 2023-2024.

The consensus expects GDP growth for China to be in a 5 - 5.5% range in 2022-2024, down from a strong rebound of 8.0% in 2021. The slowdown reflects the government’s relatively tight regulatory and credit stance regarding real estate developers and measures to rein in house price increases and mortgage approvals slowing down real estate investment.

In Australia, economic growth is expected to strengthen in the course of 2022. The consensus sees economic growth slowing to at or below 3% in 2023 and 2024 after expanding by 3.8% in 2022.

When compared to the December 2020 consensus forecast, used for the 2020 Annual Report, the December 2021 forecast assumes a stronger economic recovery. Global GDP is expected to increase by 5.7% in 2021 (compared to 5.0% assumed before) and 4.1% in 2022 (3.8% assumed before). This upward adjustment follows on from a more effective than expected roll-out of vaccination programs, higher than assumed fiscal stimulus and generally better than expected realizations.

Alternative scenarios and risks (*)

Although vaccination against Covid-19 has progressed swiftly in many countries, uncertainty surrounding the forecasts remains larger than usual. This reflects continued uncertainty around the development and impact of the pandemic. The pandemic could worsen (again) as, given globally still low rates of vaccination, the emergence of new, possibly more virulent, variants cannot be excluded.

To reflect the general increase of uncertainty surrounding the forecasts, the dispersion of the alternative scenarios was widened in 2020. Specifically, the forecast bandwidths projected for the end of the forecast horizon has been applied to the near-term as well. As the forecast-error distributions widen over time, this means that the distributions became wider in the near-term and thus allow for a wider range of possible outcomes. Meanwhile, at the end of the scenario horizon they remained unchanged and are hence comparable to scenarios generated prior to the pandemic.

In the scenarios applied at year end 2021 the above-mentioned near-term dispersion has been halved, following Oxford Economics’ research showing that the harm from lockdowns has halved from what it was in the first half of 2020. The downward skew following on from the outcomes of Oxford Economics’ Global Risk Survey has been maintained. As a result of this, the near-term dispersion of the forward-looking distributions (from which the alternative scenarios are derived) remains larger than in normal times, but it now also reflects the adaptability of economies to the pandemic.

The upside scenario – though technical in nature – implies, for most countries, a quick return of output to its pre-coronavirus baseline forecast and more positive medium-term prospects than envisaged in the baseline scenario. In this scenario unemployment rates quickly fall back from their peaks and reach new lows in the mid-2020s.

The downside scenario, while being equally technical in nature, results in a renewed global downturn in the near-term. The downside scenario reflects the risk of the coronavirus pandemic remaining a drag on the global economy, if new highly transmissible and more virulent variants (than Omicron) result in renewed restrictions. The subsequent recovery would be more sluggish, as the combination of persistent restrictions, increased risk aversion and long-term scarring weigh heavily on the global economy. The downside scenario also captures the risks of supply chain disruptions and higher inflation hampering economic growth.

Management adjustments applied this year (*)

In times of volatility and uncertainty where portfolio quality and the economic environment are changing rapidly, models alone may not be able to accurately predict losses. In these cases, management adjustments can be applied to appropriately reflect ECL. Management adjustments can also be applied where the impact of the updated macroeconomic scenarios is over- or under-estimated by the IFRS 9 models.

ING has internal governance frameworks and controls in place to assess the appropriateness of all management adjustments.

Management adjustments to ECL models (*)

in EUR million	2021	2020
Model time lag overlay	0	394
Economic sector based adjustments	341	0
Payment holiday adjustments	32	244
Reserve Based Lending adjustment	0	25
Mortgage portfolio adjustment	124	0
Other Post Model Adjustments	135	17
Total management adjustments	**632**	**680**

An economic sector-based management adjustment of €341 million was taken in December 2021 because of delays in defaults occurring in the Covid-19 related crisis, mainly as a result of government support programmes, while GDP growth forecasts as well as unemployment rates and house prices improved over 2021 and which triggered releases of the model based provisions. As it is expected that additional defaults as a result of the Covid-19 crisis will still come in, especially in certain sectors where a significant change to the business models is observed, a sector-based management adjustment was calculated. In determining the sector-based management adjustment, a heatmap approach was used to adjust the probability of default for sectors where businesses are significantly impacted by the pandemic. Refer also to the section 'Covid-19 sensitive sectors'. The Acquisition Finance portfolio is also in scope of the sector based management adjustment, given the highly leveraged nature of the product.
The economic sector-based management adjustment replaced the time lag overlay of €394 million that was recognised as at 31 December 2020 and which was calculated using a scenario with a time lag between GDP growth forecasts deteriorating and defaults occurring, but did not differentiate between sectors. Also the management adjustment that was recognised in 2020 for the Reserved Based Lending book was released in 2021, mainly as result of increased oil prices.

As mentioned earlier, per the guidance from EBA that expired on 30 September 2020, Covid-19 related payment holidays granted have not automatically been classified as forbearance, and hence, have not automatically triggered recognition of lifetime ECL in Stage 2. Payment holidays have also been granted in certain countries in 2021, though to a much lesser extent than in 2020. Looking forward, it is expected that the phasing out of all the support measures in 2022 could lead to more insolvencies and unemployment. This could lead to more clients getting into financial difficulties and to higher levels of defaults. To the extent ING believes that this elevated risk is not yet covered in the IFRS 9 models, a management adjustment has been recognised. As at 31 December 2021 this management adjustment is reported in Retail Banking in Belgium, Italy and Australia. As many payment holiday programs have already expired, this management adjustment has decreased to €32 million as at 31 December 2021 coming from €244 million a year ago.

ECL of mortgage portfolios determined by the models continued to decrease rapidly during 2021, driven by significant increase of house prices in various countries. Management adjustments of €124 million in total, mainly in stage 2 and 3, have been recognised in ING Netherlands, Belgium, Germany and Australia to maintain an appropriate level of ECL and reflecting a potential impact of higher inflation and rates on clients' ability to pay and a potential impact of market uncertainty on the recovery value of residential real estate. The management adjustment for the Netherlands mortgage portfolio was determined by developing three alternative macroeconomic forecast scenarios, in addition to the consensus base, up- and down-scenarios, that reflect a correction in the house prices in the next 3 years bringing it back in line with the historical growth rate. For other countries, management adjustments were determined by calculating the impact of lower house prices on LTVs and LGDs.

Other Post Model Adjustments mainly relate to the impact of model redevelopment or recalibration and periodic model assessment procedures that have not been incorporated in the ECL models yet. These result from both regular model maintenance and ING's multiyear program to update ECL models for the new definition of default. These adjustments will be removed once updates to the models have been implemented.

Analysis on sensitivity (*)

The table below presents the analysis on the sensitivity of key forward-looking macroeconomic inputs used in the ECL collective-assessment modelling process and the probability-weights applied to each of the three scenarios. The countries included in the analysis are the most significant geographic regions, in terms of both gross contribution to reportable ECL, and sensitivity of ECL to forward-looking macroeconomics. Accordingly, ING considers these portfolios to present the most significant risk of resulting in a material adjustment to the carrying amount of financial assets within the next financial year. ING also observes that, in general, the Wholesale Banking business is more sensitive to the impact of forward-looking macroeconomic scenarios.

The purpose of the sensitivity analysis is to enable the reader to understand the extent of the impact from the upside and downside scenario on model-based reportable ECL. The table does not include any management adjustments, except for the overlay for time lag in defaults of €394 million as at 31 December 2020. The current sector based management adjustment as per 31 December 2021 is not included in the table, which mainly explains the decreases in reportable amounts.

In the table below the Real GDP is presented in percentage year-on-year change, the unemployment in percentage of total labour force and the house price index (HPI) in percentage year-on year change.

Sensitivity analysis as at December 2021 (*)

		2022	2023	2024	Un-weighted ECL (Eur mln)	Probability-weighting	Reportable ECL (Eur mln)[1]
Netherlands	Real GDP	5.1	2.9	2.7			
	Unemployment	3.2	2.9	2.9	259	20%	
Upside scenario	HPI	23.3	10.9	0.9			
	Real GDP	3.4	2.0	1.7			
Baseline Scenario	Unemployment	3.7	4.1	4.3	289	60%	307
	HPI	13.1	2.8	0.8			
	Real GDP	-1.5	1.2	0.7			
Downside scenario	Unemployment	5.6	6.8	7.8	411	20%	
	HPI	0.3	-7.7	0.6			
Germany	Real GDP	6.2	3.1	1.6			
	Unemployment	2.9	2.2	1.9	457	20%	
Upside scenario	HPI	12.9	7.9	5.3			
	Real GDP	4.0	2.3	1.4			
Baseline Scenario	Unemployment	3.4	3.1	3.1	475	60%	483
	HPI	10.4	4.6	1.9			
	Real GDP	-0.6	0.9	0.8			
Downside scenario	Unemployment	5.0	5.4	5.7	535	20%	
	HPI	5.3	0.4	-2.1			
Belgium	Real GDP	4.6	2.5	2.0			
	Unemployment	5.6	5.6	5.9	364	20%	
Upside scenario	HPI	3.9	2.7	2.9			
	Real GDP	3.1	2.0	1.8			
Baseline Scenario	Unemployment	6.1	6.3	6.3	383	60%	393
	HPI	3.0	2.3	2.3			
	Real GDP	-0.4	1.4	1.4			
Downside scenario	Unemployment	7.6	8.6	9.0	451	20%	
	HPI	0.4	1.0	1.0			
United States	Real GDP	6.7	2.4	3.1			
	Unemployment	3.5	2.5	2.4	28	20%	
Upside scenario	HPI	10.4	8.1	8.7			
	Real GDP	4.0	2.5	2.1			
Baseline Scenario	Unemployment	4.0	3.7	3.7	55	60%	75
	HPI	9.1	3.0	3.3			
	Real GDP	-0.7	1.1	0.3			
Downside scenario	Unemployment	6.5	7.4	8.0	183	20%	
	HPI	5.3	-3.2	-3.0			

1 Excluding management adjustments.

Sensitivity analysis as at December 2020 (*)

		2021	2022	2023	Un-weighted ECL (Eur mln)	Probability-weighting	Reportable ECL (Eur mln)[1]
Netherlands	Real GDP	5.3	3.3	2.8			
	Unemployment	5.1	3.9	3.0	383	20%	
Upside scenario	HPI	8.1	6.3	4.7			
	Real GDP	2.8	2.9	1.9			
Baseline Scenario	Unemployment	5.8	5.2	4.7	441	60%	468
	HPI	-1.9	-1.6	4.5			
	Real GDP	-4.9	4.8	1.4			
Downside scenario	Unemployment	7.7	7.8	7.9	636	20%	
	HPI	-12.3	-11.0	4.3			
Germany	Real GDP	7.6	3.3	1.5			
	Unemployment	3.0	2.2	1.8	504	20%	
Upside scenario	HPI	3.5	8.3	6.6			
	Real GDP	3.9	3.4	1.6			
Baseline Scenario	Unemployment	4.1	3.5	3.5	541	60%	558
	HPI	0.4	4.8	3.1			
	Real GDP	-2.4	3.5	1.3			
Downside scenario	Unemployment	5.6	5.3	5.6	662	20%	
	HPI	-3.5	0.8	-0.9			
Belgium	Real GDP	6.9	3.3	2.4			
	Unemployment	7.3	6.2	5.8	494	20%	
Upside scenario	HPI	-0.2	4.2	4.8			
	Real GDP	4.5	3.3	2.3			
Baseline Scenario	Unemployment	7.5	6.3	6.3	540	60%	559
	HPI	-1.7	3.5	3.8			
	Real GDP	-0.4	4.0	2.2			
Downside scenario	Unemployment	9.4	9.1	8.8	681	20%	
	HPI	-3.6	2.5	2.9			
United States	Real GDP	5.6	4.1	3.8			
	Unemployment	5.0	3.0	1.9	93	20%	
Upside scenario	HPI	6.2	9.4	9.3			
	Real GDP	4.0	3.2	2.5			
Baseline Scenario	Unemployment	6.0	4.7	4.1	134	60%	189
	HPI	4.3	4.1	4.0			
	Real GDP	-6.3	6.8	1.9			
Downside scenario	Unemployment	8.5	7.9	7.6	448	20%	
	HPI	1.2	-1.9	-2.3			

1 Sensitivity does only include the effect of time lag overlay, other management adjustments are excluded.

When compared to the sensitivity analysis of 2020 the macroeconomic inputs for 2021 and 2022 are more favourable, as at that time expectations around the possible consequences of the spread of the coronavirus were more pessimistic, especially with regard to house prices and the unemployment rates. The macroeconomic inputs used in the 2021 sensitivity analysis reflect that, after declining sharply in 2020, a strong bounce back in macro-economic forecast has been realised in 2021 and is to a lesser extent also expected for 2022. Furthermore the widened dispersion around upside and downside scenarios in 2021 is half of the size of that in 2020, reflecting continuing but decreased short term uncertainty related to the impact of Covid-19 compared to a year ago.
The decrease in reportable ECL compared to 2020 is mainly caused the €394m Model Time lag Overlay that was included in the model ECL amounts as per December 2020, while current comparable Economic Sector based management adjustment is not included in the December 2021 model ECL amounts. This due to the improvement of the methodology applied to determine the adjustment, which is now recognised in addition to the model ECL, and better reflects that the uncertainty is more prominent in specific sectors.

While the table above does give a high-level indication of the sensitivity of the outputs to the different scenarios, it does not provide insight into the interdependencies and correlations between different macroeconomic variable inputs. On total ING level, the unweighted ECL for all collective provisioned clients in the upside scenario was €2,126 million, in the baseline scenario €2,294 million and in the downside scenario €2,964 million compared to €2,394 million reportable collective provisions as per 31 December 2021 (excluding all management adjustments). This reconciles as follows to the reported ECL's:

Reconciliation of model (reportable) ECL to total ECL (*)

in EUR million	2021	2020
Total model ECL*	2,394	3,245
ECL from individually assessed impairments	2,342	2,323
ECL from management adjustments**	632	286
Total ECL	5,368	5,854

* The prior period has been updated to improve consistency and comparability

** The overlay of €394m as per 2020 is included in Total model ECL.

Criteria for identifying a significant increase in credit risk (SICR) (*)

All assets and off-balance sheet items that are in scope of IFRS 9 impairment and which are subject to collective ECL assessment are allocated a 12-month ECL if deemed to belong in Stage 1, or a lifetime ECL if deemed to belong in Stages 2 and 3. An asset belongs in Stage 2 if it is considered to have experienced a significant increase in credit risk since initial origination or purchase. ING considers the credit risk of an asset to have significantly increased when either a threshold for absolute change in lifetime probability of default (PD) or a relative change in lifetime PD is hit.

It should be noted that the lifetime PD thresholds are not the only drivers of stage allocation. An asset can also change stages as a result of other triggers, such as having over 30 days arrears, being on a Watch List or being forborne. Refer to section 1.6.8 of Note 1 'Basis of preparation and significant accounting policies' for an exhaustive list. Furthermore, this analysis is rudimentary in a sense that other parameters would change when an asset changes stages.

Absolute lifetime PD threshold

The absolute threshold is a fixed value calibrated per portfolio/segment and provides a fixed threshold that, if exceeded by the difference between lifetime PD at reporting date and lifetime PD at origination, triggers Stage 2 classification. The thresholds for the absolute change in lifetime PD vary between 75bps for Retail portfolios, 100bps for Wholesale and 250bps for SMEs, based on the characteristics of the specific portfolio. ING is in the process of refining the thresholds on a portfolio level, which has been implemented for a few Turkish, Polish and German models and resulting in deviating absolute lifetime PD thresholds.

Relative Lifetime PD threshold

The relative threshold defines a relative increase of the lifetime PD beyond which a given facility is classified in Stage 2 because of significant increase in credit risk. The relative threshold is dependent on the individual PD assigned to each facility at the moment of origination and a scaling factor calibrated in the model development phase that is optimised depending on the observed default rates and overall average riskiness of the portfolio. While the scaling factor is associated with a whole portfolio/segment, the PD at origination is facility-specific and, in this sense, the relative threshold may differ facility by facility.
Ultimately the relative threshold provides a criterion to assess whether the ratio (i.e. increase) between lifetime PD at reporting date and lifetime PD at origination date is deemed a significant increase in credit risk. If the threshold is breached, SICR is identified and Stage 2 is assigned to the given facility.

The threshold for the relative change in lifetime PD is inversely correlated with the PD at origination; the higher the PD at origination, the lower the threshold. The logic behind this is to allow facilities originated in very favourable ratings to downgrade for longer without the need of a Stage 2 classification. In fact, it is likely that said facilities will still be in favourable ratings even after a downgrade of a few notches. On the contrary, facilities originated in already unfavourable ratings grades are riskier and even a single-notch downgrade might represent a significant increase in credit risk and thus a tighter threshold will be in place. Still, the relative threshold is relatively sensitive for investment grade assets while the absolute threshold primarily affects non-investment grade assets.

In the table below the average increase in PD at origination needed to be classified in Stage 2 is reported, taking into account the PD at origination of the facilities included in each combination of asset class and rating quality. In terms of rating quality, assets are divided into "Investment grade" and "Non-investment grade" facilities. Rating 18 and 19 are not included in the table since facilities are not originated in these ratings and they constitute a staging trigger of their own (i.e. if a facility is ever to reach rating 18 or 19 at reporting date, it is classified in Stage 2). In the table values are weighted by IFRS 9 exposure and shown for both year-end 2020 and year end 2021.

In order to represent the thresholds as a ratio (i.e. how much should the PD at origination increase in relative terms to trigger Stage 2 classification) the absolute threshold is recalculated as a relative threshold for disclosure purposes. Since breaching only relative or absolute threshold triggers Stage 2 classification, the minimum between the relative and recalculated absolute threshold is taken as value of reference for each facility.

Quantitative SICR thresholds (*)

	2021		2020	
Average threshold ratio	Investment grade (rating grade 1-10)	Non-investment grade (rating grade 11-17)	Investment grade (rating grade 1-10)	Non-investment grade (rating grade 11-17)
Asset class category				
Mortgages	2.7	2.2	2.7	2.1
Consumer Lending	2.8	1.7	2.8	1.7
Business Lending	4.0	2.2	4.0	2.1
Governments and Fin. Institutions	7.9	2.2	7.7	2.0
Other Wholesale Banking	4.5	2.0	3.9	1.8

As it is apparent from the disclosures above, as per ING's methodology, the threshold is tighter the higher the riskiness at origination of the assets, illustrated by the noticeable difference between the average threshold applied to investment grade facilities and non-investment grade facilities. In addition to the above, asset classes having usually more favourable ratings at origination (i.e. Central Governments and Financial Institutions) show an average threshold higher than the rest in investment grade assets. Changes in the threshold averages between the two reporting years can be caused by model updates (the staging parameters have been recalibrated) and/ or by changes in portfolio composition.

Sensitivity of ECL to PD lifetime PD thresholds

The setting of PD threshold bandings requires management judgement and is a key source of estimation uncertainty. On Group level, the total ECL collective-assessment for performing assets is €1,003 million (2020: €1,678 million) (without taking management adjustments into account).To demonstrate the sensitivity of the ECL to these PD thresholds bandings, analysis was run on all collectively-assessed assets, which assumed all assets (Stage 1 and 2) were below the threshold and apportioned a 12-month ECL. On the same asset base, analysis was run which assumed all performing assets were above the threshold and apportioned a lifetime ECL. This gave rise to hypothetical collective-assessment ECLs of €634 million (2020: €1,242 million) and €2,232 million (2020: €3,552 million) respectively. Please note that in this analysis all other ECL risk parameters (except for the stage) were kept equal.

Market risk

Introduction (*)

Market risk is the risk that movements in market variables, such as interest rates, equity prices, foreign exchange rates, credit spreads and real estate prices negatively impact the bank's earnings, capital, market value or liquidity position. Market risk either arises through positions in banking books or trading books. The banking book positions are intended to be held for the long term (or until maturity) or for the purpose of hedging other banking book positions. The trading book positions are typically held with the intention of short-term trading or to hedge other positions in the trading book. This means that financial instruments in the trading books should be free of trade restrictions. Policies and processes are in place to monitor the inclusion of positions in either the trading or banking book as well as to monitor the transfer of risk between the trading and banking books.

ING recognises the importance of sound market risk management and bases its market risk management framework on the need to identify, assess, control and manage market risks. The approach consists of a cycle of five recurring activities: risk identification, risk assessment, risk control, risk monitoring and risk reporting.

(*)

- Risk identification is a joint effort of the first and second lines of defence. The goal of risk identification is to detect potential new risks and any changes in known risks. See 'Risk Governance' for more on our three lines of defence governance model;
- Identified risks are assessed and measured by means of various risk metrics to determine the importance of the risk to ING and subsequently to identify the control measures needed;
- Risk control measures used by ING include policies, procedures, minimum standards, limit frameworks, buffers and stress tests;
- Risk monitoring occurs to check if the implemented risk controls are executed, complied with across the organisation, and are effective; and
- Market risk management results and findings are reported to the necessary governing departments and approval bodies.

Governance (*)

A governance framework has been established defining specific roles and responsibilities of business management units, market risk management units, and internal approval bodies per activity.

Supervision of market risk falls under the responsibility of the EB/MBB and is delegated to the ALCO function, where ALCO Bank is the highest approval authority and sets the market risk appetite. ALCO Bank monitors ING's adherence to the risk appetite for market risk and sets additional limits where appropriate. These limits are cascaded through the organisation through lower level ALCOs. This ALCO structure facilitates top-down risk management, limit setting, and the monitoring and control of market risk.

The monitoring and control of market risk is the responsibility of the Financial Risk (FR) department and Financial Institutions – Financial Markets (FI-FM) Risk. FR and FI-FM Risk are the designated departments of the second line of defence that report to the CRO function and are responsible for the design and execution of the bank's market risk and counterparty credit risk management functions in support of the ALCO function. FR focuses on the market risks in the banking books, whereas FI-FM Risk is responsible for counterparty credit risk and market risks resulting from the Financial Markets trading books. FR and FI-FM Risk are responsible for determining adequate policies and procedures for actively managing market risk in the banking and trading books and for monitoring ING's compliance with these guidelines.

FR and FI-FM Risk also maintain a limit framework in line with ING's Risk Appetite Framework. The businesses are responsible for adhering to the limits that are ultimately approved by the ALCO Bank. Limit excesses are reported to senior management on a timely basis and the business is required to take appropriate actions based on management decisions. To adhere to the established limit framework, ING implements hedging and risk mitigation strategies that range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at the portfolio level.

The organisational structure facilitates top-down risk management by recognising that risk taking and risk management to a large extent occur at the regional/local level. Bottom-up reporting from regional/local units to head office units allows each management level to fully assess the market risks relevant at the respective levels. Several committees govern communication between the parties involved in market risk management, such as MRMC (reporting to ALCO Bank) and CTRC (reporting to GCTP). The Market Risk Model Committee (MRMC) is the dedicated authority within ING for the approval of all trading risk, counterparty credit risk and banking risk models, methodologies and related parameters. The Trading Pricing Model Committee (TPMC) approves pricing models for trading and banking books. Financial Risk and FI-FM Risk departments provide systematic risk reporting to the EB and MBB, the ALCO Bank and the senior executive management of related business functions.

The Trading and Banking Book Boundary Policy governs the boundary between trading books and banking books. It defines the activities ING considers to be trading according to a regulatory definition and for own funds requirement purposes. Trading activity is systematically reviewed and positions are assessed against the mandates jointly by the first and second lines of defence. As specified in the framework, the transfer of risk or the transfer of positions between banking and trading books is in principle not allowed. In exceptional cases when a re-designation is deemed necessary, the re-designation should be approved by ALCO. The boundary requirements for banking book and trading book instruments and risk transfer are detailed in the Trading and Banking Book Boundary Policy.

The following sections elaborate on the various elements of the risk management framework for:

- Market risk economic capital (trading and banking books);
- Market risks in banking books; and
- Market risks in trading books.

Market risk economic capital (trading and banking books)

Economic capital for market risk is the economic capital necessary to withstand unexpected value movements due to changes in market variables and model risk.

Economic capital for market risk is calculated for exposures both in trading portfolios and banking portfolios and includes interest rate risk, credit spread risk, equity price risk, foreign exchange rate risk, customer behaviour risk, real estate risk, model risks and pension risk. Economic capital for market risk is calculated using internally developed methodologies with a 99.9% confidence level and a horizon of one year.

For the trading books and the linear interest rate risk and equity investments in the banking books, the Value at Risk (VaR) is taken as a starting point for the economic capital calculations for market risk. The VaR is measured at a 99% confidence level with a one-day holding period.

To arrive at the economic capital for market risk, a simulation-based model is used which includes scaling to the required confidence level and holding period. In determining this scaling factor, other factors are also taken into account like the occurrence of large market movements (events).

Embedded options, e.g. the prepayment option and offered rate option in mortgages in the banking books, result in non-linear interest rate risk in the banking books. Embedded options are economically hedged using a delta-hedging methodology, leaving the mortgage portfolio exposed to convexity risk, volatility risk and model risk. For the calculation of economic capital for this non-linear interest rate risk, ING performs a Monte Carlo simulation.

While aggregating the different economic capital market risk figures for the different portfolios, diversification benefits (based on stressed correlations) are taken into account as it is not expected that all extreme market movements will appear at the same moment.

Market risk in banking books (*)

ING makes a distinction between the trading and banking (non-trading) books. Positions in banking books originate from the market risks inherent in commercial products that are sold to clients, Group Treasury exposures, and from the investment of our own funds (core capital). Both the commercial products and the products used to hedge market risk exposures in these products are intended to be held until maturity, or at least for the long term.

Risk transfer (*)

An important element of the management of market risks in the banking book is the risk transfer process. In this process the interest rate, FX, funding and liquidity risks are transferred from the commercial books through matched funding to Group Treasury, where it is centrally managed. The scheme below presents the transfer and management process of market risks in the banking books:

(*)
Risk transfer

Risk measurement (*)

The main concepts and metrics used for measuring market risk in the banking book are described below per risk type.

Interest rate risk in banking book (*)

Interest rate risk in the banking book is defined as the exposure of a bank's earnings, capital, and market value to adverse movements in interest rates originated from positions in the banking book.

Governance (*)

The management of interest rate risk follows the Interest Rate Risk in the Banking Book (IRRBB) framework as approved by ALCO Bank. This framework describes roles, responsibilities, risk metrics, and the policies and procedures related to interest rate risk management. Furthermore ALCO Bank sets the risk appetite for interest rate risk, which is then translated into limits for the interest rate risk metrics.

As a result of this framework, ING centralises interest rate risk management from commercial books (that capture the products sold to clients) to globally managed interest rate risk books. This enables a clear demarcation between commercial business results and results based on unhedged interest rate positions.

ING distinguishes between three types of activities that generate interest rate risk in the banking book:

- Investment of own funds;
- Commercial business; and
- Group Treasury exposures including strategic interest rate positions.

Group Treasury is responsible for managing the investment of own funds (core capital). Capital is invested for longer periods to keep earnings stable. The main objective is to maximise the economic value of the book and to generate adequate and stable annual earnings within the risk appetite boundaries set by ALCO Bank.

Commercial activities can result in linear interest rate risk, for example, when re-pricing causes the tenors of assets to differ from those of liabilities. Also, interest rate risk can arise from customer behaviour and/or convexity risk, depending on the nature of the underlying product characteristics. Customer behaviour risk is defined as the potential future value loss due to deviations in the actual behaviour of clients versus the modelled behaviour towards the embedded options in commercial products. General sources of customer behaviour risk, amongst others, include the state of the economy, competition, changes in regulation, legislation and tax regime, and developments in the housing market. Since these risk factors cannot be (fully) mitigated, ING holds capital to be able to absorb possible losses as a result of unforeseen customer behaviour.

From an interest rate risk perspective, commercial activities can typically be divided into three main product types: savings and demand deposits, mortgages, and loans.

- Savings and demand deposits are generally invested to hedge their value and minimise the sensitivity of the margin to market interest rates. Interest rate risk can arise when there is a lag between savings rate adjustments and the adjustments experienced through market rates or when market rate changes cannot be passed on to clients. Interest rate risk is modelled based on the stability of the deposit and the pass-through rate. This takes account of different elements, such as pricing strategies, volume developments and the level and shape of the yield curve. Savings volumes are typically assumed to be relatively stable and not sensitive to rate changes;
- Interest rate risk for mortgages arises through prepayment behaviour. In modelling this risk, both interest rate dependent pre-payments and constant prepayments are considered. Next to the dependence on interest rates, modelled prepayments may include other effects such as loan-to-value, seasonality and the reset date of the loan. In addition, the interest sensitivity of embedded offered rate options is considered; and
- Wholesale Banking loans typically do not experience interest rate dependent prepayment behaviour; these portfolios are match-funded taking the constant prepayment model into account. They typically do not contain significant convexity risk. Wholesale banking loans can have an all-in rate floor or a floor on a reference rate.

Customer behaviour in relation to mortgages, loans, savings and demand deposits is modelled, based on extensive research. Per business unit and product type, exposures are typically segmented into different portfolios based on expected client behaviour. For each of the segments, model parameters for example for the pass-through rate and customer behaviour are determined based on historical data and expert opinion. Models are backtested and updated when deemed necessary in an annual procedure. Model parameters and the resulting risk measures are approved by (local) ALCO.

Linear risk transfers take place from commercial business books to the treasury book (Group Treasury), if necessary, by using estimations of customer behaviour. The originating commercial business is ultimately responsible for estimating customer behaviour, leaving convexity risk and (unexpected) customer behaviour risk with the commercial business. Risk measurement and the risk transfer process take place monthly. However, if deemed necessary, additional risk transfers can take place, for instance due to volatile markets.

The commercial business manages the convexity risk that is the result of products that contain embedded options, like mortgages. Here the convexity risk is defined as the optionality effects in the value due to interest rate changes, excluding the first-order effects. In some cases, convexity risk is transferred from the commercial books to treasury books using cap/floor contracts.

In the following sections, the interest rate risk exposures in the banking books are presented. ING uses risk measures based on both an earnings and a value perspective. Net interest income (NII)-at-risk is used to provide the earnings perspective and the net present value (NPV)-at-risk figures provide the value perspective. Please note that the expected interest rate risk coming forward from the business is assumed to be linearly hedged but no additional corrective management actions are taken into account in the NPV-at-Risk measure. In the NII-at-Risk measure a more dynamic hedging process is taken into account.

During 2021, the following activities related to the risk measurement for IRRBB were performed:

- Annual review of the risk appetite for IRRBB includes further enhancement;
- More in-depth assessment of sub-risk types such as tenor basis risk, vega optionality risk and a client behaviour risk earnings and value metrics;
- Annual review of the interest rates scenarios used for calculating NII-at-Risk and NPV-at-Risk;
- Savings/ current account model updates and prepayment model updates for market developments;
- Specific Covid-19 related stress test; and
- IRRBB related impact as part of firm-wide inflation risk stress test.

Net interest income (NII) at Risk (*)

The NII-at-Risk measures the impact of changing interest rates on the forecasted net interest income (before tax) of the banking book, excluding the impacts of credit spread sensitivity and fees. Future projected balance sheet developments are included in this risk metric.

In its risk management ING monitors the NII-at-Risk under a three-year timeframe. Interest rates are stressed during the first year versus the prevailing curve, taking gradual changes over the first year. The rate changes considered comprise both upward and downward scenarios, as well as parallel (equal movements across the yield curve) and non-parallel scenarios.

The impact of changing interest rates on ING's NII is predominantly caused by the following factors:

- Change in returns of (re-)investments of client deposits;
- Change in deposits client rates (mainly savings), (partially) tracking changes in market interest rates;
- Change in funding profile of mortgages, due to less or more expected prepayments;
- Higher/Lower returns of (re-)investments of capital investments;
- Open interest rate positions, leading to changes in return because of different market rates.

For projecting the change in client deposits rates ING uses a client rate model that describes the relation to market interest rates and client deposits rates. The model is calibrated under a range of interest rate scenarios. Per scenario the actual change in client deposits rate may deviate from this calibrated model.

For projecting the change in the funding profile of mortgages ING uses prepayment models for the various mortgage portfolios.

The NII-at-Risk figures in the tables below reflect a parallel, gradual interest rate movement ("ramped") under the assumption of balance sheet developments in line with the dynamic plan with a time horizon of one year.

NII-at-Risk banking books per business - year one (*)

in EUR million	2021		2020	
	Ramped, unfloored		Ramped, unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By business				
Wholesale Banking	46	-33	135	-83
Retail Banking Benelux	-122	132	-114	105
Retail Challengers & Growth Markets	-93	75	-52	-14
Corporate Line Banking	-58	58	-52	52
Total	**-226**	**232**	**-83**	**60**

EUR ramped is at +/- 100bps in 1 year
USD ramped is at +/- 120bps in 1 year

The NII-at-Risk is primarily driven by the difference in sensitivity of client liabilities, mainly savings, versus the sensitivity of client assets and investments to rate changes. The investment of own funds only impacts the earnings sensitivity marginally, as only a relatively small part has to be (re)invested within the one-year horizon.

NII-at-Risk banking book per currency - year one (*)

in EUR million	2021		2020	
	Ramped, unfloored		Ramped, unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By currency				
Euro	-181	179	-146	120
US Dollar	-23	23	41	-36
Other	-23	30	23	-25
Total	**-226**	**232**	**-83**	**60**

EUR ramped is at +/- 100bps in 1 year
USD ramped is at +/- 120bps in 1 year

Per year-end 2021, the NII is projected to be higher when interest rate rise. In this scenario the one-year (re-) investment returns are higher than the modelled increase in client deposits rates and modelled extra funding costs due to higher funding costs for mortgages.

The projected change in NII numbers in the tables above include projected changes in client deposits rates. Without increasing client deposits rates the NII-at-Risk for the parallel ramped up scenario would be significantly higher, meaning that the actual client deposits rate tracking of market interest rates in such scenario is a key driver in the NII development of the bank.

The change in NII under a declining or upward interest rate scenario are not equal. This is primarily caused by different expected reactions in prepayment behaviour of mortgages and different pricing developments of commercial loans and deposits products (mainly savings). This is caused by embedded options, explicit or implicit pricing floors and other (assumed) pricing factors.

Year-on-year variance analysis (*)

In 2021, interest rates remained at very low levels and for short tenors at even negative levels. Interest rates in the longer tenors increased towards the end of year. The change in NII sensitivity is driven by balance sheet developments, specifically in relation to mortgages and savings. The production of mortgages in the longer tenors in the Eurozone was significant. The increase in funds entrusted volume, the impact of explicit and implicit floors on savings rates in the Eurozone and savings model updates also had an impact on NII sensitivity. Models are reviewed and recalibrated annually to reflect actual client behavior accurately. The pre-existing hedges as executed by Group Treasury were also adjusted during the year. As Group Treasury is included in the Wholesale Banking risk numbers, this adjustment changed the Wholesale Banking NII-at-Risk. The total NII-at-Risk remains relatively limited in comparison with ING's total interest income.

Net Present Value (NPV) at Risk (*)

NPV-at-Risk measures the impact of changing interest rates on the value of the positions in the Banking Book. This does not include the positive earnings in our commercial books. The NPV-at-Risk is defined as the outcome of an instantaneous increase or decrease in interest rates from applying currency-specific scenarios. The NPV-at-Risk asymmetry between the downward and upward shock is mainly caused by convexity risk in the mortgage and savings portfolio.

The full value impact cannot be directly linked to the financial position or profit or loss account, as fair value movements in banking books are not necessarily reported through the profit or loss account or through other comprehensive income (OCI). The changes in value are expected to materialize over time in the profit and loss account if interest rates develop according to forward rates throughout the remaining maturity of the portfolio.

NPV-at-Risk banking books per business (*)

in EUR million	2021		2020	
	unfloored		unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By business				
Wholesale Banking	-1,477	1,444	-68	171
Retail Banking Benelux	-953	-202	-1,425	541
Retail Challengers & Growth Markets	832	-1,111	-506	-17
Corporate Line Banking	1,820	-1,712	1,946	-1,820
Total	**223**	**-1,580**	**-54**	**-1,125**

The prior period has been updated to improve consistency and comparability.

EUR +/- 100bp shock scenario

USD +/- 120bp shock scenario

Year-on-year variance analysis (*)

The change in NPV-at-Risk in segments Retail Benelux and Retail Challengers & Growth Markets was more or less off-set by an opposite NII-at-Risk change for Wholesale Banking. The NPV change for the Retail Business line was driven by increased production in fixed rate mortgages and the development of the savings and current account volumes combined with savings model updates. The resulting impact on retail sensitivity was hedged by Group Treasury in line with the internal ALM practices. The Group Treasury exposure is reported under business line Wholesale Banking. An important part of the overall NII sensitivity can be attributed to the Corporate Line, in which core capital is invested strategically.

IBOR transition (*)

Interbank offered rates have been widely used as benchmarks to set interest rates across a broad range of financial products and contracts. In line with the recommendations from the Financial Stability Board, a fundamental review of these important interest rates benchmarks has been undertaken. While some interest benchmarks have been reformed, such as EURIBOR, others such as EONIA and LIBOR have or will be replaced by risk-free rates (RFR) and discontinued.

The reform of EURIBOR was completed in 2019 and allows for the continued use in both existing and new contracts. In 2021, the Working Group on Euro Risk-Free Rates completed its work on developing recommended fallbacks for EURIBOR contracts based on €STR. These recommendations will be used to improve fallback language in EURIBOR contracts.

EONIA ceased to be published on 3 January 2022, and is succeeded by €STR. EONIA and €STR are both overnight rates and the spread between them was established and fixed in 2019. ING transitioned nearly all EONIA dependent products in the course of 2021, with only a limited number utilising the statutory fallback mechanism put in place by the EU.

GBP, CHF, JPY, and EUR LIBOR rates ceased on 31 December 2021, whereas the most used USD LIBOR tenors will continue to be published until the end of June 2023 to support legacy products. The USD LIBOR extension was seen as a welcome step given the range and volume of USD LIBOR contracts and has bought time for the market to develop and assess the alternatives to USD LIBOR. The use of USD LIBOR for new contracts is (subject to very limited exceptions) no longer permitted.

During 2021, ING focused on the transition of EONIA and non-USD LIBOR contracts and conducting new business using the recommended alternatives. This was supported by our investment in and ability to offer a wide range of products to our clients using alternative rates. In 2022, we will shift our focus to USD LIBOR, and expect to be able to leverage the experience gained transitioning the other LIBOR rates.

To enable these changes, the financial sector has issued several guidance papers and other initiatives to help phase in key components of this transition. For example ISDA issued an IBOR fallback supplement to help ensure clear and agreed fallback rates apply on the discontinuation of key IBORs. For loans, various recommendations have been made to help drive the inclusion of consistent robust fallback provisions.

Public authorities have also recognised that certain contracts do not contain provisions for any alternatives, contain inappropriate alternatives, or cannot be renegotiated or amended prior to the expected cessation dates of the relevant benchmark rates (‘tough legacy’ contracts). In response, the European Commission has implemented legislation that gives the Commission the power to replace critical benchmarks if their termination would significantly disrupt or otherwise affect the functioning of the financial markets in the EU. In addition, the UK government has granted additional powers to the Financial Conduct Authority (FCA) to enable the temporary publication of a ‘’synthetic’’ LIBOR using a different methodology and inputs. The FCA has used these powers to ensure 1-, 3- and 6-months GBP and JPY LIBOR settings continue to be available using a “synthetic” methodology for a limited time to support legacy contracts. The FCA has not yet decided whether it will require the LIBOR benchmark administrator to publish synthetic USD LIBOR rates after June 2023.

At the beginning of 2021, ING Group had significant exposures to IBORs that either were discontinued at the end of 2021 or will cease in the future. Due to the discontinuation of these interest rate benchmarks, ING Group, its customers, and the financial services industry more widely has faced (and is still facing until the IBOR transition is completed) a number of risks. These risks include legal risks, financial risks, operational risks, and conduct risk. Legal risks are related to any required changes to documentation for new and existing transactions. Financial risks (predominantly limited to interest rate risk) as a consequence of changes in the valuation of financial instruments linked to such benchmarks and declining liquidity may impact a contract directly or the ability to hedge the risks in that contract. Changes in valuation, interest calculation methodology or documentation may also result in complaints or litigation. Operational risks due to the requirement to adapt IT systems, trade reporting infrastructure and operational processes to the new benchmark rates. Conduct risk also plays a particular role in each benchmark transition. For example, the renegotiation of loan contracts requires active engagement from both parties or multiple parties in the case of syndicated loans, which is one of the key challenges and may lead to negotiations and the required contractual updates occurring later than planned and concentrated in a period close to actual cessation, which has been the case for GBP LIBOR. ING will continue to reach out to impacted clients in order to best support the relevant timelines and regulatory guidelines.

The ING IBOR programme has a robust governance in place, with progress being tracked by business line steering committees reporting into a central IBOR steering committee. The programme assesses and coordinates the actions necessary to manage the required changes to internal processes and systems, including pricing, risk management, legal documentation, hedge arrangements, as well as the impact on our customers. ING continues to monitor market developments, with a focus on USD market, to anticipate the impact on the program, our customers and any related risks.

During 2021, ING transitioned significant part of its non-derivative financial instruments linked to benchmarks ceasing in 2021 to their designated replacement rates. The total of non-derivative financial assets linked to non-USD LIBOR are reduced from EUR 8,004 million to EUR 765 million (32 contracts remaining) and the non-derivative financial liabilities linked to non-USD LIBOR reduced from EUR 1,078 million to EUR 23 million (34 contracts remaining). The major part of the remaining non-derivative financial instruments (98%) is linked to USD LIBOR that will cease at the end of June 2023. In addition, ING reduced its committed undrawn credit facilities linked to non-USD LIBOR from EUR 6,735 million to EUR 534 million (includes 15 contracts that are fully undrawn) during 2021. The remaining non-derivative financial instruments linked to non-USD LIBORs will either transition before the next interest rate reset date with only a limited number making use of synthetic LIBORs. Therefore the remaining exposure to non-USD LIBORs is expected to reduce further during the first quarter of 2022.

The tables below summarize ING's approximate exposures by significant benchmark rate, excluding contracts that will expire before transition is required. For all benchmarks except USD LIBOR the transition deadline has been taken as 31 December 2021. For USD LIBOR the transition date is 30 June 2023 as USD LIBOR will be available to support existing contracts until that date. The 31 December 2021 table excludes exposures whose contractual terms were amended during 2021, including those where transition will occur in 2022 and prior to the next interest rate reset date, as well as contracts that mature in early 2022 to which no amendment is required.

Non derivative Financial instruments to transition to alternative benchmarks (*)

in EUR million at 31 December 2021	Financial Assets non-derivative	Financial Liabilities non-derivative	Off balance sheet commitments
	Carrying value	Carrying value	Nominal value
By benchmark rate			
GBP LIBOR	764		350
USD LIBOR	41,805	1,542	16,435
CHF LIBOR	1		
JPY LIBOR			
EUR LIBOR			
EONIA		23	184
Total	**42,570**	**1,565**	**16,969**

Non derivative Financial instruments to transition to alternative benchmarks (*)

in EUR million at 31 December 2020	Financial Assets non-derivative	Financial Liabilities non-derivative	Off balance sheet commitments
	Carrying value	Carrying value	Nominal value
By benchmark rate			
GBP LIBOR	6,912	259	3,732
USD LIBOR	31,057	4,096	9,376
CHF LIBOR	345	42	321
JPY LIBOR	225	41	79
EUR LIBOR	422	8	2,564
EONIA	100	728	39
Total	**39,061**	**5,173**	**16,111**

Comparatives for non-derivative financial assets and liabilities have been updated to improve consistency and comparability with the current period disclosure.

ING has also completed the transition of a significant part of its derivative financial instruments linked to benchmarks ceasing in 2021 to their designated replacement rates. In total, the derivative financial instruments linked to non-USD LIBOR were reduced from EUR 153,391 million to EUR 822 million (19 contracts). The majority of derivatives linked to non-USD LIBOR rates were transacted with clearing houses and transitioned through a standardized exercise to the designated replacement rates in December 2021. For non-centrally cleared derivatives the main transition occurred using the ISDA IBOR fallback arrangements. The remaining derivative financial instruments linked to non-USD LIBOR will either be transitioned before the next interest rate reset date or will make use of synthetic LIBORs. Therefore a rapid drop of the remaining exposures to non-USD LIBORs is expected at the beginning of the first quarter of 2022.

Derivative Financial instruments to transition to alternative benchmarks (*)

in EUR million	31 December 2021	31 December 2020
	Nominal value	Nominal value
By benchmark rate[1]		
GBP LIBOR	822	27,031
USD LIBOR	441,094	357,805
CHF LIBOR		9,710
JPY LIBOR		87,057
EONIA		29,593
Total	**441,916**	**511,196**

1 For cross currency swaps all legs of the swap are included that are linked to a main IBOR that is significant to ING Group.

Comparatives have been updated to improve consistency and comparability with the current period disclosure.

ING Group also has exposure to interest rate benchmark reform in respect of its cash collateral balances across some of its Credit Support Annex agreements. This exposure is not included within the table above. However, during 2021 ING transitioned those portions of Credit Support Annex agreements linked to benchmarks ceasing in 2021 to their designated replacement rates.

Given that IBOR reform may have various accounting implications, the International Accounting Standards Board (IASB) has undertaken a two-phase project:

- Phase 1 addresses those issues that affect financial reporting before the replacement of an existing benchmark. Phase 1 amendments to IFRS were issued by the IASB in 2019 and were early adopted by ING Group in the same year. This allows ING to apply a set of temporary exceptions to continue hedge accounting even when there is uncertainty about contractual cash flows arising from the reform. Under these temporary exceptions, interbank offered rates are assumed to continue unaltered for the purposes of hedge accounting until such time as the uncertainty is resolved.
- Phase 2 focuses on issues that may affect financial reporting when the existing benchmark rate is reformed or replaced. Phase 2 amendments to IFRS were issued by the IASB in 2020 and became effective in 2021. Phase 2 amendments to IFRS relate mainly to accounting for changes in the basis for determining the contractual cash flows of financial assets and liabilities due to the IBOR reform and impact on hedge accounting when an existing benchmark rate is reformed or replaced with an alternative risk-free rate. Refer to section 1.4.1 of Note 1 'Basis of preparation and significant accounting policies' of the financial statements.

As explained above, Phase 1 and Phase 2 IBOR amendments to IFRS, amongst other changes, provide specific hedge accounting reliefs that allow hedge accounting relationships to continue when IBOR Reform is ongoing. Phase 1 reliefs cease to apply when uncertainty arising from IBOR Reform is no longer present with respect to the timing and amount of the IBOR-based cash flows of the relevant instruments. It is ING Group's policy to cease to apply Phase 1 reliefs when the applicable contract (either hedging instrument or hedged item) is actually modified. During 2021, ING transitioned significant part of its financial instruments (designated in hedge accounting relationships) linked to benchmarks ceasing in 2021. As a result, for these hedge accounting relationships the applicable Phase 1 reliefs ceased to apply and Phase 2 became applicable. For USD LIBOR, and although the administrator of LIBOR confirmed on 5 March 2021 its plans for the cessation of USD LIBOR rates at the end of June 2023, there is still uncertainty with respect to the timing of the transition as well as the transition strategy for individual hedged items and/or hedging instruments linked to USD LIBOR. Therefore, for USD LIBOR financial instruments designated in hedge accounting the applicable Phase 1 reliefs will continue to apply until the relevant contract is modified. At that point in time, Phase 2 reliefs will become applicable.

Foreign exchange (FX) risk in banking books (*)

FX exposures in banking books result from core banking business activities (business units doing business in currencies other than their base currency), foreign currency investments in subsidiaries (including realised net profit and loss), and strategic equity stakes in foreign currencies. The policy regarding these exposures is briefly explained below.

Governance – Core banking business (*)

Every business unit hedges the FX risk resulting from core banking business activities into its base currency. Consequently, assets and liabilities are matched in terms of currency.

Governance – FX translation result (*)

ING's strategy is to protect the CET1 ratio against adverse impact from FX rate fluctuations, whilst limiting the volatility in the profit and loss account due to this CET1 hedging. Therefore, hedge accounting is applied to the largest extent possible. Taking this into account, the CET1 ratio hedge can be achieved by deliberately taking foreign currency positions equal to certain target positions, such that the CET1 capital and risk-weighted assets are equally sensitive in relative terms to changing FX rates. For a selection of emerging market currencies ING decided not to enter into foreign currency hedges as allowed under the policy.

Risk profile – FX translation result (*)

The following table presents the currency exposures in the banking books for the most important currencies for the FX translation result. Positive figures indicate long positions in the respective currency. As a result of the strategy to hedge the CET1 ratio an open structural FX exposure exists.

In order to measure the sensitivity of the CET1 ratio against FX rate fluctuations, an Historical Value at Risk approach is used. It measures the drop in the CET1 ratio based on historical FX rates. The impact is taken into account under the Solvency RAS.

EBA Structural FX Guidelines

The EBA guidelines on structural FX positions become effective in 2022. These guidelines aim to harmonize the implementation and treatment of structural FX positions, which may be excluded from the calculation of net open currency positions under CRR article 352(2) subject to permission by the competent authorities. The implementation of these guidelines is expected to have limited impact on the existing management of structural FX positions of ING Group and its CET1 Ratio.

Foreign currency exposures banking books (*)

in EUR million	Foreign Investments		Hedges		Net exposures	
	2021	2020	2021	2020	2021	2020
US Dollar[1]	8,218	7,126	-99	-10	8,119	7,117
Pound Sterling	1,593	1,285			1,592	1,285
Polish Zloty	2,761	2,631	-142	-369	2,620	2,262
Australian Dollar	3,774	3,544	-2,511	-2,269	1,263	1,275
Turkish Lira	729	1,078			729	1,078
Chinese Yuan	1,976	1,912	-107		1,869	1,912
Russian Rouble	256	344	-174	-126	82	218
Other currency	5,860	5,992	-3,453	-3,456	2,407	2,536
Total	**25,167**	**23,913**	**-6,486**	**-6,231**	**18,681**	**17,683**

1 US Dollar net exposure move is mainly driven by EURUSD FX rate.

Equity price risk in banking books (*)

Governance (*)

ING maintains a strategic portfolio with substantial equity exposure in its banking books. Local offices are responsible for the management of the equity investment positions. Financial Risk is responsible for monitoring the regulatory capital for equity investments on a monthly basis and acts independently from ING / local management when monitoring these positions.

Risk Profile (*)

Equity price risk arises from the possibility that an equity security's price will fluctuate, affecting the values of the equity security itself as well as other instruments whose value react similarly to the particular security, a defined basket of securities, or a securities index. ING's equity exposure mainly consists of the investments in associates and joint ventures of EUR 1,587 million (2020: EUR 1,475 million) and equity securities held at fair value through other comprehensive income (FVOCI) of EUR 2,457 million (2020: EUR 1,862 million). The value of equity securities held at FVOCI is directly linked to equity security prices with increases/decreases being recognised in the revaluation reserve. Investments in associates and joint ventures are measured in accordance with the equity method of accounting and the balance sheet value is therefore not directly linked to equity security prices.

Year-on-year variance analysis (*)

In 2021, the revaluation reserve equity securities increased by EUR 101 million from EUR 1,181 million to EUR 1,282 million. In 2021, the equity securities at fair value through OCI increased by EUR 595 million mainly due to new investments in HQLA eligible equity instruments.

Revaluation reserve equity securities at fair value through other comprehensive income (*)

in EUR million	2021	2020
Positive re-measurement	1,291	1,201
Negative re-measurement	-9	-20
Total	**1,282**	**1,181**

Market risk in trading books (*)

Within the trading portfolios, the positions are maintained in the financial markets. These positions are often a result of transactions with clients and may benefit from short-term price movements. In 2021, ING continued its strategy of undertaking trading activities to develop its client-driven franchise and deliver a differentiating experience by offering multiple market and trading products.

Governance (*)

The Financial Markets Risk Committee (FMRC) is the market risk committee that, within the risk appetite set by the ALCO Bank, sets market risk limits both on an aggregated level and on a desk level, and approves new products. FI-FM Risk advises both FMRC and ALCO Bank on the market risk appetite of trading activities.

With respect to the trading portfolios, FI-FM Risk focuses on the management of market risks of Wholesale Banking (mainly Financial Markets) as this is the only business line within ING where trading activities take place. Trading activities include facilitation of client business and market making. FI-FM Risk is responsible for the development and implementation of trading risk policies and risk measurement methodologies, and for reporting and monitoring risk exposures against approved trading limits. FI-FM Risk also reviews trading mandates and global limits, and performs the gatekeeper role in the product review process. The management of market risk in trading portfolios is performed at various organisational levels. The FI-FM Risk Management Framework defines policies and procedures for the overall management of trading books. Trading activity is systematically reviewed and positions against the mandates are assessed jointly by the first and second lines of defence.

Risk measurement (*)

ING uses a comprehensive set of methodologies and techniques to measure market risk in trading books: Value at Risk (VaR) and Stressed Value at Risk (SVaR), Incremental Risk Charge (IRC), and Event Risk (stress testing). Systematic validation processes are in place to validate the accuracy and internal consistency of data and parameters used for the internal models and modelling processes.

Value at Risk (*)

FI-FM Risk uses the historical simulation VaR methodology (HVaR) as its primary risk measure. The HVaR for market risk quantifies, with a one-sided confidence level of 99%, the maximum overnight loss that could occur in the trading portfolio of ING due to changes in risk factors (e.g. interest rates, equity prices, foreign exchange rates, credit spreads, implied volatilities) if positions remain unchanged for a time period of one day. Next to general market movements in these risk factors, HVaR also takes into account market data movements for specific moves in e.g. the underlying issuer of securities. A single model that diversifies general and specific risk is used. In general, a full revaluation approach is applied, and for a limited number of linear trading positions and risk factors in commodity and equity risk classes a sensitivity-based approach is applied. The potential impact of historical market movements on today's portfolio is estimated, based on equally weighted observed market movements of the previous year (260 days). When simulating potential movements in risk factors, depending on the risk factor type, either an absolute or a relative shift is used. The data used in the computations is updated daily. ING uses HVaR with a one-day horizon for internal risk measurement, management control, and backtesting, and HVaR with a ten-day horizon for determining regulatory capital. To compute HVaR with a ten-day horizon the one-day risk factor shifts are scaled by the square root of ten and then used as an input for the revaluation. The same model is used for all legal entities within ING with market risk exposure in the trading portfolio.

Limitations (*)

HVaR has some limitations: HVaR uses historical data to forecast future price behaviour, but future price behaviour could differ substantially from past behaviour. Moreover, the use of a one-day holding period (or ten days for regulatory capital calculations) assumes that all positions in the portfolio can be liquidated or hedged in one day. In periods of illiquidity or market events, this assumption may not hold. Also, the use of a 99% confidence level means that HVaR does not take into account any losses that occur beyond this confidence level.

Backtesting (*)

Backtesting is a technique for the ongoing monitoring of the plausibility of the HVaR model in use. Although HVaR models estimate potential future trading results, estimates are based on historical market data. In a backtest, the actual daily trading result (excluding fees and commissions) is compared with the one-day HVaR. In addition to using actual results for backtesting, ING also uses hypothetical results, which exclude the effects of intraday trading, fees, and commissions. When an actual or a hypothetical loss exceeds the HVaR, an 'outlier' occurs. Based on ING's one-sided confidence level of 99%, an outlier is expected once in every 100 business days. On an overall level in 2021, there were five outliers for hypothetical P&L and 0 outliers for actual P&L. The outliers occurred by the market movements for that, ING Group is in the Yellow zone and as a result the regulatory capital multiplier has changed from 3.75 to 4.15. In general, ING reports backtesting results on a quarterly basis to the ECB.

Stressed HVaR (*)

The Stressed HVaR (SVaR) is intended to replicate the HVaR calculation that would be generated on the bank's current portfolio with inputs calibrated to the historical data from a continuous 12-month period of significant financial stress relevant to the bank's portfolio. To calculate SVaR, ING uses the same model that is used for 1DHVaR, with a ten-day horizon. The data for the historical stress period used currently includes the height of the credit crisis around the fall of Lehman Brothers, and this choice is reviewed regularly. The historical data period is chosen so that it gives the worst scenario loss estimates for the current portfolio. The same SVaR model is used for management purposes and for regulatory purposes. The same SVaR model is used for all legal entities within ING with market risk exposure in the trading portfolio.

Incremental risk charge (*)

The Incremental risk charge (IRC) for ING is an estimate of the default and migration risks for credit products (excluding securitisations) in the trading book, over a one-year capital horizon, with a 99.9% confidence level. The same IRC model is used for all legal entities within ING with market risk exposure in the trading portfolio. Trading positions (excluding securitisations) of ING, which are subject to specific interest rate risk included in the internal model approach for market risk regulatory capital, are in scope of the IRC model. By model choice, equity is excluded from the model. For the calculation of IRC, ING performs a Monte-Carlo simulation based on a Gaussian copula model. The asset correlations used in the Gaussian copula model are determined using the IRB correlation formula. The rating change is simulated for all issuers over the different liquidity horizons (i.e. time required to liquidate the position or hedge all significant risks) within one year. Movements across different rating categories and probabilities of default are governed by a credit-rating transition matrix. An external transition matrix is obtained from Standard & Poor's (S&P). The financial impact is then determined for the simulated migration to default, or for the simulated migration to a different rating category, based on LGD or credit spread changes, respectively.

The liquidity horizon has been set to the regulatory minimum of three months for all positions in scope. ING reviews the liquidity horizons on a yearly basis based on a structured assessment of the time it takes to liquidate the positions in the trading portfolio.

ING periodically assesses the compliance of the IRC model with regulatory requirements by performing gap analyses, substantiating the modelling choices, and quantifying the impact of alternative approaches.

Stress testing and event risk (*)

Stress testing and event risk are valuable risk management tools. In addition to the bank-wide stress test framework as described in the stress-testing section, FI-FM Risk performs additional assessments, specific to the Trading Book, with various frequencies: sensitivity analyses (single-risk factor and multi-risk factor), ad-hoc stress tests (e.g. Covid-19 scenarios) and structured stressed scenario tests under the event risk framework - to monitor market risks under extreme market conditions. Event risk is calculated because HVaR in general does not produce an estimate of the potential losses that can occur as a result of extreme market movements, i.e. beyond the confidence level. Event risk evaluates the bank's financial stability under severe but plausible stress scenarios and assists in decision-making aimed at maintaining a financially healthy going-concern institution after a severe event occurs. Event risk is based on historical as well as hypothetical extreme scenarios. The result is an estimate of the profit and loss caused by a potential event and its worldwide impact for ING. As with HVaR, the risk appetite for event risk is limited to ALCO Bank.

ING's event risk policy is based on a large set of possible stress scenarios per risk type. In stress scenarios, shocks are applied to prices (credit spreads, interest rates, equity, commodities, and FX rates) and volatilities. Depending on the type of the stress test, additional scenario assumptions can be made, for example on correlations, dividends, or recovery rates. For equity products, for example, both a crisis scenario (prices decrease) as well as a bull scenario (prices increase) are assumed. Scenarios are calculated based on events happening independently, jointly by region, or in all countries simultaneously. This way, for each risk type, a large set of scenarios is calculated. The worst scenarios per market are combined across markets by assessing both independent events per market, and the worst events happening in all markets at the same time.

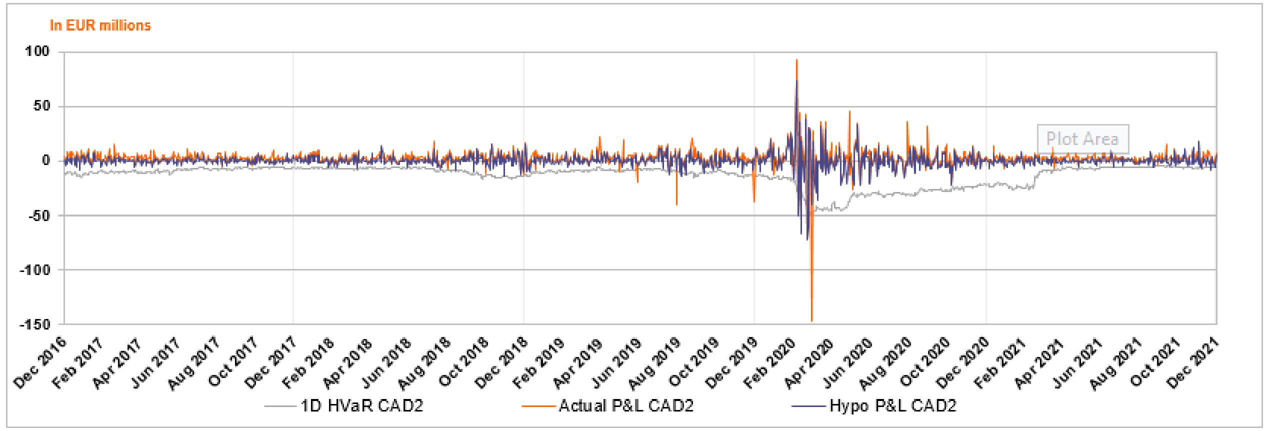
Other trading controls

HVaR and event risk limits are the most important limits to control the trading portfolios. Additionally, limits have been set on SVaR and IRC. Furthermore, ING uses a variety of other controls to supplement these limits. Position and sensitivity limits are used to prevent large concentrations in specific issuers, sectors, or countries. Moreover, other risk limits are set with respect to the activities in complex derivatives trading. The market risk of these products is controlled by product-specific limits and constraints.

Risk profile

The following chart shows the development of the overnight HVaR under a 99% confidence level and a one-day horizon versus actual and hypothetical daily trading profits and losses. In calculation of the hypothetical daily profit and loss, the trading position is kept constant and only the market movement is taken into account. The overnight HVaR is presented for the ING trading portfolio from 2016 to 2021.

EU MR4: Consolidated trading HVaR[1]



1 CVA risk is not included in VaR.

The risk figures in the backtesting graph above and in the table below relate to all trading books for which the internal model approach is applied, i.e. all trading books, including Credit Exposure Management books.

1d VaR for Internal Model Approach trading portfolios

in EUR million	Minimum		Maximum		Average		Year end	
	2021	2020	2021	2020	2021	2020	2021	2020
Interest rate [1]	4	12	20	42	8	26	5	15
Equity and commodity	1	1	4	14	2	3	2	3
Foreign exchange		1	3	7	1	3	1	2
Credit spread	2	4	11	32	4	15	2	7
Diversification [2]					-5	-17	-4	-4
Total VaR [2]	**4**	**12**	**26**	**52**	**10**	**29**	**6**	**22**

1 For calculation of HVaR per risk class the full valuation is performed according to HVaR methodology using a set of scenario changes for the risk factors for the particular risk class, while risk factors for all other risk classes are kept unchanged.

2 The total HVaR for the columns Minimum and Maximum cannot be calculated by taking the sum of the individual components since the minimum/maximum observations for both the individual markets as well as for total HVaR may occur on different dates. Therefore, diversification is not calculated for the minimum and maximum categories.

3 CVA risk is not included in VaR.

Average 1D/10D HVaR, 10D SVaR over 2021 has decreased compared to 2020, due to the increase in market volatility, while IRC remained in line with 2020. The average for all the risk classes has decreased compared to 2020, mainly driven by market movements. The VaR at the period end of 2021 decreased from EUR 22 million to EUR 6 million at period end of 2021, due to the market recovery from the COVID crisis.

ING doesn't calculate Comprehensive Risk capital charge and therefore it appears N/A in the table below.

EU MR3: Internal Model Approach values for trading portfolios

in EUR million	2021	2020
VaR (10 day 99%)		
1 Maximum value	78	161
2 Average value	27	83
3 Minimum value	12	31
4 Period end	18	60
Stressed VaR (10 day 99%)		
5 Maximum value	105	304
6 Average value	80	116
7 Minimum value	64	72
8 Period end	74	83
Incremental Risk Charge (99.9%)		
9 Maximum value	195	134
10 Average value	71	74
11 Minimum value	37	38
12 Period end	65	89
Comprehensive Risk capital charge (99.9%)		
13 Maximum value	n/a	n/a
14 Average value	n/a	n/a
15 Minimum value	n/a	n/a
16 Period end	n/a	n/a

Regulatory capital

According to the Capital Requirements Regulation (CRR/CRD IV), regulatory capital (own funds requirements) for market risk can be calculated using the standardised approach or an internal model approach. ING received regulatory approval to use an internal model to determine the regulatory capital for the market risk in all trading books of ING. Market risk capital of trading books is calculated according to the CRR, using internal HVaR, SVaR, and IRC models, where diversification is taken into account. Capital for foreign exchange risk from the banking books and for collective investment undertakings (CIUs) exposures in trading books are calculated using the standardised approach with fixed risk weights. ING does not have a correlation trading portfolio or any other securitisations in the trading book.

Standardised approach

EU MR1: Market risk under Standardised Approach

in EUR million	2021	2020
	RWA	RWA
Outright products		
1 Interest rate risk (general and specific)	6	2
2 Equity risk (general and specific)		
3 Foreign exchange risk		
4 Commodity risk		
Options		
5 Simplified approach		
6 Delta-plus method		
7 Scenario approach		
8 Securitization (specific risk)		
9 **Total**	**6**	**2**

The MRWA under standardised approach slightly increased in 2021 as compared to end of 2020. The FX exposure continued to be lower than the 2% own funds threshold. According to Art. 351 CRR, in such a case, the calculation of Market Risk regulatory capital is not required. As of the third quarter of 2021, collective investment undertakings are capitalised in market risk under standardised approach under interest rate risk and foreign exchange risk.

Internal model approach

Market risk regulatory capital increased slightly during 2021 compared to 2020. The increase is driven by an increase in HVaR and SVaR due to increased market volatility as a result of the Covid-19 pandemic, while IRC slightly decreased.

EU MR2-A: Market risk under Internal Model Approach

in EUR million		2021		2020	
		RWA	Capital requirements	RWA	Capital requirements
1	**VaR** (higher of values a and b)	**1,179**	**94**	**3,214**	**257**
(a)	Previous day's VaR (VaRt-1)		21		60
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)		94		257
2	**SVaR** (higher of values a and b)	**6,336**	**507**	**4,419**	**354**
(a)	Latest available SVaR (SVaRt-1))		112		83
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)		507		354
3	**IRC** (higher of values a and b)	**1,314**	**105**	**1,113**	**89**
(a)	Most recent IRC measure		94		89
(b)	12 weeks average IRC measure		105		77
4	**Comprehensive risk measure** (higher of values a, b and c)				
(a)	Most recent risk measure of comprehensive risk measure				
(b)	12 weeks average of comprehensive risk measure				
(c)	Comprehensive risk measure - Floor				
5	**Other**	**200**	**16**	**180**	**14**
6	**Total**	**9,029**	**722**	**8,925**	**714**

Sensitivities (*)

As part of the risk monitoring framework, FI-FM Risk actively monitors the daily changes of sensitivities of the trading portfolios. Sensitivities measure the impact of movements in individual market risk factors (foreign exchange rates, interest rates, credit spreads, equity, and commodity prices) on profit and loss results of the trading positions and portfolios.

The following tables show the five largest trading positions in terms of sensitivities to foreign exchange, interest rate and credit spread risk factor movements. These largest exposures also reflect concentrations of risk in FX risk per currency, interest rate risk per currency, and credit spread risk per country, rating and sector. Due to the nature of the trading portfolios, positions in the portfolios can change significantly from day to day, and sensitivities of the portfolios can change daily accordingly.

Most important foreign exchange year-end trading positions (*)

in EUR million	2021		2020
Foreign exchange		Foreign exchange	
US Dollar	**-160**	US Dollar	203
Taiwan Dollar	**42**	Chinese Yuan Renminbi	-63
Romanian Leu	**32**	Japanese Yen	-44
Japanese Yen	**27**	Great-Britain Pound	-37
South Korean Won	**-24**	Romanian Leu	-16

Most important interest rate and credit spread sensitivities at year-end (*)

in EUR thousand	2021		2020
Interest Rate (BPV) [1]		**Interest Rate (BPV)** [1]	
Euro	**-501**	Euro	-787
US Dollar	**185**	US Dollar	-319
British Pound	**-75**	Great-Britain Pound	-120
Taiwan Dollar	**73**	Russian Ruble	-86
Japanese Yen	**-57**	Australian Dollar	-64
Credit Spread (CSO1) [2]		**Credit Spread (CSO1)** [2]	
Netherlands	**535**	Germany	134
Germany	**408**	Republic of Korea	-129
United States	**171**	United States	118
France	**112**	Belgium	115
China	**110**	Netherlands	50

1 Basis Point Value (BPV) measures the impact on value of a 1 basis point increase in interest rates. The figures include commodity risk in banking books.

2 Credit Spread Sensitivity (CS01) measures the impact on value of a 1 basis point increase in credit spreads. Exposures to supranational institutions are not assigned to a specific country.

Credit spread sensitivities per risk class and sector at year-end (*)

in EUR thousand	2021 Corporate	2021 Financial Institutions	2020 Corporate	2020 Financial Institutions
Credit Spread (CSO1) [1]				
Risk classes				
1 (AAA)		-5	4	-4
2–4 (AA)	-7	18	2	-120
5–7 (A)	141	578	80	-14
8–10 (BBB)	204	12	301	-14
11–13 (BB)	40	-1	55	
14–16 (B)	52	-6	18	-6
17–22 (CCC and NPL)	-6	-12	2	
Not rated			1	
Total	**424**	**584**	**462**	**-158**

1 Credit Spread Sensitivity (CS01) measures the impact on value of a 1 basis point increase in credit spreads.

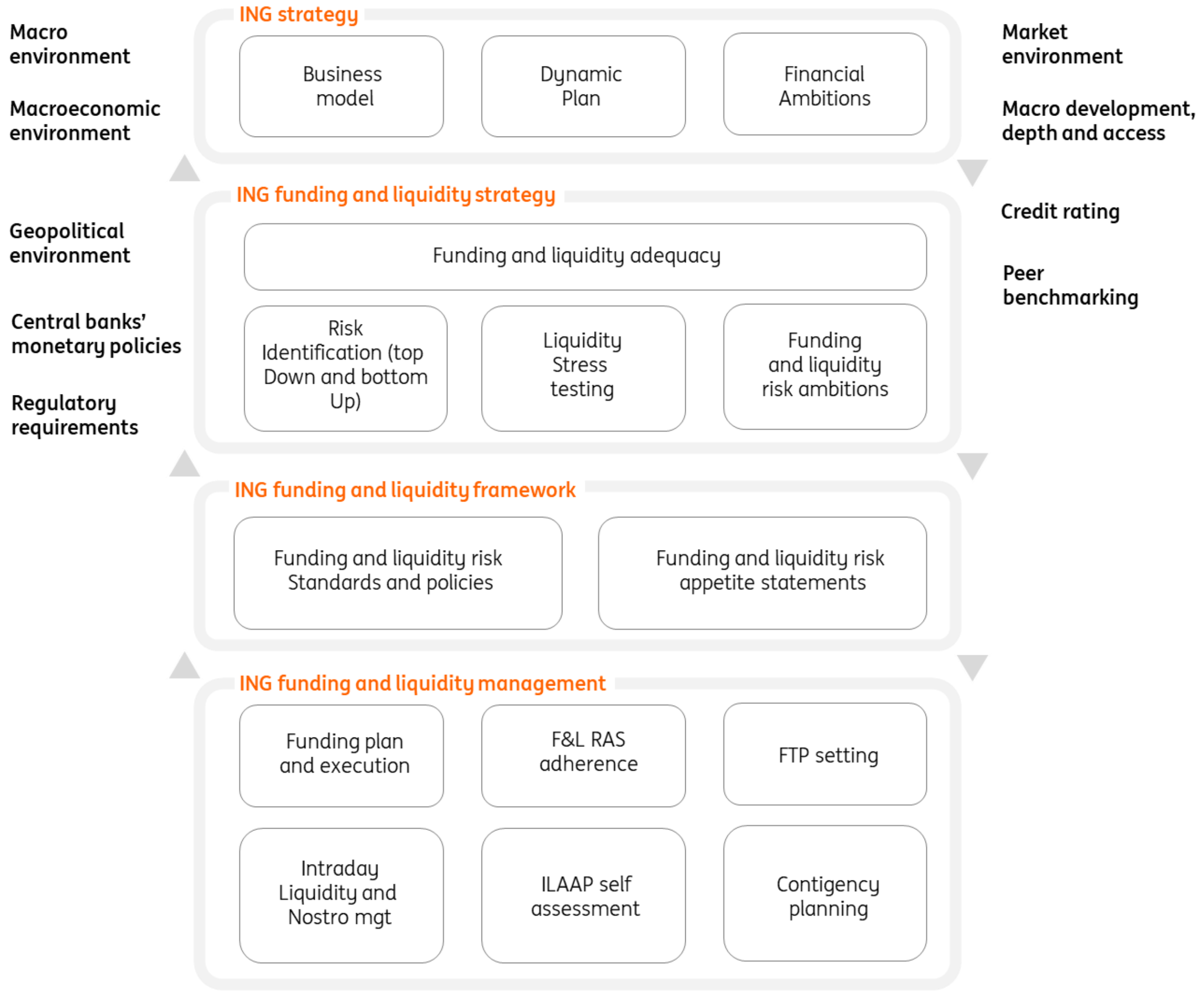
Funding and liquidity risk (*)

Introduction (*)

Funding and liquidity (F&L) risk is the risk that ING or one of its subsidiaries cannot meet its financial liabilities when they are due at reasonable cost and in a timely manner. ING incorporates funding and liquidity management in its business strategy and has established a funding and liquidity risk framework to manage risks within pre-defined boundaries.

A high-level overview of the F&L framework is provided in the next figure.

(*)
Funding and liquidity framework



Governance (*)

Funding and liquidity risk management within ING falls under the supervision of the ALCO Bank function that approves the funding and liquidity risk appetite and subsequently cascades it throughout the organisation. ALCO Bank has delegated the responsibilities concerning the Internal Capital and Liquidity Adequacy Assessment Process (ICLAAP) and documents, as per the ICLAAP framework of ING, to the ICLAAP Committee. The ICLAAP Committee therefore focuses on technical liquidity documents and oversees business processes and deliverables concerning ILAAP. The EB, MBB, staff departments from the CRO and CFO domain as well as Group Treasury have oversight of and are responsible for managing funding and liquidity risks.

ING's funding and liquidity risk governance is based on the three lines of defence structure to ensure a clear division of responsibilities as well as an independent risk control challenging process.

Group Treasury and the business lines have the first line of defence functions. Group Treasury's main responsibility is to manage ING's (regulatory) liquidity and funding position by executing ING's funding plan, maintaining access to both the short- and the long-term professional funding markets and managing the liquidity buffer. Business lines are responsible for managing the funding and liquidity positions from the originated business, a large part of which is replicated with Group Treasury.

At the second line of defence, Financial Risk is responsible for developing and maintaining ING's policies, standards and guidelines on F&L risk management as well as for setting the F&L risk appetite. Furthermore, the Financial Risk function measures funding and liquidity risks, executes stress testing, provides management information and controls the liquidity and funding requirements on commercial products. The Finance function is responsible for management information and regulatory reporting related to funding and liquidity risk management.

For the third line of defence Corporate Audit Services is responsible for independently assessing the design, effectiveness and implementation of the funding and liquidity framework.

Funding and liquidity management strategy and objectives (*)

The main objective of ING's funding and liquidity risk management is to maintain sufficient liquidity to fund the commercial activities of ING both under normal and stressed market circumstances across various territories, currencies and tenors. This requires a diversified funding structure considering relevant opportunities and constraints.

ING's funding consists mainly of retail and corporate deposits contributing around 50 percent and 20 percent of total funding respectively. These funding sources provide a relatively stable funding base. The remainder of the required funding is attracted primarily through a combination of long-term and short-term professional funding. Group Treasury manages the professional funding in line with the F&L risk appetite to ensure a sufficiently diversified and stable funding base.

Funding mix[1] (*)

	2021	2020
Funding type		
Customer deposits (retail)	51%	52%
Customer deposits (corporate)	21%	20%
Interbank	9%	9%
Lending/repurchase agreements	5%	6%
CD/CP	3%	2%
Long-term senior debt	8%	9%
Subordinated debt	2%	2%
Total	**100%**	**100%**

1 Liabilities excluding trading securities and IFRS equity

ING's long-term professional funding is well diversified across maturities and currencies. The main part of it is EUR and USD denominated which is in line with the currency composition of customer lending. Differently than last year, the amounts in the tables below exclude Tier 1 instruments. To enable comparability with last year, these instruments have also been excluded from the table below with the situation per end of 2020.

ING Group long-term debt maturity profile by currency at year-end 2021 (*)

in EUR billion (nominal amounts)	2022	2023	2024	2025	2026	2027	Beyond 2027	Total
Currency								
EUR	7	5	1	5	3	2	29	**52**
USD	4	3	1		2	3	5	**18**
Other		1	1		2		3	**8**
Total	**11**	**9**	**3**	**6**	**7**	**5**	**38**	**78**

ING Group long-term debt maturity profile by currency at year-end 2020 (*)

in EUR billion (nominal amounts)	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
Currency								
EUR	8	7	5	1	4	5	23	**53**
USD	2	3	2	1		2	5	**16**
Other	2	1	1	1		1	1	**8**
Total	**13**	**12**	**9**	**3**	**4**	**8**	**29**	**77**

Amounts adjusted to exclude Tier 1 instruments.

Funding and liquidity adequacy and risk appetite (*)

ING distinguishes between several key drivers of future liquidity and funding needs:

- Refinancing needs resulting from maturing debt and asset growth;
- Current and future regulatory requirements;
- Risk appetite statements set by ING's funding and liquidity risk function;
- The outcomes of various stress tests;
- Ability to distribute and transfer liquidity across the Group.

Taking into consideration the abovementioned factors, ING regularly assesses its current and future liquidity adequacy and, if deemed necessary, takes steps to further improve ING's liquidity position and to ensure sufficient counterbalancing capacity. A Liquidity Adequacy Statement is formulated at least quarterly to substantiate and reflect the management's view on the current funding and liquidity position as well as the potential future challenges. The quarterly adequacy statement is an important part of ING's ILAAP process.

ING assesses its F&L adequacy through three lenses – stress, sustainable and regulatory:

- ING evaluates its ability to withstand a period of prolonged F&L stress (idiosyncratic, market-wide and combined – idiosyncratic plus market-wide) which is characterised by customer deposit outflows, deterioration of funding markets access and lower liquidity value of the counterbalancing capacity;
- ING assesses the extent to which its customers, professional counterparties and investors are comfortable with extending funding in tenors, currencies and instruments necessary to sustainably fund ING under a going-concern situation;
- ING manages its position to meet current and future regulatory requirements.

For each lens, ING has established a related set of risk appetite statements which define ING's risk appetite commensurate with the principles of liquidity adequacy. These risk appetite statements are summarised in the next graph.

(*)

Funding and liquidity adequacy

Stress

The bank counter-balancing capacity should be sufficient in adverse and stressed market circumstances

The "time to survive' in a F&L stress situation must be sufficient

Sustainable

Funding of longer-term assets and investments must be done by stable and longer-term liabilities

Funding of short Term assets may not lead to too much dependency on-short term professional markets

Diversification must be in place of funding profile, across funds providers, instrument types, geographic markets, tenors and currencies

Geographic dependencies with respect to intra-group funding are to be limited

The Bank should be able to meet payment and settlement obligations on a timely basis

Regulatory

We comply with home and host regulatory funding and liquidity requirements

The F&L risk appetite statements are translated into a number of metrics with appropriate boundaries and instruments which are used to measure and manage ING's funding and liquidity risk.

The risk appetite with respect to the stress lens is set to ensure there is sufficient counterbalancing capacity under various internally defined stress scenarios. Regarding the sustainability perspective, an internally defined stable funding to loans (SFtL) ratio (supplemented by other metrics) is used to ensure a diversified funding base and to prevent overreliance on professional funding. Finally, the liquidity coverage ratio (LCR) and the NSFR regulatory metrics are monitored in terms of both ING's risk appetite and regulatory requirements.

The LCR compares the volume of available high-quality liquid assets (HQLA) to net outflows (outflows minus inflows) over a 30-day stress scenario defined by the regulator. ING's liquidity buffer forms a part of the counterbalancing capacity which serves as a liquidity cushion under normal and stressed conditions.

The liquidity buffer consists mainly of high grade Level 1 assets, such as government and central bank assets. Only assets that are freely available (not pledged under existing contracts) for liquidity purposes are included in the buffer. The size and composition of the liquidity buffer are driven by ING's internal risk appetite limits as well as by regulatory requirements.

The macroeconomic and market environment are also important considerations in ING's funding and liquidity framework.
The macroeconomic environment comprises various exogenous factors over which ING has no control, but which may have a material impact on ING's F&L position. The main macroeconomic factors analysed on a regular basis include:

- Global and local economic performance: e.g. shifts in GDP, inflation rate, unemployment rates and public deficit/surplus;
- Changing geopolitical trends;
- Monetary policy with a focus on the unconventional monetary measures employed by central banks in recent years including the measures taken since the start of the Covid-19 crisis; and
- Regulatory requirements: e.g. understanding the changing regulatory landscape as well as the impact of ING's actions on existing regulatory boundaries.

The strategic ambitions of ING, together with the design and execution of the funding plan, are assessed under both current and projected market conditions. Key emphasis is placed on understanding overall market trends and developments, credit rating changes and peer comparison.

Liquidity stress testing (*)

Funding and liquidity stress testing forms part of the overall F&L framework. It allows ING to examine the effects of severe but plausible future events on ING's liquidity position and provides insight into which entities, business lines or portfolios are vulnerable to which types of risk or scenarios.

The stress testing framework encompasses the funding and liquidity risks of the consolidated balance sheet of ING Group including all entities, business lines as well as on- and off-balance sheet positions. The net liquidity position is the main stress testing measure, capturing the liquidity position after stressed net outflows, and is measured at different time buckets. The net liquidity position is impacted differently under specific F&L stress scenarios and parameterisation.

The stress testing framework considers idiosyncratic, market-wide and combined (idiosyncratic and market-wide) stress scenarios. Moreover, it differentiates between stress events that develop in a gradual and in a fast manner, allowing ING to assess the net liquidity position at different time horizons. The design of the framework is based on empirical evidence supplemented by expert judgment. The framework can be extended to additional ad hoc scenarios. For example, it can be used as input for firm-wide stress testing and reverse stress testing.

The outcomes of the stress testing are taken into account in all the key aspects of ING's F&L risk framework and F&L risk management:

- Risk Appetite Framework (through risk appetite statements);
- Risk identification and assessment;
- Monitoring of the liquidity and funding position;
- Business actions (if needed);
- Contingency funding plan; and
- Early warning indicators.

The funding and liquidity stress testing framework is also subject to regular internal validation by model validation.

In line with supervisory expectations, ING's liquidity position is stress tested at least monthly using scenarios that are part of the F&L risk appetite statement. In addition, the results of all internal stress scenarios are monitored and assessed on a regular basis. They also serve as input in the decision on additional contingency measures.

Contingent F&L risks are addressed in the Contingency Funding Plan with a focus on early warning indicators as well as organisation and planning of liquidity management in times of stress. The contingency funding measures are developed in conjunction with the ING Recovery Plan and are tested on a regular basis.

Environmental, social and governance risk

Introduction

Environmental, social and governance risk is the risk that environmental and social issues stemming from the bank's clients result in reputational damages and/or financial losses for ING. Climate risk is the risk that a financial loss will be incurred due to climate change, either through physical risk (e.g. flooding) or transition risk (e.g. solar energy instead of gas).

Environmental and Social Risk

Governance

ESR is a risk function part of the second line of defence of ING. The ESR Team is responsible for developing policy and procedures. The department takes the lead in communicating them internally and in training internal stakeholders. The ESR Team also performs an advisory role to support the deal principals, senior credit officers and approval authorities on individual transactions. The degree of the ESR Team engagement in transactions is dependent upon (i) the risk profile of the project and (ii) ING's exposure. In some locations an ESR delegated advisor may be appointed if mutually agreed by the head of ESR and regional head. Such a role would support the Senior Credit Officer (SCO) who would be responsible for ESR issues in the region.

Committees involved in managing environmental and social risks include the Global Credit & Trading Risk Committee (GCTP) and the Global Credit Committee GCC(TA). The GCTP approves the policies, methodologies, and procedures related to ESR. The GCC(TA) approves transactions that entail taking higher environmental and social risk.

The ESR function encompasses the following activities:

- Create and maintain policies for sensitive industry sectors.
- Assess transactions for environmental and social risk.
- Monitor high-risk clients to ensure compliance with sustainability criteria.
- Spread ESR awareness throughout ING.
- Participate in European and global advisory groups (i.e. OECD advisory group, steering committee to the Equator Principles, Thun Group of Banks) to help bring all banks to the same high standard.

External developments and ING's actions

After the UN Paris Agreement and the United Nations Sustainable Development Goals (UN SDGs) were signed by world leaders in 2015, the European Commission published the European Green Deal in December 2019 with the overarching aim of making Europe climate-neutral by 2050 and emitting net zero greenhouse gases from then on. Among other objectives, the Green Deal targets mobilisation of the business community in the transition to a circular economy, as well as achieving clean energy and a toxic-free environment. The European Climate Law, provisionally agreed between the European Parliament and the Council in April 2021, is a core element of the European Green Deal. This outlines a framework for the gradual, irreversible reduction of greenhouse gas emissions and legally establishes the goal of a climate-neutral Europe by 2050.

The introduction of the United Nations Guiding Principles and the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises mark a clear shift towards a more regulated environment with impact management required on social risks. Legislation aimed at preventing human rights violations along the supply chain is being introduced in several countries, including a proposal at EU level for mandatory human rights due diligence.

Other key developments in the regulatory landscape include the EU Taxonomy Regulation that requires compliance to minimum social and governance safeguards and the EBA consultation on ESG risks, which aims to incorporate ESG risks into the governance, risk management and supervision of credit institutions and investment firms. The effects of the recent pandemic also bring a renewed focus on the importance of health and safety measures on the ground for the projects we finance as well as for the workforce of our clients.

ING joined the Net-Zero Banking Alliance in August 2021 in support of achieving a world with net-zero greenhouse gas emissions by 2050. The Alliance was launched by 43 Founding Members on 21 April 2021 and has since grown to represent over a third of global banking assets. The initiative is part of the UN Race to Zero and is the banking element of the Glasgow Financial Alliance for Net-Zero. In addition, ING published its first integrated Climate Report in September 2021, which combined our progress report on Terra and climate risk report into one comprehensive report. Our integrated approach to climate action is about steering our portfolio to achieve net zero by 2050, providing green financing and advice to clients, managing climate risk and reaching net zero in our own operations by 2050 rather than 2070.

Meanwhile, the Dutch Banking Sector Agreement on Human Rights (DBA) was successfully completed in 2019. ING updated its human rights policy to reflect its commitment to the United Nations Guiding Principles, and improved transparency through regular human rights reporting. We continue to work within the framework of this agreement. We are currently in the process of testing and implementing a tool that will help assess portfolio and client exposure to salient human rights issues, enabling identification of issues and client engagement.

The ESR Framework

ING's ESR policy framework helps us make transparent choices about how, where and with whom we do business. In 2021, we updated the ESR Framework as part of the three-year mandatory comprehensive review cycle. The new release takes account of the recent ESR requirements of the EBA Loan Origination and Monitoring guidelines, improved controls and comments received from internal and external stakeholders. The update further aims to improve understanding of existing process and evaluation requirements, with special attention to supply chain due diligence. Where appropriate, internationally acknowledged certification standards and guiding principles have been added to or adjusted per the individual sector policies.

In 2021, we continued the implementation of the new ESR self-declaration approach for business banking. The concept was incorporated in the updated ESR Framework. There is an alternative ESR client assessment implementation for business banking clients where lending and pre-settlement limits exceed €1 million and where the client is active in any of the pre-identified sectors (e.g. employment agencies). Such clients will be required to confirm their compliance with specific statements related to safeguarding labour rights and/or environmental regulations that are specific for that sector. The initiative has already been rolled out in half of the countries where we are active with business banking clients globally while other affected ING locations are expected to implement this in the course of 2022.

Following any key ESR policy updates on restrictions, we engage with affected existing clients and provide them with the opportunity to reduce their exposure to the new restrictions; in case a reduction is not feasible, we implement an exit strategy.

We will continue to update and refine our ESR policy to ensure it is reflective of ING's risk appetite and sustainability direction.

ESR in practice in 2021

The ESR policy framework includes standards and best practice guidance for ESR-sensitive sectors. It includes explicit restrictions on activities not in line with ING's values and harmful to people or the environment (for example companies involved in clearance of primary forest), which we do not finance.

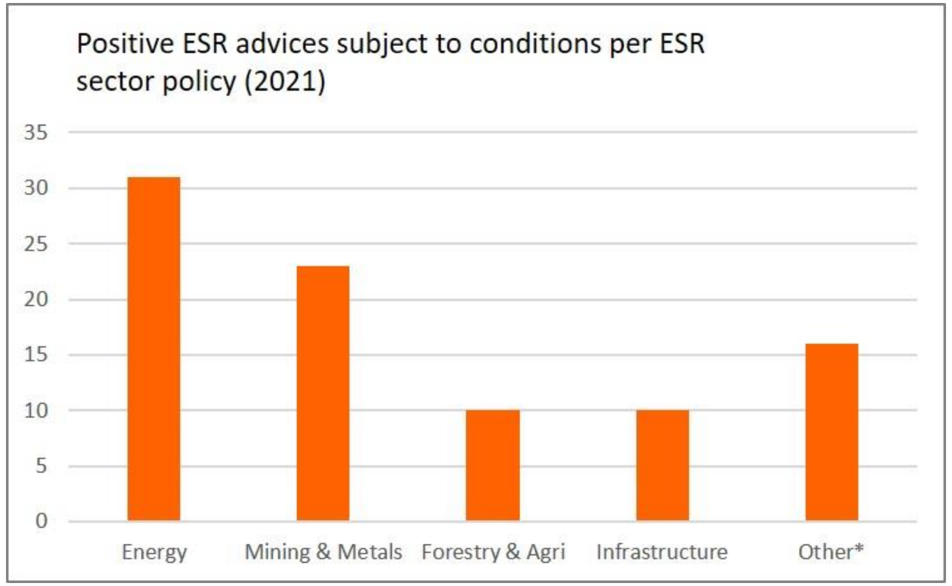
The way the ESR Framework is applied in practice differs per product type. The largest potential environmental and social impacts come from large corporates within our Wholesale Banking (WB) segment. WB is therefore the primary focus of our assessments and where we promote active ESR dialogue and knowledge sharing. We have been working with wholesale clients for more than 15 years to support them in understanding and managing their environmental and social impact. A simplified version of the ESR policy framework, following the same rationale and principles, applies to ING's business banking clients. The ESR framework minimum requirements are also included in ING's procurement policy and apply to the screening of suppliers of ING's global procurement activities.

The ESR policy framework is incorporated in ING's KYC policy framework, meaning the ESR client assessment is part of regular client on-boarding and review. The ESR policy framework also triggers a dedicated ESR transaction assessment to corporate clients, which will indicate if such transaction is categorised as 'ESR high risk', and thus require a separate in-depth advice from the ESR team.

While we have a strong ESR policy framework and made progress in enhancing the automation of the checks and controls in the ESR assessment processes, we acknowledge that we need to further improve our processes to ensure accuracy and completeness of the data.

Of all Wholesale Banking engagements in scope of the ESR policy framework in 2021, 82 percent were considered ESR low-risk, 7 percent ESR medium-risk and 11 percent ESR high-risk. ESR high-risk cases require specialised advice from the global ESR team. The team now consists of 10 dedicated ESR advisors, 9 of whom are in Amsterdam and one in Geneva. The ESR advice assesses the specific product offered and environmental and social impacts associated with it, the sector, operating context and geography of the engagement and other relevant factors. Based on this in-depth research, a binding advice is given that can only be overruled at Global Credit Committee level. Of the 379 ESR advices given in 2021, which are related to new requests, 60 percent were positive, 24 percent positive subject to conditions and 16 percent negative.

Conditions can play an important role in helping clients improve their environmental and social performance and ensuring their continued compliance with our ESR policy. The following chart shows the concentration of ESR conditions and engagement across policy sectors.



*Other includes advices reports covering the policy area animal welfare, chemicals and manufacturing.

The ESR team mainly focuses on policy development and transaction advisory. However the team also provides training (both in-person and via webinars) to hundreds of colleagues around the world every year in risk, front-office, KYC and compliance teams, so that ESR knowledge is built on and spread.

Further evolving ESG within the bank

Our ESR approach helps us and our clients gradually enhance the implementation of key standards like the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. But beyond stimulating better environmental and social performance in our own portfolio, ING actively collaborates with other institutions, peers and regulators to address the environmental, social and human rights challenges we face:

- **ING and the Equator Principles (EPs):** The EPs are an environmental and social risk management framework adopted by 126 financial institutions worldwide. ING is active in several EP working groups covering social risks, climate change and scope. ING also co-leads the capacity building and training workgroup, which is focussing on updating the EP E-learning tool with the changes included in EP4. The update of the EP e-learning tool has been successfully completed in 2021.

- **The Covid-19 pandemic** continued to impact our clients and their operations in 2021. Although international travel is slowly picking up again, visiting clients and their operations is still done remotely. On a number of projects the engaged environmental and social consultants were able to conduct virtual site visits and with the use of drones and video footage successfully visit our clients’ construction areas. We have seen a number of clients that were confronted with high rates of Covid-19 infections in their operations. In some cases operations were temporarily halted, but for most the measures, such as improvement on health and safety protocols, were sufficient to manage further spreading of the virus.

- **Shift Business Learning Programme:** is a practitioners group organised and supported by Shift, the leading centre of expertise on the UN Guiding Principles on Business and Human Rights. The programme focuses on the corporate responsibility to respect human rights as set out in the UN Guiding Principles. Under the leadership of Shift a group of companies active in various business sectors including financial institutions share challenges and practices through cross-industry workshops and benefit from tailored strategic support. ING participates in the programme. We are also a member of the Financial Institution Practitioners’ Circle, a group for selected practitioners in the financial sector to discuss and share approaches to meeting their responsibility to respect human rights, led by Shift experts.

- **Responsible Business Conduct Agreement:** following the Dutch Banking Sector Agreement a new commitment on responsible business was formed among Dutch banks. Global Sustainability is leading the initiative for ING and the ESR team is aligned for any policy implications or client interactions.

- **Thun Group:** was initially established in 2011 to support the integration of the UN Guiding Principles on Business and Human Rights into banking activities. The Group is now in the process of establishing itself as a formal group promoting human rights and sharing best practices among its participant members.

By taking part in the above-mentioned initiatives, we aim to contribute our viewpoint and those of our clients, employees and other stakeholders to help form a consensus and develop clear guidelines that can serve as a standard for our industry.

Climate risk management

Climate change is increasingly exposing society to a range of acute and chronic physical risks. At the same time, the transition to a net zero economy can also create exposure to transition risks, such as stranded assets.

Managing climate risks covers both physical risks and transition risks:

- Physical risks: These risks can be climate-related event-driven (acute) such as increased severity of extreme weather events (e.g. cyclones, droughts, floods and fires) or longer term (i.e. chronic) when they arises from progressive shifts, such as increasing temperatures, sea level rises, water stress, or biodiversity loss.
- Transition risks: these can be climate-related or environmental risks from policy, legal, technology and market changes occurring in the shift to a lower-carbon economy. This could result in stranded assets and/or markets by the loss of value of assets that are no longer part of a more sustainable world

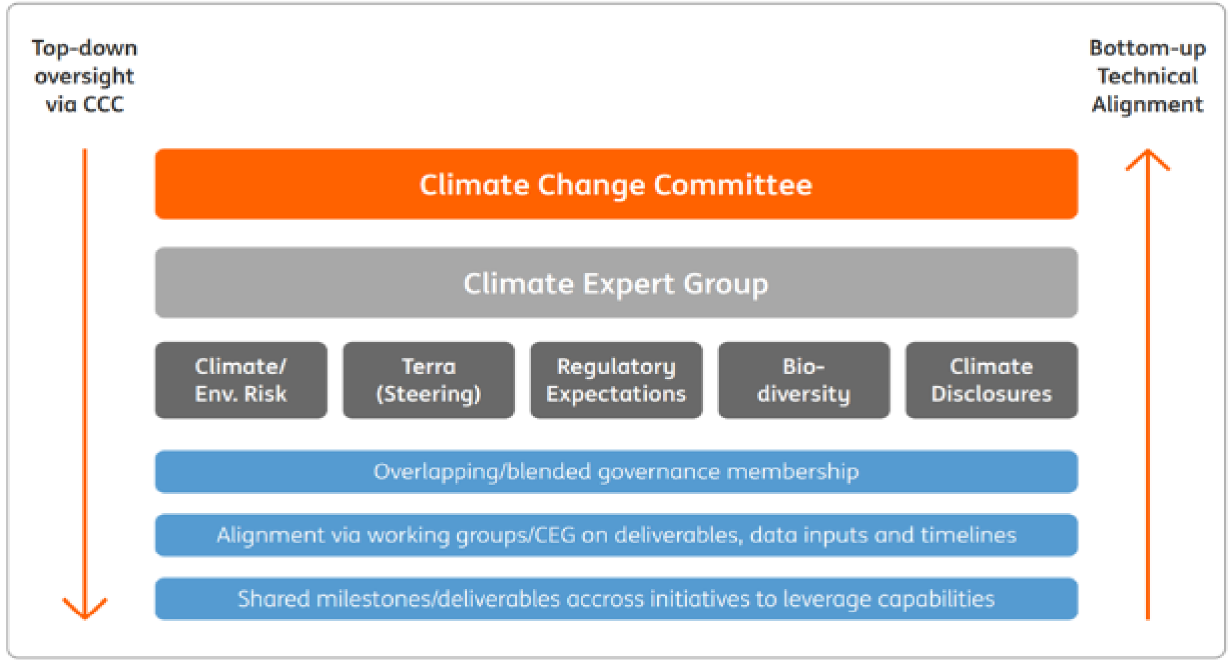
The potential impacts that physical and transition risks could have on households, businesses and the macro-economy ultimately require us to view climate risk as a risk that has an impact on various financial risks.

ING endorses the recommendations of the Financial Stability Board’s (FSB) Task Force on Climate-Related Financial Disclosures. (TCFD). To further strengthen our understanding and adoption of the TCFD recommendations, ING is part of the UNEP FI TCFD project. We continue to develop our approach to climate related and environmental disclosures as we build our approach to quantifying such risks.

Governance

ING’s Climate Change Committee (CCC) is established by the Management Board Banking and mandated to oversee and set priorities for the implementation of the TCFD recommendations and other strategic climate-related topics that impact the group. The CCC is chaired by the ING Group CRO and co-chaired by board member responsible for Wholesale Banking. The CCC meets on a bi-monthly basis and is supported by the Climate Expert Group with experts from across the business who lead and advise on key climate initiatives. For details please refer to our approach to climate governance (Sustainability governance) published on our corporate website ing.com . In 2021 the mandate of the CCC was expanded to include oversight of our approach to biodiversity. In addition , please refer to the 2021 Climate Report (Managing climate and environmental risks) available on ing.com.

With the strategic review of the risk organisation structure, that will start as of March 2022, an ESG department will be established to ensure that ESG regulation is assessed and implemented in accordance with the expectations of supervisors and society. The department is responsible for the development of the overarching ESG risk framework, the setting of Risk Appetite Statements and reporting thereon as well as the coordination of internal and regulatory ESG risk stress testing and scenario analysis.



As part of our integrated strategy and as per regulatory expectations (ECB Guide on climate-related and environmental risks), ING has established its climate risk road map as a formalised programme under ING's global oversight of regulatory programmes. The programme aims at embedding climate-related and environmental risks across the organisation, from identification to business strategy and governance to risk appetite and from data management to internal reporting and external disclosures. Together with ING's ESR framework and the Terra approach that was introduced to align our lending portfolio of the most carbon emission intensive sectors with the decarbonization objectives, the climate risk programme contributes to increase the control over exposure to climate change.
The governance of the programme has recently been strengthened. Under the ING Group CRO's sponsorship, the Steering Committee has been extended with broader representation of Finance, both the first and second line of defence of the Risk domain and an observer role for the third line of defence.

The Steering Group is responsible for the following tasks:

- Set strategic direction and prioritise the programme deliverables
- Define KPIs for climate risk integration
- Oversight on execution
- Manage impediments raised by the workstreams

Workstreams are responsible for the implementation of the specific requirements with regard to strategy and governance, the risk management framework across all risk categories, scenario and stress testing and reporting and disclosures. Workstreams for the Wholesale Banking and Retail Banking are responsible for the implementation in the business lines.

The Workstreams are supported by a Core Team that is responsible for overall management of the programme, alignment on content across the workstreams, report progress to the Steering Committee and communication with both internal and external stakeholders to further promote awareness and knowledge of the topic

Progress 2021

Under the governance of the climate risk programme the following progress was made in 2021:

Review of credit risk policies and procedures

Under ING's governance for policy review, the group-wide policies and procedures for Financial Risk, ESR, Operational Risk, Compliance and Retail Risk have been assessed for guidance on climate-related and environmental risks. Focusing on credit risk, the global policies for sector strategy and risk appetite setting, the credit risk appetite framework, corporate credit assessment and regular review, collateral valuation and loan renewal, credit risk mitigation, the ESR framework, the investment policy, the methodology for the climate & environmental risk heatmap and the Retail credit risk policy have been updated with specific requirements for climate-related and environmental risks. The risk rating policy was updated to explicitly include climate-related and environmental risks as a valid reason to appeal the rating.

Risk identification

In the course of 2021, we worked on further identifying climate-related and environmental risk within our portfolio. We have created extensive heatmaps to assess each Wholesale Banking sector and the Retail Banking mortgages, consumer lending and business lending portfolios, from a global perspective, on more than 30 climate-related and environmental risk factors. These heatmaps have been established with the input from ING's front office and credit risk management experts. The heatmaps have been challenged for plausibility and ratified for consistency across the individual sectors and portfolios by responsible Senior Management of the Front Office and the second line Credit Risk function of Wholesale Banking and Retail Banking.

The table below is an extract from the consolidated heatmap. The aggregated scores on transition risk and physical risk for each sector are assuming a 5-year horizon, which is relatively short in climate terms. We refer to ING's 2021 Integrated Climate Report for more information on the methodology and risk factors used to establish the heatmaps. Besides, we highlight the fact that these scores represent the financial materiality of climate risk on ING's portfolio, as opposed to a generic sector perspective.

Heatmap

Sectors	Transition risk	Physical risk	EAD 2021 (€ million)
Renewables & power	Low	Low	11,203
Upstream O&G	High	low-medium	6,266
Mid & downstream O&G	medium -high	low-medium	12,098
Utilities	low	low	12,173
Metals manufacturing	low-medium	medium	5,135
Metals mining	medium	low-medium	5,153
Fertilizers	low	low-medium	387
Automotive	low-medium	low-medium	8,842
Aviation	low-medium	low-medium	3,905
Shipping	low-medium	low-medium	10,420
Containers & logistics	low-medium	low-medium	9,106
Land transport	low-medium	low-medium	3,937
Commercial real estate[1]	medium	low	57,766
Residential real estate	medium	medium	329,764

1 Commercial real estate includes Wholesale Banking and business banking (Retail Banking) exposures.

All EAD exposures are from our Wholesale Bank division, except for Commercial real estate which also include ING's Business Banking exposure and the residential real estate which represents ING's Retail Bank's mortgages. The heatmaps' climate risk assessments are based on internal expert judgement and don't yet include individual counterparty assessment. The heatmapping exercise is however a useful tool to scan our portfolio on climate risk and to identify the pockets of exposure which need to be further investigated in priority. The table represents the portfolios of our balance sheet for which we consider to have the most mature level of expertise to assess climate risk impact. Going forward, we expect to disclose the assessment on all our portfolios. We use our heatmaps to inform the Wholesale Bank sector strategy and risk appetite papers and as main climate risk identification tool for the pilot we are launching to embed climate risk into the Wholesale Bank transaction approval process

Retail Banking has finalized the preparation of the risk assessment of physical risk exposure of the mortgage portfolio in cooperation with an external party. Compared with the expert led heatmaps, the physical risk assessment of the Retail mortgages portfolio provides information on a granular level which allows for a more quantified impact analysis.

Risk appetite

The heatmaps have been used to introduce climate-related and environmental risk in our 2022 credit RAS cycle. Starting with a monitoring period, the 2022 credit RAS for Wholesale Banking introduces a mechanism that limits growth of subsectors with a higher exposure to climate-related and environmental risks while allowing subsectors with a low exposure to these risks to grow within the overall limit of the sector. A similar approach is planned for Retail Banking, where the outcome of the physical risk assessment that is will be conducted in the first half of 2022 is expected to inform the Retail Banking strategy and risk appetite

Risk measurement

We have conducted a climate change scenario analysis pilot project with Baringa Partners, a consulting group with specific climate change capabilities. The project consisted of running the Climate Change Scenario Model, developed by Baringa and acquired by BlackRock in June 2021, on a sample of 40 counterparties in the Energy, Transport & Logistics, and Metals & Mining sectors. The pilot provided insight on the impact of climate change pathways on company metrics. Under a 2 degrees orderly climate change scenario, the pilot showed limited impact on company metrics until 2035 and limited defaults. Under a disorderly 2 degrees scenario in which the response comes at a later stage and with more sudden actions , the steeper increase of carbon pricing results in a higher number of company defaults after 2040. In the 4 degrees scenario ("hothouse") in which no measures to mitigate the impact from climate change are taken, there is no transition risk but a higher physical risk than in the 2 degrees orderly / disorderly scenarios. The main high level insight from this exercise is that transition risks are expected to materialize much faster than physical risks given the expected actions to decarbonize the economy. More concrete conclusions would be expected in case such exercise would be run on a representative part of our exposure to the various sectors of the economy. The pilot project we did has provided an accelerated experience of what climate change scenario analysis is on a sample of companies, under specific scenarios. At the same time the heatmap data for Wholesale Banking sectors will also be integrated in the ING internal credit risk dashboard to allow senior management to monitor climate risk exposure against the RAS limits. ING is also actively preparing for the ECB climate risk stress to occur in 2022. For details please refer to our stand-alone 'Climate Report 2021' published on our corporate website ing.com.

Next to the structured approach to measurement of exposure to climate risks and as part of collecting and analysing empirical data of climate and environmental risk impacts, a separate assessment was made of the credit losses resulting from the river floodings in Germany, Belgium and The Netherlands that took place in July 2021. The credit losses were assessed not to be material for ING.

Challenges

Access to actual and consistent data is the key challenge for risk measurement as definitions and methodologies for the quantification of climate-related and environmental risks are developing. Availability of company data is scattered across industries and jurisdictions and limited as not all companies are subject to disclosure requirements w.r.t. climate-related and environmental risk factors. In absence of comprehensive company data, the use of proxies is required for a consistent assessment of exposures. Because of these limitations and given the prospective and (very) long term nature of climate risk measurement, the integration of quantified inputs into risk modelling has not taken place at this stage.

Next steps

In 2022, we aim to further progress with our efforts regarding climate-related risks and opportunities by refining our methodologies. ING's leadership objectives in building a sustainable future has been translated into targets to manage our portfolio's material ESG risks and quantify the financial impact that are linked to the United Nations' Sustainable Development Goals. A specific KPI has been defined for the Management Board Banking to integrate ESG into ING's governance. For the implementation of "E", next to the above mentioned next steps for the integration of climate-related and environmental risk considerations in the credit risk domain, this includes working towards standard setting and expanding the scope to the market and liquidity risk and the non-financial risk / compliance framework. From 2022 onwards, climate-related and environmental risks will be integrated in the critical policies and procedures for ING's financial markets, treasury and liquidity risk management function and the Operational & Compliance risk framework. The outcome of internal stress testing will inform the risk appetite and limit setting process. Where applicable, the governance framework will be updated with roles and responsibilities for climate-related and environmental risks assigned. With the strengthened climate risk governance and structured programme management approach, we aim to accelerate the embedding of climate risk within the ING organisation, moving towards quantification of these risks in our risk management procedures. This includes the implementation of a global climate risk data management plan, the integration of climate-related and environmental risk considerations in risk policies and procedures at country level, the further refinement of our climate-related and environmental risk heatmaps with longer time horizons and geographical dimension. The outcome of the ECB climate stress test that will be conducted in the first half of 2022 will inform the approach for standardised internal climate risk stress testing that is planned to start as from 2023. Based on an inventory of training needs of the critical functions in front office, risk management and leadership, ING will launch training plans to educate our staff on climate risk.

Non-financial risk

Introduction

Non-financial risk (NFR) is defined as the risk of financial loss, legal or regulatory sanctions, or reputational damage due to inadequate or failing internal processes, people and systems; a failure to comply with laws, regulations and standards; or external events.

Governance

The global head of NFR is responsible for developing the framework of NFR policies and standards within ING, and for monitoring the quality of non-financial risk management in the ING entities.

Non-Financial risk measurement

ING uses an internal model in line with the Advanced Measurement Approach (AMA) to determine the regulatory and economic capital amounts that are necessary to cover potential losses resulting from non-financial risks. This model predicts non-financial risk losses by combining a forward-looking and a backward-looking view on non-financial risk events. ING reports the outcome of its AMA model quarterly.

Risk categories

ING categorises non-financial risks in the following areas:

- *Information (technology) risk* is the risk of financial loss, regulatory sanctions or reputational damage due to breaches of confidentiality, integrity or availability of information or a lack of information quality within business processes and/or the supporting IT systems;
- *Continuity risk* is the risk of financial loss, regulatory sanctions or reputational damage due to business disruptions (loss of people, processes, systems, data, premises);
- *Control risk* is the risks of financial loss, regulatory sanctions or reputational damage due to ineffective organisational structures and governance procedures (including unclear roles and responsibilities and inadequate reporting structure);
- *Processing risk* is the risk of financial loss, regulatory sanctions or reputational damage due to failed (transaction) processing (input, execution, output) or failing process management;
- *Unauthorised activity risk* is the risk of financial loss, regulatory sanctions or reputational damage due to employees performing outside the normal course of their business, intentionally giving unauthorised approvals or overstepping their authority;
- *Personal and physical security risk* is the risk of financial loss, regulatory sanctions or reputational damage due to criminal and environmental threats that might endanger the security or safety of ING personnel at work, people in ING locations, ING assets or assets entrusted to ING, people at ING event locations, or might have an impact on ING organisation's confidentiality, integrity or availability;
- *Employment practice risk* is the risk of financial loss, regulatory sanctions or reputational damage due to acts that are inconsistent with employment, health and/or safety laws, regulations or agreements, from payment of personal injury claims, or from diversity/discrimination events; and
- *Fraud* is the deliberate abuse of procedures, systems, assets, data, products and/or services of ING by those who intend to deceitfully or unlawfully benefit themselves and/or others. This definition of fraud is specified in the following two categories of fraud:
  Internal fraud: acts of fraud which involves at least one internal party performed by or in collusion with an ING employee or agent with the consequence of financial loss, regulatory fines, litigation loss, business disruption and/or reputational damage for ING.
  External fraud: acts of fraud or scams by individuals and/or parties excluding ING staff (including contractors), with the consequence of financial loss, regulatory fines, litigation loss, business disruption and/or reputational damage for ING.

Main developments in 2021

Covid-19

From the start of the global outbreak of the Covid-19 virus in January 2020, ING's priority has been to protect its employees and their families and to continue servicing its customers as before, putting extra effort into supporting them in difficult times. To ensure this ING employees have put immediate focus on ensuring the bank's operational resilience and continuity. ING has mobilised a global crisis management organisation – engaging with all ING entities worldwide – to monitor and manage Covid-19-related operational, health and safety challenges. Throughout 2021, ING continued to monitor developments in employee well-being and local Business Continuity Management (BCM) threat levels and aimed to identify, monitor and manage Covid-19 related risks through specific risk assessments. During 2021 ING developed an approach for the new way of working once Covid-19 measures are lifted. This approach (Hybrid Mode) is based on working partly at home, and partly in the office according to local health authority guidance.

Cybercrime and fraud

Cybercrime remains a continuous threat to companies in general and to financial institutions in particular. Both the frequency and the intensity of attacks are increasing on a global scale. The sophistication and implications of ransomware attacks are a growing concern in the threat landscape. The continuous enhancement of the control environment to protect from, and detect and respond to, e-banking fraud, distributed denial-of-service (DDoS), targeted attacks and more specific ransomware attacks is of the highest priority. Based on regular scenario analysis done in ING's first line of defence, additional controls continue to be embedded in the organisation as part of the overall internal control framework and are continuously re-assessed against existing and new threats.

In addition, ING continues to strengthen its global cybercrime and fraud resilience through collaboration with financial industry peers, law enforcement authorities, government (e.g. National Cyber Security Centre) and Internet Service Providers (ISPs).

The further digitalisation of banking services, increasing electronic exchange of information via different consumer channels, use of and dependency on third-party vendors for services, and the implementation of PSD2 are likely to present ongoing cybercrime resilience, fraud management and IT-security challenges; both in the short- and medium-term as criminal actors target financial and sensitive (payment) data, such as customer user credentials outside the traditional banking environment. Sensitive (payment) or personal data can be obtained by criminals via social forums such as WhatsApp and by screen scraping user credentials when a fallback procedure within PSD2 is allowed. In 2021, these challenges have further increased with more sophisticated phishing attempts, improved social engineering fraud attempts, an increased risk of external fraud in the lending portfolio and because people are working from home.

Dealing with current and emerging fraud threats, especially given the ever increasing use of digital and online banking, effectively requires continuous improvement of fraud management capabilities such as real-time transaction monitoring and response capabilities. In addition, better alignment and standardisation is needed for cross-border fraud management across ING and related platforms. With legislation such as EBA PSD2 and the continuing emphasis on duty of care, financial institutions are potentially becoming more and more responsible for losses incurred by clients and are taking on more of the burden of reclaiming those losses.

Data risk management

Data – whether customer, financial, risk or other business – is core to ING's purpose. Data leads to insights and insights empower people to stay a step ahead in life and in business. The ING Data Strategy is creating a single vision and governance for data, empowering business users with a harmonised foundation. This encompasses further embedding data functions and improving (bank-wide) data operations in ING's Way of Working, and simplifying, standardising and modernising its technology and data platforms. Recognising that data risk is one of the top risks of the bank, ING is creating a holistic view on how ING manages risk around data, including personal data protection, data security, data quality and data ethics.

Identity and access management (IAM)

IAM remains one of the focus areas of ING and an important element in our control framework to prevent and mitigate the risk of, unauthorised access to IT systems and the data processed and stored therein. This is done by enforcing IAM global processes and controls which are periodically reviewed and tested. These processes and controls are supported by technologies, tooling and practices which are managed by a dedicated IAM team, also ensuring improvements are identified to address developments both inside and outside ING. In 2021, ING continued to improve, with attention to tooling, standardisation and harmonisation of processes, workflows and automation of IAM controls.

Personal data protection

As per 25 May 2018, the European General Data Protection Regulation (GDPR) became effective. ING is bound by the GDPR that affords greater protection to individuals and requires more control on data and transparency regarding the use of data by companies. In 2021, ING continued to further enhance the data protection of our clients and employees.

Sourcing Risk

In 2019, a renewed sourcing policy became effective, outlining the inherent critical and high risks that can materialise during the sourcing life-cycle. In addition, a sourcing guideline was issued to support updated requirements, issued by EBA in 2019. The controls defined in the support control framework (SCF) sourcing have been implemented and tested. The scope of sourcing encompasses outsourcing to external providers as well as intra-group sourcing. During 2019, 2020 and 2021 the relevant service arrangements have been assessed based on the new Sourcing Policy definition and when applicable updated to comply with the EBA guidelines.

Compliance risk

Introduction

Compliance risk is defined as a threat posed to ING's standing resulting from failure to act in line with applicable laws and regulations, internal rules (including ING's Orange Code and global Code of Conduct) and/or societal expectations. A failure to adequately mitigate compliance risk may lead to damage to ING's reputation and/or legal/regulatory sanctions, and/or financial loss.

The mission of Compliance is to support ING in conducting its business activities in line with applicable laws and regulations, taking into account ING's internal code of conduct and societal expectations. Compliance wants to drive compliance risk management by desire and design throughout the organisation, unleashing the power of our data, risk expertise, and people to keep the bank safe and sound, and help drive new and sustainable ways of doing business.

Within ING, compliance risks are defined as those risks that are within the scope of the ING Compliance Risk Catalogue. The following three risk categories apply:

- Financial crime risk refers to the risks of the bank's products and services being abused for illicit purpose generating or disguising financial and/or economic crimes (FEC).
- Conduct risk refers to the compliance risks arising from potential or perceived misconduct by ING or its employees towards its customers, market integrity, business partners and other stakeholders.
- Organisational risk refers to the compliance risks arising from actual, potential or perceived flaws in the way that ING is organised and structured including its regulatory and reporting framework.

Governance

The Compliance organisation (comprised of three roles: Group Compliance, geographical compliance and country compliance) is part of ING's second line of defence. Group Compliance sets the methodologies and minimum standards for the bank as a whole. Geographical compliance (Challengers & Growth Markets / Wholesale Banking / Market Leaders) together with the functional lines in the countries are responsible for the execution of these standards and control frameworks, within the boundaries set. Compliance is tasked with instructing, advising, challenging and having oversight of the first line of defence in their management of compliance risks as well as raising awareness (via training and communication), influencing and stimulating a sound compliance risk culture. The scope of the compliance risks is outlined in the ING Compliance Charter.

Compliance is headed by the chief compliance officer (CCO) who reports directly to the CRO. The CCO has direct access to the Risk Committee of the Supervisory Board. The CCO and the chairman of the Risk Committee had regular bilateral consultations in 2021.

Strengthening the compliance function

As a global bank in a fast-changing world we want to do the right thing to be safe, secure and compliant for our customers and for society. To live up to that the OneCompliance strategy was launched in October 2019.

The OneCompliance strategy is a multi-year, global compliance strategy and transformation programme that is based on a framework that aims to help ING manage risks consistently across the organisation. In 2021 the work continued on the following programme goals: a global identity and risk view allowing people to assess risks in a uniform way; a single, risk-based monitoring methodology to accelerate improvements in addressing risks; simplified work processes through a uniform framework, to allow people to focus on what matters; the necessary skills and resources to deliver at the desired quality; intuitive, actionable and insightful management information and global dashboard to take smart decisions and steer within risk appetite and our global direction (steering) to support everyone in Compliance. As we operate in a dynamic and challenging environment we are continuously learning and improving while getting to a more sustainable and mature level within the compliance function.

Financial crime

Financial crime risk results from illicit activity in the form of money laundering, terrorist financing, bribery and corruption, sanctions evasion, fraud and customer tax offences. It arises in the course of ING's day-to-day banking operations if our customers, employees or third parties undertake or facilitate financial crime, or if our products and services are misused for illicit purposes to generate or disguise financial crime.

We have zero tolerance for deliberately or knowingly facilitating financial crime - keeping ING safe, secure and compliant remains a top priority in order to protect our business and society at large from financial crime and its corrosive effects upon individuals and communities.

Financial crime risk management

The Non-Financial Risk Committee, chaired by ING's chief risk officer, is the principal risk management forum for financial crime risk. This committee reviews and escalates, where appropriate, key financial crime topics and risks across ING to the Executive Board and Management Board Banking. Responsibility for the oversight of ING's compliance with our legal and regulatory obligations in relation to financial crime risk resides with the global head Financial Crime Compliance who reports to ING's chief compliance officer, with oversight by the chief risk officer. The Global KYC Committee, chaired by the chief operating officer, is mandated by the Management Board Banking to steer, prioritise and approve KYC-related topics undertaken across ING, and to oversee compliance with international standards and laws and internal policies related to KYC.

We believe all of our people have a key role to play in the fight against financial crime. Having a robust and sound risk culture embedded in our day-to-day way of working is a foundational element of our financial crime risk control environment. We define the accountabilities and responsibilities of our staff in accordance with the three lines of defence model, considering our business, geographical and functional structure.

As an organisation, we're committed to meeting our legal and regulatory requirements and the standards we also expect from ourselves. ING remains subject to regulatory investigations and scrutiny in certain jurisdictions, and we're committed to executing and implementing the identified enhancements required to our financial crime risk framework in a sustainable way for the longer-term.

Key risk management processes

ING strives to play its part in contributing to the safeguarding of the financial system against illicit financial activity, in the context of heightened and changing regulatory expectations and as financial crime risks continue to evolve. To fulfil our responsibility as a global financial institution in combatting financial crime, we believe it is essential to comply with anti-money laundering and counter terrorism financing (AML/CFT) laws and regulations, establish a reasonable and risk-based control framework to mitigate financial crime risk, and to seek to provide useful information to relevant government agencies. We also believe it is important to respond swiftly and proactively to new financial crime threats and techniques (which can be increasingly sophisticated as financial criminals harness and misuse new technological capabilities) as well as to relevant media reporting, such as on the Pandora Papers and the Congo Hold-Up.

To mitigate financial crime risks, we apply a framework of preventative and detective systems and controls, underpinned by policy, procedures and related control standards across our global business in all locations where we operate. In 2021, we remained focused on continuing to strengthen this financial crime risk management framework in order to support sustainable remediation of known issues. At the same time, we acknowledge that the continuous maturing of the financial crime risk management framework, as well as other developments such as regulatory and legislative changes, will keep asking for our attention and commitment in future years. For that purpose we've initiated the Financial Economic Crime Controls Maturity Programme (FCMP). See also 'Know your customer (KYC)'.

In 2021, we refreshed and further enhanced the annual Systematic Integrity Risk Analysis (SIRA) across our global footprint, which assesses inherent and residual integrity risks related to financial crime, and the effectiveness of the associated processes and controls ING has in place. This provides insights into the financial crime integrity risks that ING may be exposed to, so we can appropriately manage these risks in accordance with our risk appetite. Our risk-based surveillance (screening and monitoring) controls are also designed to identify activity that may require additional investigation or other risk management actions, and where appropriate, reporting to the relevant authorities.

We monitor our compliance in relation to financial crime risk and our tolerance levels on a regular basis against a set of quantitative and qualitative financial crime Risk Appetite metrics that were updated in 2021 and approved by the Non-Financial Risk Committee.

Bribery and Corruption

Corruption curbs economic growth and impedes the development of societies. It undermines business confidence and corporate integrity, hinders fair business competition and harms international trade. ING takes these risks seriously: bribery and corruption risks are part of our non-financial risk framework, and are included in the client and third-party due diligence and monitoring measures in our financial crime risk management framework. We will continue to further structurally strengthen our response to bribery and corruption risks in key areas as part of our multi-year enhancement programme and FCMP, and in support of our zero tolerance approach for bribery and corruption.

Customer Tax Compliance

ING remains committed to its reporting obligations under the Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standards (CRS). Throughout 2021, we have worked to improve the quality of reports provided to tax authorities and reacted to the implementation of mandatory disclosure rules for EU jurisdictions (implemented via the amendment to Directive 2011/16 (DAC6)). We also continue to focus on customer tax integrity, as we do not want to be involved in or facilitating tax-related financial crime through servicing our customers.

Key developments in 2021

Covid-19 taskforce

Opportunistic criminals have been quick to exploit the disruption caused by the Covid-19 pandemic. During 2021, the activities of the ING financial crime Covid-19 taskforce continued to focus on protecting customers from fraud and cyber-related crimes, as well as identifying evolving criminal money laundering methods. The taskforce worked with data analysts and business-aligned teams globally to share guidance with regional teams on the thematic financial crime risks relating to Covid-19, including potential risk scenarios and datapoints to assist regional and local teams identify unusual transactions.

Evolving external landscape

Financial institutions continue to face considerable regulatory scrutiny in relation to detecting and preventing financial crime, and increasing costs of compliance. In 2021, this saw some participants in the Dutch banking sector streamlining their workforces or increasing their account fees for higher risk customers. In addition, the complexity of the regulatory landscape continues to give rise to potential tension between data privacy (GDPR), anti-money laundering/counter terrorism financing and anti-corruption laws and regulations. This includes requirements for sharing information within ING in relation to financial crime in order to manage our risk exposure, while also complying with relevant data legislation (which can differ significantly depending on jurisdiction). Society's expectations that financial institutions are accountable for safeguarding the financial system also create an increasingly demanding environment.
We take this gatekeeper responsibility seriously. We believe that by proactively participating in public-private partnerships and collaborating with other banks, as well as investing in new and innovative technological capabilities, we can be more effective in the collective fight against financial crime. We also recognise the essential role played by certain other financial services providers in safeguarding the financial system against illicit funds.

Payment Service Providers

The position of payment service providers (PSPs) in the financial service industry has become prominent and permanent over the years. PSPs face continuous challenges to demonstrate compliance with industry standards and recommendations, such as the guidance provided by the Wolfsberg Group and Financial Action Task Force (FATF) on payment transparency. Having limited transparency on transactions initiated through the different payment platforms increases the challenge of monitoring whether PSPs and banks are potentially misused to facilitate tax evasion, money laundering and terrorist financing.

ING will continue to contribute to dialogues with PSPs, regulators and industry bodies on these challenges; ensuring we obtain the required transparency on payment information. This supports compliance with the applicable laws and regulations and internal policies and instructions as well as monitoring to ensure that ING stays within its financial crime risk appetite.

EU AML/CFT legislative package

In mid-2021 the European Commission adopted a package of legislative proposals aimed at strengthening anti-money laundering (AML) and counter terrorism financing (CFT) rules. This included amendments to existing legislation to tackle emerging challenges linked to technological innovations, such as virtual assets, as well as the increasingly global nature of terrorist organisations. It also included centralisation of EU AML/CFT supervision (the European Anti Money Laundering Authority) and establishing a single EU AML/CFT rulebook, which provides financial institutions with harmonised and directly applicable AML/CFT rules.

ING welcomes this harmonisation, which removes a degree of regulatory complexity. We have considered amendments in the context of drafting the updated ING Financial Crime Policy framework. We have also participated in workstreams and analyses prepared by global banking associations such as the Dutch Banking Association and the European Banking Federations to assist us in assessing the potential impact of the AML legislative package on the bank.

Virtual Assets

The rise in price and use of virtual assets, accompanied by the growth of virtual assets service providers was a key theme throughout 2020 and continued in 2021 to attract regulatory attention for potential tax evasion, money laundering and terrorist financing concerns. Although the industry's assessment of financial crime risks in these areas is beginning to mature, the evolving regulatory environment and understanding of how the virtual assets ecosystem may be potentially abused for financial crime purposes continues to present a challenge for financial institutions.

We believe it is important to contribute to ongoing dialogue with regulators on this topic. In 2021, we created guidance that has been shared across the bank to develop a deeper knowledge and understanding of virtual assets and the associated financial crime risk landscape, an important step towards our goal of ensuring that ING remains a safe and compliant bank.

Environmental crime

Environmental crime risks also came to the fore in 2021; including a wide range of activities such as the illegal wildlife trade, the illegal extraction and trade of forestry and natural resources as well as illegal land clearance and waste trafficking, all of which have a socio-economic impact on the population and earth. There is a growing convergence between environment crime and other serious crimes including corruption and trade-based fraud, among others.

In 2021, we examined the risks arising from the illegal wildlife trade and how to detect suspicious financial flows linked to it. We joined the United for Wildlife Financial Taskforce, which brings together private, public and third-sector partners to identify, disrupt and prevent illegal wildlife trade.

Know your customer (KYC)

Know your customer and financial crime compliance play a key role in ensuring we only engage and do business with people and companies that meet regulatory requirements and are within our risk appetite. Knowing who we do business with is vital to keeping ING safe, secure and compliant. As part of our ongoing anti-money laundering efforts, we continuously assess relationships with customers and monitor and screen transactions. Potentially unusual or suspicious transactions are reviewed and, where applicable, reported to the relevant authorities.

We're continuously working to strengthen the implementation of KYC and build sustainable KYC practices. This includes enhancing customer due diligence files (documentation, data and identity verification) and making structural improvements in five areas: policy and risk appetite statements, digital tooling, governance, monitoring and screening, and KYC knowledge and behaviour. All of these enhancements are being integrated into our business-as-usual practices.

To reinforce this foundation, the Financial Economic Crime Controls Maturity Programme, set up in 2020, broadens the scope of certain aspects of financial crime such as sanctions, customer tax, new and existing FEC threats and internal quality controls. Its holistic approach aims to take into account new developments in the complex and dynamic environment that we operate in and is jointly managed by the Financial Crime Compliance (FCC) and KYC departments.

Our regulators keep a close eye on the measures we have in place against money laundering and terrorism financing and to manage compliance risks, as well as improvements we've made to address shortcomings that had been identified in some countries. In February 2021, the French regulator, the Autorité de contrôle prudentiel et de résolution (ACPR), confirmed ING had put in place the necessary corrective measures following its reprimand in 2018 and a sanction of €3 million.

Public-private partnerships

To continue to be more effective in our efforts to counter financial economic crime, we work closely with our peers, regulators and law enforcement.

We have elected to centrally coordinate our proactive participation in various public-private partnerships across our footprint. This ensures a holistic, streamlined and strategically orientated approach towards ING's participation in external partnerships and improves our ability to meet regulatory obligations, satisfy moral and integrity expectations and improve the operational efficiency of managing financial and economic crime-related risks.

To this end, in 2021 we participated in several projects leveraging intelligence from public-private partnerships in the areas of trade-based money laundering and synthetic drug production in the Netherlands. We also continue to support supranational initiatives, such as Europol's project on the financial crime risks associated with virtual assets.

Throughout 2021, ING continued to work in a consortium of Dutch banks on Transaction Monitoring Netherlands (TMNL). The initiative, which monitors transactions within a combined database, is operational and intersecting with thematic areas of focus for law enforcement, enabling us to better understand potential criminal money flows, and improve our detection controls in response to these insights. In the Netherlands, ING also works with the government's Financial Intelligence Unit and three other banks in the Fintell Alliance. In a pilot, the alliance investigated and analysed alerts generated by TMNL. It detected complex financial crime networks that none of the banks could have found alone, illustrating the benefits of multilateral information exchange.

In Germany, ING joined the public-private partnership Anti-Financial Crime Alliance (AFCA) to foster mutual exchange of information within the financial system. The alliance consists of 30 members, amongst them public authorities, the largest financial institutions as well as representatives from the real estate sector. We also continue to contribute in various fora to the further development of industry-wide standards.

KYC policy framework

The KYC policy and related control standards (the KYC policy framework) set the minimum requirements and control objectives for all ING entities to guard against the involvement in financial crime activity. The KYC policy framework reflects relevant national and international laws, regulations, guidance documents and guidelines from national, European and international authorities, (supra)national risk assessments and industry standards related to:

- financial crime, covering money laundering, terrorist financing, bribery and corruption, export trade controls, proliferation financing, sanctions (economic, financial and trade), countries designated by ING as ultra-high-risk countries (UHRC).
- customer tax compliance, covering customer tax integrity (CTI), FATCA, CRS, mandatory disclosure requirements (MDR).
- environmental and social risk (ESR) client assessment, specifically the initial customer screening for environmental and social risk.

The KYC policy framework is mandatory and applies to all ING entities (i.e. all branches and majority-owned subsidiaries of ING Groep N.V., including ING Bank N.V., or where ING exercises control), their corporate functions and their branches, including outsourcing partners to whom ING entities have sourced KYC-related responsibilities. The KYC policy framework also reflects relevant national and international laws, regulations and industry standards related to business partners and overarching requirements with regards to record retention, training and awareness. ING entities have local procedures in place, aimed at enabling them to comply with local laws and regulations and the KYC policy framework. Where local laws and regulations are more stringent, these have to be applied.

As a result of frequent evaluation of the business from economic, strategic and risk-based perspectives, ING, with limited exception, does not engage in business involving certain countries including Cuba, Iran, North Korea, Sudan, Syria and the Crimea region. ING has a policy not to enter into new relationships with clients from these countries and processes are in place to discontinue existing relationships involving these countries.

Global approach

ING updated its KYC policy in line with external regulatory developments in anti-money laundering and financial sanctions. In 2021, we finalised the implementation of our continuous adverse media screening tool in all of ING's Wholesale and Retail Banking businesses. This allows us to continuously screen customers against news intelligence related to financial and economic crime, creating an additional control to monitor our customers on relevant news updates on a daily basis, instead of during the periodic CDD reviews only. As a result, the business is better able to identify customers involved in potential criminal activity. We also enhanced our screening control environment, reducing false positives to prevent potential transaction delays for our customers.

Substituting local tools with centralised global tools enables us to further improve the way we onboard, monitor and screen customers using a standardised approach across the world.

Knowledge and behaviour

We believe all our people play a role in keeping ING safe, secure and compliant and that a sound risk culture requires us to act with integrity above all. We want to empower our employees with the skills and knowledge they need to fight financial crime, and encourage them to speak up if they have concerns relating to financial crime risk management.

In 2021, the Global KYC Academy further matured and rolled out new learnings to KYC employees, in addition to the regular curriculum. These included trainings on customer tax offences, environmental and social risks, sanctions and KYC tools. It also continued to partner with ACAMS (Association of Certified Anti-Money Laundering Specialists) to develop and deliver tailored, certified training for our employees. The ACAMS training portfolio focuses on learning paths that provide professional foundational skills or advance expertise in a range of topics including customer due diligence, screening, transaction monitoring and sanctions. Over 8,000 ACAMS trainings were enrolled in 2021. Virtual Instructor Led Training (VILT) was also rolled out to enable innovative and flexible learning, especially with many employees working from home due to the coronavirus pandemic. In addition we introduced a mobile app quiz to engage employees and stimulate learning on KYC topics.

To increase understanding and share best practices on financial crime risk management, awareness sessions were held for all employees and bi-annual bootcamps are organised for money laundering reporting officers. Our training framework is currently being enhanced to provide more targeted and specialist training on risks related to bribery and corruption. We are also working on further developing dedicated centres of expertise to use our centralised expertise more effectively and harmonise standards across ING.

In 2021, behavioural risk assessments were carried out at ING in Italy and in Wholesale Banking in the UK and Germany. These focused on identifying behavioural patterns and driving appropriate escalation behaviour. Feedback sessions and dialogue starters to initiate open conversations around these assessments were also held in Italy, while behavioural interventions were held in Poland and Romania, aimed at improving the desired behaviours around leadership and decision-making. In addition, two KYC world cafes were held for all KYC employees to create a shared understanding, collective purpose and uniformed approach to solving problems when dealing with common behavioural risks.

Conduct Compliance & Culture

Conduct risk is defined by anything that can result either in client detriment or impacts market integrity. Conduct compliance includes client protection and transparency (Treating Customers Fairly), market conduct (including market manipulation) and conflicts of interest.

A sound risk culture is paramount at ING as it determines the way in which employees identify, understand, discuss, and act on the risks we are confronted with and the risks we take. The proper embedding of our global Code of Conduct, Orange Code and the Whistleblower policy into our processes is key to managing our culture and ethics risk.

Treating Customers Fairly

Building on work done in 2020 to strengthen our compliance with the Markets in Financial Services Directive (MiFID) and to create a more effective Client Protection and Product Approval (CPAC) framework, in 2021 we created several training sessions on investment services, issued guidelines and closely monitored the remediation of improvements to the MiFID implementation to ensure a common understanding of our approach to MiFID group-wide. CPAC governance was further strengthened to ensure strong challenge and a consistent application globally of risk appetite when offering investment services to our customers. Preparations for the implementation of the Mifid Quickfix have progressed in line with implementation in 2022.

Alongside direct consumer protection requirements as laid down in the specific regulations (e.g. Mifid II) ING is bound by local consumer protection laws and has adopted its own minimum standards, such as the Customer Golden Rules. These minimum standards are regularly reviewed to stay in sync with legal developments and expectations from society. One of the elements we take into account in the review, is the outcome of the various discussions we have with consumer associations. Sometimes such review and discussions also lead to an offer to compensate certain customers, as we have done for certain customers with mortgages in Swiss franc in Poland and for certain Dutch retail customers in connection with certain revolving consumer loans with variable interest. See for more detail Note 46 'Legal proceedings' to the consolidated financial statements.

Transaction reporting activities were improved considerably with the creation of a group-wide governance framework and controls, as well as participating in the market wide upload of backlog in close cooperation with the relevant supervisory authorities and the reporting agencies.

To support our objectives, we expanded our focus to other key areas: In relation to insurance products, we rolled out a global policy and controls in order to align with the EU Insurance Distribution Directive (IDD). To safeguard client interests during the IBOR transition, best practices focused on client conduct and shared by the relevant supervisory authorities have been implemented.

Finally, in response to the increasing importance of sustainable products for our clients and the need for ESG considerations to form an integral part of our products and services to clients, alongside the development and roll out of policy on SFDR. ESG is being embedded within the ING organisation across all three lines of defence.

Market Conduct

Market conduct risk stems from undertaking activities that impact market integrity. The smooth functioning and public confidence in markets are crucial for economic growth and wealth. As part of our work in 2021 to strengthen our market conduct framework, an update of our market abuse policy was completed, together with a revised set of key controls owned by the first line and rolled out to all ING entities, alongside an updated mandatory e-learning on market abuse. To support ING entities in the maintenance of information barriers and the communication of confidential and inside information, new global procedures are in the process of being rolled out to ING entities.

Conflicts of Interest

ING is committed to identify conflicts of interest and act on them. The Conflicts of Interest policy sets the obligations to identify, assess and manage conflicts of interest, when personal or organisational interests are in conflict over the interest of our client(s), employees or other stakeholders (e.g. when related to personal account dealing). In 2021 the Conflicts of Interest policy was revised to further align with the standards as defined by enterprise risk management. The policy incorporates key requirements for both personal and organisational conflicts of interest in line with the European Bank Association Guidelines on Internal Governance. Next to the updated policy, mandatory instructions on conflict of interest registers were developed including templates, which provide more guidance on identifying, assessing and keeping audit trail of our conflict of interest risks.

Culture & Ethics

In 2021, ING executed the risk culture programme that was developed based on the 2020 self-assessment. Some key results are the formalisation of ING's risk culture principles, the development of a risk culture dashboard, and the development and roll-out of an approach to increase awareness and dialogue on Non-Financial Risk. The dashboard is developed to monitor and facilitate meaningful conversations on our risk culture and it leverages different instruments for insight generation. Instruments include amongst others a survey to capture employee perceptions, quantitative indicators from existing data sources and systems and a structured approach to capturing the professional judgements of Compliance officers. The risk culture programme is actively discussed by the MBB and the SB on a quarterly basis.

In February 2021, ING launched a programme to further enhance the global Whistleblower process. The programme aims to further strengthen risk management through more automated data collection and reporting and to continuously enhance psychological safety and trust by strengthening the whistleblowing confidentiality and employee protection. The quarterly whistleblowing report is shared with the MBB and the SB.

To preserve risk awareness and risk judgement in the area of risk culture, ING continued its efforts towards embedding the Orange Code decision making model that supports ethical and well-balanced decision-making throughout ING further by inserting referral to using the model in several local PARP frameworks.

Innovation, analytics and digitalisation

We continue to seek to harness new and innovative technological capabilities to keep our clients safer and to enhance their digital journey with ING. In 2021, we consolidated disruptive client-focussed innovation activities across the Group under a single dedicated business area, ING Neo. We also continue to prioritise more incremental innovation, under the oversight of our KYC Innovation Committee and RegTech Innovation Board.

In 2021, we rolled out the CoorpID platform which digitalises the know your customer process for our corporate clients improving the KYC journey of our customers, in four countries and will aim to continue to expanding in throughout 2022. Furthermore, we rolled out the Blacksmith solution to improve the KYC journey for financial institutions in six countries. We also continued to develop and leverage an AI-supported platform to help us to respond swiftly and effectively to the changing regulatory landscape and underlying policies in relation to financial crime.

Tax risk

Tax policies, procedures and a tax control framework have been implemented to support management in mitigating potential tax risks in a prudent manner. Internal monitoring, control and reporting of tax-related risks take place on a continuous basis with regular reporting to various stakeholders. For 404/SOX purposes (section 404 of the Sarbanes-Oxley Act), an 'effectiveness of internal control statement' with respect to tax controls has been provided. Tax risk management is subject to Corporate Audit testing and evaluation. In the Netherlands and also in other countries, ING's position is to be cooperatively tax compliant, this implies to have transparency about and disclosure of relevant tax risks towards tax authorities. Tax risks not only refer to ING's own tax position, but also to the risks in relation to our customers. In this respect, we have integrated a tax integrity assessment in our overall customer risk assessment process.

Model risk

Introduction

Model risk is the risk that the financial or reputational position of ING is negatively impacted as a consequence of the use of models. Model risk can arise from errors in the development, implementation, use or interpretation of models, or from incomplete or wrong data etc., leading to inaccurate, non-compliant or misinterpreted model outputs.

A model is defined as a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques, and assumptions to process input data into quantitative estimates or whose inputs are partially or wholly qualitative or based on expert judgement.

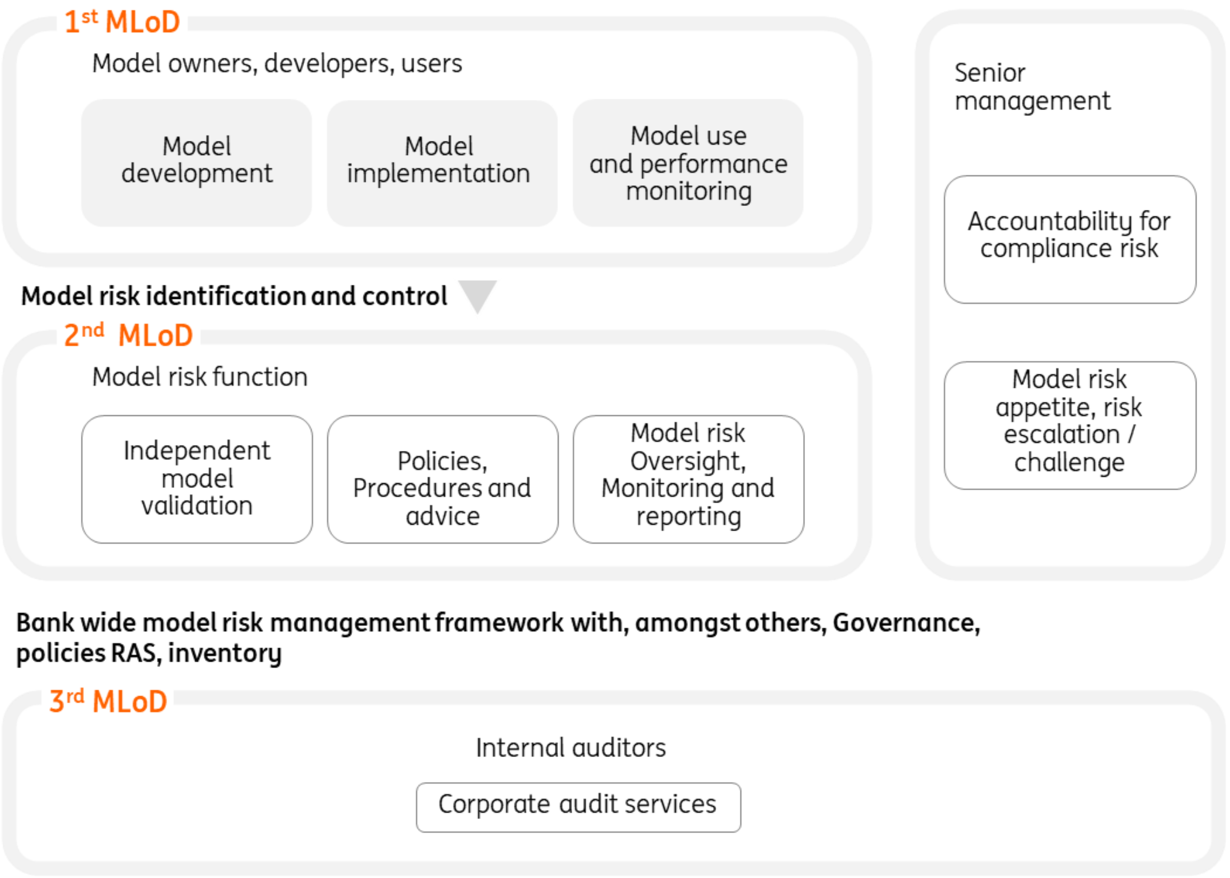
Governance (*)

The head of Model Risk Management (MoRM) reports to the ING chief risk officer. The Model Risk Management Committee (MoRMC) is the dedicated authority within ING for model risk management. It is a committee designated by the Management Board of ING bank. It is chaired by the ING chief risk officer and co-chaired by the head of MoRM.

Model lines of defence (*)

ING's model risk and control structure is based on the three model lines of defence (MLoD) approach. This approach aims to provide a sound governance framework for model risk management by defining and implementing three different management layers with distinct roles and oversight responsibilities.

Model lines of defence (*)



The composition and main activities within the three model lines of defence (MLoD):

- The 1st MLoD is composed of the model owners, model users, data management and model development, and is accountable for, among others, the development, implementation and use of the models as well as monitoring models' performance;
- The 2nd MLoD is composed of model validation and model risk oversight, which owns the model risk management framework, proposes the model risk appetite, provides challenge to model risk identification and assessment and provides an independent validation of models used within ING;
- The 3rd MLoD is the internal audit, reviewing the quality of model risk management execution in all lines of defence and provide assurance over the 1st and 2nd line model risk management activities.

Model risk appetite (Model RAS) (*)

The model risk appetite is designed to determine the level of model risk ING is willing to accept in pursuit of its strategic objectives. The initial iteration of Model RAS was introduced in 2020 and was monitored throughout 2021. At the end of 2021, the data captured by the initial Model RAS was evaluated, resulting in the implementation of thresholds and early warning limits for selected metrics.

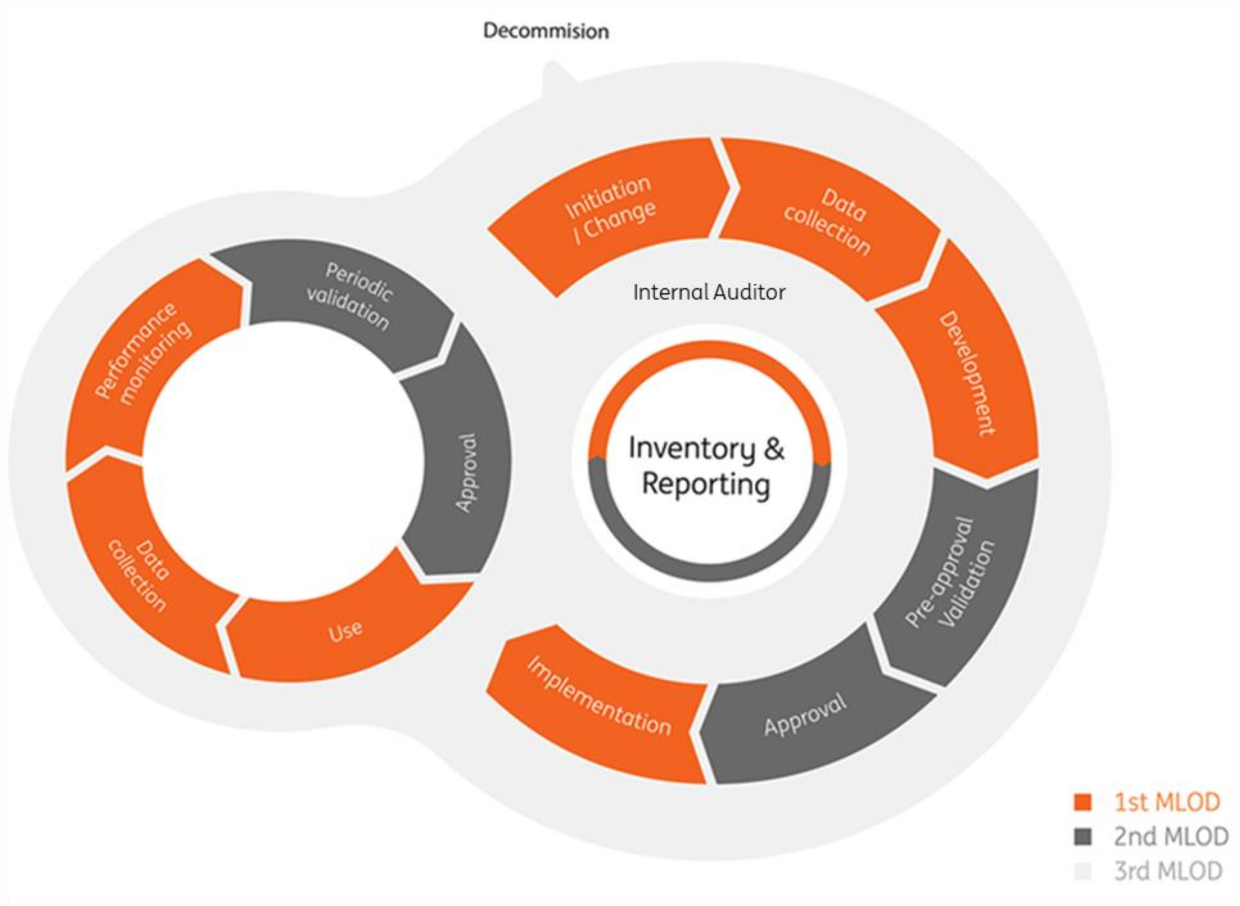
Model risk management (*)

Model risk management is executed via processes such as: model identification, model classification, model risk identification and assessment, and model validation. During 2021, these processes were further enhanced by incorporating model identification in the product approval and review process and by inclusion of model ethics principles as an element for assessing model risk. Dedicated model validation frameworks are in place for the key model types such as Credit, Market, Liquidity, Operational Risk, IRRBB and advanced analytics. These frameworks are continuously being enhanced to keep up to date with latest development.

On an aggregated level model risk is monitored via analysis of data from the global model inventory. The insights, from aggregated data analysis, are reported to the MoRMC and to the MBB for senior management to take well-informed decisions on acceptance or further mitigation of model risk.

Model lifecycle (*)

The next figure provides a schematic overview of the model lifecycle, where orange represents the activities of the 1st MLoD, grey represents the 2nd MLoD and light grey is the 3rd MLoD. The objectives of the different processes are outlined below (reference).



Initiation or change: The initiation of the development of a new model or change of an existing model can be triggered by different factors. These may be (i) internal, such as the introduction of a new product that cannot be handled by the existing models, a change in ING's organisation, financial or commercial strategy or findings and issues by an auditor, validator or based on monitoring; or (ii) external, such as innovation/new technology that becomes available (for example the Fintech models), new or upcoming supervisory regulations or ongoing technical developments.

Data collection is the process of defining and collecting data that meets the defined data quality requirements for model development. The process includes the definition of the data needed, assessment of data availability and quality, assumptions and limitations, as well as the gathering of the data needed for the analyses, impact study and testing during the model development process.

Model development is a structured process that leads to a model that is ready for validation and subsequent use. Depending on the development approach these first stages can be separate or integrated. An example of the latter is data science-based application development.

Pre-approval validation is the independent confirmation that the model is valid for its intended use. To ensure objectivity and effective challenge, the model validator is independent from other model parties such as the model developer, model owner or model approver. Model validation applies equally to in-house developed and third-party models.

The objective of the **model approval** stage is to approve models for use. The model owner submits the model for formal decision to the internal approver before a model can be deployed and used. The recommendations and validation report prepared by the model validator are key inputs for the approval.

During the **implementation** stage, the model is realised, tested and made available in a production environment.

In the **model use** stage the model is applied by the users for the specific purpose it was designed for. The model can only be used after formal approval for use of the model.

The objective of model **performance monitoring** is to regularly check if the model is performing as intended, also after possible changes in the commercial, organisational or legal environment. Model performance monitoring begins when model use has started and continues until the model has officially been decommissioned.

Periodic validation: During the life-time of a model its ongoing validity must be safeguarded. This is done by periodic independent (re)validation that assesses whether the model is still valid for its intended use and if it is used as intended. There are two types of validation: (1) periodic, such as annual, which is mandatory for regulatory models, or (2) ad hoc, for example triggered by changes in the model, the business or financial instruments etc. The actual frequency of periodic validation depends on the model risk, model type and applicable regulation.

A model that is / will no longer be used must be decommissioned. **Decommissioning** disables the model. It can, for example, be triggered because (1) the product, organisation or risk the model is made for has changed considerably or no longer exists, (2) the model is outdated, underperforming or better alternatives are available, (3) the model became obsolete or (4) the external approver withdraws its approval for the model.

Continuous model inventory and reporting: Keeping an inventory of all models and their status during their lifecycle is a continuous process. It supports management and control of the models in scope, both per individual model and the overarching management of all ING’s models. Periodic model risk reporting provides the relevant internal and external stakeholders with an overview of the models in use and the associated model risk given the defined model risk appetite.

Business risk

Introduction

Business risk for ING has been defined as the exposure to value loss due to fluctuations in volumes/margins, net fee and commission income as well as expenses. It is the risk inherent to strategy decisions, internal efficiency and the business environment. Business risk economic capital is calculated via the variance-covariance methodology for these risks, covering the risk that volume/margins, net fee and commission income and operating expenses will deviate from the expected expenses over the horizon of the relevant activities.

Governance and risk management

ING applies an explicit risk appetite statement regarding business risk, focusing on earnings stability and diversification of the business mix. Diversification reduces the risk that volumes and/or margins will suddenly drop due to unexpected changes in the business environment for certain markets and products. Furthermore, the underlying risk types (expense risk, volume-margin risk, and net fee and commission income risk) are mitigated and managed differently. Expense risk is monitored and managed via the financial performance of the bank and the local units, whereby the reported expense numbers are compared quarterly with the projected cost/income ratio. Deviations from this ambition are monitored as part of the financial projections that are discussed continuously within different parts of the organisation.

Selected Statistical Information on Banking Operations

Reference is made to Note 1 ' Basis of preparation and significant accounting policies' of the Consolidated financial statements for information on Changes in accounting principles, estimates and presentation of the consolidated financial statements and related notes.

The information in this section sets forth selected statistical information regarding the Group's operations. Information for 2021, 2020 and 2019 is set forth under IFRS-IASB. Unless otherwise indicated, average balances, when used, are calculated from monthly data and the distinction between domestic and foreign is based on the location of the office where the assets and liabilities are booked, as opposed to the domicile of the customer. However, the Company believes that the presentation of these amounts based upon the domicile of the customer would not result in material differences in the amounts presented in this section.

Average balances and interest rates

The following tables show the Group's operations, average interest-earning assets and average interest-bearing liabilities, together with average rates, for the periods indicated. The interest income, interest expense and average yield figures do not reflect interest income and expense on derivatives and other interest income and expense not considered to be directly related to interest-bearing assets and liabilities. These items are reflected in the corresponding interest income, interest expense and net interest income figures in the consolidated financial statements. A reconciliation of the interest income, interest expense and net interest income figures to the corresponding line items in the consolidated financial statements is provided hereunder.

ASSETS									
Interest-earning assets	2021			2020			2019		
	Average balance	Interest income	Average yield %	Average balance	Interest income	Average yield %	Average balance	Interest income	Average yield %
	(EUR millions)			(EUR millions)			(EUR millions)		
Time deposits with banks									
domestic	2,818	33	1.2	3,495	39	1.1	4,516	49	1.1
foreign	3,718	41	1.1	4,788	57	1.2	4,433	121	2.7
Loans and advances									
domestic	186,022	4,313	2.3	187,189	4,831	2.6	190,118	5,673	3.0
foreign	438,174	9,437	2.2	431,665	10,606	2.5	428,646	12,825	3.0
Securities purchased with agreements to resell									
domestic	3,768	0	0.0	5,242	3	0.1	3,722	52	1.4
foreign	61,137	322	0.5	55,682	573	1.0	63,337	1,939	3.1
Interest-earning securities[1]									
domestic	31,662	242	0.8	33,400	313	0.9	29,892	347	1.2
foreign	53,276	622	1.2	54,542	708	1.3	50,156	917	1.8
Other interest-earning assets									
domestic	50,713	13	0.0	43,417	27	0.1	30,659	56	0.2
foreign	71,055	56	0.1	48,453	44	0.1	24,978	66	0.3
Total	**902,341**	**15,080**	**1.7**	**867,875**	**17,201**	**2.0**	**830,456**	**22,047**	**2.7**
Non-interest earning assets	51,012			48,761			54,459		
Derivatives assets	23,505			29,423			25,322		
Total assets	**976,857**			**946,059**			**910,238**		
Percentage of assets applicable to foreign operations		68.9%			69.7%			70.0%	
Interest income on derivatives		4,386			4,546			5,499	
Other [2]		1,585			812			617	
Total interest income		**21,051**			**22,559**			**28,163**	

1 Substantially all interest-earning securities held by the banking operations of the Company are taxable securities.
2 Other includes negative interest expense.

LIABILITIES

	Interest-bearing liabilities								
	2021			2020			2019		
	Average balance (EUR millions)	Interest expense	Average yield %	Average balance (EUR millions)	Interest expense	Average yield %	Average balance (EUR millions)	Interest expense	Average yield %
Time deposits from banks									
domestic	51,928	3	0.0	35,079	10	0.0	17,673	28	0.2
foreign	24,497	76	0.3	18,888	123	0.7	14,270	200	1.4
Demand deposits									
domestic	98,236	110	0.1	82,639	121	0.1	66,667	498	0.7
foreign	144,706	19	0.0	124,337	12	0.0	108,193	32	0.0
Time deposits[1]									
domestic	12,508	35	0.3	11,798	129	1.1	14,019	336	2.4
foreign	5,926	90	1.5	9,538	132	1.4	14,114	300	2.1
Savings deposits									
domestic	97,862	–324	–0.3	95,455	77	0.1	93,911	114	0.1
foreign	257,796	482	0.2	267,713	627	0.2	266,470	1,301	0.5
Securities sold under agreements to repurchase									
domestic	3,205	0		–	0	–	36	33	92.8
foreign	55,300	133	0.2	46,225	317	0.7	52,158	1,429	2.7
Commercial paper									
domestic	2,712	3	0.1	10,127	12	0.1	13,554	21	0.2
foreign	12,873	23	0.2	13,360	163	1.2	14,143	350	2.5
Short term debt									
domestic	3,484	7	0.2	8,995	97	1.1	9,005	159	1.8
foreign	4,190	11	0.3	3,389	28	0.8	3,784	55	1.5
Long term debt									
domestic	55,511	1,167	2.1	64,418	1,387	2.2	72,012	1,700	2.4
foreign	14,490	168	1.2	14,994	234	1.6	14,110	317	2.2
Subordinated liabilities									
domestic	15,364	573	3.7	16,676	616	3.7	15,304	664	4.3
foreign	–			–0	–	–	77	3	4.3
Other interest-bearing liabilities									
domestic	3,470	12	0.4	2,960	31	1.1	1,472	113	7.6
foreign	6,557	28	0.4	8,173	44	0.5	9,101	121	1.3
Total	**870,615**	**2,616**	**0.3**	**834,764**	**4,159**	**0.5**	**800,076**	**7,773**	**0.8**

	2021	2020	2019
Non-interest bearing liabilities	30,839	31,711	35,010
Derivatives liabilities	21,173	27,232	24,376
Total Liabilities	**922,627**	**893,707**	**859,461**
Group Capital	54,230	52,353	50,777
Total liabilities and capital	**976,857**	**946,059**	**910,238**
Percentage of liabilities applicable to foreign operations	60.4%	62.3%	63.5%
Other interest expense:			
Interest expenses on derivatives	3,305	4,227	5,925
other [2]	1,130	622	654
Total interest expense	**7,051**	**9,007**	**14,353**
Total net interest result	**14,000**	**13,552**	**13,811**

1 These captions do not include deposits from banks.

2 Other includes negative interest income.

Analysis of changes in net interest income

The following table allocates changes in the Group's operations' interest income and expense and net interest result between changes in average balances and rates for the periods indicated. Changes due to a combination of volume and rate have been allocated to changes in average volume. The net changes in interest income, interest expense and net interest result, as calculated in this table, have been reconciled to the changes in interest income, interest expense and net interest result in the consolidated financial statements. See introduction to "Average Balances and Interest Rates" for a discussion of the differences between interest income, interest expense and net interest result as calculated in the following table and as set forth in the consolidated financial statements.

	2021 over 2020 Increase (decrease) due to changes in			2020 over 2019 Increase (decrease) due to changes in		
	Average volume	Average rate	Net change	Average volume	Average rate	Net change
	(EUR millions)			(EUR millions)		
Interest-earning assets						
Time deposits to banks						
domestic	–8	1	–6	–11	1	–10
foreign	–13	–3	–16	10	–74	–64
Loans and advances						
domestic	–55	–463	–518	–78	–764	–842
foreign	140	–1,309	–1,169	96	–2,316	–2,220
Securities purchased with agreements to resell						
Domestic	–1	–2	–3	21	–69	–48
foreign	56	–307	–251	–234	–1,132	–1,366
Interest-earning securities						
Domestic	–16	–55	–71	41	–75	–35
foreign	–16	–69	–85	80	–290	–210
Other interest-earning assets						
domestic	5	–18	–14	23	–52	–29
foreign	20	–8	12	62	–84	–22
Interest income						
domestic	–75	–537	–612	–4	–960	–964
foreign	187	–1,696	–1,509	14	–3,895	–3,882
Total	**112**	**–2,233**	**–2,121**	**9**	**–4,855**	**–4,846**
Other interest income			613			–759
Total interest income			**–1,508**			**–5,604**

	2021 over 2020			2020 over 2019		
	Increase (decrease) due to changes in			Increase (decrease) due to changes in		
	Average volume	Average rate (EUR millions)	Net change	Average volume	Average rate (EUR millions)	Net change
Interest-bearing liabilities						
Time deposits from banks						
domestic	5	–12	–7	28	–46	–18
foreign	36	–83	–47	65	–142	–77
Demand deposits						
domestic	23	–34	–12	119	–496	–377
foreign	2	5	7	5	–24	–20
Time deposits						
domestic	8	–101	–93	–53	–154	–207
foreign	–50	8	–42	–97	–70	–167
Savings deposits						
domestic	2	–403	–401	2	–39	–37
foreign	–26	–119	–146	6	–680	–674
Short term debt						
domestic	–59	–31	–90	–0	–62	–62
foreign	7	–23	–17	–6	–22	–27
Securities sold under agreements to repurchase						
domestic	–145	144	–0	–41	8	–33
foreign	62	–245	–183	–162	–950	–1,113
Commercial paper						
domestic	–8	–1	–9	–5	–4	–10
foreign	–6	–134	–140	–19	–168	–187
Long term debt						
domestic	–192	–28	–219	–179	–134	–313
foreign	–8	–58	–66	20	–103	–83
Subordinated liabilities						
domestic	–49	6	–43	59	–107	–47
foreign	–	–	–	–3	0	–3
Other interest-bearing liabilities						
domestic	5	–24	–19	114	–195	–81
foreign	–9	–7	–16	–12	–64	–77
Interest expense						
domestic	–409	–483	–892	44	–1,230	–1,186
foreign	8	–658	–650	–205	–2,224	–2,428
Total	**–401**	**–1,141**	**–1,542**	**–161**	**–3,454**	**–3,615**
Other interest expense			–414			–1,731
Total interest expense			**–1,956**			**–5,345**
Net interest						
domestic	334	–53	281	–48	270	222
foreign	179	–1,039	–859	218	–1,672	–1,454
Net interest	**513**	**–1,092**	**–579**	**170**	**–1,402**	**–1,231**
Other net interest result			1,027			972
Net interest result			**448**			**–259**

The following table shows the interest spread and net interest margin for the past two years.

	2021 Average rate %	2020 Average rate %
Interest spread		
Domestic	1.1	1.1
Foreign	1.5	1.7
Total	**1.3**	**1.5**
Net interest margin		
Domestic	1.0	1.0
Foreign	1.5	1.7
Total	**1.3**	**1.5**

Investments in debt securities

The following tables show the weighted average yield of ING's investments on debt securities measured at amortised cost and fair value through other comprehensive income. The weighted average yield is calculated as follows:

$$\frac{\text{Nominal value * coupon rate * remaining maturity}}{\text{Nominal value * remaining maturity}}$$

Weighted average yield

2021	1 year or less	Between 1 and 5 years	Between 5 and 10 years	Over 10 years
Fair value through other comprehensive income				
Government bonds	2.61%	2.02%	1.34%	3.00%
Sub-sovereign, Supranationals and Agencies	3.01%	2.40%	0.51%	0.66%
Covered bonds	0.73%	0.28%	0.21%	
Corporate bonds	0.88%	0.82%	0.13%	
Financial institutions bonds	0.47%	1.25%	0.06%	
ABS portfolio		0.14%	0.11%	0.13%

(1) Since substantially all investment securities held by the banking operations of the Company are taxable securities, the yields are on tax-equivalent basis.

Weighted average yield

2021	1 year or less	Between 1 and 5 years	Between 5 and 10 years	Over 10 years
Securities at amortised cost				
Government bonds	2.13%	2.44%	1.18%	4.43%
Sub-sovereign, Supranationals and Agencies	2.07%	1.37%	0.42%	0.40%
Covered bonds	0.67%	0.37%	0.10%	
Corporate bonds	1.25%	0.12%	0.67%	
Financial institutions bonds	0.52%	1.11%	0.18%	
ABS portfolio		0.02%	1.20%	0.69%

(1) Since substantially all investment securities held by the banking operations of the Company are taxable securities, the yields are on tax-equivalent basis.

Loan Portfolio

Loans and advances to banks and customers

Loans and advances to banks include all receivables from credit institutions, except for cash, current accounts and deposits with other banks (including central banks). Loans and advances to customers includes lending facilities to corporate and private customers encompass among others, loans, overdrafts and finance lease receivables.

Maturities and sensitivity of loans to changes in interest rates

The following table analyses loans and advances to banks and customers by time remaining until maturity as of 31 December 2021.

2021	1 year or less	1 year to 5 years	5 years through 15 years	After 15 years	Total
By domestic offices:					
Loans guaranteed by public authorities	1,028	2,323	9,499	10,920	23,770
Loans secured by mortgages	5,857	18,858	43,806	46,329	114,849
Loans guaranteed by credit institutions	6,362	900	16		7,278
Other private lending	859	835	704	179	2,577
Other corporate lending	25,507	14,348	2,647	274	42,777
Total domestic offices	**39,613**	**37,264**	**56,673**	**57,701**	**191,251**
By foreign offices:					
Loans guaranteed by public authorities	3,970	6,297	6,353	942	17,563
Loans secured by mortgages	25,805	63,766	85,516	74,656	249,743
Loans guaranteed by credit institutions	16,938	2,039	1,362	2,277	22,616
Other private lending	6,941	12,279	3,784	1,679	24,682
Other corporate lending	62,708	67,958	16,702	785	148,153
Total foreign offices	**116,364**	**152,339**	**113,717**	**80,338**	**462,758**
Total gross loans and advances to banks and customers	**155,977**	**189,602**	**170,390**	**138,039**	**654,009**

The following table analyzes loans and advances to banks and customers by interest rate sensitivity by maturity as of 31 December 2021 for loans and advances due after one year.

	Predetermined interest rates	Floating or adjustable interest rates (1)
Loans guaranteed by public authorities	27,230	9,106
Loans secured by mortgages	233,819	99,133
Loans guaranteed by credit institutions	3,309	3,262
Other private lending	15,789	3,671
Other corporate lending	19,727	82,987
Total	**299,873**	**198,159**

(1) Loans that have an interest rate that remains fixed for more than one year and which can then be changed are classified as "adjustable interest rates".

Allowance for credit losses

The following table presents the movements in allocation of the provision for loan losses on loans accounted for as loans and advances to banks and customers for 2021, 2020 and 2019 under IFRS-IASB.

Movements in allocation of the provision for loan losses on loans

	2021	2020	2019
Balance on 1 January	5,854	4,645	4,568
Effect of changes in accounting policy			
Change in the composition of the Group			
Write-offs	-854	-1,200	-1,030
Recoveries	45	39	55
Net write-offs	**-809**	**-1,160**	**-975**
Additions and other adjustments (included in value Adjustments to receivables of the Banking operations)	324	2,369	1,052
Balance on 31 December	**5,368**	**5,854**	**4,645**
Average loans and advances to banks and customers	**644,853**	**645,134**	**644,139**
Ratio of net charge-offs to average loans and advances to banks and customers	**0.13%**	**0.18%**	**0.15%**
Ratio of allowance for credit losses to total loans and advances to banks and customers outstanding	**0.82%**	**0.94%**	**0.72%**

Although Covid-19 has had a negative impact on the global economy, defaults in our portfolio have been limited in 2021. This both reflects the quality of our loan portfolio and the impact of government support schemes. However, due to the ongoing pandemic as well as strained supply chains, staffing shortage and rising prices, uncertainty remains. As it is expected that additional defaults as a result of the Covid-19 crisis will still come in, especially in certain sectors, a sector-based management adjustment was calculated. Risk costs further include management adjustment related to residential mortgages to reflect the potential impact of higher inflation and rising interest rates on customers' ability to pay and expected negative impact on property valuations. Reference is made to Note 1 'Basis of preparation and significant accounting policies' and 'Additional information – Risk Management' for detailed information on loan loss provisioning.

Deposits

Reference is made to 'Additional information – Average balances and interest rates' for detailed information on average amount of and the average rate paid on deposit categories.

For the years ended 31 December 2021, 2020 and 2019 the aggregate amount of deposits by foreign depositors in domestic offices was EUR 29,696 million, EUR 27,850 million and EUR 27,649 million, respectively.

Uninsured deposits

For the years ended 31 December 2021 and 2020 the amount of uninsured deposits, which were not covered by DGS, was EUR 162,983 million and EUR 171,802 million, respectively.

Deposit guarantee schemes (DGS) reimburse a limited amount to compensate depositors whose bank has failed. A fundamental principle underlying DGS is that they are funded entirely by banks, and that no taxpayer funds are used. Under EU rules, the Deposit Guarantee Scheme (DGS) guarantees deposits up to a maximum of EUR 100,000 per depositor in case of a bank failure.

On 31 December 2021, the amount of time deposits in excess of (local) deposit insurance regime and time deposits which are otherwise uninsured is as follows:

	Time deposits in excess on deposit insurance regime (EUR millions)	Other uninsured Time deposits (EUR millions)
3 months or less	1,954	18,381
6 months or less but over 3 months	416	3,140
12 months or less but over 6 months	467	1,138
Over 12 months	542	69,525
Total	**3,380**	**92,184**

For further detailed information on deposits reference is made to Note 12 'Deposits from banks' and Note 13 ' Customer deposits' of the consolidated financial statements.

Contents

Segment reporting

Additional notes to the consolidated financial statements

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Supervisory Board ING Groep N.V.

Opinion on the consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of ING Groep N.V. and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of profit or loss, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2021, the related notes and the specific disclosures described in Note 1 as being part of the consolidated financial statements (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 7, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Changes in Accounting Principles

As discussed in Note 1.4.1 to the financial statements, the Company changed its method of accounting and disclosures for certain financial Instruments as of January 1, 2021 due to the adoption of 'Interest Rate Benchmark Reform – Phase 2 – amendments to IFRS9, IAS 39, IFRS7, IFRS 4 and IFRS 16'.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgements. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Assessment of expected credit losses on loans and advances to customers and loans and advances to banks

As discussed in the Credit Risk section on pages 163-205 and in Note 3 and Note 7 in the consolidated financial statements, the loans and advances to customers amount to EUR 625 billion and loans and advances to banks amount to EUR 24 billion as at 31 December 2021. These loans and advances are measured at amortised cost, less expected credit losses ('ECL') of EUR 5.3 billion.

Management estimated ECL using three components: probability of default ('PD'), loss given default ('LGD') and exposure at default ('EAD'). Management applied forward looking economic scenarios with associated weights. Relevant macroeconomic factors include the gross domestic product ('GDP'), house price index ('HPI') and unemployment rate. The recent economic conditions are outside the bounds of historical experience used to develop ECL model methodologies and result in greater uncertainties to estimate ECLs. These uncertainties are addressed by judgemental overlays by management.

We identified the assessment of ECL on loans and advances to customers and loans and advances to banks as a critical audit matter because of the significant and complex auditor judgment and specialized skills and knowledge required to evaluate the following elements of the overall ECL estimate:

- the judgements used to develop PD, LGD and EAD, including model or manual determined expected future recovery cash flow assessments of individual loan provisions for impaired loans;
- the recalibration of existing IFRS 9 credit risk models and redevelopment of IFRS 9 credit risk models to reflect the new definition of default applied in credit risk management of the bank and the update of data history;
- use of forward-looking macroeconomic forecasts in the ECL, including GDP, HPI and unemployment rate;
- the consistent identification and application of criteria for significant increase in credit risk ('SICR');
- calculation of management overlays to the modelled ECL due to the increased uncertainty in the forecast of future economic conditions. These management overlays included specific sectorial wholesale and retail lending overlays and overlays to residential mortgages.

The following are the primary procedures we performed to address this critical audit matter.

- We evaluated the design and tested the operating effectiveness of certain internal controls related to the ECL process for loans and advances to customers and banks. This included controls related to the assumptions (including PD, LGD, EAD and macroeconomic forecasts), review of model outputs, the application of the new definition of default, the update of data history, governance and monitoring of the ECL, reconciliations, determination of credit risk ratings, the estimated future recovery cash flows of individual loan provisions and management overlays to the modelled ECL.
- We involved credit risk professionals with specialised skills and knowledge who assisted in evaluating the assumptions to determine the PD, LGD, and EAD parameters in models used by the Company to determine the collective provisions including the evaluation of the recalibrated and redeveloped credit risk models. In addition, assessing management overlays recorded to the ECL, including sectorial wholesale and retail lending overlays and overlays to residential mortgages. This included reperforming back testing of certain models to evaluate current model performance. We considered the impact these overlays have on model calculations and results when reaching our conclusions.
- We involved economic professionals with specialised skills and knowledge, who assisted in assessing the Company's methodology to determine the macroeconomic forecasts used in the ECL. We tested the reasonableness of management's forecasts against other external benchmarks and our own internal forecasts.
- We involved corporate finance professionals with specialised skills and knowledge, who assisted in examining the methodologies, cash flows and collateral values used in expected future recovery cash flow assessments of individual loan provisions for impaired loans. We challenged management's use of recovery scenarios and expected cash flows considering industry trends and comparable benchmarks, recalculated recovery amounts and performed reconciliations.
- We evaluated the identification of SICR in loans by challenging the scope of management's criteria used in staging assessments, consistent application of the thresholds applied within each criterion, and the ability of staging criteria to identify SICR prior to loans being credit impaired.

/s/ KPMG Accountants N.V.

We have served as the Company's auditor since 2016.

Amstelveen, The Netherlands
March 7, 2022

Consolidated statement of financial position

As at 31 December

in EUR million	2021	2020
Assets		
Cash and balances with central banks 2	106,520	111,087
Loans and advances to banks 3	23,592	25,364
Financial assets at fair value through profit or loss 4		
– Trading assets	51,381	51,356
– Non-trading derivatives	1,536	3,583
– Designated as at fair value through profit or loss	6,355	4,126
– Mandatorily at fair value through profit or loss	42,684	44,305
Financial assets at fair value through other comprehensive income 5	30,635	35,895
Securities at amortised cost 6	48,319	50,587
Loans and advances to customers 7	625,122	593,970
Investments in associates and joint ventures 8	1,587	1,475
Property and equipment 9	2,515	2,841
Intangible assets 10	1,156	1,394
Current tax assets	549	419
Deferred tax assets 38	1,303	1,596
Other assets 11	5,996	5,893
Total assets	**949,250**	**933,891**

in EUR million	2021	2020
Liabilities		
Deposits from banks 12	85,092	78,098
Customer deposits 13	617,400	609,517
Financial liabilities at fair value through profit or loss 14		
– Trading liabilities	27,113	32,709
– Non-trading derivatives	2,120	1,629
– Designated as at fair value through profit or loss	41,808	48,444
Current tax liabilities	271	342
Deferred tax liabilities 38	311	343
Provisions 15	995	691
Other liabilities 16	12,839	11,609
Debt securities in issue 17	91,784	82,065
Subordinated loans 18	16,715	15,805
Total liabilities	**896,448**	**881,250**
Equity 19		
Share capital and share premium	17,144	17,128
Other reserves	-540	2,342
Retained earnings	35,462	32,149
Shareholders' equity (parent)	**52,066**	**51,619**
Non-controlling interests	736	1,022
Total equity	**52,802**	**52,640**
Total liabilities and equity	**949,250**	**933,891**

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements.

Consolidated statement of profit or loss

for the years ended 31 December

in EUR million	2021	2020	2019
Continuing operations			
Interest income using effective interest rate method	18,577	20,715	25,056
Other interest income	2,474	1,843	3,107
Total interest income	**21,051**	**22,559**	**28,163**
Interest expense using effective interest rate method	-5,085	-7,402	-11,268
Other interest expense	-1,966	-1,605	-3,084
Total interest expense	**-7,051**	**-9,007**	**-14,353**
Net interest income 20	**14,000**	**13,552**	**13,811**
Fee and commission income	5,004	4,514	4,439
Fee and commission expense	-1,487	-1,503	-1,571
Net fee and commission income 21	**3,517**	**3,011**	**2,868**
Valuation results and net trading income 22	2,065	474	-159
Investment income 23	167	152	188
Share of result from associates and joint ventures 8	141	66	82
Impairment of associates and joint ventures 8	-3	-235	-34
Result on disposal of group companies 24	-29	-3	117
Net result on derecognition of financial assets measured at amortised cost 25	-0	189	38
Other income 26	236	20	214
Total income	**20,093**	**17,227**	**17,125**

in EUR million	2021	2020	2019
Addition to loan loss provisions	516	2,675	1,120
Staff expenses 27	5,941	5,812	5,755
Other operating expenses 28	5,251	5,341	4,598
Total expenses	**11,708**	**13,828**	**11,472**
Result before tax	**8,385**	**3,399**	**5,653**
Taxation 38	2,306	1,070	1,652
Net result	**6,079**	**2,329**	**4,001**
Net result (before non-controlling interests)	**6,079**	**2,329**	**4,001**
Net result attributable to Non-controlling interests	128	78	99
Net result attributable to shareholders of the parent	**5,951**	**2,250**	**3,903**
in EUR			
Earnings per ordinary share 30			
Basic earnings per ordinary share	1.53	0.58	1.00
Diluted earnings per ordinary share	1.53	0.58	1.00

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements.

Consolidated statement of comprehensive income

for the years ended 31 December

in EUR million	2021	2020	2019
Net result (before non-controlling interests)	6,079	2,329	4,001
Other comprehensive income			
Items that will not be reclassified to the statement of profit or loss:			
Realised and unrealised revaluations property in own use	-2	-7	58
Remeasurement of the net defined benefit asset/liability 37	95	28	58
Net change in fair value of equity instruments at fair value through other comprehensive income	96	-335	139
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss	37	-19	-116
Items that may subsequently be reclassified to the statement of profit or loss:			
Net change in fair value of debt instruments at fair value through other comprehensive income	-186	25	-42
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss	-42	-34	-34
Changes in cash flow hedge reserve	-1,955	355	640
Exchange rate differences	143	-1,620	-29
Share of other comprehensive income of associates and joint ventures and other income	-3	6	
Total comprehensive income	**4,262**	**728**	**4,674**
Comprehensive income attributable to:			
Non-controlling interests	-247	133	142
Equity holders of the parent	4,509	595	4,532
	4,262	**728**	**4,674**

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements.

For the disclosure on the income tax effects on each component of the other comprehensive income reference is made to Note 38 'Taxation'.

Consolidated statement of changes in equity

in EUR million	Share capital and share premium	Other reserves	Retained earnings	Shareholders' equity (parent)	Non-controlling interests	Total equity
Balance as at 31 December 2020	17,128	2,342	32,149	51,619	1,022	52,640
Net change in fair value of equity instruments at fair value through other comprehensive income		101	-6	94	2	96
Net change in fair value of debt instruments at fair value through other comprehensive income		-173		-173	-13	-186
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss		-40		-40	-1	-42
Changes in cash flow hedge reserve		-1,603		-1,603	-352	-1,955
Realised and unrealised revaluations property in own use		-13	11	-2		-2
Remeasurement of the net defined benefit asset/liability 37		95		95		95
Exchange rate differences and other		153		153	-10	143
Share of other comprehensive income of associates and joint ventures and other income		-21	18	-3		-3
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss		37		37		37
Total amount recognised directly in other comprehensive income net of tax		**-1,465**	**23**	**-1,442**	**-375**	**-1,817**
Net result		191	5,760	5,951	128	6,079
Total comprehensive income net of tax		**-1,274**	**5,782**	**4,509**	**-247**	**4,262**
Dividends and other cash distributions 31			-2,342	-2,342	-40	-2,382
Share buyback programme		-1,604	-140	-1,744		-1,744
Changes in treasury shares		-4		-4		-4
Employee stock option and share plans	16		12	29		29
Balance as at 31 December 2021	**17,144**	**-540**	**35,462**	**52,066**	**736**	**52,802**

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements. Changes in individual Reserve components are presented in Note 19 ‘Equity’.

Consolidated statement of changes in equity - continued

in EUR million	Share capital and share premium	Other reserves	Retained earnings	Shareholders' equity (parent)	Non-controlling interests	Total equity
Balance as at 31 December 2019	17,117	4,013	29,866	50,996	893	51,889
Net change in fair value of equity instruments at fair value through other comprehensive income		-399	62	-337	2	-335
Net change in fair value of debt instruments at fair value through other comprehensive income		20		20	5	25
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss		-33		-33	-1	-34
Changes in cash flow hedge reserve		242		242	112	355
Realised and unrealised revaluations property in own use		-33	26	-7	-0	-7
Remeasurement of the net defined benefit asset/liability 37		28		28		28
Exchange rate differences and other		-1,557		-1,557	-63	-1,620
Share of other comprehensive income of associates and joint ventures and other income		-37	43	6		6
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss		-3	-16	-19		-19
Total amount recognised directly in other comprehensive income net of tax		-1,770	114	-1,656	55	-1,601
Net result		94	2,156	2,250	78	2,329
Total comprehensive income net of tax		-1,676	2,271	595	133	728
Dividends 31					-3	-3
Changes in treasury shares		5		5		5
Employee stock option and share plans	11		11	22	0	22
Changes in the composition of the group and other changes					-1	-1
Balance as at 31 December 2020	**17,128**	**2,342**	**32,149**	**51,619**	**1,022**	**52,640**

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements. Changes in individual Reserve components are presented in Note 19 ‘Equity’.

Consolidated statement of changes in equity - continued

in EUR million	Share capital and share premium	Other reserves	Retained earnings	Shareholders' equity (parent)	Non-controlling interests	Total equity
Balance as at 31 December 2018	**17,088**	**3,621**	**28,339**	**49,049**	**803**	**49,851**
Net change in fair value of equity instruments at fair value through other comprehensive income		-335	472	137	1	139
Net change in fair value of debt instruments at fair value through other comprehensive income		-43		-43	1	-42
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss		-33		-33	-1	-34
Changes in cash flow hedge reserve		604		604	36	640
Realised and unrealised revaluations property in own use		49	9	58	-0	58
Remeasurement of the net defined benefit asset/liability 37		58		58		58
Exchange rate differences and other		-36		-36	7	-29
Share of other comprehensive income of associates and joint ventures and other income		69	-69			
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss		-123	6	-116		-116
Total amount recognised directly in other comprehensive income net of tax		211	418	629	44	673
Net result		180	3,723	3,903	99	4,001
Total comprehensive income net of tax		391	4,141	4,532	142	4,674
Dividends 31			-2,650	-2,650	-29	-2,679
Changes in treasury shares		1		1		1
Employee stock option and share plans	28		13	41	0	41
Changes in the composition of the group and other changes			23	23	-23	-0
Balance as at 31 December 2019	**17,117**	**4,013**	**29,866**	**50,996**	**893**	**51,889**

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements. Changes in individual Reserve components are presented in Note 19 ‘Equity’.

Consolidated statement of cash flows

for the years ended 31 December

in EUR million		2021	2020	2019
Cash flows from operating activities 32				
Result before tax		8,385	3,399	5,653
Adjusted for:	– Depreciation and amortisation	834	829	789
	– Addition to loan loss provisions	516	2,675	1,120
	– Other non-cash items in Result before tax	-1,190	1,671	1,213
Taxation paid		-1,873	-1,734	-2,345
Changes in:	– Net change in Loans and advances to/from banks, not available/payable on demand	8,700	53,078	-3,911
	– Net change in Trading assets and Trading liabilities	-5,620	2,566	-2,568
	– Loans and advances to customers	-27,860	2,876	-16,687
	– Customer deposits	10,339	39,740	18,040
	– Other 32	-7,175	-3,856	11,752
Net cash flow from/(used in) operating activities		**-14,943**	**101,243**	**13,055**
Cash flows from investing activities				
Investments and advances:	- Acquisition of subsidiaries, net of cash acquired			-17
	- Associates and joint ventures	-91	-24	-507
	- Financial assets at fair value through other comprehensive income	-13,186	-16,949	-16,270
	- Securities at amortised cost	-44,945	-37,522	-12,268
	– Property and equipment	-184	-287	-355
	– Other investments	-179	-300	-395
Disposals and redemptions:	– Associates and joint ventures	57	24	67
	– Disposal of subsidiaries, net of cash disposed	27	-3	
	- Financial assets at fair value through other comprehensive income	17,750	14,571	13,390
	- Securities at amortised cost	46,933	31,918	13,001
	– Property and equipment	39	75	81
	– Loans sold			744
	– Other investments	0	12	34
Net cash flow from/(used in) investing activities		**6,220**	**-8,487**	**-2,495**
Cash flows from financing activities 33				
Proceeds from debt securities		85,113	65,308	90,793
Repayments of debt securities		-76,150	-99,212	-94,497
Proceeds from issuance of subordinated loans		3,163	2,165	3,429
Repayments of subordinated loans		-2,449	-2,786	-933
Repayments of principal portion of lease liabilities		-301	-273	-271
Purchase/sale of treasury shares		-1,608	5	1
Dividends paid		-2,382	-3	-2,679
Other financing		1	-1	2
Net cash flow from/(used in) financing activities		**5,387**	**-34,796**	**-4,154**
Net cash flow		**-3,335**	**57,960**	**6,406**
Cash and cash equivalents at beginning of year 34		111,566	54,031	47,529
Effect of exchange rate changes on cash and cash equivalents		-565	-425	95
Cash and cash equivalents at end of year 34		**107,665**	**111,566**	**54,031**

Consolidated statement of cash flows - continued

As at 31 December 2021, Cash and cash equivalents includes cash and balances with central banks of EUR 106,520 million (2020: EUR 111,087 million; 2019: EUR 53,202 million). In 2020 the increase was mainly driven by ING's participation of EUR 59.5 billion in the targeted longer-term refinancing operations (TLTRO III), which were mainly placed on deposit with the ECB as at 31 December 2020, and by increased customer deposits. Reference is made to Note 34 'Cash and cash equivalents'.

References relate to the accompanying notes. These are an integral part of the Consolidated financial statements.

The table below presents the Interest and dividend received and paid.

in EUR million	2021	2020	2019
Interest received	21,496	23,352	28,957
Interest paid	-8,705	-9,672	-14,550
	12,791	**13,680**	**14,407**
Dividend received [1]	172	144	219
Dividend paid	-2,382	-3	-2,679

1 Includes dividends received as recognized within Investment Income, from equity securities included in the Financial assets at fair value through profit or loss, Financial assets at fair value through OCI, and from Investments in associates and joint ventures. Dividend paid and received from trading positions have been included.

Dividends received from associates and joint ventures are included in investing activities, interest received, interest paid and other dividends received are included in operating activities and dividend paid is included in financing activities in the Consolidated statement of cash flows.

Notes to the Consolidated financial statements

1 Basis of preparation and significant accounting policies

1.1 Reporting entity and authorisation of the Consolidated financial statements

ING Groep N.V. is a company domiciled in Amsterdam, the Netherlands. Commercial Register of Amsterdam, number 33231073. These Consolidated financial statements, as at and for the year ended 31 December 2021, comprise ING Groep N.V. (the Parent company) and its subsidiaries, together referred to as ING Group. ING Group is a global financial institution with a strong European base, offering a wide range of retail and wholesale banking services to customers in over 40 countries.

The ING Group Consolidated financial statements, as at and for the year ended 31 December 2021, were authorised for issue in accordance with a resolution of the Executive Board on 7 March 2022. The Executive Board has the power to amend the financial statements as long as these are not adopted by the General Meeting of Shareholders. The General Meeting of Shareholders may decide not to adopt the financial statements, but may not amend these.

1.2 Basis of preparation of the Consolidated financial statements

The ING Group Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board for purposes of reporting with the U.S. Securities and Exchange Commission (SEC), including financial information contained in this Annual report on Form 20-F. The term ‘IFRS-IASB’ is used to refer to International Financial Reporting Standards as issued by the International Accounting Standards Board, including the decisions ING Group made with regard to the options available under IFRS-IASB.

The ING Group Consolidated financial statements have been prepared on a going concern basis and there are no significant doubts about the ability of ING Group to continue as a going concern. In 2021 ING Group’s capital and liquidity position remained strong despite the Covid-19 impact and ING Group has sufficient buffers to withstand certain adverse scenarios without breaching currently applicable and likely future requirements. Strong capital position allowed ING Group to pay cash dividends and other cash distributions to the shareholders during 2021, as well as to announce and to start execution of a share buyback programme. Reference is made to Note 19 ‘Equity’.

The Consolidated financial statements are presented in euros and rounded to the nearest million, unless stated otherwise. Amounts may not add up due to rounding.

1.2.1 Presentation of Risk management disclosures

To improve transparency, reduce duplication and present related information in one place, certain disclosures of the nature and extent of risks related to financial instruments required by IFRS 7 ‘Financial instruments: Disclosures’ are included in the ‘Risk management’ section of the Annual Report.

These disclosures are an integral part of ING Group Consolidated financial statements and are indicated in the ‘Risk management’ section by the symbol (*). Chapters, paragraphs, graphs or tables within the risk management section that are indicated with this symbol in the respective headings or table header are considered to be an integral part of the Consolidated financial statements.

1.2.2 Reconciliation between IFRS-EU and IFRS-IASB

The published 2021 Consolidated financial statements of ING Group are prepared in accordance with IFRS-EU. IFRS-EU refers to International Financial Reporting Standards (‘IFRS’) as adopted by the European Union (EU), including the decisions ING Group made with regard to the options available under IFRS as adopted by the EU. IFRS-EU differs from IFRS-IASB in respect of certain paragraphs in IAS 39 ‘Financial Instruments: Recognition and Measurement’ regarding hedge accounting for portfolio hedges of interest rate risk.

Under IFRS-EU, ING Group applies fair value hedge accounting for portfolio hedges of interest rate risk (fair value macro hedges) in accordance with the EU carve-out version of IAS 39. Under the EU IAS 39 carve-out, hedge accounting may be applied, in respect of fair value macro hedges, to core deposits and hedge ineffectiveness is only recognised when the revised estimate of the amount of cash flows in scheduled time buckets falls below the original designated amount of that bucket and is not recognised when the revised amount of cash flows in scheduled time buckets is more than the original designated amount. Under IFRS-IASB, hedge accounting for fair value macro hedges cannot be applied to core deposits and ineffectiveness arises whenever the revised estimate of the amount of cash flows in scheduled time buckets is either more or less than the original designated amount of that bucket.

This information is prepared by reversing the hedge accounting impacts that are applied under the EU 'carve-out' version of IAS 39. Financial information under IFRS-IASB accordingly does not take account of the possibility that had ING Group applied IFRS-IASB as its primary accounting framework it might have applied alternative hedge strategies where those alternative hedge strategies could have qualified for IFRS-IASB compliant hedge accounting. These decisions could have resulted in different shareholders' equity and net result amounts compared to those indicated in this Annual Report on Form 20-F.

A reconciliation between IFRS-EU and IFRS-IASB is included below.
Both IFRS-EU and IFRS-IASB differ in several areas from accounting principles generally accepted in the United States of America (US GAAP).

Reconciliation net result under IFRS-EU and IFRS-IASB

in EUR million	2021	2020	2019
In accordance with IFRS-EU (attributable to the shareholders of the parent)	4,776	2,485	4,781
Adjustment of the EU IAS 39 carve-out	1,603	-410	-1,181
Tax effect of the adjustment [1]	-429	176	303
Effect of adjustment after tax	1,174	-234	-878
In accordance with IFRS-IASB (attributable to the shareholders of the parent)	**5,951**	**2,250**	**3,903**

1) includes the effect of changes in tax rate.

Reconciliation shareholders' equity under IFRS-EU and IFRS-IASB

in EUR million	2021	2020	2019
In accordance with IFRS-EU (attributable to the shareholders of the parent)	53,919	54,637	53,769
Adjustment of the EU IAS 39 carve-out	-2,490	-4,081	-3,658
Tax effect of the adjustment	637	1,063	885
Effect of adjustment after tax	-1,853	-3,018	-2,773
In accordance with IFRS-IASB Shareholders' equity	**52,066**	**51,619**	**50,996**

1.3 Impact of Covid-19

In 2021, the Covid-19 pandemic continued to have an impact on people, businesses and the economy. While vaccination rates continued to increase and Covid-19 related restrictions were lifted in some jurisdictions in the first part of 2021, the end of 2021 was again marked by new waves of infections, supply chain disruptions, rising energy prices and increasing inflation impacting companies and consumers. In many countries, governments have adopted economic support programs. In addition, various initiatives have been taken by ING to support our clients to manage these extraordinary times by way of granting, amongst others, temporary payment holidays.

Governments in almost all Retail Banking countries have adopted measures providing for payment holidays. During 2020 and 2021, in line with the EBA moratoria guidelines, approximately 137 thousand customers had been granted payment holidays under schemes that were eligible under the EBA moratoria guidelines. The total exposure of loans for which a payment holiday was granted amounts to EUR 15.3 billion of which over 57% were for customers located in the Netherlands and Belgium. At the end of 2021, 99.8% of granted payment holidays had expired.

As government support measures will, or have already ended, and Covid-19 remains a threat as was evidenced with the emergence of the omicron variant at the end of 2021, Covid-19 is still bringing uncertainties and risks.

Certain sector were particularly impacted by the Covid-19 pandemic. An economic sector-based adjustments of EUR 341 million was taken in December 2021 because of delays in defaults occurring in the Covid-19 related crisis, mainly as a result of government support programmes, while GDP growth forecasts as well as unemployment rates and house prices improved over 2021 and which triggered releases of the model based provisions.

For further information on payments holidays and management adjustments applied, reference is made to the 'Credit risk' paragraph of the 'Risk management' section.

As a result of the economic effects of Covid-19 estimation uncertainty and level of management judgement remains at an elevated level in 2021 compared to before the Covid-19 pandemic, particularly in the estimation of loan loss provisions (including the need for management adjustments) and impairment assessment of an investment in an associate. Reference is made to paragraph 1.5 'Significant judgements and critical accounting estimates and assumptions' for further explanation.

1.4 Changes to accounting policies and presentation

ING Group has consistently applied its accounting policies to all periods presented in these Consolidated financial statements.

In 2021, in note 21 'Net fee and commission income', ING Group changed the presentation of net fee and commission income to better align with internal management and monitoring. Comparative figures for 2020 and 2019 have been updated accordingly.

1.4.1 Changes in IFRS effective in 2021

The following amended standards became effective in 2021:

- Amendments to IFRS 9 'Financial Instruments', IAS 39 'Financial Instruments: Recognition and Measurement', IFRS 16 'Leases', IFRS 4 'Insurance Contracts' and IFRS 7 'Financial Instruments: Disclosures': 'IBOR Reform and its Effects on Financial Reporting – Phase 2' (issued in August 2020);
- Amendments to IFRS 16 'Leases': 'Covid-19-Related Rent Concessions' (issued in May 2020).

The IBOR Reform – Phase 2 amendments relate mainly to accounting for changes in the basis for determining the contractual cash flows of financial assets and liabilities due to the IBOR reform and impact on hedge accounting when an existing benchmark rate is reformed or replaced with an alternative risk free rate. Specifically, Phase 2 amendments require that the effective interest rate on debt financial instruments is adjusted, and hedge accounting continues on transition to risk free rates, but only to the extent that the modifications made to financial instruments are those necessary to implement the IBOR Reform and that the new basis for calculating cash flows is 'economically equivalent' to the previous basis. By applying these mandatory amendments, ING Group avoids recognising modification gains and losses on debt instruments that would otherwise be required in the absence of Phase 2 amendments (changes to debt instruments resulting from IBOR Reform are treated as a reset to the instrument's variable interest rate). In addition, ING Group avoids hedge accounting discontinuations when modifying both hedged items and hedging instruments (and related hedge documentation) as a consequence of IBOR reform that would otherwise be required in the absence of Phase 2 amendments. Refer to 'Risk Management' section – 'Market Risk' for more details.

Although ING Group has significant exposures to IBORs, the transition to the new risk free rates did not have a material impact in 2021 partially due to the IBOR amendments to IFRS 9 and IAS 39 as described above.

The amendments to IFRS 16 'Leases' provide lessees with an exemption from assessing whether a Covid-19-related rent concession is a lease modification. As ING Group did not receive rent concessions as a lessee, these amendments had no impact on the accounting policies of ING Group.

ING Group has not early adopted any standard, interpretation or amendment in 2021 which has been issued, but is not yet effective.

1.4.2 Upcoming changes in IFRS after 2021

The following published amendments are not mandatory for 2021 and have not been early adopted by ING Group. ING Group is still currently assessing the detailed impact of these amendments. However, the implementation of these amendments is expected to have no significant impact on ING Group's Consolidated financial statements.

<u>Effective in 2022:</u>

- Amendments to IFRS 3 'Business Combinations': Reference to the Conceptual Framework (issued in May 2020).
- Amendments to IAS 16 'Property, Plant and Equipment': Proceeds before Intended Use (issued in May 2020).
- Amendments to IAS 37 'Provisions, Contingent Liabilities and Contingent Assets': Onerous Contracts — Cost of Fulfilling a Contract (issued in May 2020).
- Annual improvements to IFRS Standards 2018-2020 Cycle: Amendments to IFRS 1 'First-time Adoption of International Financial Reporting Standards', amendments to IFRS 9 'Financial Instruments' and amendments to IFRS 16 'Leases' (issued in May 2020).

<u>Effective in 2023:</u>

- Amendments to IAS 1 'Presentation of Financial Statements': Classification of Liabilities as Current or Non-current (issued in January 2020).
- Amendments to IAS 1 'Presentation of Financial Statements': Disclosure of Accounting Policies (issued in February 2021).
- Amendments to IAS 8 'Accounting Policies, Changes in Accounting Estimates and Errors': Definition of Accounting Estimates (issued in February 2021).
- Amendments to IAS 12 'Income Taxes': Deferred Tax Related to Assets and Liabilities Arising From a Single Transaction (issued in May 2021).

<u>IFRS 17 'Insurance contracts' – effective in 2023</u>

In May 2017, the IASB issued IFRS 17 'Insurance Contracts', a new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. Once effective, IFRS 17 will replace IFRS 4 'Insurance Contracts', which allowed diversity in accounting practices for insurance contracts. In June 2020, the IASB published amendments to IFRS 17 including a scope exclusion for credit card contracts and similar contracts that provide insurance coverage, and an optional scope exclusion for loans with death waivers. ING Group does not have insurance business, but mainly sells insurance products as a broker where it does not run the insurance risk. ING Group is currently assessing the detailed impact of adopting this Standard.

1.5 Significant judgements and critical accounting estimates and assumptions

The preparation of the Consolidated financial statements requires management to make judgements in the process of applying its accounting policies and to use estimates and assumptions. The estimates and assumptions affect the reported amounts of the assets and liabilities and the amounts of the contingent assets and contingent liabilities at the balance sheet date, as well as reported income and expenses for the year. The actual outcome may differ from these estimates. The process of setting assumptions is subject to internal control procedures and approvals.

ING Group has identified areas that require management to make significant judgements and use critical accounting estimates and assumptions based on the information and financial data that may change in future periods. These areas are:

- Loan loss provisions (financial assets);
- The determination of the fair values of financial assets and liabilities;
- Impairment assessment of an investment in associate;
- Provisions; and
- Accounting for Targeted Longer-Term Refinancing Operations (TLTRO).

For further discussion of the significant judgements and critical accounting estimates and assumptions in these areas, reference is made to the relevant parts in paragraph 1.6 'Financial instruments' (specifically 1.6.8 'Impairment of financial assets', 1.6.3 for 'Fair values of financial assets and liabilities', 1.10 'Investments in associates and joint ventures', 1.16 'Provisions, contingent liabilities and contingent assets' and 1.6.9 'Accounting for Targeted Longer-Term Refinancing Operations (TLTRO)') of this note and the applicable notes to the Consolidated financial statements.

1.6 Financial instruments

1.6.1 Recognition and derecognition of financial instruments

Recognition of financial assets

Financial assets are recognised in the balance sheet when ING Group becomes a party to the contractual provisions of the instrument. For a regular way purchase or sale of a financial asset, trade date and settlement date accounting is applied depending on the classification of the financial asset.

Derecognition of financial assets

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or where ING Group has transferred the rights to receive the cash flows from the financial asset or assumed an obligation to pass on the cash flows and has transferred substantially all the risks and rewards of the asset. If ING Group neither transfers nor retains substantially all the risks and rewards of ownership of a financial asset, it derecognises the financial asset if it no longer has control over the asset. The difference between the carrying amount of a financial asset that has been extinguished and the consideration received is recognised in profit or loss.

Recognition of financial liabilities

Financial liabilities are recognised on the date that the entity becomes a party to the contractual provisions of the instrument.

Derecognition of financial liabilities

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished and the consideration paid is recognised in profit or loss.

1.6.2 Classification and measurement of financial instruments

Financial assets

ING Group classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through OCI, or through profit or loss); and
- those to be measured at amortised cost (AC).

At initial recognition, ING Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss (FVPL) are expensed in the statement of profit or loss.

Financial assets - Debt instruments

The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows at initial recognition.

Business models

Business models are classified as Hold to Collect (HtC), Hold to Collect and Sell (HtC&S) or Other depending on how a portfolio of financial instruments as a whole is managed. ING Group's business models are based on the existing management structure of the bank, and refined based on an analysis of how businesses are evaluated and reported, how their specific business risks are managed and on historic and expected future sales. Sales are permissible in a HtC business model when these are due to an increase in credit risk, take place close to the maturity date (where the proceeds from the sales approximate the collection of the remaining contractual cash flows), are insignificant in value (both individually and in aggregate) or are infrequent.

Contractual cash flows Solely Payments of Principal and Interest (SPPI)

The contractual cash flows of a financial asset are assessed to determine whether they represent SPPI. Interest includes consideration for the time value of money, credit risk and also consideration for liquidity risk and costs associated with holding the financial asset for a particular period of time. In addition, interest can include a profit margin that is consistent with a basic lending arrangement. Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are SPPI.

In assessing whether the contractual cash flows are SPPI, ING Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition.

Based on the entity's business model for managing the financial assets and the contractual terms of the cash flows, there are three measurement categories into which ING Group classifies its debt instruments:

- *Amortised Cost (AC):*
  Debt instruments that are held for collection of contractual cash flows under a HtC business model where those cash flows represent SPPI are measured at AC. Interest income from these financial assets is included in Interest income using the EIR method. Any gain or loss arising on derecognition is recognised directly in profit or loss. Impairment losses are presented as a separate line item in the statement of profit or loss.
- *FVOCI:*
  Debt instruments that are held for collection of contractual cash flows and for selling the financial assets under a HtC&S business model, where the assets' cash flows represent SPPI, are measured at FVOCI. Movements in the carrying amount are recognised in OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and presented in Investment income or Other income, based on the specific characteristics of the business model. Interest income from these financial assets is included in Interest income using the EIR method. Impairment losses are presented as a separate line item in the statement of profit or loss.
- *FVPL:*
  Debt instruments that do not meet the criteria for AC or FVOCI are measured at FVPL. This includes debt instruments that are held-for-trading (presented separately as Trading assets) and all other debt instruments that do not meet the criteria for AC or FVOCI (presented separately as Mandatorily at FVPL). ING Group may in some cases, on initial recognition, irrevocably designate a financial asset as classified and measured at FVPL. This is the case where doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise on assets measured at AC or FVOCI. Fair value movements on

trading securities, trading loans and deposits (mainly reverse repo's) are presented fully within valuation result and net trading income, this also includes interest. The interest arising on financial assets designated as at FVPL is recognised in profit or loss and presented within Interest income or Interest expense in the period in which it arises. The interest arising on a debt instrument that is part of a hedge relationship, but not subject to hedge accounting, is recognised in profit or loss and presented within Interest income or Interest expense in the period in which it arises.

ING Group reclassifies debt instruments if, and only if, its business model for managing those financial assets changes. Such changes in business models are expected to be very infrequent. There have been no reclassifications during the reporting period.

Financial assets - Equity instruments

All equity investments are measured at fair value. ING Group applies the fair value through OCI option to investments which are considered strategic, consisting of investments that add value to ING Group's core banking activities.

There is no subsequent recycling of fair value gains and losses to profit or loss following the derecognition of investments if elected to be classified and measured as FVOCI. However, the cumulative gain or loss is transferred within equity to retained earnings on derecognition of such equity instruments. Dividends from such investments continue to be recognised in profit or loss as Investment income when ING Group's right to receive payments is established. Impairment requirements are not applicable to equity investments classified and measured as FVOCI.

Other remaining equity investments are measured at FVPL. All changes in the fair value are recognised in Valuation result and Net trading income in the Consolidated statement of profit or loss.

Financial liabilities

Financial liabilities are classified and subsequently measured at AC, except for financial guarantee contracts, derivatives and liabilities designated at FVPL. Financial liabilities classified and measured at FVPL are presented as follows:

- the amount of change in the fair value that is attributable to changes in own credit risk of the liability designated at FVPL is presented in OCI. Upon derecognition this Debit Valuation Adjustment (DVA) impact does not recycle from OCI to profit or loss; and
- the remaining amount of change in the fair value is presented in profit or loss in 'Valuation results and net trading income'. Interest on financial liabilities at FVPL is also recognised in the valuation result, except for items voluntarily designated as FVPL for which interest is presented within 'Other interest income (expense).

A financial guarantee contract is a contract that requires ING Group to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Such a contract is initially recognised at fair value and is subsequently measured at the higher of (a) the amount determined in accordance with impairment provisions of IFRS 9 'Financial instruments' (see section "Impairment of financial assets") and (b) the amount initially recognised less, when appropriate, cumulative amortisation recognised in accordance with the revenue recognition principle of IFRS 15 'Revenue from contracts with customers'.

1.6.3 Fair values of financial assets and liabilities

All financial assets and liabilities are recognised initially at fair value. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a material difference between the transaction price and the fair value of financial instruments whose fair value is based on a valuation technique using significant unobservable inputs, the entire day one difference (a 'Day One profit or loss') is deferred. ING Group defers the Day One profit or loss relating to financial instruments classified as Level 3 and financial instruments with material unobservable inputs into CVA which are not necessarily classified as Level 3. The deferred Day One profit or loss is recognised in the statement of profit or loss over the life of the transaction until the transaction matures or until the observability improves. In all other cases, ING Group recognises the difference as a gain or loss at inception.

Subsequently, except for financial assets and financial liabilities measured at amortised cost, all the other financial assets and liabilities are measured at fair value.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It assumes that market participants would use and take into account the characteristics of the asset or liability when pricing the asset or liability. Fair values of financial assets and liabilities are based on unadjusted quoted market prices where available. Such quoted market prices are primarily obtained from exchange prices for listed financial instruments. Where an exchange price is not available, quoted prices in an active market may be obtained from independent market vendors, brokers, or market makers. In general, positions are valued at the bid price for a long position and at the offer price for a short position or are valued at the price within the bid-offer spread that is most representative of fair value in the circumstances. In some cases where positions are marked at mid-market prices, a fair value adjustment is calculated.

For certain financial assets and liabilities, quoted market prices are not available. For such instruments, fair value is determined using valuation techniques. These range from discounting of cash flows to various valuation models, where relevant pricing factors including the market price of underlying reference instruments, market parameters (volatilities, correlations and credit ratings), and customer behaviour are taken into account. ING Group maximises the use of market observable inputs and minimises the use of unobservable inputs in determining the fair value. It can be subjective dependent on the significance of the unobservable input to the overall valuation. All valuation techniques used are subject to internal review and approval. Most data used in these valuation techniques are validated on a daily basis when possible.

When a group of financial assets and liabilities are managed on the basis of their net risk exposures, the fair value of a group of financial assets and liabilities are measured on a net portfolio level.

To include credit risk in fair value, ING Group applies both Credit and Debit Valuation Adjustments (CVA, DVA, also known as Bilateral Valuation Adjustments or BVA). Own issued debt and structured notes that are designated at FVPL are adjusted for ING Group’s own credit risk by means of a DVA. Additionally, derivatives valued at fair value are adjusted for credit risk by a BVA. The BVA is of a bilateral nature as both the credit risk on the counterparty (CVA) as well as the credit risk on ING Group (DVA) are included in the adjustment. All input data that is used in the determination of the BVA is based on market implied data. Additionally, wrong-way risk (when exposure to a counterparty is increasing and the credit quality of that counterparty deteriorates) and right-way risk (when exposure to a counterparty is increasing and the credit quality of that counterparty improves) are taken into account in the measurement of the valuation adjustment.

To include the funding risk, ING Group applies an additional ‘Funding Valuation Adjustment’ (FVA) to the uncollateralised derivatives based on the market price of funding liquidity.

ING Group also applies to certain positions other valuation adjustments to arrive at the fair value: Bid-Offer adjustments, Model Risk Adjustments and Collateral Valuation Adjustments (CollVA).

Significant judgements and critical accounting estimates and assumptions:
Even if market prices are available, when markets are less liquid there may be a range of prices for the same security from different price sources. Selecting the most appropriate price requires judgement and could result in different estimates of fair value.

Valuation techniques are subjective in nature and significant judgement is involved in establishing fair values for certain financial assets and liabilities. Valuation techniques involve various assumptions regarding pricing factors. The use of different valuation techniques and assumptions could produce significantly different estimates of fair value.

Price testing is performed to assess whether the process of valuation has led to an appropriate fair value of the position and to minimise the potential risks of economic losses due to incorrect or misused models.

Assessing whether a market is active, and whether an input is observable and significant, requires judgement. ING Group categorises its financial instruments that are either measured in the statement of financial position at fair value or of which the fair value is disclosed, into a three level hierarchy based on the observability and significance of the valuation inputs. The use of different approaches to assess whether a market is active, whether an input is observable, and whether an unobservable input is significant could produce different classification within the fair value hierarchy as well as potentially different deferral of the Day One profit or loss.

Reference is made to note 39 ‘Fair value of assets and liabilities’ and to the ‘Market risk’ paragraph in the ‘Risk management’ section of the Annual Report for the basis of the determination of the fair value of financial instruments and related sensitivities.

1.6.4 Derivatives and hedge accounting

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently measured at fair value. Fair values are obtained from quoted market prices in active markets, including market transactions and valuation techniques (such as discounted cash flow models and option pricing models), as appropriate. All derivatives are carried as assets when their fair value is positive and as liabilities when their fair value is negative. Fair value movements on derivatives are presented in profit or loss in Valuation result and net trading income, except for derivatives in either a formal hedge relationship and so-called economic hedges that are not in a formal hedge accounting relationship where a component is presented separately in interest result in line with ING Group's risk management strategy.

Embedded derivatives are separated from financial liabilities and other non-financial contracts and accounted for as a derivative if, and only if:

a) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract;
b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
c) the combined instrument is not measured at fair value with changes in fair value reported in profit or loss.

If an embedded derivative is separated, the host contract is accounted for as a similar free-standing contract.

The method of recognising the resulting fair value gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. ING Group designates certain derivatives as hedges of the fair value of recognised assets or liabilities or firm commitments (fair value hedge), hedges of highly probable future cash flows attributable to a recognised asset or liability or a forecast transaction (cash flow hedge), or hedges of a net investment in a foreign operation. Hedge accounting is used for derivatives designated in this way provided certain criteria are met.

At the inception of the transaction ING Group documents the relationship between hedging instruments and hedged items, its risk management objective, together with the methods selected to assess hedge effectiveness. ING Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of the hedged items.

ING Group applies also macro cash flow hedge accounting to hedge the variability in future cash flows of non-trading assets and liabilities due to the interest rate risk and foreign currency exchange rate risk. The designated hedged items are floating rated assets or liabilities, such as floating rate mortgages and corporate loans. The effective portion of changes in the fair value of the derivatives are recognised in the Other Comprehensive Income.

Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognised in the statement of profit or loss, together with fair value adjustments to the hedged item attributable to the hedged risk. If the hedge relationship no longer meets the criteria for hedge accounting, the cumulative adjustment of the hedged item is, in the case of interest bearing instruments, amortised through the statement of profit or loss over the remaining term of the original hedge or recognised directly when the hedged item is derecognised. For non-interest bearing instruments, the cumulative adjustment of the hedged item is recognised in the statement of profit or loss only when the hedged item is derecognised.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognised in the Other Comprehensive Income. The gain or loss relating to the ineffective portion is recognised immediately in the statement of profit or loss. Amounts accumulated in the Other Comprehensive Income are recycled to the statement of profit or loss in the periods in which the hedged item affects net result. When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in the Other Comprehensive Income at that time remains in the Other Comprehensive Income and is recognised when the forecast transaction is ultimately recognised in the statement of profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in the Other Comprehensive Income is transferred immediately to the statement of profit or loss.

Net investment hedges

Hedges of net investments in foreign operations are accounted for in a similar way to cash flow hedges. Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in the Other Comprehensive Income and the gain or loss relating to the ineffective portion is recognised immediately in the statement of profit or loss. Gains and losses accumulated in the Other Comprehensive Income are included in the statement of profit or loss when the foreign operation is disposed.

IBOR Transition - specific policies applicable from 1 January 2019 for hedges directly affected by IBOR reform

As further explained in the 'IBOR Transition' paragraph of the 'Risk management' section, the financial markets are going through a significant reform of interbank offered rates (IBOR) and financial institutions are obligated to implement a replacement of major interest rate reference rates.

Given that IBOR reform may have various accounting implications, the International Accounting Standards Board (IASB) has undertaken a two phase project. Phase 1 addresses those issues that affect financial reporting before the replacement of an existing benchmark (Phase 1 amendments to IFRS were issued by the IASB in 2019). Phase 2 focuses on issues that may affect financial reporting when the existing benchmark rate is reformed or replaced. Phase 2 amendments to IFRS were issued by the IASB in 2020.

In 2019, ING Group early adopted the Phase 1 amendments to IFRS which allowed ING Group to apply a set of temporary exceptions to continue hedge accounting even when there is uncertainty about contractual cash flows arising from the reform. Under these temporary exceptions, interbank offered rates are assumed to continue unaltered for the purposes of hedge accounting until such time as the uncertainty is resolved.

More specifically, the following temporary reliefs are part of the Phase 1 amendments:

- Highly probable requirement for cash flow hedges
- When determining whether a forecast transaction is highly probable, it is assumed that the interest rate benchmark on which the hedged cash flows are based is not altered as a result of the reform.
- Prospective assessment of hedge effectiveness
- When performing the prospective assessment it is assumed that the interest rate benchmark on which the hedged cash flows are based is not altered as a result of the reform.
- Retrospective assessment of hedge effectiveness
- When performing the retrospective assessment hedges are allowed to pass the assessment even if actual results are outside the 80-125% range, during the period of uncertainty arising from the IBOR reform.
- Designation of a component of an item as a hedged item
- For hedges of the benchmark component of interest rate risk affected by the reform, the separately identifiable requirement only needs to be demonstrated at the inception of such hedging relationships (including macro hedges).

The amendments are relevant given that ING Group hedges and applies hedge accounting to benchmark interest rate exposure part of IBOR reform. ING Group hedges are being progressively amended, where necessary, to incorporate the new benchmark rates. During 2021, ING Group transitioned significant portions of its financial instruments (designated in hedge accounting relationships) linked to benchmarks ceasing in 2021. In the coming year, ING Group will shift the focus to USD LIBOR contracts (USD LIBOR tenors will continue to be published until the end of June 2023).

As at 31 December 2021, ING Group still maintains hedging instruments and hedged items indexed by the IBOR benchmark rates (mainly, USD LIBOR). Therefore, although the path for IBOR transition is well progressed (including the timeline of IBOR cessation and for some contracts the replacement rate and spread adjustment), some uncertainties still remain in 2021 over the timing and the amount of the replacement rate cash flows and, thus, temporary exceptions under Phase 1 continued to be relevant for ING Group as at 31 December 2021. ING Group will completely cease to apply the amendments when this uncertainty is no longer present or when the hedging relationship is discontinued. Refer to note 40 'Derivatives and hedge accounting' for the disclosures relating to the application of the amendments as part of Phase 1. Refer to note 'Risk management/ IBOR Transition' for more information regarding the end of Phase 1 reliefs for ING Group's hedging relationships.

In 2021 Phase 2 amendments became effective for ING Group. For hedge accounting, Phase 2 amendments require that hedge accounting continues on transition to risk free rates provided that the modifications made to financial instruments are those necessary to implement the IBOR Reform and that the new basis for calculating cash flows is 'economically equivalent' to the previous basis. Particularly, Phase 2 amendments allow the continuation of hedging relationships, subject to amending their documentation to reflect changes in hedged instruments, hedging instruments, hedged risk, and/or the method for measuring effectiveness during the transition to the new benchmark rates.

More specifically, the following temporary reliefs are part of the Phase 2 amendments:

- Relief from discontinuing hedging relationships
  - Amendments in the hedge documentation as a consequence of changes required by the IBOR reform do not result in the discontinuation of the hedge relationship nor the designation of a new hedge relationship. The changes can be in form of designating an alternative benchmark rate as a hedged risk, the description of the hedging instrument, the description of the hedged item, or the method to measure the effectiveness.

  - When the hedged item is amended as a consequence of the IBOR reform (or if the hedge has previously been discontinued), amounts accumulated in the cash flow hedge reserve are deemed to be based on the RFR. This results in the release of the cash flow hedge reserve to profit or loss in the same period or periods in which the hedged cash flows that are now based on the RFR affect profit or loss.
  - When the items within a designated group of hedged items are amended as a consequence of the IBOR reform, the hedging strategy remains and is not discontinued. As items within the hedged group transition at different times from IBORs to RFRs, they are transferred to sub-groups of instruments that reference RFRs as the hedged risk. The existing IBORs remain designated as the hedged risk for the other sub-group of hedged items, until they are also updated to reference the new RFR. The usual hedge accounting requirements are applied to the hedge relationship in its entirety.
- For the assessment of retrospective hedge effectiveness, the cumulative fair value changes may be reset to zero when the exception to the retrospective assessment of the Phase 1 reliefs ends. This election is made separately for each hedging relationship (i.e., on a hedge-by-hedge basis).
- Temporary relief from having to meet the separately identifiable requirement: a RFR is considered a separately identifiable risk component if it is reasonably expected to meet the separately identifiable requirement within 24 months from the date it is first designated as a non-contractually specified risk component (i.e. when the entity first designates the RFR as a non-contractually specified risk component). This relief applies to each RFR on a rate-by-rate basis.

Reference is made to paragraph 1.4.1 ‘Changes in IFRS effective in 2021’ of this note.

Non-trading derivatives that do not qualify for hedge accounting

Derivative instruments that are used by ING Group as part of its risk management strategies, but which do not qualify for hedge accounting under ING Group’s accounting policies, are presented as non-trading derivatives. Non-trading derivatives are measured at fair value with changes in the fair value taken to the statement of profit or loss.

1.6.5 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset, and the net amount reported, in the statement of financial position when ING Group has a current legally enforceable right to set off the recognised amounts and intends to either settle on a net basis or to realise the asset and settle the liability simultaneously. Offsetting is applied to certain interest rate swaps for which the services of a central clearing house are used.

1.6.6 Repurchase transactions and reverse repurchase transactions

Securities sold subject to repurchase agreements (repos), securities lending and similar agreements continue to be recognised in the Consolidated statement of financial position. The counterparty liability is measured at FVPL (designated) and included in Other financial liabilities at FVPL if the asset is measured at FVPL. Otherwise, the counterparty liability is included in Deposits from banks, Customer deposits, or Trading, as appropriate.

Securities purchased under agreements to resell (reverse repos), securities borrowings and similar agreements are not recognised in the Consolidated statement of financial position. The consideration paid to purchase securities is recognised as Loans and advances to customers, Loans and advances to banks, Other financial assets at FVPL or Trading assets, as appropriate. The difference between the sale and repurchase price is treated as interest and amortised over the life of the agreement using the effective interest method for instruments that are not measured at FVPL.

1.6.7 Credit risk management classification and maximum credit risk exposure

Credit risk management disclosures are provided in the ‘Credit risk’ paragraph ‘Credit risk categories’ of the ‘Risk management’ section in the Annual Report.

The maximum credit risk exposure for items in the statement of financial position is generally the carrying value for the relevant financial assets. For the off-balance sheet items the maximum credit exposure is the maximum amount that could be required to be paid. Reference is made to Note 45 ‘Contingent liabilities and commitments’ for these off-balance sheet items. Collateral received is not taken into account when determining the maximum credit risk exposure.

The manner in which ING Group manages credit risk and determines credit risk exposures for that purpose is explained in the Credit risk paragraph ‘Credit Risk Appetite and Concentration Risk Framework’ of the ‘Risk management’ section in the Annual Report.

1.6.8 Impairment of financial assets

An Expected Credit Loss (ECL) model is applied to financial assets accounted for at AC or FVOCI such as loans, debt securities and lease receivables, as well as off-balance sheet items such as undrawn loan commitments, certain financial guarantees issued, and undrawn committed revolving credit facilities. Under the ECL model ING Group calculates the expected credit losses (ECL) by considering on a discounted basis the cash shortfall it would incur in case of a default and multiplying the shortfall by the probability of a default occurring. The ECL is the sum of the probability-weighted outcomes. The ECL estimates are unbiased and include reasonable and supportable information about past events, current conditions, and forecasts of future economic conditions. ING Group's approach leverages the Advanced Internal Ratings Based (AIRB) models that are used for regulatory purposes. Adjustments are applied to make these models suitable for determining ECL. ECL is recognised on the balance sheet as loan loss provisions (LLP).

Three stage approach

Financial assets are classified in one of the below three Stages at each reporting date. A financial asset can move between Stages during its lifetime. The Stages are based on changes in credit quality since initial recognition and defined as follows:

- Stage 1
  Financial assets that have not had a significant increase in credit risk since initial recognition (i.e. no Stage 2 or 3 triggers apply). Assets are classified as Stage 1 upon initial recognition (with the exception of purchased or originated credit impaired (POCI) assets) and ECL is determined by the probability that a default occurs in the next 12 months (12 months ECL);
- Stage 2
  Financial assets showing a significant increase in credit risk since initial recognition. For assets in Stage 2 ECL reflects an estimate on the credit losses over the remaining maturity of the asset (lifetime ECL); or
- Stage 3
  Financial assets that are credit-impaired. Also for these assets ECL is determined over the remaining maturity of the asset.

Significant increase in credit risk

ING Group established a framework, incorporating quantitative and qualitative indicators, to identify and assess significant increases in credit risk (SICR). This is used to determine the appropriate ECL Stage for each financial asset.

The main determinate of SICR is a quantitative test, whereby the lifetime Probability of Default (PD) of an asset at each reporting date is compared against its lifetime PD determined at the date of initial recognition. If the delta is above pre-defined absolute or relative thresholds the item is considered to have experienced a SICR. Consequently, the item moves from Stage 1 to Stage 2 (unless the item is credit-impaired). In these instances, items are no longer assigned a 12 month ECL and instead are assigned a lifetime ECL. Items can return to Stage 1 if there is sufficient evidence that there is no longer a significant increase in credit risk. Refer to 'Criteria for identifying a significant increase in credit risk' in the 'Risk Management' section of the Annual Report for more details on relative and absolute PD thresholds, including quantitative disclosures on those thresholds.

ING Group also relies on a number of qualitative indicators to identify and assess SICR. These include:

- Forbearance status;
- Watch List status. Loans on the Watch List are individually assessed for Stage 2 classification;
- Intensive care management;
- Substandard Internal rating; and
- Arrears status (including 30 days past due used as a backstop).

An asset that is in Stage 2 will move back to Stage 1 when none of the above criteria are in place anymore. However, if the asset was moved to Stage 2 based on the forbearance status, then the asset stays in Stage 2 for at least 24 months. If the asset was classified as Stage 2 due to 30 days past due trigger, then the asset is moved back to Stage 1 only after three months from when the trigger no longer applies.

Credit-impaired financial assets (Stage 3)

Financial assets are assessed for credit-impairment at each reporting date and more frequently when circumstances warrant further assessment. Evidence of credit-impairment includes arrears of over 90 days on any material credit obligation, indications that the borrower is experiencing significant financial difficulty, a breach of contract, bankruptcy or distressed restructuring. The definition of credit-impaired under IFRS 9 (Stage 3) is aligned with the definition of default used by ING Group for internal risk management purposes, which is also the definition used for regulatory purposes.

An asset (other than a POCI asset) that is in Stage 3 will move back to Stage 2 when, as at the reporting date, it is no longer considered to be credit-impaired subject to certain probation periods. The asset will migrate back to Stage 1 when its credit risk at the reporting date is no longer considered to have increased significantly since initial recognition.

Macroeconomic scenarios

ING Group has established a quarterly process whereby forward-looking macroeconomics scenarios and probability weightings are developed for the purpose of ECL. ING Group applies data predominantly from a leading service provider (Oxford Economics (OE)) enriched with the internal ING Group view. A baseline, up-scenario and a down-scenario are determined to reflect an unbiased and probability-weighted ECL amount. As a baseline scenario, ING Group applies the market-neutral view combining consensus forecasts for economic variables such as unemployment rates, GDP growth, house prices, commodity prices, and short-term interest rates. Applying market consensus in the baseline scenario ensures unbiased estimates of the expected credit losses.

The alternative scenarios are based on observed forecast errors in the past, adjusted for the risks affecting the economy today and the forecast horizon. The probabilities assigned are based on the likelihoods of observing the three scenarios and are derived from confidence intervals on a probability distribution. The forecasts for the economic variables are adjusted on a quarterly basis.

Measurement of ECL

ING Group applies a collective assessment method to measure ECL for Stage 1, Stage 2, and certain Stage 3 assets. Other credit-impaired assets subject to ECL measurement apply the individual assessment method.

Collectively assessed assets (Stages 1 to 3)

For collective assessed assets, ING Group applies a model-based approach. ECL is determined by, expressed simplistically, multiplying the probability of default (PD) with the loss given default (LGD) and exposure at default (EAD), adjusted for the time value of money. Assets that are collectively assessed are grouped on the basis of similar credit risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors. These characteristics are relevant to the estimation of future cash flows for groups of such assets by being indicative of the debtors’ ability to pay all amounts due according to the contractual terms of the assets being evaluated and the loss in case the debtor is not able to pay all amounts due.

For Stage 3 assets the PD equals 100% and the LGD and EAD represent a lifetime view of the losses based on characteristics of defaulted facilities.

For the purpose of ECL, ING Group’s expected credit loss models (PD, LGD, EAD) used for regulatory purposes have been adjusted. These adjustments include removing embedded prudential conservatism (such as floors) and converted through-the-cycle estimates to point-in-time estimates. The models assess ECL on the basis of forward-looking macroeconomic forecasts and other inputs. For most financial assets, the expected life is limited to the remaining maturity. For overdrafts and certain revolving credit facilities, such as credit cards, the maturity is estimated based on historical data as these do not have a fixed term or repayment schedule.

Individually assessed assets (Stage 3)

ING Group estimates ECL for individually significant credit-impaired financial assets within Stage 3 on an individual basis. ECL for these Individually assessed assets are determined using the discounted expected future cash flow method. To determine expected future cash flows, one or more scenarios are used. Each scenario is analysed based on the probability of occurrence and include forward looking information.

In determining the scenarios, all relevant factors impacting the future cash flows are taken into account. These include expected developments in credit quality, business and economic forecasts, and estimates of if/when recoveries will occur taking into account ING Group’s restructuring/recovery strategy.

The best estimate of ECL is calculated as the weighted-average of the shortfall (gross carrying amount minus discounted expected future cash flow using the original EIR) per scenario, based on best estimates of expected future cash flows. Recoveries can arise from, among others, repayment of the loan, collateral recovery and the sale of the asset. Cash flows from collateral and other credit enhancements are included in the measurement of ECL of the related financial asset when it is part of or integral to the contractual terms of the financial asset and the credit enhancement is not recognised separately. For the individual assessment, with granular (company or asset-specific) scenarios, specific factors can have a larger impact on the future cash flows than macroeconomic factors.

When a financial asset is credit-impaired, interest is no longer recognised based on the accrual income based on the gross carrying amount of the asset. Rather, interest income is calculated by applying the original EIR to the AC of the asset, which is the gross carrying amount less the related loan loss provision.

Purchased or Originated Credit Impaired (POCI) assets

POCI assets are financial assets that are credit-impaired on initial recognition. Impairment on a POCI asset is determined based on lifetime ECL from initial recognition. POCI assets are recognised initially at an amount net of ECL and are measured at AC using a credit-adjusted effective interest rate. In subsequent periods any changes to the estimated lifetime ECL are recognised in profit or loss. Favourable changes are recognised as an impairment gain even if the lifetime ECL at the reporting date is lower than the estimated lifetime ECL at origination.

Modifications

In certain circumstances ING Group grants borrowers postponement, reduction of loan principal and/or interest payments on a temporary period of time to maximise collection opportunities, and if possible, avoid default, foreclosure, or repossession. When such postponement, reduction of loan principal and/or interest payments is executed based on credit concerns it is also referred to as forbearance (refer to the 'Risk Management' section of the Annual Report for more details). In such cases, the net present value of the postponement, reduction of loan principal and/or interest payments is taken into account in the determination of the appropriate level of ECL. If the forbearance results in a substantial modification of the terms of the loan, the original loan is derecognised and a new loan is recognised at fair value at the modification date. ING Group determines whether there has been a substantial modification using both quantitative and qualitative factors.

Write-off and debt forgiveness

Loans and debt securities are written off (either partially or in full) when there is no reasonable expectation of recovery and/or collectability of amounts due. The following events can lead to a write-off:

- After a restructuring has been completed and there is a high improbability of recovery of part of the remaining loan exposure (including partial debt forgiveness);
- In a bankruptcy liquidation scenario;
- After divestment or sale of a credit facility at a discount;
- Specific fraud cases with no recourse options.

When a loan is uncollectable, it is written off against the related loan loss provision. Subsequent recoveries of amounts previously written off are recognised in 'Addition to loan loss provisions' in the Consolidated statement of profit or loss.

Debt forgiveness (or debt settlement) involves write-off but additionally involves the forgiveness of a legal obligation, in whole or in part. This means that ING Group forfeits the legal right to recover the debt. As a result, the financial asset needs to be derecognised. Distinction is made in situations where ING Group ends the relationship with the client and situations where ING Group (partially) continues the financing of the client.

Presentation of ECL

ECL for financial assets measured at AC are deducted from the gross carrying amount of the assets. For debt instruments at FVOCI, the ECL is recognised in OCI, instead of deducted the carrying amount of the asset. ECL also reflects any credit losses related to the portion of the loan commitment that is expected to be drawn down over the remaining life of the instrument. The ECL on issued financial guarantee contracts, in scope of IFRS 9 and not measured at FVPL, are recognised as liabilities and presented in Other provisions. ECL are presented in profit or loss in Addition to loan loss provision.

Significant judgements and critical accounting estimates and assumptions:

Considerable management judgement is exercised in determining the amount of ECL for financial assets assessed on both a collective and an individual basis. The need for management judgement has increased even further due to the Covid-19 pandemic. In particular, this judgement requires ING Group to make various assumptions about the risk of default, the credit loss rates in case of a default and expected future cash flows. These assumptions are based on a combination of ING Group's past history, existing market conditions and forward-looking estimates at the end of each reporting period. Changes in these assumptions may lead to changes in the ECL over time. Given they are subjective and complex in nature, and because the ECL and the underlying exposures subject to ECL are material, these assumptions are considered critical accounting assumptions. The sensitivity of these assumptions is assessed in the credit risk section of the 'Risk Management' section in the Annual Report.

The use of forward-looking macroeconomic scenarios in both collective and individual impairment assessments

Forward-looking macroeconomic scenarios are uncertain in nature. The process ING Group follows involves two internal groups, the Macroeconomics Scenarios Team and the Macroeconomics Scenarios Expert Panel. The latter team consists of senior management representatives from the Business, Risk and Finance. These groups review inputs obtained from a third party provider and subject these to internal expert challenge to ensure the inputs used in the models reflect ING Group's view on the macro economy. The use of alternate forward-looking macroeconomic scenarios can produce significantly different estimates of ECL. This is demonstrated in the sensitivity analysis in the 'Risk Management' section of the Annual Report, where the un-weighted ECL under each of the three scenarios for some significant portfolios is disclosed.

The probability weights applied to each of the three scenarios
ING Group uses three macroeconomic scenarios when determining IFRS 9 ECL (baseline, upside and downside). Management judgement is applied in the design of the approach used to determine the weights of each scenario and in selecting the parts of the distribution of forecast errors from which the weights are derived. Reference is made to the 'Alternative scenarios and probability weights' and the sensitivity analysis in the 'Risk Management' section of the Annual Report for further details.

The criteria for identifying a significant increase in credit risk
When determining whether the credit risk on a financial asset has increased significantly, ING Group considers reasonable and supportable information to compare the risk of default occurring at reporting date with the risk of a default occurring at initial recognition of the financial asset. Whilst judgement is required in applying a PD rating to each financial asset, there is significant judgement used in determining the Stage allocation PD banding thresholds. The process of comparing a financial asset's PD with the PD banding thresholds determines its ECL Stage. Assets in Stage 1 are allocated a 12 month ECL, and those in Stage 2 are allocated a lifetime ECL, and the difference is often significant. As such, the judgement made in assigning financial asset PDs and the PD banding thresholds constitute a significant judgement. Analysis of the sensitivity associated with the assessment of significant increase in credit risk is presented in the 'Risk Management' section of the Annual Report.

The definition of default
Judgement is exercised in management's evaluation of whether there is objective evidence that larger exposures are credit-impaired. Management judgement is required in assessing evidence of credit-impairment.

Management adjustments applied as at 31 December 2021
As Covid-19 continues to bring uncertainties, management adjustments to the model-based ECL were still necessary as at 31 December 2021, although they decreased compared to 2020. The Covid-19 related management adjustments comprised EUR 373 million as at 31 December 2021 (31 December 2020: EUR 638 million) consisting of economic sector-based and payment holidays management adjustments. Reference is made to the 'Management adjustments applied this year' paragraph in the 'Risk management' section of the Annual Report.

1.6.9 Accounting for Targeted Longer-Term Refinancing Operations (TLTRO)

ING Group participates in Targeted Longer-Term Refinancing Operations (TLTRO III), reference is made to Note 12 'Deposits from banks'.

ING Group considers TLTRO funding provided by the ECB to banks to be on market terms on the basis that the ECB has established a separate market with TLTRO programmes. They have specific terms which are different from other sources of funding available to banks, including those provided by the ECB. Consequently, the rate under TLTRO is considered to be a market conforming rate and TLTRO funding is recognized fully as a financial liability.

ING Group interprets the whole rate set by the ECB under TLTRO as a floating rate on the financial liability, being the market rate for each specific period in time. This results in discrete rates for discrete interest periods over the life of TLTRO. The change in the applicable rate between interest periods is seen as a change in the floating rate and is accounted for prospectively. Similarly, if the ECB announces changes in the rate for the amounts already drawn under the existing TLTRO, then such changes also represent a change in a floating rate. Following this, such changes lead to the recognition of an increased interest in the relevant period of life of the exposure, rather than by the recognition of an immediate modification gain or loss at the moment of the change of terms by the ECB.

Furthermore, the change in the TLTRO rate driven by changes in expectations of meeting the targets impacts interest income. As a result, interest income which relates to the period that already passed until the moment when the change in expectations occurs, is recognised as a catch up adjustment in Consolidated statement of profit or loss. This change occurs only when ING Group has a reasonable expectation that the lending targets will be met.

ING Group views 'reasonable expectation' in case of TLTRO funding as a high hurdle. This is the moment when it becomes highly probable, i.e. the probability of meeting the lending targets is substantially greater than the probability that it will not. As a result, if interest income is recognised during the period based on the expectation of meeting the targets, there should only be a limited possibility that the interest may need to be reversed in future reporting periods.

Reference is made to note 12 'Deposits from banks' and to note 20 'Net interest income' for the presentation of ING Group's participation in TLTRO programmes.

Significant judgements:
Significant management judgement is exercised in determining the accounting treatment of TLTRO transactions. In particular, ING Group applied judgement in:
- assessing and concluding that in ING Group's view the rate under TLTRO is considered to be a market conforming rate and, hence, accounting for TLTRO in accordance with IFRS 9; and
- selecting accounting policies regarding the calculation of the effective interest rate under TLTRO, including treatment of changes in expectations of meeting the lending targets.

In addition, estimation uncertainty exists when the end of the observation period for lending growth does not coincide with the end of the reporting period. At 31 December 2021, however, limited estimation uncertainty exists as the lending targets were met as at 31 December 2021 (subject to the final confirmation by the ECB), which is the end of the observation period 2 and determines the conditional rate applicable during the period between June 2021 and June 2022.

1.7 Consolidation

ING Group comprises ING Groep N.V. (the Parent Company), ING Bank N.V. and all other subsidiaries. Subsidiaries are entities controlled by ING Groep N.V. Control exists if ING Groep N.V. is exposed or has rights to variable returns and has the ability to affect those returns through the power over the investee. Control is usually achieved through situations including, but not limited to:
- Ownership, directly or indirectly, of more than half of the voting power;
- Ability to appoint or remove the majority of the board of directors;
- Power to govern operating and financial policies under statute or agreement; and
- Power over more than half of the voting rights through an agreement with other investors.

The existence and effect of potential voting rights that are currently exercisable or convertible are considered in assessing whether Group controls another entity.

For interests in structured entities, the existence of control requires judgement as these entities are designed so that voting or similar rights are not the dominant factor in deciding who controls the entity. This judgement includes, for example, the involvement in the design of the structured entity, contractual arrangements that give rights to direct the structured entities relevant activities and commitment to ensure that the structured entity operates as designed.

A list of principal subsidiaries is included in Note 48 'Principal subsidiaries'.

A list containing the information referred to in Section 379 (1), Book 2 of the Dutch Civil Code has been filed with the office of the Commercial Register of Amsterdam, in accordance with Section 379 (5), Book 2 of the Dutch Civil Code.

The results of the operations and the net assets of subsidiaries are included in the statement of profit or loss and the statement of financial position from the date control is obtained until the date control is lost. On disposal, the difference between the sales proceeds, net of directly attributable transaction costs, and the net assets is included in net result.

A subsidiary which ING Group has agreed to sell but is still legally owned by ING Group may still be controlled by ING Group at the balance sheet date and therefore, still be included in the consolidation. Such a subsidiary may be presented as a held for sale disposal group if certain conditions are met.

All intercompany transactions, balances and unrealised surpluses and deficits on transactions between group companies are eliminated. Where necessary, the accounting policies used by subsidiaries are changed to ensure consistency with group policies. In general, the reporting dates of subsidiaries are the same as the reporting date of ING Groep N.V.

ING Groep N.V. and its Dutch group companies are subject to legal restrictions regarding the amount of dividends they can pay to their shareholders. The Dutch Civil Code contains the restriction that dividends can only be paid up to an amount equal to the excess of the company's own funds over the sum of the paid-up capital and reserves required by law. Certain Group companies are also subject to other restrictions in certain countries, in addition to the restrictions on the amount of funds that may be transferred in the form of dividends, or otherwise, to the parent company.

Furthermore, in addition to the restrictions in respect of minimum capital requirements that are imposed by industry regulators in the countries in which the subsidiaries operate, other limitations exist in certain countries.

1.8 Segment reporting

An operating segment is a distinguishable component of ING Group, engaged in providing products or services, whose operating results are regularly reviewed by the Executive Board of ING Group and the Management Board Banking (together the Chief Operating Decision Maker (CODM)) to make decisions about resources to be allocated to the segments and assess its performance. A geographical area is a distinguishable component of ING Group engaged in providing products or services within a particular economic environment that is subject to risks and returns that are different from those of segments operating in other economic environments.

The CODM examines ING Group's performance both by line of business and geographic perspective and has identified five reportable segments by line of business. The geographical analyses are based on the location of the office from which the transactions are originated.

1.9 Foreign currency translation

Functional and presentation currency

Items included in the financial statements of each of ING Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The Consolidated financial statements are presented in euros, which is ING Group's presentation currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rate prevailing at the date of the transactions. Exchange rate differences resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of profit or loss, except when deferred in equity as part of qualifying cash flow hedges or qualifying net investment hedges.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

Exchange rate differences on non-monetary items, measured at fair value through profit or loss, are reported as part of the fair value gain or loss. Non-monetary items are retranslated at the date the fair value is determined. Exchange rate differences on non-monetary items measured at fair value through other comprehensive income are included in other comprehensive income and get accumulated in the revaluation reserve in equity.

Exchange rate differences in the statement of profit or loss are generally included in 'Valuation results and net trading income'. Reference is made to Note 22 'Valuation results and net trading income', which discloses the amounts included in the statement of profit or loss. Exchange rate differences relating to the disposal of debt and FVPL equity securities are considered to be an inherent part of the capital gains and losses recognised in Investment income. As mentioned below, in Group companies relating to the disposals of group companies, any exchange rate difference deferred in equity is recognised in the statement of profit or loss in 'Result on disposal of group companies'. Reference is also made to Note 19 'Equity', which discloses the amounts included in the statement of profit or loss.

Group companies

The results and financial positions of all group companies that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities included in each statement of financial position are translated at the closing rate at the date of that statement of financial position;
- Income and expenses included in each statement of profit or loss are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and
- All resulting exchange rate differences are recognised in a separate component of equity.

On consolidation, exchange rate differences arising from the translation of a monetary item that forms part of the net investment in a foreign operation, and of borrowings and other instruments designated as hedges of such investments, are taken to shareholders' equity. When a foreign operation is sold, the corresponding exchange rate differences are recognised in the statement of profit or loss as part of the gain or loss on sale.

Goodwill and fair value adjustments arising from the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the exchange rate prevailing at the balance sheet date.

1.10 Investments in associates and joint ventures

Associates are all entities over which ING Group has significant influence but not control. Significant influence is the ability to participate in the financial and operating policies of the investee. It generally results from a shareholding of between 20% and 50% of the voting rights or through situations including, but not limited to one or more of the following:

- Representation on the board of directors;
- Participation in the policymaking process; and
- Interchange of managerial personnel.

Joint ventures are entities over which ING Group has joint control. Joint control is the contractually agreed sharing of control over an arrangement or entity, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. Joint control means that no party to the agreement is able to act unilaterally to control the activity of the entity. The parties to the agreement must act together to control the entity and therefore exercise the joint control.

Investments in associates and joint ventures are initially recognised at cost and subsequently accounted for using the equity method of accounting.

ING Group's investment in associates and joint ventures (net of any accumulated impairment loss) includes goodwill identified on acquisition. ING Group's share of its associates and joint ventures post-acquisition profits or losses is recognised in the statement of profit or loss, and its share of post-acquisition changes in reserves is recognised in equity. The cumulative post-acquisition changes are adjusted against the carrying amount of the investment. When ING Group's share of losses in an associate or joint venture equals or exceeds its interest in the associate or joint venture, including any long-term interests in the associate like uncollateralised loans that are neither planned nor likely to be settled in the foreseeable future, ING Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate or joint venture.

Unrealised gains on transactions between ING Group and its associates and joint ventures are eliminated to the extent of ING Group's interest in the associates and joint ventures. Unrealised losses are also eliminated unless they provide evidence of an impairment of the asset transferred. Accounting policies of associates and joint ventures have been changed where necessary to ensure consistency with the policies adopted by ING Group.

The recoverable amount, being the higher of fair value less cost of disposal and value in use, of the investment in associate and joint venture is determined when there is an indication of potential (reversal of) impairment. An impairment loss is recognised when the carrying amount of the investment exceeds its recoverable amount. Goodwill on acquisitions of interests in associates and joint ventures is not tested separately for impairment, but is assessed as part of the carrying amount of the investment. An impairment loss is subsequently reversed if there is indication of a reversal and there is a change in the estimates used to determine the recoverable amount. An impairment loss is reversed to the extent that the recoverable amount exceeds its carrying amount, but cannot exceed the original impairment loss.

Significant judgements and critical accounting estimates and assumptions:
The most significant estimates and assumptions relate to the assessment of (reversal of) impairment of the investment in TMBThanachart Bank Public Company Limited (hereafter: TTB) which involves estimation of value in use.

Management's best estimate of TTB's expected future earnings are based on forecasts derived from broker consensus over the short to medium term and TTB observable targets for steady state earnings into perpetuity. A capital maintenance charge is applied, which is management's forecast of the earnings that need to be withheld in order for TTB to meet target regulatory requirements over the forecast period. Both of these factors are subject to a high degree of uncertainty.

Key assumptions used in estimating TTB's value in use and the sensitivity of the value in use calculations to different assumptions are described in note 8 'Investments in associates and joint ventures'.

1.11 Property and equipment

Property in own use

Land and buildings held for own use are stated at fair value at the balance sheet date. Increases in the carrying amount arising on revaluation of land and buildings held for own use are credited to the revaluation reserve in shareholders' equity. Decreases in the carrying amount that offset previous increases of the same asset are charged against the revaluation reserve directly in equity; all other decreases are charged to the statement of profit or loss. Increases that reverse a revaluation decrease on the same asset previously recognised in net result are recognised in the statement of profit or loss. Depreciation is recognised based on the fair value and the estimated useful life (in general 20–50 years). Depreciation is calculated on a straight-line basis. On disposal, the related revaluation reserve is transferred to retained earnings.

The fair values of land and buildings are appraised annually by independent qualified valuers. Subsequent expenditure is included in the asset's carrying amount when it is probable that future economic benefits associated with the item will flow to ING Group and the cost of the item can be measured reliably.

Equipment

Equipment is stated at cost less accumulated depreciation and any impairment losses. The cost of the assets is depreciated on a straight line basis over their estimated useful lives, which are generally as follows: for data processing equipment two to five years, and four to ten years for fixtures and fittings. Expenditure incurred on maintenance and repairs is recognised in the statement of profit or loss as incurred. Expenditure incurred on major improvements is capitalised and depreciated.

Disposals of property and equipment

The difference between the proceeds on disposal and net carrying value is recognised in the statement of profit or loss under Other income.

Right-of-use assets

ING Group as the lessee

A lessee is required to recognise a right-of-use asset representing its right to use the underlying leased asset and a corresponding liability representing its obligation to make lease payments at the date at which the leased asset is available for use by ING Group. Each lease payment is allocated between the repayment of the liability and finance cost. The finance costs are charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- Variable lease payments that are based on an index or a rate;
- Amounts expected to be payable by the lessee under residual value guarantees;
- The exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions. This rate is approximated by using the risk free rate applicable to the lease term, the currency of the lease payment and jurisdiction, with the Fund Transfer Pricing (FTP) rate as an add-on. The FTP rate is used to transfer interest rate risk and funding and liquidity risk positions between the ING Group business and treasury departments. It is determined by either ING Group or Local Asset and Liability Committee (ALCO). Reference is made to the 'Risk management' section of the Annual Report.

Right-of-use assets are measured at cost comprising the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date less any lease incentives received and any initial direct costs and restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise mainly IT-equipment (for example mobile phones or laptops) and small items of office furniture.

The right-of-use asset is included in the statement of financial position line-item 'Property and equipment', the lease liability is included in the statement of financial position line-item 'Other liabilities'. Refer to note 9 'Property and equipment' and to note 16 'Other liabilities'.

Subsequent to initial recognition, the right-of-use asset amortises using a straight-line method to the income statement over the life of the lease. The lease liability increases for the accrual of interest and decrease when payments are made. Any remeasurement of the lease liability due to a lease modification or other reassessment results in a corresponding adjustment to the carrying amount of the right-of-use asset.

ING Group as the lessor

When ING Group acts as a lessor, a distinction should be made between finance leases and operating leases. For ING Group as a lessor these are mainly finance leases. The present value of the lease payments is recognised as a receivable under Loans and advances to customers or Loans and advances to banks. The difference between the gross receivable and the present value of the receivable is unearned finance lease income. Lease income is recognised over the term of the lease using the net investment method (before tax), which reflects a constant periodic rate of return.

1.12 Acquisitions, goodwill and other intangible assets

Goodwill resulting from a business combination

ING Group's business combinations are accounted for using the acquisition method of accounting. The consideration for each business combination is measured at the aggregate of the fair values (at the date of exchange) of assets given, liabilities incurred or assumed, and equity instruments issued in exchange for control of the acquiree. Goodwill, being the difference between the cost of the acquisition (including assumed debt) and the Group's interest in the fair value of investee's identifiable assets, liabilities and contingent liabilities as at the date of acquisition, is capitalised as an intangible asset. Goodwill is only recognised separately on acquisitions. The results of the operations of the acquired companies are included in the statement of profit or loss from the date control is obtained.

Where applicable, the consideration for the business combination includes any asset or liability resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value. Contingent consideration arrangements classified as an asset or a liability, are subsequently measured at fair value and the changes in fair value will be recognised in the statement of profit or loss. Changes in the fair value of the contingent consideration classified as equity, are not recognised.

Where a business combination is achieved in stages, ING Group's previously held interests in the assets and liabilities of the acquired entity are remeasured to fair value at the acquisition date (i.e. the date ING Group obtains control) and the resulting gain or loss, if any, is recognised in the statement of profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognised in other comprehensive income are reclassified to the statement of profit or loss, where such treatment would be appropriate if that interest were disposed of. Acquisition related costs are recognised in the statement of profit or loss as incurred and presented in the statement of profit or loss as Other operating expenses.

The initial accounting for the fair value of the net assets of the companies acquired during the year may be determined only provisionally as the determination of the fair value can be complex and the time between the acquisition and the preparation of the Financial statements can be limited. The initial accounting shall be completed within a year after acquisition. Adjustments to the fair value as at the date of acquisition of acquired assets and liabilities, that are identified within one year after acquisition are recognised as an adjustment to goodwill; any subsequent adjustment is recognised as income or expense. On disposal of group companies where control is lost, the difference between the sale proceeds and carrying value (including goodwill) and the unrealised results (including the currency translation reserve in equity) is included in the statement of profit or loss.

Impairment of goodwill and other non-financial assets

ING Group assesses at each reporting period, whether there is an indication that a non-financial asset may be impaired. Irrespective of whether there is an indication of impairment, intangible assets with an indefinite useful life, including goodwill acquired in a business combination, and intangible assets not yet available for use, are tested annually for impairment. Goodwill is allocated to groups of CGUs (that is, the group of cash generating units or CGUs) for the purpose of impairment testing. These groups of CGUs represent the lowest level at which goodwill is monitored for internal management purposes. Goodwill is tested for impairment by comparing the carrying value of the group of CGUs to the recoverable amount of that group of CGUs. The carrying value is determined as the IFRS net asset value including goodwill. The carrying value is determined on a basis that is consistent with the way in which the recoverable amount of the CGU is determined. The recoverable amount is estimated as the higher of fair value less costs of disposal and value in use. Impairment of goodwill, if applicable, is included in the statement of profit or loss in Other operating expenses and is not subsequently reversed.

Computer software

Computer software that has been purchased or generated internally for own use is stated at cost less amortisation and any impairment losses. Amortisation is calculated on a straight-line basis over its useful life. This period will generally not exceed five years. Amortisation is included in Other operating expenses.

Other intangible assets

Other intangible assets are capitalised and amortised over their expected economic life, which is generally between three and ten years. Intangible assets with an indefinite life are not amortised.

1.13 Taxation

Income tax on the result for the year consists of current and deferred tax. Income tax is recognised in the statement of profit or loss but it is recognised directly in equity if the tax relates to items that are recognised directly in equity.

Deferred income tax

Deferred income tax is provided in full, using the liability method, for temporary differences arising between the tax basis of assets and liabilities and their carrying amounts in the Consolidated statement of financial position. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted at the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled. Deferred tax assets and liabilities are not discounted.

Deferred tax assets are recognised when it is probable that future taxable profit will be available against which the temporary differences can be utilised. Deferred income tax is provided for temporary differences arising from investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by ING Group and it is probable that the difference will not reverse in the foreseeable future. The tax effects of income tax losses available for carry forward are recognised as an asset where it is probable that future taxable profits will be available against which these losses can be utilised.

Fair value remeasurements of debt and equity instruments measured at FVOCI and cash flow hedges are recognised directly in equity. Deferred tax related to this fair value remeasurement is also recognised directly in equity and is subsequently recognised in the statement of profit or loss together with the deferred gain or loss.

Uncertain tax positions are assessed continually by ING Group and in case it is probable that there will be a cash outflow, a current tax liability is recognised.

1.14 Other assets

Investment property

Investment properties are recognised at fair value at the balance sheet date. The fair values of investment properties are appraised annually by independent qualified valuers. Changes in the carrying amount resulting from revaluations are recognised in the statement of profit or loss. On disposal, the difference between the sale proceeds and carrying value is recognised in the statement of profit or loss.

Property obtained from foreclosures

Property obtained from foreclosures is stated at the lower of cost and net realisable value. Net realisable value is the estimated selling price, less applicable variable selling expenses. Property obtained from foreclosures is included in Other assets - Property development and obtained from foreclosures.

Property development

Property developed and under development is included in Other assets – Property development and obtained from foreclosures. Depending on the intention of ING Group after completion of the development, the property is measured as follows:

- Intention to sell: at the lower of cost and net realisable value;
- Intention to use as a real estate investment: at fair value.

1.15 Disposal groups held for sale and discontinued operations

Disposal groups (and non-current assets) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This is only the case when the sale is highly probable and the disposal group (or non-current assets) is available for immediate sale in its present condition; management must be committed to the sale, which is expected to occur within one year from the date of classification as held for sale.

Upon classification as held for sale, the disposal group is measured at the lower of its carrying amount and fair value less costs to sell, except where specifically exempt from IFRS 5 ‘Non-current Assets Held for Sale and Discontinued Operations. An impairment loss is recognised for any initial or subsequent write-down of the disposal group to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of the disposal group, but not in excess of any cumulative impairment loss previously recognised. A gain or loss not previously recognised by the date of the sale of the disposal group is recognised at the date of derecognition. Assets within the disposal group are not depreciated or amortised while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognised. The assets of the disposal group classified as held for sale are presented separately from the other assets in the balance sheet. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the balance sheet.

When a group of assets that is classified as held for sale represents a major line of business or geographical area the disposal group is classified as discontinued operations. Upon classification of a business as held for sale and discontinued operations the individual income and expenses are presented within the Total net result from discontinued operations instead of being presented in the usual line items in the Consolidated statement of profit or loss. All comparative years in the Consolidated statement of profit or loss are restated and presented as discontinued operations for all periods presented. Furthermore, the individual assets and liabilities are presented in the Consolidated statement of financial position as Assets and liabilities held for sale and are no longer included in the usual line items in the Consolidated statement of financial position. Changes in assets and liabilities as a result of classification as held for sale are included in the notes in the line 'Changes in composition of the group and other changes'.

1.16 Provisions, contingent liabilities and contingent assets

A provision is a present obligation arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits, however the timing or the amount is uncertain. Provisions are discounted when the effect of the time value of money is significant using a pre-tax discount rate.

Reorganisation provisions include employee termination benefits when ING Group is demonstrably committed to either terminate the employment of current employees according to a detailed formal plan without possibility of withdrawal, or providing termination benefits as a result of an offer made to encourage voluntary redundancy.

A liability is recognised for a levy when the activity that triggers payment, as identified by the relevant legislation, occurs. For a levy that is triggered upon reaching a minimum threshold, the liability is recognised only upon reaching the specified minimum threshold.

A contingent liability is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of ING Group; or a present obligation that arises from past events but is not recognised because it is either not probable that an outflow of economic benefits will be required to settle the obligation or the amount of the obligation cannot be measured reliably. Contingent liabilities are not recognised in the statement of financial position, but are rather disclosed in the notes unless the possibility of the outflow of economic benefits is remote.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of ING Group. Contingent assets are recognised in the statement of financial position only when realisation of the income that arises from such an asset is virtually certain. Contingent assets are disclosed in the notes when an inflow of economic benefits is probable.

Significant judgements and critical accounting estimates and assumptions:
The recognition and measurement of provisions is an inherently uncertain process involving using judgement to determine when a present obligation exists and estimates regarding probability, amounts and timing of cash flows.

ING Group may become involved in governmental, regulatory, arbitration and legal proceedings and investigations and may be subject to third party claims. With or without reference to the above, ING Group may also offer compensation to certain of its customers. Judgement is required to assess whether a present obligation exists and to estimate the probability of an unfavourable outcome and the amount of potential loss. The degree of uncertainty and the method of making the accounting estimate depends on the individual case, its nature and complexity. Such cases are usually one of a kind. For the assessment of related provisions ING Group consults with internal and external legal experts. Even taking into consideration legal experts' advice, the probability of an outflow of economic benefits can still be uncertain and the provision recognised can remain sensitive to the assumptions used. Reference is made to note 15 'Provisions'. For proceedings where it is not possible to make a reliable estimate of the expected financial effect, that could result from the ultimate resolution of the proceedings, no provision is recognised, however disclosure is included in the financial statements, where relevant. Reference is made to note 46 'Legal proceedings'.

Critical accounting estimates and assumptions for the reorganisation provision are in estimating the amounts and timing of cash flows as the announced transformation initiatives are implemented over a period of several years. Reference is made to note 15 'Provisions'.

1.17 Other liabilities

Defined benefit plans

The net defined benefit asset or liability recognised in the statement of financial position in respect of defined benefit pension plans is the fair value of the plan assets less the present value of the defined benefit obligation at the balance sheet date.

Plan assets are measured at fair value at the balance sheet date. For determining the pension expense, the return on plan assets is determined using a high quality corporate bond rate identical to the discount rate used in determining the defined benefit obligation.

Changes in plan assets that effect Shareholders' equity and/or Net result, include mainly:

- Return on plan assets using a high quality corporate bond rate at the start of the reporting period which are recognised as staff costs in the statement of profit or loss; and
- Remeasurements which are recognised in Other comprehensive income.

The defined benefit obligation is calculated by internal and external independent qualified actuaries through actuarial models and calculations using the projected unit credit method. This method considers expected future payments required to settle the obligation resulting from employee service in the current and prior periods, discounted using a high quality corporate bond rate. Inherent in these actuarial models are assumptions including discount rates, rates of increase in future salary and benefit levels, mortality rates, consumer price index and the expected level of indexation. The assumptions are based on available market data as well as management expectations and are updated regularly. The actuarial assumptions may differ significantly from the actual results due to changes in market conditions, economic and mortality trends, and other assumptions. Any changes in these assumptions could have a significant impact on the defined benefit plan obligation and future pension costs.

Changes in the defined benefit obligation that effects Shareholders' equity and/or Net result, include mainly:

- Service cost which are recognised as staff costs in the statement of profit or loss;
- Interest expenses using a high quality corporate bond rate at the start of the period which are recognised as staff costs in the Statement of profit or loss; and
- Remeasurements which are recognised in Other comprehensive income (equity).

Remeasurements recognised in other comprehensive income are not recycled to profit or loss. Any past service cost relating to a plan amendment is recognised in profit or loss in the period of the plan amendment. Gains and losses on curtailments and settlements are recognised in the statement of profit or loss when the curtailment or settlement occurs.

The recognition of a net defined benefit asset in the Consolidated statement of financial position is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

Defined contribution plans

For defined contribution plans, ING Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. ING Group has no further payment obligations once the contributions have been paid. The contributions are recognised as staff expenses in the profit or loss when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

Other post-employment obligations

Some group companies provide other post-employment benefits to former employees. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using an accounting methodology similar to that for defined benefit pension plans.

1.18 Treasury shares

Treasury shares (own equity instruments bought back by ING Group or its subsidiaries) are deducted from Equity (Other reserves). No gain or loss is recognised in the statement of profit or loss when purchasing, selling or cancelling these shares. Treasury shares are not taken into account when calculating earnings per ordinary share or dividend per ordinary share as they are not considered to be outstanding.

Treasury shares can be purchased by ING as part of a share buyback programme. If a share buyback is executed by a broker and the agreement with the broker is irrevocable, ING has a contractual obligation to purchase its own shares that is unavoidable once it signs the agreement with the broker. This is the moment when ING recognises a financial liability measured at the present value of the redemption amount with a corresponding reduction in equity (Retained earnings). During the share buyback programme, ING settles this liability for the actual purchase price paid for the shares bought on a daily basis. Actual shares bought back and held by ING are presented as Treasury shares within Other reserves in equity.

1.19 Income recognition

Interest

Interest income and expense are recognised in the statement of profit or loss using the effective interest method. The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, ING Group estimates cash flows considering all contractual terms of the financial instrument (for example, prepayment options) but does not consider future credit losses.

The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums or discounts. Once a financial asset or a group of similar financial assets has been written down as a result of an impairment loss, interest income is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Interest results on instruments classified at Amortised Cost, assets measured at FVOCI and derivatives in a formal hedge accounting relationship is presented in ‘Interest income (expense) using effective interest rate method’. Interest result on financial assets and liabilities voluntarily designated as at FVPL and derivatives in so called economic hedges and instruments designated at fair value are presented in ‘Other interest income (expense)’. Interest result on all other financial assets and liabilities at FVTPL is recognised in ‘Valuation results and net trading income’.

Fees and commissions

Fees and commissions are generally recognised as the service is provided. Loan commitment fees for loans that are likely to be drawn down are deferred (together with related direct costs) and recognised as an adjustment to the effective interest rate on the loan. Loan syndication fees are recognised as income when the performance obligation has been satisfied based on the particular contract and ING Group has retained no part of the loan package for itself or has retained a part at the same effective interest rate as the other participants. Commission and fees arising from negotiating, or participating in the negotiation of, a transaction for a third party – such as the arrangement of the acquisition of shares or other securities or the purchase or sale of businesses – are recognised on completion of the underlying transaction. Portfolio and other management advisory and service fees are recognised based on the applicable service contracts as the service is provided. Asset management fees related to investment funds and investment contract fees are recognised on a pro-rata basis over the period the service is provided. The same principle is applied for wealth management, financial planning and custody services that are continuously provided over an extended period of time. Fees received and paid between banks for payment services are classified as commission income and expenses.

Lease income

The proceeds from leasing out assets under operating leases are recognised on a straight-line basis over the life of the lease agreement. Lease payments received in respect of finance leases when ING Group is the lessor are divided into an interest component (recognised as interest income) and a repayment component based on a pattern reflecting a constant periodic rate of return on the lessor’s net investment in the lease.

1.20 Expense recognition

Expenses are recognised in the statement of profit or loss as incurred or when a decrease in future economic benefits related to a decrease in an asset or an increase in a liability has arisen that can be measured reliably. Fee and commission expenses are generally a result from a contract with ING service providers in order to perform the service for ING Group’s customers. Costs are generally presented as ‘Commission expenses’ if they are specific, incremental, directly attributable and identifiable to generate commission income.

Share-based payments

ING Group only engages in share-based payment transactions with its staff and directors. Share-based payment expenses are recognised as a staff expense over the vesting period. A corresponding increase in equity is recognised for equity-settled share-based payment transactions. A liability is recognised for cash-settled share-based payment transactions. The fair value of equity-settled share-based payment transactions are measured at the grant date, and the fair value of cash-settled share-based payment transactions are measured at each balance sheet date. Rights granted will remain valid until the expiry date, even if the share based payment scheme is discontinued. The rights are subject to certain conditions, including a pre-determined continuous period of service.

1.21 Earnings per ordinary share

Earnings per ordinary share is calculated on the basis of the weighted average number of ordinary shares outstanding. In calculating the weighted average number of ordinary shares outstanding:

- Own shares held by group companies are deducted from the total number of ordinary shares in issue;
- The computation is based on daily averages; and
- In case of exercised warrants, the exercise date is taken into consideration.

Diluted earnings per share data are computed as if all convertible instruments outstanding at year-end were exercised at the beginning of the period. It is also assumed that ING Group uses the assumed proceeds thus received to buy its own shares against the average market price in the financial year. The net increase in the number of shares resulting from the exercise is added to the average number of shares used to calculate diluted earnings per share.

Share options with fixed or determinable terms are treated as options in the calculation of diluted earnings per share, even though they may be contingent on vesting. They are treated as outstanding on the grant date. Performance-based employee share options are treated as contingently issuable shares because their issue is contingent upon satisfying specified conditions in addition to the passage of time.

1.22 Statement of cash flows

The statement of cash flows is prepared in accordance with the indirect method, distinguishing cash flows from operating, investing and financing activities. In the net cash flow from operating activities, the result before tax is adjusted for those items in the statement of profit or loss and changes in items per the statement of financial position, which do not result in actual cash flows during the year.

For the purposes of the statement of cash flows, Cash and cash equivalents comprise balances with less than three months' maturity from the date of acquisition, including cash and balances with central banks, treasury bills and other eligible bills, amounts due from other banks, and deposits from banks. Investments qualify as a cash equivalent if they are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

Cash flows arising from foreign currency transactions are translated into the functional currency using the exchange rates at the date of the cash flows.

The net cash flow shown in respect of Loans and advances to customers relates only to transactions involving actual payments or receipts. The Addition to loan loss provision which is deducted from the item Loans and advances to customers in the statement of financial position has been adjusted accordingly from the result before tax and is shown separately in the statement of cash flows.

The difference between the Net cash flow in accordance with the statement of cash flows and the change between the opening and closing balance of Cash and cash equivalents in the statement of financial position is due to exchange rate differences and is presented separately in the cash flow statement.

Liabilities arising from financing activities are debt securities, lease liabilities and subordinated loans.

Notes to the Consolidated statement of financial position

2 Cash and balances with central banks

Cash and balances with central banks		
in EUR million	2021	2020
Amounts held at central banks [1]	104,870	109,237
Cash and bank balances	1,650	1,851
	106,520	**111,087**

1 Amounts held at central banks include an amount of EUR -6 million (2020: EUR -3 million) of Loan loss provisions.

The movement in Cash and balances with central banks reflects ING's active liquidity management. Amounts held at central banks reflect on demand balances.

Reference is made to Note 43 'Transfer of financial assets, assets pledged and received as collateral' for restrictions on amounts held at central banks.

3 Loans and advances to banks

Loans and advances to banks	Netherlands		Rest of the world		Total	
in EUR million	2021	2020	2021	2020	2021	2020
Loans and advances to banks	7,019	7,442	16,595	17,945	23,614	25,387
Loan loss provisions	-10	-10	-13	-13	-22	-23
	7,010	**7,432**	**16,582**	**17,933**	**23,592**	**25,364**

Loans include balances (mainly short-term deposits) with central banks amounting to EUR 1,952 million (2020: EUR 2,519 million).

As at 31 December 2021, Loans include receivables related to finance lease contracts amounting to EUR 5 million (2020: EUR 6 million). Reference is made to Note 7 'Loans and advances to customers' for information on finance lease receivables.

As at 31 December 2021, all loans and advances to banks are non-subordinated.

4 Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss		
in EUR million	2021	2020
Trading assets	51,381	51,356
Non-trading derivatives	1,536	3,583
Designated at fair value through profit or loss	6,355	4,126
Mandatorily measured at fair value through profit or loss	42,684	44,305
	101,956	**103,370**

(Reverse) repurchase transactions

Financial assets at fair value through profit or loss includes securities lending and sales and repurchase transactions which were not derecognised, because ING Group continues to be exposed to substantially all risks and rewards of the transferred financial asset. For repurchase agreements the gross amount of assets must be considered together with the gross amount of related liabilities, which are presented separately on the statement of financial position since IFRS does not always allow netting of these positions in the statement of financial position.

ING Group's exposure to (reverse) repurchase transactions is included in the following lines in the statement of financial position:

Exposure to (reverse) repurchase agreements		
in EUR million	2021	2020
Reverse repurchase transactions		
Loans and advances to banks	3,403	4,869
Loans and advances to customers	71	624
Trading assets, loans and receivables	8,026	10,947
Loans and receivables mandatorily measured at fair value through profit or loss	39,823	41,735
	51,322	**58,175**
Repurchase transactions		
Deposits from banks	4,138	1,971
Trading liabilities, funds on deposit	7,127	5,787
Funds entrusted designated and measured at fair value through profit or loss	34,608	41,177
	45,873	**48,935**

Securities purchased under agreements to resell (reverse repos), securities borrowings and similar agreements are not recognised in the consolidated statement of financial position. Based on the business model assessment and counterparty, the consideration paid to purchase securities is recognised as Loans and advances to customers, Loans and advances to banks, Other financial assets at FVPL or Trading assets.

Securities sold subject to repurchase agreements (repos), securities lending and similar agreements continue to be recognised in the consolidated statement of financial position. The counterparty liability is measured at FVPL (designated) and included in Other financial liabilities at FVPL if the asset is measured at FVPL. Otherwise, the counterparty liability is included in Deposits from banks, Customer deposits, or Trading, as appropriate.

Reference is made to Note 43 'Transfer of financial assets, assets pledged and received as collateral' for information on transferred assets which were not derecognised.

Trading assets

Trading assets by type		
in EUR million	2021	2020
Equity securities	17,566	7,809
Debt securities	5,319	5,183
Derivatives	19,764	27,238
Loans and receivables	8,733	11,126
	51,381	**51,356**

Trading assets include assets that are classified under IFRS as Trading, but are closely related to servicing the needs of the clients of ING Group. ING offers institutional clients, corporate clients, and governments, products that are traded on the financial markets. A significant part of the derivatives in the trading portfolio is related to servicing corporate clients in their risk management to hedge for example currency or interest rate exposures. In addition, ING provides its customers access to equity and debt markets for issuing their own equity or debt securities (securities underwriting).

Reference is made to Note 14 'Financial liabilities at fair value through profit or loss' for information on trading liabilities.

Non-trading derivatives

Non-trading derivatives by type		
in EUR million	2021	2020
Derivatives used in		
- fair value hedges	365	486
- cash flow hedges	300	1,376
- hedges of net investments in foreign operations	18	69
Other non-trading derivatives	852	1,653
	1,536	**3,583**

Reference is made to Note 40 'Derivatives and hedge accounting' for information on derivatives designated in hedge accounting.

Other non-trading derivatives mainly includes interest rate swaps and foreign exchange currency swaps for which no hedge accounting is applied.

Designated at fair value through profit or loss

Designated at fair value through profit or loss by type		
in EUR million	2021	2020
Debt securities	5,870	3,544
Loans and receivables	485	582
	6,355	**4,126**

‘Financial assets designated at fair value through profit or loss’ is partly economically hedged by credit derivatives. The hedges do not meet the criteria for hedge accounting and the loans and debt securities are recorded at fair value to avoid an accounting mismatch. The maximum credit exposure of the loans and receivables and debt securities included in ‘Financial assets designated at fair value through profit or loss’ approximates its carrying value. The cumulative change in fair value of the loans and debt securities attributable to changes in credit risk is not significant.

The notional value of the related credit derivatives is EUR 2,640 million (2020: EUR 1,077 million). The cumulative change in fair value of the credit derivatives attributable to changes in credit risk since the financial assets were first designated, amounts to EUR -69 million (2020: EUR -16 million) and the change for the current year amounts to EUR -53 million (2020: EUR -45 million).

These have been calculated by determining the changes in credit spread implicit in the fair value of bonds issued by entities with similar credit characteristics.

Mandatorily at fair value through profit or loss

Mandatorily at fair value through profit or loss by type		
in EUR million	2021	2020
Equity securities	161	228
Debt securities	787	787
Loans and receivables	41,735	43,290
	42,684	**44,305**

None of the equity securities are individually significant for ING Group.

Loans and receivables mainly include reverse repurchase agreements.

For details on ING Group’s total exposure to debt securities reference is made to Note 6 ‘Securities at amortised cost’.

5 Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income by type		
in EUR million	2021	2020
Equity securities	2,457	1,862
Debt securities[1]	27,340	32,977
Loans and advances[1]	838	1,056
	30,635	**35,895**

1 Debt securities include an amount of EUR -12 million (2020: EUR -12 million) and the Loans and advances includes EUR -1 million (2020: EUR -2 million) of Loan loss provisions.

Exposure to equity securities

Equity securities designated as at fair value through other comprehensive income				
	Carrying value	Carrying value	Dividend income	Dividend income
in EUR million	2021	2020	2021	2020
Investment in Bank of Beijing	1,700	1,662	97	95
Other Investments	757	200	25	12
	2,457	**1,862**	**122**	**107**

For strategic equity securities, ING decided to apply the option to irrevocably designate these investments at fair value through other comprehensive income, instead of the IFRS 9 default measurement of fair value through profit or loss.

As at 31 December 2021 ING holds approximately 13% (2020: 13%) of the shares of Bank of Beijing, a bank listed on the stock exchange of Shanghai. As per regulatory requirements set by China Banking and Insurance Regulatory Commission, ING, as a shareholder holding more than 5% or more of the shares, is required to supply additional capital when necessary. No request for additional capital was received in 2021 (2020: nil).

Changes in fair value through other comprehensive income

The following table presents changes in financial assets at fair value through other comprehensive income.

Changes in fair value through other comprehensive income financial assets

	FVOCI equity securities		FVOCI debt instruments [1]		Total	
in EUR million	2021	2020	2021	2020	2021	2020
Opening balance	1,862	2,306	34,033	32,163	35,895	34,468
Additions	518	13	12,669	16,936	13,186	16,949
Amortisation			-46	-9	-46	-9
Transfers and reclassifications	-7	-107		0	-7	-107
Changes in unrealised revaluations [2]	-88	-283	-1,209	520	-1,296	237
Impairments			-5	-2	-5	-2
Reversals of impairments			4	-4	4	-4
Disposals and redemptions	-19	-13	-17,730	-14,557	-17,750	-14,571
Exchange rate differences	191	-53	460	-1,017	651	-1,070
Changes in the composition of the group and other changes	0	-0	2	2	2	2
Closing balance	**2,457**	**1,862**	**28,178**	**34,033**	**30,635**	**35,895**

1 Fair value through other comprehensive income debt instruments includes both debt securities and loans and advances.

2 Changes in unrealized revaluations of FVOCI debt instruments include changes on hedged items which are recognized in the statement of profit or loss. Reference is made to Note 19 'Equity' for details on the changes in revaluation reserve.

FVOCI equity securities

In 2021, additions of EUR 518 million mainly relates to new investments in HQLA eligible equity instruments. This is a diversified buy-and-hold portfolio aimed at generating a stable dividend income stream.

In 2021, exchange rate differences of EUR 191 million are fully related to the stake in Bank of Beijing following the appreciation of CNY vs EUR.

In 2021, changes in unrealised revaluations of equity securities decreased mainly related to negative revaluation of the stake in Bank of Beijing following a decline in share price (EUR -153 million) compensated by positive revaluation in several other equity stakes of EUR 65 million.

In 2020, transfers and reclassifications of EUR -107 million mainly relates to ING's investment in Visa preference series C shares (EUR -116 million) that have been reclassified from equity at fair value through other comprehensive income to debt securities at mandatorily fair value through profit or loss' based on variable conversion rate.

FVOCI debt instruments

In 2021, changes in unrealised revaluations of EUR -1,209 million relates to increased yield curves.

Reference is made to Note 6 'Securities at amortised cost' for details on ING Group's total exposure to debt securities.

6 Securities at amortised cost

Securities at amortised cost fully consist of Debt securities.

ING Group's exposure to debt securities is included in the following lines in the statement of financial position:

Exposure to debt securities

in EUR million	2021	2020
Debt securities at fair value through other comprehensive income	27,340	32,977
Debt securities at amortised cost	48,319	50,587
Debt securities at fair value through other comprehensive income and amortised cost	**75,659**	**83,564**
Trading assets	5,319	5,183
Debt securities at fair value through profit or loss	6,658	4,331 [1]
Total debt securities at fair value through profit or loss	**11,976**	**9,514**
	87,635	**93,078**

1 The prior period has been updated to improve consistency and comparability of exposure to debt securities.

ING Group's total exposure to debt securities (excluding debt securities held in the trading portfolio) of EUR 82,316 million (31 December 2020: EUR 87,895 million) is specified as follows:

Debt securities by type of exposure

in EUR million	Debt Securities at FVPL 2021	Debt Securities at FVPL 2020	Debt Securities at FVOCI 2021	Debt Securities at FVOCI 2020	Debt Securities at AC 2021	Debt Securities at AC 2020	Total 2021	Total 2020
Government bonds	48	48	16,271	22,448	26,588	26,801	42,908	49,296
Sub-sovereign, Supranationals and Agencies	3,115	2,331	7,587	7,510	13,752	14,858	24,454	24,699
Covered bonds			1,729	1,821	5,063	5,965	6,792	7,786
Corporate bonds	778	26	156	207	90	131	1,024	364
Financial institutions' bonds	1,993	1,199 [1]	798	523	1,932	1,956	4,724	3,679
ABS portfolio	723	726	810	480	913	894	2,445	2,100
	6,658	**4,331**	**27,352**	**32,990**	**48,338**	**50,604**	**82,347**	**87,924**
Loan loss provisions			-12	-12	-19	-17	-31	-29
Debt securities portfolio	**6,658**	**4,331**	**27,340**	**32,977**	**48,319**	**50,587**	**82,316**	**87,895**

1 The prior period has been updated to improve consistency and comparability of exposure to debt securities.

7 Loans and advances to customers

Loans and advances to customers by type

in EUR million	Netherlands 2021	Netherlands 2020	Rest of the world 2021	Rest of the world 2020	Total 2021	Total 2020
Loans to, or guaranteed by, public authorities	23,770	24,292	17,563	17,210	41,333	41,502
Loans secured by mortgages	114,849	115,176	249,743	236,954	364,592	352,130
Loans guaranteed by credit institutions	259	305	6,022	4,896	6,282	5,201
Personal lending	2,577	3,019	24,682	24,776	27,260	27,794
Corporate loans	42,777	37,594	148,153	135,527	190,930	173,121
	184,232	**180,385**	**446,164**	**419,364**	**630,396**	**599,749**
Loan loss provisions	-1,119	-1,286	-4,156	-4,493	-5,274	-5,779
	183,113	**179,099**	**442,009**	**414,871**	**625,122**	**593,970**

For details on credit quality and loan loss provisioning, refer to 'Risk management – Credit risk' paragraph 'Credit quality'.

Loans and advances to customers by subordination

in EUR million	2021	2020
Non-subordinated	624,962	593,871
Subordinated	160	99
	625,122	**593,970**

No individual loan or advance has terms and conditions that significantly affect the amount, timing or certainty of the consolidated cash flows of ING Group.

Loans and advances to customers and Loans and advances to banks include finance lease receivables and are detailed as follows:

Finance lease receivables

in EUR million	2021	2020
Maturities of gross investment in finance lease receivables		
- within 1 year	3,204	3,175
- between 1-2 years	2,311	2,212
- between 2-3 years	1,716	1,722
- between 3-4 years	1,178	1,166
- between 4-5 years	734	711
- more than 5 years	1,495	1,487
	10,637	**10,473**
Unearned future finance income on finance leases	-525	-508
Net investment in finance leases	**10,112**	**9,965**
Included in Loans and advances to banks	5	6
Included in Loans and advances to customers	10,106	9,958
	10,112	**9,965**

The finance lease receivables mainly relate to the financing of equipment and are part of corporate loans. To a lesser extent, the finance lease receivables relate to real estate for third parties, where ING is the lessor. These finance lease receivables are part of loans secured by mortgages. Interest income in 2021 on Finance lease receivables amounts to EUR 217 million (2020: EUR 229 million).

The total loan loss provision of EUR 167 million (2020: EUR 164 million) for finance lease receivables is classified into the following loan loss provision stages:

- Stage 1: EUR 8 million (2020: EUR 8 million)
- Stage 2: EUR 30 million (2020: EUR 25 million)
- Stage 3: EUR 129 million (2020: EUR 131 million)

8 Investment in associates and joint ventures

Investments in associates and joint ventures

2021	Interest held (%)	Fair value of listed invest-ments	Balance sheet value	Total assets	Total liabilities	Total income	Total expenses
TMBThanachart Bank Public Company Limited	23	866	1,208	46,478	40,957	1,286	1,038
Other investments in associates and joint ventures			379				
			1,587				

Investments in associates and joint ventures

2020	Interest held (%)	Fair value of listed invest-ments	Balance sheet value	Total assets	Total liabilities	Total income	Total expenses
TMBThanachart Bank Public Company Limited	23	653	1,202	50,123	44,597	1,388	1,093
Other investments in associates and joint ventures			273				
			1,475				

The reporting dates of certain associates and joint ventures can differ from the reporting date of the Group, but by no more than three months.

TMBThanachart Bank Public Company Limited

ING Group has a 23% investment in TMBThanachart Bank Public Company Limited (hereafter: TTB), a bank listed on the Stock Exchange of Thailand. TTB is providing products and services to Wholesale, Small and Medium Enterprise (SME), and Retail customers. TTB is accounted for as an investment in associate based on the size of ING shareholding and representation on the Board.

Impairment testing

The fair value has been below the purchase cost of the investment for a prolonged period of time (since 1Q 2020). This is considered to be objective evidence of impairment. As a result ING performed an impairment test at 31 December 2021 that did not lead to an impairment loss (2020: EUR 230 million). Furthermore, no reversal of impairment was recognised.

Methodology

The recoverable amount is determined as the higher of the fair value less costs of disposal and Value in Use (‘VIU’). Fair value less costs of disposal is based on observable share price. The VIU calculation uses discounted cash flow projections based on management’s best estimates. VIU is derived using a Dividend Discount Model (DDM) where distributable equity, i.e. future earnings available to ordinary shareholders, is used as a proxy for future cash flows. The valuation looks at expected cash flows into perpetuity resulting in two main components to the VIU calculation:

i) the estimation of future earnings over a 5 year forecast period; and

ii) the terminal value being the extrapolation of earnings into perpetuity applying a long term growth rate. The earnings that are used for extrapolation represent the stable long term financial results and position of TTB, i.e. a steady state. The terminal value comprises the majority of the total VIU.

Key assumptions used in the VIU calculation as at 31 December 2021

The VIU is determined using a valuation model which is subject to multiple management assumptions. The key assumptions, i.e. those to which the overall result is most sensitive to, are the following:

- Expected future earnings of TTB: based on forecasts derived from broker consensus over the short to medium term and TTB observable targets for steady state earnings into perpetuity. A capital maintenance charge is applied, which is management’s forecast of the earnings that need to be withheld in order for TTB to meet target regulatory requirements over the forecast period;
- Discount rate (cost of equity): 8.74% (2020: 8.49%), based on the capital asset pricing model (CAPM) calculated for TTB using current market data.
- Terminal growth rate: 2.30% (2020: 1.60%) consistent with current long term government bond yield in Thailand as a proxy for a risk-free rate;

To assess the risk of further impairment at 31 December 2021, the model was evaluated for reasonably possible changes to key assumptions in the model. This reflects the sensitivity of the VIU to each key assumption on its own and it is possible that more than one favourable and/or unfavourable change may occur at the same time. Holding the other key assumptions constant, a reduction in all of the forecasted annual cash flows, including terminal value, of 13.0% or an increase in the discount of 112bps would reduce the recoverable amount to the carrying amount. A reasonably possible change in the terminal growth rate to zero would not cause the VIU to equal the carrying amount.

Reversal of the impairment loss recognised in 2020 was not considered appropriate as at 31 December 2021 mainly due to the lack of sufficiently positive changes observed in the underlying performance of TTB since the impairment loss in 2020 as reflected in the broker consensus. Furthermore, the share price remains below the original cost of the investment for a prolonged period of time.

Other investments in associates and joint ventures
Included in Other investments in associates and joint ventures are mainly financial services and financial technology funds or vehicles operating predominantly in Europe.

Other investments in associates and joint ventures represents a number of associates and joint ventures that are individually not significant to ING Group.

Significant influence for associates in which the interest held is below 20%, is based on the combination of ING Group's financial interest and other arrangements, such as participation in the Board of Directors.

The associates and joint ventures of ING are subject to legal and regulatory restrictions regarding the amount of dividends they can pay to ING. These restrictions are for example dependent on the laws in the country of incorporation for declaring dividends or as a result of minimum capital requirements that are imposed by industry regulators in the countries in which the associates and joint ventures operate. In addition, the associates and joint ventures also consider other factors in determining the appropriate levels of equity needed. These factors and limitations include, but are not limited to, rating agency and regulatory views, which can change over time.

Changes in Investments in associates and joint ventures

in EUR million	2021	2020
Opening balance	1,475	1,790
Additions	91	24
Revaluations	-24	-3
Share of results	141	66
Dividends received	-34	-12
Disposals	-23	-12
Impairments	-3	-235
Exchange rate differences	-31	-144
Other	-5	0
Closing balance	**1,587**	**1,475**

Share of results from associates and joint ventures of EUR 141 million (2020: EUR 66 million) as included in the table above is mainly attributable to results of TTB of EUR 61 million (2020: EUR 70 million), EUR 28 million gain on our stake in Ebusco and other share of results. In 2020 impairments is predominantly attributable to TTB.

9 Property and equipment

Property and equipment by type

in EUR million	2021	2020
Property in own use	702	745
Equipment:		
- Data processing equipment	207	281
- Other equipment	493	561
Right- of- use assets:		
- ROU property	1,009	1,129
- ROU cars	83	89
- ROU other leases	21	38
	2,515	**2,841**

Changes in property and equipment

	Property in own use		Equipment		Right-of-use assets		Total	
in EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Opening balance	745	757	842	940	1,255	1,476	2,841	3,172
Additions	9	10	175	277	164	134	348	421
Transfers	-5	57	1	-42	-20	-4	-24	11
Depreciation	-15	-12	-287	-291	-271	-275	-573	-578
Impairments	-10	-8	-8	-9	-15	-35	-33	-52
Reversals of impairments	6	9	0	0	1	0	7	9
Remeasurements	17	20			6	8	24	28
Disposals	-24	-63	-15	-12	-10	-14	-49	-89
Exchange rate differences	-21	-24	-7	-22	4	-35	-25	-81
Closing balance	**702**	**745**	**699**	**842**	**1,113**	**1,255**	**2,515**	**2,841**
Costprice	910	948	3,581	3,786	1,738	1,737	6,229	6,472
Accumulated depreciation	-373	-378	-2,871	-2,940	-644	-492	-3,888	-3,810
Accumulated impairments	-134	-135	-10	-5	-29	-36	-173	-175
Accumulated revaluation surplus	299	310					299	310
Accumulated remeasurement					48	45	48	45
Net carrying value	**702**	**745**	**699**	**842**	**1,113**	**1,255**	**2,515**	**2,841**

Right-of-use assets relate to leased land and buildings, cars, data-processing equipment and other leases. ING considers valuations from third party experts in determining the fair values of property in own use.

Property in own use purchase costs amounted to EUR 910 million (2020: EUR 948 million). Cost or the purchase price less accumulated depreciation and impairments would have been EUR 403 million (2020: EUR 435 million) had property in own use been valued at cost instead of at fair value.

The reported impairment losses of EUR 33 million (2020: EUR 52 million) mainly result from anticipation of a change in the post-pandemic way of working and phasing out of activities.

10 Intangible assets

Changes in intangible assets

	Goodwill		Software		Other		Total	
in EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Opening balance	533	907	846	958	15	52	1,394	1,916
Additions			44	86			44	87
Capitalised expenses			135	213			135	213
Amortisation			-260	-249	-1	-2	-261	-251
Impairments [1]		-310	-82	-167	-12	-35	-94	-513
Exchange rate differences	-61	-63	-0	-6	0	-0	-62	-69
Disposals			-0	-9			-0	-9
Changes in the composition of the group and other changes			-1	19		0	-0	19
Closing balance	**472**	**533**	**682**	**846**	**2**	**15**	**1,156**	**1,394**
Gross carrying amount	472	843	2,521	2,642	59	60	3,052	3,545
Accumulated amortisation			-1,710	-1,621	-9	-9	-1,719	-1,630
Accumulated impairments		-310	-129	-175	-48	-37	-177	-522
Net carrying value	**472**	**533**	**682**	**846**	**2**	**15**	**1,156**	**1,394**

1 Impairments of intangible assets are presented within Other operating expenses in the statement of Profit or Loss.

Goodwill

Goodwill is allocated to groups of cash generating units (CGUs) as follows:

Goodwill allocation to group of CGUs

	Method used for recoverable amount	Discount rate	Terminal growth rate	Goodwill	Goodwill
Group of CGU's				**2021**	**2020**
Retail Netherlands	Values in use	8.84%	0.19%	30	30
Retail Germany	Values in use	8.81%	0.67%	349	349
Retail Growth Markets	Values in use	12.87%	3.68%	92	153
				472	**533**

Impairment testing

Goodwill is tested for impairment annually in the fourth quarter by comparing the recoverable amount of each goodwill-carrying CGU with its carrying amount. The key assumptions used in the calculation of the recoverable amounts are included in the table above. In addition ING Group tests goodwill whenever a triggering event is identified.

The recoverable amount exceeds the carrying value of the CGUs as at 31 December 2021 and therefore no impairment is required.

In 2020, Covid-19 has resulted in adverse changes in the market and economic environment. Due to the impact of the significant deterioration in the economic environment on the cash flow outlook of our businesses, we also completed a goodwill impairment review across ING Group in 2020. The goodwill impairment test resulted in the recognition of goodwill impairments on the CGU Retail Belgium of EUR 50 million (of which EUR 43 million is reported in Retail Belgium segment and EUR 8 million in Corporate Line segment) and on the CGU Wholesale Banking of EUR 260 million (fully reported in the Wholesale Banking segment). For both CGUs the impairment resulted from the negative developments in the macro-economic outlook in the context of the Covid-19 pandemic.

Methodology

In line with IFRS, the recoverable amount is determined as the higher of the fair value less costs of disposal and Value in Use (VIU). The VIU calculation is based on a Dividend Discount model using three year management approved plans, updated for expected changes in the macroeconomic environment. When estimating the VIU of a CGU, local conditions and requirements determine the capital requirements, discount rates, and terminal growth rates. These local conditions and requirements determine the ability to upstream excess capital and profits to ING Group. The discount rate calculation includes other inputs such as equity market premium, country risk premium, and long term inflation which are based on market sources and management's judgement. The long term growth rate for EU-countries is based on long term risk-free rate by reference to the yield of a composite index consisting of Euro generic government bonds, with a maturity of 30 years. For other countries, the growth rate includes long term inflation rate obtained from market sources.

Sensitivity of key assumptions

Key assumptions in the goodwill impairment test model are the projected locally available cash flows (based on local capital requirements and projected profits), discount rates (cost of equity), and long term growth rates.

The recoverable amounts of the CGUs are sensitive to the above key assumptions. A decrease in the available cash flows of 10%, an increase in the discount rate of 1 percent point or a reduction of future growth rate to zero are considered reasonably possible changes in key assumptions. If the aforementioned changes occur to the above key assumptions holding the other key assumptions constant, goodwill of the remaining CGUs will continue to be recoverable and no impairment will occur.

Other changes

Other changes in goodwill in 2021 related to changes in currency exchange rates of Retail Growth Markets goodwill.

Software

Software, includes internally developed software amounting to EUR 573 million (2020: EUR 688 million).

In 2021 an impairment of EUR 51 million with regard to software in the payments and cash management business was recognised. The remaining software impairments in 2021 related to various, individually immaterial items.

In 2020, following the decision to discontinue the Maggie programme an impairment of EUR 141 million was recognised, primarily related to capitalised software development costs. In addition, an impairment of EUR 19 million with regard to software in the payments and cash management business was recognised. The remaining software impairments in 2020 related to various, individually immaterial items.

Other intangible assets

In 2021 an impairment of an indefinite useful life asset related to brand names of EUR 7 million (2020: 14 million) was recognised. Additionally EUR 5 million (2020: EUR 20 million) was recognised related to intangible assets from a previous acquisition (customer relationships), following a re-evaluation of the business plan.

11 Other assets

Other assets by type		
in EUR million	2021	2020
Net defined benefit assets	783	725
Investment properties	26	20
Property development and obtained from foreclosures	52	72
Accrued assets	798	781
Amounts to be settled	2,424	2,215
Other	1,914	2,079
	5,996	**5,893**

Disclosures in respect of Net defined benefit assets are provided in Note 37 'Pension and other post-employment benefits'.

Amounts to be settled include primarily transactions not settled at the balance sheet date. The nature of these transaction is short term and they are expected to settle shortly after the closing date of the balance sheet.

Other relates to various receivables in the normal course of business, amongst others, short term receivables relating to mortgage issuance and other amounts receivable from customers.

12 Deposits from banks

Deposits from banks includes non-subordinated deposits and repurchase agreements from banks.

Deposits from banks by type						
	Netherlands		Rest of the world		Total	
in EUR million	2021	2020	2021	2020	2021	2020
Non-interest bearing	570	596	321	196	891	792
Interest bearing	51,893	49,336	32,307	27,971	84,201	77,306
	52,463	**49,931**	**32,629**	**28,166**	**85,092**	**78,098**

Deposits from banks includes ING's participation in the Targeted Longer-Term Refinancing Operations of EUR 65.5 billion (2020: EUR 59.5 billion). ING participated in a new series of Targeted Longer-Term Refinancing Operations (TLTRO III) for EUR 6.0 billion in March 2021.

For the details of the applicable rates and impact on net interest income reference is made to note 20 'Net interest income'.

13 Customer deposits

Customer deposits		
in EUR million	2021	2020
Savings accounts	314,997	336,392
Credit balances on customer accounts	279,805	256,636
Corporate deposits	22,174	15,941
Other	424	548
	617,400	**609,517**

Customer deposits by type						
	Netherlands		Rest of the world		Total	
in EUR million	2021	2020	2021	2020	2021	2020[1]
Non-interest bearing	1,861	24,206	27,636	24,153	29,497	48,359
Interest bearing	214,228	174,641	373,674	386,517	587,902	561,158
	216,090	**198,847**	**401,310**	**410,671**	**617,400**	**609,517**

1 The prior period has been updated to improve consistency and comparability of customer deposits by type.

Savings accounts relate to the balances on savings accounts, savings books, savings deposits, and time deposits of private individuals.

14 Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss		
in EUR million	2021	2020
Trading liabilities	27,113	32,709
Non-trading derivatives	2,120	1,629
Designated at fair value through profit or loss	41,808	48,444
	71,041	**82,781**

Trading liabilities

Trading liabilities by type		
in EUR million	2021	2020
Equity securities	322	191
Debt securities	753	577
Funds on deposit	7,513	6,204
Derivatives	18,525	25,737
	27,113	**32,709**

Non-trading derivatives

Non-trading derivatives by type		
in EUR million	2021	2020
Derivatives used in:		
- fair value hedges	270	444
- cash flow hedges	485	230
- hedges of net investments in foreign operations	88	98
Other non-trading derivatives	1,278	857
	2,120	**1,629**

Reference is made to Note 40 'Derivatives and hedge accounting' for information on derivatives used for hedge accounting.

Other non-trading derivatives mainly includes interest rate swaps and foreign currency swaps for hedging purposes, but for which no hedge accounting is applied.

Designated at fair value through profit or loss

Designated at fair value through profit or loss by type		
in EUR million	2021	2020
Debt securities	6,065	6,276
Funds entrusted	35,513	41,911
Subordinated liabilities	230	258
	41,808	**48,444**

As at 31 December 2021, the change in the fair value of financial liabilities designated at fair value through profit or loss attributable to changes in credit risk is EUR 95 million (2020: EUR 141 million) on a cumulative basis. This change has been determined as the amount of change in fair value of the financial liability that is not attributable to changes in market conditions that gave rise to market risk (i.e. mainly interest rate risk based on yield curves).

The amount that ING Group is contractually required to pay at maturity to the holders of financial liabilities designated at fair value through profit or loss excluding repurchase agreements (part of funds entrusted) is EUR 6,853 million (2020: EUR 6,682 million).

15 Provisions

Provisions by type		
in EUR million	2021	2020
Reorganisation provisions	421	381
Litigation provisions	132	105
Other provisions	441	205
	995	**691**

Changes in provisions	Reorganisation		Litigation		Other		Total	
in EUR million	2021	2020	2021	2020	2021	2020[1]	2021	2020
Opening balance	381	385	105	102	205	201	691	688
Additions	310	165	50	46	354	66	715	277
Interest					-2	-1	-2	-1
Releases	-96	-16	-11	-25	-79	-47	-186	-88
Utilised	-172	-152	-18	-16	-25	-13	-215	-180
Exchange rate differences	0	-1	-3	-3	-2	-5	-4	-9
Other changes	-3	-0	9	0	-11	4	-5	4
Closing balance	**421**	**381**	**132**	**105**	**441**	**205**	**995**	**691**

1 The prior period additions and releases have been updated to improve consistency and comparability of Other Provisions.

In 2021, the additions to the reorganisation provision mainly relate to the discontinuation of retail banking activities in France and the restructuring of the branch network and retail advice organisation in the Netherlands.

The additions to the reorganisation provision in 2020 are mainly attributable to refocusing of our activities in Wholesale Banking and decision on the Maggie project, as well as additional restructuring costs in Retail Benelux and Other Challengers & Growth Markets.

These initiatives are implemented over a period of several years and the estimate of the reorganisation provisions is inherently uncertain.

Reference is made to Note 46 ‘Legal proceedings’ for developments in litigation provisions.

The additions to the Other provisions in 2021 include an EUR 180 million provision for the compensation of Dutch retail customers for past interest charges that did not sufficiently track market rates.

In 2021, Other provisions includes provisions of EUR 34 million (2020: EUR 17 million) that relate to credit replacement facilities and EUR 114 million (2020: EUR 75 million) that relate to non-credit replacement off balance facilities.

As at 31 December 2021, amounts expected to be settled within twelve months in Other provisions amount to EUR 417 million (2020: EUR 139 million). The amounts included are based on best estimates with regard to amounts and timing of cash flows required to settle the obligation.

Additions to provisions and unused amounts released are presented in Note 28 ‘Other operating expenses’.

16 Other liabilities

Other liabilities by type

In EUR million	2021	2020
Net defined benefit liability	227	350
Other post-employment benefits	72	83
Other staff-related liabilities	612	490
Share-based payment plan liabilities	4	2
Other taxation and social security contributions	409	435
Rents received in advance	19	15
Costs payable	2,016	2,018
Amounts to be settled	5,082	4,877
Lease liabilities	1,220	1,339
Other	3,178	1,999
	12,839	**11,609**

Disclosures in respect of Net defined benefit liabilities are provided in Note 37 ‘Pension and other post-employment benefits’.

Other staff-related liabilities includes vacation leave provisions, variable compensation provisions, jubilee provisions, and disability/illness provisions.

Amounts to be settled includes primarily transactions not settled at the balance sheet date. The nature of these transactions is short term and these are expected to settle shortly after the closing date of the balance sheet.

Lease liabilities relate to right-of-use assets. Disclosures in respect to right-of-use assets are provided in Note 9 ‘Property and Equipment’.

The total cash outflow for leases in 2021 was EUR 301 million (2020: EUR 273 million).

The line other relates mainly to balances on margin accounts or amounts payable to customers and includes the remaining EUR 140 million obligation to the broker regarding the share buyback programme.

17 Debt securities in issue

Debt securities in issue relates to debentures and other issued debt securities with either fixed interest rates or interest rates based on floating interest rate levels, such as certificates of deposit and accepted bills issued by ING Group, except for subordinated items. Debt securities in issue does not include debt securities presented as Financial liabilities at fair value through profit or loss. ING Group does not have debt securities that are issued on terms other than those available in the normal course of business.

Debt securities in issue – maturities

In EUR million	2021	2020
Fixed rate debt securities		
Within 1 year	34,559	18,315
More than 1 year but less than 2 years	6,245	8,339
More than 2 years but less than 3 years	2,791	6,193
More than 3 years but less than 4 years	4,924	2,731
More than 4 years but less than 5 years	7,035	3,685
More than 5 years	29,843	28,706
Total fixed rate debt securities	**85,397**	**67,969**
Floating rate debt securities		
Within 1 year	3,389	8,699
More than 1 year but less than 2 years	1,534	3,050
More than 2 years but less than 3 years	137	1,526
More than 3 years but less than 4 years	194	138
More than 4 years but less than 5 years	192	91
More than 5 years	942	592
Total floating rate debt securities	**6,388**	**14,095**
Total debt securities	**91,784**	**82,065**

In 2021 Debt securities in issue increased by EUR 9.7 billion because of liquidity and funding needs.

Reference is made to Note 33 ‘Changes in liabilities arising from financing activities’ for further information on issuances and redemptions.

18 Subordinated loans

Subordinated loans by group companies

In EUR million	2021	2020
ING Groep N.V.	15,890	13,150
ING Group companies	824	2,654
	16,715	**15,805**

Subordinated loans issued by ING Groep N.V. include bonds issued to raise Tier 1 and Tier 2 (CRD IV eligible) capital for ING Bank N.V. Under IFRS these bonds are classified as liabilities and for regulatory purposes, they are considered capital. Subordinated loans issued by ING Group companies comprise, for the most part, subordinated loans which are subordinated to all current and future liabilities of ING Bank N.V.

In 2021 ING Groep N.V. issued in June EUR 500 million 0.875 % Fixed Rate Subordinated Tier 2 Green Notes, in September USD 1 billion 3.875% and USD 1 billion 4.250% Perpetual Additional Tier 1 Contingent Convertible Capital Securities and in November EUR 1 billion 1.000% Fixed Rate Subordinated Tier 2 Notes.

In 2021 ING Bank N.V. redeemed in February EUR 1.5 billion 3.625% Fixed Rate Subordinated Tier 2 notes on the first call date. ING Groep N.V. redeemed EUR 555 million, EUR 430 million and EUR 10 million Perpetual Debt Securities in September.

Reference is made to Note 33 ‘Changes in liabilities arising from financing activities’ for further information on issuances and redemptions.

The average interest rate on subordinated loans is 3.75% (2020: 3.73%). The interest expense during the year 2021 was EUR 571 million (2020: EUR 612 million).

19 Equity

Total equity			
In EUR million	2021	2020	2019
Share capital and share premium			
- Share capital	39	39	39
- Share premium	17,105	17,089	17,078
	17,144	**17,128**	**17,117**
Other reserves			
- Revaluation reserve: Equity securities at FVOCI	1,282	1,181	1,580
- Revaluation reserve: Debt instruments at FVOCI	96	309	322
- Revaluation reserve: Cash flow hedge	-153	1,450	1,208
- Revaluation reserve: Credit liability	-80	-117	-114
- Revaluation reserve: Property in own use	208	221	253
- Net defined benefit asset/liability remeasurement reserve	-212	-307	-336
- Currency translation reserve	-3,483	-3,636	-2,079
- Share of associates and joint ventures and other reserves	3,416	3,246	3,189
- Treasury shares	-1,612	-4	-10
	-540	**2,342**	**4,013**
Retained earnings	35,462	32,149	29,866
Shareholders' equity (parent)	52,066	51,619	50,996
Non-controlling interests	736	1,022	893
Total equity	**52,802**	**52,640**	**51,889**

Share capital and share premium

Share capital

Share capital						
	Ordinary shares (par value EUR 0.01)					
	Number x 1,000			Amount		
	2021	2020	2019	2021	2020	2019
Authorised share capital	14,729,000	14,729,000	14,729,000	147	147	147
Unissued share capital	10,824,935	10,828,331	10,832,266	108	108	108
Issued share capital	**3,904,065**	**3,900,669**	**3,896,734**	**39**	**39**	**39**

Changes in issued share capital		
	Ordinary shares (par value EUR 0.01)	
	Number x 1,000	Amount
Issued share capital as at 1 January 2019	3,891,728	39
Issue of shares	5,006	
Issued share capital as at 31 December 2019	**3,896,734**	**39**
Issue of shares	3,934	
Issued share capital as at 31 December 2020	**3,900,669**	**39**
Issue of shares	3,397	
Issued share capital as at 31 December 2021	**3,904,065**	**39**

In 2021, ING Groep N.V. issued 3.4 million ordinary shares (2020: 3.9 and in 2019: 5.0 million ordinary shares). These issues were made in order to fund obligations arising from share-based employee incentive programmes.

As at 31 December 2021 ING Groep N.V. has issued USD 7,750 million Perpetual Additional Tier 1 Contingent Convertible Capital Securities which can, in accordance with their terms and conditions, convert by operation of law into ordinary shares if the conditions to such a conversion are fulfilled. As a result of this conversion, the issued share capital can increase by up to 861 million ordinary shares. Reference is made to Note 18 'Subordinated loans'.

Ordinary shares

All ordinary shares are registered. No share certificates have been issued. The par value of ordinary shares is EUR 0.01. The authorised ordinary share capital of ING Groep N.V. currently consists of 14,729 million ordinary shares. As at 31 December 2021, 3,904 million ordinary shares were issued and fully paid.

Ordinary shares held by ING Group (Treasury shares)

As at 31 December 2021, 128.3 million ordinary shares (2020: 0.6 million and 2019: 0.9 million) of ING Groep N.V. with a par value of EUR 0.01 are held by ING Groep N.V. or its subsidiaries. The obligations with regard to the share plans will be funded either by cash or by newly issued shares at the discretion of ING Group.

Share premium

Share premium			
In EUR million	2021	2020	2019
Opening balance	17,089	17,078	17,050
Issue of shares	16	11	28
Closing balance	**17,105**	**17,089**	**17,078**

The increase in share premium, is a result of the issuance of ordinary shares related to share-based employee incentive programmes.

Other reserves

Revaluation reserves

Changes in revaluation reserve

	Equity securities at FVOCI			Debt instruments at FVOCI			Cash flow hedge			Credit liability			Property in own use		
In EUR million	**2021**	**2020**	**2019**	**2021**	**2020**	**2019**	**2021**	**2020**	**2019**	**2021**	**2020**	**2019**	**2021**	**2020**	**2019**
Opening balance	1,181	1,580	1,914	309	322	398	1,450	1,208	604	-117	-114	8	221	253	204
Changes in credit liability reserve										37	-19	-116			
Unrealised revaluations	94	-337	137	-173	20	-43	-1,603	242	604				-2	-7	58
Realised gains/losses transferred to the statement of profit or loss				-40	-33	-33									
Realised revaluations transferred to retained earnings	6	-1	-472								16	-6	-11	-26	-9
Other changes		-62													
Closing balance	**1,282**	**1,181**	**1,580**	**96**	**309**	**322**	**-153**	**1,450**	**1,208**	**-80**	**-117**	**-114**	**208**	**221**	**253**

Equity securities at FVOCI

In 2021, the unrealised revaluation of EUR 94 million includes revaluation of shares in Bank of Beijing for EUR 38 million.

In 2020, the unrealised revaluations of EUR -337 million includes revaluation of shares in Bank of Beijing for EUR -339 million. Other changes of EUR -62 million is related to prior years revaluations of Visa shares, which are reclassified to Financial assets at fair value through profit or loss and for which the unrealised revaluation up until 2019 is transferred to retained earnings. Reference is made to note 5 ‘Financial assets at fair value through other comprehensive income’.

In 2019, the unrealised revaluations of EUR 137 million are due to the revaluation of shares in Bank of Beijing EUR 35 million and shares in EquensWorldLine EUR 101 million. The EUR -472 million transfer of revaluation reserve to retained earnings is mainly related to the sale of shares in Kotak Mahindra Bank EUR -320 million and EquensWorldLine EUR -149 million.

Cash flow hedge

ING mainly hedges floating rate lending with interest rate swaps. Due to an increase in yield curves in 2021 the interest rate swaps had a negative revaluation of EUR -1,603 million which is recognised in the cash flow hedge reserve.

Net defined benefit asset/liability remeasurement reserve

Reference is made to Note 37 ‘Pension and other post-employment benefits’.

Currency translation reserve

Changes in currency translation reserve			
In EUR million	2021	2020	2019
Opening balance	-3,636	-2,079	-2,043
Unrealised revaluations	-61	106	-134
Realised gains/losses transferred to the statement of profit or loss		-1	-138
Exchange rate differences	214	-1,662	236
Closing balance	**-3,483**	**-3,636**	**-2,079**

Unrealised revaluations relates to changes in the value of hedging instruments that are designated as net investment hedges. The hedging strategy is to hedge the CET1 ratio of ING Group. The net increase of unrealised revaluations and Exchange rate differences of EUR 153 million is related to several currencies including USD (EUR 456 million), TRY (EUR -466 million) GBP (EUR 86 million), CHF (EUR 32 million), CNY (EUR 27 million) and other currencies (EUR 18 million).
In 2019 realised gains/losses transferred to the statement of profit or loss is related to the sale of shares in Kotak Mahindra Bank (EUR -119 million) and the effect of the merger transaction of TTB (EUR -18 million).

Share of associates and joint ventures and other reserves

Changes in share of associates, joint ventures and other reserves			
In EUR million	2021	2020	2019
Opening balance	3,246	3,189	2,940
Result for the year	191	94	180
Transfer to/from retained earnings	-21	-37	69
Closing balance	**3,416**	**3,246**	**3,189**

The Share of associates, joint ventures and other reserves includes non-distributable profits from associates and joint ventures of EUR 738 million (2020: EUR 644 million). Other reserves includes a statutory reserve of EUR 2,103 million (2020: EUR 1,912 million) related to the former Stichting Regio Bank and the former Stichting Vakbondsspaarbank SPN and a legal reserve of EUR 573 million (2020: EUR 688 million) related to own developed software.

Treasury shares

Changes in treasury shares						
	Amount			Number x 1,000		
	2021	2020	2019	2021	2020	2019
Opening balance	-4	-10	-11	572	919	1,138
Purchased/sold for trading purposes	-4	5	1	102	-348	-218
Purchases Share buyback programme	-1,604			127,628		
Closing balance	**-1,612**	**-4**	**-10**	**128,301**	**572**	**919**

On 1 October 2021, ING announced a share buyback programme for EUR 1,744 million, commencing on 5 October 2021 and which was completed by February 2022. As per 31 December 2021 a total of 128 million shares have been repurchased at an average price of EUR 12.57 per share for a total consideration of EUR 1,604 million. As the programme was initiated for capital reduction purposes, ING Groep N.V. intends to cancel all the shares acquired under the programme.

Retained earnings

Changes in retained earnings			
In EUR million	2021	2020	2019
Opening balance	32,149	29,866	28,339
Transfer to/from other reserves	26	108	418
Result for the year	5,760	2,156	3,723
Dividend and other distributions	-2,342		-2,650
Employee stock options and share plans	12	11	13
Changes in composition of the group and other changes	-143	6	23
Closing balance	**35,462**	**32,149**	**29,866**

Dividend and other distributions

In 2021, a cash dividend of EUR 1,288 million (2020: nil and 2019: EUR 2,650 million) and other cash distributions of EUR 1,054 million related to prior year profits were paid to the shareholders of ING Group. For further information, reference is made to Note 31 ‘Dividend per ordinary share’.

Other changes

Other changes' includes an amount of EUR 140 million, which corresponds to the remaining obligation to the broker regarding the share buyback programme. As ING Group has a contractual obligation to purchase its own shares when the agreement with the broker was signed a liability was formed with a corresponding reduction in equity.

Ordinary shares - Restrictions with respect to dividend and repayment of capital

The following equity components cannot be freely distributed: Revaluation reserves, Net defined benefit asset/liability remeasurement reserve, Currency translation reserve, Share of associates and joint ventures reserve and Other reserves including the part related to the former Stichting Regio Bank and the former Stichting Vakbondsspaarbank SPN.

As at 31 December 2021, an amount of EUR 2,103 million (2020: EUR 1,912 million; 2019: EUR 1,818 million) related to the former Stichting Regio Bank and the former Stichting Vakbondsspaarbank SPN is included.

ING Groep N.V. is subject to legal restrictions regarding the amount of dividends it can pay to the holders of its ordinary shares. Pursuant to the Dutch Civil Code, dividends can only be paid up to an amount equal to the excess of the company's own funds over the sum of the paid-up capital and reserves required by law.

Moreover, ING Groep N.V.'s ability to pay dividends is dependent on the dividend payment ability of its subsidiaries, associates and joint ventures. ING Groep N.V. is legally required to create a non-distributable reserve insofar as profits of its subsidiaries, associates and joint ventures are subject to dividend payment restrictions which apply to those subsidiaries, associates and joint ventures themselves.

Non distributable reserves, determined in accordance with the financial reporting requirements included in Part 9 of Book 2 of the Dutch Civil Code, from ING Group's subsidiaries, associates and joint ventures are as follows:

Non-distributable reserves			
In EUR million	2021	2020	2019
ING Bank	8,205	9,829	8,397
Other	0	2	0
Non-distributable reserves	**8,205**	**9,831**	**8,398**

In addition to the legal and regulatory restrictions on distributing dividends from subsidiaries, associates and joint ventures to ING Groep N.V. there are various other considerations and limitations that are taken into account in determining the appropriate levels of equity in the Group's subsidiaries, associates and joint ventures. These considerations and limitations include, but are not restricted to, minimum capital requirements that are imposed by industry regulators in the countries in which the subsidiaries, associates and joint ventures operate, or other limitations which may exist in certain countries and may or may not be temporary in nature. It is not possible to disclose a reliable quantification of these limitations. For an overview of the minimal capital requirements of ING Group refer to the 'Capital Management' section.

Without prejudice to the authority of the Executive Board to allocate profits to reserves and to the fact that the ordinary shares are the most junior securities issued by ING Groep N.V., no specific dividend payment restrictions with respect to ordinary shares exist. Refer to Note 51 'Capital Management' for further details.

Furthermore, ING Groep N.V. is subject to legal restrictions with respect to repayment of capital to holders of ordinary shares. Pursuant to the Dutch Civil Code, capital may only be repaid if none of ING Groep N.V.'s creditors opposes such a repayment within two months following the announcement of a resolution to that effect.

Cumulative preference shares (not issued)

Pursuant to the Articles of Association of ING Groep N.V. the authorised cumulative preference share capital consists of 4.6 billion cumulative preference shares, of which none have been issued. The par value of these cumulative preference shares is EUR 0.01. A right to acquire cumulative preference shares has been granted to Stichting Continuïteit ING (ING Continuity Foundation).
The cumulative preference shares rank before the ordinary shares in entitlement to dividend and to distributions upon liquidation of ING Groep N.V.

The dividend on the cumulative preference shares will be equal to a percentage, calculated on the amount compulsorily paid up or yet to be paid up. This percentage shall be equal to the average of the Euro short-term rate (€STR) as calculated by the European Central Bank during the financial year for which the distribution is made; this percentage being weighted on the basis of the number of days for which it applies, and increased by 2.585 percentage points.

If, and to the extent that the profit available for distribution is not sufficient to pay the dividend referred to above in full, the shortfall will be made up from the reserves insofar as possible. If, and to the extent that, the dividend distribution cannot be made from the reserves, the profits earned in subsequent years shall first be used to make up the shortfall before any distribution may be made on shares of any other category.

ING Groep N.V.'s Articles of Association make provision for the cancellation of cumulative preference shares. Upon cancellation of cumulative preference shares and upon liquidation of ING Groep N.V., the amount paid up on the cumulative preference shares will be repaid together with the accrued dividend as well as any dividend shortfall in preceding years, insofar as this shortfall has not yet been made up.
No specific dividend payment restrictions with respect to the cumulative preference shares exist.

Notes to the Consolidated statement of profit or loss

20 Net interest income

Net interest income

in EUR million	2021	2020	2019
Interest income on loans	13,914	15,624	19,028
Interest income on financial assets at fair value through OCI	346	512	615
Interest income on debt securities at amortised cost	468	508	673
Interest income on non-trading derivatives (hedge accounting)	2,361	3,392	4,319
Negative interest on liabilities	1,487	678	422
Total interest income using effective interest rate method	**18,577**	**20,715**	**25,056**
Interest income on financial assets at fair value through profit or loss	435	658	1,897
Interest income on non-trading derivatives (no hedge accounting)	2,025	1,154	1,181
Interest income other	14	32	30
Total other interest income	**2,474**	**1,843**	**3,107**
Total interest income	**21,051**	**22,559**	**28,163**

in EUR million	2021	2020	2019
Interest expense on deposits from banks	109	177	361
Interest expense on customer deposits	915	1,331	2,934
Interest expense on debt securities in issue	1,218	1,732	2,350
Interest expense on subordinated loans	571	612	660
Negative interest on assets	572	353	349
Interest expense on non-trading derivatives (hedge accounting)	1,700	3,198	4,615
Total interest expense using effective interest rate method	**5,085**	**7,402**	**11,268**
Interest expense on financial liabilities at fair value through profit or loss	304	514	1,695
Interest expense on non-trading derivatives (no hedge accounting)	1,605	1,029	1,311
Interest expense on lease liabilities	14	18	25
Interest expense other	43	44	54
Total other interest expense	**1,966**	**1,605**	**3,084**
Total interest expense	**7,051**	**9,007**	**14,353**
Net interest income	**14,000**	**13,552**	**13,811**

Total net interest income amounts to EUR 14,000 million (2020: EUR 13,552 million). Net interest income was affected by reversing the hedge accounting impacts that are applied under EU ‘IAS 39 carve-out’ with an impact of EUR +385 million (2020: EUR -52 million). The net increase, without the IAS 39 carve out impact, is EUR 11 million. Higher interest results were recorded on lending products (driven by a higher total lending margin). These increases were offset by lower revenues on current accounts and savings, reflecting continued liability margin pressure.

Negative interest on liabilities in 2021, amounting to EUR 1,487 million (2020: EUR 678 million) includes ECB funding rate benefit from the TLTRO III programme of EUR 808 million (2020: EUR 164 million). This amount includes EUR 325 million of unconditional interest benefit and EUR 483 million of conditional interest benefit which depends on meeting the lending growth targets (2020: the full amount of EUR 164 million represented unconditional interest benefit).

As at 31 December 2020, ING Group did not have a reasonable expectation of meeting the lending growth targets for the first special reference period (1 March 2020 to 31 March 2021), hence ING Group did not accrue for the conditional benefit and recognised unconditional interest benefit at -50 bps in 2020. In the first quarter of 2021, ING Group met the lending growth targets for the first special reference period (1 March 2020 to 31 March 2021) and therefore the interest rate applicable under TLTRO III during the period 24 June 2020 to 23 June 2021 changed from -50bps to -100bps. The effect of the revised interest rate has been recognised in the statement of profit or loss (net interest income) in 2021 including EUR 158 million related to the year 2020. Based on the developments in the eligible asset base, ING met the lending growth targets for the second special reference period (1 October 2020 to 31 December 2021), therefore the funding rate remains at -100 bps for the period 24 June 2021 – 23 June 2022.

21 Net fee and commission income

Net fee and commission income			
in EUR million	2021	2020	2019
Fee and commission income			
Payment Services	1,661	1,566	1,638
Securities business	853	700	485
Insurance and other broking	734	705	674
Portfolio management	617	525	490
Lending business	477	368	411
Financial guarantees and other commitments	458	364	338
Other	204	286	404
Total fee and commission income	**5,004**	**4,514**	**4,439**
Fee and commission expenses			
Payment Services	563	611	669
Securities business	164	133	127
Distribution of products (Externally)	591	548	504
Other	169	211	272
Total fee and commission expenses	**1,487**	**1,503**	**1,571**
Net fee and commission income	**3,517**	**3,011**	**2,868**

ING Group changed the presentation of net fee and commission income as of 2021 to better align with internal management and monitoring. Comparative figures for 2020 and 2019 have been updated accordingly. The reclassifications do not affect the total amount of Net Fee and Commission Income.

Payment services fees are earned for providing services for deposit accounts and cards, cash management and transaction processing including interchange. Securities fees and commissions are fees for securities brokerage and securities underwriting. Portfolio management fees include fees earned for asset management activities, fiduciary and related activities in which ING holds or invests assets on behalf of its customers. Fees and commissions from Lending business include income earned for lending advisory, origination, underwriting and loan commitments which are not part of the effective interest rate. Financial guarantees and other commitments fees and commissions are earned from bank guarantees, letters of credit and other trade finance related products, factoring and leasing. Fees paid for distribution of products are all fees paid for the distribution of ING's products and services through external providers.

All of ING's net fee and commission income are in scope of IFRS 15 'Revenue from Contracts with Customers'. Reference is made to Note 35 'Segments' which includes net fee and commission income, as reported to the Executive Board and the Management Board Banking, disaggregated by line of business and by geographical segment.

22 Valuation results and net trading income

Valuation results and net trading income			
in EUR million	2021	2020	2019
Securities trading results	787	-500	974
Derivatives trading results	-554	701	-998
Other trading results	84	72	117
Change in fair value of derivatives relating to			
– fair value hedges	-1,317	538	507
– cash flow hedges (ineffective portion)	1	-5	47
– other non-trading derivatives	1,179	-90	-732
Change in fair value of assets and liabilities (hedged items)	1,330	-541	-518
Valuation results on assets and liabilities designated at FVPL (excluding trading)	-13	-123	-358
Foreign exchange transactions results	567	422	801
	2,065	**474**	**-159**

Changes in Valuation results and net trading income in 2021 compared to 2020 are the result of increased yield curves in 2021 versus decreased yield curves in 2020.

Securities trading results includes the results of market making in instruments such as government securities, equity securities, corporate debt securities, money-market instruments. Derivatives trading results includes the results of derivatives such as interest rate swaps, options, futures, and forward contracts.

Trading gains and losses relating to trading securities still held as at 31 December 2021 amount to EUR -268 million (2020: EUR -690 million; 2019: EUR -82 million).

The majority of the risks involved in security and currency trading is economically hedged with derivatives. The securities trading results are partly offset by results on these derivatives. The result of these derivatives is included in Derivatives trading results.

Other trading results include the results of trading loans and funds entrusted.

Foreign exchange transactions results include gains and losses from spot and forward contracts, options, futures, and translated foreign currency assets and liabilities. The result on currency trading is included in foreign exchange transactions results.

Net trading income relates to trading assets and trading liabilities which include assets and liabilities that are classified under IFRS as Trading but are closely related to servicing the needs of the clients of ING. ING offers products that are traded on the financial markets to institutional clients, corporate clients, and governments. ING Group's trading books are managed based on internal limits and comprise a mix of products with results which could be offset. A significant part of the derivatives in the trading portfolio are related to servicing corporate clients in their risk management to hedge for example currency or interest rate exposures. From a risk perspective, the gross amount of trading assets must be considered together with the gross amount of trading liabilities, which are presented separately on the statement of financial position. However, IFRS does not always allow netting of these positions in the statement of financial position. Reference is made to Note 4 'Financial assets at fair value through profit or loss' and Note 14 'Financial liabilities at fair value through profit or loss' for information on trading assets and trading liabilities respectively.

'Valuation results and net trading income' include the fair value movements on derivatives (used for both hedge accounting and economically hedging exposures) as well as the changes in the fair value of assets and liabilities included in hedging relationships as hedged items. Reference is made to Note 40 'Derivatives and hedge accounting' for information on derivatives used for hedge accounting.

In general, the fair value movements are influenced by changes in the market conditions, such as stock prices, credit spreads, interest rates and currency exchange rates. The Covid-19 pandemic is still ongoing, but markets have recovered and stabilised further during 2021 and volatility has largely returned to pre-pandemic levels.

Furthermore, derivatives trading results is also impacted by fair value movements arising from changes in credit spreads (CVA and DVA), bid offer spreads, model risk and incremental cost of funding on derivatives (FVA and CollVA). Spreads tightened in 2021 compared to 2020 and the fair value changes decreased.

In 2021, Derivatives trading results include EUR 98 million CVA/DVA adjustments on trading derivatives (2020: EUR 17 million; 2019: EUR 39 million).

'Valuation results on assets and liabilities designated at fair value through profit or loss (excluding trading)' include fair value changes on financial assets and financial liabilities driven by changed market conditions. Refer to Note 4 'Financial assets at fair value through profit or loss' and to Note 14 'Financial liabilities at fair value through profit or loss'.
In addition, 'Valuation results on assets and liabilities designated at fair value through profit or loss (excluding trading)' include fair value adjustments on own issued notes amounting to EUR 65 million (2020: EUR -1 million; 2019: EUR -424 million).

Interest income from trading assets in 2021 amounted to EUR 13,737 million (2020: EUR 13,412 million; 2019: 15,187 million). Interest expense from trading liabilities in 2021 amounted to EUR 14,079 million (2020: EUR 13,052 million; 2019: 14,922 million).

23 Investment income

Investment income in EUR million	2021	2020	2019
Dividend income	122	107	115
Realised gains/losses on disposal of debt instruments measured at FVOCI	45	44	46
Income from and fair value gains/losses on investment properties	-0	1	27
Investment income	**167**	**152**	**188**

In 2021, 2020 and 2019 dividend income mainly consists of dividend received from ING's equity stake in Bank of Beijing.

24 Result on disposal of group companies

Result on disposal of group companies			
in EUR million	2021	2020	2019
ING Austria (Retail Banking activities)	-26		
Makelaarsland	-3		
Cel Data Services		-3	
ING Lease Italy			-2
ING Mauritius			119
	-29	**-3**	**117**

At 12 July 2021, ING announced that it has reached an agreement to transfer ING's Retail Banking operations in Austria to bank99. Per 1 December 2021 ING completed the transaction and realized a loss on settlement of EUR 26 million.

ING and the board of Makelaarsland agreed during 2021 to continue Makelaarsland independently. The negative result on disposal of group companies from this management buyout amounted to a loss of approximately EUR 3 million.

In 2020 ING realized a EUR 3 million loss on the sale of Cel Data Services N.V. against net assets disposed of EUR 4 million. Cel Data Services N.V. is active in ATM services including cash loading and ICT managed services for ING's Belgian retail branches, other Belgian financial institutions and retail shops.

In 2019 the Result on disposal of group companies is mainly impacted by the sale of ING's stake in Kotak Mahindra Bank by ING Mauritius during 1Q 2019. ING Mauritius is in the process of being liquidated and consequently, the release of the currency translation reserve (CTA) and the release of the Net Investment Foreign Entities reserve resulted in a one-off gain of EUR 119 million.

25 Net result on derecognition of financial assets measured at amortised cost

Net result on derecognition of financial assets measured at amortised cost			
in EUR million	2021	2020	2019
Loans at amortised cost	1	4	13
Securities at amortised cost	-1	185	24
Net result on derecognition of financial assets measured at amortised cost	**-0**	**189**	**38**

In 2020, driven by exceptional market circumstances in the first quarter, ING realised a profit on the sale of debt securities at amortised cost of EUR 186 million.

26 Other income

In 2021, Other income of EUR 236 million (2020: EUR 20 million; 2019: EUR 214 million) includes the recognition of EUR 72 million relating to a better than expected recovery of the insolvency of a financial institution in the Netherlands and EUR 34 million proceeds of the agreement with Raiffeisenbank due to the withdrawal from the retail banking market in the Czech Republic. Furthermore, it includes the positive recovery of defaulted receivables of EUR 25 million (2020: EUR 27 million).

In 2020, Other income is impacted by positive and negative non-recurring results, including a loss of EUR 58 million following a settlement with the Australian Tax Authorities related to former insurance activities, that were fully indemnified by NN Group. This was offset by a tax profit for the same amount resulting from the release of the provision for uncertain tax positions in current tax liabilities.

In 2019, Other income also included the recognition of EUR 79 million receivable related to the insolvency of a financial institution.

27 Staff Expenses

Staff expenses

in EUR million	2021	2020	2019
Salaries	4,011	3,751	3,572
Pension costs and other staff-related benefit costs	408	395	366
Social security costs	563	538	530
Share-based compensation arrangements	31	19	41
External employees	699	881	974
Education	47	43	64
Other staff costs	182	186	208
	5,941	**5,812**	**5,755**

Share-based compensation arrangements include EUR 29 million (2020: EUR 17 million; 2019: EUR 38 million) relating to equity-settled share-based payment arrangements and EUR 2 million (2020: EUR 2 million; 2019: EUR 3 million) relating to cash-settled share-based payment arrangements.

Number of employees

	Netherlands			Rest of the world			Total		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
Total average number of internal employees at full time equivalent basis	15,138	15,201	14,415	42,523	40,701	39,016	57,660	55,901	53,431

Remuneration of senior management, Executive Board and Supervisory Board

Reference is made to Note 50 'Related parties'.

Share plans and Stock Options

ING grants various types of share awards, namely deferred shares, performance shares and upfront shares, which form part of the variable remuneration offering via the Long-term Sustainable Performance Plan (LSPP). The entitlement to the LSPP share awards is granted conditionally. If the participant remains in employment for an uninterrupted period between the grant date and the vesting date, the entitlement becomes unconditional, with the exception of the upfront shares which are immediately vested upon grant. Upfront and deferred shares awarded to the Management Board members of ING Group as well as identified staff, have a retention obligation that must be adhered to upon vesting, typically a minimum retention of 12 months applies. ING has the authority to apply a holdback to awarded but unvested shares and a clawback to vested shares.

In addition to the LSPP share awards, ING paid a number of senior employees fixed shares. The number of shares were determined each month from a cash value that forms part of the employee fixed remuneration. The shares were immediately vested to the employee, but had a minimum holding requirement of two years before the employee can dispose of the shares. The fixed shares are not subject to holdback or clawback.

The share awards granted in 2021 relate to the performance year 2020. In 2021, 0 share awards (2020: 63,837; 2019:0) were granted to the members of the Executive Board of ING Groep N.V., and 123,750 share awards (2020: 122,338; 2019: 2,837) were granted to the Management Board Banking. To senior management and other employees 3,267,372 share awards (2020: 3,678,776; 2019: 2,167,817) were granted.

The obligations with regard to share plans are funded by newly issued shares at the discretion of ING Group. In 2010, the Group Executive Board has decided not to continue the option scheme as from 2011. These option schemes have run off during the financial year 2020.

On 31 December 2019 there were 2,356,343 options outstanding and in 2019 2,186,316 options were exercised. The weighted average share price at the date of exercise for options exercised during 2020 was EUR 5.73 (2019: 10.89).

Changes in share awards

	Share awards (in numbers)			Weighted average grant date fair values (in euros)		
	2021	2020	2019	2021	2020	2019
Opening balance	3,878,219	3,857,048	5,854,999	7.25	11.14	11.62
Granted	3,391,122	3,864,951	2,170,654	9.69	5.12	10.04
Performance effect						11.12
Vested	-3,459,163	-3,690,340	-3,945,020	9.25	9.01	11.23
Forfeited	-135,506	-153,440	-223,585	7.61	8.55	11.39
Closing balance	**3,674,672**	**3,878,219**	**3,857,048**	7.60	7.25	11.14

As at 31 December 2021 the share awards consists of 3,154,715 share awards (2020: 3,326,457; 2019: 3,346,004) relating to equity-settled share-based payment arrangements and 519,957 share awards (2020: 551,762; 2019: 511,044) relating to cash-settled share-based payment arrangements.

The fair value of share awards granted is recognised as an expense under Staff expenses and is allocated over the vesting period of the share awards. The fair value calculation takes into account the current stock prices, expected volatilities and the dividend yield of ING shares.

As at 31 December 2021, total unrecognised compensation costs related to share awards amount to EUR 13 million (2020: EUR 10 million; 2019: EUR 15 million). These costs are expected to be recognised over a weighted average period of 1.7 years (2020: 1.6 years; 2019: 1.4 years).

28 Other operating expenses

Other operating expenses			
in EUR million	2021	2020	2019
Regulatory costs	1,265	1,105	1,021
Audit and non-audit services	34	29	30
IT related expenses	781	812	759
Advertising and public relations	305	335	391
External advisory fees	301	418	416
Office expenses	281	320	325
Travel and accommodation expenses	52	68	140
Contributions and subscriptions	112	110	108
Postal charges	38	38	46
Depreciation of property and equipment	573	578	551
Amortisation of intangible assets	261	251	237
(Reversals of) impairments of tangible assets	26	43	-3
(Reversals of) impairments of intangible assets	95	515	62
Addition to / (unused amounts reversed of) provision for reorganisations	214	149	6
Addition to / (unused amounts reversed of) other provisions	254	39	29
Other	658	532	477
	5,251	**5,341**	**4,598**

Reference is made to Note 9 for (reversals of) impairments of property and equipment and Note 10 for (reversals of) impairments of intangible assets.

Regulatory costs

Regulatory costs represent contributions to the Deposit Guarantee Schemes (DGS), The Single Resolution Fund (SRF), local bank taxes and local resolution funds. Included in Regulatory costs for 2021, are contributions to DGS of EUR 435 million (2020: EUR 413 million; 2019: EUR 362 million) mainly related to the Netherlands, Germany, Belgium, and Poland and contributions to the SRF and local resolution funds of EUR 308 million (2020: EUR 277 million; 2019: EUR 239 million). In 2021 local bank taxes increased by EUR 107 million from EUR 414 million in 2020 to EUR 522 million (2019: EUR 420 million).

Addition to / (unused amounts reversed of) provision for reorganisations

For further information reference is made to Note 15 'Provisions'.

Addition to / (unused amounts reversed of) other provisions

For further information reference is made to Note 15 'Provisions' and Note 46 'Legal proceedings'.

29 Audit fees

Total audit and non-audit services include the following fees for services provided by the Group's auditor.

Fees of Group's auditors			
	2021	2020	2019
Audit fees	27	25	21
Audit related fees	0	1	2
Total [1]	**27**	**26**	**23**

1 The Group's auditors did not provide any non-audit services.

Fees as disclosed in the table above relate to the network of the Group's auditors and are the total expected audit fees for the period excluding VAT.

30 Earnings per ordinary share

Earnings per ordinary share

	Amount (in EUR million)			Weighted average number of ordinary shares outstanding during the period (in millions)			Per ordinary share (in EUR)		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
Basic earnings	5,951	2,250	3,903	3,888.5	3,898.9	3,894.8	1.53	0.58	1.00
Basic earnings from continuing operations	**5,951**	**2,250**	**3,903**				**1.53**	**0.58**	**1.00**
Effect of dilutive instruments:									
Stock option and share plans				2.2	2.2	0.5			
				2.2	**2.2**	**0.5**			
Diluted earnings	5,951	2,250	3,903	3,890.7	3,901.1	3,895.3	1.53	0.58	1.00
Diluted earnings from continuing operations	**5,951**	**2,250**	**3,903**				**1.53**	**0.58**	**1.00**

Earnings per ordinary share is calculated on the basis of the weighted average number of ordinary shares outstanding. In calculating the weighted average number of ordinary shares outstanding, own shares held by group companies (including share buyback programme) are deducted from the total number of ordinary shares in issue.

Dilutive instruments

Diluted earnings per share is calculated as if the stock options and share plans outstanding at the end of the period had been exercised at the beginning of the period and assuming that the cash received from dilutive instruments (if any) is used to buy own shares against the average market price during the period. The net increase in the number of shares resulting from exercising stock options and share plans is added to the average number of shares used for the calculation of diluted earnings per share. In 2021, the effect of dilutive instruments no longer includes stock options. The stock option scheme was terminated in 2020.

31 Dividend per ordinary share

Dividends to shareholders of the parent

	Per ordinary share (in EUR)	Total (in EUR million)
Dividends on ordinary shares:		
In respect of 2019		
- Interim dividend, paid in cash in August 2019	0.24	935
Total dividend in respect of 2019	**0.24**	**935**
In respect of 2020		
- Interim dividend, paid in February 2021[1]	0.12	468
Total dividend in respect of 2020	**0.12**	**468**
In respect of 2021		
- Interim dividend, paid in October 2021	0.21	820
- Final dividend declared	0.41	1,548 [2]
Total dividend in respect of 2021	**0.62**	**2,368**

1 AGM declared the interim dividend of EUR 0.12 per ordinary share, paid in February 2021, as final dividend over 2020.

2 Compared to the reserved amount of EUR 1,568 million, EUR 20 million will remain available for distribution to the shareholders due to rounding of cents per share.

ING Groep N.V. is required to withhold tax of 15% on dividends paid.

The final dividend declared for 2021 is based on the proposed dividend of EUR 0.41 per share times the total number of outstanding shares. This excludes the shares repurchased under the share buyback programme (128 million shares at 31 December 2021). On 28 February 2022 ING announced it has fully completed the programme under which 140 million shares were repurchased.

In 2021, other cash distributions related to prior year profits of EUR 1,054 million (EUR 0.27 per share) were paid to the shareholders of ING Group. Reference is made to Note 19 ‘Equity’ for further information.

32 Net cash flow from operating activities

The table below shows a detailed overview of the net cash flow from operating activities.

Cash flows from operating activities

in EUR million		2021	2020	2019
Cash flows from operating activities				
Result before tax		8,385	3,399	5,653
Adjusted for:	- Depreciation and amortisation	834	829	789
	- Addition to loan loss provisions	516	2,675	1,120
	- Other non-cash items included in result before tax	-1,190	1,671	1,213
Taxation paid		-1,873	-1,734	-2,345
Changes in:	– Loans and advances to banks, not available on demand	262	10,033	-1,338
	– Deposits from banks, not payable on demand	8,438	43,044	-2,574
	Net change in loans and advances to/ from banks, not available/ payable on demand	**8,700**	**53,078**	**-3,911**
	– Trading assets	-25	-2,101	605
	– Trading liabilities	-5,596	4,667	-3,173
	Net change in Trading assets and Trading liabilities	**-5,620**	**2,566**	**-2,568**
	Loans and advances to customers	-27,860	2,876	-16,687
	Customer deposits	10,339	39,740	18,040
	– Non–trading derivatives	290	-1,440	1,072
	– Assets designated at fair value through profit or loss	-1,907	-1,369	-7
	– Assets mandatorily at fair value through profit or loss	1,650	-1,963	23,343
	– Other assets	-113	1,082	1,363
	– Other financial liabilities at fair value through profit or loss	-6,791	1,189	-12,235
	– Provisions and other liabilities	-304	-1,355	-1,784
	Other	**-7,175**	**-3,856**	**11,752**
Net cash flow from/(used in) operating activities		**-14,943**	**101,243**	**13,055**

33 Changes in liabilities arising from financing activities

Changes in liabilities arising from financing activities

	Debt securities in issue		Subordinated Loans		Lease liabilities		Total Liabilities from financing activities	
in EUR million	2021	2020	2021	2020	2021	2020	2021	2020
Opening balance	82,065	118,528	15,805	16,588	1,339	1,507	99,208	136,622
Cashflows:								
Additions	85,113	65,308	3,163	2,165			88,276	67,472
Redemptions / Disposals	-76,150	-99,212	-2,449	-2,786	-301	-273	-78,900	-102,270
Non cash changes:								
Amortisation	1	68	27	5	14	18	42	92
Other	-92	-105	-26	-20	161	118	43	-6
Changes in unrealised revaluations	-1,923	880	-414	397			-2,336	1,277
Foreign exchange movement	2,771	-3,403	609	-545	6	-31	3,386	-3,980
Closing balance	**91,784**	**82,065**	**16,715**	**15,805**	**1,220**	**1,339**	**109,719**	**99,208**

34 Cash and cash equivalents

Cash and cash equivalents

in EUR million	2021	2020	2019
Treasury bills and other eligible bills	23	0	43
Deposits from banks/Loans and advances to banks	1,122	478	786
Cash and balances with central banks	106,520	111,087	53,202
Cash and cash equivalents at end of year	**107,665**	**111,566**	**54,031**

Treasury bills and other eligible bills included in cash and cash equivalents

in EUR million	2021	2020	2019
Treasury bills and other eligible bills included in securities at AC	23		43
	23	**0**	**43**

Deposits from banks/Loans and advances to banks			
in EUR million	2021	2020	2019
Included in cash and cash equivalents:			
– Deposits from banks	-7,059	-8,788	-8,519
– Loans and advances to banks	8,181	9,266	9,304
	1,122	**478**	**786**
Not included in cash and cash equivalents:			
– Deposits from banks	-78,033	-69,310	-26,307
– Loans and advances to banks	15,411	16,098	25,832
	-62,621	**-53,212**	**-476**
Total as included in the statement of financial position:			
– Deposits from banks	-85,092	-78,098	-34,826
– Loans and advances to banks	23,592	25,364	35,136
	-61,500	**-52,733**	**310**

Cash and cash equivalents includes deposits from banks and loans and advances to banks that are on demand.

Included in Cash and cash equivalents, are minimum mandatory reserve deposits to be held with various central banks. Reference is made to Note 43 ‘Transfer of financial assets, assets pledged and received as collateral’ for restrictions on Cash and balances with central banks.

Segment reporting

35 Segments

ING Group’s segments are based on the internal reporting structure by lines of business.

The Executive Board of ING Group and the Management Board Banking (together the Chief Operating Decision Maker (CODM)) set the performance targets, approve and monitor the budgets prepared by the business lines. Business lines formulate strategic, commercial, and financial plans in conformity with the strategy and performance targets set by the CODM.

Recognition and measurement of segment results are in line with the accounting policies as described in Note 1 ‘Basis of preparation and significant accounting policies’. The results for the period for each reportable segment are after intercompany and intersegment eliminations and are those reviewed by the CODM to assess performance of the segments. Corporate expenses are allocated to business lines based on time spent by head office personnel, the relative number of staff, or on the basis of income, expenses and/or assets of the segment.

The following table specifies the segments by line of business and main sources of income of each of the segments:

Specification of the main sources of income of each of the segments by line of business

Segments by line of business	Main source of income
Retail Netherlands *(Market Leaders)*	Income from retail and private banking activities in the Netherlands, including the SME and mid-corporate segments, and the Real Estate Finance portfolio related to Dutch domestic mid-corporates. The main products offered are current and savings accounts, business lending, mortgages and other consumer lending in the Netherlands.
Retail Belgium *(Market Leaders)*	Income from retail and private banking activities in Belgium (including Luxembourg), including the SME and mid-corporate segments. The main products offered are similar to those in the Netherlands.
Retail Germany *(Challengers and Growth Markets)*	Income from retail and private banking activities in Germany (including Austria). The main products offered are current and savings accounts, mortgages and other customer lending.
Retail Other *(Challengers and Growth Markets)*	Income from retail banking activities in the rest of the world, including the SME and mid-corporate segments in specific countries. The main products offered are similar to those in the Netherlands.
Wholesale Banking	Income from wholesale banking activities. The main products are: lending, debt capital markets, working capital solutions, export finance, daily banking solutions, treasury and risk solutions, and corporate finance.

Specification of geographical split of the segments

Geographical split of the segments	Main countries
The Netherlands	
Belgium	Including Luxembourg
Germany	Including Austria
Other Challengers	Australia, Czech Republic, France, Italy, Spain, Portugal, Other
Growth Markets	Poland, Romania, Turkey, Philippines and Asian stakes
Wholesale Banking Rest of World	UK, Americas, Asia and other countries in Central and Eastern Europe
Other	Corporate Line

ING Group monitors and evaluates the performance of ING Group at a consolidated level and by segment using results based on figures according to IFRS as adopted by the European Union (IFRS-EU). The Executive Board and the Management Board Banking consider this measure to be relevant to an understanding of the Group's financial performance, because it allows investors to understand the primary method used by management to evaluate the Group's operating performance and make decisions about allocating resources.

In addition, ING Group believes that the presentation of results in accordance with IFRS-EU helps investors compare its segment performance on a meaningful basis by highlighting result before tax attributable to ongoing operations and the profitability of the segment businesses. IFRS-EU result is derived by including the impact of the IFRS-EU 'IAS 39 carve out' adjustment.

The IFRS-EU 'IAS 39 carve-out' adjustment relates to fair value portfolio hedge accounting strategies for the mortgage and savings portfolios in the Benelux, Germany and Other Challengers that are not eligible under IFRS-IASB. As no hedge accounting is applied to these mortgage and savings portfolios under IFRS-IASB, the fair value changes of the derivatives are not offset by fair value changes of the hedge items (mortgages and savings).

The segment reporting in the annual report on Form 20-F has been prepared in accordance with International Financial Reporting Standards as issued by the EU (IFRS-EU) and reconciled to International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS-IASB) for consistency with the other financial information contained in this report. The difference between the accounting standards is reflected in the Wholesale Banking segment, and in the geographical split of the segments in the Netherlands, Belgium, Germany and Other Challengers.

Reference is made to Note 1 'Basis of preparation and significant accounting policies' for a reconciliation between IFRS-EU and IFRS-IASB. Corporate expenses are allocated to business lines based on time spent by head office personnel, the relative number of staff, or on the basis of income, expenses and/or assets of the segment.

ING Group reconciles the total segment results to the total result using Corporate Line. The Corporate Line is a reflection of capital management activities and certain income and expenses that are not allocated to the banking businesses, including the recognition of value-added tax (VAT) refunds in the Netherlands (recorded under expenses). In 2021, income was supported by a EUR 143 million conditional TLTRO III benefit and the recognition of a EUR 72 million receivable related to the insolvency of a financial institution, while expenses included EUR 87 million of regulatory costs due to an incidental 50% increase in the Dutch bank tax as well as a significantly lower VAT refund compared with the previous year. In 2020, net interest income on the Corporate Line sharply declined, mainly due to lower interest results from foreign currency hedging due to lower interest rate differentials. In 2019, a EUR 119 million gain from the release of a currency translation reserve following the sale of ING's stake in Kotak Mahindra Bank was included, and the recognition of a EUR 79 million receivable related to the insolvency of a financial institution (both recorded under income). Furthermore, the Corporate Line includes the isolated legacy costs (mainly negative interest results) caused by the replacement of short-term funding with long-term funding during 2013 and 2014. ING Group applies a system of capital charging for its banking operations in order to create a comparable basis for the results of business units globally, irrespective of the business units' book equity and the currency they operate in.

The information presented in this note is in line with the information presented to the Executive Board of ING Group and Management Board Banking.

This note does not provide information on the revenue specified to each product or service as this is not reported internally and is therefore not readily available.

Reconciliation between IFRS-IASB and IFRS-EU income, expense and net result

12 month period	2021					2020					2019				
in EUR million	Income	Expenses	Taxation	Non-controlling interests	Net result [1]	Income	Expenses	Taxation	Non-controlling interests	Net result[1]	Income	Expenses	Taxation	Non-controlling interests	Net result[1]
Net result IFRS-IASB attributable to equity holder of the parent	**20,093**	**11,708**	**2,306**	**128**	**5,951**	**17,227**	**13,828**	**1,070**	**78**	**2,250**	**17,125**	**11,472**	**1,652**	**99**	**3,903**
Remove impact of:															
Adjustment of the EU 'IAS 39 carve out' [2]	-1,603		-429		-1,174	410		176		234	1,181		303		878
Result IFRS-EU [3]	**18,490**	**11,708**	**1,877**	**128**	**4,776**	**17,637**	**13,828**	**1,246**	**78**	**2,485**	**18,306**	**11,472**	**1,955**	**99**	**4,781**

1. Net result, after tax and non-controlling interests.
2. ING prepares the Form 20-F in accordance with IFRS-IASB. This information is prepared by reversing the hedge accounting impacts that applied under the EU 'carve-out' version of IAS 39. For the IFRS-EU result, the impact of the carve-out is re-instated as this is the measure at which management monitors the business.
3. IFRS-EU figures are derived from figures according to IFRS-IASB by excluding the impact of adjustment of the EU 'IAS 39 carve-out'.

ING Group Total

12 month period	2021			2020			2019		
in EUR million	ING Bank	Other	Total ING Group	ING Bank	Other	Total ING Group	ING Bank	Other	Total ING Group
Income									
– Net interest income	13,615	-0	13,615	13,600	3	13,604	14,074	4	14,079
– Net fee and commission income	3,517	-0	3,517	3,011	-0	3,011	2,868	-0	2,868
– Total investment and other income	1,354	5	1,359	1,034	-12	1,022	1,352	8	1,360
Total income	**18,485**	**5**	**18,490**	**17,645**	**-9**	**17,637**	**18,295**	**12**	**18,306**
Expenditure									
– Operating expenses	11,195	-3	11,192	11,160	-8	11,153	10,343	9	10,353
– Addition to loan loss provisions	516	0	516	2,675	-0	2,675	1,120	0	1,120
Total expenses	**11,711**	**-3**	**11,708**	**13,835**	**-8**	**13,828**	**11,463**	**9**	**11,472**
Result before taxation	**6,774**	**8**	**6,782**	**3,810**	**-1**	**3,809**	**6,831**	**3**	**6,834**
Taxation	1,876	1	1,877	1,317	-71	1,246	1,889	66	1,955
Non-controlling interests	128	0	128	78		78	99		99
Net result IFRS-EU	**4,770**	**7**	**4,776**	**2,415**	**70**	**2,485**	**4,843**	**-63**	**4,781**
Adjustment of the EU 'IAS 39 carve out'	1,174		1,174	-234		-234	-878		-878
Net result IFRS-IASB attributable to equity holder of the parent	**5,944**	**7**	**5,951**	**2,180**	**70**	**2,250**	**3,966**	**-63**	**3,903**

> 35 Segments

Segments by line of business

12 month period in EUR million	2021							2020							2019						
	Retail Nether-lands	Retail Belgium	Retail Ger-many [1]	Retail Other [1]	Wholesale Banking	Corporate Line	Total	Retail Nether-lands	Retail Belgium	Retail Ger-many	Retail Other	Wholesale Banking	Corporate Line	Total	Retail Nether-lands	Retail Belgium	Retail Ger-many	Retail Other	Wholesale Banking	Corporate Line	Total
Income																					
– Net interest income	3,290	1,747	1,447	2,712	4,151	267	13,615	3,511	1,816	1,587	2,760	3,718	212	13,604	3,541	1,907	1,579	2,787	3,794	470	14,079
– Net fee and commission income	771	519	497	530	1,197	3	3,517	681	413	437	412	1,069	-1	3,011	674	374	268	423	1,135	-6	2,868
– Total investment and other income	201	209	65	361	568	-45	1,359	279	145	93	89	609	-192	1,022	290	161	138	298	369	103	1,360
Total income	**4,262**	**2,475**	**2,009**	**3,602**	**5,916**	**226**	**18,490**	**4,471**	**2,373**	**2,117**	**3,261**	**5,396**	**18**	**17,637**	**4,505**	**2,442**	**1,985**	**3,509**	**5,298**	**568**	**18,306**
Expenditure																					
– Operating expenses	2,403	1,667	1,174	2,452	2,926	570	11,192	2,236	1,737	1,110	2,469	3,218	383	11,153	2,210	1,609	1,080	2,210	2,937	307	10,353
– Additions to loan loss provision	-76	225	49	202	117	0	516	157	514	57	593	1,351	2	2,675	91	186	-53	364	532	-0	1,120
Total expenses	**2,326**	**1,892**	**1,223**	**2,654**	**3,042**	**570**	**11,708**	**2,393**	**2,251**	**1,167**	**3,063**	**4,568**	**385**	**13,828**	**2,301**	**1,794**	**1,027**	**2,574**	**3,469**	**307**	**11,472**
Result before taxation	**1,936**	**583**	**786**	**949**	**2,874**	**-345**	**6,782**	**2,078**	**122**	**950**	**199**	**827**	**-367**	**3,809**	**2,204**	**647**	**957**	**935**	**1,830**	**261**	**6,834**
Taxation	499	146	252	212	703	65	1,877	523	51	331	105	295	-58	1,246	558	192	328	234	464	179	1,955
Non-controlling interests		0	4	98	26	-0	128	-1	0	4	55	20	-0	78	-0	0	3	82	14	-0	99
Net result IFRS-EU	**1,437**	**437**	**529**	**639**	**2,144**	**-410**	**4,776**	**1,556**	**71**	**615**	**39**	**512**	**-308**	**2,485**	**1,646**	**455**	**627**	**619**	**1,352**	**82**	**4,781**
Adjustment of the EU 'IAS 39 carve out'					1,174		1,174					-234		-234					-878		-878
Net result IFRS-IASB	**1,437**	**437**	**529**	**639**	**3,318**	**-410**	**5,951**	**1,556**	**71**	**615**	**39**	**278**	**-308**	**2,250**	**1,646**	**455**	**627**	**619**	**474**	**82**	**3,903**

1 In the fourth quarter of 2021, ING exited from the retail banking markets in Austria and the Czech Republic.

Geographical split of the segments

12 month period in EUR million — 2021

	Netherlands	Belgium	Germany [1]	Other Challengers [1]	Growth Markets	Wholesale Banking Rest of World	Other	Total
– Net interest income	4,068	2,109	1,943	1,889	1,532	1,805	268	13,615
– Net fee and commission income	1,070	717	525	331	351	520	3	3,517
– Total investment and other income	314	265	121	88	446	171	-46	1,359
Total income	**5,452**	**3,092**	**2,589**	**2,308**	**2,330**	**2,496**	**226**	**18,490**
Expenditure								
– Operating expenses	3,279	1,960	1,346	1,547	1,276	1,214	570	11,192
– Additions to loan loss provision	28	184	117	99	110	-21	0	516
Total expenses	**3,307**	**2,143**	**1,463**	**1,646**	**1,386**	**1,192**	**570**	**11,708**
Result before taxation	**2,145**	**948**	**1,125**	**662**	**944**	**1,303**	**-345**	**6,782**
Retail Banking	1,936	583	786	206	742			4,253
Wholesale Banking	209	365	340	456	202	1,303	-0	2,874
Corporate Line							-345	-345
Result before taxation	**2,145**	**948**	**1,125**	**662**	**944**	**1,303**	**-345**	**6,782**
Taxation	556	240	359	194	178	287	64	1,877
Non-controlling interests		0	4		124		-0	128
Net result IFRS-EU	**1,589**	**708**	**762**	**468**	**641**	**1,016**	**-409**	**4,776**
Adjustment of the EU 'IAS 39 carve out'	723	47	390	14				1,174
Net result IFRS	**2,312**	**755**	**1,153**	**482**	**641**	**1,016**	**-409**	**5,951**

12 month period in EUR million — 2020

	Netherlands	Belgium	Germany	Other Challengers	Growth Markets	Wholesale Banking Rest of World	Other	Total
– Net interest income	4,178	2,116	2,090	1,781	1,578	1,654	208	13,604
– Net fee and commission income	981	583	468	276	286	418	-1	3,011
– Total investment and other income	398	196	127	27	215	243	-184	1,022
Total income	**5,557**	**2,896**	**2,684**	**2,084**	**2,078**	**2,315**	**23**	**17,637**
Expenditure								
– Operating expenses	3,347	2,037	1,270	1,566	1,272	1,273	387	11,153
– Additions to loan loss provision	421	589	267	298	412	684	2	2,675
Total expenses	**3,769**	**2,627**	**1,537**	**1,864**	**1,684**	**1,957**	**390**	**13,828**
Result before taxation	**1,788**	**269**	**1,146**	**220**	**395**	**357**	**-367**	**3,809**
Retail Banking	2,078	122	950	-27	225			3,348
Wholesale Banking	-290	147	197	247	169	357	-0	827
Corporate Line							-367	-367
Result before taxation	**1,788**	**269**	**1,146**	**220**	**395**	**357**	**-367**	**3,809**
Taxation	518	89	381	91	141	85	-59	1,246
Non-controlling interests	-1	0	4		75		-0	78
Net result IFRS-EU	**1,271**	**180**	**761**	**129**	**178**	**273**	**-308**	**2,485**
Adjustment of the EU 'IAS 39 carve out'	-177	27	-115	30				-234
Net result IFRS	**1,094**	**207**	**647**	**159**	**178**	**273**	**-308**	**2,250**

12 month period in EUR million — 2019

	Netherlands	Belgium	Germany	Other Challengers	Growth Markets	Wholesale Banking Rest of World	Other	Total
– Net interest income	4,213	2,233	2,122	1,808	1,610	1,633	461	14,079
– Net fee and commission income	994	533	315	283	304	446	-7	2,868
– Total investment and other income	119	233	169	16	420	292	111	1,360
Total income	**5,325**	**2,999**	**2,606**	**2,107**	**2,334**	**2,370**	**566**	**18,306**
Expenditure								
– Operating expenses	2,994	1,925	1,237	1,318	1,277	1,293	308	10,353
– Additions to loan loss provision	146	268	-40	171	271	303	-0	1,120
Total expenses	**3,140**	**2,194**	**1,197**	**1,489**	**1,548**	**1,596**	**308**	**11,472**
Result before taxation	**2,185**	**805**	**1,409**	**618**	**785**	**774**	**258**	**6,834**
Retail Banking	2,204	647	957	307	628			4,744
Wholesale Banking	-19	158	451	311	157	774	-3	1,830
Corporate Line							261	261
Result before taxation	**2,185**	**805**	**1,409**	**618**	**785**	**774**	**258**	**6,834**
Taxation	549	247	476	207	159	144	173	1,955
Non-controlling interests	-0	0	3		96		-0	99
Net result IFRS-EU	**1,637**	**558**	**929**	**411**	**530**	**630**	**85**	**4,781**
Adjustment of the EU 'IAS 39 carve out'	-273	-372	-232	-0				-878
Net result IFRS	**1,363**	**186**	**697**	**411**	**530**	**630**	**85**	**3,903**

1 In the fourth quarter of 2021, ING exited from the retail banking markets in Austria and the Czech Republic.

36 Information on geographical areas

ING Group's business lines operate in seven main geographical areas: the Netherlands, Belgium, Germany, Poland, Rest of Europe, North America, Latin America, Asia and Australia. A geographical area is a distinguishable component of the Group engaged in providing products or services within a particular economic environment that is subject to risks and returns that are different from those of geographical areas operating in other economic environments. The geographical analyses are based on the location of the office from which the transactions are originated and do not include countries where ING only has representation offices. The Netherlands is ING Group's country of domicile.

In order to increase ING Group's tax transparency, additional financial information on a per country basis has been included in this disclosure: Tax paid represents all income tax paid to and/or received from tax authorities in the current year, irrespective of the fiscal year to which these payments or refunds relate. Total assets by country does not include intercompany balances and reconciles to the total assets in the consolidated statement of financial position of ING Group.

The table below provide additional information, for the years 2021, 2020 and 2019 respectively, on names of principal subsidiaries and branches, nature of main activities and average number of employees on a full time equivalent basis by country/tax jurisdiction.

Additional information by country

Geographical area	Country/Tax jurisdiction	Name of principal subsidiary	Main (banking) activity	Average number of employees at full time equivalent basis			Total Income			Total assets			Result before tax			Taxation			Tax paid		
				2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
Netherlands	Netherlands	ING Bank N.V.	Wholesale / Retail	15,138	15,201	14,415	6,621	5,100	5,198	299,767	283,664	267,368	2,384	612	1,397	728	285	437	428	588	684
Belgium	Belgium	ING België N.V.	Wholesale / Retail	6,965	7,397	7,694	2,754	2,637	2,277	130,335	133,269	121,813	842	212	291	212	75	142	174	66	258
	Luxemburg	ING Luxembourg S.A.	Wholesale / Retail	856	855	841	366	279	292	20,406	15,290	16,608	189	100	123	48	25	29	20	24	17
Rest of Europe	Poland [1]	ING Bank Slaski S.A	Wholesale / Retail	10,674	9,425	8,968	1,509	1,399	1,344	43,888	40,928	37,220	660	438	533	154	131	141	235	232	166
	Germany	ING DiBa A.G.	Wholesale / Retail	5,521	5,059	4,639	2,962	2,376	2,141	159,799	162,539	147,642	1,587	896	1,032	523	310	355	493	409	460
	Romania [1]	Branch of ING Bank N.V.	Wholesale / Retail	3,319	3,049	2,575	495	456	457	9,635	8,526	7,424	273	141	221	41	20	34	21	24	34
	Spain	Branch of ING Bank N.V.	Wholesale / Retail	1,380	1,228	1,233	743	679	706	32,559	29,899	26,118	212	104	249	57	37	72	59	52	90
	Italy	Branch of ING Bank N.V.	Wholesale / Retail	1,099	1,025	959	335	337	269	13,983	13,747	15,726	73	44	-39	25	24	4	2	2	4
	UK	Branch of ING Bank N.V.	Wholesale	698	709	692	636	546	594	50,734	64,676	61,088	277	97	214	73	15	52	50	32	40
	France [2]	Branch of ING Bank N.V.	Wholesale / Retail	764	737	659	313	239	308	12,397	11,555	12,058	-65	-71	70	-16	-17	35	-7	9	48
	Russia	ING Bank (Eurasia) Z.A.O.	Wholesale	281	297	293	38	51	93	898	1,035	1,499	3	3	68	0	0	22	-7	-3	49
	Czech Republic [3]	Branch of ING Bank N.V.	Wholesale	285	355	339	100	146	88	2,894	3,848	4,494	33	59	10	8	12	2	-2	4	5
	Hungary	Branch of ING Bank N.V.	Wholesale	119	131	138	44	43	24	1,148	1,092	1,299	12	6	-7	3	2	2	2	1	2
	Slovakia [1]	Branch of ING Bank N.V.	Wholesale	983	878	703	15	18	14	352	385	587	3	7	2	0	3	0	2	1	-1
	Ukraine	PJSC ING Bank Ukraine	Wholesale	96	108	111	22	26	43	409	335	481	11	16	31	2	3	9	2	3	6
	Austria [3]	Branch of ING DiBa A.G.	Wholesale	292	332	279	175	75	80	419	1,840	1,441	101	0	0	16	-5	1	6	-14	1
	Bulgaria	Branch of ING Bank N.V.	Wholesale	61	65	68	14	13	12	420	406	358	2	2	2	0	0	0	0	0	0
	Ireland	Branch of ING Bank N.V.	Wholesale	64	50	48	70	72	71	1,831	2,051	2,575	77	66	58	10	8	8	10	8	7
	Portugal	Branch of ING Bank N.V.	Wholesale	11	13	12	15	16	18	675	790	899	9	11	14	3	7	4	3	4	5
	Switzerland	Branch of ING Bank N.V.	Wholesale	259	256	257	241	187	234	11,081	7,939	8,577	148	88	126	21	13	-36	67	14	22

1 Includes significant amount of FTEs in relation to global services provided.

2 Public subsidies received, as defined in article 89 of the CRD IV, amounts to EUR 0.0 million (2020: EUR 0.3 million; 2019: EUR 0.3 million).

3 In the fourth quarter of 2021, ING exited from the retail banking markets in Austria and the Czech Republic.

Additional information by country (continued)

Geographical area	Country/Tax jurisdiction	Name of principal subsidiary	Main (banking) activity	Average number of employees at full time equivalent basis 2021	2020	2019	Total Income 2021	2020	2019	Total assets 2021	2020	2019	Result before tax 2021	2020	2019	Taxation 2021	2020	2019	Tax paid 2021	2020	2019
North America	Canada	Payvision Canada Services Ltd.	Wholesale	0	1	1	0	3	3	0	0	1	0	0	0	0	0	0	0	0	0
	USA	ING Financial Holdings Corp.	Wholesale	563	600	626	936	720	813	55,582	48,205	45,521	779	39	366	182	16	118	148	38	130
Latin America	Brazil	Branch of ING Bank N.V.	Wholesale	63	89	89	13	30	43	288	1,813	2,921	1	3	27	5	19	6	8	4	7
	Colombia	ING Capital Colombia S.A.S.	Dissolved	0	3	3	0	1	1	0	2	2	0	0	0	0	0	0	0	0	0
	Mexico	ING Consulting, S.A. de C.V.	Wholesale	6	7	8	1	1	1	3	2	2	-1	-1	-2	0	0	0	0	0	0
Asia	China	Branch of ING Bank N.V.	Wholesale	79	90	89	26	26	35	1,654	1,598	2,031	0	-2	7	6	1	-1	-1	-5	0
	Japan	Branch of ING Bank N.V.	Wholesale	30	32	33	25	29	31	2,256	3,104	5,109	4	-1	22	2	-1	8	3	2	10
	Singapore	Branch of ING Bank N.V.	Wholesale	573	608	592	331	353	349	24,163	24,498	27,982	133	42	76	19	8	13	9	7	22
	Macau	Payvision Macau Ltd.	In liquidation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hong Kong	Branch of ING Bank N.V.	Wholesale	105	122	128	79	92	96	6,691	7,030	7,350	5	-9	38	1	-1	7	-7	15	2
	Philippines [1]	Branch of ING Bank N.V.	Wholesale/ Retail	2,414	1,857	1,420	6	13	25	567	497	412	-33	-26	-11	-5	6	-5	1	2	2
	South Korea	Branch of ING Bank N.V.	Wholesale	75	77	79	65	66	60	5,800	6,692	5,457	26	18	25	6	4	7	-2	10	3
	Taiwan	Branch of ING Bank N.V.	Wholesale	33	34	34	26	36	26	2,963	3,160	2,873	-3	19	10	-1	4	0	0	1	3
	Indonesia	PT ING Securities Indonesia	In liquidation	0	0	0	0	0	0	5	5	6	0	0	0	0	0	0	0	0	0
	Malaysia	Branch of ING Bank N.V.	In liquidation	4	6	5	0	1	1	1	141	166	-1	-1	0	0	0	0	0	0	0
	Sri Lanka	Branch of ING Business Shared Services B.V.	Global services	0			0			0			0			0			0		
	Turkey	ING Bank A.S.	Wholesale / Retail	3,338	3,724	4,074	335	420	677	5,818	7,316	9,927	144	125	304	35	27	66	33	25	92
	United Arab Emirates	Branch of ING Bank N.V.	Wholesale	10	10	11	0	0	-1	1	1	0	-1	-2	-2	0	0	0	0	0	0
Australia	Australia	ING Bank (Australia) Ltd.	Wholesale / Retail	1,503	1,472	1,319	782	740	701	49,826	46,014	43,482	500	362	400	149	40	121	121	181	177
Other	Mauritius	ING Mauritius Investment I	In liquidation	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Total				**57,660**	**55,901**	**53,431**	**20,093**	**17,227**	**17,125**	**949,250**	**933,891**	**888,520**	**8,385**	**3,399**	**5,653**	**2,306**	**1,070**	**1,652**	**1,873**	**1,734**	**2,345**

1 Includes significant amount of FTEs in relation to global services provided.

2021

The higher tax charge of 31% in the Netherlands (compared to the statutory rate of 25%) is mainly caused by the non-deductible Dutch bank tax (EUR 260 million) and the impairments on deferred tax assets regarding Payvision and Yolt (EUR 26 million tax).

The lower tax charge in Austria is caused by previously not recognised tax losses (EUR -10 million tax).

The higher tax charge in Poland is mainly caused by non-deductible regulatory- and other costs.

2020

The higher tax charge of 47% in the Netherlands (compared to the statutory rate of 25%) is mainly caused by the non-deductible Dutch bank tax (EUR 169 million) and the non-deductible impairments regarding goodwill (EUR 266 million) and TMB (EUR 230 million).

The lower tax charge in Australia is caused by a release of a tax provision after concluding a settlement with the Australian Tax Authorities on an issue related to former Insurance activities, which issue was fully indemnified by NN Group.

The higher tax charges in Brazil and the Philippines are mainly caused by the de-recognition of tax benefits for incurred tax losses due to expected insufficient future taxable profits.

The higher tax charges in Poland and Belgium are mainly caused by non-deductible regulatory- and other costs.

2019

The relatively high tax charge of 31% in the Netherlands (compared to statutory rate of 25%) is mainly caused by the non-deductible Dutch bank tax (EUR 177 million) and the non-deductible AT1 interest expenses (EUR 276 million).

The relatively low tax charge in Switzerland is caused by a deferred tax benefit following a tax rate reduction in 2019.

Additional notes to the Consolidated financial statements

37 Pensions and other post-employment benefits

Most group companies sponsor defined contribution pension plans. The assets of all ING Group's defined contribution plans are held in independently administered funds. Contributions are generally determined as a percentage of remuneration. Contributions, including the defined contribution plan in the Netherlands, are principally determined as a percentage of renumeration. These plans do not give rise to provisions in the statement of financial position, other than relating to short-term timing differences included in other assets/liabilities.

ING Group maintains defined benefit retirement plans in some countries. These plans provide benefits that are related to the remuneration and service of employees upon retirement. The benefits in some of these plans are subject to various forms of indexation. The indexation is, in some cases, at the discretion of management; in other cases it is dependent upon the sufficiency of plan assets.

Annual contributions are paid to the funds at a rate necessary to adequately finance the accrued liabilities of the plans calculated in accordance with local legal requirements. Plans in all countries are designed to comply with applicable local regulations governing investments and funding levels.

ING Group provides other post-employment benefits to certain former employees. These are primarily discounts on ING products.

Defined Contribution Plans

ING, as part of employee's labour agreement, sponsors a number of defined contribution plans. ING's obligation is limited to contributions which are agreed in advance and also includes employee contributions. The most significant plans are in The Netherlands and Belgium. The Employer contribution are recognized as an expense which amounted for 2021 EUR 369 million (2020: EUR 356 million).

Defined benefit retirement plans

Statement of financial position - Net defined benefit asset/liability

Plan assets and defined benefit obligation per country

	Plan assets		Defined benefit obligation		Funded Status	
in EUR million	2021	2020	2021	2020	2021	2020
The Netherlands	427	469	578	643	-152	-174
United States	332	311	312	291	20	20
United Kingdom	1,968	1,896	1,236	1,199	732	696
Belgium	606	591	617	681	-10	-90
Other countries	338	316	372	393	-34	-77
Funded status (Net defined benefit asset/liability)	**3,671**	**3,583**	**3,115**	**3,208**	**556**	**375**
Presented as:						
- Other assets					783	725
- Other liabilities					-227	-350
					556	**375**

The most recent (actuarial) valuations of the plan assets and the present value of the defined benefit obligation were carried out as at 31 December 2021. The present value of the defined benefit obligation, and the related current service cost and past service cost, were determined using the projected unit credit method.

Changes in the fair value of plan assets for the period were as follows:

Changes in fair value of plan assets

in EUR million	2021	2020
Opening balance	3,583	3,377
Interest income	37	50
Remeasurements: Return on plan assets excluding amounts included in interest income	2	246
Employer's contribution	26	170
Participants contributions	2	2
Benefits paid	-136	-128
Exchange rate differences	158	-134
Closing balance	**3,671**	**3,583**
Actual return on the plan assets	**39**	**296**

As at 31 December 2021 the defined benefit plans did not hold any direct investments in ING Groep N.V. (2020: nil). During 2021 and 2020 there were no purchases or sales of assets between ING and the pension funds.

ING does not manage the pension funds and thus receives no compensation for fund management. The pension funds have not engaged ING in any swap or derivative transactions to manage the risk of the pension funds.

No plan assets are expected to be returned to ING Group during 2022.

The overall funded status improved during the year because of increased interest rates, leading to lower benefit obligations, and positive performance of plan assets. Covid-19 still has an impact on most investment markets in 2021, the effect on the fair value of ING Group’s plan assets is limited as a large majority of our plan assets is invested in liquid asset categories which mark to market frequently.

Changes in the present value of the defined benefit obligation and other post-employment benefits for the period were as follows:

Changes in defined benefit obligation and other post-employment benefits

	Defined benefit obligation		Other post-employment benefits	
in EUR million	2021	2020	2021	2020
Opening balance	3,208	3,151	83	84
Current service cost	33	31	1	-2
Interest cost	31	44	2	2
Remeasurements: Actuarial gains and losses arising from changes in demographic assumptions	-5	4		
Remeasurements: Actuarial gains and losses arising from changes in financial assumptions	-122	190	-16	7
Participants' contributions	1	2	1	0
Benefits paid	-141	-132	-1	-1
Past service cost	0	2	0	
Effect of curtailment or settlement	-0	0	-2	
Exchange rate differences	109	-85	4	-8
Closing balance	**3,115**	**3,208**	**72**	**83**

Amounts recognised directly in Other comprehensive income were as follows:

Changes in the net defined benefit assets/liability remeasurement reserve

in EUR million	2021	2020
Opening balance	-307	-336
Remeasurement of plan assets	2	246
Actuarial gains and losses arising from changes in demographic assumptions	5	-4
Actuarial gains and losses arising from changes in financial assumptions	122	-190
Taxation and Exchange rate differences	-34	-24
Total Other comprehensive income movement for the year	**95**	**28**
Closing balance	**-212**	**-307**

In 2021, EUR 2 million remeasurement of plan assets that is recognised as a gain in other comprehensive income is driven by slightly higher yields on investments.
The EUR 122 million actuarial gains arising from changes in financial assumptions in the calculation of the defined benefit obligation are mainly due to an increase in discount rates.

The accumulated amount of remeasurements recognised directly in Other comprehensive income is EUR -262 million (EUR -212 million after tax) as at 31 December 2021 (2020: EUR -343 million; EUR -307 million after tax).

Amounts recognised in the statement of profit or loss related to pension and other staff related benefits are as follows:

Pension and other staff-related benefit costs

	Net defined benefit asset/liability			Other post-employment benefits			Total		
in EUR million	2021	2020	2019	2021	2020	2019	2021	2020	2019
Current service cost	33	31	28	1	-2	-1	34	29	27
Past service cost	0	2	-0	0			0	2	-0
Net Interest cost	-6	-6	-5	2	2	3	-4	-4	-3
Effect of curtailment or settlement	-0	0	0	-2			-2	0	0
Defined benefit plans	**27**	**27**	**23**	**1**	**0**	**2**	**28**	**28**	**25**
Defined contribution plans							369	356	340
Pension and other post employment benefits							**397**	**383**	**365**
Other staff related benefits							11	12	2
Pension and other staff-related benefits							**408**	**395**	**366**

Determination of the net defined benefit asset/liability

The net defined benefit asset/liability is reviewed and adjusted annually. The assumptions used in the determination of the net defined benefit asset/liability and the Other post-employment benefits include discount rates, mortality rates, expected rates of salary increases (excluding promotion increases), and indexation. The rates used for salary developments, interest discount factors, and other adjustments reflect country-specific conditions.

The key assumption in the determination of the net defined benefit asset/liability is the discount rate. The discount rate is the weighted average of the discount rates that are applied in different regions where ING Group has defined benefit pension plans (weighted by the defined benefit obligation). The discount rate is based on a methodology that uses market yields on high quality corporate bonds of the specific regions with durations matching the pension liabilities as key input. Market yields of high quality corporate bonds reflect the yield on corporate bonds with an AA rating for durations where such yields are available. An extrapolation is applied in order to determine the yield to the longer durations for which no AA-rated corporate bonds are available. As a result of the limited availability of long-duration AA-rated corporate bonds, extrapolation is an important element of the determination of the discount rate. The weighted average discount rate applied for net defined benefit asset/liability for 2021 was 1.5% (2020: 1.0%) based on the pension plan in the Netherlands, Germany, Belgium, The United States of America, and the United Kingdom. The average discount rate applied for Other post-employment benefits was 2.9% (2020: 2.7%).

Sensitivity analysis of key assumptions

ING performs sensitivity analysis on the most significant assumptions: discount rates, mortality, expected rate of salary increase, and indexation. The sensitivity analysis has been carried out under the assumption that the changes occurred at the end of the reporting period.

The sensitivity analysis calculates the financial impact on the defined benefit obligation of an increase or decrease of the weighted averages of each significant actuarial assumption, all other assumptions held constant. In practice, this is unlikely to occur, and some changes of the assumptions may be correlated. Changes to mortality, expected rate of salary increase, and indexation would have no material impact on the defined benefit obligation. The most significant impact would be from a change in the discount rate. An increase or decrease in the discount rate of 1% creates an impact on the defined benefit obligation of EUR-443 million (decrease) and EUR 549 million (increase), respectively.

Expected cash flows

Annual contributions are paid to the funds at a rate necessary to adequately finance the accrued liabilities of the plans calculated in accordance with local supervisory requirements. Plans in all countries are designed to comply with applicable local regulations governing investments and funding levels. ING Group's subsidiaries should fund the cost of the entitlements expected to be earned on a yearly basis.

For 2022 the expected contributions to defined benefit pension plans are EUR 33 million.
The benefit payments for defined benefit and other post-employment benefits expected to be made by the plan between 2022-2026 are estimated to be between EUR 113 million and EUR 136 million per year. From 2027 to 2031 the total payments made by the plan are expected to be EUR743 million.

38 Taxation

Statement of financial position – Deferred tax

Deferred taxes are recognised on all temporary differences under the liability method using tax rates applicable in the jurisdictions in which ING Group is subject to taxation.

Changes in deferred tax

2021	Net liability (-) Net asset (+) opening balance	Change through equity	Change through net result	Exchange rate differences	Changes in the composition of the group and other changes	Net liability (-) Net asset (+) ending balance
Financial assets at FVOCI	-108	29	-1	1	7	-72
Investment properties	2		-3			-1
Financial assets and liabilities at FVPL	1,202		-469	20	-7	746
Depreciation	-10		5	-2		-7
Cash flow hedges	-360	233		1		-126
Pension and post-employment benefits	36	-54	-23	-8		-49
Other provisions	-5		28	-4	-0	19
Loans and advances	517	-2	-83	-1	-0	430
Unused tax losses carried forward	63		129	7		199
Other	-83	-83	18	1	-0	-147
	1,253	**123**	**-399**	**15**	**-1**	**991**
Presented in the statement of financial position as:						
– Deferred tax liabilities	-343					-311
– Deferred tax assets	1,596					1,303
	1,253					**991**

The above table shows netted deferred tax amounts related to right-of-use assets and lease liabilities included in the row 'Other' a deferred tax amount for right-of-use assets of EUR 220 million (2020: EUR 306 million) and a deferred tax amount for lease liabilities of EUR 252 million (2020: EUR 326 million).

Financial assets and liabilities FVPL changes through net result in 2021 relates to the decrease in fair value of derivatives due to increased interest yield curves.

The deferred tax on cash flow hedges relate to floating rate lending with interest rate swaps. Due to an increase in the interest rate yield curve in 2021 there was a negative revaluation through other comprehensive income and an increase of the deferred tax asset of EUR 233 million.

Changes in deferred tax

2020	Net liability (-) Net asset (+) opening balance	Change through equity	Change through net result	Exchange rate differences	Changes in the composition of the group and other changes	Net liability (-) Net asset (+) ending balance
Financial assets at FVOCI	-107	10	-10	0		-108
Investment properties	-7		3	0	5	2
Financial assets and liabilities at FVPL	947		246	10		1,202
Depreciation	-19		6	2		-10
Cash flow hedges	-337	-23		0		-360
Pension and post-employment benefits	42	-8	-5	7	-0	36
Other provisions	6		-4	-7	0	-5
Loans and advances	490	-1	42	-15	0	517
Unused tax losses carried forward	61		7	-5		63
Other	-156	62	16	-1	-5	-83
Total	**920**	**40**	**301**	**-9**	**0**	**1,253**
Presented in the statement of financial position as:						
– deferred tax liabilities	-322					-343
– deferred tax assets	1,242					1,596
	920					**1,253**

The above table shows netted deferred tax amounts related to right-of-use assets and lease liabilities included in the row 'Other' a deferred tax amount for right-of-use assets of EUR 306 million (2019: EUR 370 million) and a deferred tax amount for lease liabilities of EUR 326 million (2019: EUR 376 million).

Financial assets and liabilities FVPL changes through net result in 2020 relates to the increase in fair value of derivatives due to decreased interest yield curves.

Deferred tax in connection with unused tax losses carried forward

	2021	2020
Total unused tax losses carried forward	2,165	1,675
Unused tax losses carried forward not recognised as a deferred tax asset	819	903
Unused tax losses carried forward recognised as a deferred tax asset	**1,345**	**772**
Average tax rate	22.3%	22.0%
Deferred tax asset	300	170

Total unused tax losses carried forward analysed by expiry terms

	No deferred tax asset recognised		Deferred tax asset recognised	
	2021	2020	2021	2020
Within 1 year		1		
More than 1 year but less than 5 years	3	4	642	57
More than 5 years but less than 10 years	9	92		8
More than 10 years but less than 20 years				
Unlimited	808	806	704	707
	819	**903**	**1,345**	**772**

The above mentioned deferred tax asset of EUR 300 million (2020: EUR 170 million) and the related unused tax losses carried forward exclude the deferred tax liability recognised in the Netherlands with respect to the recapture of tax losses originated in the United Kingdom but previously deducted in the Netherlands for the amount of EUR 102 million (2020: EUR 107 million).

Deferred tax assets are recognised for temporary deductible differences, for tax losses carried forward and unused tax credits only to the extent that realisation of the related tax benefit is probable.

Breakdown of certain net deferred tax asset positions by jurisdiction	2021	2020
Italy		86
Poland	265	
France	66	28
Philippines	7	
China	12	
Czech	2	
Hong Kong	1	
United States of America	1	
	354	**114**

The table above includes a breakdown of certain net deferred tax asset positions by jurisdiction for which the utilisation of the deferred tax asset is dependent on future taxable profits in excess of the profits arising from the reversal of existing taxable temporary differences whilst the related entities have incurred losses in either the current or the preceding year.

In 2021 ING Bank Slaski (Poland) incurred a tax loss following the large value changes of the cash flow hedge derivatives which are settled net via a central counter party. This tax loss can be carried forward for 5 years. Based on a taxable profit forecast, ING considers it probable that the future taxable profits will compensate for this tax loss carry forward position within 2 years. Based on this a deferred tax asset on unused tax losses carried forward (EUR 117 million) is fully recognised during 2021. The remaining deferred tax amount in Poland of EUR 148 million relates to temporary tax differences on loans and advances and financial assets at fair value through profit and loss.

Recognition is based on the fact that it is probable that the entity will have taxable profits and/or can utilise tax planning opportunities before expiration of the deferred tax assets. Changes in circumstances in future periods may adversely impact the assessment of the recoverability. The uncertainty of the recoverability is taken into account in establishing the deferred tax assets.

At 31 December 2021 and at 31 December 2020, ING Groep N.V. had no significant temporary differences associated with the parent company's investments in subsidiaries as any economic benefit from those investments will not be taxable at parent company level.

Statement of profit or loss – Taxation

Taxation by type

	Netherlands			Rest of the world			Total		
in EUR million	2021	2020	2019	2021	2020	2019	2021	2020	2019
Current taxation	459	355	488	1,448	1,016	1,481	1,908	1,371	1,970
Deferred taxation	269	-72	-51	129	-230	-267	399	-301	-318
	729	**284**	**437**	**1,578**	**786**	**1,214**	**2,306**	**1,070**	**1,652**

Reconciliation of the weighted average statutory income tax rate to ING Group's effective income tax rate

in EUR million	2021	2020	2019
Result before tax from continuing operations	8,385	3,399	5,653
Weighted average statutory tax rate	24.7%	25.2%	25.8%
Weighted average statutory tax amount	**2,074**	**856**	**1,459**
Permanent differences affecting current tax			
Participation exemption	-68	-46	-49
Other income not subject to tax	-32	-6	-76
Expenses not deductible for tax purposes	201	320	237
Current tax from previously unrecognised amounts	51	17	48
State and local taxes	64	44	72
Adjustments to prior periods	-12	-85	16
Differences affecting deferred tax			
Impact on deferred tax from change in tax rates	9	-47	-57
Deferred tax benefit from previously unrecognised amounts	-18	-6	
Write-off/reversal of deferred tax assets	37	24	2
Effective tax amount	**2,306**	**1,070**	**1,652**
Effective tax rate	**27.5%**	**31.5%**	**29.2%**

The weighted average statutory tax rate in 2021 (24.7%) is slightly lower compared to that of 2020 (25.2%).

The effective tax rate of 27.5% in 2021 is higher than the weighted average statutory tax rate. This is mainly caused by expenses non-deductible for tax purposes like the non-deductible bank tax and a tax charge caused by the recapture of tax losses originated in the United Kingdom but previously deducted in the Netherlands.

The weighted average statutory tax rate in 2020 (25.2%) was slightly lower compared to the 25.8% of 2019.

The effective tax rate of 31.5% in 2020 was significantly higher than the weighted average statutory tax rate. This is mainly caused by a high amount of expenses non-deductible for tax purposes like the non-deductible bank tax and non-deductible losses with respect to goodwill impairments and impairments on associates in the Netherlands and in some other European countries.

Adjustments to prior periods in 2020 relates to a release of a tax provision of EUR 68 million after concluding on a settlement with the Australian tax authorities with respect to an issue related to former insurance activities, which issue was fully indemnified by NN Group.

The effective tax rate of 29.2% in 2019 was higher than the weighted average statutory tax rate. This was mainly caused by a high amount of expenses non-deductible for tax purposes with respect to interest on additional Tier 1 securities and non-deductible bank tax in the Netherlands and regulatory expenses non-deductible for tax purposes in some other European countries.

Equity – Other comprehensive income

Income tax related to components of other comprehensive income			
in EUR million	2021	2020	2019
Unrealised revaluations financial assets at fair value through other comprehensive income and other revaluations	17	-1	11
Realised gains/losses transferred to the statement of profit or loss (reclassifications from equity to profit or loss)	12	10	12
Changes in cash flow hedge reserve	233	-23	-199
Remeasurement of the net defined benefit asset/liability	-54	-8	-14
Changes in fair value of own credit risk of financial liabilities at fair value through profit or loss	-8	-1	7
Exchange rate differences and other	-77	62	7
Total income tax related to components of other comprehensive income	**123**	**40**	**-176**

Tax Contingency

The contingent liability (also disclosed in note 45 ‘Contingent liabilities’) in connection with taxation in the Netherlands refers to a possible obligation arising from the deduction from Dutch taxable profit of losses incurred by ING Bank in the United Kingdom in previous years. The existence of this obligation will be confirmed only by the occurrence of future profits in the United Kingdom.

39 Fair value of assets and liabilities

a) Valuation Methods

The estimated fair values represent the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It is a market-based measurement, which is based on assumptions that market participants would use and takes into account the characteristics of the asset or liability that market participants would take into account when pricing the asset or liability.

Fair values of financial assets and liabilities are based on quoted prices in active market where available. When such quoted prices are not available, the fair value is determined by using valuation techniques.

b) Valuation Control framework

The valuation control framework covers the product approval process (PARP), pricing, independent price verification (IPV), valuation adjustments, and model use. Valuation processes are governed by various governance bodies, including Local Parameter Committees, Global Price Testing and Impairment Committee, Market Data Committee and Valuation Model Committee. All relevant committees meet on a regular basis (monthly/quarterly), where agenda covers the aforementioned valuation controls.

The Global Price Testing and Impairment Committee is responsible for the oversight and the approval of the outcome of impairments (other than loan loss provisions) and valuation processes. It oversees the quality and coherence of valuation methodologies and performance. The Valuation Model Committee is responsible for the approval of fair value pricing models and fair and prudent valuation adjustment models and the Local Parameter Committee monitors the appropriateness of (quoted) pricing, any other relevant market info, as well as the appropriateness of pricing models themselves related to the fair valued positions to which they are applied. The Local Parameter Committee executes valuation methodology and processes at a local level. The Market Data Committee approves and reviews all pricing inputs for the calculation of market parameters.

c) Valuation Adjustments

Valuation adjustments are an integral part of the fair value. They are included as part of the fair value to provide better estimation of market exit value on measurement date. ING considers various valuation adjustments to arrive at the fair value including Bid-Offer adjustments, Model Risk adjustments, Credit Valuation Adjustments (CVA), Debit valuation Adjustments (DVA), including DVA on derivatives and own issued liabilities, Collateral Valuation Adjustment (CollVA) and Funding Valuation Adjustment (FVA)'.

For financial instruments measured by internal models where one or more unobservable market inputs are significant for valuation, a difference between the transaction price and the theoretical price resulting from the internal model can occur. ING defers material Day One profit or loss relating to financial instruments classified as Level 3 and financial instruments with material unobservable inputs into CVA which are not necessarily classified as Level 3. The Day One profit or loss is amortised over the life of the instrument or until the observability improves. Both the impact on the profit and loss per year end 2021 and the Day One profit or loss reserve in the balance sheet as per 31 December 2021 are deemed to be immaterial.

The following table presents the models reserves for financial assets and liabilities:

Valuation adjustment on financial assets and liabilities

as at 31 December	2021	2020
Bid/Offer	-143	-121
Model Risk	-11	-25
CVA	-159	-238
DVA	-66	-124
CollVA	-8	-16
FVA	-95	-111
Total Valuation Adjustments	**-482**	**-634**

Bid-Offer Adjustment

Bid-Offer adjustments are required to adjust mid-market values to appropriate bid or offer value in order to best represent the exit value, and therefore fair value. It is applicable to financial assets and liabilities that are valued at mid-price initially. In practice this adjustment accounts for the difference in valuation from mid to bid and mid to offer for long and short exposures respectively. In principle assets are valued at the bid prices and liabilities are valued at the offer price. For certain assets or liabilities, where a market quoted price is not available, the price used is the fair value that is most representative within the bid-offer spread.

Model Risk Adjustment

Model risk adjustments addresses the risk of possible financial losses resulting from the use of a mis-specified, misapplied, or incorrect implementation of a model.

Credit Valuation Adjustment (CVA)

Credit Valuation Adjustment (CVA) is the adjustment on the fair value of a derivative trade to account for the possibility that a counterparty can go into default. In other words, it is the market value of counterparty credit risk. On the contrary, Debit Valuation Adjustment (DVA) reflects the credit risk of ING for its counterparty. CVA and DVA combinedly are regarded as the Bilateral Valuation Adjustment (BVA). The calculation of CVA is based on the estimation of the expected exposure, the counterparties' risk of default, and taking into account the collateral agreements as well as netting agreements. The counterparties' risk of default is measured by probability of default and expected loss given default, which is based on market information including credit default swap (CDS) spread. Where counterparty CDS spreads are not available, relevant proxy spreads are used. Additionally, wrong-way risk (when exposure to a counterparty is increasing and the credit quality of that counterparty deteriorates) and right-way risk (when exposure to a counterparty is increasing and the credit quality of that counterparty improves) are included in the adjustment.

Debit Valuation Adjustment (DVA)

ING recognises two types of Debit Valuation Adjustments, namely DVA on derivatives, as aforementioned and DVA on own issued financial liabilities. The application of DVA on own issued financial liabilities is for those financial liabilities measured at fair value through profit or loss, if the credit risk component has not been included in the prices. In this DVA calculation, the default probability of the institution are estimated based on the ING Credit spread.

Collateral Valuation Adjustment (CollVA)

Collateral Valuation Adjustment is a derivative valuation adjustment capturing specific features of CSA (Credit Support Annex) with a counterparty that the regular valuation framework does not capture. Non-standard CSA features may include deviations in relation to the currency in which ING posts or receives collateral, deviations in remuneration rate on collateral which may pay lower or higher rate than overnight rate or even no interest at all. Other deviations can be posting securities rather than cash as collateral.

Funding Valuation Adjustment (FVA)

ING applies an additional 'Funding Valuation Adjustment' (FVA) to address the funding costs associated with the collateral funding asymmetry on uncollateralized or partially collateralized derivatives in the portfolio. This adjustment is based on the expected exposure profiles of the uncollateralized or partially collateralized OTC derivatives and market-based funding spreads.

d) Fair value hierarchy

ING Group has categorised its financial instruments that are either measured in the statement of financial position at fair value or of which the fair value is disclosed, into a three level hierarchy based on the observability of the valuation inputs from (unadjusted) quoted prices. Highest priority is retained to (unadjusted) quoted prices in active markets for identical assets or liabilities and the lowest priority to valuation techniques supported by unobservable inputs.

Transfers into and transfers out of fair value hierarchy levels are made on a quarterly basis at the end of the reporting period.

Level 1 – (Unadjusted) quoted prices in active markets

This category includes financial instruments whose fair value is determined directly by reference to (unadjusted) quoted prices in an active market. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer markets, brokered markets, or principal to principal markets. Those prices represent actual and regularly occurring market transactions with sufficient frequency and volume to provide pricing information on an ongoing basis. Transfers out of Level 1 into Level 2 or Level 3 occur when ING Group establishes that markets are no longer active and therefore (unadjusted) quoted prices no longer provide reliable pricing information.

Level 2 – Valuation technique supported by observable inputs

This category includes financial instruments whose fair value is based on market observables other than (unadjusted) quoted prices. The fair value for financial instruments in this category can be determined by reference to quoted prices for similar instruments in active markets, but for which the prices are modified based on other market observable external data or reference to quoted prices for identical or similar instruments in markets that are not active. These prices can be obtained from a third party pricing service. ING analyses how the prices are derived and determines whether the prices are liquid tradable prices or model based consensus prices taking various data as inputs.

For financial instruments that do not have a reference price available, fair value is determined using a valuation technique (e.g. a model), where inputs in the model are taken from an active market or are observable, such as interest rates and yield curves observable at commonly quoted intervals, implied volatilities, and credit spreads.

Instruments, where inputs are unobservable are classified in this category, provided that the impact of those unobservable inputs on the overall valuation is insignificant. The notion of significant is particularly relevant for the distinction between Level 2 and Level 3 assets and liabilities. If the combined change in asset value resulting from the shift of the unobservable parameters and the model uncertainty exceeds the threshold, the asset is classified as Level 3. A value change below the threshold results in a Level 2 classification.

Level 3 – Valuation technique supported by unobservable inputs

This category includes financial instruments whose fair value is determined using a valuation technique (e.g. a model), for a significant part of the overall valuation the valuation input is unobservable, or is determined by reference to price quotes where the market is considered inactive. Unobservable inputs are inputs which are based on the Group's own assumptions about the factors that market participants would use in pricing an asset or liability, developed based on the best information available in the market. Unobservable inputs may include volatility, correlation, spreads to discount rates, default rates and recovery rates, prepayment rates, and certain credit spreads.

Financial instruments at fair value

The fair values of the financial instruments were determined as follows:

Methods applied in determining fair values of financial assets and liabilities (carried at fair value)

	Level 1		Level 2		Level 3		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Financial Assets								
Financial assets at fair value through profit or loss								
- Equity securities	17,591	7,897	2	2	134	138	17,727	8,037
- Debt securities	2,317	3,378	7,016	4,867	2,643	1,269	11,976	9,514
- Derivatives	6	1	21,154	30,623	140	197	21,299	30,821
- Loans and receivables			48,706	53,733	2,248	1,265	50,954	54,998
	19,914	**11,276**	**76,877**	**89,225**	**5,165**	**2,870**	**101,956**	**103,370**
Financial assets at fair value through other comprehensive income								
- Equity securities	2,232	1,687			225	176	2,457	1,862
- Debt securities	21,753	31,592	5,587	1,385			27,340	32,977
- Loans and receivables					838	1,056	838	1,056
	23,984	**33,279**	**5,587**	**1,385**	**1,063**	**1,231**	**30,635**	**35,895**
Financial liabilities								
Financial liabilities at fair value through profit or loss								
– Debt securities	827	1,124	5,333	5,231	135	180	6,295	6,534
– Deposits		1	43,026	48,111		2	43,026	48,114
– Trading securities	955	699	120	70	0	0	1,075	768
– Derivatives	63	55	20,388	27,094	195	217	20,646	27,365
	1,844	**1,879**	**68,867**	**80,505**	**330**	**398**	**71,041**	**82,781**

The following methods and assumptions were used by ING Group to estimate the fair value of the financial instruments:

Equity securities

Instrument description: Equity securities include stocks and shares, corporate investments and private equity investments.

Valuation: If available, the fair values of publicly traded equity securities and private equity securities are based on quoted market prices. In absence of active markets, fair values are estimated by analysing the investee’s financial position, result, risk profile, prospect, price, earnings comparisons and revenue multiples. Additionally, reference is made to valuations of peer entities where quoted prices in active markets are available. For equity securities best market practice will be applied using the most relevant valuation method. All non-listed equity investments, including investments in private equity funds, are subject to a standard review framework which ensures that valuations reflect the fair values.

Fair value hierarchy: The majority of equity securities are publicly traded and quoted prices are readily and regularly available. Hence, these securities are classified as Level 1. Equity securities which are not traded in active markets mainly include corporate investments, fund investments and other equity securities and are classified as Level 3.

Debt securities

Instrument description: Debt securities include government bonds, financial institutions bonds and Asset-backed securities (ABS).

Valuation: Where available, fair values for debt securities are generally based on quoted market prices. Quoted market prices are obtained from an exchange market, dealer, broker, industry group, pricing service, or regulatory service. The quoted prices from non-exchange sources are reviewed on their tradability of market prices. If quoted prices in an active market are not available, fair value is based on an analysis of available market inputs, which includes consensus prices obtained from one or more pricing services. Furthermore, fair values are determined by valuation techniques discounting expected future cash flows using a market interest rate curves, referenced credit spreads, maturity of the investment, and estimated prepayment rates where applicable.

Fair value hierarchy: Government bonds and financial institutions bonds are generally traded in active markets, where quoted prices are readily and regularly available and are hence, classified as Level 1. The remaining positions are classified as Level 2 or Level 3. Asset backed securities for which no active market is available and a wide discrepancy in quoted prices exists, are classified as Level 3.

Derivatives

Instrument description: Derivatives contracts can either be exchange-traded or over the counter (OTC). Derivatives include interest rate derivatives, FX derivatives, Credit derivatives, Equity derivatives and commodity derivatives.
Valuation: The fair value of exchange-traded derivatives is determined using quoted market prices in an active market and are classified as Level 1 of the fair value hierarchy. For instruments that are not actively traded, fair values are estimated based on valuation techniques. OTC derivatives and derivatives trading in an inactive market are valued using valuation techniques. The valuation techniques and inputs depend on the type of derivatives and the nature of the underlying instruments. The principal techniques used to value these instruments are based on (amongst others) discounted cash flows option pricing models and Monte Carlo simulations. These valuation models calculate the present value of expected future cash flows, based on 'no-arbitrage' principles. The models are commonly used in the financial industry and inputs to the validation models are determined from observable market data where possible. Certain inputs may not be observable in the market, but can be determined from observable prices via valuation model calibration procedures. These inputs include prices available from exchanges, dealers, brokers or providers of pricing, yield curves, credit spreads, default rates, recovery rates, dividend rates, volatility of underlying interest rates, equity prices, and foreign currency exchange rates and reference is made to quoted prices, recently executed trades, independent market quotes and consensus data, where available.
For uncollateralised OTC derivatives, ING applies Credit Valuation Adjustment to correctly reflect the counterparty credit risk in the valuation and Debit Valuation Adjustments to reflect the credit risk of ING for its counterparty. See sections CVA/DVA in section c) Valuation Adjustments for more details regarding the calculation.
Fair value hierarchy: The majority of the derivatives are priced using observable inputs and are classified as Level 2. Derivatives for which the input cannot be implied from observable market data are classified as Level 3.

Loans and receivables

Instrument description: Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables carried at fair value includes trading loans, being securities lending and similar agreement comparable to collateralised lending, syndicated loans, loans expected to be sold and receivables with regards to reverse repurchase transactions.
Valuation: The fair value of loans and receivables are generally based on quoted market prices. The fair value of other loans is estimated by discounting expected future cash flows using a discount rate that reflects credit risk, liquidity, and other current market conditions. The fair value of mortgage loans is estimated by taking into account prepayment behaviour.
Fair value hierarchy: Loans and receivables are predominantly classified as Level 2. Loans and receivables for which current market information about similar assets to use as observable, corroborated data for all significant inputs into a valuation model is not available are classified as Level 3.

Financial liabilities at fair value through profit and loss

Instrument description: Financial liabilities at fair value through profit and loss include debt securities, debt instruments, primarily comprised of structured notes, which are held at fair value under the fair value option. Besides that, it includes derivative contracts and repurchase agreements.
Valuation: The fair values of securities in the trading portfolio and other liabilities at fair value through profit or loss are based on quoted market prices, where available. For those securities not actively traded, fair values are estimated based on internal discounted cash flow valuation techniques using interest rates and credit spreads that apply to similar instruments.
Fair value hierarchy: The majority of the derivatives are classified as Level 2. Derivatives for which the input cannot be derived from observable market data are classified as Level 3.

e) Transfers between Level 1 and 2

As a consequence of a change in the levelling methodology of INGs bond portfolio in 2021, ING recorded an EUR 2.6 billion and EUR 0.8 billion transfer from Level 1 to Level 2 respectively in debt securities measured at fair value through other comprehensive income and debt securities measured at fair value through profit or loss. No significant transfers from Level 2 to Level 1 were recorded in the reporting period 2021.

f) Level 3: Valuation techniques and inputs used

Financial assets and liabilities in Level 3 include both assets and liabilities for which the fair value was determined using (i) valuation techniques that incorporate unobservable inputs as well as (ii) quoted prices which have been adjusted to reflect that the market was not actively trading at or around the balance sheet date. Unobservable inputs are inputs which are based on ING's own assumptions about the factors that market participants would use in pricing an asset or liability, developed based on the best information available in the circumstances. Unobservable inputs may include volatility, correlation, spreads to discount rates, default rates and recovery rates, prepayment rates, and certain credit spreads. Valuation techniques that incorporate unobservable inputs are sensitive to the inputs used.

Of the total amount of financial assets classified as Level 3 as at 31 December 2021 of EUR 6.2 billion (31 December 2020: EUR 4.1 billion), an amount of EUR 2.0 billion (32.5%) (31 December 2020: EUR 2.1 billion, being 52.3%) is based on unadjusted quoted prices in inactive markets. As ING does not generally adjust quoted prices using its own inputs, there is no significant sensitivity to ING's own unobservable inputs.

Furthermore, Level 3 financial assets includes approximately EUR 2.9 billion (31 December 2020: EUR 0.9 billion) which relates to financial assets that are part of structures that are designed to be fully neutral in terms of market risk. Such structures include various financial assets and liabilities for which the overall sensitivity to market risk is insignificant. Whereas the fair value of individual components of these structures may be determined using different techniques and the fair value of each of the components of these structures may be sensitive to unobservable inputs, the overall sensitivity is by design not significant.

The remaining EUR 1.3 billion (31 December 2020: EUR 1.1 billion) of the fair value classified in Level 3 financial assets is established using valuation techniques that incorporates certain inputs that are unobservable.

Of the total amount of financial liabilities classified as Level 3 as at 31 December 2021 of EUR 0.3 billion (31 December 2020: EUR 0.4 billion), an amount of EUR 0.1 billion (42.0%) (31 December 2020: EUR 0.1 billion, being 34.6%) is based on unadjusted quoted prices in inactive markets. As ING does not generally adjust quoted prices using its own inputs, there is no significant sensitivity to ING's own unobservable inputs.

Furthermore, Level 3 financial liabilities includes approximately EUR 0.1 billion (31 December 2020: EUR 0.1 billion) which relates to financial liabilities that are part of structures that are designed to be fully neutral in terms of market risk. As explained above, the fair value of each of the components of these structures may be sensitive to unobservable inputs, but the overall sensitivity is by design not significant.

The remaining EUR 0.1 billion (31 December 2020: EUR 0.2 billion) of the fair value classified in Level 3 financial liabilities is established using valuation techniques that incorporates certain inputs that are unobservable.
The table below provides a summary of the valuation techniques, key unobservable inputs and the lower and upper range of such unobservable inputs, by type of Level 3 asset/liability. The lower and upper range mentioned in the overview represent the lowest and highest variance of the respective valuation input as actually used in the valuation of the different financial instruments. Amounts and percentages stated are unweighted. The range can vary from period to period subject to market movements and change in Level 3 position. Lower and upper bounds reflect the variability of Level 3 positions and their underlying valuation inputs in the portfolio, but do not adequately reflect their level of valuation uncertainty. For valuation uncertainty assessment, reference is made to section Sensitivity analysis of unobservable inputs (Level 3).

Valuation techniques and range of unobservable inputs (Level 3)

	Assets		Liabilities		Valuation techniques	Significant unobservable inputs	Lower range		Upper range	
In EUR million	2021	2020	2021	2020			2021	2020	2021	2020
At fair value through profit or loss										
Debt securities	2,643	1,269			Price based	Price (%)	0%	0%	121%	107%
Equity securities	134	137		1	Price based	Price (price per share)	0	0	5,475	5,475
Loans and advances	1,598	1,090		2	Price based	Price (%)	0%	0%	100%	101%
					Present value techniques	Credit spread (bps)	0	0	250	250
(Reverse) repo's	650	176			Present value techniques	Interest rate (%)	0%	3%	1%	4%
Structured notes			135	180	Price based	Price (%)	84%	74%	125%	109%
					Option pricing model	Equity volatility (%)	13%	14%	30%	25%
						Equity/Equity correlation	n.a.	0.6	n.a.	0.9
						Equity/FX correlation	0	-0.7	0	0.3
						Dividend yield (%)	3%	0%	4%	5%
Derivatives										
– Rates	5	2	35	38	Option pricing model	Interest rate volatility (bps)	43	12	82	70
					Present value techniques	Reset spread (%)	2%	2%	2%	2%
– FX	27		30		Present value techniques	FX volatility (%)	1%	n.a.	16%	n.a.
					Option pricing model	FX volatility (bps)	n.a.	6	n.a.	10
						Implied volatility (%)	1%	n.a.	22%	n.a.
– Credit	75	168	94	154	Present value techniques	Credit spread (bps)	1	2	359	1,403
						Jump rate (%)	n.a.	n.a.	n.a.	n.a.
					Price based	Price (%)	0%	99%	100%	107%
– Equity	30	24	27	20	Option pricing model	Equity volatility (%)	11%	5%	119%	64%
						Equity/Equity correlation	0.5	0.5	0.8	0.9
						Equity/FX correlation	-0.7	-0.6	0.1	0.1
						Dividend yield (%)	0%	0%	18%	34%
					Price based	Price (%)	0%	3%	0%	3%
– Other	3	3	9	3	Option pricing model	Commodity volatility (%)	20%	18%	89%	55%
						Com/Com correlation	n.a.	n.a.	n.a.	n.a.
						Com/FX correlation	n.a.	-0.5	n.a.	-0.3
At fair value through other comprehensive income										
– Loans and advances	838	1,056			Present value techniques	Prepayment rate (%)	9%	9%	9%	9%
					Price based	Price (%)	99%	99%	100%	99%
– Equity	225	176			Present value techniques	Credit spread (bps)	2	2	2	2
						Interest rate (%)	3%	3%	3%	3%
					Price based	Price (%)	1%	n/a	1%	n/a
					Price based	Other (EUR)	63	63	80	80
Total	**6,228**	**4,101**	**330**	**398**						

Price

For securities where market prices are not available fair value is measured by comparison with observable pricing data from similar instruments. Prices of 0% are distressed to the point that no recovery is expected, while prices significantly in excess of 100% or par are expected to pay a yield above current market rates.

Credit spreads

Credit spread is the premium above a benchmark interest rate required by the market participant to accept a lower credit quality. Higher credit spreads indicate lower credit quality and a lower value of an asset.

Volatility

Volatility is a measure for variation of the price of a financial instrument or other valuation input over time. Volatility is one of the key inputs in option pricing models. Typically, the higher the volatility, the higher value of the option. Volatility varies by the underlying reference (equity, commodity, foreign currency and interest rates), by strike, and maturity of the option. The minimum level of volatility is 0% and there is no theoretical maximum.

Correlation

Correlation is a measure of dependence between two underlying references which is relevant for valuing derivatives and other instruments having more than one underlying reference. High positive correlation (close to 1) indicates strong positive (statistical) relationship, where underliers move, everything else equal, into the same direction. The same holds for a high negative correlation.

Reset spread

Reset spreads are key inputs to mortgage linked prepayment swaps valuation. Reset spread is the future spread at which mortgages will re-price at interest rate reset dates.

Inflation rate

Inflation rate is a key input to inflation linked instruments. Inflation linked instruments protect against price inflation and are denominated and indexed to investment units. Interest payments would be based on the inflation index and nominal rate in order to receive/pay the real rate of return. A rise in nominal coupon payments is a result of an increase in inflation expectations, real rates, or both.

Dividend yield

Dividend yield is an important input for equity option pricing models showing how much dividends a company is expected to pay out each year relative to its share price. Dividend yields are generally expressed as an annualised percentage of share price.

Jump rate

Jump rates simulate abrupt changes in valuation models. The rate is an added component to the discount rate in the model to include default risks.

Prepayment rate

Prepayment rate is a key input to mortgage and loan valuation. Prepayment rate is the estimated rate at which mortgage borrowers will repay their mortgages early, e.g. 5% per year. Prepayment rate and reset spread are key inputs to mortgage linked prepayment swaps valuation

Level 3: Changes during the period

Changes in Level 3 Financial assets

	Trading assets		Non-trading derivatives		Financial assets mandatorily at FVPL		Financial assets designated at FVPL		Financial assets at FVOCI		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Opening balance	882	174	1	8	1,191	1,381	796	1,244	1,231	1,961	4,101	4,768
Realised gain/loss recognised in the statement of profit or loss during the period [1]	22	–61	0	–1	32	–104	–80	–198	–12	–19	–37	–383
Revaluation recognised in other comprehensive income during the period [2]									22	–46	22	–46
Purchase of assets	453	453	3	3	1,496	1,180	1,919	212	165	39	4,036	1,887
Sale of assets	–48	–73	–3	–8	–612	–973	–141	–270	–234	–419	–1,037	–1,743
Maturity/settlement	–14	–39		–1	–163	–83	–13	–57	–109	–175	–299	–354
Reclassifications					–5	330			–6	–105	–11	224
Transfers into Level 3	43	517			–1	6		1	–1	–1	42	523
Transfers out of Level 3	–517	–90	–1	0	–98	–528		–138			–615	–755
Exchange rate differences		0			20	–24			9	–4	29	–27
Changes in the composition of the group and other changes					0	5			–2	1	–2	6
Closing balance	**822**	**882**	**1**	**1**	**1,862**	**1,191**	**2,480**	**796**	**1,063**	**1,231**	**6,228**	**4,101**

1 Net gains/losses were recorded as 'Valuation results and net trading income' in the statement of profit or loss. The total amounts includes EUR 50 million (2020: EUR 312 million) of unrealised gains and losses recognised in the statement of profit or loss.
2 Revaluation recognised in other comprehensive income is included on the line 'Net change in fair value of debt instruments at fair value through other comprehensive income'.

In 2020, the transfer into Level 3 assets is mainly driven by debt securities that are part of a structure transferred into level 3 due to market illiquidity which decreased observability for an input. In 2021, these instruments transferred out of Level 3 due to the valuation not being significantly impacted by unobservable inputs.

In 2021, transfers out of Level 3 of financial assets designated at fair value mainly relate to (long term) reverse repurchase transactions that were transferred out of Level 3 due to the valuation not being significantly impacted by unobservable inputs.

In 2020, transfers out of Level 3 is mainly related to debt obligations due to the valuation no longer being significantly impacted by unobservable inputs.

In 2020, reclassification relate to a re-review of the general terms of a portfolio of securitization loans, the underlying pools of assets are exposed to residual value risk. Consequently, the portfolio of EUR 0.3 billion, which is classified at Level 3, was incorrectly measured at amortised cost and therefore reclassified to mandatorily fair value through profit or loss. Furthermore, it relates to ING's investment in Visa preference series C shares, reference is made to Note 5 'Financial assets at fair value through other comprehensive income'.

Changes in Level 3 Financial liabilities

	Trading liabilities		Non-trading derivatives		Financial liabilities designated as at fair value through profit or loss		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Opening balance	180	195	39	110	180	184	398	490
Realised gain/loss recognised in the statement of profit or loss during the period[1]	101	-2	-0	20	13	-22	113	-4
Additions	58	55	3	19	52	662	113	736
Redemptions	-10	-116	-3	-45	-140	-90	-153	-250
Maturity/settlement	-44	-11		-52	-1	-83	-45	-146
Transfers into Level 3	48	170		8	233	267	282	445
Transfers out of Level 3	-173	-111	-3	-23	-203	-738	-378	-873
Closing balance	**160**	**180**	**35**	**39**	**135**	**180**	**330**	**398**

1 Net gains/losses were recorded as 'Valuation results and net trading income' in the statement of profit or loss. The total amount includes EUR 113 million (2020: EUR -4 million) of unrealised gains and losses recognised in the statement of profit or loss.

In 2020 and 2021, financial liabilities transfers into and out of Level 3 mainly consist of structures notes, measured as designated at fair value through profit or loss. The structured notes are transferred out of Level 3 as the valuation is no longer impacted by significantly unobservable inputs.

In 2020, financial liabilities mainly (long term) repurchase transactions were transferred out of Level 3 mainly due to the valuation not being significantly impacted by unobservable inputs.

g) Recognition of unrealised gains and losses in Level 3

Amounts recognised in the statement of profit or loss relating to unrealised gains and losses during the year that relates to Level 3 assets and liabilities are included in the line item 'Valuation results and net trading income' in the statement of profit or loss.

In 2020 and 2021, unrealised gains and losses that relate to 'Financial assets at fair value through other comprehensive income' are included in the Revaluation reserve – Equity securities at fair value through other comprehensive income or Debt Instruments at fair value through other comprehensive income.

h) Level 3: Sensitivity analysis of unobservable inputs

Where the fair value of a financial instrument is determined using inputs which are unobservable and which have a more than insignificant impact on the fair value of the instrument, the actual value of those inputs at the balance date may be drawn from a range of reasonably possible alternatives. In line with market practice the upper and lower bounds of the range of alternative input values reflect a 90% level of valuation certainty. The actual levels chosen for the unobservable inputs in preparing the financial statements are consistent with the valuation methodology used for fair valued financial instruments.

In practice valuation uncertainty is measured and managed per exposure to individual valuation inputs (i.e. risk factors) at portfolio level across different product categories. Where the disclosure looks at individual Level 3 inputs the actual valuation adjustments may also reflect the benefits of portfolio offsets.

This disclosure does not attempt to indicate or predict future fair value movement. The numbers in isolation give limited information as in most cases these Level 3 assets and liabilities should be seen in combination with other instruments (for example as a hedge) that are classified as Level 2.

The valuation uncertainty in the table below is broken down by related risk class rather than by product. The possible impact of a change of unobservable inputs in the fair value o of financial instruments where unobservable inputs are significant to the valuation is as follows:

Sensitivity analysis of Level 3 instruments

	Positive fair value movements from using reasonable possible alternatives		Negative fair value movements from using reasonable possible alternatives	
	2021	2020	2021	2020
Equity (equity derivatives, structured notes)	3	33	-27	-14
Interest rates (Rates derivatives, FX derivatives)	15	20	-1	-1
Credit (Debt securities, Loans, structured notes, credit derivatives)	27	43	-2	-27
	45	**96**	**-30**	**–42**

i) Financial instruments not measured at fair value

The following table presents the estimated fair values of the financial instruments not measured at fair value in the statement of financial position. The aggregation of the fair values presented below does not represent, and should not be construed as representing, the underlying value of ING Group.

Methods applied in determining fair values of financial assets and liabilities (carried at amortised cost)

	Carrying Amount		Carrying amount approximates fair value		Level 1		Level 2		Level 3		Total fair value	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Financial Assets												
Loans and advances to banks	23,592	25,364	1,675	2,165	1	0	6,610	7,763	15,349	15,611	23,635	25,539
Loans and advances to customers[1, 2]	625,122	593,970	16,939	17,486	0	0	18,465	14,595	600,253	577,526	635,657	609,607
Securities at amortised cost[1]	48,319	50,587	–0	0	40,314	49,109	7,327	2,550	681	622	48,323	52,281
	697,032	**669,921**	**18,614**	**19,651**	**40,316**	**49,109**	**32,403**	**24,908**	**616,282**	**593,759**	**707,614**	**687,427**
Financial liabilities												
Deposits from banks	85,092	78,098	4,298	3,918	0		75,847	68,473	5,890	6,014	86,035	78,405
Customer deposits	617,400	609,517	585,929	580,262	–0		20,089	14,007	11,624	15,704	617,641	609,972
Debt securities in issue[1]	91,784	82,065		–0	37,345	51,906	40,704	24,005	15,036	6,449	93,085	82,360
Subordinated loans[1]	16,715	15,805		–0	12,826	15,013	4,377	1,161			17,203	16,174
	810,990	**785,484**	**590,227**	**584,180**	**50,171**	**66,919**	**141,017**	**107,645**	**32,549**	**28,167**	**813,964**	**786,911**

1 As a consequence of a change in the levelling methodology of INGs bond portfolio ING recorded transfers from Level 1 to Level 2 in 2021.
2 The prior period has been updated to improve consistency and comparability of the fair values of loans and advances to customers.

The following methods and assumptions were used by ING Group to estimate the fair value of the financial instruments not measured at fair value .

Loans and advances to banks

For short term receivables from banks carrying amounts represent a reasonable estimate of the fair value. The fair value of long term receivables from banks is estimated by discounting expected future cash flows using a discount rate based on available market interest rates and appropriate spreads that reflects current credit risk.

Loans and advances to customers

For short term loans carrying amounts represent a reasonable estimate of the fair value. The fair value of long term loans is estimated by discounting expected future cash flows using a discount rate that reflects current credit risk, current interest rates, and other current market conditions where applicable. The fair value of mortgage loans is estimated by taking into account prepayment behaviour. Loans with similar characteristics are aggregated for calculation purposes.

Deposits from banks

For short term payables to banks carrying amounts represent a reasonable estimate of the fair value. The fair value of long term payables to banks is estimated by discounting expected future cash flows using a discount rate based on available market interest rates and appropriate spreads that reflects ING's own credit risk.

Customer deposits

The carrying values of customer deposits with an immediate on demand features approximate their fair values. The fair values of deposits with fixed contractual terms have been estimated based on discounting future cash flows using the interest rates currently applicable to deposits of similar maturities.

Debt securities in issue

The fair value of debt securities in issue is generally based on quoted market prices, or if not available, on estimated prices by discounting expected future cash flows using a current market interest rate and credit spreads applicable to the yield, credit quality and maturity.

Subordinated loans

The fair value of publicly traded subordinated loans are based on quoted market prices when available. Where no quoted market prices are available, fair value of the subordinated loans is estimated using discounted cash flows based on interest rates and credit spreads that apply to similar instruments.

40 Derivatives and hedge accounting

Use of derivatives

ING Group uses derivatives for economic hedging purposes to manage its asset and liability portfolios and structural risk positions. The primary objective of ING Group's hedging activities is to manage the risks which arises from structural imbalances in the duration and other profiles of its assets and liabilities. The objective of economic hedging is to enter into positions with an opposite risk profile to an identified risk exposure to reduce that exposure. The main risks which are being hedged are interest rate risk and foreign currency exchange rate risk. These risks are primarily hedged with interest rate swaps, cross currency swaps and foreign exchange forwards/swaps.

ING Group uses credit derivatives to manage its economic exposure to credit risk, including total return swaps and credit default swaps, to sell or buy protection for credit risk exposures in the loan, investment, and trading portfolios. Hedge accounting is not applied in relation to these credit derivatives.

Hedge accounting

Derivatives that qualify for hedge accounting under IFRS are classified and accounted for in accordance with the nature of the instrument hedged and the type of IFRS hedge accounting model that is applicable. The three models applicable under IFRS are: fair value hedge accounting, cash flow hedge accounting, and hedge accounting of a net investment in a foreign operation. How and to what extent these models are applied are described under the relevant headings below. The company's detailed accounting policies for these three hedge models are set out in paragraph 1.6 'Financial instruments' of Note 1 'Basis of preparation and accounting policies'.

Impact of Covid-19

The impact of Covid-19 on timing or amount of cash flows of our products that are designated as hedged items in hedge accounting programs did not result in significant hedge ineffectiveness during the reporting period.

IBOR transition

Reference is made to the note Risk management/ IBOR Transition for information on how ING is managing the transition to alternative benchmark rates and INGs progress in completing the transition.
At the reporting date, ING Group assessed the extent to which hedge relationships are subject to uncertainties driven by IBOR reform.

Except for EONIA and EUR LIBOR all IBOR's in scope of ING's IBOR Transition program are a component of either the hedging instrument and/or the hedged item where the interest rate and/or foreign currency risk are the designated hedged risk. The hedged exposures are mainly loan portfolios, issued debt securities and purchased debt instruments.

ING Group early adopted the amendments to IAS 39 issued in September 2019 to these hedging relationships directly affected by IBOR reform (Phase 1). This excludes EURIBOR hedges as EURIBOR is Benchmarks Regulation compliant. Refer to section 1.6.4 of Note 1 'Basis of preparation and significant accounting policies' for more information on the Phase 1 amendments.

In 2021 the amendments to IAS 39 issued in August 2020 became effective for ING Group (Phase 2). Refer to sections 1.4.1 and 1.6.4 of Note 1 'Basis of preparation and significant accounting policies' for more information on the Phase 2 amendments.

Phase 1 amendments to IFRS allow ING Group to apply a set of temporary exceptions to continue hedge accounting even when there is uncertainty about contractual cash flows arising from IBOR reform. Phase 1 reliefs cease to apply when uncertainty arising from IBOR Reform is no longer present with respect to the timing and amount of the IBOR-based cash flows of the relevant instruments.

ING Group hedges are being amended, where necessary, to incorporate the new benchmark rates. During 2021 ING transitioned significant portions of its financial instruments (designated in hedge accounting relationships) linked to benchmarks ceasing in 2021. As a result, for these hedge accounting relationships the applicable Phase 1 reliefs ceased to apply and Phase 2 became applicable. In the coming year, ING will shift the focus to USD LIBOR contracts (USD LIBOR tenors will continue to be published until the end of June 2023).

As at 31 December 2021, USD LIBOR indexed fair value and cash flow hedges are still directly affected by the uncertainties arising from the IBOR reform. In particular, uncertainties over the timing and amount of the replacement rate may impact the effectiveness and highly probable assessment.

For these affected fair value and cash flow hedge relationships ING Group assumes that the USD LIBOR based cash flows from the hedging instrument and hedged item will remain unaffected.

The same assumption is used to assess the likelihood of occurrence of the forecast transactions that are subject to cash flow hedges. The hedged cash flows in cash flow hedges directly impacted by the IBOR reform still meet the highly probable requirement, assuming the USD LIBOR benchmark on which the hedged cash flows are based is not altered as a result of the reform.

The following table contains details of the gross notional amounts of hedging instruments as at 31 December that are used in the ING Group's hedge accounting relationships for which the Phase 1 amendments to IAS39 were applied:

Notional amounts of Hedging instruments in EUR mln as at 31 December		
Benchmark	**2021**	**2020**
USD LIBOR	41,473	41,020
GBP LIBOR		1,500
JPY LIBOR		410
CHF LIBOR		315

Approximately 72% (31 December 2020: 60%) of the above notional amounts for USD LIBOR have a maturity date beyond June 2023.

The notional amounts of the derivative hedging instruments (in above table) provide a close approximation of the extent of the risk exposure ING manages through these hedging relationships.

Fair value hedge accounting

ING Group's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate instruments due to movements in market interest rates. ING Group's approach to manage market risk, including interest rate risk, is discussed in 'Risk management –Market risk'. ING Group's exposure to interest rate risk is disclosed in paragraph 'Interest rate risk in banking book'.

ING Group designates specific non-contractual risk components of hedged items. This is usually determined by designating benchmark interest rates such as EURIBOR. As a result of the IBOR reform ING designated new benchmark rates in 2021 such as SOFR, SONIA and TONAR. Note that ING applies the IBOR phase 2 amendments (refer to section 1.6.4 of Note 1 'Basis of preparation and significant accounting policies' for more information on the Phase 2 amendments) for new benchmarks for which the separately identifiable requirement cannot (yet) be met.

By using derivative financial instruments to hedge exposures to changes in interest rates, ING Group also exposes itself to credit risk of the derivative counterparty, which is not offset by the hedged item. ING Group minimises counterparty credit risk in derivative instruments by clearing most of the derivatives through Central Clearing Counterparties. In addition ING Group only enters into transactions with high-quality counterparties and requires posting collateral.

ING Group applies fair value hedge accounting on micro level in which one hedged item is hedged with one or multiple hedging instruments. Micro fair value hedge accounting is mainly applied on issued debt securities and purchased debt instruments for hedging interest rate risk.

Before fair value hedge accounting is applied by ING Group, ING Group determines whether an economic relationship between the hedged item and the hedging instrument exists based on an evaluation of the quantitative characteristics of these items and the hedged risk that is supported by quantitative analysis. ING Group considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING Group evaluates whether the fair value of the hedged item and the hedging instrument respond similarly to similar risks. In addition ING is mainly using regression analysis to assess whether the hedging instrument is expected to be and has been highly effective in offsetting changes in the fair value of the hedged item.

ING Group uses the following derivative financial instruments in a fair value hedge accounting relationship:

Gross carrying value of derivatives designated under fair value hedge accounting

	Assets 2021	Liabilities 2021	Assets 2020	Liabilities 2020
As at 31 December				
Hedging instrument on interest rate risk				
– Interest rate swaps	2,665	1,528	4,895	2,050
– Other interest derivatives	87	83	44	110

The derivatives used for fair value hedge accounting are included in the statement of financial position line-item 'Financial assets at fair value through profit or loss – Non-trading derivatives' for EUR 365 million (2020: EUR 486 million) respectively 'Financial liabilities at fair value through profit or loss – Non-trading derivatives' EUR 270 million (2020: EUR 444 million). The difference between the gross carrying value as presented in the table and the net carrying value as presented in the statement of financial position is due to offsetting with other derivatives and collaterals paid or received.

For our main currencies the average fixed rate for interest rate swaps used in fair value hedge accounting are 3.06% (2020: 2.79%) for EUR and 3.83% (2020: 3.76%) for USD.

The following table shows the net notional amount of derivatives designated in fair value hedging, split into the maturity of the instruments. The net notional amounts presented in the table are a combination of payer (-) and receiver (+) swaps.

Maturity derivatives designated in fair value hedging

As at 31 December 2021	Less than 1 month	1 to 3 months	3 to 12 months	1 to 2 year	2 to 3 years	3 to 4 years	4 to 5 years	>5 years	Total
Hedging instrument on interest rate risk									
– Interest rate swaps	-83	2,654	1,340	7,213	5,862	3,772	7,533	20,282	48,574
– Other interest derivatives	-0	-102	-307	-286	-287	-357	-224	73	-1,490
As at 31 December 2020									
Hedging instrument on interest rate risk									
- Interest rate swaps	15	1,153	1,263	6,704	6,170	4,281	4,347	16,548	40,481
– Other interest derivatives	-1	-68	-283	-434	-370	-302	-315	394	-1,378

Gains and losses on derivatives designated under fair value hedge accounting are recognised in the statement of profit or loss. The effective portion of the fair value change on the hedged item is also recognised in the statement of profit or loss. As a result, only the net accounting ineffectiveness has an impact on the net result.

Hedged items included in a fair value hedging relationship

	Carrying amount of the hedged items		Accumulated amount of fair value hedge adjustment on the hedged item included in the carrying amount of the hedged item		Change in fair value used for measuring ineffectiveness for the period	Change in fair value hedge instruments	Hedge ineffectiveness recognised in the statement of profit or loss gain (+) / loss (-)
	Assets	Liabilities	Assets	Liabilities			
As at 31 December 2021							
Interest rate risk							
– Amounts due from banks					-0		
– Debt securities at fair value through other comprehensive income	17,307		n/a		-798		
– Loans at FVOCI			n/a		-0		
– Loans and advances to customers	1,056		93		-42		
– Debt instruments at amortised cost	3,458		301		-165		
– Debt securities in issue		53,756		1,498	1,923		
– Subordinated loans		16,713		115	414		
– Amounts due to banks					-0		
– Customer deposits and other funds on deposit					-2		
– Discontinued hedges			372	8			
Total	**21,821**	**70,469**	**767**	**1,621**	**1,330**	**-1,317**	**13**
As at 31 December 2020							
Interest rate risk							
– Amounts due from banks							
– Debt securities at fair value through other comprehensive income	20,164		n/a		552		
– Loans at FVOCI			n/a		-0		
– Loans and advances to customers	876		121		25		
– Debt instruments at amortised cost	4,222		501		170		
– Debt securities in issue		54,043		3,443	-878		
– Subordinated loans		13,309		510	-397		
– Amounts due to banks					-5		
– Customer deposits and other funds on deposit		54		0	-9		
– Discontinued hedges			561	2			
Total	**25,262**	**67,406**	**1,183**	**3,956**	**-541**	**538**	**-4**

The main sources of ineffectiveness are:

- differences in maturities of the hedged item(s) and hedging instrument(s);
- different interest rate curves applied to discount the hedged item(s) and hedging instrument(s);
- differences in timing of cash flows of the hedged item(s) and hedging instrument(s).

There were no other sources of significant ineffectiveness in these hedging relationships.

Cash flow hedge accounting

ING Group's cash flow hedges mainly consist of interest rate swaps and cross-currency swaps that are used to protect against the exposure to variability in future cash flows on non-trading assets and liabilities that bear interest at variable rates or are expected to be refunded or reinvested in the future. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities, based on contractual terms and other variables including estimates of prepayments. These projected cash flows form the basis for identifying the notional amount subject to interest rate risk or foreign currency exchange rate risk that is designated under cash flow hedge accounting.

ING Group's approach to manage market risk, including interest rate risk and foreign currency exchange rate risk, is discussed in 'Risk management – Credit risk and Market risk'. ING Group determines the amount of the exposures to which it applies hedge accounting by assessing the potential impact of changes in interest rates and foreign currency exchange rates on the future cash flows from its floating-rate assets and liabilities. This assessment is performed using analytical techniques.

As noted above for fair value hedges, by using derivative financial instruments to hedge exposures to changes in interest rates and foreign currency exchange rates, ING Group exposes itself to credit risk of the derivative counterparty, which is not offset by the hedged items. This exposure is managed similarly to that for fair value hedges.

Gains and losses on the effective portions of derivatives designated under cash flow hedge accounting are recognised in Other Comprehensive Income. Interest cash flows on these derivatives are recognised in the statement of profit or loss in 'Net interest income' consistent with the manner in which the forecasted cash flows affect net result. The gains and losses on ineffective portions of such derivatives are recognised immediately in the statement of profit or loss in 'Valuation results and net trading income'.

ING Group determines an economic relationship between the cash flows of the hedged item and the hedging instrument based on an evaluation of the quantitative characteristics of these items and the hedged risk that is supported by quantitative analysis. ING Group considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING Group evaluates whether the cash flows of the hedged item and the hedging instrument respond similarly to the hedged risk, such as the benchmark interest rate of foreign currency. In addition (for macro FX hedging relationships) a regression analysis is performed to assess whether the hedging instrument is expected to be and has been highly effective in offsetting changes in the fair value of the hedged item.

ING Group uses the following derivative financial instruments in a cash flow hedge accounting relationship:

Gross carrying value of derivatives used for cash flow hedge accounting

	Assets 2021	Liabilities 2021	Assets 2020	Liabilities 2020
As at 31 December				
Hedging instrument on interest rate risk				
– Interest rate swaps	-437	781	2,271	545
Hedging instrument on combined interest and FX rate risk				
– Cross currency interest rate derivatives	73	285	774	21

The derivatives used for cash flow hedge accounting are included in the statement of financial position line-item 'Financial assets at fair value through profit or loss – Non-trading derivatives' EUR 300 million (2020: EUR 1,376 million) respectively 'Financial liabilities at fair value through profit or loss – Non-trading derivatives' EUR 485 million (2020: EUR 230 million). The difference between the gross carrying value as presented in the table and the net carrying value as presented in the statement of financial position is due to offsetting with other derivatives and collaterals paid or received.

For the main currencies the average fixed rate for interest rate swaps used in cash flow hedge accounting are -0.16% (2020: -0.15%) for EUR, 1.73% (2020: 1.74%) for PLN, 2.09% (2020: 2.31%) for USD and 0.55% (2020: 0.82%) for AUD. The average currency exchange rates for cross currency swaps used in cash flow hedge accounting is for EUR/USD 1.01 (2020: 0.95) and for EUR/AUD 1.61 (2020: 1.6).

The following table shows the net notional amount of derivatives designated in cash flow hedging split into the maturity of the instruments. The net notional amounts presented in the table are a combination of payer (+) and receiver (-) swaps.

Maturity derivatives designated in cash flow hedging

As at 31 December 2021	Less than 1 month	1 to 3 months	3 to 12 months	1 to 2 year	2 to 3 years	3 to 4 years	4 to 5 years	>5 years	Total
Hedging instrument on interest rate risk									
– Interest rate swaps	418	-1,075	-6,939	-5,470	-6,711	-5,825	-5,272	-18,107	-48,982
Hedging instrument on combined interest and FX rate risk									
– Cross currency interest rate derivatives	-256	-1,048	-1,760	-3,831	-2,528	-2,580	181	-56	-11,878
As at 31 December 2020									
Hedging instrument on interest rate risk									
– Interest rate swaps	-248	-92	-2,061	-4,896	-1,832	-5,772	-3,466	-19,537	-37,904
Hedging instrument on combined interest and FX rate risk									
– Cross currency interest rate derivatives	-160	-1,666	-2,828	-2,446	-3,493	-1,324	194	-210	-11,934

The following table shows the cash flow hedge accounting impact on profit or loss and comprehensive income:

Cash flow hedging – impact of hedging instruments on the statement of profit or loss and other comprehensive income

	Change in value used for calculating hedge ineffectiveness for the period	Carrying amount cash flow hedge reserve at the end of the reporting period[1]	Amount reclassified from CFH reserve to profit or loss	Cash flow is no longer expected to occur	Change in value of hedging instrument recognised in OCI	Hedge ineffectiveness recognised in the statement of profit or loss, gain (+) / loss (-)
As at 31 December 2021						
Interest rate risk on;						
– Floating rate lending	2,937	-1,132	-454			
– Floating rate borrowing	-915	366	143			
– Other	165	-122	15			
– Discontinued hedges		674	-306			
Total interest rate risk	**2,188**	**-214**	**-603**		**-1,825**	**-2**
Combined interest and FX rate risk on;						
– Floating rate lending	-90	-19	-153			
– Floating rate borrowing	-2	-16	9			
– Other	-0	-1	-1			
– Discontinued hedges		-13	-90			
Total combined interest and Fx	**-92**	**-49**	**-235**		**250**	**3**
Total cash flow hedge	**2,096**	**-262**	**-838**		**-1,574**	**1**
As at 31 December 2020						
Interest rate risk on;						
– Floating rate lending	-784	1,310	-97			
– Floating rate borrowing	136	-306	33			
– Other	-107	36	19			
– Discontinued hedges		1,037	-236			
Total interest rate risk	**-755**	**2,077**	**-281**		**830**	**-6**
Combined interest and FX rate risk on;						
– Floating rate lending	-26	-35	-256			
– Floating rate borrowing	29	-42	-10			
– Other	-0	-0	-3			
– Discontinued hedges			-26			
Total combined interest and Fx	**3**	**-78**	**-295**		**263**	**1**
Total cash flow hedge	**-753**	**1,999**	**-576**		**1,093**	**-5**

1 The carrying amount is the gross amount, excluding tax adjustments.

The decrease in the carrying amount of the cash flow hedge reserve is driven by increased interest rates.

The main sources of ineffectiveness for cash flow hedges are:

- differences in timing of cash flows of the hedged item(s) and hedging instrument(s);

- mismatches in reset frequency between hedged item and hedging instrument.

Hedges of net investments in foreign operations

A foreign currency exposure arises from a net investment in subsidiaries that have a different functional currency from the presentation currency of ING Group. The risk arises from the fluctuation in spot exchange rates between the functional currency of the subsidiaries and ING Group's presentation currency, which causes the amount of the net investment to vary in the consolidated financial statements of ING Group. This risk may have a significant impact on ING Group's financial statements. ING Group's policy is to hedge these exposures only when not doing so it is expected to have a significant impact on the regulatory capital ratios of ING Group and its subsidiaries.

ING Group's net investment hedges principally consist of derivatives (including currency forwards and swaps) and non-derivative financial instruments such as foreign currency denominated funding. When the hedging instrument is foreign currency denominated debt, ING Group assesses effectiveness by comparing past changes in the carrying amount of the debt that are attributable to a change in the spot rate with past changes in the investment in the foreign operation due to movement in the spot rate (the offset method).

Gains and losses on the effective portions of derivatives designated under net investment hedge accounting are recognised in Other Comprehensive Income. The balance in equity is recognised in the statement of profit or loss when the related foreign subsidiary is disposed. The gains and losses on ineffective portions are recognised immediately in the statement of profit or loss.

ING Group has the following derivative financial instruments used for net investment hedging;

Gross carrying value of derivatives used for net investment hedging

	Assets 2021	Liabilities 2021	Assets 2020	Liabilities 2020
As at 31 December				
– FX forwards and Cross currency swaps	18	88	69	98

The derivatives used for net investment hedge accounting are included in the statement of financial position line-item 'Financial assets at fair value through profit or loss – Non-trading derivatives' EUR 18 million (2020: EUR 69 million) respectively 'Financial liabilities at fair value through profit or loss – Non trading derivatives' EUR 88 million (2020: EUR 98 million).

For ING Group's main currencies the average exchange rates used in net investment hedge accounting for 2021 are EUR/USD 1.18 (2020: 1.14), EUR/PLN 4.58 (2020: 4.45), EUR/AUD 1.58 (2020: 1.65) and EUR/THB 37.84 (2020: 35.71).

The following table shows the notional amount of derivatives designated in net investment hedging split into the maturity of the instruments:

Maturity derivatives designated in net investment hedging

As at 31 December 2021	Less than 1 month	1 to 3 months	3 to 12 months	1 to 2 year	2 to 3 years	3 to 4 years	4 to 5 years	>5 years	Total
– FX forwards and cross currency swaps	-4,462	-461	-590						-5,514
– Other FX derivatives									
As at 31 December 2020									
– FX forwards and Cross currency swaps	-3,825	-375		-580					-4,780
– Other FX derivatives	-8								-8

The effect of the net investment hedge accounting in the statement of profit or loss and other comprehensive income is as follows:

Net investment hedge accounting – Impact on statement of profit or loss and other comprehensive income

As at 31 December 2021	Change in value used for calculating hedge ineffectiveness for the period	Carrying amount net investment hedge reserve at the end of the reporting period[1]	Hedged item affected statement of profit or loss	Change in value of hedging instrument recognised in OCI	Hedge ineffectiveness recognised in the statement of profit or loss, gain(+) / Loss(-)
Investment in foreign operations	72	330		-72	-1
Discontinued hedges		-59			
As at 31 December 2020					
Investment in foreign operations	-122	553	-11	121	1
Discontinued hedges		-210			

1 The carrying amount is the gross amount, excluding tax adjustments.

41 Assets by contractual maturity

Amounts presented in these tables by contractual maturity are the amounts as presented in the statement of financial position and are discounted cash flows. Reference is made to ‘Risk Management – Funding and liquidity risk’.

> 41 Assets by contractual maturity

Assets by contractual maturity

2021	Less than 1 month [1]	1-3 months	3-12 months	1-5 years	Over 5 years	Maturity not applicable	Total
Cash and balances with central banks	106,520						106,520
Loans and advances to banks	15,163	2,204	3,921	1,937	367		23,592
Financial assets at fair value through profit or loss							
– Trading assets	21,055	3,859	8,735	7,922	9,810		51,381
– Non-trading derivatives	240	171	217	421	488		1,536
– Mandatorily at fair value through profit or loss	20,462	12,063	7,487	1,741	770	161	42,684
– Designated as at fair value through profit or loss	96	120	520	2,510	3,109		6,355
Financial assets at fair value through other comprehensive income							
– Equity securities						2,457	2,457
– Debt securities	593	518	1,926	11,182	13,121		27,340
– Loans and advances	14	11	173	214	427		838
Securities at amortised cost	1,108	1,217	4,509	24,413	17,072		48,319
Loans and advances to customers	52,269	26,414	53,616	185,836	306,988		625,122
Other assets[2]	3,827	362	1,524	1,185	1,482	4,725	13,106
Total assets	**221,346**	**46,940**	**82,627**	**237,360**	**353,634**	**7,343**	**949,250**
2020							
Cash and balances with central banks	111,087						111,087
Loans and advances to banks	15,786	2,796	3,419	3,093	270		25,364
Financial assets at fair value through profit or loss							
– Trading assets	12,100	6,567	9,206	10,206	13,277		51,356
– Non-trading derivatives	495	446	644	1,252	746		3,583
– Mandatorily at fair value through profit or loss	26,854	11,376	3,472	1,153	1,222	228	44,305
– Designated as at fair value through profit or loss	248	26	631	657	2,564		4,126
Financial assets at fair value through other comprehensive income							
– Equity securities						1,862	1,862
– Debt securities	841	985	5,175	11,576	14,400		32,977
– Loans and advances	32	34	73	407	509		1,056
Securities at amortised cost	2,104	2,444	3,943	24,298	17,798		50,587
Loans and advances to customers	50,293	19,788	48,261	176,047	299,581		593,970
Other assets[2]	3,797	312	1,148	1,934	1,283	5,142	13,617
Total assets	**223,636**	**44,775**	**75,973**	**230,625**	**351,649**	**7,232**	**933,891**

1 Includes assets on demand.

2 Includes other financial assets such as assets held for sale, current and deferred tax assets as presented in the consolidated statement of the financial position. Additionally, non-financial assets are included in that position where maturities are not applicable as property and equipment and investments in associates and joint ventures. Due to their nature non-financial assets consist mainly of assets expected to be recovered after more than 12 months.

42 Liabilities and off-balance sheet commitments by maturity

The tables below include all liabilities and off-balance sheet commitments by maturity based on contractual, undiscounted cash flows. These balances are included in the maturity analysis as follows:

- Perpetual liabilities are included in the column ‘Maturity not applicable’.
- Derivative liabilities are included on a net basis if cash flows are settled net. For other derivative liabilities the contractual gross cash flow payable is included.
- Undiscounted future coupon interest on financial liabilities payable is included in a separate line and in the relevant maturity bucket.
- Non-financial liabilities are included based on a breakdown of the amounts per statement of financial position, per expected maturity.
- Loans and other credit-related commitments are classified on the basis of the earliest date they can be drawn down.

ING Group’s expected cash flows on some financial liabilities vary significantly from contractual cash flows. Principal differences are in demand deposits from customers that are expected to remain stable or increase and in unrecognised loan commitments that are not all expected to be drawn down immediately. Reference is made to the liquidity risk paragraph in ‘Risk Management – Funding and liquidity risk’ for a description on how liquidity risk is managed.

> 42 Liabilities and off-balance sheet commitments by maturity

Liabilities and off-balance sheet commitments by maturity

2021	Less than 1 month [1]	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity not applicable	Adjustment [2]	Total
Deposits from banks	10,477	1,062	1,387	71,413	1,719		-967	85,092
Customer deposits	596,625	11,226	6,060	1,571	1,937		-19	617,400
Financial liabilities at fair value through profit or loss								
– Other trading liabilities	6,965	397	322	462	438		4	8,588
– Trading derivatives	1,689	1,608	3,674	8,295	5,731		-2,472	18,525
– Non-trading derivatives	546	245	422	900	571		-564	2,120
– Designated at fair value through profit or loss	24,862	10,224	771	1,851	3,721	20	358	41,808
Debt securities in issue	2,766	19,470	15,712	23,052	28,934		1,851	91,784
Subordinated loans				716	8,948	6,822	229	16,715
Lease liabilities	18	40	159	571	454		-23	1,220
Financial liabilities	**643,949**	**44,272**	**28,506**	**108,831**	**52,453**	**6,843**	**-1,602**	**883,252**
Other liabilities [3]	8,810	487	2,665	300	934			13,196
Total liabilities	**652,759**	**44,758**	**31,172**	**109,132**	**53,386**	**6,843**	**-1,602**	**896,448**
Coupon interest due on financial liabilities	193	406	1,000	2,579	2,773	387		7,338
Contingent liabilities in respect of								
– Discounted bills								
– Guarantees	25,911				550			26,461
– Irrevocable letters of credit	16,851							16,851
– other	1		2	5				8
Guarantees issued by ING Groep N.V.	316							316
Irrevocable facilities	143,891	1	13	184	78			144,167
	186,969	**1**	**15**	**189**	**628**			**187,802**

1 Includes liabilities on demand.

2 This column reconciles the contractual undiscounted cash flows on financial liabilities to the statement of financial position values. The adjustments mainly relate to the impact of discounting and fair value hedge adjustments, and for derivatives, to the fact that the contractual cash flows are presented on a gross basis (unless the cash flows are actually settled net).

3 Includes Other liabilities, Current and deferred tax liabilities, and Provisions as presented in the Consolidated statement of financial position.

Liabilities and off-balance sheet commitments by maturity

2020	Less than 1 month [1]	1–3 month	3–12 months	1–5 years	Over 5 years	Maturity not applicable	Adjustment [2]	Total
Deposits from banks	11,080	537	772	64,147	1,722		-161	78,098
Customer deposits	587,137	9,662	8,208	2,169	2,207		134	609,517
Financial liabilities at fair value through profit or loss								
– Other trading liabilities	4,940	1,197	204	268	323		39	6,972
– Trading derivatives	2,179	2,297	4,250	9,589	7,794		-373	25,737
– Non-trading derivatives	283	178	204	468	454		41	1,629
– Designated at fair value through profit or loss	32,540	8,506	1,330	2,181	3,247	11	631	48,444
Debt securities in issue	5,144	8,428	13,441	25,752	25,430		3,868	82,065
Subordinated loans				661	8,815	5,670	659	15,805
Lease liabilities	17	42	166	611	520		-18	1,339
Financial liabilities	**643,321**	**30,848**	**28,576**	**105,846**	**50,512**	**5,680**	**4,821**	**869,605**
Other liabilities [3]	6,830	568	2,681	765	802			11,646
Total liabilities	**650,150**	**31,416**	**31,257**	**106,611**	**51,315**	**5,680**	**4,821**	**881,250**
Coupon interest due on financial liabilities	229	490	1,155	3,732	3,249	292		9,147
Contingent liabilities in respect of								
– Discounted bills								
– Guarantees	22,836				550			23,386
– Irrevocable letters of credit	14,016							14,016
– other	50			47				97
Guarantees issued by ING Groep N.V.	292							292
Irrevocable facilities[4]	124,739		37	141	74			124,991
	161,934		**37**	**188**	**624**			**162,782**

1 Includes liabilities on demand.

2 This column reconciles the contractual undiscounted cash flows on financial liabilities to the statement of financial position values. The adjustments mainly relate to the impact of discounting and fair value hedge adjustments, and for derivatives, to the fact that the contractual cash flows are presented on a gross basis (unless the cash flows are actually settled net).

3 Includes Other liabilities, Current and deferred tax liabilities, and Provisions as presented in the Consolidated statement of financial position.

4 The prior period has been updated to improve consistency and comparability of the amounts per maturity of irrevocable facilities.

43 Transfer of financial assets, assets pledged and received as collateral

Financial assets pledged as collateral

The financial assets pledged as collateral consist primarily of Loans and advances to customers pledged to secure Debt securities in issue, deposits from the Dutch Central Bank and other banks, as well as debt securities used in securities lending or sale and repurchase transactions. They serve to secure margin accounts and are used for other purposes required by law. Pledges are generally conducted under terms that are usual and customary for collateralised transactions including standard sale and repurchase agreements, securities lending and borrowing and derivatives margining. The financial assets pledged are as follows:

Financial assets pledged as collateral	2021	2020
Banks		
– Cash and balances with central banks	465	1,377
– Loans and advances to banks	3,310	3,833
Financial assets at fair value through profit or loss	15,334	14,772
Financial assets at fair value through OCI	2,320	2,377
Securities at amortised cost	4,468	7,023
Loans and advances to customers	118,868	115,194
Other assets	796	761
	145,560	**145,338**

In addition, in some jurisdictions ING Bank N.V. has an obligation to maintain a reserve with central banks. As at 31 December 2021, the minimum mandatory reserve deposits with various central banks amount to EUR 10,625 million (2020: EUR 10,573 million).

Loans and advances to customers that have been pledged as collateral for debt securities in issue and for liquidity purposes amount to EUR 118,868 million (2020: EUR 115,194 million).

Financial assets received as collateral

The financial assets received as collateral that can be sold or repledged in absence of default by the owner of the collateral consists of securities obtained through reverse repurchase transactions and securities borrowing transactions.
These transactions are generally conducted under standard market terms for most repurchase transactions and the recipient of the collateral has unrestricted right to sell or repledge it, provided that the collateral (or equivalent collateral) is returned to the counterparty at term.

Financial assets received as collateral	2021	2020
Total received collateral available for sale or repledge at fair value		
– equity securities	27,553	20,018
– debt securities	67,696	79,670
of which sold or repledged at fair value		
– equity securities	23,330	16,365
– debt securities	50,366	60,384

Transfer of financial assets

The majority of ING's financial assets that have been transferred, but do not qualify for derecognition are debt instruments used in securities lending or sale and repurchase transactions.

Transfer of financial assets not qualifying for derecognition

	Securities lending				Sale and repurchase			
	Equity		Debt		Equity		Debt	
	2021	2020	2021	2020	2021	2020	2021	2020
Transferred assets at carrying amount								
Financial assets at fair value through profit or loss	3,109	3,151			4,384	2,078	5,863	8,619
Financial assets at fair value through other comprehensive income			150	56			527	2,120
Loans and advances to customers							4,386	2,381 [2]
Securities at amortised cost			280	470			992	6,281
Associated liabilities at carrying amount[1]								
Deposits from banks	n/a	n/a	n/a	n/a				
Customer deposits	n/a	n/a	n/a	n/a				
Financial liabilities at fair value through profit or loss	n/a	n/a	n/a	n/a	4,130	2,018	7,538	5,994 [2]

1 The table includes the associated liabilities which are reported after offsetting, compared to the gross positions of the encumbered assets.
2 The prior period has been updated to improve consistency and comparability.

The table above does not include assets transferred to consolidated securitisation entities as the related assets remain recognised in the consolidated statement of financial position.
Transferred financial assets that are derecognised in their entirety are mentioned in note 49 'Structured Entities'.

44 Offsetting financial assets and liabilities

The following tables include information about rights to offset and the related arrangements. The amounts included consist of all recognised financial instruments that are presented net in the statement of financial position under the IFRS netting criteria (legal right to offset and intention to net settle or to realise the asset and settle the liability simultaneously) and amounts presented gross in the statement of financial position but subject to enforceable master netting arrangements or similar arrangements.

At ING Group amounts that are offset mainly relate to derivatives transactions, sale and repurchase agreements, securities lending agreements and cash pooling arrangements. A significant portion of offsetting is applied to OTC derivatives which are cleared through central clearing parties.

Related amounts not set off in the statement of financial position include transactions where:

- The counterparty has an offsetting exposure and a master netting or similar arrangement is in place with a right to set off only in the event of default, insolvency or bankruptcy, or the offsetting criteria are otherwise not satisfied, and
- In the case of derivatives and securities lending or sale and repurchase agreements, cash and non-cash collateral has been received or pledged to cover net exposure in the event of a default or other predetermined events. The effect of over-collateralisation is excluded.

The net amounts resulting after setoff are not intended to represent ING's actual exposure to counterparty risk, as risk management employs a number of credit risk mitigation strategies in addition to netting and collateral arrangements. Reference is made to the Risk Management section on Credit risk.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

2021					Related amounts not offset in the statement of financial position				
Statement of financial position line item	**Financial instrument**	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities offset in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Financial instruments	Cash and financial instruments received as collateral	Net amount	Amounts not subject to enforceable netting arrangements	Statement of financial position total [1]
Loans and advances to banks [2]									
	Reverse repurchase, securities borrowing and similar agreements	1,930		1,930		1,923	7	1,473	3,403
	Cash pools	1	–1	0	0		0	–0	
		1,931	**–1**	**1,930**	**0**	**1,923**	**7**	**1,473**	**3,403**
Financial assets at fair value through profit or loss									
Trading and Non-trading									
	Reverse repurchase, securities borrowing and similar agreements	43,822	–11,564	32,258	168	31,848	243	15,590	47,848
	Derivatives	52,724	–38,431	14,293	9,005	3,108	2,180	7,006	21,299
		96,546	**–49,995**	**46,552**	**9,172**	**34,956**	**2,423**	**22,596**	**69,148**
Loans and advances to customers [3]									
	Reverse repurchase, securities borrowing and similar agreements	71		71		71	–0		71
	Cash pools	196,328	–194,522	1,806	19	1,417	369		1,806
		196,400	**–194,522**	**1,878**	**19**	**1,489**	**369**		**1,878**
Other items where offsetting is applied in the statement of financial position [4]		**3,692**	**–3,470**	**222**	**–0**		**222**		**222**
Total financial assets		**298,569**	**–247,987**	**50,581**	**9,191**	**38,368**	**3,022**	**24,069**	**74,650**

1 'The statement of financial position total' is the sum of 'Net amounts of financial assets presented in the statement of financial position' and 'Amounts not subject to enforceable master netting arrangements'.

2 At 31 December 2021, the total amount of 'Loans and advances to banks' excluding repurchase agreements is EUR20,189 million which is not subject to offsetting.

3 At 31 December 2021, the total amount of 'Loans and advances to customers' excluding repurchase agreements is EUR 624,635 million of which EUR 1,806 million is subject to offsetting.

4 Other items mainly include amounts to be settled with Central Clearing Counterparties regarding securities and derivatives transactions and is included in 'Other Assets – Amounts to be settled' for EUR 2,424 million in the statement of financial position of which EUR 222 million is subject to offsetting as at 31 December 2021.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

2020					Related amounts not offset in the statement of financial position				
Statement of financial position line item	**Financial instrument**	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities offset in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Financial instruments	Cash and financial instruments received as collateral	Net amount	Amounts not subject to enforceable netting arrangements	Statement of financial position total [1]
Loans and advances to banks [2]	Reverse repurchase, securities borrowing and similar agreements	1,911	0	1,911	0	1,907	4	2,958	4,869
	Cash pools	2	–2	0	0		0	–0	0
		1,913	**–2**	**1,911**	**0**	**1,907**	**4**	**2,958**	**4,869**
Financial assets at fair value through profit or loss									
Trading and non-trading	Reverse repurchase, securities borrowing and similar agreements	48,487	–14,823	33,664	245	33,343	77	19,018	52,682
	Derivatives	73,142	–52,561	20,581	12,520	5,350	2,710	10,240	30,821
		121,629	**–67,384**	**54,245**	**12,765**	**38,693**	**2,787**	**29,258**	**83,503**
Loans and advances to customers [3]	Reverse repurchase, securities borrowing and similar agreements	2,845	–2,359	486		486		138	624
	Cash pools	168,461	–165,815	2,646	1,729	628	289		2,646
		171,306	**–168,174**	**3,132**	**1,729**	**1,113**	**289**	**138**	**3,270**
Other items where offsetting is applied in the statement of financial position [4]		**8,558**	**–7,752**	**806**	**10**		**796**		**806**
Total financial assets		**303,406**	**–243,312**	**60,095**	**14,505**	**41,714**	**3,876**	**32,354**	**92,449**

1 'The statement of financial position total' is the sum of 'Net amounts of financial assets presented in the statement of financial position' and 'Amounts not subject to enforceable master netting arrangements'.

2 At 31 December 2020, the total amount of 'Loans and advances to banks' excluding repurchase agreements is EUR20,495 million which is not subject to offsetting.

3 At 31 December 2020, the total amount of 'Loans and advances to customers' excluding repurchase agreements is EUR 593,345 million of which EUR 2,646 million is subject to offsetting.

4 Other items mainly include amounts to be settled with Central Clearing Counterparties regarding securities and derivatives transactions and is included in 'Other Assets – Amounts to be settled' for EUR 2,215 million in the statement of financial position of which EUR 806 million is subject to offsetting as at 31 December 2020.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

2021		Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets offset in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not offset in the statement of financial position: Financial instruments	Related amounts not offset in the statement of financial position: Cash and financial instruments pledged as collateral	Net amount	Amounts not subject to enforceable netting arrangements	Statement of financial position total [1]
Statement of financial position line item	**Financial instrument**								
Deposits from banks [2]									
	Repurchase, securities lending and similar agreements	433	0	433	0	426	7	3,705	4,138
	Cash pools	3	-1	2	0	0	2	0	2
		436	**-1**	**435**	**0**	**426**	**9**	**3,705**	**4,140**
Customer deposits [3]									
	Repurchase, securities lending and similar agreements	0	0	0	0	0	0	0	
	Cash pools	207,930	-194,522	13,408	19	0	13,389	0	13,408
		207,930	**-194,522**	**13,408**	**19**	**0**	**13,389**	**0**	**13,408**
Financial liabilities at fair value through profit or loss									
Trading and Non-trading	Repurchase, securities lending and similar agreements	43,883	-11,564	32,319	168	32,056	96	9,416	41,735
	Derivatives	53,778	-39,053	14,725	9,006	4,326	1,393	5,920	20,646
		97,661	**-50,617**	**47,044**	**9,173**	**36,382**	**1,489**	**15,337**	**62,381**
Other items where offsetting is applied in the statement of financial position [4]		**3,098**	**-2,848**	**250**	**-1**	**0**	**252**	**0**	**250**
Total financial liabilities		**309,125**	**-247,987**	**61,138**	**9,191**	**36,808**	**15,139**	**19,041**	**80,179**

1 'The statement of financial position total' is the sum of 'Net amounts of financial liabilities presented in the statement of financial position' and 'Amounts not subject to enforceable master netting arrangements'.
2 At 31 December 2021, the total amount of 'Deposits from banks' excluding repurchase agreements is EUR 80,954 million of which EUR 2 million is subject to offsetting.
3 At 31 December 2021, the total amount of 'Customers deposits' excluding repurchase agreements is EUR 617,400 million of which EUR 13,408 million is subject to offsetting.
4 Other items mainly include amounts to be settled with Central Clearing Counterparties regarding securities and derivatives transactions and is included in 'Other Liabilities – Amounts to be settled' for EUR 5,082 million in the statement of financial position of which EUR 250 million is subject to offsetting as at 31 December 2021.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

2020		Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets offset in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Related amounts not offset in the statement of financial position: Financial instruments	Related amounts not offset in the statement of financial position: Cash and financial instruments pledged as collateral[1]	Net amount	Amounts not subject to enforceable netting arrangements	Statement of financial position total [1]
Statement of financial position line item	**Financial instrument**								
Deposits from banks [2]	Repurchase, securities lending and similar agreements	167		167		166	1	1,804	1,971
	Cash pools	3	-2	2			2		2
		170	**-2**	**169**		**166**	**3**	**1,804**	**1,973**
Customer deposits [3]	Repurchase, securities lending and similar agreements	2,354	-2,354						
	Cash pools	184,490	-165,815	18,675	1,702		16,973		18,675
		186,844	**-168,169**	**18,675**	**1,702**		**16,973**		**18,675**
Financial liabilities at fair value through profit or loss									
Trading and Non-trading	Repurchase, securities lending and similar agreements	53,520	-14,827	38,693	245	38,447		8,271	46,964
	Derivatives	73,215	-52,626	20,589	12,521	6,742	1,326	6,777	27,366
		126,735	**-67,453**	**59,282**	**12,766**	**45,189**	**1,326**	**15,048**	**74,330**
Other items where offsetting is applied in the statement of financial position [4]		**8,552**	**-7,687**	**865**	**36**		**829**		**865**
Total financial liabilities		**322,303**	**-243,312**	**78,991**	**14,505**	**45,356**	**19,131**	**16,852**	**95,843**

1 'The statement of financial position total' is the sum of 'Net amounts of financial liabilities presented in the statement of financial position' and 'Amounts not subject to enforceable master netting arrangements'.

2 At 31 December 2020, the total amount of 'Deposits from banks' excluding repurchase agreements is EUR 76,127 million of which EUR 2 million is subject to offsetting.

3 At 31 December 2020, the total amount of 'Customers deposits' excluding repurchase agreements is EUR 609,517 million of which EUR 18,675 million is subject to offsetting.

4 Other items mainly include amounts to be settled with Central Clearing Counterparties regarding securities and derivatives transactions and is included in 'Other Liabilities – Amounts to be settled' for EUR 4,877 million in the statement of financial position of which EUR 865 million is subject to offsetting as at 31 December 2020.

45 Contingent liabilities and commitments

In the normal course of business, ING Group is party to activities where risks are not reflected in whole or in part in the consolidated financial statements. In response to the needs of its customers, the Group offers financial products related to loans. These products include traditional off-balance sheet credit-related financial instruments.

Contingent liabilities and commitments

	2021	2020
Contingent liabilities in respect of		
– Guarantees	26,461	23,386
– Irrevocable letters of credit	16,851	14,016
– other	8	97
	43,319	**37,499**
Guarantees issued by ING Groep N.V.	316	292
Irrevocable facilities	144,167	124,991
	187,802	**162,782**

Guarantees relate both to credit and non-credit substitute guarantees. Credit substitute guarantees are guarantees given by ING Group in respect of credit granted to customers by a third party. Many of them are expected to expire without being drawn on and therefore do not necessarily represent future cash outflows.

Irrevocable letters of credit mainly secure payments to third parties for a customer's foreign and domestic trade transactions in order to finance a shipment of goods. ING Group's credit risk in these transactions is limited since these transactions are collateralised by the commodity shipped and are of a short duration.

Other contingent liabilities include acceptances of bills and are of a short-term nature. Other contingent liabilities also include contingent liabilities resulting from the operations of the Real Estate business including obligations under development and construction contracts. Furthermore other contingent liabilities include a contingent liability in connection with a possible Dutch tax obligation that relates to the deduction from Dutch taxable profit for losses incurred by ING Bank in the United Kingdom in previous years. The existence of this obligation will be confirmed only by the occurrence of future profits in the United Kingdom.

Irrevocable facilities mainly constitute unused portions of irrevocable credit facilities granted to corporate clients. Many of these facilities are for a fixed duration and bear interest at a floating rate. ING Group's credit risk and interest rate risk in these transactions is limited. The unused portion of irrevocable credit facilities is partly secured by customers' assets or counter-guarantees by the central governments and other public sector entities under the regulatory requirements. Irrevocable facilities also include commitments made to purchase securities to be issued by governments and private issuers.

As at 31 December 2021, ING Groep N.V. guarantees various US dollar debentures (that mature between 2023 and 2036) which were issued by a subsidiary of Voya Financial Inc. In accordance with the Shareholder's agreement, the net exposure of ING Groep N.V. as at 31 December 2021 was nil, as the outstanding principal amount of the US dollar debentures was fully covered with collateral of EUR 320 million (2020: EUR 304 million) pledged by Voya Financial Inc.

In addition to the items included in contingent liabilities, ING Group has issued certain guarantees as participant in collective arrangements of national banking funds and as a participant in required collective guarantee schemes which apply in different countries. For example, ING Bank N.V. provided a guarantee to the German Deposit Guarantee Fund ('Einlagensicherungsfonds' or ESF) under section 5 (10) of the by-laws of this fund, where ING Bank N.V. indemnifies the Association of German Banks Berlin against any losses it might incur as result of actions taken with respect to ING Germany. The ESF is a voluntary collective guarantee scheme for retail savings and deposits in excess of EUR 100,000.

Furthermore we refer to Note 46 for any contingent liabilities in respect of legal proceedings.

46 Legal proceedings

ING Group and its consolidated subsidiaries are involved in governmental, regulatory, arbitration and legal proceedings and investigations in the Netherlands and in a number of foreign jurisdictions, including the U.S., involving claims by and against them which arise in the ordinary course of their businesses, including in connection with their activities as lenders, broker-dealers, underwriters, issuers of securities and investors and their position as employers and taxpayers. In certain of such proceedings, very large or indeterminate amounts are sought, including punitive and other damages. While it is not feasible to predict or determine the ultimate outcome of all pending or threatened governmental, regulatory, arbitration and legal proceedings and investigations, ING is of the opinion that some of the proceedings and investigations set out below may have or have in the recent past had a significant effect on the financial position, profitability or reputation of ING and/or ING and its consolidated subsidiaries.

Settlement agreement: On 4 September 2018, ING announced that it had entered into a settlement agreement with the Dutch Public Prosecution Service relating to previously disclosed investigations regarding various requirements for client on-boarding and the prevention of money laundering and corrupt practices. Following the entry into the settlement agreement, ING has experienced heightened scrutiny from authorities in various countries. ING is also aware, including as a result of media reports, that other parties may, among other things, seek to commence legal proceedings against ING in connection with the subject matter of the settlement. Certain parties filed requests with the Court of Appeal in The Netherlands to reconsider the prosecutor’s decision to enter into the settlement agreement with ING and not to prosecute ING or (former) ING employees. In December 2020, the Court of Appeal issued its final ruling. In this ruling the prosecutors' decision to enter into the settlement agreement with ING was upheld, making the settlement final. However, in a separate ruling, the Court ordered the prosecution of ING’s former CEO.

Findings regarding AML processes: As previously disclosed, after its September 2018 settlement with Dutch authorities concerning anti-money laundering matters, and in the context of significantly increased attention on the prevention of financial economic crime, ING has experienced heightened scrutiny by authorities in various countries. The interactions with such regulatory and judicial authorities have included, and can be expected to continue to include, onsite visits, information requests, investigations and other enquiries. Such interactions, as well as ING’s internal assessments in connection with its global enhancement programme, have in some cases resulted in satisfactory outcomes, and also have resulted in, and may continue to result in, findings, or other conclusions which may require appropriate remedial actions by ING, or may have other consequences. ING intends to continue to work in close cooperation with authorities as it seeks to improve its management of non-financial risks in terms of policies, tooling, monitoring, governance, knowledge and behaviour.

In January 2022, a Luxembourg investigating judge informed ING Luxembourg that he intends to instruct the relevant prosecutor to prepare a criminal indictment regarding alleged shortcomings in AML process at ING Luxembourg. Although this matter remains at an early procedural stage and it is currently not possible to determine how this matter will be resolved or the timing of any such resolution, ING does not expect a financial outcome of this matter to have a material effect.

ING continues to take steps to enhance its management of compliance risks and embed stronger awareness across the whole organisation. These steps are part of the global KYC programme and set of initiatives, which includes enhancing KYC files and working on various structural improvements in compliance policies, tooling, monitoring, governance, knowledge and behaviour.

Tax cases: Because of the geographic spread of its business, ING may be subject to tax audits, investigations and procedures in numerous jurisdictions at any point in time. Although the Issuer believes that it has adequately provided for all its tax positions, the ultimate resolution of these audits, investigations and procedures is uncertain and may result in liabilities which are materially different from the amounts recognised.

Litigation regarding products of a former subsidiary in Mexico: Proceedings in which ING is involved include complaints and lawsuits concerning the performance of certain interest sensitive products that were sold by a former subsidiary of ING in Mexico. A provision has been taken in the past.

SIBOR – SOR litigation: In July 2016, investors in derivatives tied to the Singapore Interbank Offer Rate (“SIBOR”) filed a U.S. class action complaint in the New York District Court alleging that several banks, including ING, conspired to rig the prices of derivatives tied to SIBOR and the Singapore Swap Offer Rate (“SOR”). The lawsuit refers to investigations by the Monetary Authority of Singapore (“MAS”) and other regulators, including the U.S. Commodity Futures Trading Commission (“CFTC”), in relation to rigging prices of SIBOR- and SOR based derivatives. In October 2018, the New York District Court issued a decision dismissing all claims against ING Group and ING Capital Markets LLC, but leaving ING Bank, together with several other banks, in the case, and directing plaintiffs to file an amended complaint consistent with the Court's rulings. In October 2018, plaintiffs filed such amended complaint, which asserts claims against a number of defendants but none against ING Bank (or any other ING entity), effectively dismissing ING Bank from the case. In December 2018, plaintiffs sought permission from the Court to file a further amended complaint that names ING Bank as a defendant. In July 2019, the New York District Court granted the defendants’ motion to dismiss and denied leave to further amend the complaint, effectively dismissing all remaining claims against ING Bank. In March 2021, the Second Circuit court vacated the District Court’s ruling. The case was remanded to the District Court to reconsider the amended complaint that would add ING Bank N.V. back to the case. In April 2021, the defendants filed a petition for rehearing with the Second Circuit court. In May 2021, the Second Circuit court denied the defendants’ petition. In August 2021, plaintiffs and ING executed a binding settlement term sheet. Accordingly, plaintiffs and ING jointly asked the Court to stay all litigation proceedings and deadlines applicable to plaintiffs and ING pending drafting, execution and presentment for approval of a formal class settlement agreement. ING has taken a provision for the settlement amount.

Claims regarding accounts with predecessors of ING Bank Turkey: ING Bank Turkey has received numerous claims from (former) customers of legal predecessors of ING Bank Turkey. The claims are based on offshore accounts held with these banks, which banks were seized by the Savings Deposit Insurance Fund (“SDIF”) prior to the acquisition of ING Bank Turkey in 2007 from OYAK. SDIF has also filed various lawsuits against ING Bank Turkey to claim compensation from ING Bank Turkey, with respect to amounts paid out to offshore account holders so far. At this moment it is not possible to assess the outcome of these procedures nor to provide an estimate of the (potential) financial effect of these claims.

Interest rate derivatives claims: ING is involved in several legal proceedings in the Netherlands with respect to interest rate derivatives that were sold to clients in connection with floating interest rate loans in order to hedge the interest rate risk of the loans. These proceedings are based on several legal grounds, depending on the facts and circumstances of each specific case, inter alia alleged breach of duty of care, insufficient information provided to the clients on the product and its risks and other elements related to the interest rate derivatives that were sold to clients. In some cases, the court has ruled in favour of the claimants and awarded damages, annulled the interest rate derivative or ordered repayment of certain amounts to the claimants. The total amounts that need to be repaid or compensated in some cases still need to be determined. ING may decide to appeal against adverse rulings. Although the outcome of the pending litigation and similar cases that may be brought in the future is uncertain, it is possible that the courts may ultimately rule in favour of the claimants in some or all of such cases. Where appropriate a provision has been taken. The aggregate financial impact of the current and future litigation could become material.

Interest surcharges claims: ING received complaints and was involved in litigation with certain individuals in the Netherlands regarding increases in interest surcharges with respect to several credit products, including but not limited to commercial property. ING has reviewed the relevant product portfolio. The provision previously taken has been reversed for certain of these complaints. All claims are dealt with individually. Thus far, the courts have ruled in favour of ING in each case, ruling that ING was allowed to increase the interest surcharge based upon the essential obligations in the contract. In a relevant case the Dutch Supreme Court ruled in favor of another Dutch bank, addressing the question whether or not a bank is allowed to increase interest surcharges unilaterally. The Supreme Court ruled affirmative. ING will continue to deal with all claims individually.

Mortgage expenses claims: ING Spain has received claims and is involved in procedures with customers regarding reimbursement of expenses associated with the formalisation of mortgages. In most court proceedings in first instance the expense clause of the relevant mortgage contract has been declared null and ING Spain has been ordered to reimburse all or part of the applicable expenses. Since 2018, the Spanish Supreme Court and the European Court of Justice have issued rulings setting out which party should bear notary, registration, agency, and stamp duty costs. In January 2021, the Spanish Supreme Court ruled that valuation costs of mortgages, signed prior to 16 June 2019, the date the new mortgage law entered into force, should be borne by the bank. Media attention for the statute of limitations applicable to the right to claim reimbursement of costs resulted in an increased number of claims at the beginning of 2021. In June 2021, the Supreme Court published a press release informing of its decision to ask the European Court of Justice for a preliminary ruling regarding the criteria that should be applied to determine the date from which the action for claiming the reimbursement of mortgage expenses is considered to be expired. ING Spain has also been included, together with other Spanish banks, in three class actions filed by customer associations. In one of the class actions an agreement was reached with the association. In another class action ING filed an appeal asking the Spanish Court of Appeal to determine that the ruling of the court of first instance is only applicable to the consumers that were part of the case. A provision has been established in the past and has been adjusted where appropriate.

Imtech claim: In January 2018, ING Bank received a claim from Stichting ImtechClaim.nl and Imtech Shareholders Action Group B.V. on behalf of certain (former) shareholders of Imtech N.V. ("Imtech"). Furthermore, on 28 March 2018, ING Bank received another claim on the same subject matter from the Dutch Association of Stockholders (Vereniging van Effectenbezitters, "VEB"). Each of the claimants allege inter alia that shareholders were misled by the prospectus of the rights issues of Imtech in July 2013 and October 2014. ING Bank, being one of the underwriters of the rights issues, is held liable by the claimants for the damages that investors in Imtech would have suffered. ING Bank responded to the claimants denying any and all responsibility in relation to the allegations made in the relevant letters. In September 2018, the trustees in the bankruptcy of Imtech claimed from various financing parties, including ING, payment of what the security agent has collected following bankruptcy or intends to collect, repayment of all that was repaid to the financing parties, as well as compensation for the repayment of the bridge financing. At this moment it is not possible to assess the outcome of these claims nor to provide an estimate of the (potential) effect of these claims.

Mexican Government Bond litigation: A class action complaint was filed adding ING Bank N.V., ING Groep N.V., ING Bank Mexico S.A. and ING Financial Markets LLC ("ING") as defendants to a complaint that had previously been filed against multiple other financial institutions. The complaint alleges that the defendants conspired to fix the prices of Mexican Government Bonds. On 30 September 2019, the relevant court dismissed the antitrust complaint, finding that the plaintiffs had failed to identify any facts that links each defendant to the alleged conspiracy. In December 2019, the plaintiffs filed an amended complaint removing all ING entities as defendants on the condition that the ING entities enter into a tolling agreement for the duration of two years. ING subsequently entered into a tolling agreement, which expired in December 2021. The defendants named in the amended complaint have now settled that litigation.

Claims regarding mortgage loans in Swiss franc in Poland: ING Poland is a defendant in several lawsuits with retail customers who took out mortgage loans indexed to the Swiss franc. Such customers have alleged that the mortgage loan contract contains abusive clauses. One element that the court is expected to consider in determining whether such contracts contain abusive clauses is whether the rules to determine the exchange rate used for the conversion of the loan from Polish zloty to Swiss franc are unambiguous and verifiable. In December 2020, the Polish Financial Supervision Authority (PFSA) proposed that lenders offer borrowers voluntary out-of-court settlements on foreign-currency mortgage disputes, with mortgages indexed to Swiss franc serving as a reference point. In February 2021, ING Poland announced its support for this initiative and in October 2021 began offering the settlements to the borrowers following the PFSA's proposal. ING has recorded a portfolio provision with respect to the claims and the PFSA proposal. The Polish Supreme Court was expected to provide further clarity on this topic in a ruling scheduled for November 2021, however the court's session on this matter was postponed and the date of the next session has not yet been announced.

Certain Consumer Credit Products: In October 2021, ING announced that it would offer compensation to certain of its Dutch retail customers in connection with certain revolving consumer loans with variable interest rates that allegedly did not sufficiently follow market rates. This announcement was made in response to a number of rulings by the Dutch Institute for Financial Disputes (Kifid) regarding similar products at other banks. ING currently expects that any such compensation will be paid before the end of 2022. ING has recognized a provision of €180 million in 2021 for compensation and costs in connection with this matter. On 22 December 2021 ING announced that it has reached an agreement with the Dutch Consumers' Association (Consumentenbond) on the compensation methodology for revolving credits.

47 Consolidated companies and businesses acquired and divested

Acquisitions

There were no significant acquisitions in 2021 or 2020.

In May 2019 ING acquired 80% of the shares of Intersoftware Group B.V., Findata Access B.V. and Unitrust B.V. (ISW Group) for a total consideration of EUR 18 million. The acquisition of ISW Group resulted in the recognition of goodwill of EUR 17 million.

Divestments

On 18 February 2021 ING announced the intention to withdraw from the retail banking market in the Czech Republic. The decision to discontinue Czech Retail Banking entails the closure of retail customer accounts /mutual funds and the sale of assets comprising the related government bond portfolio. ING's retail customers in the Czech Republic have received a welcome offer from Raiffeisenbank Czech Republic. ING's departure from the Czech Retail banking market resulted in EUR 2.5 billion saving accounts being transferred to Raiffeisenbank and the government bond portfolio with a carrying amount of EUR 0.5 billion being sold in the second quarter of 2021.

At 12 July 2021, ING announced that it has reached an agreement to transfer ING's Retail Banking operations in Austria to bank99. Under the terms of the agreement, approximately EUR 1.7 billion of savings deposits and approximately EUR 1.0 billion of mortgages, approximately EUR 0.4 billion other personal lending and approximately EUR 0.4 billion loans to banks of ING Austria have been transferred to Bank99. Per 1 December 2021 completed the transaction and realized a loss on disposal of EUR 26 million. ING Austria was included in the segment Retail Challengers & Growth Markets.

In 2021, ING and the board of Makelaarsland agreed to continue Makelaarsland independently. The new board will take over all clients and employees, and services to clients will continue unchanged. The negative result on disposal of group companies from this management buyout amounted to approximately EUR 3 million.

On 28 October 2021 ING announced that its subsidiary Payvision will start phasing out its services as a payment service provider and acquirer. After a thorough evaluation of all options in the context of the rapidly evolving and increasingly competitive and capital intensive e-commerce merchant market, ING has concluded that it is not feasible to achieve its ambitions with Payvision. The aim is to complete the phase-out process by the second quarter of 2022.
In 2021, Payvision recognised an impairment loss of intangible assets of EUR 44 million, mainly with respect to Brand, IT and Customer relationships and an impairment loss of the deferred tax asset of EUR 14 million.

In December 2021 ING announced that it will leave the retail banking market in France. Reference is made to Note 52 'Subsequent events' for further details of the events after 31 December 2021 but before these financial statements were authorised for issue.

In 2020 there were no significant divestments.

In July 2019 ING completed the sale of part of the ING Lease Italy business. The settlement price amounted to EUR 1,162 million, consisted of a EUR 368 million cash settlement, a EUR 20 million Deferred Purchase Price and a EUR 774 million Senior Loan facility for the portfolio of lease receivables. The deferred purchase price is linked to the performance of the sold portfolio and is reported under the financial assets mandatorily measured at fair value through profit and loss. The additional loss in 2019 amounted EUR -2 million (2018: EUR -123 million). The Italian lease business was reported as Assets Held for Sale as at 31 December 2018 and previously included in the business line segment Wholesale Banking and geographical segment Other Challengers.

Reference is made to Note 24 'Result on the disposal of group companies'.

Most significant companies disposed in 2021

in EUR million	Makelaarsland BV & Above BV	ING Austria Retail Banking	Total divested
Sales Proceeds			
Sales proceeds		29	29
Non-cash proceeds			
Cash proceeds		29	29
Cash outflow / inflow on disposal		29	29
Assets			
Cash assets	3		3
Loans and advances to customers	0	1,404	1,404
Amounts due from banks		378	378
Miscalleneous other assets	0	8	8
Liabilities			
Customer deposits and other funds on deposit		1,725	1,725
Miscalleneous other liabilities	1	8	9
Net assets	3	56	58
% disposed	100%	100%	
Net assets disposed	**3**	**56**	**58**
Result on disposal	**-3**	**-26**	**-29**

48 Principal subsidiaries, investments in associates and joint ventures

For the majority of ING's principal subsidiaries, ING Groep N.V. has control because it either directly or indirectly owns more than half of the voting power. For subsidiaries in which the interest held is below 50%, control exists based on the combination of ING's financial interest and its rights from other contractual arrangements which result in control over the operating and financial policies of the entity.

For each of the subsidiaries listed, the voting rights held equal the proportion of ownership interest and consolidation by ING is based on the majority of ownership.

For the principal investments in associates and joint ventures ING Group has significant influence but not control. Significant influence generally results from a shareholding of between 20% and 50% of the voting rights, but also the ability to participate in the financial and operating policies through situations including, but not limited to one or more of the following:

- Representation on the board of directors;
- Participation in the policymaking process; and
- Interchange of managerial personnel.

The principal subsidiaries, investments in associates and joint ventures of ING Groep N.V. and their statutory place of incorporation or primary place of business are as follows:

Principal subsidiaries, investments in associates and joint ventures

			Proportion of ownership and interest held by the group	
			2021	2020
Subsidiary	**Statutory place of Incorporation**	**Country of operation**		
ING Bank N.V.	Amsterdam	the Netherlands	100%	100%
Bank Mendes Gans N.V.	Amsterdam	the Netherlands	100%	100%
ING Belgium S.A./N.V.	Brussels	Belgium	100%	100%
ING Luxembourg S.A.	Luxembourg City	Luxembourg	100%	100%
ING-DiBa AG	Frankfurt am Main	Germany	100%	100%
ING Bank Slaski S.A.[1]	Katowice	Poland	75%	75%
ING Financial Holdings Corporation	Delaware	United States of America	100%	100%
ING Bank A.S.	Istanbul	Turkey	100%	100%
ING Bank (Australia) Ltd	Sydney	Australia	100%	100%
ING Commercial Finance B.V.	Amsterdam	the Netherlands	100%	100%
ING Groenbank N.V.	Amsterdam	the Netherlands	100%	100%
Investments in associates and joint ventures				
TMBThanachart Bank Public Company Ltd[2]	Bangkok	Thailand	23%	23%

1 The shares of the non-controlling interest stake of 25% are listed on the Warsaw Stock Exchange, for summarised financial information we refer to 'Note 36 'Information on geographical areas.

2 Reference is made to Note 8 Investments in Associates and Joint Ventures.

49 Structured entities

ING Group's activities involve transactions with various structured entities (SE) in the normal course of its business. A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements. ING Group's involvement in these entities varies and includes both debt financing and equity financing of these entities as well as other relationships. Based on its accounting policies, as disclosed in the section Principles of valuation and determination of results of these financial statements, ING establishes whether these involvements result in no significant influence, significant influence, joint control or control over the structured entity.

The structured entities over which ING can exercise control are consolidated. ING may provide support to these consolidated structured entities as and when appropriate. However, this is fully reflected in the consolidated financial statements of ING Group as all assets and liabilities of these entities are included and off-balance sheet commitments are disclosed.

ING's activities involving structured entities are explained below in the following categories:

1. Consolidated ING originated securitisation programmes;
2. Consolidated ING originated Covered bond programme (CBC);
3. Consolidated ING sponsored Securitisation programme (Mont Blanc);
4. Unconsolidated Securitisation programme; and
5. Other structured entities.

1. Consolidated ING originated securitisation programmes

ING Group enters into liquidity management securitisation programmes in order to obtain funding and improve liquidity. Within the programme ING Group sells ING originated assets to a structured entity. The underlying exposures include residential mortgages and SME loans in the Netherlands, Belgium, Spain, Italy, Australia and Germany.

The structured entity issues securitised notes (traditional securitisations) which are eligible collateral for central bank liquidity purposes. In most programmes ING Group acts as investor of the securitised notes. ING Group continues to consolidate these structured entities if it is deemed to control the entities.

The structured entity issues securitisation notes in two or more tranches, of which the senior tranche obtains a high rating (AAA or AA) by a rating agency. The tranche can subsequently be used by ING Group as collateral in the money market for secured borrowings.

ING Group originated various securitisations, as at 31 December 2021, these consisted of approximately EUR 74 billion (2020: EUR 66 billion) of senior and subordinated notes, of which approximately EUR 1 billion (2020: EUR 2 billion) were issued externally. The underlying exposures are residential mortgages and SME loans. Apart from the third party funding, these securitisations did not impact ING Group's Consolidated statement of financial position and profit or loss.

In 2021, there are no non-controlling interests as part of the securitisation structured entities that are significant to ING Group. ING Group for the majority of the securitisation vehicles provides the funding for the entity except for EUR 1 billion (2020: EUR 2 billion).

In addition ING Group originated various securitisations for liquidity management optimisation purposes. As at 31 December 2021, these consisted of approximately EUR 1 billion (2020: EUR 2 billion) of senior secured portfolio loans, which have been issued to ING subsidiaries in Germany. The underlying exposures are senior loans to large corporations and financial institutions, and real estate finance loans, mainly in the Netherlands. These securitisations did not impact ING Group's consolidated statement of financial position and profit or loss.

2. Consolidated ING originated Covered bond programme (CBC)

ING Group has entered into a covered bond programme. Under the covered bond programme ING issues bonds. The payment of interest and principal is guaranteed by the ING administered structured entities, ING Covered Bond Company B.V., and ING SB Covered Bond Company B.V. In order for these entities to fulfil their guarantee, ING legally transfers mainly Dutch mortgage loans originated by ING. Furthermore ING offers protection against deterioration of the mortgage loans. The entities are consolidated by ING Group.

Covered bond programme	Fair value pledged mortgage loans	
	2021	2020
Dutch Covered Bond Companies	16,586	20,157
	16,586	**20,157**

In addition, subsidiaries of ING in Germany, Belgium and Australia also issued covered bonds with pledged mortgages loans of approximately EUR 23 billion (2020: EUR 21 billion) in total.

For the covered bond programme, third-party investors in securities issued by the structured entity have recourse to the assets of the entity and to the assets of ING Group.

3. Consolidated ING sponsored Securitisation programme (Mont Blanc)

In the normal course of business, ING Group structures financing transactions for its clients by assisting them in obtaining sources of liquidity by selling the clients' receivables or other financial assets to a Special Purpose Vehicle (SPV). The senior positions in these transactions may be funded by the ING administered multi seller Asset Backed Commercial Paper (ABCP) conduit Mont Blanc Capital Corp. (rated A-1/P-1). Mont Blanc Capital Corp. funds itself externally in the ABCP markets.

In its role as administrative agent, ING Group facilitates these transactions by acting as administrative agent, swap counterparty and liquidity provider to Mont Blanc Capital Corp. ING Group also provides support facilities (i.e. liquidity) backing the transactions funded by the conduit. The types of asset currently in the Mont Blanc conduit include trade receivables, consumer finance receivables, car leases and residential mortgages.

ING Group supports the commercial paper programmes by providing Mont Blanc Capital Corp. with short-term liquidity facilities. Once drawn these facilities bear normal credit risk.

The liquidity facilities, provided to Mont Blanc are EUR 2,581 million (2020: EUR 2,793 million). The drawn liquidity amount is nil as at 31 December 2021 (2020: nil).

The standby liquidity facilities are reported under irrevocable facilities. All facilities, which vary in risk profile, are granted to the Mont Blanc Capital Corp. subject to normal ING Group credit and liquidity risk analysis procedures. The fees received for services provided and for facilities are charged subject to market conditions.

4. Unconsolidated Securitisation programme

In 2013 ING transferred financial assets (mortgage loans) for an amount of approximately EUR 2 billion to a special purpose vehicle (SPV). The transaction resulted in full derecognition of the financial assets from ING's statement of financial position. Following this transfer ING continues to have two types of on-going involvement in the transferred assets: as counterparty to the SPE of a non-standard interest rate swap and as servicer of the transferred assets. ING has an option to unwind the transaction by redeeming all notes at their principal outstanding amount, in the unlikely event of changes in accounting and/or regulatory requirements that significantly impact the transaction. The fair value of the swap held by ING at 31 December 2021 amounted to EUR -34 million (2020: EUR -34 million); fair value changes on this swap recognised in the statement of profit or loss in 2021 were EUR 0 million (2020: EUR 11 million). Service fee income recognised, for the role as administrative agent, in the statement of profit or loss in 2021 amounted to EUR 1 million (2020: EUR 1 million). The cumulative income recognised in profit or loss since derecognition amounts to EUR 17 million (2020: EUR 16 million).

5. Other structured entities

In the normal course of business, ING Group enters into transactions with structured entities as counterparty. Predominantly in its structured finance operations, ING can be instrumental in facilitating the creation of these structured entity counterparties. These entities are generally not included in the consolidated financial statements of ING Group, as ING facilitates these transactions as administrative agent by providing structuring, accounting, funding, lending, and operation services.

ING Group offers various investment fund products to its clients. ING Group does not invest in these investment funds for its own account nor acts as the fund manager.

50 Related parties

In the normal course of business, ING Group enters into various transactions with related parties. Parties are considered to be related if one party has the ability to control or exercise significant influence over the other party in making financial or operating decisions. Related parties of ING Group include, among others, its subsidiaries, associates, joint ventures, key management personnel, and various defined benefit and contribution plans. For post-employment benefit plans, reference is made to Note 36 ‘Pension and other postemployment benefits’. Transactions between related parties include rendering or receiving of services, leases, transfers under finance arrangements and provisions of guarantees or collateral. All transactions with related parties took place at conditions customary in the market. There are no significant provisions for doubtful debts or individually significant bad debt expenses recognised on outstanding balances with related parties.

Subsidiaries

Transactions with ING Groep N.V.'s main subsidiaries

	2021	2020
Assets	56,349	45,625
Liabilities	55	134
Income received	1,158	1,122
Expenses paid	15	9

Transactions between ING Groep N.V. and its subsidiaries are eliminated on consolidation. Reference is made to Note 48 ‘Principal subsidiaries’ for a list of principal subsidiaries and their statutory place of incorporation.

Assets from ING’s subsidiaries mainly comprise long-term funding. Liabilities to ING’s subsidiaries mainly comprise short-term deposits.

Associates and joint ventures

Transactions with ING Group’s main associates and joint ventures

	Associates		Joint ventures	
	2021	2020	2021	2020
Assets	115	100		0
Liabilities	417	239	3	1
Off-balance sheet commitments	24	10		–
Income received	42	14		

Assets, liabilities, commitments, and income related to Associates and joint ventures result from transactions which are executed as part of the normal Banking business.

Key management personnel compensation

The Executive Board of ING Groep N.V., the Management Board Banking and the Supervisory Board are considered Key Management personnel of ING Group. In 2021 and 2020, the three members of the Executive Board of ING Groep N.V. were also members of the Management Board Banking.

Transactions with key management personnel, including their compensation are included in the tables below.

Key management personnel compensation (Executive Board and Management Board Banking)

2021 in EUR thousands	Executive Board of ING Groep N.V. [3]	Management Board Banking [1]	Total
Fixed Compensation			
– Base salary	3,836	5,024	8,860
– Collective fixed allowances [2]	954	1,214	2,168
– Pension costs	64	116	180
– Severance benefits[4]		1,075	1,075
Variable compensation			
– Upfront cash		664	664
– Upfront shares	265	691	956
– Deferred cash		997	997
– Deferred shares	398	1,036	1,434
– Other emoluments[5]	274	959	1,233
Total compensation	**5,791**	**11,776**	**17,567**

1 Excluding members of the Management Board Banking that are also members of the Executive Board of ING Groep N.V.
2 The collective fixed allowances consist of two savings allowances applicable to employees in the Netherlands; an individual savings allowance of 3.5% and a collective savings allowance to compensate for loss of pension benefits with respect to salary in excess of EUR 112,189.
3 In 2021 one member of the Executive Board joined ING during the year. The table includes compensation earned in the capacity as Executive Board member as of the appointment at the AGM on 26 April 2021.
4 One member of the Management Board Banking left ING during the reporting year 2021. In line with applicable regulation a severance payment was granted.
5 This includes amongst others: housing, school/tuition fees, international health insurance, relocation costs and tax and financial planning.

Key management personnel compensation (Executive Board and Management Board Banking)

2020 **in EUR thousands**	Executive Board of ING Groep N.V. [3]	Management Board Banking [1,4]	Total
Fixed Compensation			
– Base salary	3,609	4,170	7,779
– Collective fixed allowances [2]	898	1,009	1,907
– Pension costs	58	93	151
– Severance benefits		667	667
Variable compensation			
– Upfront cash		305	305
– Upfront shares		305	305
– Deferred cash		457	457
– Deferred shares		457	457
– Other emoluments [5,6]	298	814	1,112
Total compensation	**4,863**	**8,277**	**13,140**

1 Excluding members of the Management Board Banking that are also members of the Executive Board of ING Groep N.V.
2 The collective fixed allowances consist of two savings allowances applicable to employees in the Netherlands; an individual savings allowance of 3.5% and a collective savings allowance to compensate for loss of pension benefits with respect to salary in excess of EUR 110,111.
3 In 2020 one member of the Executive Board left ING during the year. The table includes compensation earned in the capacity as Executive Board member.
4 One member of the Management Board Banking left ING at the end of the year. In line with applicable regulation a severance payment was granted.
5 Other emoluments include reimbursement of costs related to home/work commute, costs relating to tax and financial planning services, costs associated with a company car and for expats and the costs associated with housing and schooling
6 Prior year numbers have been updated by excluding costs related to reimbursement of Directors and Officers indemnity to improve consistency and comparability.

ING indemnifies the members of the EB against direct financial losses in connection with claims from third parties filed, or threatened to be filed, against them by virtue of their service as a member of the EB, as far as permitted by law, on the conditions laid down in the Articles of Association and their commission contract. ING has taken out liability insurance for the members of the EB.

In accordance with the Articles of Association ING indemnifies the members of the Supervisory Board as far as legally permitted against direct financial losses in connection with claims from third parties filed or threatened to be filed against them by virtue of their service as a member of the Supervisory Board.

Key management personnel compensation is generally included in Staff expenses in the statement of profit or loss. The total remuneration of the Executive Board and Management Board Banking is disclosed in the table above. Under IFRS, certain components of variable remuneration are not recognised in the statement of profit or loss directly, but are allocated over the vesting period of the award. The comparable amount recognised in Staff expenses in 2021 relating to the fixed expenses of 2021 and the vesting of variable remuneration of earlier performance years, is EUR 13 million in 2021 (2020: EUR 12 million).
The table below shows the total of fixed remuneration, expense allowances and attendance fees for the Supervisory Board in 2021 and 2020.

Key management personnel compensation (Supervisory Board)

in EUR thousands	2021	2020
Total compensation	994	1,042

Balances outstanding with key management personnel were as follows:

Loans and advances to key management personnel

	Amount outstanding 31 December		Weighted average interest rate		Repayments	
in EUR thousands	2021	2020	2021	2020	2021	2020
Executive Board members						
Management Board Banking	2,392	350	1.7%	2.6%	40	
Supervisory Board members						
Total	**2,392**	**350**			40	

The loans and advances mentioned in the table above (1) were made in the ordinary course of business, (2) were granted on conditions that are comparable to those of loans and advances granted to all employees and (3) did not involve more than the normal risk of collectability or present other unfavourable features. Loans and advances to members of the Executive Board and Management Board Banking are compliant with the standards set out in the DNB guidelines for loans to officers and directors of a regulated entity, such as ING.

As at 31 December 2021 Deposits outstanding from key management personnel amounted to EUR 6.1 million (31 December 2020: EUR 12.5 million). Total interest paid in 2021 on these deposits amounted to EUR nil (2020: EUR 14 thousand).

Number of ING Groep N.V. shares and stock options to key management personnel

	ING Groep N.V. shares	
in numbers	2021	2020
Executive Board members	91,853	88,741
Management Board Banking	237,525	254,052
Supervisory Board members	5,295	5,295
Total number of shares and stock options	**334,673**	**348,088**

51 Capital management

Objectives

Group Treasury ("GT") Balance Sheet & Capital Management, is responsible for maintaining the adequate capitalisation of ING Group and ING Bank entities, to manage the risk associated with ING's business activities. This involves not only managing, planning and allocating capital within ING Group, ING Bank and its various entities, but also helping to execute necessary capital market transactions, term (capital) funding and risk management transactions. ING takes an integrated approach to assess the adequacy of its capital position in relation to its risk profile and operating environment. This means GT Balance Sheet & Capital Management takes into account both regulatory and internal, economic based metrics and requirements as well as the interests of key stakeholders such as shareholders and rating agencies. ING Group's capital position and capital distributions are managed based on IFRS-EU.

ING applies the following main capital definitions:

- Common equity Tier 1 capital (CET1) - is defined as shareholders' equity less regulatory adjustments. CET1 capital divided by risk-weighted assets equals the CET1 ratio.
- Tier 1 capital – is defined as CET1 capital plus Additional Tier 1 (hybrid) securities and other regulatory adjustments. Tier 1 capital divided by risk-weighted assets equals the Tier 1 capital ratio.
- Total capital – is Tier 1 capital plus subordinated Tier 2 liabilities and regulatory adjustments. Total capital divided by risk-weighted assets equals the Total capital ratio.

- CET1 ratio ambition – is built on the CET1 requirements specified for ING, uncertainty of expected regulatory RWA inflation, potential increase in the regulatory requirement of the Countercyclical Buffer and the potential impact of a standardised and pre-determined stress scenario.
- Leverage ratio (LR) – is defined as Tier 1 capital divided by the leverage exposure.
- Total Loss Absorbing Capacity (TLAC) – Total capital plus senior unsecured bonds and amortisations. TLAC ratios are based on both risk-weighted assets and leverage exposure.
- Minimum Required Eligible Liabilities (MREL) – Total capital plus senior unsecured bonds and amortisations. MREL ratios are based on both risk-weighted assets and leverage exposure.

Capital developments

ING's capital position remained strong despite Covid-19 uncertainty. At both the consolidated and entity level, ING has sufficient buffers to withstand various stressed scenarios.

ING's CET1 ambition level of around 12.5% is well above the prevailing Maximum Distributable Amount (MDA) level of 10.51%, implying a management buffer of about 200 basis points.

ING's capital ratios at the end of the year improved compared to 2020 primarily due to the addition of 50% of the full year 2021 net profit to CET1 capital. This was only partly offset by higher risk-weighted assets that were mainly driven by model impacts, reflecting the ongoing redevelopment of internal models and EBA guidelines.

ING Groep N.V. has a CET1 ratio of 15.9% at 31 December 2021 versus an overall SREP requirement (including buffer requirements) of 10.51%. The Group's Tier 1 ratio increased to 18.1%. All AT1 securities outstanding at 31 December 2021 are CRR-compliant. The Total capital ratio (including grandfathered securities) increased from 20.1% to 21.0% compared to last year.

ING Group capital position according to CRR II / CRD V

in EUR million	2021	2020
Shareholders' equity [1]	53,919	54,637
- Interim profits not included in CET1 capital [2]	-1,568	-3,266
- Other adjustments	-2,590	-4,037
Regulatory adjustments	-4,159	-7,303
Available common equity Tier 1 capital	**49,760**	**47,333**
Additional Tier 1 securities [3]	6,808	5,643
Regulatory adjustments additional Tier 1	50	48
Available Tier 1 capital	**56,618**	**53,024**
Supplementary capital Tier 2 bonds [4]	9,341	9,359
Regulatory adjustments Tier 2	-158	-846
Available Total capital	**65,801**	**61,537**
Risk weighted assets	313,064	306,324
Common equity Tier 1 ratio	**15.89%**	**15.45%**
Tier 1 ratio	18.09%	17.31%
Total capital ratio	21.02%	20.09%

1) Shareholders' equity is determined in accordance with IFRS-EU.
2) The interim profits not included in CET1 capital as per 31 December 2021 were EUR 1,568 million (full-year 2021: EUR 2,388 million, of which EUR 820 million was paid out as interim dividend in October 2021).
3) All AT1 securities outstanding at 31 December 2021 are CRR-compliant (2020: EUR 983 million was subject to CRR/CRD IV grandfathering rules).
4) Including EUR 9,188 million which is CRR-compliant (2020: EUR 9,206 million), and EUR 153 million to be replaced as capital recognition is subject to CRR grandfathering rules (2020: EUR 153 million).

In accordance with the applicable regulation, credit and operational risk models used in the capital ratios calculations are not audited.

Distribution

ING's distribution policy is a pay-out ratio of 50% of resilient net profit and additional return of structural excess capital. The latter to be considered periodically, taking into account alternative opportunities as well as macroeconomic circumstances and the outcome of capital planning. Resilient net profit is defined as net profit adjusted for significant items not linked to the normal course of business. The 50% pay-out may be in the form of cash or a combination of cash and share repurchases.

For 2021, the resilient net profit amounts to EUR 4,776 million, of which EUR 2,388 million was reserved for distribution outside of CET1 capital reflecting ING's distribution policy of a 50% pay-out ratio. Resilient net profit is equal to the net profit as there were no adjustments to make for significant items not linked to the normal course of business.

In the fourth quarter of 2021 ING resumed the distribution of capital, after the ECB lifted its recommendation to limit or refrain from dividends in light of the Covid-19 pandemic.

- ING paid an amount of EUR 0.48 per share on 12 October 2021, consisting of an interim dividend over 2021 (EUR 0.21 per share) and the remaining amount originally reserved for the 2020 distribution (EUR 0.27 per share).
- On 5 October 2021 ING commenced a share buyback programme for EUR 1,744 million to distribute the remaining amount originally reserved over 2019 for distribution. Approximately 92% of the programme had been completed by 31 December 2021. On 28 February 2022 the share buyback programme was completed.

At the end of 2021, ING has EUR 1,568 million reserved for distribution outside of CET1 capital fully related to reserved profits in 2021 (full-year 2021: EUR 2,388 million, of which EUR 820 million was paid out as interim dividend in October 2021).

Following ING's distribution policy of a 50% pay-out ratio on resilient net profit, the Board has proposed to pay a final cash dividend over 2021 of EUR 0.41 per share. This is subject to the approval by shareholders at the Annual General Meeting in April 2022.

Processes for managing capital

GT Balance Sheet & Capital Management ensures adherence to ING's solvency risk appetite statements by planning and executing capital management transactions. The ongoing assessment and monitoring of capital adequacy is embedded in the capital planning process as part of the ICAAP framework. As part of the dynamic business planning process, ING prepares a capital and funding plan on a regular basis for all its material businesses and assesses continuously the timing, need and feasibility for capital management actions in scope of its execution strategy. Sufficient financial flexibility should be preserved to meet important financial objectives. Risk appetite statements are at the foundation of the capital plan and are cascaded to the different businesses in line with ING's risk management framework. Contingency capital measures and early warning indicators are in place in conjunction with ING's contingency and recovery plan to support the strategy in times of stress.

Adverse planning and stress testing, which reflect the outcome of the annual risk assessment, are integral components of ING's risk and capital management framework. It allows to (i) identify and assess potential vulnerabilities in ING's businesses, business model, portfolios or operating environment; (ii) understand the sensitivities of the core assumptions used in ING's strategic and capital plan; and (iii) improve decision-making and business steering through balancing risk and return following a forward looking and prudent management approach.

Regulatory requirements

Capital adequacy and the use of required regulatory capital are based on the guidelines developed by the Basel Committee on Banking Supervision (The Basel Committee) and the European Union Directives, as implemented by the Dutch Central Bank and the ECB for supervisory purposes. In 2010, the Basel Committee issued new solvency and liquidity requirements that superseded Basel II, implemented in the EU via CRR / CRD. In accordance with the CRR the minimum Pillar 1 capital requirements applicable to ING Group are: a CET1 ratio of 4.5%, a Tier 1 ratio of 6% and a Total capital ratio of 8% of risk-weighted assets.

The overall SREP CET1 requirement (including buffer requirements) for ING Group at a consolidated level remained stable during 2021 and was 10.51% at the end of 2021. This requirement is the sum of a 4.5% Pillar I requirement, a 0.98% Pillar II requirement, a 2.5% Capital Conservation Buffer (CCB), a 0.03% Countercyclical Buffer (CCyB) (based on December 2021 positions) and a 2.5% O-SII buffer that is set separately for Dutch systemic banks by the Dutch Central Bank (De Nederlandsche Bank). This requirement excludes the Pillar II guidance, which is not disclosed.

The Maximum Distributable Amount (MDA) trigger level stood at 10.51% in 2021 for CET1, 12.34% for Tier 1 Capital and 14.78% for Total Capital. These MDA levels are in line with the application of Art.104a in CRD V, which allows ING to partly fulfil the total Pillar II requirement (1.75%) with Additional Tier 1 and Tier 2 securities. In the event that ING Group breaches an MDA level, ING may face restrictions on dividend payments, coupons on AT1 securities and payment of variable remuneration.

Ratings

ING's credit ratings and outlook are shown in the table below. Each of these ratings reflects only the view of the applicable rating agency at the time the rating was issued, and any explanation of the significance of a rating may be obtained only from the rating agency.

Main credit ratings of ING at 31 December 2021

	S&P	Moody's	Fitch	GBB-Rating
ING Groep N.V.				
Issuer rating				
Long-term	A-	n/a	A+	
Short-term	A-2	n/a	F1	
Outlook	Stable	Stable [1]	Stable	
Senior unsecured rating	A-	Baa1	A+	

1) Outlook refers to the senior unsecured rating.

A security rating is not a recommendation to buy, sell or hold securities and each rating should be evaluated independently of other ratings. There is no assurance that any credit rating will remain in effect for any given period of time or that a rating will not be lowered, suspended or withdrawn entirely by the rating agency if, in the rating agency's judgment, circumstances so warrant. ING accepts no responsibility for the accuracy or reliability of the ratings.

52 Subsequent events

ING has been active in the French retail banking market since 2000 as an online bank. In December 2021 ING announced that it will leave the retail banking market in France in order to sharpen the focus of its business portfolio. At February 1, 2022 ING and Societe Generale announced that a Memorandum of Understanding was signed on 31 January between ING and Boursorama (subsidiary of Societe Generale) to offer banking solutions to ING's retail customers in France. The intention of both parties is to reach a definitive agreement in April 2022 at the latest.
The exact scope of the definitive agreement remains to be specified and would concern daily banking (current accounts and cards), savings and investment products (assurance vie & brokerage). The ING France retail lending portfolio (mortgages and consumer loans) will not be part of the agreement. Mortgages will continue to be managed by ING. Maintaining consumer loans at ING is under consideration.
ING continues its Wholesale Banking activities in France, with a focus on strengthening our position and the ambition to be the go-to-bank for sustainable finance.

The Russian invasion of Ukraine and rapidly escalating events in late February and early March 2022 is a significant tragedy for the people and is causing disruption to business and economic activity in the region and worldwide. This qualifies as a non-adjusting subsequent event. At this moment it is not possible to provide an estimate of the financial impact of this crisis on ING (including direct impact on ING exposures to Russian and Ukrainian markets as well as wider impacts for ING). For further details on Russian and Ukrainian exposures of ING Group reference is made to 'Risk Management – Top and emerging risks'.