ING Bank

Annual Report 2021

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About this report

ING's purpose is empowering people to stay a step ahead in life and in business. In this report we describe how we live up to our purpose and create value as a bank, as an employer and in society.

In this report, the sections Strategy and performance, Risk management, Corporate governance and Dutch Corporate governance statement by the Management Board Banking together form the Report of the Management Board Banking. This annual report also contains ING Bank N.V. consolidated and parent company financial statements, and other information.

This report is intended to inform stakeholder groups that have an impact on or are impacted by our business. This includes customers, investors and shareholders, regulators and supervisors, employees, government authorities and non-governmental organisations.

It aims to give our stakeholders a balanced overview of our activities and ING's ability to create and sustain value.

World around us

Our business is largely shaped by what's happening in the world around us, from economic and political developments to the changing regulatory environment, global trends and social issues. And of course, in 2021 the Covid-19 pandemic continued to have an impact on people, businesses and the economy.

All these factors provide both challenges and opportunities for ING as we navigate the ever-changing world around us to deliver on our purpose and create long-term value for our stakeholders.

Our operating environment

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 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 2Q 2022 and expects to have reduced asset purchases under this 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.

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 and continued uncertainty around the full impact of Brexit all added to the volatility of our external environment.

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.

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.

Among other topics impacting our business in 2021 were climate change (including climate risk), anti-money laundering, cybersecurity and fraud, personal data protection, and culture and ethics.

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.

Stakeholder engagement case: agri commodities and the threat of deforestation

Topic: Financing agricultural commodities that may contribute to deforestation
Stakeholder groups: NGO Global Witness; agricultural commodities clients
Case: The agricultural sector is essential for global food security and provides local economic development and employment. At the same time, agricultural commodities such as coffee, grain and soy (and cattle farming) require significant land use, which can lead to the destruction of forests and risks to the climate, biodiversity and land rights. The supply chains of clients we finance could be directly or indirectly contributing to this. In an October 2021 report, NGO Global Witness mentions ING as financing agri commodities companies with an increased risk of deforestation.
Outcome: ING recognises the alarming rate of deforestation. We are in an ongoing dialogue with NGOs, clients and regulators to determine the best way to mitigate our impact throughout agri commodity supply chains. Clients who trade in and/or grow agri commodities are thoroughly assessed against our Environmental and Social Risk (ESR) policy, including for the risk of deforestation. We encourage clients to use certification aimed at demonstrating that no deforestation occurred for the product in question. Where relevant, clients must participate in the Forest Stewardship Council (FSC) scheme or Programme for the Endorsement of Forest Certification. See ing.com for our stance on deforestation and position on biodiversity.

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, 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.

Personal data protection

Customers trust us with their money and their data, and this is a responsibility we take very seriously. Safeguarding customer data and data privacy are growing in importance on the global agenda across sectors and geographies. This is required by an increasing legislative focus, for example through the EU's second Payment Services Directive (PSD2) around data sharing and the General Data Protection Regulation (GDPR), with which we align our own global data protection policy.

Data controllers or processors who want to transfer personal data outside of the European Economic Area (EEA) must ensure that the data subject is granted a level of protection equivalent to that guaranteed by GDPR. In 2020, the Court of Justice of the European Union introduced the Schrems II ruling, confirming that European companies have to carry out individual assessments of each data transfer to a non-EEA country. In 2021, the European Commission also introduced new standard contractual clauses to the GDPR governing the transfer of data to third countries such as the US. Following the Schrems II ruling, ING launched its own transfer impact assessments and the necessary updates of our standard contractual clauses, all of which should be completed by year-end 2022.

Financial institutions need to walk the fine line between privacy protection and fostering data sharing; again, countries differ in their approach. At EU level there is a clear regulatory trend towards more data portability and more data sharing. Under the Digital Markets Act, Big Techs will be required to facilitate data portability and we expect the future Open Finance proposal to establish PSD2-like data portability.

Culture and ethics

Trust is integral to our role as a bank. At ING we adhere to a comprehensive set of policies and rules designed to protect our customers and our bank from conduct that will jeopardise people's trust in our business and our sector. This includes policies to prevent insider trading, price fixing and market manipulation, as well as to detect and prevent tax evasion, fraud and other financial crimes. Everything we do at ING is guided by our Orange Code, which describes the values and behaviours that underpin our way of working, and which puts integrity above all.

Building on the Orange Code is ING's Global Code of Conduct. We encourage employees to speak up when they are confronted with unethical or illegal behaviour and provide a variety of reporting channels, including via their manager, local compliance officer or an ING whistleblower reporting officer. ING also has external and anonymous whistleblower channels. We take great care to protect the identity of whistleblowers and the confidentiality of their reports to protect them against potential retaliation.

We believe that trust, integrity and ethical behaviour are at the core of any reliable business; they go hand-in-hand with satisfied customers. Yet, with the growth of social media platforms and the behaviour of the tech giants that own them coming under ever closer scrutiny, these core principles are also more frequently questioned by whistleblowers for example, who release evidence of what they believe to be unethical practice to regulators and the media.

The 2021 Edelman Trust Barometer, (surveying 33,000 people in 28 countries), revealed a crisis of trust in media, particularly social media, alongside governments and NGOs, fuelled by widespread misinformation and a lack of credible leadership through the pandemic. However, businesses emerged as the only trusted institutions regarded as both ethical and competent. People clearly expect businesses to step in and help to solve challenges such as the pandemic impact, job automation and societal problems.

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.

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.

Stakeholder engagement case: oil and gas in the Amazon

Topic: The role of banks in financing Amazonian oil and gas activities in Ecuador and Peru
Stakeholder groups: NGOs Stand.Earth and Amazon Watch; hard commodities trading clients
Case: The Amazon Sacred Headwaters region in Peru and Ecuador is one of the most biodiverse places on earth. It protects the climate by acting as a carbon sink and is home to more than 500,000 Indigenous people. NGOs have raised concerns about ongoing oil exploration and production in this fragile ecosystem. ING has no asset-based finance exposure to oil and gas activities here. However, we have financed the trade of Amazonian oil.
Outcome: In 2020, after the NGOs raised their concerns with us, we decided to no longer enter into new contracts for oil and gas exports from Ecuador. In November 2021, we expanded this moratorium to new oil and gas export contracts from Peru following continuing dialogue with the NGOs and a further review of our exposure to the Amazonian oil trade. We will continue to monitor and engage with existing clients on this topic, in line with our view that we can use our influence to steer our clients.

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.

Our business

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 (see 'Measuring customer satisfaction' below). 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).

Case study: balancing customer needs and financial wellbeing

Financial services such as loans, credit cards and buy-now-pay-later products can cause financial difficulties for some people. As a bank, providing loans is integral to what we do. It's our belief that financially healthy people contribute to a healthy economy and help drive social progress. That's why we take a responsible approach to all financing, looking at products like loans, mortgages and short-term credit carefully in line with local market conditions while also balancing the needs of our customers.

For example, in Turkey, where inflation is typically very high, it may make sense to pay for purchases in instalments and credit card use is widespread. At the same time we remain cautious. ING's Orange Extra programme encourages customers in Turkey to use their debit card, or if they do take credit, to repay their loans interest free, contributing to improving financial health.

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

Of the nine sectors in scope for Terra, five – power generation, automotive, residential real estate, shipping and fossil fuel – were on track with existing climate-alignment pathways in 2020.
Steel, cement and commercial real estate were all within 5% of their scenario and we consider these sectors able to improve their performance in the short term. Aviation was not on track. Covid-19 had an extraordinary impact on the sector in 2020, when restrictions on international travel led to a significant reduction in absolute emissions but also impacted efficiency owing to the global fall in passenger loads. Read more in our integrated climate report on ing.com.

5 of 9 sectors on track with 2020 climate alignment pathways (based on 2020 year-end data)

On track	Power generation
On track	Upstream oil & gas
On track	Residential real estate
On track	Automotive
On track	Shipping
Close to on track	Commercial real estate
Close to on track	Cement
Close to on track	Steel
Not on track	Aviation

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. Detailed information on our transition plans is available in our integrated climate report on ing.com.

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.

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.

To reflect on the composition of our power generation portfolio we measure our outstandings on 31 December 2021, as shown in the graphic 'Total power generation lending' below. This portfolio includes both renewable and non-renewable sources, which should – over time – contribute to the overall transition by reallocating our exposure to renewables in the global energy supply mix.

Overall, financing of our power-generating activities increased by 22% to €12.2 billion in 2021, which is largely attributable to renewables, including solar and wind. This sector saw an increase of 26% to €7.3 billion in 2021. Over the last five years, ING's exposure in renewables has more than doubled and now makes up 60% of our power generation portfolio. Our exposure to power generation through natural gas – the least damaging fossil fuel in the transition to a net-zero economy - remained roughly stable in 2021 at €1.5 billion while we have zero exposure to power generated by oil. In line with stated target to reduce coal financing to zero by 2025, financing for coal-fired power plants decreased by 29% to €87 million (from €122 million in 2020). In addition, financing for thermal coal mining (which is not shown in the power generation graphic) decreased by 26% to €107 million in 2021 from €144 million in 2020.

Total power generation lending
(O/S in EUR million)

	2021	2020	2019
Renewables	7,259	5,740	6,109
Oil	0	0	0
Gas	1,523	1,541	1,867
Coal	87	122	131
Diversified utility companies	3,327	2,556	2,238

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 sustainble 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.)

The tables below provide a breakdown of our direct lending for environmental and social activities at year-end 2021, which show our total climate finance and social impact portfolio increased by €3.1 billion to €20.2 billion. Of this, the climate finance portfolio, which supports clients and projects helping the transition to a low-carbon economy, rose to €19.5 billion (from €16.5 billion in 2020). Social impact financing increased by €0.1 billion to €0.7 billion.

Climate finance		
in EUR million	2021	2020
Energy [1]	5,923	5,322
Construction and real estate activities	10,536	9,865
Transport	2,063	1,087
Water supply, sewerage, waste management and remediation	218	117
Information and communication	497	53
Circular economy [2]	-	28
Green loans (multi-purpose) [3]	288	-
Other [4]	-	26
Total	**19,524**	**16,498**

1 Assessment methodology has been updated and comparatives aligned accordingly
2 Category 'Waste management' has been merged with 'Circular economy'
3 Includes green loans that are aligned with more than one Green Loan Principles category
4 'Other' category has been removed in 2021

Social impact finance		
in EUR million	2021	2020
Basic Infrastructure	377	275
Community development	-	49
Essential services	193	209
Healthcare	82	
Total	**652**	**533**

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 CO2 intensity of this portfolio reduced from 35kg CO2/m2 to 31.3kg at end-2020, helped by the Netherlands’ growing use of renewable energy sources in its electricity network. See ‘Reporting process’ above for more information on how we monitor and report on our progress.

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.

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.

Our performance and capital management

Capital management

Risk and capital management remain central to the stability and continuity of the bank. Maintaining our risk profile within our risk appetite and strengthening our capital base is how we grow a sustainable business and achieve our strategic objectives.

Our overall approach to capital management is to ensure that we have enough capital to cover our (economic) risks at all levels, including the risks from the ongoing pandemic, and comply with local and global regulations, while delivering a return for our shareholders and investing in innovation to accelerate the Think Forward Strategy.

ING Bank's capital ratios at the end of the year improved compared to 2020 primarily due to the partial addition of the 2021 net profit to CET1 capital and lower regulatory adjustments. 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 Bank continues to maintain a strong and high quality capital level.

ING Bank N.V. has a CET1 ratio of 14.3% at 31 December 2021, versus an overall CET1 requirement (including buffer requirements) of 7.03%. The Tier 1 ratio (including grandfathered securities) increased from 15.9% to 16.5% compared to last year. The Banks's total capital ratio (including grandfathered securities) increased to 19.5%.

See 'Note 49 Capital management' in the 'Consolidated Financial Statements' for more information.

Financial developments

In 2021, ING Bank achieved good results, despite the challenging conditions, impacting customers, business clients and society from the ongoing Covid-19 pandemic. ING Bank's net result rose to €4,770 million from €2,415 million in 2020. The effective tax rate in 2021 was 27.7%, down from 34.6% 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 reference was made to as TMB).

The result before tax increased 77.8% to €6,774 million in 2021 from €3,810 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 €30.6 billion, and net core deposits growth was €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 €18,485 million in 2021 from €17,645 million in 2020. Income was supported by the recognition of a €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 €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 €13,615 million, and was supported by the €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 €3,517 million from €3,011 million in 2020. In Retail Banking, net fee and commission income rose by €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 €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 €1,354 million in 2021 from €1,034 million in 2020. The increase was mainly caused by the recognition of a €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 €230 million impairment on ING's equity stake in TTB (recorded in Retail Banking) as well as a €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 €35 million, or 0.3%, to €11,195 million. Expenses in 2021 included €1,265 million of regulatory costs, up from €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 €522 million of incidental items, mainly reflecting a €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 €673 million, mainly reflecting €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 €25 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 60.6% versus 63.2% in 2020.

Net additions to loan loss provisions declined to €516 million, or 8 basis points of average customer lending, compared with €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.

The return on IFRS-EU equity of ING Bank increased to 10.1% in 2021 from 5.1% in 2020.

Retail Banking

Total Retail Banking

In 2021, Retail Banking results strongly improved compared with 2020 which was negatively affected by the impact of the Covid-19 pandemic. The net result rose 33.4% to €3,042 million from €2,281 million in 2020, driven by lower risk costs and higher fee income, while expenses excluding regulatory costs and incidental items declined. Net interest income, however, decreased due to the continued margin pressure on liabilities.

The result before tax rose 27.0% to €4,253 million. Income rose by €126 million, or 1.0%, supported by €152 million of conditional TLTRO III benefits while 2020 had included a €230 million impairment on ING's equity stake in TTB. Excluding both items, income fell 2.1%, as strong growth in fee income and the increased impact of charging negative interest rates to clients was more than offset by lower interest margins on liabilities. In 2021, total customer lending rose by €11.0 billion to €447.8 billion. Adjusted for currency impacts, Treasury and the run-off in WestlandUtrecht Bank (WUB) and Austria, Retail's net core lending book grew by €17.5 billion, of which €15.0 billion was in residential mortgages, primarily in Germany, Spain and Poland. Net core deposits growth (also adjusted for the run-off in the Czech Republic) was €12.9 billion in 2021.

Operating expenses increased by €144 million, or 1.9%, of which €69 million was caused by higher regulatory costs. In 2021, expenses furthermore included €455 million of incidental items, primarily reflecting redundancy provisions and impairments related to the decisions to exit the retail banking markets in France and the Czech Republic, the closure of branches in the Netherlands, and a provision for compensation to customers on certain Dutch consumer credit products. In 2020, incidental items amounted to €281 million, mainly reflecting impairments and restructuring provisions related to the Maggie programme and our retail branch network as well as a goodwill impairment in Retail Belgium.

Expenses excluding regulatory costs and incidental items declined 1.5%; this was primarily driven by Retail Netherlands. The cost/income ratio was 62.3% in 2021 compared with 61.8% in 2020.

Risk costs declined to €399 million, or 9 basis points of average customer lending, from €1,322 million, or 30 basis points, in 2020. Risk costs in 2021 included €702 million of Stage 3 provisioning. This was partly offset by releases in Stage 1 and 2 provisioning due to releases of management adjustments taken in 2020 and further reflect clients being removed from the watch list or moving back to Stage 1.

Market Leaders

Retail Netherlands

The result before tax of Retail Netherlands declined 6.8% to €1,936 million from €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 €209 million, or 4.7%, to €4,262 million compared with €4,471 million in 2020. Net interest income declined 6.3%, despite the recognition of a €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 €1.1 billion decline in the WUB run-off portfolio) grew by €0.8 billion in 2021, of which €1.5 billion was in residential mortgages and €-0.7 billion in other lending. Net core deposits growth (excluding Treasury) was €14.8 billion, predominantly in current accounts. Net fee and commission income increased by €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 €78 million lower, mainly attributable to lower results from Treasury-related products.

Operating expenses rose by €167 million, or 7.5%, to €2,403 million from €2,236 million in 2020. The increase was mainly due to a €180 million provision for compensation to customers with certain consumer credit products, and €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 €29 million of provisions. Excluding these incidental items, expenses declined by €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 €76 million, or -5 basis points of average customer lending, compared with a net addition of €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.

Retail Belgium

Retail Belgium includes ING in Luxembourg.

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

Income rose by €102 million, or 4.3%, to €2,475 million from €2,373 million in 2020. Net interest income was 3.8% lower at €1,747 million, despite the recognition of a €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 €0.4 billion in 2021, of which €0.9 billion was in mortgages, and €-0.5 billion in other lending. Net core deposits (excluding Treasury) declined by €2.6 billion, predominantly in savings and deposits. Net fee and commission income rose by €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 €64 million, mainly due to positive treasury-related fair value adjustments and a €25 million capital gain on the sale of an associate.

Operating expenses declined by €70 million, mainly due to a €43 million goodwill impairment and €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 €225 million, or 25 basis points of average customer lending, from €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 adjustments applied in 2020.

Challengers & Growth Markets

Retail Germany

Retail Germany includes ING in Austria.

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

Total income fell 5.1% to €2,009 million from €2,117 million in 2020. Net interest income declined 8.8% as higher revenues from lending products and the recognition of a €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 €7.8 billion, of which €6.8 billion was in residential mortgages and €0.9 billion in consumer lending. Net core deposits declined by €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 €50,000 as of November 2021. Net fee income rose by €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 €28 million due to a €26 million one-off loss related to the transfer of the Austrian retail banking activities to bank99 in December 2021.

Operating expenses increased by €64 million, or 5.8%, to €1,174 million in 2021, of which €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 €49 million, or 5 basis points of average customer lending, compared with €57 million, or 6 basis points, in 2020.

Retail Other

Retail Other consists of the Other Challengers & Growth Markets, including the bank stakes in Asia.

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

Total income rose by €341 million to €3,602 million from €3,261 million in 2020. Excluding the impairment on TTB, total income increased by €111 million, or 3.2%. Net interest income was down 1.7% to €2,712 million, mainly reflecting lower margins on savings and current accounts, partly offset by higher interest results from lending products and a €7 million conditional TLTRO III benefit. Net customer lending (adjusted for currency effects and Treasury) grew by €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 €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 €118 million, or 28.6%, to €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 €42 million, mainly due to higher revenues from Financial Markets-related products.

Operating expenses declined by €17 million, or 0.7%, to €2,452 million from €2,469 million in 2020. In 2021, expenses included €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 €167 million of impairments and restructuring provisions mainly related to the Maggie programme. Excluding these incidental items, expenses declined by €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 €391 million on 2020 to €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.

Wholesale Banking

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 net result increased to €2,144 million from €512 million in 2020. The result before tax rose 247.5% to €2,874 million from €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 €5,916 million in 2021, compared with €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 €433 million, or 11.6%, and was supported by a €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 €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 €2.6 billion. Net fee and commission income rose by €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 €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 €2,926 million from €3,218 million in 2020. Expenses in 2021 included a €44 million impairment on Payvision, while 2020 included a €260 million goodwill impairment and €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 €117 million, or 7 basis points of average customer lending, compared with €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 €2,141 million, up from €691 million in 2020, predominantly due to lower risk costs compared with the elevated level in 2020. Lending income rose by €231 million, or 8.0%, and was supported by the recognition of a €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 €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 €375 million from €246 million in 2020. This increase was due to higher income, supported by the recognition of a €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 €278 million, compared with €230 million in 2020. The increase was mainly due to higher income, which was supported by the recognition of a €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 €80 million compared with a loss of €339 million in 2020. The improvement was mainly due to lower expenses, as 2020 included a €260 million goodwill impairment and €95 million of restructuring provisions and related impairments following the announced refocusing of activities. Excluding these incidental items, result before tax rose by €64 million, mainly due to higher Treasury income as well as higher income in Corporate Investments, which was supported by a €28 million gain on an investment in an associate, and Corporate Finance.

Our people

Although banking is ever more digitalised, it's still built on relationships. Our people are at the heart of our business and we rely on them to support our customers and deliver on our purpose. At the same time, we strive to provide a differentiating employee experience that keeps our people motivated and engaged, and a diverse and inclusive workplace where they feel free to be themselves.

Who we are

ING has over 57,000 employees worldwide and 130 nationalities. Our biggest workforce is in the Netherlands.

Our people offer

Our people are at the heart of our business and we rely on them to deliver on a differentiating customer experience. In our people offer, introduced in 2020, we set out what we expect from our people and what ING offers in return, forming the basis of our employer brand.

Preparing for a hybrid way of working

For most of 2021, the majority of ING employees continued to work from home due to ongoing Covid-19 restrictions. However, in some countries it was possible to cautiously return to the office in a hybrid mode, which combines the advantages of working from home on several days of the week with the benefits of collaborating with colleagues in the office on the other days. The aim is to offer flexibility in balancing work and private life while taking into consideration the lessons over the past year in relation to people's physical and mental wellbeing, engagement, collaboration and efficiency. However, a strong degree of flexibility is required, given the constantly changing situation as new outbreaks occur and the emergence of new variants continues to test the resilience of our people. In implementing what we call 'Hybrid Mode', we're taking a step-by-step approach that provides flexibility for local implementation and respects local health and safety guidelines and labour laws. We'll adapt and improve as we go along, weighing up personal, team, company and customer interests when determining what works best.
ING strongly encourages employees to be vaccinated in line with local government advice, to protect themselves, their colleagues and their communities. Recognising there are employees who may not want to be vaccinated (for example for medical reasons or because of personal beliefs), we will do our best to accommodate them, while acknowledging that in some situations, or countries, proof of vaccine may be required by external parties such as business partners or clients for instance, or for travel purposes. In this regard, ING always follows local government regulations, which can differ from country to country.

Our global and local crisis teams keep a close eye on developments and we strive to maintain the highest health and safety standards in our offices and branches. This includes restricting business travel to high-risk countries when necessary and following local protocols around social distancing and the number of people allowed to attend meetings and events. These often differ from country to country.

Supporting vitality

The wellbeing (or vitality as it's known in ING) of employees remained of crucial importance in 2021 as Covid-related challenges continued. Apart from finding new ways to collaborate, managers developed methods to motivate and engage their teams from a distance, while also managing their own wellbeing. For colleagues who were unable to work from home, we made space available in our offices.

Our local businesses came up with various initiatives to help employees maintain their physical and mental vitality. These ranged from providing ergonomic home working stations to psychological support (in the Czech Republic and Poland); wellbeing coaching in the Netherlands and Belgium; and a health budget in Germany for preventative care. The Netherlands also launched a platform called My Vitality where colleagues can team up for runs, walks and other activities. The Wellbeing Quotient (WQ) programme, now fully digital, continued to run courses on energy management, performing under pressure and mental power for individuals and teams in the Netherlands, Belgium and across Wholesale Banking. Around 10,000 people have completed the WQ programme since 2018.

In 2021, 2.2% of our total workforce was absent through sickness, compared to 3.22% in 2020.

Culture and capabilities: our core drivers

ING's culture and capabilities define who we are. Together, they drive our success and enable us to fulfil our purpose of empowering people to stay a step ahead in life and in business. 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. Our capabilities are what enable us to deliver on our strategy, by ensuring we have what we need as individuals and as an organisation to succeed now, and in the future. It's how we build strong leadership, become a data-driven digital bank that's safe, secure and compliant, and create long-term value for our stakeholders.

Orange Code

Our business centres 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 manifesto that describes our way of working, putting integrity above all. It is comprised of our values – the principles we stick to, no matter what – and our behaviours, which are the commitments we make to each other and the standards by which we measure each other's performance. We expect everyone to demonstrate our Orange Code 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 the foundation of our culture.

Closely linked to this is our Global Code of Conduct, which outlines the 10 core principles we expect from employees. These principles build on the values and behaviours of the Orange Code and are based on ING's existing policies, minimum standards and guidelines. The Global Code of Conduct is in addition to local codes of conduct in various countries. Important elements are the 'speak-up' principle, encouraging employees to report any 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.

All employees (including senior managers) are appraised annually against the requirements of the Orange Code as part of ING's performance management process. As of 2022, all employees will also be required to acknowledge and commit to the Global Code of Conduct.

Ethics and business culture

Having a strong and sound risk culture is essential for performing our role in society responsibly and keeping the bank safe, secure and compliant. Our risk culture is built on our Orange Code and comprises the knowledge, attitude, behaviour and understanding of risk shared by everyone at ING. We strive to have a sound risk culture in which all employees know and understand our core values, where there's an environment of open communication and effective challenge in decision-making, and where management leads by example.

To continuously strengthen our risk culture, we defined our seven risk culture principles – putting integrity first – and introduced a risk culture programme in 2021. It aims to ensure our people are equipped to make responsible decisions when it comes to managing risk and is an action plan for monitoring our progress towards our envisioned risk culture. This follows a self-assessment of our risk culture. Enhancements of our monitoring activities include a risk culture health index and risk culture dashboard.

Our Big 6 capabilities

For ING to be successful now and in the future, we have identified six capabilities our employees need to have in order to deliver on our purpose. These include capabilities that will help us provide a differentiating and seamless digital customer experience – data fluency, customer experience, operations management and leadership – and capabilities tokeep our bank safe, secure and compliant – cybersecurity and non-financial risk management.

The 'Big 6' capabilities were introduced in the Netherlands and Belgium in 2020 and rolled out to the rest of ING during 2021. While not every capability is relevant to every job, and not everyone is expected to master all six, the idea is that every employee understands the basics of each.

To promote these capabilities, ING has set up a number of specialised training facilities via its My Learning digital platform. This includes an Analytics Academy to promote data fluency and strengthen our analytics delivery, and Risk and KYC Academies to equip employees with the skills and knowledge they need to protect our customers and our bank against financial economic crime.

Recognising the need for a strong engineering culture to achieve our digital ambitions, we strive to develop and grow a global workforce of highly skilled engineers. ING's Tech Academy provides both learning and network opportunities for engineers to remain up to date and share knowledge and expertise. Initiatives such as the ING Women in Engineering days aim to increase the diversity of our teams. To provide additional growth and development opportunities we organise global performance days for the Tech community where we assess and calibrate engineering maturity based on ING's global job profiles.

Diversity and inclusion

ING strives to create a diverse and inclusive workplace in which everyone feels free to be themselves. We promote diversity not just because it is the right thing to do, but because we can't deliver on our strategy without it. We believe that teams with a healthy mix of contrasting perspectives and backgrounds are more creative, adapt faster and are more inventive with their solutions; they avoid 'group think' and, by reflecting the diversity of our customers, allow us greater insights into how we can best meet their needs.

Our approach

At ING we strive for no group or level to comprise more than 70% of the same gender, nationality or age group. Managers are ultimately responsible for building mixed teams and choosing the dimensions of diversity they focus on. They are guided as far as possible by the 70% principle and our global priorities: gender, nationality and age. Of course, diversity is about more than these three areas and we'll continue our efforts to include all people, regardless of religion, race, ethnicity, ability, sexual orientation etc.

How are we doing?

Looking at the global make-up of ING we collectively meet the 70% principle across all three dimensions. However, within individual teams and on a country level there are different, often complex challenges in creating the mixed teams we strive for, and we are not always making progress at the speed we would like.

We have dashboards to help us understand where the challenges lie, identify the gaps and monitor progress towards building mixed teams, at different levels of the organisation. The HR teams use these dashboards in their discussions with local management teams.

Diversity at the top

Like many other financial organisations, getting the right mix of people – especially in leadership positions – remains a challenge and we are committed to making progress in this area.

When looking at the composition of our Supervisory, Executive and Management Boards, we look at diversity in a broad sense, striving not only for factors such as, gender, nationality and age, but also, for example, education and work background.

The appointment in 2021 of Ljiljana Čortan as ING's chief risk officer and member of the Executive Board means that both our Executive and Supervisory Boards now comprise 33% women. ING was one of only 16 companies in the Dutch Female Board index to achieve this in 2021, the highest ranked Dutch bank.

As of 1 January 2022, we will be required under new Dutch legislation, the Gender Diversity Act, to set 'appropriate and ambitious' targets for improving gender diversity on our Management Board Banking (MBB) and at senior management level and to report annually on our progress. The Act also introduces a quota for new Supervisory Board appointments to ensure at least one third of seats are held by women and one third by men.

At MBB and senior management level there is still work to be done to make the necessary progress, particularly in terms of gender. We are committed to addressing the imbalances that still exist, for example by accelerating the development of internal candidates for top roles and attracting more diverse candidates from the external market. At MBB level, 25% of our leaders are women (33% in 2020). This follows the separation of the board roles for operations and technology in 2021, enlarging the board with an additional (male) member. In terms of nationality there is more diversity at this level with 63% of MBB members of non-Dutch nationality. Looking more broadly, the number of female managers remained stable at 37% (37% in 2020) and 30% of managers of managers (30% in 2020). Going forward we will report on gender diversity for senior management at job levels 22 and above in our new global job architecture (GJA) classification that was introduced at end-2021.

Diversity and succession planning

Research with an external partner in 2021 helped us better understand our leadership pipeline and identified actions that can help us to improve its diversity. These include to proactively build forward-looking plans so that succession-planned candidates are appointed when opportunity arises.

To bring more diversity into succession planning we use a template that visualises the gender and nationality of the current role-holder and their successors and we aim to create a more balanced pipeline of candidates on succession lists for around 400 senior roles. Diversity is considered a key part of our annual talent review process and we have integrated the 70% principle into the leadership appointment process.

The introduction in December 2021 of a new global job classification called Global Job Architecture (GJA) will also help us identify competencies and opportunities for every role at ING. Previously job profiles were defined locally; now we can compare, match and understand jobs across borders and business lines, enabling us to make more informed decisions about our organisational structure, workforce planning, benchmarking and diversity.

Gender pay gap

The gender pay gap represents the average difference between the remuneration of men and women. It's a prevalent societal issue whereby women are generally considered to earn less than men. According to the European Commission, at European level this is 14.1% less and at Dutch level 14.7%. These pay differences may be due to a variety of reasons, most typically being that there are less women within the (higher earning) senior management layer and women tend to work part time more often.

We acknowledge this is likely to be the case at ING too and we are committed to annually assessing and monitoring the gender pay gap in our organisation at a global level through the gender-neutral pay project.

ING is committed to paying men and women equal pay for doing work of equal value. The ING Remuneration Regulations Framework (IRRF) guides our remuneration policies in all ING countries. One of its principles is that these policies are gender-neutral. All countries are required to review their policies each year and certify that they adhere to the principle of equal pay for work of equal value. The gender-neutral pay project will help them with this.

Gender-neutral pay project

Building on the introduction of the Global Job Architecture in 2021, which enables us to compare like-for-like jobs, the gender-neutral pay project aims to define, build and deliver going forward a standardised, replicable annual process and accompanying tool for determining whether men and women at the same job level are receiving 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. global job level, tenure, etc.). Where these characteristics are equal but the remuneration is not, and the reason for the pay difference is not supported by mitigating circumstances (e.g. time spent outside of the workforce), we will take appropriate measures. The tool will also calculate ING's annual global gender pay gap. We've committed to publishing the average pay of all men compared to the average pay of all women as a percentage in our 2022 Annual Report.

This year, ING improved its rating in the 2021 Bloomberg Gender Equality Index, scoring 70.35% compared to 70.26% in 2020. The index tracks the performance of public companies in their efforts to promote gender equality.

Inclusion

Inclusion is part of our Orange Code, which encourages us to help others to be successful. We have more than 30 employee networks and employee-led diversity initiatives. The Lioness network, for instance, aims to help women realise their ambitions; Enable is an inclusion network for all abilities; BEING is ING's Black Employee Inclusion Group; while Experience aims to achieve senior inclusion and RING is our community for young professionals under 36. ING is a founding partner of Workplace Pride, an international platform for LGBT+ inclusion at work. In 2021, we were again recognised as an 'Ambassador' by the Workplace Pride global benchmark, which scores companies in eight areas and identifies best practices. ING scored 77.2% (72.3% in 2020).

To create an environment where people can truly feel free to be themselves and where people decisions are made objectively and fairly, we need to reduce our biases. One way is through a 'Banking on inclusion' training programme for managers and HR professionals. A total of 214 managers participated in the training sessions for senior leadership in 2021. In addition, an e-learning on unconscious bias has been available to all employees globally since 2019.

To reduce biases in our hiring processes, we're rolling out a three-step evidence-based approach that aims to ensure a fair and objective process for every candidate. It's about predictive validity and overcoming unconscious biases and involves analysing jobs to establish the competencies required, structured interviews and diverse interview panels, and calibrating before making a decision.
To strengthen the inclusive culture across our organisation, we organised a global D&I day with over 100 global initiatives. This year's theme invited employees to ask, 'How inclusive are we really?', inviting them to think about their unconscious biases.

Inclusiveness also means making sure everyone has equal access to our services and products, regardless of their ability, and that all our employees have equal access to our facilities and development opportunities. But more than this, it's about creating equity within our organisation to achieve fairer outcomes based on people's personal circumstances. Accessibility for our people means supporting employees to do their own thing and facilitating the means to do it.

As an inclusive employer, we want our benefits to be inclusive too. A 2020 review of our benefits packages globally concluded that overall these are of a good standard, particularly with regard to inclusive themes such as equal paternity/maternity leave, financial education and wellbeing. We'll further investigate how to maintain these standards in the long term.

In the Financial Times' Diversity Leaders 2021 report, an independent study focusing specifically on gender, age, ethnicity, disability and sexual orientation, ING was listed in 225th place out of 850 companies, up 100 places on 2020.

Our stance on discrimination

Discrimination includes any distinction, exclusion or preference made on the basis of gender, cultural background, experience, religion, race, ethnicity, disability, family responsibility, political opinion, sexual orientation, social origin or any other status, that has the effect of nullifying or impairing equal opportunity or treatment in employment. Any distinction, exclusion or preference not based on the inherent requirements of the job is deemed to be discrimination. We are working together to create an inclusive workplace and, in turn, play our part in building an inclusive world. To support our ongoing efforts to create meaningful change, we have measures such as our Global Code of Conduct that aim to keep discrimination from happening within our company – towards both our customers and employees.

Talent development and learning

ING expects employees to take the lead in their own personal and professional development and ensure that their skills and work experience stay relevant both within ING and in the external environment.

We offer several development tools to support employees in shaping their own career paths. These include an Individual Development Plan (IDP) with a framework for identifying actions that will improve their performance in their current role, the skills they might need for a next role, perhaps even outside ING. The IDP is available in all countries and over a third of all employees have put a plan in place.
As with performance management, two formal moments are scheduled at mid-year and year-end to check in on progress.

ING's International Talent Programme (ITP) is designed for international graduates with high growth potential, and we have various leadership programmes in place as well as a library of online trainings via the My Learning platform.

My Learning

My Learning is ING's open, digital learning platform that gives employees access to our complete learning offering in one location. Launched in the Netherlands and Belgium in 2020, it was made available to employees in most countries during 2021 (except Turkey, Germany and Luxembourg) and learning content is now available in all nine ING languages.
My Learning contains both ING content as well as external content on topics that are important to the bank. The learnings are selected specifically for the user; the better the platform 'gets to know' the employee, the more the recommendations are based on the user's role, interests, completed learnings and search behaviour.

Leadership programmes

Leadership is one of our Big 6 capabilities. To strengthen the leadership skills within our organisation, we introduced an online training in 2021 for new and aspiring leaders, to help them transition from an individual contributor to an effective leader. Available via My Learning, the Leadership Fundamentals Programme (LFP) is entirely self-steered and includes a self-assessment tool to help users identify their learning goals and determine their own path through the online trainings. Some 968 people participated. LFP replaces the First-Time Leader Programme. For leaders and managers, we offer one-to-one coaching on remote leadership. Part of this focuses on encouraging them to steer on output rather than time spent.

For more experienced leaders we offer group activities as well as self-steered learning initiatives. These are largely focused on motivating employees, getting the most out of teams, and behaviours that drive performance – topics that are even more more relevant in the context of working from home and the acceleration in changes we're all experiencing. All global leadership programmes have been updated to reflect the context of leading in Hybrid Mode. This includes a series of webinars on topics such as vitality and motivating a team from a distance.

In 2021, ING spent €47 million on training and development, equivalent to €820 per full-time equivalent. In 2020 this was €43 million and €760 respectively.

Performance management

Called Step Up, our global performance management practice centres around so-called 'continuous conversations'. These are regular, informal chats between employees and their manager and encompass the employee's job, 'stretch' ambitions and our Orange Code behaviours. In addition there are three formal check-ins during the year – target setting, mid-year review and year-end evaluation.

When assessing performance, we always encourage managers to look broadly at an employee's performance, considering all areas affecting their work and home life. With Covid-19 introducing difficult circumstances for many employees – for example, juggling home-schooling or caring for relatives while working – this balanced view continued to be relevant this year. We provided managers with materials to support them in their performance assessments and in conducting continuous conversations in the context of the pandemic. In 2021, 94% of employees took part in a performance review, the same as in 2020.

Organisational health

It's important to ING that employees feel heard and are able to voice their opinions. We use a continuous listening framework to get an ongoing sense of how our people are doing and how they perceive our strategic objectives – and make sure we act on that feedback. Every 12 to 18 months we measure how healthy we are as an organisation and whether we're ready for the future in terms of our core organisational skills and capabilities. Between this full diagnostic Organisational Health Index (OHI) survey we run smaller pulse surveys so we can respond more rapidly to employee feedback.

Based on the outcomes of the last full OHI in 2019, we defined three focus areas: strategic direction, leadership, and innovation and learning. These were the starting point for action plans we developed at local, business and functional levels.

A full OHI was held again in May 2021, with a record number of participants: 40,000 people or 67% of our total workforce. On a global level, our overall health score improved. More colleagues indicated ING's purpose was communicated clearly and that they better understood how they contribute to ING's success. More colleagues also felt their views were included in decision-making and that leaders showed concern for their welfare.

This was reiterated in the shorter pulse survey in November 2021, which showed improvements in key practices around direction and leadership. We'll use the outcomes of these surveys to define our action plans and priorities for 2022.

Digitalisation: using data to improve the employee experience

Throughout 2021 we continued to deliver on our ambition to use data to ensure our employee experience is on a par with our customer experience. This is founded on actionable insights to improve the employee experience, and having the capabilities to lead initiatives that redesign the customer experience and implement scalable digital solutions.

We use the Employee Experience Index© to gain more insight into the touchpoints that impact employee engagement. Piloted in four countries in 2020, the survey was rolled out to five additional countries in 2021 and has become a recurring initiative offering actionable insights into the experiences of ING employees throughout the employee lifecycle.

Starting a new job is one of the crucial stages in the employee lifecycle. In 2021, we scaled up our digital onboarding tool that guides new hires and their managers through the onboarding journey, helping to make new colleagues feel welcome at a time when they can't meet their teams in person. Launched in the Philippines and the Netherlands in 2020, the tool was live in 13 additional countries by the end of 2021.

To sustain an enhanced employee experience and strengthen our HR foundation, we implemented the HR unite retrofit programme in the Netherlands, France and Australia in July 2021. It comprises five components: one HR system with standardised digital processes; consistent people services delivery centralised in two hubs for major ING countries; redesigned international mobility and recruitment services; technologies to support digital self-service and support (chatbots and livechat for employee queries); and enhanced data management and reporting. The HR unite programme will be rolled out in three phases to all ING countries (except Russia and Turkey) by end 2024 .

Supporting this data-driven digital HR foundation, we've implemented a roadmap for improving the way we collect, store and use employee data. As part of this, we deployed a global HR data lake zone that will be used for staff reporting from early 2022, drawing employee data from multiple sources and countries. This will lead to improved data governance and compliance controls and improved data quality due to standardised data definitions, ultimately leading to more reliable reporting and better decision-making.

Organisational and people impact

The trends that have shaped our direction so far continue to influence our business and the challenging external environment requires us to remain flexible in how and where we deliver on our strategy. This can impact the way we operate and the skills and capabilities we need. It means we sometimes need to make organisational changes or refocus our activities. These decisions can impact our people; their roles can change or cease to exist.

As part of our ongoing and careful assessment of our activities and whether they're likely to achieve the preferred scale in their market within a reasonable time, we decided in 2021 to exit several Retail Banking markets. In Austria, we transferred our Retail operations, including employees to bank99, the digital bank of the Austrian postal services, and in the Czech Republic around half of our customers were migrated to Raiffeisenbank. Around 225 colleagues were impacted. In France, we agreed a social plan with the local unions for 460 affected employees. The plan is subject to approval by the French Ministry of Labour.

The decision to phase out the services of our Payvision subsidiary in the coming months will affect around 160 Payvision employees. They will be supported through the transition in close consultation with the works council and in line with Payvision's employer practice standards.

In the Netherlands, where customers are increasingly choosing to use digital channels rather than visiting ING in person, we announced the closure of 69 of our 134 branches in March, moving services to other ING branches or service points. The vast majority of colleagues affected by the announced changes are expected to find new roles in other parts of our business.

Furthermore, the 2020 decisions to simplify the geographical and client footprint of our Wholesale Banking business and stop the Maggie transformation programme resulted in a headcount reduction of approximately 1,000 full-time equivalents (FTEs) mainly over the course of 2021.

ING does not make decisions like these lightly. We are committed to treating employees impacted by the changes with respect and care. We aim, as far as possible, to help them develop their skills or find new job opportunities inside and outside ING.

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.

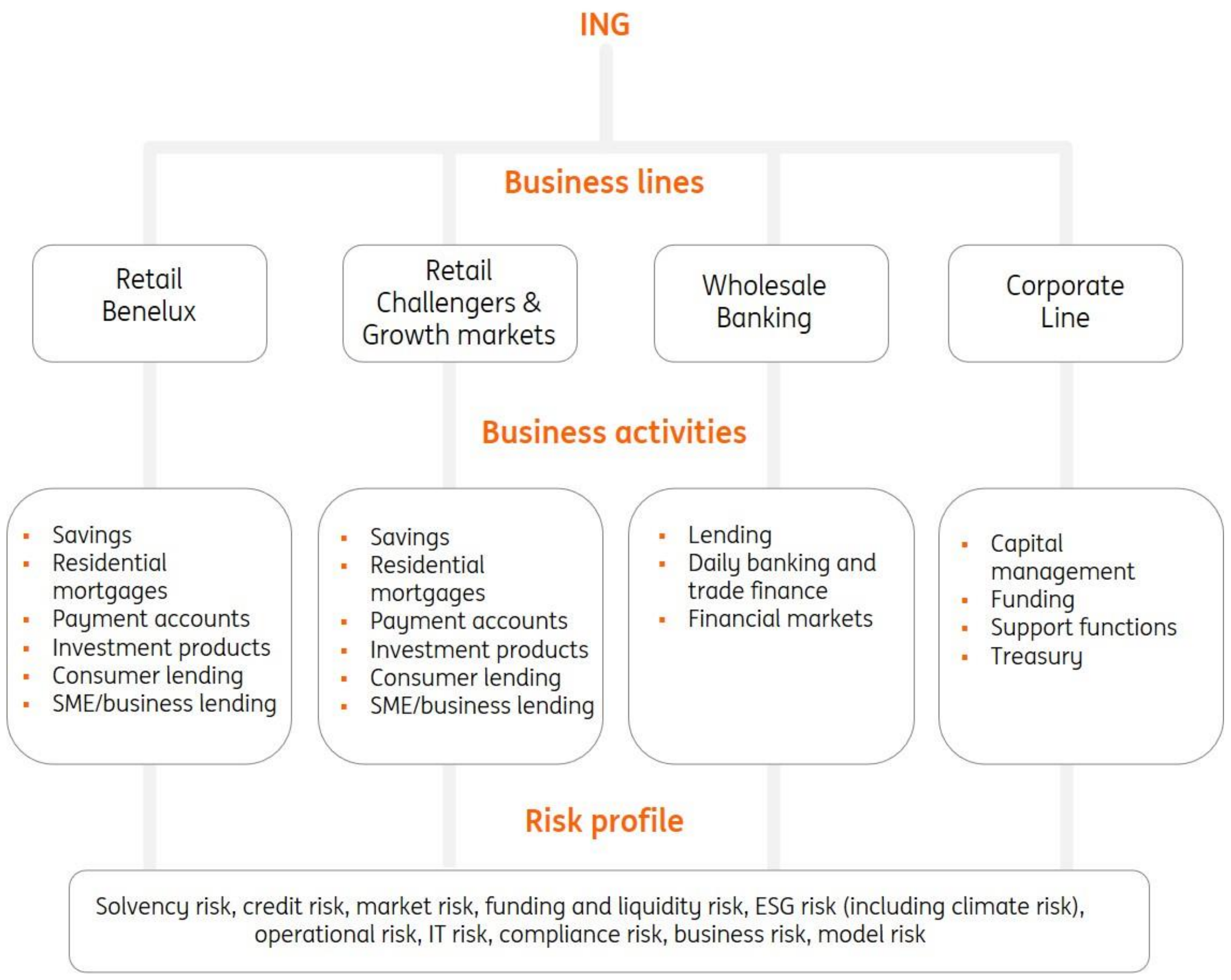
The risk management function supports the Executive Board in formulating the risk appetite, strategies, policies and limits. It provides oversight, challenges and controls throughout ING on risk-related items.

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 Bank 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.

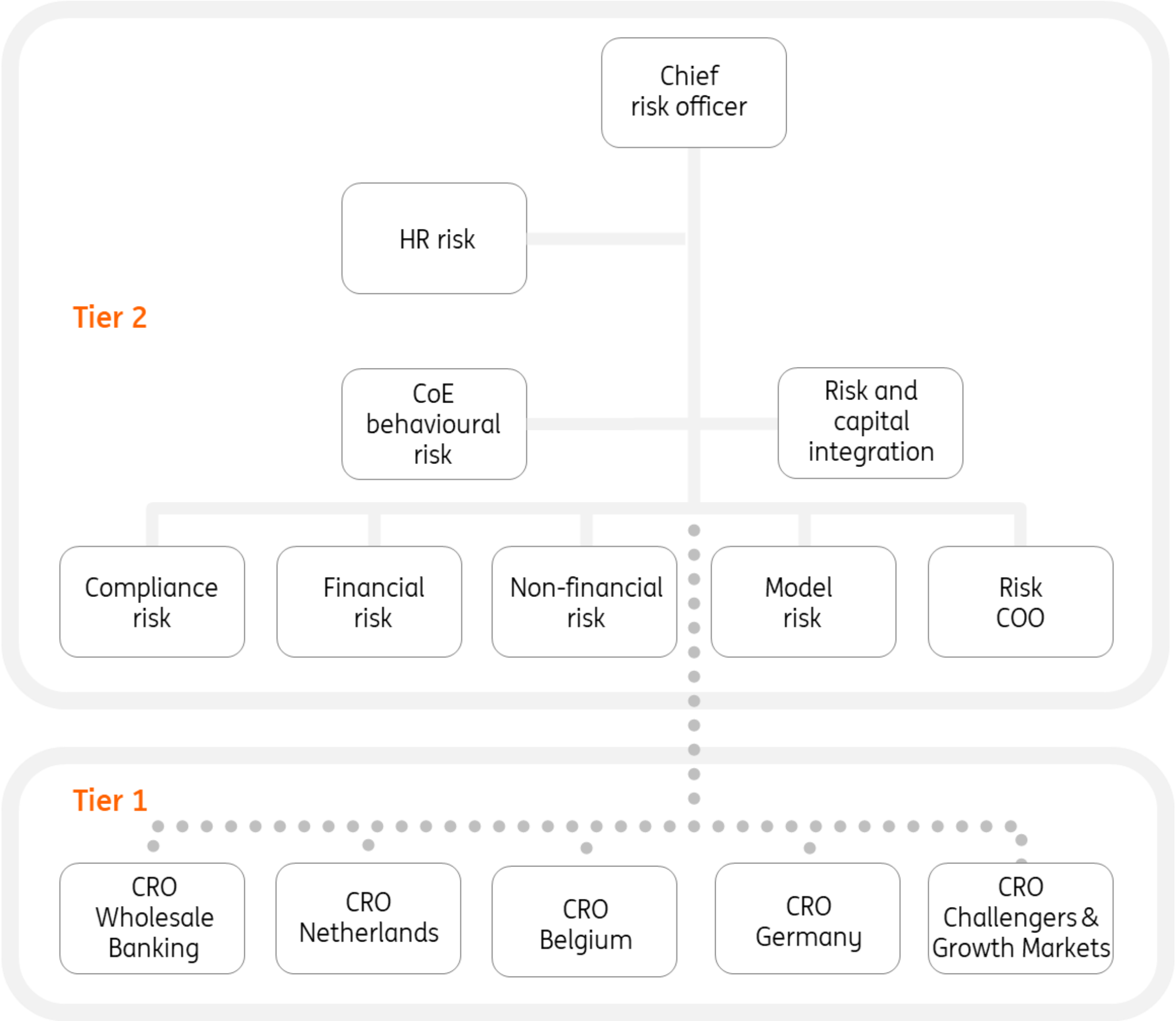
The regional and/or business unit (BU) CROs are involved in these activities. The local (regional and BU) CRO is responsible for the analysis, monitoring and management of risks across the whole value chain (from front to back office). The local risks are discussed in local risk committees that roll 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.

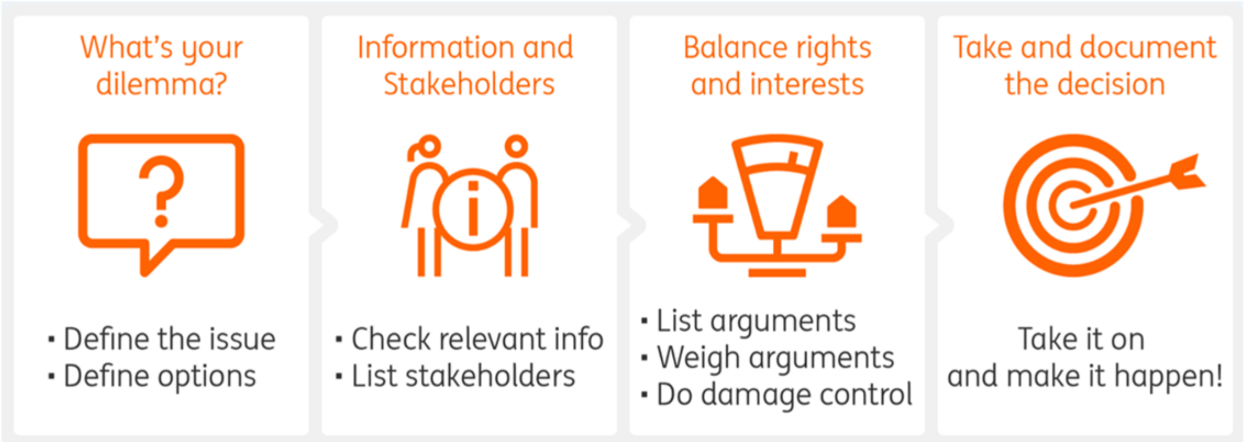
The Orange Code is a declaration of who we are. It describes what we can expect from each other when we turn up to work each day. It is a set of standards that we collectively value, strive to live up to, and invite others to measure us by.

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.

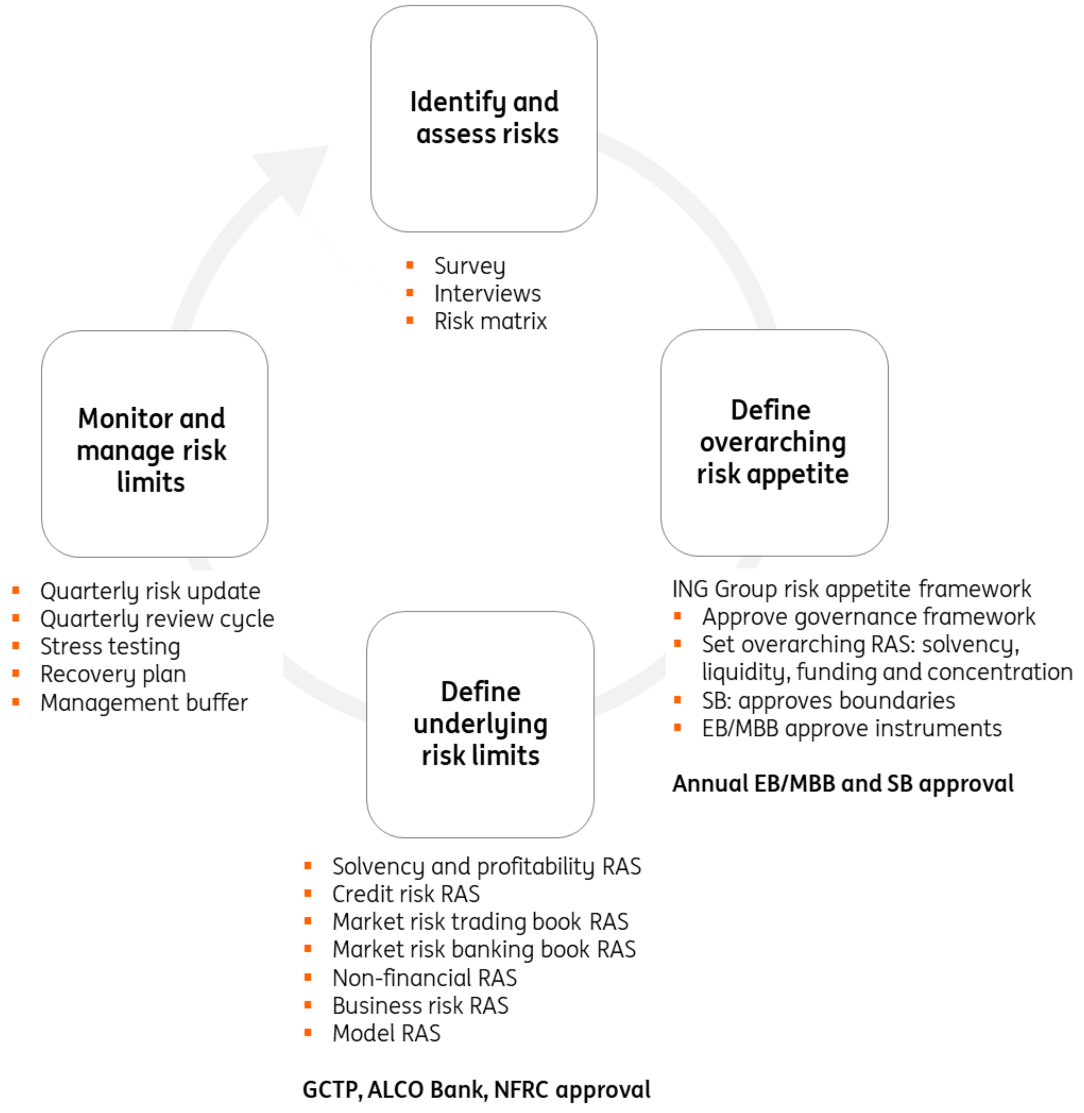
Policy

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:

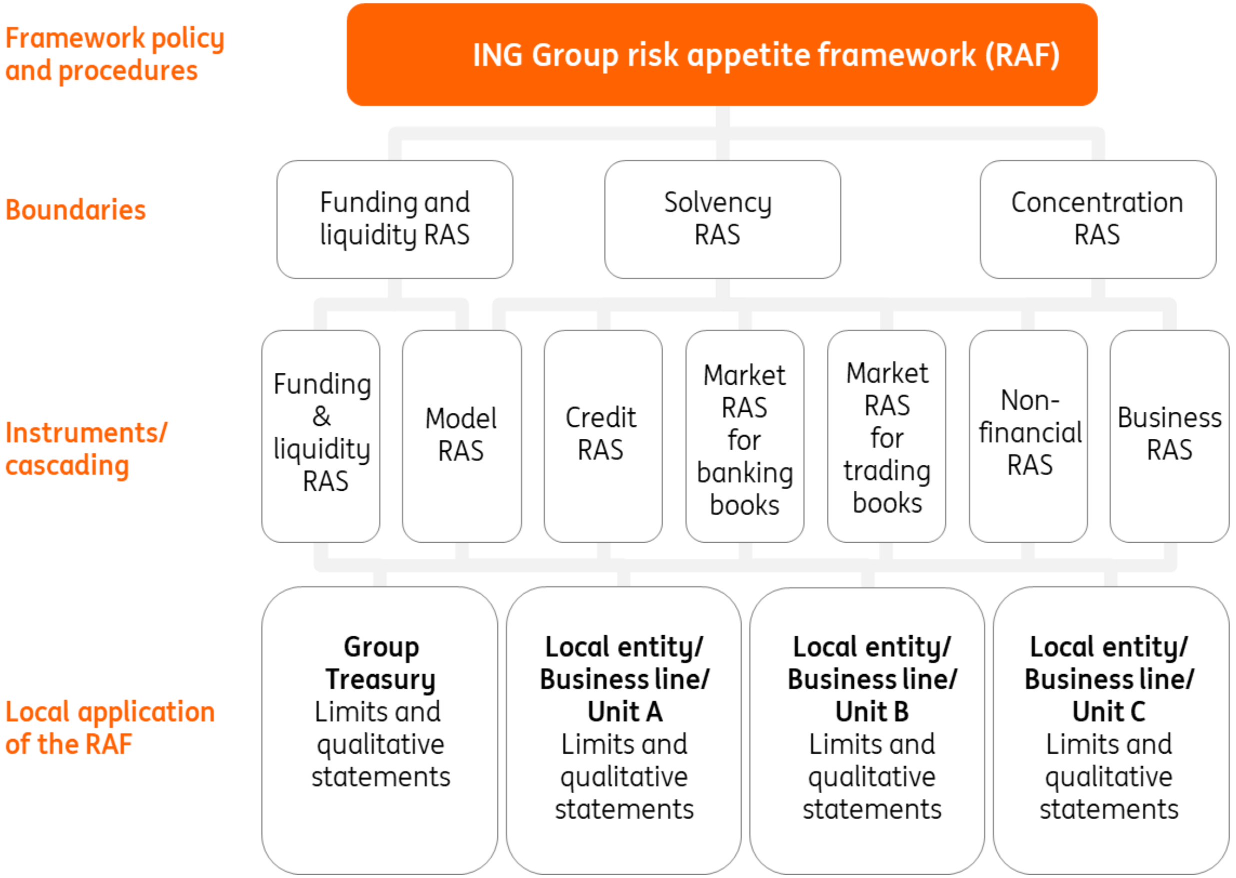
- Solvency and Profitability (e.g. IFRS P&L-at-Risk and FX translation risk)
- Funding and liquidity (e.g. Liquidity coverage ratio (LCR) and Net Stable Funding Ratio (NSFR))
- Credit risk (Exposure at Default (EAD) and Risk Weighted Assets (RWA))
- Market risk trading book (e.g. Event risk, historical 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	42	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	41	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	482	431	160,029	144,491
	8-10 (BBB)	124,622	104,987	125,469	120,714	57,394	53,346	2,502	2,400	309,986	281,447
Non-Investment grade	11-13 (BB)	61,996	65,832	60,296	61,797	42,554	39,823	37		164,883	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**	**5,577**	**5,647**	**913,749**	**887,243**
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		39,582	42,088	230	201	6,390	8,211	3,006	3,092	49,208	53,591
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	124	164	48,590	42,556
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**	**5,577**	**5,647**	**913,749**	**887,243**

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	2,826	3,047	229,771	225,614
	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	35	20	73,251	66,454
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**	**5,577**	**5,647**	**913,749**	**887,243**

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 €913.7 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	1,378	318	3,887	707	392	4,156	3,205	5,520	6,353	7,089	13,526	2,265	413	49,208
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	17,772	3,209	411		48,590
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	**229,771**	**117,919**	**141,956**	**42,063**	**37,542**	**28,567**	**31,887**	**26,517**	**82,233**	**73,251**	**48,159**	**51,382**	**2,501**	**913,749**
Rating class														
Investment grade	180,787	78,195	119,311	26,856	29,522	22,820	26,150	20,622	52,875	53,725	36,777	38,200	79	685,920
Non-Investment grade	45,530	35,600	21,250	14,148	7,647	5,234	5,568	5,774	27,993	18,184	10,534	11,998	2,259	211,721
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	**229,771**	**117,919**	**141,956**	**42,063**	**37,542**	**28,567**	**31,887**	**26,517**	**82,233**	**73,251**	**48,159**	**51,382**	**2,501**	**913,749**

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	1,722	265	4,546	607	468	6,931	3,478	6,218	6,926	7,434	13,222	1,476	298	53,591
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	14,435	3,089	376	0	42,556
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	**225,614**	**121,282**	**140,722**	**39,101**	**34,512**	**31,018**	**25,330**	**22,721**	**82,324**	**66,454**	**47,594**	**48,451**	**2,121**	**887,243**
Rating class														
Investment grade	169,193	78,294	118,082	26,045	26,622	25,924	19,528	16,688	51,233	43,987	35,879	34,545	127	646,147
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	**225,614**	**121,282**	**140,722**	**39,101**	**34,512**	**31,018**	**25,330**	**22,721**	**82,324**	**66,454**	**47,594**	**48,451**	**2,121**	**887,243**

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	413,670	160,694	23,454	112,095	332,989	44.2%	20.2%	35.5%
Investment and Money Market	112,360	43	63	1,100	167	98.9%	0.8%	0.3%
Total Lending, Investment and Money Market	**870,218**	**851,490**	**30,050**	**138,882**	**373,774**	**36.0%**	**12.8%**	**51.2%**
Pre-settlement	43,531							
Total Bank	**913,749**							

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	388,060	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	**841,157**	**771,536**	**26,761**	**121,811**	**341,039**	**36.9%**	**12.7%**	**50.4%**
Pre-settlement	46,086							
Total Bank	**887,243**							

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	Financial Collateral	Guarantees	Other covers	Value to Loan No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 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	Financial	Guarantees	Other covers	Value to Loan No Cover	>0% - 25%	>25%-50%	>50% - 75%	>75% - <100%	≥ 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

Industry	Outstandings	Cover type: Mortgages	Financial Collateral	Guarantees	Other covers	Value to Loan: 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	25,340	1,105	13,330	3,970	52,196	39.5%	4.8%	0.4%	2.3%	6.6%	46.3%
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	19,160	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	**413,670**	**160,694**	**23,454**	**112,095**	**332,989**	**44.2%**	**5.0%**	**4.0%**	**3.8%**	**7.3%**	**35.6%**
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

Industry	Outstandings	Cover type: Mortgages	Financial Collateral	Guarantees	Other covers	Value to Loan: 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	21,934	1,139	10,771	3,766	46,286	42.1%	3.6%	2.3%	3.6%	4.6%	43.7%
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	18,012	313	107	1,546	3,868	75.0%	1.0%	3.4%	1.7%	8.1%	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	**388,060**	**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		45,156	7,097	9,156	10,898	43,960	37.2%	9.4%	5.8%	3.8%	11.0%	32.8%
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		**413,670**	**160,694**	**23,454**	**112,095**	**332,989**	**44.2%**	**5.0%**	**4.0%**	**3.8%**	**7.3%**	**35.6%**
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	101,000	61,180	3,298	9,245	59,268	51.7%	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		40,508	5,967	6,872	7,442	40,815	37.9%	7.4%	6.1%	5.5%	10.2%	33.0%
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		**388,060**	**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	819,183	785,800
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	**840,466**	**806,503**
Money market	**29,752**	**34,654**
Pre-settlement	**43,531**	**46,086**
Total	**913,749**	**887,243**

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		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	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	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	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 transaction s	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	1,674	3,403	3,287	36	23,591	16,660	-23	2,161	4,869	3,639	-1,942	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	622,100	-5,274		1,487	3,178	6,059	627,550	589,355	-5,779		1,551	4,679	8,501	598,306
Total on-balance (IFRS 9 eligible)	**817,585**	**-5,334**	**3,324**	**4,890**	**6,466**	**7,229**	**834,158**	**798,314**	**-5,836**	**4,011**	**6,420**	**8,319**	**8,150**	**819,378**
Guarantees and irrevocable facilities (IFRS 9 eligible)	134,122	-34						118,418	-17					
Total Gross Carrying Amount (IFRS 9 eligible)	951,707	-5,368						916,732	-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	0			107,788	3
	2-4 (AA)	106,673	5	197	0			106,870	5
	5-7 (A)	152,255	17	1,001	1			153,256	17
	8-10 (BBB)	328,301	73	7,232	14			335,533	87
Non-Investment grade	11-13 (BB)	162,912	208	14,679	86			177,592	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		**890,158**	**501**	**49,476**	**1,016**	**12,072**	**3,851**	**951,707**	**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]		Lifetime ECL not credit impaired (Stage 2)[4]		Lifetime ECL credit impaired (Stage 3)		Total	
		Gross Carrying Amount	Provisions	Gross Carrying Amount	Provisions	Gross Carrying Amount	Provisions	Gross Carrying Amount	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)	297,292	88	4,839	12	0	0	302,131	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		**844,021**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,732**	**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	**844,020**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,732**	**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	-74	-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	-29,799		-2,526		-694		-33,019	
Changes in models/risk parameters		12		41		130		184
Increase in loan loss provisions		**-67**		**-460**		**989**		**462**
Write-offs		-0		0	-854	-854	-854	-854
Recoveries of amounts previously written off						45		45
Foreign exchange and other movements		-13		1		-125		-138
Closing balance	**890,158**	**501**	**49,476**	**1,016**	**12,072**	**3,851**	**951,707**	**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	**819,491**	**490**	**38,519**	**881**	**10,955**	**3,275**	**868,965**	**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		161,333	178
Financial assets that have been derecognised	-116,035	-85	-6,987	-107	-897	-236	-123,919	-428
Net drawdowns and repayments	12,778		-1,043		-181		11,444	
Changes in models/risk parameters				7				7
Increase in loan loss provisions		**119**		**638**		**1,908**		**2,666**
Write-offs					-1,200	-1,200	-1,200	-1,200
Recoveries of amounts previously written off						39		39
Foreign exchange and other movements		-28		-42		-226		-297
Closing balance	**844,020**	**581**	**59,313**	**1,476**	**13,398**	**3,797**	**916,732**	**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%
Loans and advances to Customers	**622,100**	**5,274**	**0.8%**		**589,355**	**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	265,276	3,340	1.3%		245,721	3,921	1.6%	
Stage 1	229,906	185	0.1%	87%	201,087	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)	**951,707**	**5,368**	**0.6%**		**916,732**	**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 Bank 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 Bank, 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 (*)

	31 December 2021	31 December 2020
in EUR million	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 Bank.

Comparatives have been updated to improve consistency and comparability with the current period disclosure.

ING Bank 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 Bank 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 Bank’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 Bank 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 Bank 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.

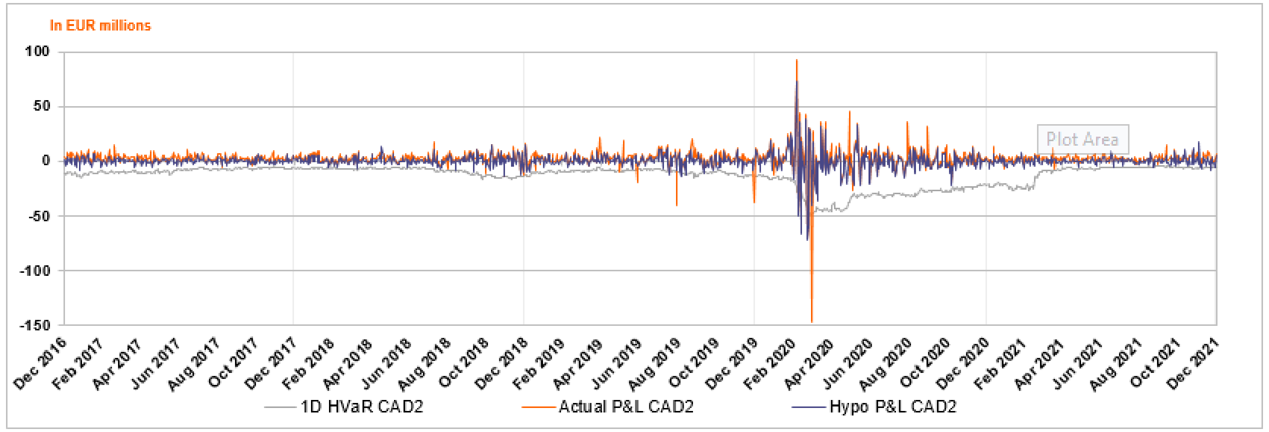
Other trading controls

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 (*)

	2021		2020	
in EUR thousand	Corporate	Financial Institutions	Corporate	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.

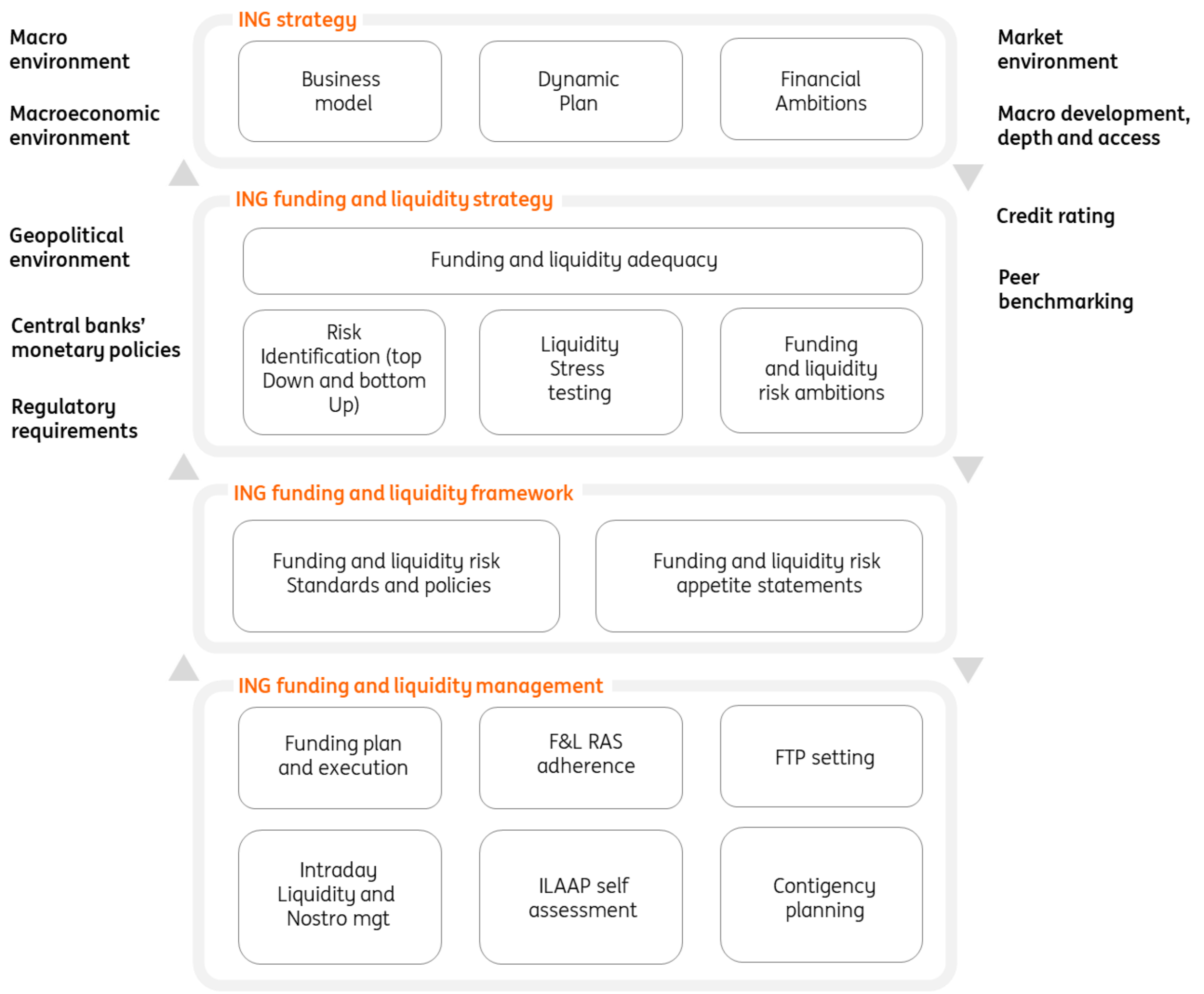
Funding and liquidity risk (*)

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)	25%	24%
Interbank	9%	6%
Lending/repurchase agreements	5%	9%
CD/CP	3%	2%
Long-term senior debt	4%	5%
Subordinated debt	2%	2%
Total	**100%**	**100%**

1 Liabilities excluding trading securities and IFRS equity

Funding and liquidity adequacy and risk appetite (*)

ING distinguishes between several key drivers of future liquidity and funding needs:

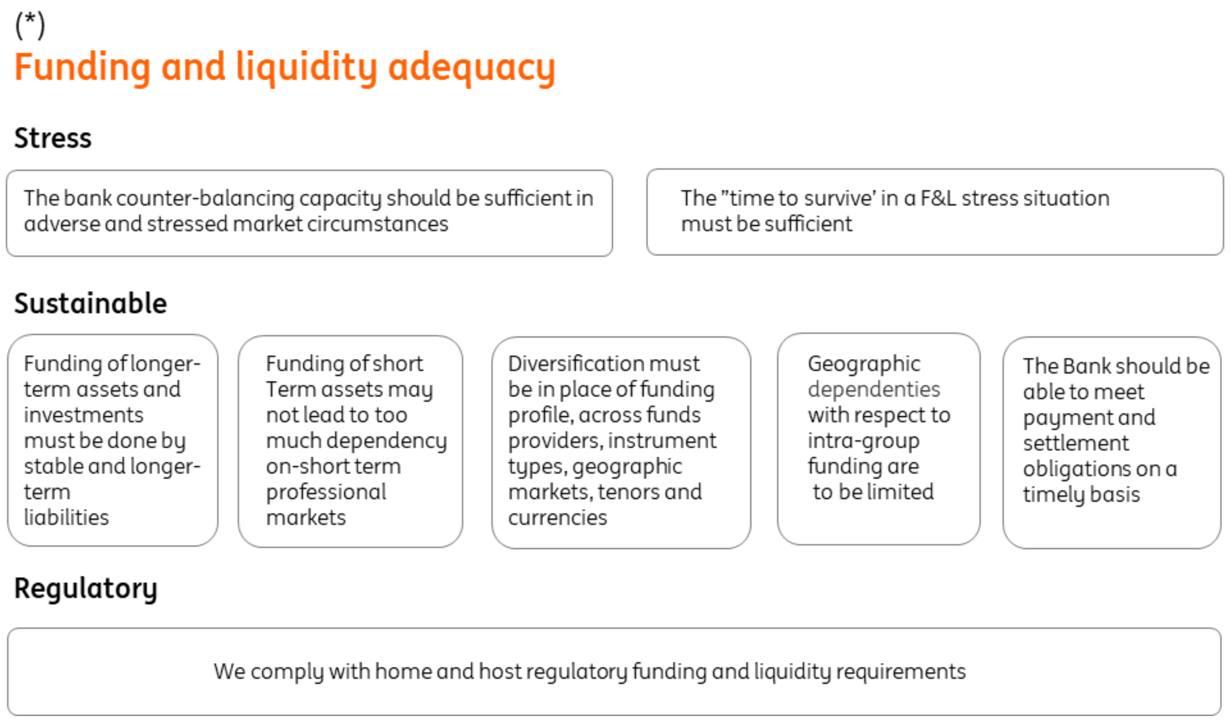
- Refinancing needs resulting from maturing debt and asset growth;
- Current and future regulatory requirements;
- Risk appetite statements set by ING's funding and liquidity risk function;
- The outcomes of various stress tests;
- Ability to distribute and transfer liquidity across the Group.

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.



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 Bank 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 green-house 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.

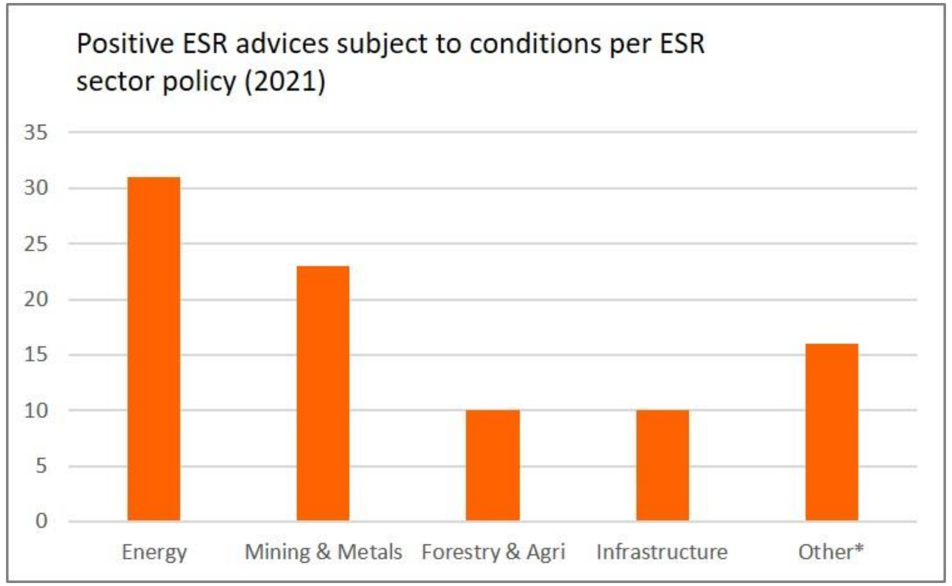
The way the ESR Framework is applied in practice differs per product type. The largest potential environmental and social impacts come from large corporates within our Wholesale Banking (WB) segment. WB is therefore the primary focus of our assessments and where we promote active ESR dialogue and knowledge 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

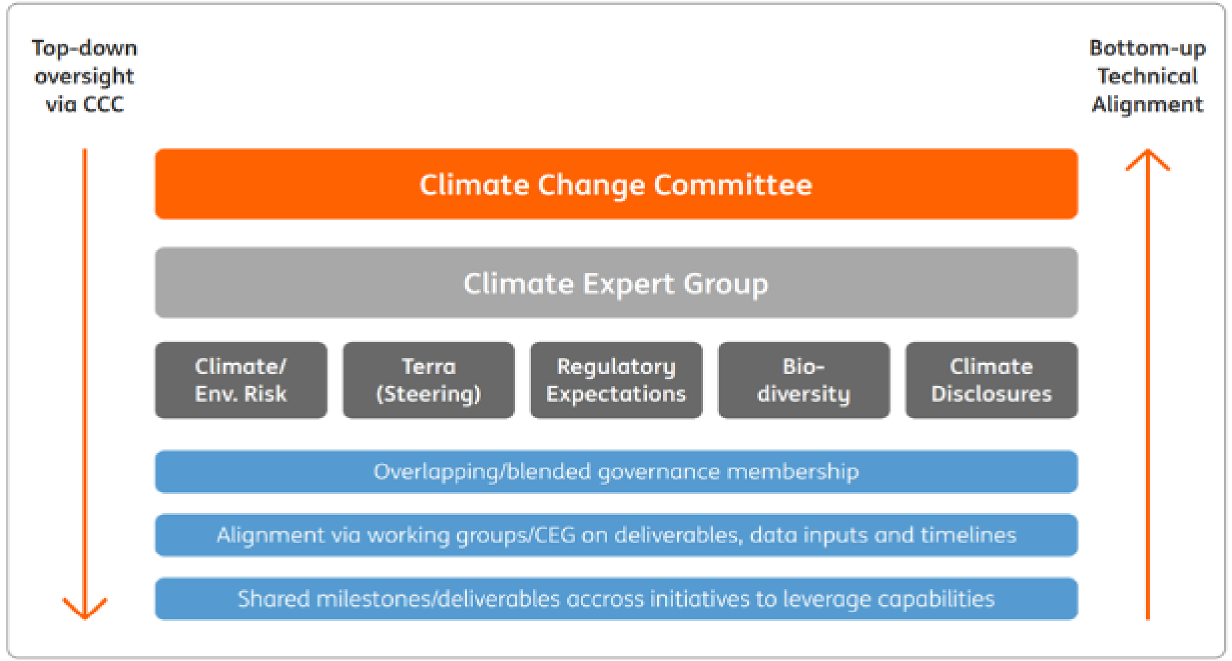
The potential impacts that physical and transition risks could have on households, businesses and the macro-economy ultimately require us to view climate risk as a risk that has an impact on various financial risks.

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 43 ‘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.

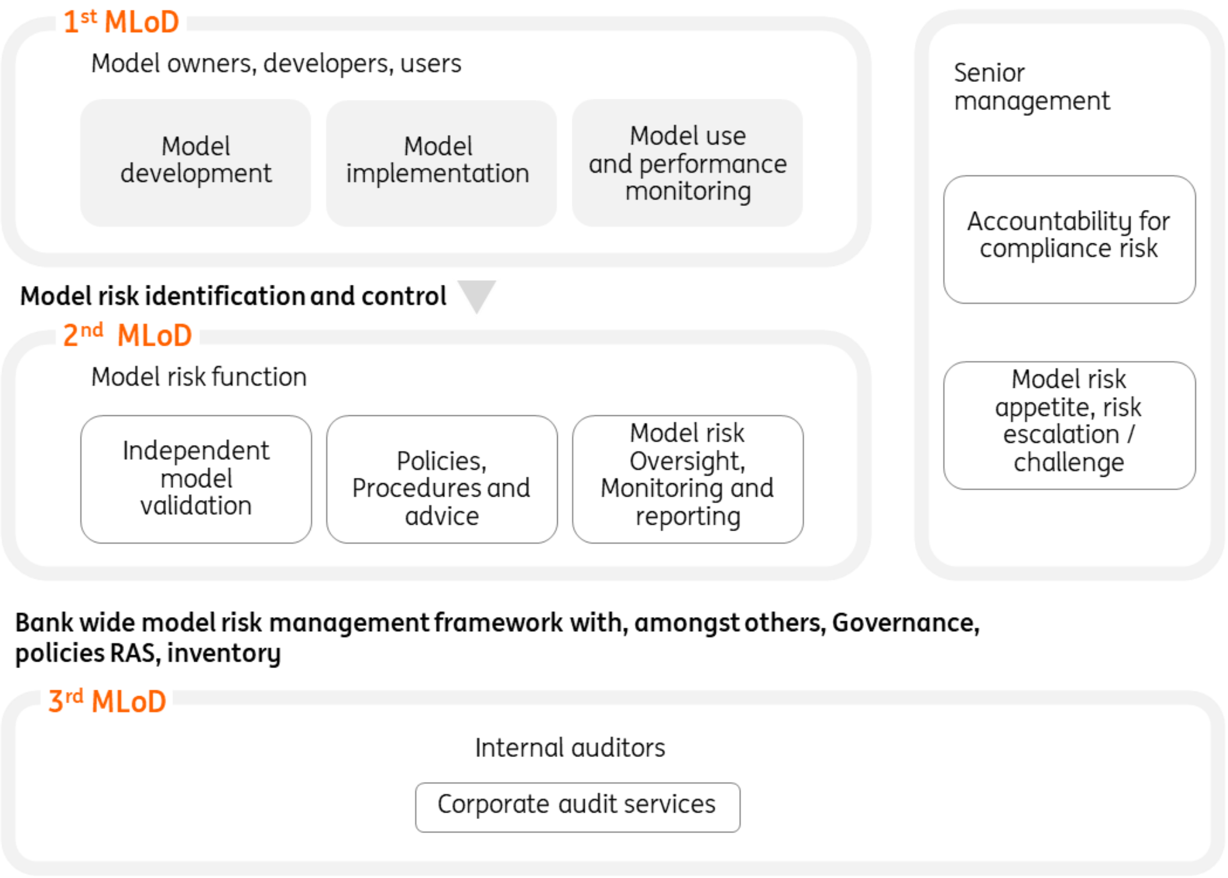
Governance (*)

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.

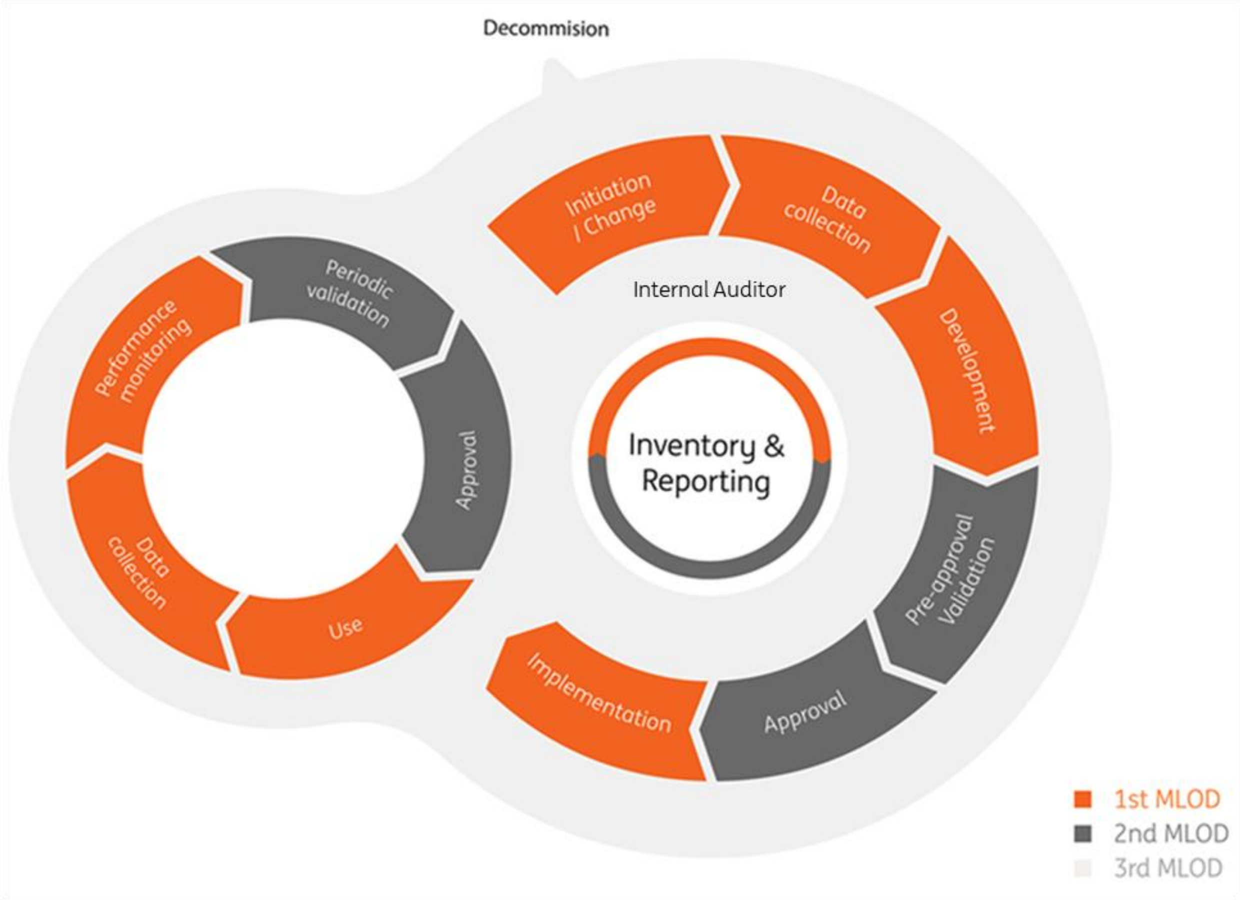
Model risk management (*)

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.

Supervisory Board report

In 2021, the Supervisory Board and its committees continued to focus on overseeing and constructively challenging management in their ambition to keep transforming into a data-driven digital bank in line with ING's strategy. How ING could help customers, employees and communities safely through and after the Covid-19 pandemic remained an important focus. ING's risk culture and the priority to further strengthen its global anti-money laundering (AML) and know your customer (KYC) activities also were key attention areas.

The Supervisory Board is responsible for supervising (i.e. assessing, overseeing, monitoring, constructively challenging, scrutinising and discussing) the policy (*beleid*) of the Management Board Banking, and the general course of affairs of ING and the business connected with it. Furthermore, the Supervisory Board provides the Management Board with advice. The Supervisory Board and committees of the Supervisory Board are identical and fulfil the same role at the level of ING Groep N.V. and ING Bank N.V.

In 2021, the Supervisory Board spent time on strategy as well as the initiatives and developments that relate to ING's strategic ambitions, with a focus on digitalisation to support a differentiating experience for customers and stakeholders. This was done in dialogues with the Management Board Banking in light of ING's four focus areas. ING will continue to focus on being safe, secure and compliant and on its role as gatekeeper in the fight against financial crime. ING will enable and increase healthy economic growth by diversifying its income, in existing and new products and services. Clear choices will continue to be made about where and how ING serves its customers. ING aims to become a data-driven digital bank to bring benefits for its customers, employees, cost-to-serve and controls. In sustainability, ING will keep working to build a sustainable future for ING and its customers, society and the environment.

The impact of the Covid-19 pandemic has been immense, affecting millions of people around the globe. It has also impacted families, customers, governments, economies, supply chains and jobs, turning people's lives and their livelihoods upside down. As was the case last year, this was an important topic for the Supervisory Board and its committees, with the Management Board Banking providing the Supervisory Board with regular updates and an outlook. The dialogue focused on how ING continues to help customers, employees and communities safely through and beyond the Covid-19 pandemic period, while taking into account ING's business continuity, performance and gatekeeper role that ensure a safe and compliant bank.

The Supervisory Board met 14 times in 2021 for its regular meetings. On average, 97% of the Supervisory Board members participated in the meetings. See the attendance matrix for the Supervisory Board meetings and committee meetings for more details. The continued high attendance in 2021 demonstrates that Supervisory Board members are engaged with ING and are able to devote sufficient time and attention to overseeing ING's affairs. The Supervisory Board discusses and reconfirms all of its members' outside positions on an annual basis. It approves any intended outside positions when they occur, among others to safeguard this level of engagement.

SB Attendance 2021 [1]

	SB	RiCo [2]	AC	NCGcom [3]	RemCo
Hans Wijers (chair)	14/14	10/10	6/6	14/14	9/9
Mike Rees (vice-chair)	13/14	10/10	6/6		
Jan Peter Balkenende[5]	5/5	4/4			
Juan Colombás	14/14	10/10	6/6		
Mariana Gheorghe	11/14	8/10		13/14	8/9
Margarete Haase	14/14	10/10	6/6		
Lodewijk Hijmans van den Bergh	9/9	6/6			
Herman Hulst	14/14	10/10	6/6		
Harold Naus [4]	14/14	10/10		3/3	9/9
Herna Verhagen [4]	14/14	3/3		14/14	9/9
Total attendance [6]	**97%**	**98%**	**100%**	**98%**	**97%**

1. This SB attendance overview shows the regular SB (committee) meetings that took place during the year. In addition to the regular meetings, there were 11 internal SB meetings in 2021 in view of nomination and remuneration matters, with a total attendance of 99%. These are not shown separately in the overview for year-on-year, like-for-like comparison purposes.
2. Additional RiCo meetings took place in 2021, three of which were in combination with the RemCo on remuneration matters that also required a risk view.

3. Additional NCGcom meetings took place in 2021, three of which were in combination with the RemCo, in view of medium to longer term board succession planning.
4. Harold Naus participated three times in a NCGcom meeting in combination with the RemCo. Herna Verhagen participated three times in a RiCo meeting in combination with the RemCo.
5. Jan-Peter Balkenende retired from the SB as per the end of the AGM on 26 April 2021. At this AGM, Lodewijk Hijmans van den Bergh was appointed to the SB. Their attendance is shown relative to their tenure.
6. The numbers exclude SB observers, if any. If SB members cannot join a meeting, they will – at all times – continue to receive the meeting materials to allow them to provide feedback prior to the meetings.

Abbreviations used: SB = Supervisory Board; RiCo = Risk Committee; AC = Audit Committee; NCGcom = Nomination and Corporate Governance Committee, RemCo = Remuneration Committee

Supervisory Board meetings

In addition to the topics mentioned in the introduction, the Supervisory Board discussed a wide range of other topics during the year. These related to, among others:

- the impact of Covid-19 and the negative interest rate environment on ING's performance and its stakeholders (e.g. how to empower customers to remain in charge of their banking and their finances, how to equip employees for a hybrid way of working in which flexibility is central, and how to help communities to build back better);
- the increasing attention to environmental, social & governance (ESG) related matters in relation to strategy, including sustainability, climate risk and energy transition;
- the follow-up to the European Central Bank's Supervisory Review and Evaluation Process (SREP) and related matters such as the internal capital adequacy assessment process (ICAAP), the internal liquidity adequacy assessment process (ILAAP) and stress testing;
- ING's financial, non-financial and compliance risks;
- ING's gatekeeper role and ensuring the security and compliance of the bank through enhancing and maturing ING's KYC priorities, supported by structural solutions (see 'Risk Management' for further details on ING's AML/KYC measures);
- the continued focus on further strengthening ING's risk culture;
- several topical regulatory themes with a global ING scope such as data (including the strategy, management, quality, ingestion and ethics of data), IT and cybersecurity, sourcing and the suitability policy framework;
- the financing of the company in accordance with ING's capital and liquidity adequacy (in line with the annually updated Risk Appetite Framework including principles and statements), ING's capital plan and ING's dividend and distribution policy;
- the audit plans of the internal and external auditor;
- ongoing supervisory developments;
- various nomination and succession planning related matters for the Management Board Banking, including the impact on the division of responsibilities at management board level (succession chief risk officer (CRO), succession head of Wholesale Banking, appointment head of Retail Banking and separation of the board roles for technology and operations with an appointment of a chief technology officer and succession of the chief operations officer (COO)/chief transformation officer);
- diversity (at the top);
- various remuneration related matters, such as the annual review of the Reward and Appointment Framework and the ING Remuneration and Regulations Framework; and
- the functioning of the Supervisory Board and Management Board Banking, supported by the annual collective self-evaluations.

In its deliberations on the various topics the Supervisory Board takes into account the customers' and other stakeholders' interests in view of ING's function in society.

The Management Board Banking was present at each regular Supervisory Board meeting. For some parts of these meetings, depending on the nature of the topics discussed, only the chief executive officer (CEO) was present. The Supervisory Board also had sessions with only its individual members, prior to its regular meetings when this was justified by the nature of the topics on the agenda. The purpose of these so-called pre-meetings and Supervisory Board-only meetings is to allow the Supervisory Board to reflect independently on and consider important matters in the absence of the Management Board Banking.

Outside of the collective meetings there was frequent interaction between the chairs of the relevant Supervisory Board committees and the members of the Management Board Banking to ensure that – at all times – everyone was up to date on the most recent developments. Furthermore, as a pilot, the chairs of the Risk Committee and the Audit Committee initiated informal interaction with the chairs of local risk and audit committees of ING's five largest subsidiaries to enrich the Supervisory Board dialogue. Also, Supervisory Board members who do not chair committees were assigned specific focus areas that make best use of their skills, knowledge and experience to further enhance well-informed Supervisory Board decision-making and challenge. The 2021 focus areas were risk culture, sustainability, models and stress testing and operational resilience.

Continuous dialogue with stakeholders

ING maintains continuous interaction with stakeholders, and strikes a balance between the interests of all stakeholders, including customers, shareholders, employees, society and other stakeholders, such as, but not limited to external supervisors and regulators. The Supervisory Board had periodic conversations with various internal and external stakeholders. It exercised its oversight role to ensure that, actions resulting from this, were embedded in the organisation and followed up, including actions related to risk culture and behaviour. Some 2021 examples in this respect relate to stakeholder interaction with regard to ESG and sustainability as well as with regard to the application of ING's remuneration approach. The dialogue between ING and external supervisors and regulators was a standard agenda item for the Supervisory Board throughout the year. This included several discussions on the results of and follow-up to the annual SREP, through which the ECB aims to promote a resilient banking system as a prerequisite for a sustainable and sound financing of the economy. The SREP involves, among others, a comprehensive assessment of banks' strategies, processes and risks, and takes a forward-looking view to determine how much capital each bank needs to cover its risks.

Strengthening ING's global AML/KYC capabilities

Keeping ING safe, secure and compliant remains a top priority. Since 2017, ING has been working to strengthen customer due diligence, transaction monitoring and screening in a sustainable way for the longer term and to better contribute to the fight against financial economic crime through the global KYC enhancement programme. Various initiatives have been implemented to further enhance AML/KYC activity throughout the bank. Among other things, this has led to standardised KYC policies, global KYC governance and harmonisation of processes, tooling and training. Further developments are captured in the Financial Economic Crime (FEC) Controls Maturity Programme, which defines and further enhances ING's operational long-term FEC control framework to manage and mitigate financial and economic crime risks in a sustainable, risk-based way. Progress is monitored by and discussed between the Supervisory Board, management and the relevant supervisors.

In 2021, the Supervisory Board was updated at least quarterly on developments regarding KYC and relevant specifics were discussed in more detail. This was facilitated through thematic sessions on various topics such as the KYC roadmap, the FEC Controls Maturity Programme, transaction monitoring and KYC aspects related to payment service providers. These sessions also contributed to the Supervisory Board's continuous learning.

The Supervisory Board and Management Board Banking also discussed ING's global AML/KYC governance and processes. Additional improvements were identified that are now being implemented. The boards reconfirmed their commitment to ensure that ING (1) continues to fulfil its gatekeeper role and play its part in contributing to the fight against financial crime, (2) complies with applicable regulatory requirements and (3) continues to take the necessary actions to strengthen compliance risk management and culture throughout the organisation.

Permanent education including exchange with the business

It is important for the members of the Supervisory Board, as part of their continuous learning, to participate in the permanent education and exchange with ING's business on a regular basis. The latter is aimed at keeping the Supervisory Board up to date on ING-relevant knowledge, skills and expertise and expanding these where necessary. It is meant to increase the Supervisory Board's understanding of and engagement with ING's business operations and stakeholders.

Due to prevailing Covid-19 related measures, on-site visits to local ING businesses could not take place in 2021. These were replaced by a combination of virtual gatherings and an off-site in the Netherlands:
- on 14 and 15 January 2021, the annual Supervisory Board Knowledge Days took place. These were combined with regular Supervisory Board meetings and focused, among others, on sustainability (i.e. energy transition and climate change) and IT and cybersecurity;
- In September 2021, an off-site was held in the Netherlands as an alternative to the annual business visit. This was the first opportunity since the Covid-19 outbreak for the Supervisory Board and the Management Board Banking to meet in person. The off-site, among others, focused on providing the Supervisory Board with a better understanding of ING in Belgium, allowing it to (i) gain insight into the local economic, financial and political landscape, including particularities; (ii) learn about the current status of ING's local business strategy and operations, including ING's Retail, Business

and Wholesale Banking activities; and (iii) get a more in-depth view on specific initiatives that are either currently underway or anticipated, including on AML/KYC and other regulatory priorities.

Throughout the year, a number of other educational sessions on specific topics were organised for and requested by the Supervisory Board. For 2021, a balance was sought between sessions focused on compliance, FEC, sustainable risk culture and management, and those on other relevant strategic topics. The latter included in-depth sessions on (i) ING's Wholesale Banking business and Retail Banking business, including Business banking, (ii) technology and IT platforms, (iii) data management, (iv) sourcing, (v) credit decision models, and (vi) managing and developing talent. Additionally, thematic sessions were organised to focus specifically on certain themes that needed further attention and/or were looking forward at emerging risks and developments. In 2021, these related to data strategy, quality and protection (including Schrems II ruling), capital and liquidity management, SOX Act framework and controls, management adjustments and developments in the area of non-financial risk. Furthermore, at the request of the Supervisory Board, several deep dive sessions were organised on selected key topics, such as IT and cybersecurity, modelling and operational resilience. These sessions had a substantial risk management relevance and contributed to a more in-depth understanding of the matters discussed.

The various educational sessions provided opportunities for Supervisory Board members to interact with senior management and subject-matter experts. They also interacted in speed-meet sessions. These meetings were also held virtually. Such interaction contributes to a better mutual understanding and alignment on what matters most to ING, its employees and the Supervisory Board. As in previous years, the Supervisory Board will continue this practice.

Strategy based on long-term value creation

Throughout 2021, the Supervisory Board monitored and discussed the progress of the strategy and its transformation and, as part of this, had an active and continuous dialogue with the Management Board Banking. In recent years, ING has seen multiple trends emerging; many parts of the business moved online due to Covid-19, customers are becoming more digital and self-directed, negative interest rates are leading to economic uncertainty, regulation is more complex and demanding, new players are changing the competitive landscape and ESG has moved to the core of society. In the meantime, ING is continuing to empower people to stay a step ahead in life and business. This has led to the following four focus areas to ensure ING seizes the opportunities flowing from today's reality and big trends to create long-term value.

ING will continue to be safe, secure and compliant and focus on its role as gatekeeper in the fight against financial crime. ING will enable and increase healthy economic growth by diversifying its income, in existing and new products and services. Clear choices will continue to be made about where and how ING serves its customers. ING aims to become a data-driven digital bank to bring benefits for its customers, employees, cost-to-serve and controls. In sustainability, ING will keep working to build a sustainable future for ING and its customers, society and the environment.

These focus areas have been discussed and agreed upon during periodic meetings between the Supervisory Board and the Management Board Banking. The Supervisory Board acknowledges the duty of care it has towards all stakeholders of ING and makes sure to take this into account while delivery on the focus areas is being executed.

Financial and risk reporting

The Management Board Banking prepared the financial statements and discussed these with the Supervisory Board. The quarterly results, including the relevant press releases, were discussed and approved in February, May, August and November 2021. The full-year 2020 financial results were discussed and approved in March 2021.

The financial statements will be submitted for adoption at the 2022 Annual General Meeting as part of the 2021 Annual Report. KPMG, in its role as ING's external auditor, audited ING's 2021 financial statements. As part of the standard procedures, KPMG declared itself independent from ING, in compliance with applicable rules and regulations. Read more in 'Audit Committee meetings' below.

The Supervisory Board was also informed in detail throughout the year of potential financial, non-financial and compliance risks for ING, including the continued implications of Covid-19, subsequent political and economic developments in various countries and regions, updates on (upcoming) regulatory changes, and discussed how these risks could best be mitigated. As part of this, ING performed specific stress tests and the results were discussed with the Supervisory Board. In this context, ING released its first integrated climate report in September 2021. It details ING's progress and targets on climate alignment in the nine sectors in ING's loan book most responsible for climate change. Read more in 'Risk Committee meetings' below.

Internal Supervisory Board meetings

During the 2021 internal meetings of the Supervisory Board (with the CEO attending, except when matters concerning him were discussed), among others, the following recurring topics were addressed:

- the annual targets and periodic performance assessments of the Management Board Banking;
- the composition of the Management Board Banking (this year including nominations for the succession of the CRO and the head of Wholesale Banking, the appointment of the head of Retail Banking, the separation of the board roles for operations and technology with the appointment of a chief technology officer and the succession of the COO/chief transformation officer);
- the composition of the Supervisory Board including its committee composition (this year including the nomination for one new member, Mr Lodewijk Hijmans van den Bergh);
- ING's broader talent and succession planning in view of bench strength, including the outcome of ING's annual talent review;
- remuneration related matters, including, but not limited to (1) the remuneration report, (2) the appointment/compensation/severance proposals of high earners and senior management in control functions and (3) the Variable Remuneration Accrual Model (VRAM) Process;
- the annual collective self-evaluation of the Management Board Banking and the Supervisory Board; and
- the progress on the global implementation of ING's suitability policy framework and the global job architecture.

Supervisory Board annual collective self-evaluation

As in previous years, the Supervisory Board conducted its annual collective self-evaluation over the reporting year. This was facilitated by an independent external party and with input from several executives and senior managers who regularly interact with the Supervisory Board and attend Supervisory Board meetings. The self-evaluation addressed the 'what' (roles and responsibilities) and the 'how' (culture and behaviour). In addition, the 2021 self-evaluation also focused on ESG, an important theme during the year, to identify priorities and further contribute to a future-proof ING and a positive contribution to society.

Approach

During the November 2021 Supervisory Board meeting, the Supervisory Board discussed and approved the annual collective self-evaluation process and design for the year 2021. In December 2021, input was gathered from the Supervisory Board members and frequent attendees. This, together with the outcome of the 2021 mid-year review and of the bilateral interactions between the chairman and each individual Supervisory Board member in January 2022, formed the basis for the collective Supervisory Board self-evaluation dialogue in February 2022. During this dialogue the Supervisory Board determined its collective positive points to maintain and its 2022 priorities for further improvement. This is part of the Supervisory Board's practice to regularly deliberate on its collective performance: towards year-end (to determine the next year's approach and potential specific themes to address), halfway through the year (to reflect on status and progress) and at the start of the year (to discuss the outcome of the previous year and agree on positive points to keep and points for further improvement).

Results

The Supervisory Board's collective dialogue in February 2022 centred around the following questions: (1) Positive points: are the positive points previously identified still valid? Where has the Supervisory Board further improved, taking into account the ongoing impact of Covid-19 and increased focus on ESG? and (2) Priorities for further improvement: Did the Supervisory Board sufficiently progress in 2021 on the improvement areas previously defined? What are the priority areas to further improve in 2022?

The Supervisory Board's agreed priorities for 2021 included:

1. Further guide and support the Management Board Banking in building an effective new team, while safeguarding the continued segregation of duties between the various boards.
2. Continue paying dedicated attention to embedding an organisation-wide change in (risk) culture mindset and behaviours, supported by a well-diversified employee base capable of delivering on ING's purpose and strategy.
3. Further re-balance focus in meetings on strategy and sustainability, business and financial performance, risk management and regulatory requirements, taking into account the continuously evolving demands and expectations of various stakeholders in relation to these key topics.

4. Continue investing in the Supervisory Board's own lifelong learning, especially in the areas of technology, IT and cybersecurity in light of ING's ambition.

During 2021, the Supervisory Board addressed all of the above and, where applicable, embedded enhancements in its standard working practice. Items 1-3 form part of the regular meetings of the Supervisory Board and its committees, with a view to the Supervisory Board's role and responsibilities supported by its comprehensive annual cycle of work. Item four is, among others, part of the Supervisory Board's education programme.

Looking back on 2021, and compared to previous years, the Supervisory Board concluded that several positive points continued to be valid and had also further improved during 2021:

- Regarding the 'what', the following Supervisory Board strengths were recognised: (1) its effectiveness at overseeing, supervising, challenging and advising the Management Board Banking, (2) its understanding of the capacity of the organisation to deliver the strategy, and the effectiveness of ING's people and talent processes, (3) its composition, and (4) the charter, including the distribution of work between the full Supervisory Board and its Committees, its meeting management and the support available.
- Regarding the 'how', the following positives were recognised: (1) the relationships between the Supervisory Board members and with the Management Board Banking and (2) the understanding of the views and requirements of key stakeholders.

Looking forward, the Supervisory Board concluded that several priorities for further improvement are still relevant and the following areas require further attention during 2022:

- Regarding the 'what' it identified: (1) safeguarding balance in open, constructive dialogue with the Management Board Banking on business/market developments, including emerging risks, and time spent per meeting on regulatory topics and (2) continue to be provided with fit-for-purpose supporting materials for board meetings.
- Regarding the 'how' these attention points were identified: (1) Covid-19 permitting, the importance of returning to physical meetings with the Management Board Banking and other ING representatives, and (2) continue investing in access to and leveraging on knowledge, skills and experiences relevant to the Supervisory Board in the context of ING.

With regard to ESG, the Supervisory Board concluded that this is to be seen and addressed as an integral part of ING's strategy and objectives (see 'In conversation with our chairman' and other ESG-related sections in this Annual Report). As part of ING's next steps in this area, the Supervisory Board will continue working with the Management Board Banking to further enhance and embed ESG principles in ING's internal processes and business activities.

The Supervisory Board agreed to a number of specific actions for 2022 to contribute to its performance, such as to:

1. Ensure time is spent on ING's progress on its strategic priorities and on reviewing the performance of specific countries and business lines as part of the Supervisory Board's time spent on ING's medium to longer-term strategy, where relevant complemented with additional outside-in views of stakeholders.
2. Ensure to pay continued attention to diversity and inclusion and attracting and retaining talent to contribute to a well-diversified employee base.
3. Enhance the Supervisory Board's governance on ESG with a dedicated Supervisory Board committee.
4. Evaluate and re-assess the practice and allocation of non-chair Supervisory Board members to specific focus areas so as to benefit from the knowledge, skills and experience they've gained in other roles in those areas that are most relevant to ING; this will also further enhance the Supervisory Board's collective decision making and effectiveness in challenging management.
5. Implement Hybrid Mode as the Supervisory Board's standard new way of working and collaboration, which combines the advantages of meeting in person and meeting virtually, enhancing collaboration and co-creation as well as flexibility, respecting personal health and well-being. As part of this, and Covid-19 permitting, resume in-person informal gatherings (to provide the Supervisory Board with additional opportunity to reflect and look forward) as well as resume off-sites/business visits.

The Supervisory Board is of the opinion that the above contributes to overseeing and constructively challenging ING in its ambition to keep transforming into a data-driven digital bank in line with the strategy.

Permanent committee meetings

To manage each of the committees' annual cycle of work and potential committee interdependencies, each committee has drawn up an annual work plan that is being kept up to date throughout the year for priority setting and forward-looking purposes. These plans all feed into the Supervisory Board's annual meeting cycle.

Risk Committee

The Risk Committee met 10 times in 2021, of which three were combined with the Remuneration Committee to address remuneration-related risk methodology elements, such as those relating to the VRAM that was introduced in 2018 (see also 'Remuneration Committee meetings'). Since 2020, almost all Supervisory Board members have been members of the Risk Committee. The reason for this is the ever increasing importance of risk and how this is managed and supervised. On 31 December 2021, the committee members were: Mike Rees (chair), Juan Colombás, Mariana Gheorghe, Margarete Haase, Lodewijk Hijmans van den Bergh, Herman Hulst, Harold Naus and Hans Wijers.

The committee assists and advises the Supervisory Board with the performance of its duties in relation to overseeing: (1) the setting and monitoring of ING's risk appetite and risk strategy for all types of risk, including but not limited to financial, non-financial and compliance risk; (2) the effectiveness of the internal risk management and control systems; and (3) other related risk management topics. The Risk Committee prepares the discussions within and decisions of the Supervisory Board on such matters.

ING needs to ensure that integrity continues to come first and that critical non-financial risk areas stay top of mind, as an integral part of ING's identity. ING needs to build strong foundations with structural solutions that continue to earn and maintain the trust of its stakeholders, including its customers and society at large. In light of Covid-19, additional updates on financial, non-financial and compliance risk were provided, both separately and as an integral part of recurring reports.

At each quarterly Risk Committee meeting financial and model risks, non-financial risks and compliance risks were discussed, with a specific focus on Covid-19. This included the status of ING's accompanying metrics such as for risks in the areas of solvency, liquidity and funding, credit, country, market, IT, non-financial risk and compliance. The discussions were supported by different analyses conducted on the potential Covid-19 impact on ING's credit portfolio, capital and liquidity position, and updates on credit developments in certain countries and portfolios. The non-financial and compliance risk discussions were supported by (1) updates of the bank-wide KYC enhancement and maturity efforts, (2) a variety of topical dashboards such as on IT (risk), cybersecurity, sourcing, data quality and data privacy (including GDPR) and (3) the status of implementation of related regulatory programmes. With respect to Covid-19, the committee addressed risks related to business continuity, business resilience, the working from home control environment, HR, and IT and cybercrime.

As part of the annual recurring topics, the Risk Committee also discussed the following topics:

- the annual review of the Risk Appetite Framework and accompanying principles and risk appetite statements;
- the annual update to the Recovery Plan;
- the impact of upcoming regulations, and credit developments in certain countries and portfolios;
- the review of the scope of ING's key policies; and
- the update of the Conflicts of Interest policy.

The entire Supervisory Board also participated in the dry run of the Recovery Plan.

As mentioned before, throughout the year, deep dives and thematic sessions took place on specific topics. Deep dives are technical discussions on selected recurring key topics that have substantial risk management relevance and that contribute to a more in-depth understanding of the matters at hand. In 2021, there were deep dives on operational resilience, IT and cybersecurity, modelling and sourcing. Thematic sessions focus specifically on certain themes that need further attention and/or are looking forward at emerging risks and developments. Thematic sessions in 2021 encompassed: SOX Act Framework and controls, capital and liquidity management with a view to capital planning, supervisory update with the focus on SREP and Covid-19, data plan and data quality, non-financial risk management (developments) and management adjustments. In principle, these sessions were presented from a risk management angle and where relevant also addressed the impact of the Covid-19 pandemic. All Supervisory Board members received a standing invitation for sessions deemed relevant to them and participated in several of these.

All relevant items discussed by the committee were reported to the Supervisory Board, with the Supervisory Board approving those items as required from a governance perspective.

Audit Committee

The Audit Committee met six times in 2021. On 31 December 2021, the committee members were: Margarete Haase (chair), Juan Colombás, Herman Hulst, Mike Rees and Hans Wijers.

The committee assists and advises the Supervisory Board with (1) the performance of its duties in relation to the integrity and quality of ING's financial reporting, (2) the related effectiveness of ING's internal risk management and control systems, and (3) the preparation of the discussions within and the decisions of the Supervisory Board on such matters.

The Audit Committee addressed, among others, the following recurring topics:
- the quarterly results and the financial statements;
- judgemental accounting topics;
- key audit matters, as included in the auditors' reports;
- financial reporting;
- (the approval of) the external auditor's audit plan/engagement letter/independence and fees;
- the overall internal control environment, the internal controls over financial reporting, the internal and external auditor reports;
- the review of the internal audit function;
- matters related to the financing of the company, including the assessment of ING's capital and liquidity position;
- the press releases related to the periodic results and the Annual Report;
- the internal audit plan, including its support and progress monitoring;
- critical and highly overdue issues, as reported by the internal audit function;
- the updated internal audit charter and the update of the ING External Auditor Independence Policy; and
- update of ING's key policies, such as the ING Global Tax Policy.

The Audit Committee performed an assessment of the functioning of the external auditor and the scope and materiality of the audit plan and the principal risks identified in the audit plan.

Specific attention was paid to a variety of other related topics. These included, among others, the following recurring topics:
- ING's long-term CET1 ratio ambition level;
- ING's (interim) dividend;
- SOX Act framework and controls; and
- capital and liquidity management.

In addition, in 2021, the Audit Committee addressed, among others, expected credit losses including management adjustments, IT security / access management and matters in the context of Covid-19 uncertainty.

All relevant items discussed by the committee were reported to the Supervisory Board, with the Supervisory Board approving those items as required from a governance perspective.

Directly following the Audit Committee meetings, the members of the Audit Committee met in a closed meeting with the internal and external auditors to seek confirmation that all relevant topics were discussed in the Audit Committee meetings.

To properly prepare for the regular Audit Committee meetings, the chairperson of the Audit Committee held separate sessions with the external auditor, the general manager of the internal audit department, the chief financial officer (CFO) and the Group Controller. The chairperson also met with various senior managers.

Nomination and Corporate Governance Committee

The Nomination and Corporate Governance Committee met 14 times in 2021, of which three were combined with the Remuneration Committee to address topics that simultaneously covered nomination as well as remuneration. On 31 December 2021, the committee members were: Hans Wijers (chair), Mariana Gheorghe and Herna Verhagen.

The committee assists the Supervisory Board with the performance of its duties in relation to selection and nomination of, among others, the members of the Supervisory Board and Management Board Banking, talent management and the effectiveness of ING's governance arrangements. The committee prepares the discussions with and decisions of the Supervisory Board on such matters.
With regard to nomination related matters, it is ING's aim to ensure that all of its boards are – at all times – adequately composed to perform its duties. As is standard practice, the Nomination and Corporate Governance Committee therefore discusses (1) the performance of the individual members

of the Management Board Banking (also serving as input to the Remuneration Committee) and (2) medium- to long-term succession planning for the Management Board Banking and the Supervisory Board. A continuing conversation on Management Board Banking succession planning is facilitated by the chief human resources officer as part of its regular meetings in the form of deep dives by function and business line.

Finding suitable board succession candidates remains challenging, while taking into account the evolving role of boards in general and with the goal of maintaining a balanced board composition. Numerous requirements are to be met in view of board composition, including regulatory requirements, suitability considerations, diversity, banking and other industry knowledge, outside positions, independence, no conflicts of interest, availability, etc. Also diversity-related aspects are to be taken into account as well as the minimum and optimal size of a board and how to arrive at an appropriate balance in its representation of regions, age, gender, knowledge and expertise. The generic profile of the Supervisory Board aims to capture these elements; this profile can be found on ing.com. Read more on the boards' composition in the 'Composition of the Executive Board, Management Board Banking and Supervisory Board' section that also includes a diversity and competence matrix.

With a view to the above, in 2021 specific attention was paid to:
- the succession of the head of Wholesale Banking, the appointment of a head of Retail Banking and the separation of the board roles for operations and technology, resulting in the appointment of a chief technology officer and the succession to the chief operations officer (COO)/chief transformation officer.
- the nomination and subsequent appointment by the General Meeting 2021 of Lodewijk Hijmans van den Bergh as well as the reappointments of Hans Wijers and Margarete Haase to the Supervisory Board.

The Nomination and Corporate Governance Committee also focuses on ING's broader talent and succession planning in view of bench strength and diversity at higher management levels, with selected key roles receiving dedicated attention. This is done by taking into account ING's diversity policy (70% principle for mixed teams) and by accelerating refreshment where possible without jeopardising business continuity. The diversity policy is published on ing.com and explained in more detail in 'Our People'. The committee also holds periodic conversations outside of its regular meetings with internal talented individuals who are considered to have the potential to assume more senior and complex roles in the organisation over time. The results of these conversations are fed into the individuals' coaching and development plans.

With regard to corporate governance, the committee discussed:
- the 2021 Annual Report and the accompanying booklets on ING's application of the Dutch Corporate Governance Code and the Dutch Banking Code;
- the approach and agenda for the General Meeting 2021, including the impact of the Covid-19 pandemic;
- the suitability policy framework and its global implementation, thereby also taking into account regulatory developments.
- the annual updates to the corporate board charters, the governance manual and the decision structure as well as any changes in board members' outside positions; and
- the review of the scope of ING's key policies, such as ING's suitability policy framework.

All relevant items discussed by the committee were reported to the Supervisory Board, with the Supervisory Board approving those items as required from a governance perspective.

Remuneration Committee

The Remuneration Committee met nine times in 2021. On 31 December 2021 the committee members were: Herna Verhagen (chair), Mariana Gheorghe, Harold Naus and Hans Wijers.

The committee assists the Supervisory Board, with the performance of its duties in relation to remuneration, the remuneration policies and the application and compliance thereof and shall prepare the discussions within and decisions of the Supervisory Board on such matters. In doing so, the Remuneration Committee will take into account the adequacy of information provided to shareholders on remuneration policies and practices.

As an annual recurring topic, the Remuneration Committee reviewed the remuneration report by way of benchmarking with the purpose of further improving the remuneration report.

In addition, the Remuneration Committee discussed the progress and performance on the annual targets set for the Management Board Banking. With regard to variable remuneration and the application of ING's accompanying VRAM (including last year's lessons learned), the committee received input and advice from the Risk Committee following strengthened risk management governance. This served as input for a review of the predefined thresholds above which the pool for variable remuneration may be unlocked for those eligible as well as the accompanying individual variable remuneration proposals, including potential cases for holdback or clawback of deferred compensation by way of malus. Furthermore, the Remuneration Committee discussed the mandate for the variable remuneration cap for selected global staff outside the European Economic Area in the Corporate Staff departments, and in the business lines of Wholesale Banking and Retail Banking from 100% to 200%, for a period of five performance years, starting with performance year 2022. The above-mentioned was approved by the 2021 Annual General Meeting of ING Groep N.V.

This included the views and expectations of the ECB, specifically regarding the impact that such policies may have on the maintenance of a financial institution's sound capital base.

The Remuneration Committee also reviewed the proposed updates to ING's Remuneration Regulations Framework as part of its annual review. Throughout the year it assessed Identified Staff and High Earner-related remuneration matters, based on ING's accompanying governance framework.

In 2021, the committee paid specific attention to potential implications of the Covid-19 pandemic on target setting and remuneration, by closely monitoring developments in this area.

All relevant items discussed by the committee were reported to the Supervisory Board, with the Supervisory Board approving those items as required from a governance perspective.

Overview of Supervisory Board committee members

	Risk Committee	Audit Committee	Nomination and Corporate Governance Committee	Remuneration Committee
Hans Wijers (chair)	Member	Member	Chair	Member
Mike Rees (vice-chair)	Chair	Member		
Juan Colombás	Member	Member		
Mariana Gheorghe	Member		Member	Member
Margarete Haase	Member	Chair		
Lodewijk Hijmans van den Bergh	Member			
Herman Hulst	Member	Member		
Harold Naus	Member			Member
Herna Verhagen			Member	Chair

Composition of the Management Board Banking and Supervisory Board

ING's aim is to ensure that the boards are – at all times – adequately composed to perform their duties. The Supervisory Board continued with 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.

Andrew Bester was appointed as a member of the Management Board Banking and head of Wholesale Banking as of 6 April 2021. In addition, Aris Bogdaneris was appointed as head of Retail Banking as of 1 May 2021. This appointment formalised the role at Management Board Banking level and was an important step forward in building a global Retail Banking business. Aris Bogdaneris continued in his role as head of Challengers & Growth Markets alongside his role as head of Retail Banking.

To further strengthen ING's position as a digital leader in banking, the decision was taken to separate the Management Board Banking roles for technology and for operations. Ron van Kemenade was appointed as a member of the Management Board Banking and chief technology officer as of 1 May 2021. Marnix van Stiphout was appointed as a member of the Management Board Banking and COO/chief transformation officer as of 1 September 2021. He succeeded Roel Louwhoff, who stepped down from the Management Board Banking, effective 1 August 2021. Roel Louwhoff left ING on 1 November 2021.

Lodewijk Hijmans van den Bergh was appointed as new Supervisory Board member by and at effective as per the end of the General Meeting 2021. He also became a member of the Risk Committee.

Furthermore, the terms of appointment of Hans Wijers, Jan Peter Balkenende and Margarete Haase expired at the end of the 2021 Annual General Meeting (of ING Groep N.V.). At his request, Jan Peter Balkenende retired from the Supervisory Board as of the end of the above-mentioned meeting to focus on other future activities. The Supervisory Board proposed to reappoint Hans Wijers and Margarete Haase to the 2021 Annual General Meeting. These proposals were approved.

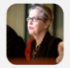
All the proposed appointments were approved by the ECB.

All Supervisory Board members, with the exception of not more than one person, shall qualify as independent as defined in the best practice provision 2.1.8 of the Dutch Corporate Governance Code. The members of the Supervisory Board are therefore requested to assess annually whether or not they are independent as set out in the Dutch Corporate Governance Code 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.

For the full list of board members see 'Corporate Governance'.

Diversity & competence matrix

Management Board (EB/MBB)		Diversity			Competences							
		Year of birth	Gender	Nationality	Executive experience	International experience	Banking	Finance / audit	Risk	Operations	IT & Cybersecurity	ESG
	Steven van Rijswijk (EB/MBB, CEO)	1970	Male	Dutch	*	●	*	*	*	●	●	*
	Tanate Phutrakul (EB/MBB, CFO)	1965	Male	Thai	*	*	*	*	●	●	●	●
	Ljiljana Čortan (EB/MBB, CRO)	1971	Female	Croatian	*	*	*	●	*	●	●	●
	Pinar Abay (MBB, head of Market Leaders)	1977	Female	Turkish	*	*	*	●	●	*	●	●
	Andrew Bester (MBB, head of Wholesale Banking)	1965	Male	British / South African	*	*	*	*	●	*	●	*
	Aris Bogdaneris (MBB, head of Retail and head of Challengers & Growth Markets)	1963	Male	Canadian	*	*	*	●	●	*	●	●
	Ron van Kemenade (MBB, chief technology officer)	1965	Male	Dutch	*	●	*	●	●	●	*	●
	Marnix van Stiphout (MBB, chief operations officer and chief transformation officer)	1970	Male	Dutch	*	●	*	●	●	*	●	●

Supervisory Board		Diversity			Competences							
		Year of birth	Gender	Nationality	Executive experience	International experience	Banking	Finance / audit	Risk	Operations	IT & Cybersecurity	ESG
	Hans Wijers (chair)	1951	Male	Dutch	*	*	●	*	*	●	●	*
	Mike Rees (vice-chair)	1956	Male	British	*	*	*	*	*	●	*	●
	Juan Colombás	1962	Male	Spanish	*	*	*	*	*	*	*	●
	Mariana Gheorghe	1956	Female	Romanian / British	*	*	●	●	*	*	●	*
	Margarete Haase	1953	Female	Austrian	*	*	*	*	●	*	●	●
	Lodewijk Hijmans van den Bergh	1963	Male	Dutch	*	*	●	●	●	●	●	*
	Herman Hulst	1955	Male	Dutch	*	*	●	*	●	●	●	●
	Harold Naus	1969	Male	Dutch	*	●	*	●	*	●	●	●
	Herna Verhagen	1966	Female	Dutch	*	●	●	●	●	*	*	*

● Has sufficient/advanced knowledge, skills and experience in the area and can make a balanced independent judgement on the matter

* Is in addition considered an expert in relation to previous or current roles

Please note the following:

- The purpose of this matrix is to provide ING's stakeholders with an overview on the main aspects of diversity and competencies that ING considers to be the most relevant for its stakeholders.
- The competencies included in this matrix represent a non-exhaustive overview of the competencies that ING's corporate board members already had before joining ING and/or developed during their position(s) at ING.
- The content of the matrix is subject to change in the light of ING's continually changing situation, markets and environment.
- Furthermore, for the appointments of new corporate board members, all relevant competencies are also shared with the ING's supervisors DNB/ECB based on their standard suitability matrix to assess the collective competence of members of the management/supervisory body.

Appreciation for the Management Board Banking and ING employees

The Supervisory Board would like to thank the members of the Management Board Banking for their contribution to ING's performance over the past year. It remained a year of uncertainty as Covid-19 continued to have an impact on our business and our customers and the devastating effects of climate change became even more apparent. We're grateful for their efforts in navigating these challenges and creating long-term value for our stakeholders. In particular, we're pleased to see progress in the areas ING focused on this year: being safe, secure and compliant; digitalisation to improve the customer experience; delivering healthy returns for our shareholders; and taking action to protect planet and people for a more sustainable future. Of course, none of this would be possible without our employees; we rely on them to deliver on ING's purpose and strategy. The Supervisory Board appreciates their ongoing commitment and flexibility. We recognise it's not always been easy. Our sincere thanks to all.

Additional information

More information can be found in 'Corporate governance', which is deemed to be incorporated by reference here.

Amsterdam, 7 March 2022

Corporate governance

This chapter comprises ING Bank N.V.’s Corporate Governance Statement.

Dutch Banking Code

The Dutch Banking Code is applied by ING Bank N.V. (ING Bank). The application by ING Bank is described in the 2021 publication ‘Application of the Dutch Banking Code by ING Bank N.V.’, 10 March 2022, available on ing.com. This is to be read in conjunction with and deemed to be incorporated in the Annual Report of ING Bank.

The Banking Code can be downloaded from the website nvb.nl/English/.

Financial reporting process

As ING Bank is a consolidated subsidiary of ING Groep N.V. (ING Group), its policies and procedures for establishing and maintaining adequate internal control over financial reporting are the same as those applied by ING Group for its consolidated financial statements with respect to ING Bank and the entities included in the latter's own consolidated financial statements.

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 the 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.

ING has a process in place where, under the supervision and with the participation of the CEO and CFO, ING assesses the effectiveness of internal control over financial reporting, based on the criteria of the Committee of Sponsoring Organisations of the Treadway Commission (‘COSO’) in Internal Reporting – Integrated Framework (2013 Framework).

Board composition

The Management 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 Management Board.

The Supervisory Board regularly assesses the composition of the Management Board.

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 Management Board and senior management. ING’s target for gender diversity in the Management Board is set at 30%.

Changes in the composition

Ljiljana Čortan was appointed as the CRO of ING Bank and member of the Management Board as of 1 January 2021. In terms of the dimensions of diversity, Ljiljana Čortan added both nationality and gender diversity to the Management Board.

Information on members of the Management Board Banking

Steven van Rijswijk
Chief executive officer

Steven van Rijswijk (51) was appointed as chief executive officer 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 chief executive officer, he was ING's chief risk officer.

As chief executive officer and chairman he is responsible for:

- the proper functioning of the Executive Board and Management Board Banking;
- formulating, communicating and delivering ING's strategy, including ESG;
- ING's decision-making, results, governance, (risk) culture, branding, reputation and ING's people agenda;
- communication with the Supervisory Board.

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

Tanate Phutrakul (56) was appointed as chief financial officer and member of the Management Board Banking with effect from 7 February 2019, and subsequently as a member of the Executive Board at the AGM 2019.

As chief financial officer 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;
- the communication to the Audit Committee and Supervisory Board on the aforementioned topics.

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
Chief risk officer

Ljiljana Čortan (50) was appointed as chief risk officer and member of the Management Board Banking with effect from 1 January 2021 and subsequently as member of the Executive Board member at the 2021 AGM.

As chief risk officer 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;
- risk reporting.

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.

Pinar Abay
Head of Market Leaders

Pinar Abay (44) joined the Management Board Banking on 1 January 2020. Previously she was a board member of ING in Turkey and a non-executive member of the board of ING in Belgium.

As head of Market Leaders she is responsible for:
- the execution of the strategy and priorities for ING as well as the strategies for Retail in the Benelux and Wholesale Banking in Belgium and Luxemburg;
- driving performance, operations and compliance, including profitability and risk management within Market Leaders across all products and segments in the Benelux; and
- creating a platform in which the interests of Retail, Business Banking and Wholesale Banking are appropriately balanced.

Relevant positions pursuant to CRD IV
Member of the Management Board Banking of ING Bank N.V. and non-executive member of the board of ING Belgium N.V./S.A.

Other relevant ancillary positions
None.

Andrew Bester
Head of Wholesale Banking

Andrew Bester (56) was appointed as member of the Management Board Banking and head of Wholesale Banking with effect from 6 April 2021.

As head of Wholesale Banking he is responsible for:
- defining the strategy and priorities for global Wholesale Banking in line with the overall strategy of ING;
- driving performance, operations and compliance of wholesale banking, including profitability and risk management across all geographies, segments and products;
- optimising all aspects of Wholesale Banking and steering of the different regions, sectors and products and Wholesale Banking innovation; and
- sustainability.

Relevant positions pursuant to CRD IV
Member of the Management Board Banking of ING Bank N.V.

Other relevant ancillary positions
None.

Aris Bogdaneris
Head of Retail Banking
Head of Challengers & Growth Markets

Aris Bogdaneris (58) was appointed as member of the Management Board Banking with effect from 1 June 2015. He is head of Retail Banking and head of Challengers & Growth Markets.

As head of Challengers & Growth Markets he is responsible for:
- the execution of the strategy and priorities for ING as well as the strategies for Retail and Wholesale Banking in the Challengers countries (Australia, Austria, Czech Republic, France, Germany, Italy, Portugal, Spain) and the Growth countries (Poland, Romania, Turkey), Asia region and the strategic positions in Thailand and China (where applicable);
- driving performance, operations and compliance, including profitability and risk management within Challengers & Growth Markets across all products and segments; and
- creating a platform in which the interests of Retail, Business Banking and Wholesale Banking are appropriately balanced.

As head of Retail Banking he is responsible for:
- defining the strategy and priorities for Retail and Business Banking, facilitating the global platform strategy and overseeing the proper implementation of these in line with ING's strategy.

- setting targets for implementation of the global Retail strategy, and monitoring implementation and effectiveness thereof;
- creating effective Retail governance to deliver a global Retail customer experience; and
- leveraging global competencies and bringing expertise to local units with respect to Retail products, channels and client interactions.

Relevant positions pursuant to CRD IV

Member of the Management Board Banking of ING Bank N.V., member of Management Board of ING Bank (Australia) Limited and member of the Supervisory Board of ING DiBa.

Other relevant ancillary positions

None.

Ron van Kemenade
Chief technology officer

Ron van Kemenade (56) was appointed as member of the Management Board Banking and chief technology officer with effect from 1 May 2021. Prior to his appointment, he was the chief information officer of ING Bank.

As chief technology officer he is responsible for:

- translating the defined ING and respective business line (Wholesale Banking and Retail) strategies into an IT data and information security strategy and overseeing proper implementation thereof;
- the total IT landscape (including infrastructure and applications), information security and data management;
- advising the business on technology driven (business) opportunities.

Relevant positions pursuant to CRD IV

Member of the Management Board Banking of ING Bank N.V. and member of the management board of ING Groenbank N.V.

Other relevant ancillary positions

None.

Marnix van Stiphout
Chief operations officer & chief transformation officer

Marnix van Stiphout (51) was appointed as member of the Management Board Banking, chief operations officer and chief transformation officer with effect from 1 September 2021.

In his role, he is responsible for translating the defined ING and respective business line (Wholesale Banking and Retail) strategies into a strategy for the operations function and overseeing proper implementation thereof, in particular on:

- sourcing and shared services;
- KYC operations;
- process management;
- global analytics;
- data protection execution;
- the execution and management of bank-wide transformation;
- making decisions on related budget release in line with ING's strategy.

Relevant positions pursuant to CRD IV

Member of the Management Board Banking of ING Bank N.V.

Other relevant ancillary positions

None.

Supervisory Board

The 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.

In 2021, three out of nine members of the Supervisory Board were female. We believe the Supervisory Board is 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.

Ancillary positions

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 Bank. 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 Bank.

Information on the members of the Supervisory Board

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.).

Conformity statement

The Management Board Banking is required to prepare the Financial statements and the Annual Report of ING Bank N.V. for each financial year in accordance with applicable Dutch law and those International Financial Reporting Standards (IFRS) that were endorsed by the European Union.

Conformity statement pursuant to section 5:25c paragraph 2(c) of the Dutch Financial Supervision Act (Wet op het financieel toezicht).

The Management Board Banking is responsible for maintaining proper accounting records, for safeguarding assets and for taking reasonable steps to prevent and detect fraud and other irregularities. It is responsible for selecting suitable accounting policies and applying them on a consistent basis, making judgements and estimates that are prudent and reasonable. It is also responsible for establishing and maintaining internal procedures which ensure that all major financial information is known to the Management Board Banking, so that the timeliness, completeness and correctness of the external financial reporting are assured.

As required by section 5:25c paragraph 2(c) of the Dutch Financial Supervision Act, each of the signatories hereby confirms that to the best of his knowledge:

- the ING Bank N.V. 2021 Financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of ING Bank N.V. and the enterprises included in the consolidation taken as a whole; and
- the ING Bank N.V. 2021 Annual Report gives a true and fair view of the position at the balance sheet date, the development and performance of the business during the financial year 2021 of ING Bank N.V. and the enterprises included in the consolidation taken as a whole, together with a description of the principal risks ING Bank N.V. is being confronted with.

Amsterdam, 7 March 2022

The Management Board Banking

S.J.A. (Steven) van Rijswijk
CEO, chairman of the Management Board Banking

T. (Tanate) Phutrakul
CFO

L. (Ljiljana) Čortan
CRO

P. (Pinar) Abay
Head of Market Leaders

A.J.M. (Andrew) Bester
Head of Wholesale Banking

A. (Aris) Bogdaneris
Head of Retail Banking
Head of Challengers & Growth Markets

R.H.E. (Ron) van Kemenade
Chief technology officer

M.A. (Marnix) Stiphout
Chief operations officer / Chief transformation officer

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Parent company financial statements

Other information

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	23,591	25,363
Financial assets at fair value through profit or loss 4		
– Trading assets	51,389	51,361
– 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	627,550	598,306
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	533	403
Deferred tax assets 35	957	773
Other assets 11	5,991	5,879
Total assets	**951,317**	**937,379**

	2021	2020
Liabilities		
Deposits from banks 12	85,092	78,098
Customer deposits 13	657,831	643,138
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	48,445
Current tax liabilities	271	341
Deferred tax liabilities 35	603	584
Provisions 15	973	666
Other liabilities 16	12,695	11,605
Debt securities in issue 17	57,443	55,573
Subordinated loans 18	16,719	15,897
Total liabilities	**902,668**	**888,683**
Equity 19		
Share capital and share premium	17,067	17,067
Other reserves	1,069	2,334
Retained earnings	29,778	28,273
Shareholders' equity (parent)	**47,914**	**47,675**
Non-controlling interests	736	1,022
Total equity	**48,650**	**48,697**
Total liabilities and equity	**951,317**	**937,379**

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	18,657	20,865	25,355
Other interest income	2,474	1,846	3,110
Total interest income	**21,131**	**22,711**	**28,465**
Interest expense using effective interest rate method	-5,550	-7,507	-11,305
Other interest expense	-1,966	-1,603	-3,085
Total interest expense	**-7,516**	**-9,110**	**-14,391**
Net interest income 20	**13,615**	**13,600**	**14,074**
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	847	852	765
Investment income 23	167	152	188
Share of result from associates and joint ventures 8	141	66	64
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	230	12	213
Total income	**18,485**	**17,645**	**18,295**

	2021	2020	2019
Addition to loan loss provisions	516	2,675	1,120
Staff expenses 27	5,938	5,817	5,753
Other operating expenses 28	5,257	5,344	4,590
Total expenses	**11,711**	**13,835**	**11,463**
Result before tax	**6,774**	**3,810**	**6,831**
Taxation 35	1,876	1,317	1,889
Net result	**4,898**	**2,493**	**4,942**
Net result (before non-controlling interests)	**4,898**	**2,493**	**4,942**
Net result attributable to Non-controlling interests	128	78	99
Net result attributable to Shareholder of the parent	**4,770**	**2,415**	**4,843**
Dividend per ordinary share	6.72	0.09	6.06
Total amount of dividend paid (in million euros)	3,125	43	2,819

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)	4,898	2,493	4,942
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	60
Remeasurement of the net defined benefit asset/liability 34	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	-178	36	-32
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	-5
Share of other comprehensive income of associates and joint ventures and other income	-3	7	
Total comprehensive income	**3,089**	**904**	**5,651**
Comprehensive income attributable to:			
Non-controlling interests	-247	133	142
Shareholders of the parent	3,336	770	5,509
	3,089	**904**	**5,651**

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 35 '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	17,067	2,334	28,273	47,675	1,022	48,697
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		-164		-164	-13	-178
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	-0	-2
Remeasurement of the net defined benefit asset/liability 34		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		**-1,456**	**23**	**-1,433**	**-375**	**-1,809**
Net result		191	4,579	4,770	128	4,898
Total comprehensive income net of tax		**-1,265**	**4,601**	**3,336**	**-247**	**3,089**
Dividends			-3,125	-3,125	-40	-3,165
Employee stock option and share plans			28	28	0	28
Changes in the composition of the group and other changes					-0	-0
Balance as at 31 December 2021	**17,067**	**1,069**	**29,778**	**47,914**	**736**	**48,650**

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	Share-holders' equity (parent)	Non-controlling interests	Total equity
Balance as at 31 December 2019	17,067	4,000	25,857	46,924	893	47,817
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		31		31	5	36
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 34		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	44	7		7
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		-1,760	115	-1,644	55	-1,589
Net result		94	2,321	2,415	78	2,493
Total comprehensive income net of tax		-1,666	2,436	770	133	904
Dividends			-43	-43	-3	-46
Employee stock option and share plans			23	23	0	23
Changes in the composition of the group and other changes					-1	-1
Balance as at 31 December 2020	**17,067**	**2,334**	**28,273**	**47,675**	**1,022**	**48,697**

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	**17,067**	**3,504**	**23,602**	**44,173**	**803**	**44,976**
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		-33		-33	1	-32
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		51	9	60	-0	60
Remeasurement of the net defined benefit asset/liability 34		58		58		58
Exchange rate differences and other		-11		-11	7	-5
Share of other comprehensive income of associates and joint ventures and other income		137	-137			
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		316	350	666	44	709
Net result		180	4,663	4,843	99	4,942
Total comprehensive income net of tax		496	5,013	5,509	142	5,651
Dividends			-2,819	-2,819	-29	-2,848
Employee stock option and share plans			39	39	0	39
Changes in the composition of the group and other changes			22	22	-23	-1
Balance as at 31 December 2019	**17,067**	**4,000**	**25,857**	**46,924**	**893**	**47,817**

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 29				
Result before tax		6,774	3,810	6,831
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	413	1,259	64
Taxation paid		-1,871	-1,735	-2,369
Changes in:	– Net change in Loans and advances to/from banks, not available/payable on demand	8,700	53,076	-3,909
	– Net change in Trading assets and Trading liabilities	-5,624	2,571	-2,567
	– Loans and advances to customers	-27,772	2,888	-16,696
	– Customer deposits	18,339	40,576	24,828
	– Other 29	-8,179	-2,770	11,463
Net cash flow from/(used in) operating activities		**-7,869**	**103,179**	**19,553**
Cash flows from investing activities				
Investments and advances:	- Acquisition of subsidiaries, net of cash acquired			-17
	- Associates and joint ventures	-91	-24	-686
	- 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

		2021	2020	2019
Disposals and redemptions:	– Associates and joint ventures	57	24	60
	– 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**	**-2,681**
Cash flows from financing activities 30				
Proceeds from debt securities		77,298	63,269	84,641
Repayments of debt securities		-76,150	-99,212	-94,497
Proceeds from issuance of subordinated loans		3,169	2,138	3,440
Repayments of subordinated loans		-2,538	-2,608	-931
Repayments of principal portion of lease liabilities		-301	-273	-271
Dividends paid		-3,165	-46	-2,848
Net cash flow from/(used in) financing activities		**-1,686**	**-36,732**	**-10,465**
Net cash flow		**-3,335**	**57,960**	**6,406**
Cash and cash equivalents at beginning of year 31		111,565	54,029	47,528
Effect of exchange rate changes on cash and cash equivalents		-565	-425	95
Cash and cash equivalents at end of year 31		**107,664**	**111,565**	**54,029**

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) in 2020, which were mainly placed on deposit with the ECB as at 31 December 2020, and by increased customer deposits. Reference is made to Note 31 '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	21,515	23,365	28,968
Interest paid	-8,723	-9,690	-14,594
	12,792	**13,675**	**14,374**
Dividend received [1]	172	144	212
Dividend paid	-3,165	-46	-2,848

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 Bank N.V. (Naamloze vennootschap) is a company domiciled in Amsterdam, the Netherlands. Commercial Register of Amsterdam, number 33031431. ING Bank N.V. is a wholly-owned subsidiary of ING Groep N.V. domiciled in Amsterdam, the Netherlands. These Consolidated financial statements, as at and for the year ended 31 December 2021, comprise ING Bank N.V. (the Parent company) and its subsidiaries, together referred to as ING Bank. ING Bank 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 Bank Consolidated financial statements, as at and for the year ended 31 December 2021, were authorised for issue in accordance with a resolution of the Management Board Banking on 7 March 2022. The General Meeting of Shareholder 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 Bank Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) and the relevant articles of Part 9 of Book 2 of the Dutch Civil Code.

IFRS as adopted by the EU are IFRS Standards and IFRS Interpretations as issued by the International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRIC) with some limited modifications such as the temporary 'carve-out' from IAS 39 'Financial Instruments: Recognition and Measurement' (herein, referred to as IFRS).

Under the EU carve-out, ING Bank applies fair value hedge accounting to portfolio hedges of interest rate risk (macro hedging). For further information, reference is made to paragraph 1.6.4 'Derivatives and hedge accounting' of this note and to note 37 'Derivatives and hedge accounting'.

The ING Bank Consolidated financial statements have been prepared on a going concern basis and there are no significant doubts about the ability of ING Bank to continue as a going concern. In 2021 ING Bank's capital and liquidity position remained strong despite the Covid-19 impact and ING Bank has sufficient buffers to withstand certain adverse scenarios without breaching currently applicable and likely future requirements. Strong capital position allowed ING Bank to pay a cash dividend to the shareholder during 2021. 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 Bank 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.

1.3 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank did not receive rent concessions as a lessee, these amendments had no impact on the accounting policies of ING Bank.

ING Bank 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 Bank. ING Bank 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 Bank's Consolidated financial statements.

Effective in 2022:

- 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).

Effective in 2023:

- 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).

IFRS 17 'Insurance contracts' – effective in 2023

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 Bank does not have insurance business, but mainly sells insurance products as a broker where it does not run the insurance risk. ING Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank'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 Bank 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 Bank 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 Bank 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 Bank 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 Bank applies the fair value through OCI option to investments which are considered strategic, consisting of investments that add value to ING Bank'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 Bank'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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank'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

Bank (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 Bank applies an additional 'Funding Valuation Adjustment' (FVA) to the uncollateralised derivatives based on the market price of funding liquidity.

ING Bank 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 Bank 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 36 '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 Bank'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 Bank 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 Bank documents the relationship between hedging instruments and hedged items, its risk management objective, together with the methods selected to assess hedge effectiveness. ING Bank 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 Bank 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 Bank early adopted the Phase 1 amendments to IFRS which allowed ING Bank 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 Bank hedges and applies hedge accounting to benchmark interest rate exposure part of IBOR reform. ING Bank hedges are being progressively 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. In the coming year, ING Bank 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 Bank 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 Bank as at 31 December 2021. ING Bank will completely cease to apply the amendments when this uncertainty is no longer present or when the hedging relationship is discontinued. Refer to note 37 '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 Bank's hedging relationships

In 2021 Phase 2 amendments became effective for ING Bank. 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 Bank as part of its risk management strategies, but which do not qualify for hedge accounting under ING Bank'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 Bank 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 42 '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 Bank 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 Bank 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 Bank'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 Bank 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 Bank 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 Bank 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 Bank has established a quarterly process whereby forward-looking macroeconomics scenarios and probability weightings are developed for the purpose of ECL. ING Bank applies data predominantly from a leading service provider (Oxford Economics (OE)) enriched with the internal ING Bank 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 Bank 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 Bank 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 Bank 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 Bank'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 Bank 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 Bank'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 Bank 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 Bank 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 Bank 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 Bank ends the relationship with the client and situations where ING Bank (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 Bank 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 Bank'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 Bank 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 Bank'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 Bank 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 Bank 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 Bank participates in Targeted Longer-Term Refinancing Operations (TLTRO III), reference is made to Note 12 'Deposits from banks'.

ING Bank 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 Bank 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 Bank has a reasonable expectation that the lending targets will be met.

ING Bank 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 Bank’s participation in TLTRO programmes.

Significant judgements:
Significant management judgement is exercised in determining the accounting treatment of TLTRO transactions. In particular, ING Bank applied judgement in:

- assessing and concluding that in ING Bank’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, no 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 Bank comprises ING Bank N.V. (the Parent Company) and all other subsidiaries. Subsidiaries are entities controlled by ING Bank N.V. Control exists if ING Bank 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 ING Bank 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 45 ‘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 Bank has agreed to sell but is still legally owned by ING Bank may still be controlled by ING Bank 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 Bank N.V.

ING Bank 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 Bank, engaged in providing products or services, whose operating results are regularly reviewed by the Management Board Banking of ING Bank (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 Bank 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 Bank'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 Bank'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 Bank'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 Bank 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 Bank 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 Bank's investment in associates and joint ventures (net of any accumulated impairment loss) includes goodwill identified on acquisition. ING Bank'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 Bank'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 Bank 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 Bank and its associates and joint ventures are eliminated to the extent of ING Bank'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 Bank.

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 Bank 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 Bank 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 Bank. 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 Bank business and treasury departments. It is determined by either ING Bank 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 Bank as the lessor

When ING Bank acts as a lessor, a distinction should be made between finance leases and operating leases. For ING Bank 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 Bank’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 Bank’s interest in the fair value of 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 Bank’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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank 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 Bank; 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 Bank. 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 Bank 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 Bank 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 Bank 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 43 '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 Bank pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. ING Bank 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 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 Bank 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 Bank 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 Bank 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.

1.19 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 Bank'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 Bank 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.

1.20 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.

1.21 Parent company accounts

The parent company accounts of ING Bank N.V. are prepared in accordance with the financial reporting requirements included in Part 9 of Book 2 of the Dutch Civil Code. In accordance with subsection 8 of section 362, Book 2 of the Dutch Civil Code, the recognition and measurement principles applied in the Parent company accounts are the same as those applied in the Consolidated financial statements.

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 40 '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	7,018	7,441	16,595	17,945	23,613	25,386
Loan loss provisions	-10	-10	-13	-13	-22	-23
	7,009	**7,431**	**16,582**	**17,933**	**23,591**	**25,363**

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	51,389	51,361
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
	101,964	**103,374**

(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 Bank 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 Bank'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 40 '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	17,574	7,813
Debt securities	5,319	5,183
Derivatives	19,764	27,238
Loans and receivables	8,733	11,126
	51,389	**51,361**

Trading assets include assets that are classified under IFRS as Trading, but are closely related to servicing the needs of the clients of ING Bank. 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 37 '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 Bank.

Loans and receivables mainly include reverse repurchase agreements.

For details on ING Bank'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 Bank's total exposure to debt securities.

6 Securities at amortised cost

Securities at amortised cost fully consist of Debt securities.
ING Bank'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 Bank'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

	Debt Securities at FVPL		Debt Securities at FVOCI		Debt Securities at AC		Total	
in EUR million	2021	2020	2021	2020	2021	2020	2021	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

	Netherlands		Rest of the world		Total	
in EUR million	2021	2020	2021	2020	2021	2020
Loans to, or guaranteed by, public authorities	23,770	24,292	17,563	17,210	41,333	41,502
Loans secured by mortgages	116,666	117,967	250,312	238,370	366,978	356,337
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	42,819	37,724	148,153	135,527	190,972	173,251
	186,091	**183,306**	**446,733**	**420,780**	**632,824**	**604,086**
Loan loss provisions	-1,119	-1,286	-4,156	-4,493	-5,274	-5,779
	184,972	**182,020**	**442,577**	**416,287**	**627,550**	**598,306**

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	627,390	598,207
Subordinated	160	99
	627,550	**598,306**

No individual loan or advance has terms and conditions that significantly affect the amount, timing or certainty of the consolidated cash flows of ING Bank.

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	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	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 Bank 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 Bank.

Significant influence for associates in which the interest held is below 20%, is based on the combination of ING Bank'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 Bank 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 Bank 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 Bank. 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	795	773
Amounts to be settled	2,424	2,215
Other	1,910	2,074
	5,991	**5,879**

Disclosures in respect of Net defined benefit assets are provided in Note 34 '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	314,893	336,517
Credit balances on customer accounts	280,028	256,899
Corporate deposits	28,183	22,720
Other	34,727	27,001
	657,831	**643,138**

Customer deposits by type	Netherlands		Rest of the world		Total	
in EUR million	2021	2020	2021	2020	2021	2020[1]
Non-interest bearing	1,860	24,206	27,712	24,223	29,573	48,429
Interest bearing	254,752	208,169	373,507	386,539	628,258	594,708
	256,612	**232,375**	**401,219**	**410,762**	**657,831**	**643,138**

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.

In 2021 Customer deposits includes EUR39,759 million (2020: EUR 31,768 million) of deposits received from ING Group.

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	48,445
	71,042	**82,782**

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 37 '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	5,585	5,887
Funds entrusted	35,993	42,300
Subordinated liabilities	230	258
	41,808	**48,445**

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 Bank 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	420	180
	973	**666**

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	180	200	666	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	-7	-22	-1	-21
Closing balance	**421**	**381**	**132**	**105**	**420**	**180**	**973**	**666**

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 43 '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 396 million (2020: EUR 113 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
Other taxation and social security contributions	409	435
Rents received in advance	19	15
Costs payable	2,015	2,017
Amounts to be settled	5,082	4,877
Lease liabilities	1,220	1,339
Other	3,038	1,998
	12,695	**11,605**

Disclosures in respect of Net defined benefit liabilities are provided in Note 34 '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.

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 Bank, 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 Bank 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	31,785	18,315
More than 1 year but less than 2 years	3,135	5,667
More than 2 years but less than 3 years	1,235	3,158
More than 3 years but less than 4 years	1,729	1,222
More than 4 years but less than 5 years	2,914	1,730
More than 5 years	13,133	13,807
Total fixed rate debt securities	**53,930**	**43,898**
Floating rate debt securities		
Within 1 year	2,266	8,699
More than 1 year but less than 2 years	130	1,998
More than 2 years but less than 3 years	137	155
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	593	593
Total floating rate debt securities	**3,513**	**11,675**
Total debt securities	**57,443**	**55,573**

In 2021 Debt securities in issue increased by EUR 1.9 billion because of liquidity and funding needs.

Reference is made to Note 30 'Changes in liabilities arising from financing activities' for further information on issuances and redemptions.

18 Subordinated loans

Subordinated loans		
In EUR million	2021	2020
Subordinated loans	16,719	15,897
	16,719	**15,897**

Subordinated loans relate to subordinated capital debentures and private loans which may be included in the calculation of the capital ratio.

Subordinated loans include loans that qualify as Tier 1 and Tier 2 (CRD IV eligible) capital. Subordinated loans of EUR 15.9 billion (2020 : EUR 13.1 billion) have been placed with ING Bank N.V. by ING Groep 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.

These issuances were subsequently placed by ING Groep N.V. with ING Bank N.V. against the same conditions.

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 Bank N.V. redeemed with ING Groep N.V. EUR 563 million and EUR 432 million Perpetual Debt Securities in September.

Reference is made to Note 30 'Changes in liabilities arising from financing activities' for further information on issuances and redemptions and to the Parent company financial statements, Note 17 'Subordinated loans' for additional information.

The average interest rate on subordinated loans is 3.74% (2020: 3.73%). The interest expense during the year 2021 was EUR 573 million (2020: EUR 613 million).

19 Equity

Total equity			
In EUR million	2021	2020	2019
Share capital and share premium			
- Share capital	525	525	525
- Share premium	16,542	16,542	16,542
	17,067	**17,067**	**17,067**
Other reserves			
- Revaluation reserve: Equity securities at FVOCI	1,282	1,181	1,580
- Revaluation reserve: Debt instruments at FVOCI	92	296	299
- 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
	1,069	**2,334**	**4,000**
Retained earnings	29,778	28,273	25,857
Shareholders' equity (parent)	47,914	47,675	46,924
Non-controlling interests	736	1,022	893
Total equity	**48,650**	**48,697**	**47,817**

The following components of equity, as included in Other reserves, cannot be freely distributed: Revaluation reserve, 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.

Share capital and share premium

Share capital

Share capital

	Ordinary shares (par value EUR 1.13)					
	Number x 1,000			Amount		
	2021	2020	2019	2021	2020	2019
Authorised share capital	1,600,000	1,600,000	1,600,000	1,808	1,808	1,808
Unissued share capital	1,134,965	1,134,965	1,134,965	1,283	1,283	1,283
Issued share capital	**465,035**	**465,035**	**465,035**	**525**	**525**	**525**

No change occurred in the issued share capital and share premium in 2021, 2020 and 2019.

All ordinary shares are in registered form. No share certificates have been issued. Ordinary shares may be transferred by means of a deed of transfer, subject to the approval of the general meeting of ING Bank. The par value of ordinary shares is EUR 1.13.

The authorised ordinary share capital of ING Bank N.V. consists of 1,600 million shares of which as at 31 December 2021, 465 million ordinary shares were issued and fully paid.

ING Bank has 50 authorised preference shares with par value of EUR 1.13 per preference share. As at 31 December 2021, 7 preference shares were issued and fully paid (2020: 7 preference shares; 2019: 7 preference shares) amounting to EUR 8 (2020: EUR 8 and 2019: EUR 8).

Dividend restrictions

ING Bank 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. Additionally, certain Bank companies are subject to restrictions on the amount of funds they may transfer 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 subsidiaries operate, other limitations exist in certain countries.

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	296	299	365	1,450	1,208	604	-117	-114	8	221	253	202
Changes in credit liability reserve										37	-19	-116			
Unrealised revaluations	94	-337	137	-164	31	-33	-1,603	242	604				-2	-7	60
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**	**92**	**296**	**299**	**-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 34 '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	-2,068
Unrealised revaluations	-61	106	-134
Realised gains/losses transferred to the statement of profit or loss		-1	-128
Exchange rate differences	214	-1,662	251
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. The net increase of unrealized 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 -9 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	2,872
Result for the year	191	94	180
Transfer to/from retained earnings	-21	-37	137
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.

Retained earnings

Changes in retained earnings			
In EUR million	2021	2020	2019
Opening balance	28,273	25,857	23,602
Transfer to/from other reserves	26	108	350
Result for the year	4,579	2,321	4,663
Dividend and other distributions	-3,125	-43	-2,819
Employee stock options and share plans	28	23	39
Changes in composition of the group and other changes	-3	7	22
Closing balance	**29,778**	**28,273**	**25,857**

Dividend

In 2021, a cash dividend of EUR 3,125 million (2020: EUR 43 million and 2019: EUR 2,819 million) was paid to the shareholder of ING Bank.

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) related to the former Stichting Regio Bank and the former Stichting Vakbondsspaarbank SPN is included.
ING Bank N.V. is subject to legal restrictions regarding the amount of dividends it can pay to its shareholder. 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 Bank N.V.'s ability to pay dividends is dependent on the dividend payment ability of its subsidiaries, associates and joint ventures. ING Bank 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 Bank's subsidiaries, associates and joint amounts to EUR 8,205 million (2020: 9,829 million).

Furthermore there are restrictions to the ability of subsidiaries, associates and joint ventures to distribute reserves to ING Bank N.V. as a result of minimum capital requirements that are imposed by industry regulators in the countries in which the subsidiaries operate.

In addition to the legal and regulatory restrictions on distributing dividends from subsidiaries, associates and joint ventures to ING Bank N.V. there are various other considerations and limitations that are taken into account in determining the appropriate levels of equity in the Bank'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 Bank 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 shares are the most junior securities issued by ING Bank N.V., no specific dividend payment restrictions with respect to the shares exist.

Furthermore, ING Bank N.V. is subject to legal restrictions with respect to repayment of capital to Its shareholder. Pursuant to the Dutch Civil Code, capital may only be repaid if none of ING Bank N.V.'s creditors opposes such a repayment within two months following the announcement of a resolution to that effect.

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	13,979	15,766	19,322
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	4,318
Negative interest on liabilities	1,502	686	428
Total interest income using effective interest rate method	**18,657**	**20,865**	**25,355**
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	1,156	1,183
Interest income other	14	31	29
Total other interest income	**2,474**	**1,846**	**3,110**
Total interest income	**21,131**	**22,711**	**28,465**

in EUR million	2021	2020	2019
Interest expense on deposits from banks	109	177	361
Interest expense on customer deposits	1,999	2,022	3,559
Interest expense on debt securities in issue	597	1,145	1,767
Interest expense on subordinated loans	573	613	654
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	**5,550**	**7,507**	**11,305**
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	1,312
Interest expense on lease liabilities	14	18	25
Interest expense other	43	42	53
Total other interest expense	**1,966**	**1,603**	**3,085**
Total interest expense	**7,516**	**9,110**	**14,391**
Net interest income	**13,615**	**13,600**	**14,074**

Total net interest income amounts to EUR 13,615 million (2020: EUR 13,600 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 1,502 million (2020: EUR 686 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 Bank 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 Bank did not accrue for the conditional benefit and recognised unconditional interest benefit at -50 bps in 2020. In the first quarter of 2021, ING Bank 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 Bank 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 Bank 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 32 'Segments' which includes net fee and commission income, as reported to 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	-85	246	-305
– cash flow hedges (ineffective portion)	1	-5	47
– other non-trading derivatives	-53	222	105
Change in fair value of assets and liabilities (hedged items)	113	-183	382
Valuation results on assets and liabilities designated at FVPL (excluding trading)	-12	-121	-359
Foreign exchange transactions results	566	422	801
	847	**852**	**765**

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 Bank'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 37 '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 56 million (2020: EUR 8 million; 2019: EUR -403 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 230 million (2020: EUR 12 million; 2019: EUR 213 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	28	23	39
External employees	699	881	974
Education	47	43	64
Other staff costs	182	186	208
	5,938	**5,817**	**5,753**

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, Management Board Banking and Supervisory Board

Reference is made to Note 47 ‘Related parties’.

Stock option and share plans

ING Bank N.V. has granted option rights on ING Groep N.V. shares and conditional rights on shares to a number of senior executives (members of the Management Board Banking, general managers and other officers nominated by the Management Board Banking), and to a considerable number of employees of ING Bank. The purpose of the option and share schemes, apart from promoting a lasting growth of ING Bank, is to attract, retain and motivate senior executives and staff.

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.

The obligations with regard to the existing stock option plan and the share plans is funded by newly issued shares at the discretion of ING Group.

ING grants four types of share awards, deferred shares, performance shares and upfront shares, which form part of the variable remuneration offering via the Long term Sustainable Performance Plan (LSPP), as well as fixed shares. 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. Additionally, a condition before vesting was applied to performance shares until 2018. As of 2019, this performance condition is no longer applicable. Upfront and deferred shares awarded to the Management Board members of ING Bank as well as identified staff, have a retention obligation that must be adhered to upon vesting, a minimum retention of 12 months applies. ING has the authority to apply a hold back to awarded but unvested shares and a clawback to vested shares.

In addition to the LSPP share awards, ING also pays a number of senior employees fixed shares. The number of shares are determined each month from a cash value that forms part of the employee fixed remuneration. The shares are immediately vested to the employee, but have 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, 123,750 share awards (2020: 186,176; 2019: 2,837) were granted to the Management Board Banking. To senior management and other employees 3,267,372 share awards (2020: 3,678,775; 2019: 2,167,817) were granted.

Changes in share awards

	Share awards (in numbers)			Weighted average grant date fair values (in euros)		
	2021	2020	2019	2021	2020	2019
Opening balance	3,876,206	3,855,035	5,852,986	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	**3,672,659**	**3,876,206**	**3,855,035**	7.60	7.25	11.14

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	297	413	410
Office expenses	280	320	325
Travel and accommodation expenses	52	68	140
Contributions and subscriptions	112	109	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	669	541	477
	5,257	**5,344**	**4,590**

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).

Audit and non-audit services

Audit and non-audit services include fees for services provided by the Bank's auditors. The increase of audit fees in 2021 follow from the re-appointment of the current auditor that also triggered a revision of the audit fees.

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 43 'Legal proceedings'.

29 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		6,774	3,810	6,831
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	413	1,259	64
Taxation paid		-1,871	-1,735	-2,369
Changes in:	– Loans and advances to banks, not available on demand	262	10,032	-1,336
	– 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**	**53,076**	**-3,909**
	– Trading assets	-29	-2,095	606
	– Trading liabilities	-5,596	4,667	-3,173
	Net change in Trading assets and Trading liabilities	**-5,624**	**2,571**	**-2,567**
	Loans and advances to customers	-27,772	2,888	-16,696
	Customer deposits	18,339	40,576	24,828
	– Non-trading derivatives	290	-1,420	1,047
	– Assets designated at fair value through profit or loss	-1,905	-1,371	-7
	– Assets mandatorily at fair value through profit or loss	1,650	-1,963	23,343
	– Other assets	-121	1,092	1,359
	– Other financial liabilities at fair value through profit or loss	-6,795	1,190	-12,211
	– Provisions and other liabilities	-1,298	-298	-2,068
	Other	**-8,179**	**-2,770**	**11,463**
Net cash flow from/(used in) operating activities		**-7,869**	**103,179**	**19,553**

30 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	55,573	93,721	15,897	16,515	1,339	1,507	72,809	111,742
Cashflows:								
Additions	77,298	63,269	3,169	2,138			80,467	65,407
Redemptions / Disposals	-76,150	-99,212	-2,538	-2,608	-301	-273	-78,989	-102,093
Non cash changes:								
Amortisation	-22	52	8	-14	14	18		56
Other	-120	-98	-27	-12	161	118	14	8
Changes in unrealised revaluations	-962	198	-414	397			-1,376	595
Foreign exchange movement	1,827	-2,357	624	-519	6	-31	2,456	-2,907
Closing balance	**57,443**	**55,573**	**16,719**	**15,897**	**1,220**	**1,339**	**75,382**	**72,809**

31 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	1,121	477	784
Cash and balances with central banks	106,520	111,087	53,202
Cash and cash equivalents at end of year	**107,664**	**111,565**	**54,029**

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	8,180	9,265	9,303
	1,121	**477**	**784**
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	25,830
	-62,621	**-53,212**	**-478**
Total as included in the statement of financial position:			
– Deposits from banks	-85,092	-78,098	-34,826
– Loans and advances to banks	23,591	25,363	35,133
	-61,501	**-52,734**	**307**

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 40 ‘Transfer of financial assets, assets pledged and received as collateral’ for restrictions on Cash and balances with central banks.

Segment reporting

32 Segments

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

The Management Board Banking of ING Bank (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 Bank monitors and evaluates the performance of ING Bank at a consolidated level and by segment. The Management Board Banking consider this to be relevant to an understanding of the Bank's financial performance, because it allows investors to understand the primary method used by management to evaluate the Bank's operating performance and make decisions about allocating resources.

ING Bank 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 Management Board Banking of ING Bank.

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.

Segments by line of business

12 month period in EUR million	2021							2020							2019						
	Retail Netherlands	Retail Belgium	Retail Germany [1]	Retail Other [1]	Wholesale Banking	Corporate Line	Total	Retail Netherlands	Retail Belgium	Retail Germany	Retail Other	Wholesale Banking	Corporate Line	Total	Retail Netherlands	Retail Belgium	Retail Germany	Retail Other	Wholesale Banking	Corporate Line	Total
Income																					
– Net interest income	3,290	1,747	1,447	2,712	4,151	268	13,615	3,511	1,816	1,587	2,760	3,718	208	13,600	3,541	1,907	1,579	2,787	3,794	466	14,074
– 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	-51	1,354	279	145	93	89	609	-180	1,034	290	161	138	298	369	95	1,352
Total income	**4,262**	**2,475**	**2,009**	**3,602**	**5,916**	**221**	**18,485**	**4,471**	**2,373**	**2,117**	**3,261**	**5,396**	**27**	**17,645**	**4,505**	**2,442**	**1,985**	**3,509**	**5,298**	**556**	**18,295**
Expenditure																					
– Operating expenses	2,403	1,667	1,174	2,452	2,926	574	11,195	2,236	1,737	1,110	2,469	3,218	390	11,160	2,210	1,609	1,080	2,210	2,937	298	10,343
– Addition to loan loss provisions	-76	225	49	202	117		516	157	514	57	593	1,351	3	2,675	91	186	-53	364	532		1,120
Total expenses	**2,326**	**1,892**	**1,223**	**2,654**	**3,042**	**574**	**11,711**	**2,393**	**2,251**	**1,167**	**3,063**	**4,568**	**393**	**13,835**	**2,301**	**1,794**	**1,027**	**2,574**	**3,469**	**298**	**11,463**
Result before taxation	**1,936**	**583**	**786**	**949**	**2,874**	**-353**	**6,774**	**2,078**	**122**	**950**	**199**	**827**	**-366**	**3,810**	**2,204**	**647**	**957**	**935**	**1,830**	**258**	**6,831**
Taxation	499	146	252	212	703	64	1,876	523	51	331	105	295	13	1,317	558	192	328	234	464	114	1,889
Non-controlling interests			4	98	26		128	-1		4	55	20		78			3	82	14		99
Net result IFRS	**1,437**	**437**	**529**	**639**	**2,144**	**-417**	**4,770**	**1,556**	**71**	**615**	**39**	**512**	**-378**	**2,415**	**1,646**	**455**	**627**	**619**	**1,352**	**145**	**4,843**

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
Income								
– Net interest income	4,068	2,109	1,943	1,889	1,532	1,805	269	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	-51	1,354
Total income	**5,452**	**3,092**	**2,589**	**2,308**	**2,330**	**2,496**	**221**	**18,485**
Expenditure								
– Operating expenses	3,279	1,960	1,346	1,547	1,276	1,214	574	11,195
– Addition to loan loss provisions	28	184	117	99	110	-21		516
Total expenses	**3,307**	**2,143**	**1,463**	**1,646**	**1,386**	**1,192**	**574**	**11,711**
Result before taxation	**2,145**	**948**	**1,125**	**662**	**944**	**1,303**	**-353**	**6,774**
Retail Banking	1,936	583	786	206	742			4,253
Wholesale Banking	209	365	340	456	202	1,303		2,874
Corporate Line							-353	-353
Result before taxation	**2,145**	**948**	**1,125**	**662**	**944**	**1,303**	**-353**	**6,774**
Taxation	556	240	359	194	178	287	63	1,876
Non-controlling interests			4		124			128
Net result IFRS	**1,589**	**708**	**762**	**468**	**641**	**1,016**	**-415**	**4,770**

2020

	Netherlands	Belgium	Germany	Other Challengers	Growth markets	Wholesale Banking Rest of World	Other	Total
Income								
– Net interest income	4,178	2,116	2,090	1,781	1,578	1,654	204	13,600
– 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	-172	1,034
Total income	**5,557**	**2,896**	**2,684**	**2,084**	**2,078**	**2,315**	**31**	**17,645**
Expenditure								
– Operating expenses	3,347	2,037	1,270	1,566	1,272	1,273	395	11,160
– Addition to loan loss provisions	421	589	267	298	412	684	3	2,675
Total expenses	**3,769**	**2,627**	**1,537**	**1,864**	**1,684**	**1,957**	**397**	**13,835**
Result before taxation	**1,788**	**269**	**1,146**	**220**	**395**	**357**	**-366**	**3,810**
Retail Banking	2,078	122	950	-27	225			3,348
Wholesale Banking	-290	147	197	247	169	357		827
Corporate Line							-366	-366
Result before taxation	**1,788**	**269**	**1,146**	**220**	**395**	**357**	**-366**	**3,810**
Taxation	518	89	381	91	141	85	12	1,317
Non-controlling interests	-1		4		75			78
Net result IFRS	**1,271**	**180**	**761**	**129**	**178**	**273**	**-378**	**2,415**

2019

	Netherlands	Belgium	Germany	Other Challengers	Growth markets	Wholesale Banking Rest of World	Other	Total
Income								
– Net interest income	4,213	2,233	2,122	1,808	1,610	1,633	457	14,074
– Net fee and commission income	994	533	315	283	304	446	-6	2,868
– Total investment and other income	119	233	169	16	420	292	104	1,352
Total income	**5,325**	**2,999**	**2,606**	**2,107**	**2,334**	**2,370**	**554**	**18,295**
Expenditure								
– Operating expenses	2,994	1,925	1,237	1,318	1,277	1,293	299	10,343
– Addition to loan loss provisions	146	268	-40	171	271	303		1,120
Total expenses	**3,140**	**2,194**	**1,197**	**1,489**	**1,548**	**1,596**	**299**	**11,463**
Result before taxation	**2,185**	**805**	**1,409**	**618**	**785**	**774**	**255**	**6,831**
Retail Banking	2,204	647	957	307	628			4,744
Wholesale Banking	-19	158	451	311	157	774	-3	1,830
Corporate Line							258	258
Result before taxation	**2,185**	**805**	**1,409**	**618**	**785**	**774**	**255**	**6,831**
Taxation	549	247	476	207	159	144	107	1,889
Non-controlling interests			3		96			99
Net result IFRS	**1,637**	**558**	**929**	**411**	**530**	**630**	**148**	**4,843**

1 In the fourth quarter of 2021, ING exited from the retail banking markets in Austria and the Czech Republic.

33 Information on geographical areas

ING Bank'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 Bank's country of domicile.

In order to increase ING Bank'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 Bank.

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	5,671	5,422	5,552	301,446	286,119	269,730	1,442	934	1,771	506	493	466	428	591	709
Belgium	Belgium	ING België N.V.	Wholesale / Retail	6,965	7,397	7,694	2,719	2,581	2,721	130,687	133,843	122,546	808	156	735	204	61	236	174	66	258
	Luxemburg	ING Luxembourg S.A.	Wholesale / Retail	856	855	841	338	300	322	20,452	15,335	16,634	161	120	153	41	30	37	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	2,387	2,545	2,484	159,805	162,935	147,924	1,012	1,065	1,374	338	364	465	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	271	266	302	12,381	11,570	12,053	-107	-43	63	-27	-10	33	-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	121	83	94	2,894	3,851	4,486	54	-3	16	12	0	3	-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	2,050	2,575	65	58	48	8	7	7	8	7	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			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
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**	**18,485**	**17,645**	**18,295**	**951,317**	**937,379**	**891,910**	**6,774**	**3,810**	**6,831**	**1,876**	**1,317**	**1,889**	**1,871**	**1,735**	**2,369**

1 Includes significant amount of FTEs in relation to global services provided.

2021
The higher tax charge of 35% 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 53% 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 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

34 Pensions and other post-employment benefits

Most group companies sponsor defined contribution pension plans. The assets of all ING Bank'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 Bank 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 Bank 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 Bank 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 Bank 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 Bank'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 Bank 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 Bank'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 EUR 743 million.

35 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 Bank 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	-103	26	-1	1	7	-70
Investment properties	2		-3			-1
Financial assets and liabilities at FVPL	134		-39	20	-7	107
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
	190	**120**	**30**	**15**	**-1**	**354**
Presented in the statement of financial position as:						
– Deferred tax liabilities	-584					-603
– Deferred tax assets	773					957
	190					**354**

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).

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	-99	7	-10	0		-103
Investment properties	-7		3	0	5	2
Financial assets and liabilities at FVPL	54		70	10		134
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	63	16	-1	-5	-83
Total	**36**	**38**	**125**	**-9**	**0**	**190**
Presented in the statement of financial position as:						
– deferred tax liabilities	-695					-584
– deferred tax assets	730					773
	36					**190**

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).

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.

As at 31 December 2021 and 31 December 2020, ING Bank 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	428	424	1,447	1,015	1,480	1,906	1,442	1,904
Deferred taxation	47	64	42	-78	-189	-57	-30	-125	-15
	507	**492**	**466**	**1,369**	**826**	**1,423**	**1,876**	**1,317**	**1,889**

Reconciliation of the weighted average statutory income tax rate to ING Bank's effective income tax rate

	2021	2020	2019
Result before tax from continuing operations	6,774	3,810	6,831
Weighted average statutory tax rate	24.3%	25.6%	25.9%
Weighted average statutory tax amount	**1,645**	**975**	**1,770**
Permanent differences affecting current tax			
Participation exemption	-68	-46	-45
Other income not subject to tax	-32	-5	-76
Expenses not deductible for tax purposes	201	320	168
Current tax from previously unrecognised amounts	51	17	48
State and local taxes	64	44	72
Adjustments to prior periods	-12	-16	14
Differences affecting deferred tax			
Impact on deferred tax from change in tax rates	9	10	-64
Deferred tax benefit from previously unrecognised amounts	-18	-6	
Write-off/reversal of deferred tax assets	37	24	2
Effective tax amount	**1,876**	**1,317**	**1,889**
Effective tax rate	**27.7%**	**34.6%**	**27.7%**

The weighted average statutory tax rate in 2021 (24.3%) is 1.3% lower than that of 2020.

The effective tax rate of 27.7% 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.

Included in the “Adjustments to prior periods” in 2020 is 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. From the remaining on balance prior year tax adjustments of EUR 52 million, EUR 33 million can be attributed to the Netherlands, EUR 11 million to Germany and EUR 8 million to several other countries.

The weighted average statutory tax rate in 2020 was slightly lower compared to the rate of 25.9% in 2019.

The effective tax rate of 34.6% in 2020 is 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.

The effective tax rate of 27.7% 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 due to 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	14	-3	6
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	63	7
Total income tax related to components of other comprehensive income	**120**	**38**	**-181**

Tax Contingency

The contingent liability (also disclosed in note 42 ‘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.

36 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 Bank 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 Bank 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	17,599	7,902	2	2	134	138	17,735	8,041
- Debt securities	2,317	3,379	7,016	4,867	2,643	1,269	11,976	9,514
- Derivatives	6	2	21,154	30,623	140	197	21,299	30,821
- Loans and receivables		1	48,706	53,733	2,248	1,265	50,954	54,998
	19,922	**11,284**	**76,877**	**89,225**	**5,165**	**2,870**	**101,964**	**103,374**
Financial assets at fair value through other comprehensive income								
- Equity securities	2,232	1,688			225	176	2,457	1,862
- Debt securities	21,753	31,593	5,587	1,385			27,340	32,977
- Loans and receivables		1			838	1,056	838	1,056
	23,984	**33,282**	**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	377	697	5,227	5,211	135	180	5,739	6,087
– Deposits		2	43,582	48,558		2	43,582	48,561
– Trading securities	955	700	120	70	0	0	1,075	768
– Derivatives	63	56	20,388	27,094	195	217	20,646	27,365
	1,395	**1,455**	**69,317**	**80,933**	**330**	**398**	**71,041**	**82,782**

The following methods and assumptions were used by ING Bank 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 Bank.

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	23,591	25,363	1,674	2,164	1	0	6,610	7,763	15,349	15,611	23,634	25,538
Loans and advances to customers[1, 2]	627,550	598,306	16,943	17,491	0	0	18,465	14,679	600,253	577,526	635,661	609,697
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
	699,459	**674,257**	**18,617**	**19,655**	**40,316**	**49,109**	**32,403**	**24,992**	**616,282**	**593,759**	**707,618**	**687,515**
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	657,831	643,138	586,151	580,525			61,158	48,206	11,861	15,704	659,171	644,435
Debt securities in issue[1]	57,443	55,573	–0		15,320	28,213	27,718	20,382	14,756	6,449	57,794	55,044
Subordinated loans[1]	16,719	15,897	0	–0		1,508	17,203	14,742			17,203	16,250
	817,085	**792,705**	**590,449**	**584,443**	**15,321**	**29,721**	**181,926**	**151,802**	**32,507**	**28,167**	**820,203**	**794,134**

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 Bank 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.

37 Derivatives and hedge accounting

Use of derivatives

ING Bank uses derivatives for economic hedging purposes to manage its asset and liability portfolios and structural risk positions. The primary objective of ING Bank'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 Bank 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 Bank 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 Bank 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 Bank (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 Bank 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 Bank 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 Bank 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 Bank'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 Bank'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 Bank's approach to manage market risk, including interest rate risk, is discussed in 'Risk management – Market risk'. ING Bank's exposure to interest rate risk is disclosed in paragraph 'Interest rate risk in banking book'.

ING Bank 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 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 Bank also exposes itself to credit risk of the derivative counterparty, which is not offset by the hedged item. ING Bank minimises counterparty credit risk in derivative instruments by clearing most of the derivatives through Central Clearing Counterparties. In addition ING Bank only enters into transactions with high-quality counterparties and requires posting collateral.

ING Bank applies fair value hedge accounting on micro level in which one hedged item is hedged with one or multiple hedging instruments as well as on macro level whereby a portfolio of items is hedged with multiple hedging instruments. For these macro hedges of interest rate risk ING Bank applies the EU carve-out. The EU 'carve-out' for macro hedging enables a group of derivatives (or proportions) to be viewed in combination and jointly designated as the hedging instrument and removes some of the limitations in fair value hedge accounting relating to hedging core deposits and under-hedging strategies. In retail operations, exposure on retail funding (savings and current accounts) and retail lending (mortgages) is initially offset. The remaining exposure is hedged in a portfolio hedge, using the EU carve-out, in which a portion of the retail lending portfolio and core deposits are designated as a hedged item for hedge accounting purposes.

For portfolio hedges the fair value is projected based on contractual terms and other variables including prepayment expectations. These projected fair value of the portfolios form the basis for identifying the notional amount subject to interest rate risk that is designated under fair value hedge accounting.

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 Bank, ING Bank 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 Bank considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING Bank 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.

For the macro hedge on the mortgage portfolio ING Bank follows a dynamic hedging strategy. This means that on monthly basis, based on the new portfolio projection, the hedging relationship is renewed. From an operational point of view, the existing hedging relationship is adjusted based on the new portfolio projection and additional hedging instruments are added to the hedging relationship.

ING Bank 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	6,629	5,940	7,349	5,417
– Other interest derivatives	87	83	50	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 0.20% (2020: 0.57%) 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	-242	2,807	-3,150	-6,593	-4,428	-4,347	2,310	2,278	-11,363
– Other interest derivatives	-0	-102	-237	-286	153	119	243	1,026	917
As at 31 December 2020									
Hedging instrument on interest rate risk									
- Interest rate swaps	-785	213	-652	5,771	5,207	5,269	2,720	2,915	20,658
– Other interest derivatives	-1	-68	-128	-364	-370	138	28	1,112	346

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	105		n/a		-2		
– Loans and advances to customers	68,704		-923		-1,451		
– Debt instruments at amortised cost	3,458		301		-165		
– Debt securities in issue		22,553		945	962		
– Subordinated loans		16,559		115	414		
– Amounts due to banks					-0		
– Customer deposits and other funds on deposit		40,924		385	1,152		
– Discontinued hedges			3,774	73			
Total	**89,574**	**80,037**	**3,153**	**1,518**	**112**	**-86**	**26**
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	335		n/a		2		
– Loans and advances to customers	23,323		647		456		
– Debt instruments at amortised cost	4,222		501		170		
– Debt securities in issue		30,136		1,980	-196		
– Subordinated loans		13,314		510	-397		
– Amounts due to banks					-5		
– Customer deposits and other funds on deposit		26,120		1,494	-766		
– Discontinued hedges			4,241	99			
Total	**48,044**	**69,571**	**5,390**	**4,083**	**-183**	**246**	**62**

The increase in the carrying amount of hedged items in loans & advances to customers is mainly driven by volume growth and in customer deposits by a new fair value hedge programme on customer deposits. Discontinued hedges mainly relate to the transfer of derivatives from UK based clearing houses to EU based clearing houses related to Brexit in 2020.

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).

Additionally, for portfolio (macro) fair value hedges of ING Bank's fixed rate mortgage portfolio, ineffectiveness also arises from the disparity between expected and actual prepayments (prepayment risk).

There were no other sources of significant ineffectiveness in these hedging relationships.

Cash flow hedge accounting

ING Bank'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 Bank'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 Bank 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 Bank 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 Bank 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 Bank considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING Bank 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 Bank 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 Bank. The risk arises from the fluctuation in spot exchange rates between the functional currency of the subsidiaries and ING Bank's presentation currency, which causes the amount of the net investment to vary in the consolidated financial statements of ING Bank. This risk may have a significant impact on ING Bank's financial statements. ING Bank'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 Bank and its subsidiaries.

ING Bank'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 Bank 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 Bank 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 Bank'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.

38 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'.

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	15,162	2,204	3,921	1,937	367		23,591
Financial assets at fair value through profit or loss							
– Trading assets	21,055	3,859	8,735	7,922	9,818		51,389
– 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	52,311	26,414	53,616	188,222	306,988		627,550
Other assets[2]	3,823	362	1,505	841	1,482	4,725	12,738
Total assets	**221,382**	**46,940**	**82,608**	**239,401**	**353,642**	**7,343**	**951,317**
2020							
Cash and balances with central banks	111,087						111,087
Loans and advances to banks	15,785	2,796	3,419	3,093	270		25,363
Financial assets at fair value through profit or loss							
– Trading assets	12,100	6,567	9,206	10,206	13,281		51,361
– 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	50,340	19,788	48,263	180,335	299,581		598,306
Other assets[2]	3,791	312	1,124	1,113	1,283	5,142	12,766
Total assets	**223,677**	**44,775**	**75,950**	**234,092**	**351,653**	**7,232**	**937,379**

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.

39 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 Bank’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.

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	597,906	14,989	6,849	17,814	19,718		557	657,831
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	1,850	3,719	20	362	41,808
Debt securities in issue	2,766	15,826	15,459	9,667	12,581		1,145	57,443
Subordinated loans				716	8,948	6,822	233	16,719
Lease liabilities	18	40	159	571	454		-23	1,220
Financial liabilities	**645,229**	**44,391**	**29,042**	**111,688**	**53,880**	**6,843**	**-1,725**	**889,346**
Other liabilities [3]	8,810	487	2,500	591	934			13,321
Total liabilities	**654,039**	**44,877**	**31,541**	**112,279**	**54,813**	**6,843**	**-1,725**	**902,668**
Coupon interest due on financial liabilities	195	407	1,010	2,602	2,727	387		7,328
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
Irrevocable facilities	143,891	1	13	184	78			144,167
	186,653	**1**	**15**	**189**	**628**			**187,486**

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	589,230	9,781	8,744	16,745	16,915		1,724	643,138
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	2,180	3,245	11	634	48,445
Debt securities in issue	5,144	8,428	13,441	14,159	12,151		2,249	55,573
Subordinated loans				661	8,815	5,751	670	15,897
Lease liabilities	17	42	166	611	520		-18	1,339
Financial liabilities	**645,414**	**30,967**	**29,112**	**108,827**	**51,940**	**5,762**	**4,805**	**876,827**
Other liabilities [3]	6,830	568	2,650	1,006	803			11,856
Total liabilities	**652,244**	**31,535**	**31,762**	**109,833**	**52,742**	**5,762**	**4,805**	**888,683**
Coupon interest due on financial liabilities	227	493	1,168	3,776	3,216	297		9,178
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
Irrevocable facilities[4]	124,739		37	141	74			124,991
	161,642		**37**	**188**	**624**			**162,491**

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.

40 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 46 'Structured Entities'.

41 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 Bank 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 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	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 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 EUR 20,188 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 627,063 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 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	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 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 EUR 20,494 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 597,682 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 657,831 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					Related amounts not offset in the statement of financial position				
		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	Financial instruments	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 643,138 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.

42 Contingent liabilities and commitments

In the normal course of business, ING Bank 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	**37,500**
Irrevocable facilities	144,167	124,991
	187,486	**162,491**

Guarantees relate both to credit and non-credit substitute guarantees. Credit substitute guarantees are guarantees given by ING Bank 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 Bank'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 Bank'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.

43 Legal proceedings

ING Bank 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.

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.

44 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 49 '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**

45 Principal subsidiaries, investments in associates and joint ventures

For the majority of ING's principal subsidiaries, ING Bank 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 Bank 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 Bank 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**		
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 33 'Information on geographical areas.
2 Reference is made to Note 8 Investments in Associates and Joint Ventures.

46 Structured entities

ING Bank'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 Bank'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 Bank 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 Bank enters into liquidity management securitisation programmes in order to obtain funding and improve liquidity. Within the programme ING Bank 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 Bank acts as investor of the securitised notes. ING Bank 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 Bank as collateral in the money market for secured borrowings.

ING Bank 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 Bank'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 Bank. ING Bank 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 Bank 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 Bank's consolidated statement of financial position and profit or loss.

2. Consolidated ING originated Covered bond programme (CBC)

ING Bank 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 Bank.

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 Bank.

3. Consolidated ING sponsored Securitisation programme (Mont Blanc)

In the normal course of business, ING Bank 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 Bank facilitates these transactions by acting as administrative agent, swap counterparty and liquidity provider to Mont Blanc Capital Corp. ING Bank 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 Bank 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 Bank 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 Bank 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 Bank, as ING facilitates these transactions as administrative agent by providing structuring, accounting, funding, lending, and operation services.

ING Bank offers various investment fund products to its clients. ING Bank does not invest in these investment funds for its own account nor acts as the fund manager.

47 Related parties

In the normal course of business, ING Bank 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 Bank 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 34 '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.

ING Bank forms part of ING Group and also enters into transactions with ING Group. These transactions vary from financing activities to regular purchase and sales transactions. Disclosed in the table below, are the transactions with ING Groep N.V.

Parent Company

Transactions with ING Groep N.V.

	2021	2020
Assets	55	134
Liabilities	56,349	45,625
Income received	15	9
Expenses paid	1,158	1,122

Liabilities to ING Groep N.V. mainly comprise long-term funding.

Associates and joint ventures

Transactions with ING Bank'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 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 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, the costs associated with housing and schooling and costs related to reimbursement of Directors and Officers indemnity.

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.

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**

48 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 Bank 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.
- Leverage ratio – is defined as Tier 1 capital divided by the leverage exposure.

Capital developments

ING Bank's capital ratios at the end of the year improved compared to 2020 primarily due to the partial addition of the 2021 net profit to CET1 capital and lower regulatory adjustments. 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 Bank continues to maintain a strong and high quality capital level.

ING Bank N.V. has a CET1 ratio of 14.3% at 31 December 2021, versus an overall CET1 requirement (including buffer requirements) of 7.03%. The Tier 1 ratio (including grandfathered securities) increased from 15.9% to 16.5% compared to last year. The Banks's total capital ratio (including grandfathered securities) increased to 19.5%.

ING Bank has paid EUR 3,125 million of dividend to ING Group in relation to the 2021 profit.

ING Bank capital position according to CRR II / CRD V

in EUR million	2021	2020
Shareholders' equity [1]	47,914	47,675
- Interim profits not included in CET1 capital [2]	-934	-1,207
- Other adjustments	-2,130	-3,534
Regulatory adjustments	-3,064	-4,741
Available common equity Tier 1 capital	**44,850**	**42,934**
Additional Tier 1 securities [3]	6,792	5,648
Regulatory adjustments additional Tier 1	78	68
Available Tier 1 capital	**51,720**	**48,650**
Supplementary capital Tier 2 bonds [4]	9,341	9,359
Regulatory adjustments Tier 2	21	23
Available Total capital	**61,081**	**58,032**
Risk weighted assets	312,616	306,016
Common equity Tier 1 ratio	**14.35%**	**14.03%**
Tier 1 ratio	16.54%	15.90%
Total capital ratio	19.54%	18.96%

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 934 million and fully relate to the result of the fourth quarter of 2021.
3) All AT1 securities outstanding at 31 December 2021 are CRR-compliant (2020: EUR 994 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.

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 Bank 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 CET1 requirement (including buffer requirements) for ING Bank N.V. at a consolidated level was 7.03% in 2021. This requirement is the sum of a 4.5% Pillar I requirement, a 2.5% Capital Conservation Buffer (CCB) and a 0.03% Countercyclical Buffer (CCyB) (based on December 2021 positions).

Ratings

ING Bank's key 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 Bank N.V. at 31 December 2021

	S&P	Moody's	Fitch	GBB-Rating
ING Bank N.V.				
Issuer rating				
Long-term	A+	A1	AA-	A+
Short-term	A-1	P-1	F1+	n/a
Outlook	Stable	Stable	Stable	Indeterminate
Senior unsecured rating	A+	A1	AA-	

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.

49 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'.

Authorisation of Consolidated Financial Statements

Amsterdam, 7 March 2022

The Supervisory Board

G.J. (Hans) Wijers, chairman
A.M.G. (Mike) Rees, vice-chairman
J. (Juan) Colombás
M. (Mariana) Gheorghe
M. (Margarete) Haase
L.J. (Lodewijk) Hijmans van den Bergh
H.A.H. (Herman) Hulst
H.H.J.G. (Harold) Naus
H.W.P.M.A. (Herna) Verhagen

The Management Board Banking

S.J.A. (Steven) van Rijswijk, CEO and chairman
T. (Tanate) Phutrakul, CFO
L. (Ljiljana) Čortan, CRO
P. (Pinar) Abay, head of Market Leaders
A.J.M. (Andrew) Bester, head of Wholesale Banking
A. (Aris) Bogdaneris, head of Challengers & Growth Markets and head of Retail Banking
R.H.E. (Ron) van Kemenade, chief technology officer
M.A. (Marnix) van Stiphout, chief operations officer and chief transformation officer

Parent company statement of financial position

as at 31 December before appropriation of result

in EUR million	2021	2020
Assets		
Cash and balances with central banks 2	57,958	57,668
Short-dated government paper 3	205	2,990
Loans and advances to banks 4	74,040	74,109
Loans and advances to customers 5	350,202	326,656
Debt securities 6	43,315	41,456
Equity securities 7	10,079	6,142
Investments in group companies 8	31,342	32,056
Investments in associates and joint ventures 9	1,354	1,332
Intangible assets 10	632	755
Equipment 11	901	1,062
Other assets 12	38,769	53,037
Total assets	**608,796**	**597,263**

in EUR million	2021	2020
Liabilities		
Deposits from banks 13	91,247	99,926
Customer deposits 14	363,162	327,665
Debt securities in issue	49,117	55,421
Other liabilities 15	39,161	49,546
General provisions 16	1,246	876
Subordinated loans 17	16,949	16,155
Total liabilities	**560,882**	**549,589**
Equity 18		
Share capital	525	525
Share premium	16,542	16,542
Revaluation reserves	1,617	2,150
Legal and statutory reserves	-548	185
Other reserves	25,199	25,953
Unappropriated result	4,579	2,321
Total equity	**47,914**	**47,675**
Total liabilities and equity	**608,796**	**597,263**

References relate to the accompanying notes. These form an integral part of the Parent company financial statements.

Parent company statement of profit or loss

for the years ended 31 December

in EUR million	2021	2020
Interest income	11,930	12,704
Interest expense	–5,585	–6,453
Net interest income 19	**6,345**	**6,251**
Investment income and results from participating interests 20	3,239	1,649
Commission income	2,248	1,984
Commission expense	–502	–523
Net commission income 21	**1,746**	**1,461**
Results from financial transactions 22	**472**	**857**
Other income	85	–102
Total income	**11,887**	**10,116**
Staff expenses 23	3,224	3,230
Depreciation, amortisation and impairments 24	408	817
Other expenses 25	2,523	2,012
Addition to loan loss provisions	261	1,050
Total expenses	**6,416**	**7,108**
Result before tax	**5,471**	**3,008**
Taxation 26	701	593
Result after tax	**4,770**	**2,415**

References relate to the accompanying notes. These form an integral part of the Parent company financial statements.

Parent company statement of changes in equity

in EUR million	Share capital	Share premium	Revaluation reserves	Legal and statutory reserves	Other reserves	Unappropriated results	Total
Balance as at 31 December 2020	525	16,542	2,150	185	25,953	2,321	47,675
Realised and unrealised revaluations equity and debt instruments and other revaluations			–7	–61	–6		–74
Realised gains/losses transferred to the statement of profit or loss			–22	–14			–36
Changes in cash flow hedge reserve			–538	–1,065			–1,603
Unrealised revaluations property in own use			1	–14	11		–2
Remeasurement of the net defined benefit asset/liability			–4	99			95
Exchange rate differences and other			37	153			190
Total amount recognised directly in equity			**–532**	**–903**	**5**		**–1,430**
Net result				191		4,579	4,770
			–532	**–712**	**5**	**4,579**	**3,339**
Transfer from unappropriated results					2,321	–2,321	
Dividends					–1,207	–1,918	–3,125
Employee stock options and share plans					28		28
Changes in the composition of the group and other changes				–21	18		–3
Balance as at 31 December 2021	**525**	**16,542**	**1,617**	**–548**	**27,117**	**2,661**	**47,914**

Changes in individual components are presented in Note 18 ‘Equity’.

Parent company statement of changes in equity - continued

in EUR million	Share capital	Share premium	Revaluation reserves	Legal and statutory reserves	Other reserves	Unappropriated results	Total
Balance as at 31 December 2019	525	16,542	2,467	1,532	21,194	4,663	46,924
Realised and unrealised revaluations equity and debt instruments and other revaluations			-337	-32	62		-306
Realised gains/losses transferred to the statement of profit or loss			-16	-17			-33
Changes in cash flow hedge reserve			32	210			242
Unrealised revaluations property in own use			-3	-30	26		-7
Remeasurement of the net defined benefit asset/liability			9	19			28
Exchange rate differences and other			-3	-1,557	-16		-1,576
Total amount recognised directly in equity			**-318**	**-1,405**	**71**		**-1,651**
Net result				94		2,321	2,415
			-318	**-1,311**	**71**	**2,321**	**764**
Transfer from unappropriated results					4,663	-4,663	
Dividends					-43		-43
Employee stock options and share plans					23		23
Changes in the composition of the group and other changes				-37	44		7
Balance as at 31 December 2020	**525**	**16,542**	**2,150**	**185**	**25,953**	**2,321**	**47,675**

Changes in individual components are presented in Note 18 ‘Equity’.

Notes to the parent company financial statements

1 Basis of presentation

ING Bank N.V. is registered at Bijlmerdreef 106, 1102 CT Amsterdam, the Netherlands (Commercial Register of Amsterdam under number 33031431).

The Parent company financial statements of ING Bank N.V. are prepared in accordance with the financial reporting requirements included in Part 9 of Book 2, of the Dutch Civil Code. In accordance with subsection 8 of section 362, Book 2 of the Dutch Civil Code, the recognition and measurement principles applied in these Parent company financial statements are the same as those applied in the ING Bank Consolidated financial statements, reference is made to Note 1 'Accounting policies' of the Consolidated financial statements. Investments in group companies are accounted in the Parent company accounts according to the equity method. In addition to the notes to these financial statements, further information is included in the notes to the consolidated financial statements.

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 parent company financial statements are presented in euros, rounded to the nearest million, unless stated otherwise. Amounts may not add up due to rounding.

Parent company equity and related reserves

The total amount of equity in the Parent company financial statements equals Shareholders' equity (parent) in the Consolidated financial statements. Certain components within equity are different, as a result of the following presentation differences between the parent company accounts and consolidated accounts:

- Unrealised revaluations including those related to cash flow hedges within consolidated group companies, presented in Other reserves - Revaluation reserve in the consolidated accounts, are presented in the Share of associates and joint ventures reserve in the parent company accounts;
- Foreign currency translation on consolidated group companies, presented in Other reserves - Currency translation reserve in the consolidated accounts, is presented in the Share of associates and joint ventures reserve in the parent company accounts;
- Revaluations on investment property and certain participations recognised in income and consequently presented in Retained earnings in the consolidated accounts, is presented in the Share of associates and joint ventures reserve in the parent company accounts.

A legal reserve is carried at an amount equal to the share in the results of associates and joint ventures since their first inclusion at net asset value less the amount of profit distributions to which rights have accrued in the interim. Profit distributions which can be repatriated to the Netherlands without restriction are likewise deducted from the Share of associates and joint ventures reserve.

Presentation parent company assets and liabilities

The presentation of assets and liabilities in the parent company financial statements differs from the presentation in the consolidated financial statements. In below tables a reconciliation is included between the presentation in the parent company versus consolidated financial statements.

Presentation Parent company financial statements versus Consolidated financial statements, Assets

	Parent company financial statements										
Assets as at 31 December 2021	Cash and balances with central banks	Short-dated government paper	Loans and advances to banks	Loans and advances to customers	Debt securities	Equity securities	Investments in associates and joint ventures	Intangible assets	Equipment	Other assets	**Total**
Included in Consolidated statement of financial position:											
Cash and balances with central banks	57,958										**57,958**
Loans and advances to banks			54,315								**54,315**
Financial assets at fair value through profit or loss											
– Trading assets		22	612	8,009	5,092	7,678				29,580	**50,993**
– Non-trading derivatives										4,458	**4,458**
– Designated as at fair value through profit or loss			313	129	2,758						**3,201**
– Mandatorily at fair value through profit or loss			18,800	12,694	772	31					**32,297**
Financial assets at fair value through other comprehensive income		6			12,307	2,369					**14,682**
Securities at amortised cost		178			22,385						**22,563**
Loans and advances to customers				329,370							**329,370**
Investments in associates and joint ventures							1,354				**1,354**
Property and equipment									879		**879**
Intangible assets								632			**632**
Current tax assets										234	**234**
Deferred tax assets										364	**364**
Other assets									21	4,133	**4,155**
Total assets	**57,958**	**205**	**74,040**	**350,202**	**43,315**	**10,079**	**1,354**	**632**	**901**	**38,769**	**577,454**

Presentation Parent company financial statements versus Consolidated financial statements, Liabilities

	Parent company financial statements						
Liabilities as at 31 December 2021	Deposits from banks	Customer deposits	Debt securities in issue	Other liabilities	General provisions	Subordinated loans	**Total**
Included in Consolidated statement of financial position:							
Deposits from banks	82,469						**82,469**
Customer deposits		342,965					**342,965**
Financial liabilities at fair value through profit or loss							
– Trading liabilities	1,406	6,031		27,470			**34,908**
– Non-trading derivatives				5,323			**5,323**
– Designated as at fair value through profit or loss	7,372	14,166	5,381			230	**27,149**
Current tax liabilities				112			**112**
Deferred tax liabilities					553		**553**
Provisions					685		**685**
Other liabilities				6,255	8		**6,263**
Debt securities in issue			43,736				**43,736**
Subordinated loans						16,719	**16,719**
Total liabilities	**91,247**	**363,162**	**49,117**	**39,161**	**1,246**	**16,949**	**560,882**

Notes to the Parent company statement of financial position

2 Cash and balances with central banks

Amounts held at central banks amount to EUR 57,143 million (2020: EUR 56,809 million). In 2021, the movement in Cash and balances with central banks reflects ING's active liquidity management.

3 Short-dated government paper

Short-dated government paper includes Dutch and international government paper amounting to EUR 205 million (2020: EUR 2,990 million) for the company.

4 Loans and advances to banks

	2021	2020
Non-subordinated receivables from:		
Group companies	33,583	32,087
Third parties	38,280	39,777
	71,864	**71,864**
Subordinated receivables from:		
Group companies	2,176	2,245
	74,040	**74,109**

As at 31 December 2021, Loans and advances to banks includes receivables with regard to securities, which have been acquired in reverse repurchase transactions amounting to EUR 33,057 million (2020: EUR 34,131 million).

5 Loans and advances to customers

Loans and advances to customers

	2021	2020
Non-subordinated receivables from:		
ING Groep N.V.	42	130
Group companies	43,904	37,080
Third parties	304,856	288,046
	348,802	**325,256**
Subordinated receivables from:		
Group companies	1,400	1,400
	350,202	**326,656**

As at 31 December 2021, receivables included in Loans and advances to customers that are part of the trading portfolio amount to EUR 8,009 million (2020: EUR 8,392 million).

Loans and advances to customers includes receivables with regard to securities which have been acquired in reverse repurchase transactions amounting to EUR 19,645 million (2020: EUR 18,343 million) for the company.

6 Debt securities

Debt securities by issuer

	2021	2020
Public sector	31,395	29,440
Other	11,920	12,016
	43,315	**41,456**

Debt securities analysed by listing	2021	2020
Listed	30,593	35,506
Unlisted	12,721	5,950
	43,315	**41,456**

The above table includes the following non subordinated debt securities:	2021	2020
Non-subordinated debt securities issued by:		
Third parties	42,594	40,699
	42,594	**40,699**

Changes in debt securities [1]	2021	2020
Opening balance	34,672	32,405
Additions	14,907	17,565
Amortisation	–142	–126
Changes in unrealised revaluations	–497	586
Disposals and redemptions	–15,046	–14,674
Exchange rate differences	781	–675
Other changes	18	–408
Closing balance	**34,693**	**34,672**

1 Excluding fair value through profit or loss portfolio.

7 Equity securities

Equity securities analysed by listing	2021	2020
Listed	9,910	6,042
Unlisted	169	100
	10,079	**6,142**

Changes in equity securities [1]	2021	2020
Opening balance	1,782	2,215
Additions	513	9
Changes in unrealised revaluations	–98	–288
Disposals	–12	–10
Exchange rate differences	192	–51
Other changes	–8	–93
Closing balance	**2,369**	**1,782**

1 Excluding fair value through profit or loss portfolio.

The cost or purchase price of the shares in the trading portfolio approximates their fair value. As at 31 December 2021 the cost or purchase price of shares excluding trading portfolio is EUR 1,260 million lower (2020: EUR 1,168 million lower) than the carrying amount.

8 Investments in group companies

Investments in group companies	2021		2020	
	Interest held (%)	Statement of financial position value	Interest held (%)	Statement of financial position value
ING België N.V.	100	10,001	100	10,263
ING Holding Deutschland GMBH	100	9,274	100	9,247
ING Bank (Australia) Limited	100	3,730	100	3,243
ING Financial Holdings Corporation	100	2,634	100	1,880
ING Bank Slaski S.A.	75	2,188	75	3,045
ING Bank A.S.	100	726	100	1,066
Bank Mendes Gans N.V.	100	737	100	630
ING Real Estate B.V.	100	227	100	441
ING Australia Holdings Limited	100	10	100	212
ING Corporate Investments B.V.	100	252	100	198
Other (including financing companies)		1,562		1,832
		31,342		**32,056**

As at 31 December 2021, Investments in group companies includes credit institutions of EUR 17,829 million (2020: EUR 18,766 million).
As at 31 December 2021 listed investments in group companies amount to EUR 2,188 million (2020: EUR 3,045 million).

Changes in investments in group companies

	2021	2020
Opening balance	32,056	33,310
Repayment of capital injection	–155	–
Revaluations	–1,038	194
Results from group companies	3,029	1,710
Dividends received	–2,232	–1,417
Capital contribution	–137	45
Mergers and liquidations	–7	–904
Exchange rate differences	–191	–876
Other changes	15	–5
Closing balance	**31,342**	**32,056**

In 2020 ING Bank N.V. merged with ING International (Belgium) B.V.

9 Investments in associates and joint ventures

Investments in associates and joint ventures

		2021		2020
	Interest held (%)	Statement of financial position value	Interest held (%)	Statement of financial position value
TMBThanachart Bank Public Company	23	1,208	23	1,202
Other		147		130
		1,354		**1,332**

Changes in investments in associates and joint ventures

	2021	2020
Opening balance	1,332	1,646
Additions	30	15
Share of results	70	61
Dividends received	–28	–8
Disposals	–10	–0
Impairments	–3	–237
Revaluations	1	1
Exchange rate differences	–31	–142
Other changes	–7	–4
Closing balance	**1,354**	**1,332**

10 Intangible assets

Changes in intangible assets

	Goodwill		Software		Other		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Opening balance	184	513	569	660	2	2	755	1,175
Additions			122	218			122	218
Amortisation			-166	-155			-166	-156
Impairments		-266	-16	-145			-16	-411
Exchange rate differences	-61	-63		-1			-62	-64
Other changes			-2	-8			-2	-8
Closing balance	**122**	**184**	**508**	**569**	**2**	**2**	**632**	**755**

Goodwill is tested for impairment annually, in 2021 no impairments were recognised. Goodwill impairment tests performed in the second quarter of 2020 resulted in the recognition of goodwill impairments mainly in relation to the cash-generating unit (CGU) Wholesale Banking of EUR 260 million.

11 Equipment

Changes in equipment

	2021	2020
Opening balance	1,062	1,130
Additions	89	165
Depreciation	–213	–222
Disposals	–4	–13
Impairments	–15	–29
Reversal of impairments	2	2
Exchange rate differences	9	–14
Other changes	–28	45
Closing balance	**901**	**1,062**
Gross carrying amount as at 31 December	2,220	2,363
Accumulated depreciation as at 31 December	–1,319	–1,300
Net carrying value	**901**	**1,062**

12 Other assets

Other assets

	2021	2020
Derivatives	34,038	47,790
Deferred tax assets	364	247
Income tax receivables	234	416
Accrued interests and rents	41	39
Other accrued assets	420	420
Pension asset	717	682
Other receivables	2,957	3,444
	38,769	**53,037**

Derivatives includes transactions with group companies of EUR 16,954 million (2020: EUR 22,577 million).

Other receivables includes EUR 1,479 million (2020: EUR 1,806 million) related to transactions still to be settled at balance sheet date. As at 31 December 2021, an amount of EUR 844 million (2020: EUR 813 million) is expected to be settled after more than one year from the balance sheet date.

13 Deposits from banks

Deposits from banks

	2021	2020
Group companies	26,227	32,443
Third parties	65,021	67,483
	91,247	**99,926**

14 Customer deposits

Customer deposits by group companies and third parties

	2021	2020
ING Groep N.V.	40,467	32,421
Group companies	18,666	12,373
Third parties	304,029	282,871
	363,162	**327,665**

Customer deposits from ING Groep N.V. includes EUR 34,303 million (2020: EUR 25,376 million) Senior non-preferred debt.

Customer deposits by type

	2021	2020
Savings accounts	124,901	129,920
Credit balances on customer accounts	144,018	127,260
Corporate deposits	45,379	30,063
Other	48,864	40,422
	363,162	**327,665**

15 Other liabilities

Other liabilities

	2021	2020
Derivatives	31,948	42,454
Trading liabilities	845	625
Accrued interest	7	5
Costs payable	1,274	1,079
Income tax payable	112	65
Other taxation and social security contribution	64	56
Other amounts payable	4,910	5,261
	39,161	**49,546**

Derivatives includes transactions with group companies of EUR 14,499 million (2020: EUR 19,236 million).

Other amounts payable includes EUR 2,940 million (2020: EUR 3,218 million) related to transactions still to be settled at balance sheet date. As at 31 December 2021, an amount of EUR 530 million (2020: EUR 601 million) is expected to be settled after more than one year from the balance sheet date.

16 General provisions

General provisions

	2021	2020
Deferred tax liabilities	553	532
Pension liabilities and other staff-related liabilities	8	19
Reorganisations and relocations	308	173
Other	377	153
	1,246	**876**

As at 31 December 2021, an amount of EUR 616 million (2020: EUR 587 million) is expected to be settled after more than one year from the balance sheet date.

17 Subordinated loans

Subordinated loans by group companies and third parties

	2021	2020
Group companies	15,955	13,273
Third parties	993	2,882
	16,949	**16,155**

Subordinated loans by type

	2021	2020
Capital debentures	1,935	3,459
Private loans	15,014	12,696
	16,949	**16,155**

The subordinated loans rank subordinated to the other liabilities in a winding-up of ING Bank.

18 Equity

Equity

	2021	2020
Share capital	525	525
Share premium	16,542	16,542
Revaluation reserves	1,617	2,150
Legal and statutory reserves	–548	185
Other reserves	27,117	25,953
Unappropriated result	2,661	2,321
Total equity	**47,914**	**47,675**

Share capital

	Ordinary shares (par value EUR 1.13)			
	Number x 1,000		Amount	
	2021	2020	2021	2020
Authorised share capital	1,600,000	1,600,000	1,808	1,808
Unissued share capital	1,134,965	1,134,965	1,283	1,283
Issued share capital	**465,035**	**465,035**	**525**	**525**

No changes occurred in the issued share capital and share premium in 2021 and 2020.

Changes in revaluation reserves

2021	Property in own use reserve	Equity securities at fair value through other comprehensive income	Debt instruments at fair value through other comprehensive income	Cash flow hedge reserve	Net defined benefit assets/- liability remeasurement reserve	Credit liability	Total
Opening balance	21	1,168	58	830	189	–117	2,150
Unrealised revaluations	1	95	–99			37	34
Realised gains/losses transferred to the statement of profit or loss			–23				–23
Realised revaluations reclassified to retained earnings		–3					–3
Changes in cash flow hedge reserve				–538			–538
Change in net defined benefit assets/liability					–4		–4
Closing balance	**22**	**1,260**	**–63**	**292**	**186**	**–80**	**1,617**
2020							
Opening balance	24	1,560	19	798	180	–114	2,467
Unrealised revaluations	–3	–390	56			–19	–357
Realised gains/losses transferred to the statement of profit or loss			–16				–16
Realised revaluations reclassified to retained earnings		–2				16	15
Changes in cash flow hedge reserve				32			32
Change in net defined benefit assets/liability					9		9
Closing balance	**21**	**1,168**	**58**	**830**	**189**	**–117**	**2,150**

Changes in legal and statutory reserves

2021	Share of associates and joint ventures reserves	Currency translation reserve	Statutory reserves	Capitalised software	Total
Opening balance	1,398	–3,631	1,912	505	185
Result for the year			191		191
Unrealised revaluations available-for-sale investments and other	–57				–57
Realised gains/losses transferred to the statement of profit or loss	–18				–18
Changes in cash flow hedge reserve	–1,065				–1,065
Unrealised revaluation property in own use	–14				–14
Changes in net defined benefit asset/liability remeasurement reserve	99				99
Exchange rate differences and other	10	143			153
Changes in composition of the group and other changes	32			–53	–21
Closing balance	**385**	**–3,488**	**2,103**	**452**	**–548**
2020					
Opening balance	1,220	–2,085	1,818	579	1,532
Result for the year			94		94
Unrealised revaluations available-for-sale investments and other	–29				–29
Realised gains/losses transferred to the statement of profit or loss	–17				–17
Changes in cash flow hedge reserve	210				210
Unrealised revaluation property in own use	–4				–4
Changes in net defined benefit asset/liability remeasurement reserve	19				19
Exchange rate differences and other	–11	–1,546			–1,557
Changes in composition of the group and other changes	8			–74	–65
Closing balance	**1,398**	**–3,631**	**1,912**	**505**	**185**

The Share of associates and joint ventures reserve includes the following components: Reserve for non-distributable retained earnings of associates of EUR 862 million (2020: EUR 829 million), Revaluation reserve of associates and joint ventures EUR -83 million (2020: EUR 1,071 million), Currency translation reserve of EUR 5 million (2020: EUR -5 million) and Net defined benefit asset/liability remeasurement reserve of EUR -398 million (2020: EUR -497 million).

The Statutory reserves include non-distributable reserves of EUR 2,103 million (2020: EUR 1,912 million) related to the former Stichting Regio Bank and the former Stichting Vakbondspaarbank SPN that cannot be freely distributed in accordance with the article 23.1 of the articles of association.

Changes in the value of hedging instruments that are designated as net investment hedges, are included in the line Exchange rate differences and other.

Changes in other reserves, retained earnings

	2021	2020
Opening balance	25,953	21,194
Transfer from unappropriated result	2,321	4,663
Dividends	–1,207	–43
Employee stock options and share plans	28	23
Changes in the composition of the group and other changes	23	115
Closing balance	**27,117**	**25,953**

The reserve for cash flow hedges is included in the Share of associates and joint ventures reserve on a net basis. The Revaluation reserve, Share of associates and joint ventures reserve and Currency translation reserve cannot be freely distributed. Retained earnings can be freely distributed, except for an amount equal to the negative balance in each of the components of the Revaluation reserve , Share of associates and joint ventures reserve and the Currency translation reserve. Unrealised gains and losses on derivatives, other than those used in cash flow hedges, are presented in the statement of profit or loss and are therefore part of Retained earnings and are not included in Share of associates and joint ventures reserve.

The total amount of non-distributable reserves, in accordance with the financial reporting requirements per Part 9 of Book 2 of the Dutch Civil Code, is EUR 8,205 million (2020: EUR 9,829 million).

Reference is made to Note 19 ‘Equity’ and Note 48 ‘Capital management’ in the ING Bank Consolidated financial statements for additional information, including restrictions with respect to dividend and repayment of capital.

Notes to the Parent company statement of profit or loss

19 Net interest income

Net interest income

	2021	2020
Interest income on loans	6,865	7,976
Interest income on impaired loans	59	65
Negative interest on liabilities	1,211	582
Total interest income on loans	**8,135**	**8,623**
Interest income on financial assets at fair value through OCI	101	159
Interest income on financial assets at amortised cost	210	234
Interest income on securities at fair value through profit or loss	299	433
Interest income on non-trading derivatives (no hedge accounting)	2,037	1,074
Interest income on non-trading derivatives (hedge accounting)	1,129	2,139
Other interest income	19	43
Interest income	**11,930**	**12,704**

	2021	2020
Interest expense on deposits from banks	50	93
Interest expense on customer deposits	1,300	1,193
Interest expense on debt securities	489	878
Interest expense on subordinated loans	573	613
Interest expense on securities at fair value through profit or loss	274	377
Interest expense on non-trading derivatives (no hedge accounting)	1,846	1,099
Interest expense on non-trading derivatives (hedge accounting)	453	1,814
Other interest expense	37	75
Negative interest on assets	563	312
Interest expense	**5,585**	**6,453**
Net interest income	**6,345**	**6,251**

20 Investment income and results from participating interests

Investment income and results from participating interests	2021	2020
Results from shares and other non-fixed income securities	142	115
Results from group companies	3,029	1,710
Results from associates, joint ventures and other participations	70	61
Impairment of associates and joint ventures	–3	–237
	3,239	**1,649**

21 Net commission income

Fee and commission income	2021	2020
Payment services	928	749
Securities business	284	298
Insurance and other broking	120	305
Portfolio Management fees	259	128
Lending business	279	26
Financial guarantees and other commitments	284	113
Other	93	365
	2,248	**1,984**

Fee and commission expenses	2021	2020
Payment services	252	266
Securities business	99	63
Distribution of products (Externally)	76	52
Other	75	142
	502	**523**

ING Bank changed the presentation of net fee and commission income as of 2021 to better align with internal management and monitoring. Comparative figures for 2020 have been updated accordingly. The reclassifications do not affect the total amount of Net Fee and Commission Income.

22 Results from financial transactions

Results from financial transactions	2021	2020
Results from securities trading portfolio	787	–515
Results from currency trading portfolio	101	101
Results from non-trading derivatives	68	264
Other	–484	820
	473	**671**

In 2021, Other includes EUR –419 million (2020: EUR 290 million) related to fair value changes on trading derivatives.

23 Staff expenses

Staff expenses	2021	2020
Salaries	2,124	1,978
Social security costs	243	235
Pension costs and other staff related benefit costs	305	292
Other management fees	552	725
	3,224	**3,230**

Remuneration of Senior management, Management board and Supervisory board

Reference is made to Note 47 ‘Related parties’ in the ING Bank Consolidated financial statements.

24 Depreciation, amortisation and impairments

Depreciation and amortization	2021	2020
Depreciation of equipment	213	222
Amortisation of software and other intangible assets	166	156
Impairments and reversal of impairments	29	439
	408	**817**

2020 Impairments includes impairment of goodwill (EUR 266 million), software (EUR 145 million) and equipment (EUR 28 million).

25 Other expenses

Other expenses	2021	2020
Computer costs	481	527
Office expenses	104	130
Travel and accommodation expenses	9	22
Advertising and public relations	134	152
External advisory fees	244	307
Regulatory costs	707	591
Addition/(releases) of provision for reorganisations and relocations	220	86
Other	623	196
	2,523	**2,012**

26 Taxation

	2021	2020
Current taxation	682	501
Deferred taxation	20	92
	701	**593**

Reconciliation of the weighted average statutory income tax rate to ING Bank's effective income tax rate	2021	2020
Result before tax from continuing operations	5,471	3,008
Weighted average statutory tax rate	23.7%	23.8%
Weighted average statutory tax amount	**1,296**	**716**
Permanent differences affecting current tax		
Participation exemption	-809	-470
Other income not subject to tax	0	17
Expenses not deductible for tax purposes	135	232
Current tax from previously unrecognised amounts	61	17
State and local taxes	32	17
Adjustments to prior periods	-17	37
Differences affecting deferred tax		
Impact on deferred tax from change in tax rates	10	10
Deferred tax from previously unrecognised amounts	-18	-6
Write-off/reversal of deferred tax assets	11	24
Effective tax amount	**701**	**593**
Effective tax rate	**12.8%**	**19.7%**

For more information on the reconciliation of the weighted average statutory income tax rate to ING Bank's effective income tax rate reference is made to Note 35 'Taxation' in the ING Bank Consolidated financial statements.

27 Maturity of certain assets and liabilities

Analysis of certain assets and liabilities by maturity

2021	Less than 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity not applicable	Total
Assets							
Loans and advances to banks	14,514	2,733	7,823	21,412	7,668	19,890	74,040
Loans and advances to customers	38,244	18,995	29,066	85,614	155,917	22,367	350,202
Liabilities							
Deposits from banks	24,817	1,088	3,012	52,539	929	8,862	91,247
Customer deposits	279,257	15,129	8,342	18,808	20,483	21,142	363,162
Debt securities in issue	2,490	8,200	9,518	3,769	8,026	17,116	49,117
Subordinated loans				716	15,770	463	16,949

Analysis of certain assets and liabilities by maturity

2020	Less than 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity not applicable	Total
Assets							
Loans and advances to banks	15,545	3,708	6,677	21,124	6,464	20,591	74,109
Loans and advances to customers	35,161	12,787	24,272	79,858	155,679	18,898	326,656
Liabilities							
Deposits from banks	30,190	457	1,997	50,112	1,303	15,868	99,926
Customer deposits	264,391	5,535	5,143	16,521	17,513	18,561	327,665
Debt securities in issue	4,948	7,075	8,836	9,036	7,440	18,085	55,421
Subordinated loans				661	14,567	927	16,155

28 Assets not freely disposable

Assets not freely disposable

	2021	2020
Equity and debt instruments	14,026	19,054
Lending	81,926	78,218
Banks	9,236	9,691
Other assets	733	700
	105,921	**107,663**

The table includes assets relating to securities lending as well as sale and repurchase transactions

29 Contingent liabilities and other commitments

Contingent liabilities by type

	2021	2020
Guarantees	40,221	28,635
Irrevocable letters of credit	14,295	12,139
Other	–	15
Contingent debts	**54,517**	**40,788**
Irrevocable facilities	75,606	62,482
	130,123	**103,270**

Contingent debts

	2021	2020
Group companies	23,260	14,282
Third parties	31,257	26,506
	54,517	**40,788**

Irrevocable facilities

	2021	2020
Group companies	3	3
Third parties	75,603	62,479
	75,606	**62,482**

30 Other

Guarantees

ING Bank has issued guarantees as participant in collective arrangements of national banking funds and as a participant in required collective guarantee schemes. For example, ING Bank N.V. provided a guarantee to the German Deposit Guarantee Fund (‘Einlagensicherundsfonds’ 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.

ING Bank N.V. has issued statements of liabilities in connection with Section 403 Book 2 of the Dutch Civil Code (‘403 statements’) and issued third party guarantees (and third party letters of comfort/awareness) in a limited number of cases. Third party guarantees are used when ING Bank N.V. is requested to issue a guarantee to a third party creditor of one of its subsidiaries in order to guarantee the (financial) performance of this subsidiary. 403 statements have been issued for the following Dutch subsidiaries:

- B.V. Deelnemings- en Financieringsmaatschappij 'Nova Zembla'
- B.V. Maatschappij van Onroerende Goederen 'Het Middenstandshuis'
- Bank Mendes Gans N.V.
- BMG monumenten B.V.
- Cofiton B.V.
- Entero B.V.
- ING Bank Personeel B.V.
- ING Business Shared Services B.V.
- ING Commercial Finance B.V.
- ING Corporate Investments B.V.
- ING Corporate Investments Mezzanine Fonds B.V.
- ING Corporate Investments Participaties B.V.
- ING Corporate Investments Structured Finance B.V.
- ING Groenbank N.V.
- ING Lease (Nederland) B.V.
- ING Sustainable Investments B.V.
- ING Vastgoed Ontwikkeling B.V.
- Nationale-Nederlanden Hypotheekbedrijf N.V.
- Nationale-Nederlanden Intervest II B.V.
- WestlandUtrecht Verzekeringen B.V.

Claim agreements

In the ordinary course of business we have entered into a number of agreements whereby we are provided indemnifications related to sale of our past businesses and agreements whereby we made detailed arrangements regarding allocation and handling of claims.

Fiscal unity

ING Bank N.V. forms a fiscal unity with ING Groep N.V. and several Dutch banking entities for corporation tax purposes. ING Bank N.V. and ING Groep N.V. and its banking subsidiaries that form part of the fiscal unity are jointly and severally liable for taxation payable by the fiscal unity. Settlements of corporate income tax paid or received are executed by ING Bank N.V.

31 Proposed appropriation of results

For 2021, it is proposed that the result, insofar at the disposal of the General Meeting, will be appropriated as follows. The total dividend of EUR 2,852 million was paid in May 2021 (EUR 502 million), August 2021 (EUR 731 million), November 2021 (EUR 685 million) and in February 2022 (EUR 934 million) as an interim dividend.

Proposed appropriation of result	2021
Net result	**4,770**
- Addition to reserves pursuant to Article 24 of the Articles of Association	191
- Proposed to be added to the Other Reserves pursuant to Article 24 of the Articles of Association	1,727
- Available for dividend distribution	2,852

32 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'.

Authorisation of Parent company financial statements

Amsterdam, 7 March 2022

The Supervisory Board

G.J. (Hans) Wijers, chairman
A.M.G. (Mike) Rees, vice-chairman
J. (Juan) Colombás
M. (Mariana) Gheorghe
M. (Margarete) Haase
L.J. (Lodewijk) Hijmans van den Bergh
H.A.H. (Herman) Hulst
H.H.J.G. (Harold) Naus
H.W.P.M.A. (Herna) Verhagen

The Management Board Banking

S.J.A. (Steven) van Rijswijk, CEO and chairman
T. (Tanate) Phutrakul, CFO
L. (Ljiljana) Čortan, CRO
P. (Pinar) Abay, head of Market Leaders
A.J.M. (Andrew) Bester, head of Wholesale Banking
A. (Aris) Bogdaneris, head of Challengers & Growth Markets and head of Retail Banking
R.H.E. (Ron) van Kemenade, chief technology officer
M.A. (Marnix) van Stiphout, chief operations officer and chief transformation officer

Independent auditor's report

To: the General Meeting of Shareholders and the Supervisory Board of ING Bank N.V.

Report on the audit of the financial statements 2021 included in the annual report

Our opinion

In our opinion:

— the accompanying consolidated financial statements give a true and fair view of the financial position of ING Bank N.V. as at 31 December 2021 and of its result and its cash flows for the year then ended, in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code;

— the accompanying parent company financial statements give a true and fair view of the financial position of ING Bank N.V. as at 31 December 2021 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

What we have audited

We have audited the financial statements 2021 of ING Bank N.V. (the 'Company' or 'ING Bank') based in Amsterdam. The financial statements include the consolidated financial statements and the parent company financial statements.

The consolidated financial statements comprise:

1 the consolidated statement of financial position as at 31 December 2021;

2 the following consolidated statements for 2021: the statement of profit or loss, the statements of comprehensive income, changes in equity and cash flows; and

3 the notes comprising a summary of the significant accounting policies and other explanatory information.

The parent company financial statements comprise:

1 the parent company statement of financial position as at 31 December 2021;

2 the parent company statement of profit or loss and statement of changes in equity for 2021; and

3 the notes comprising a summary of the significant accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of ING Bank in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

Our audit procedures were determined in the context of our audit of the financial statements as a whole. Our observations in respect of going concern, fraud and non-compliance with laws and regulations, climate and the key audit matters should be viewed in that context and not as separate opinions or conclusions.

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Audit approach

Summary

Materiality
— Group materiality of EUR 250 million (2020: EUR 250 million). — 3.7% of profit before taxation from continuing operations (2020: 5.7% of normalised profit before taxation from continuing operations).
Group audit
— 81% of profit before taxation from continuing operations covered by audit procedures performed by component auditors (2020: 83%). — 93% of total assets covered by audit procedures performed by component auditors (2020: 92%).
Going concern, Fraud & Non-compliance with laws and regulations and Climate risk
— Going concern: no significant going concern risks identified. — Fraud & Non-compliance with laws and regulations: in our audit we incorporate the risk of management override of controls, the risk of management override over the collective loan loss provisioning and the assessment of the risk of material misstatements of the financial statements due to non-compliance with laws and regulations. — Climate change risk: management's response to possible future effects of climate change and their anticipated outcomes have been disclosed in the Report of the Management Board and the Risk Disclosures in the annual report. We have considered the impact of climate change risks on our identification and assessment of risks of material misstatement in the financial statements.
Key audit matters
— Assessment of Expected Credit Losses on loans and advances to customers and loans and advances to banks. — Risk of inappropriate access or changes to IT systems.
Opinion
Unqualified

Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 250 million (2020: EUR 250 million) which represents 3.7% of profit before taxation from continuing operations (2020: 5.7% of normalised profit before tax from continuing operations). The prior year materiality was determined with reference to normalised profit before tax from continuing operations and excluded the goodwill impairment and impairment of associates and joint ventures. These items did not occur in 2021 and thus no normalisation of profit before tax was necessary.

We consider profit before tax from continuing operations as the most appropriate benchmark based on our assessment of the general information needs of the users of the financial statements and given the fact that ING Bank is a profit-oriented entity. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the Audit Committee of the Supervisory Board that misstatements identified during our audit in excess of EUR 12.5 million (2020: EUR 12.5 million), would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the group audit

ING Bank is at the head of a group of components. The financial information of this group is included in the consolidated financial statements of ING Bank.

ING Bank is structured along 6 segments: Retail Netherlands, Retail Belgium, Retail Germany, Retail Other, Wholesale Banking and Corporate Line Banking, each comprising of multiple legal entities and/or covering different countries.

Because we are ultimately responsible for the audit opinion, we are responsible for directing, supervising and performing the group audit. In this respect, we have determined the nature and extent of audit procedures to be carried out for group entities or so-called components.

Our group audit is mainly focused on significant components. These components are either individually financially significant due to their relative size in the group or because we identified a significant risk of material misstatement for one or more account balances of these entities. In addition, we included certain other non-significant components in the scope of our group audit in order to arrive at a sufficient coverage over all significant account balances.

This resulted in a full or specific scope audit for 43 components globally, in total covering 17 countries, and in a coverage of 81% of profit before tax from continuing operations and 93% of total assets. For the remaining 19% of profit before tax from continuing operations and the remaining 7% of total assets audit procedures were performed at the group level including analytical procedures in order to corroborate that our scoping remained appropriate throughout the audit. This coverage is in line with our 2020 audit.

The consolidation of components in the group, the disclosures in the financial statements and certain accounting topics that are performed at a group level were further covered by the group audit team. Procedures performed by the group audit team included, but were not limited to, substantive procedures with respect to equity, certain elements of the expected credit loss provisioning process and goodwill.

All components in scope for group reporting are audited by KPMG member firms. We sent detailed audit instructions to all component auditors, covering significant areas such as the relevant identified risks of material misstatement at a group level and further set out the information that is required to be reported to the group audit team.

In view of Covid-19 related restrictions on the movement of people across borders, and also within significantly affected countries, we have considered the impact on the audit approach to evaluate the component auditor's communications and the adequacy of the work performed by them. Due to the aforementioned restrictions, visiting components was not practicable in the current environment. As a result, we have requested those component auditors to provide us with access to audit workpapers in order to perform these evaluations, subject to local laws and regulations. In addition, due to the inability to arrange in-person meetings with such component auditors, we have continued to use alternative methods of communication, including written instructions, the exchange of emails and virtual meetings.

We performed file reviews for The Netherlands, Belgium, Germany, Romania, Spain, Turkey, Switzerland, Poland, France and South Korea. The Covid-19 travel restrictions required us to perform the file reviews remotely. For all components in scope of the group audit, we held conference calls and/or had remote meetings with the audit teams of these components. During these meetings and calls, the planning, risk assessment, procedures performed, findings and observations reported to the group auditor were discussed in detail and any further work deemed necessary by the group audit team was then performed.

The group audit team set component materiality levels which ranged from EUR 20 million to EUR 95 million, based on the mix of relative size and financial statement risk profile of the components within the group in order to reduce the aggregation risk to an acceptable level.

By combining the results of the aforementioned procedures performed by component auditors with additional procedures performed at a group level, we have been able to obtain sufficient and appropriate audit evidence about ING Bank's financial information and were thus able to give an opinion on ING Bank's financial statements.

The audit coverage as stated in the summary section can further be specified as follows:

Profit before tax from continuing operations

81%	19%
Covered by audit procedures performed by component auditors	Covered by audit procedures performed at group level by the group audit team

Total assets

93%	7%
Covered by audit procedures performed by component auditors	Covered by audit procedures performed at group level by the group audit team

KPMG

Audit response to going concern – no significant going concern risks identified

The Management board has performed its going concern assessment and has not identified any significant going concern risks. Our main procedures to assess the Management board's assessment were:

- we considered whether the Management board's assessment of the going concern risks includes all relevant information of which we are aware as a result of our audit;
- we analysed the company's financial position as at year-end and compared it to the previous financial year in terms of indicators that could identify significant going concern risks;
- we inspected regulatory correspondence to obtain an understanding of the Company's capital position, that underpins management's assessment of the going concern assumption for financial reporting.

The outcome of our risk assessment procedures did not give reason to perform additional audit procedures on the Management board's going concern assessment.

Audit response to the risk of fraud and non-compliance with laws and regulations

General

In chapter 'Risk management – Compliance risk' of the Annual Report and note 42 of the financial statements, the Management board describes its procedures and assessment in respect of the risk of fraud and non-compliance with laws and regulations. In the Supervisory Board report the assessment by the Risk Committee in respect of these topics is described.

As part of our audit, we have gained insights into the Company and its business environment and assessed the Company's risk management in relation to fraud and non-compliance. In addition, we performed procedures to obtain an understanding of the legal and regulatory frameworks that are applicable to the Company. The potential effect of the identified laws and regulations on the financial statements varies considerably.

The Company is subject to many laws and regulations where the consequences of non-compliance could have an indirect material effect on amounts recognised or disclosures provided in the financial statements, or both, for instance through the imposition of fines or litigation. We identified the following areas as those most likely to have such an indirect effect on the financial statements:

- anti-money laundering and terrorist financing law;
- data protection law;
- fraud, corruption and anti-bribery law;
- prudential and supervision regulations from European Central Bank and Dutch Central Bank;
- sanctions law.

Together with our forensic specialists, we evaluated the fraud and non-compliance risk factors to consider whether those factors indicate a risk of material misstatement in the financial statements.

As part of our audit procedures, we:

- assessed the Company's code of conduct, whistleblowing procedures, incidents register and its procedures to investigate indications of possible fraud and non-compliance;
- performed relevant inquiries with management, those charged with governance and other relevant functions, including General Legal Counsel, the Head of Compliance and the Head of Internal Audit;
- inspected internal reports from Compliance and Internal Audit for indications of possible fraud and non-compliance;
- evaluated correspondence with relevant supervisory authorities and regulators as well as legal confirmation letters;
- considered the outcome of our other audit procedures and evaluated whether any findings or misstatements were indicative of fraud or non-compliance;
- considered the effect of actual, suspected or identified risk of non-compliance as part of our procedures on the related financial statement items.

With respect to the bank-wide Know Your Customer enhancement program (the 'KYC enhancement program') as disclosed in the Management board report in order to improve governance, systems and tools around client due diligence and transaction monitoring, we inquired senior management, General legal counsel, Head of Compliance and Head of Internal Audit.

We inspected the progress reports in relation to the KYC enhancement program and we evaluated and discussed internal audit reports in relation to compliance. We instructed local auditors of selected components to assess client due diligence and transaction monitoring at local level.

We observe that the required KYC enhancement program receives and will need ongoing attention from management, the Audit Committee and the Supervisory Board.

Revenue recognition (a presumed fraud risk)

We assessed the presumed fraud risk on revenue recognition to be irrelevant, because the accounting of interest income and commission income is based on automatically generated accruals based on static data taken from the loan source system and therefore concerns routine transactions not subject to management judgement.

Our procedures to address the identified risks of fraud or non-compliance with laws and regulations did not result in a key audit matter.

Based on the above and in accordance with the auditing standards, we identified the following fraud risks that are relevant to our audit and we responded as follows:

Management override of controls (a presumed fraud risk)

Risk:

Management is by definition in a unique position to perpetrate fraud because of management's ability to manipulate financial records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively, such as reporting fictitious journal entries. Although the level of risk of management override of controls may vary from entity to entity, the risk nevertheless is present at all entities, including at ING Bank level. A fraud risk is by nature considered a significant audit risk.

Response:

- We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness of internal controls that mitigate fraud and non-compliance risks, such as processes related to journal entries and estimates related to loan loss provisions.

- We performed a data analysis of high-risk journal entries and evaluated key estimates and judgments for bias by the Company's management. Where we identified instances of unexpected journal entries or other risks through our data analytics, we performed additional audit procedures to address each identified risk, including testing of transactions back to source information.
- We incorporated elements of unpredictability in our audit by including South Korea in scope of the group audit and by adapting our audit methodology resulting for example in other sample sizes for substantive testing.

Management override of collective loan loss provisioning (ECL)

With respect to the risk of fraud in relation to management override of Expected Credit Loss provision results, we refer to the Key Audit Matter 'Assessment of Expected Credit Losses on loans and advances to customers and loans and advances banks'.

We communicated our risk assessment, audit responses and results to management and the Audit Committee of the Supervisory Board.

Other than disclosed in the annual report ('Risk management – Compliance risk') and note 42 of the financial statements our audit procedures did not reveal indications and/or reasonable suspicion of fraud and non-compliance that could have a material effect on amounts recognised or disclosures provided in the financial statements.

Audit response to climate change risk

The Management board is responsible for preparing the financial statements in accordance with the applicable financial reporting framework, including considering whether the implications from climate change risks and commitments have been appropriately accounted for and disclosed. In the Supervisory Board report the involvement of the Audit Committee in overseeing the financial statement process is reflected.

The Management board is responsible for the analysis of the impact of climate change risks on the Company's business and operations going forward and on the financial statements. Reference is made to the Report of the Management Board and the Risk Disclosures in the Annual Report.

The evaluation of the effectiveness of management's strategy against internal or external goals set is not in scope of our audit of the financial statements. As part of our audit, we consider potential effects of climate change risks on the accounts and disclosures, including estimates and judgements in the financial statements to determine whether the financial statements are free from material misstatement.

We performed the following procedures in this respect:

- We assessed the minutes of the Climate Change Committee.
- We obtained an understanding of the current governance structure and the integration of climate-related risks in credit risk policies and procedures.
- We obtained an understanding of the process to identify climate-related risks and the heatmap developed by ING to assess the financial materiality of climate-related risks on ING.
- We held inquires with staff involved with the integration of climate-related risks into credit risk policies and procedures and the development of the climate-related heatmaps.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the Audit Committee of the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

Compared to last year the key audit matter with respect to the assessment of goodwill impairment is not included, as this specifically related to the financial year 2020 and the impact of the Covid-19 pandemic.

Assessment of Expected Credit Losses on loans and advances to customers and loans and advances to banks

Description

As discussed in the Credit Risk section on pages 65-107 and in Note 3 and Note 7 in the financial statements, the loans and advances to customers amount to EUR 628 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.

Our response

We identified the assessment of ECL on loans and advances to customers and loans and advances to banks as a key audit matter because of the significant and complex auditor judgement and specialised 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; and
- the disclosures regarding management's application of IFRS 9 explaining the key judgements and material inputs to the IFRS 9 ECL results.

The following are the primary procedures we performed to address this key 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; and
- we assessed whether the credit risk management disclosures appropriately disclose and address the uncertainties which exists when determining the ECL.

Our observation

Based on our procedures performed, we found management's overall assessment relating to the valuation of loans and advances to customers and banks within an acceptable range and adequately disclosed in Note 3 and Note 7 of the financial statements.

Risk of in appropriate access or changes to Information Technology (IT) systems

Description

ING Bank is highly dependent on its IT environment for the continuity of its operations. Inappropriate access or changes to an application or supporting infrastructure could compromise the continuity of ING Bank's operations and the reliability of financial data. IT general controls including cybersecurity controls, are an important cornerstone of the ING Bank internal control framework.

The IT environment of ING Bank evolves over time. One of these changes relates to the implementation of automation to support control execution related to user access management and change management.

Our response

Our audit approach depends to a large extent on the effectiveness of automated controls and, therefore, procedures are designed to test among others access and change management controls over IT systems. Given the complex IT technical nature of this part of the audit, IT auditors and cyber specialists are an integral part of our audit team.

As part of our risk assessment and design of the IT audit approach we:

- examined the framework of governance over ING Bank's IT organisations, the IT general (including cybersecurity controls) and applications controls;
- assessed the reliability and continuity of the IT environment where relevant for the scope of our audit of the financial statements;
- took into account regulatory correspondence related to IT;
- determined which controls are required prior to using automation for control execution, in response to the implementation of automation to support control execution related to user access management and change management;
- held corroborative inquiries with the personnel at the Security Operations Center and with the Bank's Chief Information Security Officer (CISO).

We performed testing of operating effectiveness of user access and change management controls. We performed test procedures to respond to specific risks such as data migrations to the ING Private Cloud and vendor management related to outsourced IT processes.

We identified areas for improvement in the control execution relating to Information used in the control, interface testing and the use of automation to support control execution. Management has put efforts to remediate identified control deficiencies. For those control deficiencies that were not remediated, we tested compensating controls that addressed the same risk or tested mitigating controls that lowered the risk of the deficiency and performed additional substantive testing.

Cyber security incidents that were reported during 2021 were handled by management in accordance with ING Bank's framework and resolved without significant impact to ING assets.

Our observation

The combination of the tests of controls and substantive tests performed, provided sufficient evidence to enable us to rely on the adequate and continued operation of the IT systems for the purposes of our audit of the financial statements.

We refer to the disclosure on Risk Management on pages 137 and 138.

Report on the other information included in the Annual Report

In addition to the financial statements and our auditor's report thereon, the Annual Report contains other information.

Based on the following procedures performed, we conclude that the other information:

- is consistent with the financial statements and does not contain material misstatements; and
- contains the information as required by Part 9 of Book 2 of the Dutch Civil Code for the management report and other information.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is less than the scope of those performed in our audit of the financial statements.

The Management board is responsible for the preparation of the other information, including the information as required by Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements and ESEF

Engagement

We were engaged by General Meeting of Shareholders as auditor of ING Bank on 11 May 2015, as of the audit for the year 2016 and have operated as statutory auditor ever since that financial year. We have been reappointed by the General Meeting of Shareholders on 23 April 2019 to continue to serve ING Bank as its external auditor for the financial years 2020-2023.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audits of public-interest entities.

Services rendered

For the period to which our statutory audit relates, in addition to this audit, we have provided the following services to the Company and its controlled undertakings:

— Agreed-upon procedures and assurance engagements for the benefit of external stakeholders, largely driven by regulatory requirements.

European Single Electronic Format (ESEF)

ING Bank has prepared its 2021 Annual Report in ESEF. The requirements for this format are set out in the Commission Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (these requirements are hereinafter referred to as: the RTS on ESEF).

In our opinion, the Annual Report prepared in the XHTML format, including the partially tagged consolidated financial statements as included in the reporting package by ING Bank, has been prepared in all material respects in accordance with the RTS on ESEF.

Management is responsible for preparing the Annual Report including the financial statements in accordance with the RTS on ESEF, whereby management combines the various components into a single reporting package. Our responsibility is to obtain reasonable assurance for our opinion whether the Annual Report in this reporting package, is in accordance with the RTS on ESEF.

Our procedures taking into consideration Alert 43 of NBA (the Netherlands Institute of Chartered Accountants), included amongst others:

— obtaining an understanding of the entity's financial reporting process, including the preparation of the reporting package;
— obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance document and the XBRL extension taxonomy files have been prepared in accordance with the technical specifications as included in the RTS on ESEF;
— examining the information related to the consolidated financial statements in the reporting package to determine whether all required tagging's have been applied and whether these are in accordance with the RTS on ESEF.

Description of responsibilities regarding the financial statements

Responsibilities of the Management board and the Supervisory Board for the financial statements

The Management board is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the Management board is responsible for such internal control as the Management board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error. In that respect the Management board, under supervision of the Supervisory Board, is responsible for the prevention and detection of fraud and non-compliance with laws and regulations, including determining measures to resolve the consequences of it and to prevent recurrence.

As part of the preparation of the financial statements, the Management board is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, the Management board should prepare the financial statements using the going concern basis of accounting unless the Management board either intends to liquidate the Company or to cease operations or has no realistic alternative but to do so. The Management board should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the Company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

A further description of our responsibilities for the audit of the financial statements is included in the appendix of this auditor's report. This description forms part of our auditor's report.

Amstelveen, 7 March 2022

KPMG Accountants N.V.

P.A.M de Wit RA

Appendix:
Description of our responsibilities for the audit of the financial statements

Appendix

Description of our responsibilities for the audit of the financial statements

We have exercised professional judgement and have maintained professional scepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included among others:

- identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than the risk resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control;
- evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management board;
- concluding on the appropriateness of the Management board's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern;
- evaluating the overall presentation, structure and content of the financial statements, including the disclosures; and
- evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We are solely responsible for the opinion and therefore responsible to obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the bank to express an opinion on the financial statements. In this respect we are also responsible for directing, supervising and performing the group audit.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit. In this respect we also submit an additional report to the audit committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audits of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Articles of Association – Appropriation of results

Appropriation of results

The result is appropriated pursuant to Article 24 of the Articles of Association of ING Bank N.V., the relevant stipulations of which state that the result shall firstly be appropriated to the Stichting Regio Bank Reserve, respectively the Reserve Stichting Vakbondsspaarbank SPN or charged to that reserves in proportion to the ratio between the Stichting Regio Bank Reserve, respectively the Reserve Stichting Vakbondsspaarbank SPN and the company's equity at the end of the relevant financial year and that the remainder shall be at the disposal of the General Meeting.

Disclaimer

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: (1) changes in general economic conditions, 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 (2) 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 (3) changes affecting interest rate levels (4) any default of a major market participant and related market disruption (5) changes in performance of financial markets, including in Europe and developing markets (6) fiscal uncertainty in Europe and the United States (7) discontinuation of or changes in 'benchmark' indices (8) inflation and deflation in our principal markets (9) changes in conditions in the credit and capital markets generally, including changes in borrower and counterparty creditworthiness (10) failures of banks falling under the scope of state compensation schemes (11) non-compliance with or changes in laws and regulations, including those financial services and tax laws, and the interpretation and application thereof (12) 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 (13) legal and regulatory risks in certain countries with less developed legal and regulatory frameworks (14) prudential supervision and regulations, including in relation to stress tests and regulatory restrictions on dividends and distributions (also among members of the group) (15) regulatory consequences of the United Kingdom's withdrawal from the European Union, including authorizations and equivalence decisions (16) ING's ability to meet minimum capital and other prudential regulatory requirements (17) changes in regulation of US commodities and derivatives businesses of ING and its customers (18) application of bank recovery and resolution regimes, including write-down and conversion powers in relation to our securities (19) 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 (20) changes in tax laws and regulations and risks of non-compliance or investigation in connection with tax laws, including FATCA (21) 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 (22) risks and challenges related to cybercrime including the effects of cyberattacks and changes in legislation and regulation related to cybersecurity and data privacy (23) changes in general competitive factors, including ability to increase or maintain market share (24) inability to protect our intellectual property and infringement claims by third parties (25) inability of counterparties to meet financial obligations or ability to enforce rights against such counterparties (26) changes in credit ratings (27) business, operational, regulatory, reputation and other risks and challenges in connection with climate change (28) inability to attract and retain key personnel (29) future liabilities under defined benefit retirement plans (30) failure to manage business risks, including in connection with use of models, use of derivatives, or maintaining appropriate policies and guidelines (31) 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 (32) the other risks and uncertainties detailed in the most recent annual report of ING Bank 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.

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