ING Bank

Annual Report 2022

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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 this purpose and create value. When assessing ING's ability to create value in the short, medium and long term, stakeholders look at our financial and non-financial performance.

In this report, the sections Strategy and performance, Risk management and Our leadership and corporate governance, 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.

In this annual report, unless otherwise stated or implied by context, references to 'ING Bank' refer to ING Bank N.V. and references to 'ING', the 'Company', the 'Group', 'we' and 'us' refer to ING Bank N.V. and its consolidated subsidiaries.

The world around us

Despite the initial threat posed by the omicron variant of Covid-19, the world economy started 2022 with a strong economic recovery to the point where many advanced economies returned to levels of output seen prior to the pandemic. This was mainly driven by catch-up demand for consumer services as households spent more on leisure in the first quarters of reopening. In some cases, like the Netherlands, the pre-pandemic level of GDP was quickly surpassed.

With economies reopening, a surge in economic activity in the first half of the year was met by high inflation rates, mainly related to the energy crisis. The war in Ukraine and related energy crisis was the most dominant factor in the global economy in 2022. It pushed up inflation dramatically in Europe, to levels not seen for decades. It has also added to shortages that were already plaguing the European economy.

This caused pain among businesses and consumers alike and rapidly slowed the eurozone to stagnation, bordering on recession. The US also battled a surge in prices and China continued to struggle economically due to the continued impact of Covid-related lockdowns and a struggling real estate sector. The UK battled financial instability after the Truss Government's mini-budget and the budget cuts announced afterwards.

High inflation also prompted a strong response from central banks worldwide. The Fed led the global interest rate hike cycle, but the ECB also made quick moves towards normalisation of interest rate policy. Ending net purchases in the ECB's Pandemic Emergency Purchase Programme and Asset Purchase Programme was followed by rapid rate hikes over the course of the second half of 2022, which turned into the most aggressive hike cycle ever by the ECB. This had a marked impact on the financing environment globally with investment appetite slowing for both households and corporates.

Climate change risk

ING is aware of the risks associated with climate change and how these can impact customers and their financial health. 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.

Financial crime risk

We're committed to fulfilling our role as a gatekeeper to the financial system, to protect 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 to create a safer environment for customers, our bank and society. In 2022, we further adjusted our financial crime risk appetite and framework of policies and procedures to reflect changes in the risk environment and responded to external developments.

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.

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. Read more in 'How we are making the difference' and 'Compliance risk'.

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 growing concerns.

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 remains one of the highest priorities. 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 Centre) and Internet Service Providers (ISPs). See also 'How we are making the difference' and 'Non-financial risk'.

Inflation risk

Inflation rates accelerated across the globe at the beginning of 2022, fuelled by the war in Ukraine. Inflationary pressure prompted an adjustment in monetary policy by major central banks and lead to rising interest rates and tighter global financial conditions.

The mix of high inflation and rising interest rates further deteriorated macro-financial conditions, aggravating pre-existing vulnerabilities for both businesses and households, which were recovering from the economic consequences of the Covid-19 pandemic, and ultimately increasing banks' credit risk. Against this background while ING took additional provisions throughout 2022, it also benefited from the significantly higher interest rates.

EU member-state governments introduced several supporting measures to cushion the rise in energy prices and inflation. These measures, in conjunction with the reduced fiscal space resulting from pandemic-related support measures and the normalisation of the monetary policy stance, increased sovereign vulnerabilities in financially weaker countries.

Our strategy

ING's purpose is to empower people to stay a step ahead in life and in business. Our updated strategy, introduced in 2022, is built around this purpose and making the difference for people and the planet. In a world that's constantly changing, we're digital and sustainability pioneers, adept at adapting to the trends impacting our business.

Our two overarching priorities are giving customers a superior customer experience (CX) and putting sustainability at the heart of what we do.

We also have four enabling priorities:
1. Providing seamless, digital services.
2. Using our scalable technology and operations.
3. Staying safe and secure.
4. Unlocking our people's full potential.

Giving customers a superior experience

We want to put customers at the centre, providing them with the superior experience that is our true source of differentiation. We believe that banking is a secondary need, and that financial products and services, for the most part, are commoditised. A superior customer experience is how we can stand out from the crowd.

The rapid digitalisation of society has huge impact on what customers expect from us. They don't just expect an experience that is digital and seamless, they expect a specific level and quality of experience. A digitally-enabled personal, easy, relevant and instant experience is now the base expectation of all customers, but we also realise that different types of customers have different needs and different ways of interacting with us.

Putting sustainability at the heart of what we do

We have a responsibility to society to define new ways of doing business that align with economic growth and social impact. Climate change is one of the world's biggest challenges, threatening both our planet and its people, many of whom also struggle with inequality, poor financial health and even a lack of basic human rights. We're determined to be a banking leader in building a sustainable future for customers, society and the environment. We want to lead by example by striving for net zero in our own operations. We also want to play our part in the low-carbon transformation that's necessary to achieve a sustainable future, aiming to steer our financing towards meeting global climate goals and working with clients to achieve their own sustainability goals. For more information go to our 'Sustainability at the heart' chapter.

Our enablers

Providing seamless, digital services
We know that we can make customers happy with robust, 'always-on' channels, data-enabled personalised experiences and digitalisation of processes with limited human intervention there where needed.

Using scalable technology and operations
A technology and operations foundation that is modular and scalable brings many benefits, including superior customer experience and safety, speeding up time-to-volume, shortening time-to-market, and lowering cost-to-serve.

Staying safe and secure
Trust is the starting point, the most basic requirement, for all stakeholders. That's especially true for a digital-first bank like ING. People trust us with their money and with their data. Keeping it safe, and maintaining this trust are crucial.

Unlocking our people's full potential
We want all employees to have skills and capabilities that equip them for the future. We also want to provide them with an excellent employee experience and promote a diverse, inclusive and vital culture where everyone feels they belong.

Superior customer experience

Customers expect an experience that's personal, easy, relevant and instant. What this looks like depends, of course, on the type of customer. For individual customers and small businesses our emphasis is predominantly on mobile banking, while for mid-corporate and Wholesale Banking clients it's all about personal relationships and superior sector and network expertise supported by seamless digital delivery.

As an organisation we need to be customer focused – after all, customers are who we're here for, our reason for being. And if we want customers to choose us for more of their banking needs, to become primary customers, we need to nurture relationships with them so that they choose ING before any other. At every step of their ING journey, customers should feel an emotional connection with us: that's how we win customers' hearts and their business. Banking is a relationship just like any other, and the best relationships are those in which people feel valued, confident, empowered and in control. In response to customers' changing expectations in today's always-on digital society, we've updated our customer experience principles. We want to provide customers with an experience that is personal, easy, relevant and instant.

Personal is about recognising customers as individuals and getting to know their needs, goals and challenges so they feel valued. For example, we should not ask for information twice when we interact with them, and we tailor messaging to their specific situation.

Easy is about taking the complexity out of banking, making it intuitive, transparent and understandable so customers feel confident. For example, we aim to clearly price products and services, we avoid complicated jargon and we're always accessible.

Relevant is about bringing value to customers, anticipating their needs and proactively providing the right insights, advice and solutions at the right time, making them feel empowered. For example, guiding them on difficult financial decisions, like re-financing a mortgage in an environment of rapidly increasing interest rates.

Instant is about having solutions at their fingertips that put the customer in the driver's seat of their finances and making them feel in control by allowing them, for instance, to switch seamlessly between self-service banking on the app and personal advice in a branch. Different groups of customers have different requirements. For Retail Banking and some Business Banking customers (i.e. consumers, the self-employed and small and medium-sized enterprises), the emphasis is on mobile, for both products and services. For Wholesale Banking (corporate clients) and Business Banking mid-corporates, the emphasis remains on deepening client relationships, with superior sector knowledge and networking expertise, relevant advice and tailored products, all supported by seamless digital delivery and services.

CX Day

On 15 November, ING held a global CX Day, with over 5,500 colleagues from across the bank joining together to come up with ways to make customer experiences personal, easy, relevant and instant. The event attracted employees from Retail Banking, Business Banking, Wholesale Banking and the support functions in 11 countries. Together, they identified over 1,000 improvements to delight our customers. Some of those improvements were implemented live on the day.

Retail Banking

For customers using Retail Banking products and services, ING wants to provide a seamless digital, mobile-first experience that's personal, easy, instant and relevant. We want to engage with our customers on mobile at every stage of their journey and provide more personalised products and services based on data-driven, relevant insights. Seamless end-to-end digital delivery of customer services is a an enabler for a superior customer experience to earn, and keep, the primary relationship.

Earning 'primary relationships' with customers 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 to be our customers' first partner for their financial 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.

Mobile-first

Reflecting customer demand, we are continuously improving our mobile capabilities. In 2022, over 58 percent of customers used mobile banking only (mobile device log in through the app or mobile device log in through the website) compared to 51 percent in 2021. High adoption of mobile banking is especially visible in Turkey (88 percent), Romania (74 percent), Spain (63 percent) and in the Netherlands (61 percent).

In the Netherlands, we increased our reach for iOS and Android users to 70 percent with a new method to fully onboard new customers via their mobile phone. The process takes about 10 minutes and customers can immediately start using the account afterwards. Our reach extends to all customers that can use mobile onboarding, i.e. customers with a Dutch passport, ID card or residence permit, those from other European Economic Area countries and refugees from Ukraine.

Visa Mobile is a new online payment method available for retail customers in Poland. Visa contactless and prepaid virtual card users may activate Visa Mobile in their ING mobile app. Customers can pay with their card without using the card's data, by entering the recipient's phone number and confirming payment in their ING mobile app. Payment is fast and secure. In Romania, ING became the first bank to digitalise the mortgage journey, launching 100 percent online financial pre-approval, directly from Romania's internet banking platform. Customers interested in a mortgage loan are able to find out the exact amount they can borrow without having to go to the bank.

At Interhyp, our online mortgage broker in Germany, the HOME platform digitalises the mortgage process for home buyers, advisors, brokers and bank partners. Interhyp customers can connect directly to real-estate portals, create financing scenarios and upload documents from their smartphones, speeding up the mortgage decision process. In Spain, we launched instant lending for customers that are new to the bank. This new service uses instant and automatic processes that provide a differentiated, quick and convenient lending solution.

Daily banking and savings

Everyday Roundup is a digital product that aims to make saving simpler at a time when customers may be financially vulnerable (due to the cost-of-living crisis). It is used by over 1.1 million customers in six countries (Poland, Australia, Germany, Romania, Turkey and, since 2022, Spain). 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, Germany and Turkey also have a round-up option for donations to charities. Similarly, Australia has a round-up option for mortgages, while Spain has a round-up option for investments.

Dealwise, a smart shopping platform (accessible in the banking app), is another initiative that encourages customers to save on their daily spending. It gives users access to discounts and cashback offers from participating merchants. Dealwise is available to customers in Romania, Germany and Belgium. Additionally, in Spain, we updated our daily banking proposition, including the launch of a new, commitment-free account, that aims to increase new-to-bank customers, has a fully online and instant onboarding process, and has new services like e-commerce insurance and a subscriptions manager.

Remote advice

More customers are 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. Our global customer interaction platform is used in seven countries to harmonise the experience and ensure customers receive the same services everywhere. Compared to last year, we doubled the number of remote advice video meetings and witnessed a rise in customers using the chat function on our websites and mobile apps while realising a reduction in branch traffic. As we continue to optimise our assisted channels, we are also reducing the number of ING branches, with 94 branches closed in 2022.

Investment products

ING customers have access to smart digital investment tools like My Money Coach in Italy, Naranja+ in Spain, Easy Invest in the Netherlands, Komfort-Anlage (Comfort Investing) in Germany and ING Self Invest in Belgium.

Insurance

ING has teamed up with insurance partners in various Retail Banking markets to offer customers insurance products via the ING app or website, based on the local needs within those markets. We offer insurance linked to loans as well as a range of standalone non-life insurance policies. In the Netherlands, we set-up a new distribution partnership with Dutch health insurer CZ. In Romania, we launched salary protection insurance offering customers financial support in case of job loss, prolonged medical leave or permanent invalidity. In Turkey, we introduced digital assistance for insurance and pension products, which led to one of the very first digital remote offers for pensions in the Turkish market. During 2022, we also set up new offers linked to our daily banking activities, including group travel insurance in Romania and online purchase and cash withdrawal protection in Poland.

Measuring Retail Banking NPS

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 peers have been selected based on qualitative and quantitative criteria like size, brand strength, types of clients served and types of products and services. The yearly NPS score is an average of reported four quarter figures, based on a six months' rolling average. In 2022, ING enhanced its methodology from an average of two quarters to a six months' rolling average. The updated methodology concerns a refinement and does not significantly impact the NPS score and ING's ranking for 2021 and 2022. Our aim is to achieve a number one NPS ranking in all our Retail markets, with a 10-point lead over our main competitors. In 2022, ING ranked number one in five of 10 Retail markets. In these five markets, we have a 10-point lead on the nearest competitor. In Germany and Spain, ING's scoring improved on last year while Australia, Poland and Romania maintained their strong scores. ING ranks in the top-three in another four markets: the Netherlands and Luxembourg (ranked second) and Italy and Turkey (ranked third).

Closing of Retail businesses

In 2022, ING took the decision to close its Retail Banking operations in the Philippines. We concluded that the time to achieve the desired scale was too long and we decided to concentrate on our core markets. ING started its Retail Banking operations in late 2018 and retains a Shared Service Hub and Wholesale Banking presence in the country. In 2021, ING announced it would leave the Retail Banking market in France following a strategic review. In 2022, ING and Boursorama (a subsidiary of Société Générale) signed an agreement to offer services to ING customers in France. The contract allowed ING customers to join Boursorama and benefit from a simplified account opening process and exclusive offers. The agreement also includes the transfer to Boursorama of 'assurance-vie' (investment products) contracts, for which ING acts as a broker with Generali Vie. Home loans and consumer loans were not included in the agreement.

Business Banking

Business Banking is set up as a third pillar within ING and is a part of Retail Banking. While definitions can differ slightly per country, we've defined three customer segments using the following global framework:

Self-employed and micro companies: Independent professionals or small companies that employ up to 10 people and have a turnover up to one million euros.

SMEs: Small to medium-sized companies that employ between 10 and 250 people and have a turnover between one and 10 million euros.

Mid-corporates: Sophisticated larger companies employing more than 250 employees with a turnover of between 10 million and 250 million euros.

Business Banking serves 1.7 million customers and generates €3 billion in revenue across seven markets: the Netherlands, Belgium, Luxembourg, Poland, Romania, Turkey and Germany. Customers want to manage and grow their businesses in a constantly changing and increasingly complex world. Our aim is to empower them by providing all their financial solutions in one place and offering the right insights, products and services at the right time, to create an personal, easy, relevant and instant experience.

We apply a needs-based customer segmentation approach that differentiates between basic and more complex (specific) needs. This enables customers to 'self-serve' using our strong digital foundation, but also access remote and face-to-face advice, when needed. With digitalisation at the core of our strategy and to meet increased demand for digital solutions and self-service, our ambition is to serve over 80 percent of SMEs digitally. We focus our efforts on the most important interactions: KYC outreach for customer due diligence, onboarding, account opening and loan or card requests.

For example, in Germany, we launched our second lending product, Flexkredit, where Amazon sellers can easily make their loan application from the Amazon Marketplace seller portal (Seller Central). The disbursement and management of the product is via their online banking, Business Banking Home. If eligible, an offer is available within 48 hours. In Belgium, we offer customers, based on their financial situation, instant business credit within minutes, which is available the next working day. We inform them about this offer in our mobile banking app and on internet banking, including personalised eligibility and maximum credit availability details. For Polish customers, we have created a product offer page within their online banking listing products and services tailored to individual customer needs. Product recommendations for each customer can be directly acquired online.

As well as providing improved customer experiences through digitalisation and personalisation, we are putting sustainability at the heart of what we do with our efforts on climate action and financial health. We help customers to future-proof their businesses by offering sustainable financing alternatives. For example, we offer sustainable finance alternatives (loans and/or lease) for SMEs and mid-corporates in most Business Banking countries where we operate (the Netherlands, Belgium, Poland, Romania, Turkey and Luxembourg).

Wholesale Banking

In Wholesale Banking, we aim to empower clients by partnering with them to offer relevant financial solutions to their business needs across their value chains, and to support them through the 'ING difference', three major characteristics that offer particular value to clients:

1. **Our global reach,** with local experts: no matter where clients are, our network of experts offer them a seamless local experience with a global view.
2. **We're sector experts:** clients trust us to provide tailored solutions to meet their needs.
3. **We're sustainability pioneers:** we're not just leaders in sustainable finance, we work hand-in-hand with clients to address some of the most pressing issues in the world today.

We're driving growth by making the most of our strengths and broadening our value proposition to clients, while optimising our use of capital and enhancing financial performance. This is highlighted in deals such as that with GlobalConnect, a Nordic technology media and telecom (TMT) company. After ING co-advised on a sustainability-linked loan structure in 2021, GlobalConnect enhanced its sustainability strategy on ING's recommendations and ING ultimately supported them by securing the sole sustainability coordinator role on both their €2.7 billion existing and €1 billion incremental financing rounds. The ING difference is reflected in partnership initiatives such as leveraging ING's sector knowledge to lead a working group to design a climate-aligned finance agreement for steel. In 2022, we were proud to be one of six banks to sign up to the Sustainable STEEL Principles, which aims to help banks measure and report emissions associated with their steel loan portfolios compared to net-zero emissions pathways. Read more in the 'Sustainability at the heart' chapter.

In 2022, at the Global Finance magazine Sustainable Finance Awards ING won the global award for Outstanding Leadership in Sustainable Bonds for the second year running and the Sustainable Project Finance award for Western Europe. Our client segmentation model aligns our strengths with client 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 combine 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.

Measuring Wholesale Banking NPS

A relationship NPS programme ran in 32 WB markets throughout 2022, it concerns a qualitative measure of the client experience and the quality of the relationship and how likely clients are to recommend ING. 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). In 2022, ING's relationship NPS score rose to an all-time high of 67 (on a scale of -100 to +100), from +59 in 2021, an increase of 13.5%. Increases were prevalent in most of the sectors and regions. The response rate increased to 71% from 62%.

Finding new ways to help customers stay a step ahead

ING has always prided itself on its innovative culture and considers this an important contributor to a superior customer experience. To keep surprising customers in a fast-moving competitive environment, we need to keep finding fresh ways to translate emerging trends and technologies into new business opportunities. In 2022, we announced a move to bring innovation closer to our Retail, Business Banking and Wholesale Banking business lines to create more impact for our innovation efforts. For incremental-type innovations that support our strategic priorities of CX and sustainability, such as digitalising processes, we believe this is better done within individual business lines where we are closer to the customer. Innovation projects like CoorpID and Blacksmith, for instance, continue under Wholesale Banking's leadership.

In 2022, ING invested and partnered financial technology (fintech) companies via its venture capital arm, ING Ventures. One such investment was in SeMI Technologies, offering AI-powered search engine software to companies who want to make better use of their data. Other investments include Vault (cloud-based core banking technology), OpenFin (unified workspace solution for financial institutions) and Sardine (safer, faster payments). ING in Belgium also collaborated with Flowcast, an early warning system to predict when retail customers might go into financial distress.

ING announced in 2022 that it would phase out Yolt's business-to-business open banking operations following an evaluation that it was not feasible to achieve the preferred scale in their market within a reasonable time frame. The announcement followed the closure in 2021 of Yolt's personal finance management app. The phase-out process is expected to be completed in 2023.

Sustainability at the heart

Sustainability is at the heart of what we do because we believe we have a role in defining new ways of doing business that aligns economic growth with positive social and environmental impact. This includes aiming to bring our own operations in line with a low-carbon future and respecting and advancing human rights. As a global bank we can also have a positive impact, not just by mitigating harm, but by bringing aspects of climate change, biodiversity and human rights into our financing decisions and client dialogues.

ING takes a holistic approach to sustainability, with climate change mitigation, climate adaptation, climate and environmental risk, biodiversity, human rights, financial health, business ethics and other ESG issues all in scope.

As well as aiming to be a pioneer in defining new ways of doing business, ING wants to be a leader in building a sustainable future for customers, the environment and our company. How? By focusing on:

Climate action: We lead by example by striving for net zero in our own operations.
Collaboration: We work with clients to achieve their own sustainability goals, increasing our impact through partnerships and coalition-building.
Managing climate-related, environmental and social risk: We manage the most relevant environmental and social risks while fostering the protection of biodiversity and human rights across all of our relationships.
Financial health and inclusion: We're working to advance financial health and inclusion for customers and communities.
Empowering colleagues: We empower colleagues to contribute to it all. ING's sustainability efforts were recognised externally. In 2022, Sustainalytics assessed our management of environmental, social and governance (ESG) material risk again as 'strong' while investment research firm MSCI awarded ING an AA ESG rating for the third consecutive year. S&P rated our ESG practices for the second year in a row as 'strong'.

While we are committed to doing our part, we know that the world's problems cannot be solved by one sector, much less by one bank. We look to governments, for example, to direct and guide the change needed to reach net zero by 2050. We believe that an inclusive approach is the only way we can make any meaningful positive impact. From climate to human rights and financial health, we seek to increase our impact through partnerships and coalition-building.

Climate action

We have defined four climate action objectives: to reach net zero in our own operations, to steer the most carbon-intensive parts of our portfolio towards net zero by 2050 or sooner, to finance and advise specific clients in line with a net-zero economy and to manage climate and environmental risks. In 2022, we published our second integrated climate report, which can be found on ing.com. We have now published four overall climate reports.

Aiming for net zero in our own operations

We aim to bring our business in line with the net-zero economy of the future and use our Environmental Programme to steer our progress towards this. Adjusting to the post-pandemic 'new normal', we have set a new mid-term target for 2025 to reduce our CO2e emissions by 75 percent compared to our 2014 baseline, for emissions from scope 1, scope 2, and business travel scope 3. In 2022, we reduced emissions by 72 percent from 2014, to 29 kilotonnes – 28 percent of where we were in 2014. In 2021 the figure was 26 kilotonnes where our operations were heavily impacted by Covid-19-related restrictions.

Following migration to a new data platform, we conducted a historical review of our carbon-related data. In doing so, we made corrections to previously reported datapoints, corrected our coverage statistics for extrapolation where those were incorrectly applied, and improved our methodology by applying more granular emission factors for our use of district heating. Comparative figures and baseline year data were updated to reflect these improvements. Read more in the technical appendix to this report.

We previously shared a scope 1 and scope 2 mid-term target of a 90 percent reduction by 2030. We plan to review this and publish a combined 2030 target for scope 1, scope 2 and scope 3 for business travel. Scope 1 covers our direct, controlled emissions from natural gas and heating oils, scope 2 covers our indirect emissions from the generation of purchased energy i.e. electricity and district heating, and scope 3 currently covers emissions in our value chain from business travel (air and car). We intend to review our scope 3 reporting to include new emission categories. As we conduct the review, we will likely set a new baseline year for our reporting.

ING buildings

For building emissions, we are committed to improving energy efficiency and reducing our emissions from heating systems. In 2022, we completed a net-zero assessment on major buildings, which will form the basis of our approach going forward.

Since 2014, ING has increased the percentage of renewable electricity sourced for our operations. In 2022, we further aligned with the reporting guidance of the RE100, a technical group that sets industry standards around corporate use of renewable electricity. We assessed that our renewable electricity sourcing in 2022 was 99.2 percent aligned with RE100's market boundary criteria. The remaining 0.8 percent was not in alignment due to difficulties in purchasing renewable electricity in Russia, Ukraine, South Korea and Kazakhstan. For these markets, in addition to reporting CO2 emissions for electricity used, we sourced renewable Energy Attribute Certificates in neighbouring markets to support an in-sector reduction in line with the amount of electricity used. In 2020, 99.7 percent was aligned with the RE100 market boundary criteria; in 2021 that was 99.2 percent. We acknowledge that over time we should move towards more on-site renewables and direct purchasing agreements from local renewable projects. Read more about our renewable electricity sourcing types in the technical appendix to this report.

The Environmental Programme also covers targets to reduce our water consumption and residual waste. In 2022, we decreased our residual waste by 48 percent compared to 2014. In 2022, we decreased our water consumption by 49 percent compared to 2014.

Business travel

In 2022 we launched a Green Travel Budget Programme to make employees aware of the CO2e impact of their travel choices and encourage them to find greener options. We also updated global travel procedures to restrict most air travel on short-haul distances where high-speed rail options exist as alternatives. This includes travel between Amsterdam, Brussels, London and Frankfurt.

Next to efforts to reduce air travel, in 2022 we also started procuring sustainable aviation fuel (SAF) and SAF certificates from our partners at Air France-KLM, Lufthansa Group, Neste and SkyNRG. Although we still report the emissions resulting from our flights the SAF and SAF certificates we purchased supported an in-sector reduction of approximately 3.2 kilotonnes of CO2e emissions. In addition, we entered into a partnership with Singapore Airlines as part of our sourcing approach for 2023.

To limit the impact of car travel, we continued to electrify our fleet of leased cars. In 2022, ING in Belgium and the Netherlands announced that only fully electric vehicles (EVs) would be available in its range of new lease cars. Together, Belgium and the Netherlands represent 72 percent of our lease cars. Globally, we have an ambition to reach at least 90 percent EVs in our fleet by 2030. This ambition requires countries like the Netherlands and Belgium to reach 100 percent earlier, while accounting for EV infrastructure challenges in other countries.

Empowering clients on their road to net zero

In line with our objective to steer the most carbon-intensive parts of our portfolio towards net zero by 2050 or sooner, through our Terra approach, in 2021 we joined the Net-Zero Banking Alliance. This allows us to use our experience and knowledge to help standardise the way banks measure their alignment with climate goals and to base our approach on the most recent developments in each sector. We are convinced that all banks benefit from having an industry-wide standard for measuring the effectiveness and impact of their efforts as well as increasing transparency. We continue to collaborate with others to develop roadmaps and methodologies, including for hard-to-abate sectors.

Supporting the energy transition

While we engage with different stakeholders in our ambition to help create a low-carbon society, we believe that financial support for the energy transition could play the largest part in realising this ambition. Today, around 80 percent of the global energy mix is fossil-fuel based. Reducing that figure is vital in reaching society's net-zero emissions targets. Our approach to financing the energy sector balances three main societal interests: the need to decarbonise to fight climate change, the need for energy to remain accessible and affordable for people and companies, and the need for security of the energy supply.

Ultimately, building enough new renewable and low-carbon sources of energy will remove the need for fossil fuels and ING strongly supports the objective of this transition. However, fossil fuels currently play an important role in the global energy mix, considering the current availability of renewable and low-carbon sources, and the need to fulfil other, social, sustainable development goals. The global economy’s reliance on fossil fuels, in particular a phase-out of coal for power generation, must reduce to significantly lower levels over the next 10 to 15 years, according to the energy transition pathway set out in the International Energy Agency’s Net-Zero Emissions by 2050 (NZE 2050) Scenario.

In recent years, ING has stepped up its support for the energy transition to a low-carbon economy. In 2017, ING set a goal to restrict our financing of coal-fired power generation to close to zero by 2025. So far, we have decreased lending to individual coal-fired power plants by over 80 percent to €83 million.

With our commitment to develop the Terra approach in 2018, ING set out to develop methodologies and science-based targets to enable steering of the most emissions-intensive parts of our loan book in line with the emissions levels required to meet the Paris Agreement goals. Methodologies and targets for power generation and upstream oil and gas portfolio alignment were set out in the 2019 and 2020 Terra progress reports respectively. ING’s 2022 Climate Report shows how interim and long-term targets for these activities are benchmarked against sector-specific indicators set out in the NZE 2050 Scenario, and the outperformance to date in steering our energy sector lending portfolio in line with the global energy mix required to hold the global average temperature increase to below 1.5˚C by 2050.

Next to our Terra approach, which lays out transition plans for the nine sectors we believe to have the most impact, we reinforced our commitments to supporting the energy transition in March, when we announced we would step up our renewables energy financing efforts. Our announcement included the aim of growing new commitments in this area by 50 percent by the end of 2025 for Wholesale Banking clients, compared to the baseline year of 2021. We also committed to end the provision of dedicated upstream finance to new oil and gas fields approved for development after 31 December 2021.

Our power generation portfolio follows the North American Industry Classification System (NAICS), which links power generation to the categories shown below. All relevant NAICS codes have been selected to derive the O/S (outstandings) per category.

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

	2022	2021	2020
Renewables	7,958	7,259	5,740
Oil	0	0	0
Gas	1,660	1,523	1,541
Coal	83	87	122
Diversified utility companies	3,742	3,327	2,556

Phasing out coal, reducing oil and gas combustion and increasing renewable and low-carbon energy sources will not on their own solve the challenge of achieving a net-zero emissions world by 2050. Recognising that technology and new market developments are essential drivers of the energy transition, ING has established cross-sector and multi-disciplinary centres of expertise to support client investment in new energy systems. One important area is batteries, which address the inherent intermittency of renewable energy resources like wind and solar, as well as providing grid stabilisation services. We are also looking at other energy storage mediums like hydrogen, which have additional applications such as alternative fuel for transport and for energy-intensive industry. Finally, we are closely following the evolution of large-scale carbon-capture utilisation and storage (CCUS) which will be essential where fossil fuels are required in industrial processes that are needed for the global economy and for which there is currently no alternative.

Stakeholder engagement case: NGO fossil fuel divestment campaigns against ING

Topic: NGO protests at ING offices and branches, demanding that ING immediately divest from the fossil fuel sector.

Stakeholder group(s): Extinction Rebellion (XR) Netherlands, Fossil Free Netherlands, Friends of the Earth Netherlands, Dutch branches of other environmental NGOs.

Case: Throughout 2022, NGOs campaigned at ING offices and branches demanding immediate divestment from the financing of oil, gas and coal. The NGOs consider divestment a necessary step in avoiding the worst effects of the climate crisis.

Outcome: ING's energy strategy balances three main interests: the need to decarbonise to fight climate change, the need for energy to remain affordable for people and companies, and the need for security of the energy supply. Immediately halting funding to the oil and gas sectors, as these NGOs demand, would adversely impact energy supply and security. The total and immediate divestment they seek is not required under any credible 1.5 degree scenario. Indeed, we seek to align our climate action approach with globally recognised science-based scenarios, such as the International Energy Agency's (IAE) roadmap to net-zero by 2050. Under this scenario, massive investment in clean energy and infrastructure is required, which will lead to a decrease in demand for fossil fuels. That reduced demand could be met by existing oil and gas fields, which means that in the IEA's view, no new fields should be needed. That's why in March 2022 we announced that we will restrict dedicated upstream finance (lending or capital markets) for oil and gas fields approved for development after 31 December 2021.

Terra approach

We use our Terra approach to steer the most carbon-intensive parts of our loan book towards net zero by 2050. These are power generation, upstream oil and gas, automotive, shipping, aviation, steel, cement, residential mortgages and commercial real estate. Within Terra, we apply what we consider to be the best-fit methodology per sector, (our 'toolbox approach'), to measure and steer our loan book.

In 2022, to promote immediate action towards decarbonisation and to adhere to our Net-Zero Banking Alliance commitment, we set intermediate 2030 targets for all Terra sectors. Of the nine intermediate targets, eight are aligned with net-zero scenarios. A net-zero target for shipping will be set as soon as one is adopted under the Poseidon Principles, a financial industry framework for assessing climate alignment for the shipping sector. At the end of 2021, five of the nine sectors were on track with their respective climate-alignment pathways: power generation, upstream oil and gas, commercial real estate, automotive, and shipping. Two sectors, cement and residential real estate, were within five percent of their pathway, while steel was just above five percent of its pathway. Aviation came out well above the pathway due to the extraordinary impact that Covid-19 had on the sector, although it is beginning to trend back to its decarbonisation pathway as the sector recovers. Our 2023 Climate Report will include updated performance figures.

In 2022, building on other sector-specific working groups like the Poseidon Principles, ING launched the Sustainable STEEL Principles, a solution for measuring and disclosing the 1.5 degree alignment of steel lending portfolios. This was developed with other banks and facilitated by the Rocky Mountain Institute's Center for Climate-Aligned Finance. The sector emits roughly seven percent of global CO2 emissions and is heavily dependent on coal. Chaired by ING, the principles provide a pathway to net-zero steelmaking by 2050 and have been incorporated into our Terra approach. ING started a similar initiative in the aluminium sector.

Detailed information on ING's transition plans are available in our integrated climate report on ing.com.

The process for reporting on Terra consists of several steps, most of them carried out by ING's Global Sustainability department in collaboration with colleagues in the front office. 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 in or around April. External data is checked for consistency and matched with internal data. A year-on-year portfolio comparison is made to analyse fluctuations at company or asset level for each sector. This helps us to understand the drivers behind any changes, which can usually be attributed to the climate performance of clients, the composition of sector portfolios and improvements in methodologies. When necessary, scenarios and targets are updated in line with scientific updates to the decarbonisation pathways aimed at keeping global temperature rises within the necessary limits for a sustainable future.

Once the process is complete, we draft a progress report, which is incorporated into our integrated climate report. The report, approved at Board level, was published in September 2022. All progress reported in 2022 relates to 2021. Reporting on progress in the shipping sector is linked to, and aligned with, the Poseidon Principles timelines. A Poseidon Principles report containing 2021 data was published in December 2022.

Sustainable finance for Wholesale Banking clients

Advancing financing opportunities in line with a net-zero economy for Wholesale Banking clients is a strategic ambition, and by 2025 we aim to channel €125 billion annually to sustainable finance solutions. The Sustainable Finance team advises clients on translating their sustainability ambitions into their financing through sustainability-linked structures, green and social financing solutions, ESG rating advice, and other ESG advice.

In 2022, the Sustainable Finance team mobilised €101 billion, supported by a broad range of financial products linked to sustainability elements. Most of these were related to sustainability-linked loans (€39 billion), green bonds (€23 billion) and green loans (€17 billion). However, we believe that alongside volume, it is also the impact that measures the success of sustainable transactions. This, we believe, is shown in the additional products and services we develop for customers such as social loans and bonds, sustainable structured finance, sustainability-linked Schuldscheine and sustainable transaction services such as guarantees and supply chain finance.

The commitment to mobilise €125 billion annually makes a distinction between transactions where we are ESG lead, such as ESG coordinator or an ESG structuring role, and transactions where we do not fulfil such a position, like where we are part of a consortium of banks. Where we are one of several ESG leads or one of several participants, we record the pro-rata share of the total transaction amount, however, when we are the sole ESG lead on a transaction, we count the full transaction amount. For bonds, we make a distinction between active and passive bookrunner role. The reason for selecting this methodology is that if we are ESG lead in a transaction, we can pro-actively engage with our clients on their sustainability strategy, so our impact is more significant than if we only participate. See ing.com for more information about the methodology.

Moreover, we closed 491 sustainability deals (including sustainability loans and bonds, green loans and bonds, sustainable structured finance, social loans and bonds, and sustainable investments) at year end, up from 411 in 2021.

Green and social financing structures

We aim to accelerate the green economy by growing our green asset portfolio. Green financing solutions such as green bonds and loans form an integral part of that. For instance, we acted as sole green loan structurer in the construction of a transmission line for Champlain Hudson Power Express, ultimately owned by Blackstone; overall project costs were around USD 6 billion. The 545 km, fully buried transmission line should bring 1,250 MW of renewable hydropower from Quebec to New York City. The project is expected to be finalised in the first half of 2026. This is the largest volume mobilised for a green loan closed by ING to date.

Our sustainability efforts are also directed towards addressing social challenges. For example, ING acted as joint lead manager, joint bookrunner and joint social structuring adviser for Singapore-based healthcare real estate investment trust First REIT's SGD100 million social bond. This issuance, guaranteed by a trust fund of the Asian Development Bank, became Singapore's first-ever healthcare social bond and was awarded Best Social Bond in The Asset Triple A Country Awards for Sustainable Finance. We also acted as lead arranger, sustainability adviser and majority investor for Woori Card's Social Asset Backed Securities, valued at around €195 million. The transaction won the Best Sustainability Securitisation in The Asset Triple A Country (South Korea) Award for Sustainable Finance 2022.

Sustainability-linked structures

We incentivise clients who are shifting to more sustainable business models. Sustainability-linked loans (SLLs) link interest margins to a company's sustainability performance through mutually agreed KPIs. They are a way for ING to support, motivate and reward clients in their aim to become more sustainable. In 2017, ING coordinated the first syndicated sustainability-linked loan in the market for Philips. This loan was linked to the improvement of Philips' Sustainalytics ESG rating. In 2022, ING was the sustainability coordinator for turning this loan into a sustainability KPI-linked loan, with KPIs aligned to Philips' sustainability goals.

Since then, the popularity of SLLs has grown, as sustainability has played an increasingly significant role in corporate agendas. To date, syndicated SLLs valued at more than €1,000 billion have entered the market. ING closed 202 sustainability-linked loan transactions in 2022, compared to 147 in 2021. For US-based Compass Datacenters for example, ING structured a USD1.25 billion SLL with KPIs linked to environmental and social targets such as the reduction of energy and water consumption, female representation in the construction workforce and the use of low-carbon concrete. ING also structured an SLL for Compass Datacenters in Europe.

To enable all market participants to clearly understand the characteristics of these loans, ING was part of a financial institutions working party that established a set of sustainability-linked loan principles (SLLPs). These are based around five components: the selection of KPIs, the calibration of sustainability performance targets (SPTs), loan characteristics, reporting and verification. SLL spin-offs include sustainability swaps, derivatives and sustainability-linked bonds that are related to the total sustainability profile of a company, not just for individual projects.

We also look for other ways to support clients taking steps to achieve their sustainability ambitions and anticipate the future economy. Many of these ambitions are based on innovative technologies, business models or client propositions that have a higher risk profile and are not yet suitable for standard financing solutions. ING Sustainable Investments helps clients with their sustainability goals by providing risk-bearing capital, offering a wide range of tailor-made financial solutions, including equity (investments) and subordinated debt.

In 2022, we invested in UK-based Econic Technologies, which develops and licenses proprietary catalyst technology that uses CO2 as a building block in manufacturing, reducing the carbon footprint of widely used day-to-day products. In addition, a consortium-led investment supported Singapore-based insect protein producer Nutrition Technologies to expand production, launch new products and create strategic partnerships. Transforming agricultural waste streams into insect-based feed products and fertiliser enables a more circular economy, while at the same time also helping reach emissions-reduction targets and improve food security.

In April 2022, the Dutch National Growth Fund provided a subsidy of €50 million to Zero Emissions Services (ZES), of which ING is a founding partner, to accelerate the introduction of docking stations, ship modifications and battery containers (ZESpacks), all of which will contribute to the electrification of inland vessels and a transition to net zero. ING has also become a shareholder in EIT InnoEnergy, the European innovation engine for sustainable energy that supports start-ups and commercially attractive technologies, and provides education. EIT InnoEnergy is supported by the European Institute of Innovation & Technology (EIT), a body of the European Union.

The Sustainable Structured Finance team supports clients by functioning as a laboratory for new sustainable technologies and business models in need of financing within the EMEA region. The team is involved in the origination, structuring and execution of structured finance transactions, with an emphasis on the circular economy, bio-chemicals, waste and water or any other project supporting sustainable development. The team also provides financing solutions to smaller-scale renewable energy projects in the Netherlands, such as 'ZonnepanelenDelen', a solar financing platform that offers non-recourse project finance of between €200,000 and €5 million to solar power projects undertaken by SMEs and project developers.

We also led a consortium of Dutch financial institutions in the construction of technology company Avantium's FDCA factory in Delfzijl, the Netherlands. This will be the first commercial FDCA factory in the world. FDCA is the key building block for the 100 percent plant-based, recyclable polymer PEF, a non-fossil-fuel-based alternative for PET.

ESG Advisory

Besides financial support, we help clients navigate the rapidly changing regulatory landscape and advise on their net-zero strategy. Clients benefit from our deep and broad experience built up over the years helping other companies on ESG-related journeys. Some clients are ahead of the curve and for them we frequently act as a sounding board, alongside our financing-related role. Other clients are at the early stages of their sustainability journey. For them, we provide guidance based on our market experience and suggest areas where they can make impact to become aligned with climate pathways and their peers. Through teaming up with the relevant capital structuring and advisory departments, we also advise corporates on financing ESG-related corporates' CAPEX and M&A transactions (selling non-sustainable assets or buying sustainable assets).

Green bond framework

To support the strong growth of our sustainable finance portfolio, and to meet green funding needs, ING issues green bonds, supported by our green bond framework. The framework aligns with the International Capital Market Association's (ICMA) Green Bond Principles (GBP). We intend to allocate the proceeds of our green bonds to an Eligible Green Loan Portfolio of new and existing loans including renewable energy projects and green buildings. Other categories are clean transportation, pollution prevention and control, and sustainable water management.

Under this framework, ING Bank and its subsidiaries can issue any debt security (such as senior bonds, subordinated bonds, covered bonds, commercial papers and medium-term notes) to finance and refinance assets and projects which contribute to the UN's Sustainable Development Goals and our own sustainability. ING established its sustainable debt strategy via the publication of the framework. Since then, we have continued to take steps to enhance our sustainable debt strategy and see it as an important tool in supporting the growth of our own sustainable finance portfolio.

In alignment with the ICMA's 2021 GBPs, the framework is presented through four pillars: use of proceeds, process for project evaluation and selection, management of proceeds and reporting. The framework also follows the recommendations of the Green Bond Principles regarding external review.

Product offerings for Retail and Business Banking customers

As a retail bank, we aim to help customers transition to a low-carbon environment. While we have provided sustainability products and services in Retail Banking since 2017, we have since introduced many more sustainable banking products across our markets, following a sustainable alternative products roadmap, to facilitate this transition. It is our aim to have sustainable alternatives for our main retail products in all markets by 2025.

In 2022, we adopted a net-zero scenario for the residential real-estate sector, replacing the beyond two-degree Celsius scenario previously used. The new scenario is guided by the EU's Carbon Risk Real Estate Monitor (CRREM) 1.5-degree Celsius scenario, a tool that enables the alignment of real estate portfolios against decarbonisation pathways. We use this tool for the six markets in scope. Our scenario is also directed by data for residential real estate derived from the International Energy Agency's global net-zero scenarios. In the new scenario, houses in our portfolio across these markets need to reach an average energy efficiency of 0.6 kg CO_2/m^2 by 2050, which is more ambitious than the previous 2.6 kg CO_2/m^2. By 2030, they need to reach an average energy efficiency of 19.7 kg CO_2/m^2. The scenario currently applies to five of the six markets in scope: the Netherlands, Germany, Poland, Spain and Australia. Belgium is excluded from the target until the issue of data comparability with other markets can be solved.

In support of this ambition, in 2022 we further rolled out sustainable mortgage products, which stimulate more energy-efficient homes. Sustainable mortgages are part of our sustainable lending approach that we consider EU Taxonomy-eligible. After being introduced in Poland in 2021, sustainable mortgages are now also available in the Netherlands, Germany, Italy and Romania. We also offer sustainable consumer loans, with discounts related to the purpose of the loan, in Belgium, Romania, Poland, Turkey and Luxembourg. These loans can be used for housing, to improve the energy efficiency of homes, and for other activities such as purchasing sustainable mobility options.

In addition to lending products, we continue to provide customers with a range of tools and platforms that can support them in their renovation efforts. These include the homeQgo platform in the Netherlands, as well as a renovation calculator tool that ING makes available to customers in Germany in partnership with KfW bank. For more information on our sustainable housing approach, see our 2022 Climate Report on ing.com.

In 2022, we also launched a carbon footprint calculator in our Dutch app that enables customers to view spending-related CO_2 emissions in their bank statements. The calculator is live for 500,000 customers. In the Netherlands, Romania and Turkey, we also provide customers with renewable, recyclable or virtual bank cards, which help lower the impact of our banking products on plastic waste.

We are also helping Business Banking customers make their businesses future-proof by offering sustainable financing alternatives. We now offer sustainable finance alternatives (loans and/or lease) for SMEs and mid-sized corporates in most of the countries where we operate. We aim to reach €1 billion new production of sustainable financing annually in the Netherlands in 2025.

In 2022, we brought four new loans to market, bringing our total offering of loans supporting customers with sustainable activities to nine. In Poland, a sustainability improvement loan was launched after a pilot in the Netherlands. Similar to its Wholesale Banking counterpart, this type of loan incentivises business customers to reduce their environmental impact by improving their sustainability scores and ratings and reducing their CO_2 emissions.

Sustainability loans were launched in both Romania and Turkey. In Romania, we implemented a framework to identify and customise sustainable transactions for customers. As a result, ING in Romania granted its first sustainable credit for entrepreneurs, financing renewable energy and circular economy projects. One of the most notable examples is a sustainable loan granted to Promateris, manufacturers of sustainable products and solutions for the circular economy, to develop extra production capacity. The new facilities will produce biodegradable and compostable raw materials with applications in the packaging, food service and waste management sectors.

Next to our financing alternatives, we also supported Business Banking customers with a range of tools to support their sustainability journeys. In our real-estate financing business in Netherlands, we continued to offer access to an ESG improvement platform.

Sustainable Finance Disclosure Regulation

As of 31 December 2022, the investment funds at ING following the disclosures according to Article 8 or 9 of the Sustainable Finance Disclosure Regulation (SFDR) accounted for 51 percent of total client assets (assets under management and/or custody) in funds distributed in EU markets. These funds were purchased by our customers in the Netherlands, Belgium, Luxembourg, Germany, Spain, Romania, Poland and Italy.

ING is undertaking many efforts to create transparency and facilitate the transition of products using the SFDR framework. For example, during 2022, ING Netherlands adapted a Discretionary Portfolio Management (DPM) strategy to be in line with Article 8 disclosure requirements. With this adaption, all four standard DPM strategies available in the Netherlands are in line with Article 8, representing DPM products promoting, among other characteristics, environmental or social characteristics, or a combination of those. In addition, in Belgium, we brought three of our ING flagship funds in line with Article 8.

We disclose the ratio of client assets in SFDR Article 8 and 9 funds of total client assets in funds, to provide insights and transparency into our clients' portfolios. According to SFDR, Article 8 refers to a fund promoting, among other characteristics, environmental or social characteristics, or a combination of those. Article 9, according to SFDR, refers to funds with sustainable investment, or a reduction in carbon emissions, as its objective. For funds managed by third party asset managers, we rely on information provided by them, with no further review of the classification by ING.

Essentially, SFDR is a disclosure regulation and does not yet reflect a level of sustainability of funds. Leveraging on extensive data points provided through SFDR as well as complementary analyses, ING continues to develop methodologies to present customers with an even more insightful and transparent view on their investments, while monitoring the regulatory developments including the supervisory authorities' guidance. Eventually, it is through collaboration with asset managers, distributors, regulators, and investee companies that we can achieve a transparent market standard for our retail customers.

Sustainable investing services

ING is a signatory to the UN-backed Principles for Responsible Investment and as a provider of investor services to our Retail Banking customers we are committed to incorporating environmental, social and governance (ESG) issues into investment decisions, policies and processes that underpin these services.

We have been reporting on sustainable investing services (SIS) for a decade. Over the past two years, new regulations and definitions of sustainable investing have been introduced, such as the EU Taxonomy and the Sustainable Financial Disclosure Regulation (SFDR). For this year, the reported numbers continue to be derived from our own internal ING methodology. Our SIS are provided based on a methodology that has been developed by ING to assess different kinds of investment instruments, from company-level equity to funds and portfolios, using a diverse set of ESG criteria.

During 2022, ING's SIS applied to our biggest sustainable investment markets: the Netherlands, Belgium, Luxembourg, and Germany, with total sustainable investments valued at €14.6 billion, down from €15.7 billion in 2021. The drop was influenced by the overall market performance of equities and bonds, which decreased by 12 percent on average. Sustainable portfolios averaged a 15 percent decrease due to the absence of high-performing sectors such as oil and defence. However, €1.6 billion was added to the value of sustainable investments in 2022 as one of the four main investment strategies in the Netherlands took a more sustainable approach.

Belgium narrowed its scope on sustainable investment services, excluding the exposure on sustainable funds that are invested via funds of funds unless those assets represented over 85 percent of the funds of funds portfolio. As a result, numbers for 2021 and 2020 were updated for 2021 from €19.2 billion to €15.7 billion, and for 2020 from €13.2 billion to €11.2 billion. Our services cover all asset classes including dedicated portfolios, investment funds and structured products, available in brokerage, advisory and discretionary management propositions. Read more about our sustainable investment services on ing.com.

For investment funds, we apply quantitative and qualitative screening. The quantitative screen is conducted to understand the ESG profile of the asset and the fund manager. It covers nine ESG categories across policies, selection methodology and governance. The qualitative screen consists of an interview with the fund manager focused on their assessment and ESG approach. In a final step, we validate the fund's investments against our sustainable investing criteria. This approach applies to funds from active managers, but also to structured products or index funds. We understand that the policies of external investment funds will not fully align with the ING policy, preference is given to investment funds whose sustainability policy is most in line with that of ING.

Within discretionary management propositions, we also perform a company-level analysis, which integrates both positive and negative ESG screening. Positive screening is based on a company score that incorporates the company's ESG risk management, the evolution of that risk and the management of adverse impacts on society and the environment by the company. We invest only in companies that belong to the top 70 percent in their sector, when it comes to ESG performance. Applying negative screening means that we exclude companies with severe negative corporate conduct. We also exclude companies whose revenues from products or services that have a negative environmental or societal impact are higher than five percent (for production) or 10 percent (for distribution). Excluded companies operate in the following sectors: alcohol, coal, controversial weapons, fur, gambling, non-conventional gas, oil, tobacco, and weapons. We aim to follow this same screening process for international financial institutions and semi-sovereigns.

Our sovereign-level analysis integrates several sustainability factors such as social issues, environmental performance, corruption, endorsement of international treaties and the adverse impacts of these sovereigns on environment and society. By combining best-in-class scores with minimum requirements, we define the eligibility of a sovereign for our sustainable investment portfolios. More detailed information on the screening process can be found on ing.com.

As regulations and market standards constantly evolve, ING is investigating various ways of categorising and reporting on SIS and we are monitoring regulatory developments. We believe that transparency, uniformity and collaboration are needed from all market participants, to create a meaningful reporting standard for customers, which can easily be benchmarked against other investments.

Integration of the EU Taxonomy regulation

The European Commission introduced the EU Taxonomy in 2021 as part of the Green Deal strategy and the Commission's action plan on financing sustainable growth. With six environmental objectives, the Taxonomy aims to channel capital flows to support the transition, help generate sustainable and inclusive growth and prevent greenwashing. In 2022, we started reporting within the EU Taxonomy framework over the financial year of 2021. An update on the 2022 financial can be found under 'Environmental, social and governance risk' in the 'Risk management' section of this report.

ING sees the EU Taxonomy as an opportunity to re-evaluate balance sheet assets and increase transparency on environmentally sustainable products with the aim of reaching the Paris agreement's target of net zero by 2050. The strategic priority, 'Putting sustainability at the heart of what we do' further emphasises our own sustainability ambitions and we strive to continuously integrate regulatory measures with these ambitions. It is important to recognise that our own efforts such as the Terra approach and our sustainable finance products and services differ in scope from the EU Taxonomy. We believe that both approaches need to be harmonised in the future.

In 2022, we categorised our lending efforts to corporate clients in different product categories. Before financing clients, we assess them on environmental and social risk criteria as defined by our own risk appetite statement. Our work with specific clients is based on the opportunity to develop tailored sustainable products with them, such as sustainability-linked loans with company-specific KPIs.

We continuously explore new ways to support clients in a sustainable way and align with the principles of the Loan Market Association, the ICMA for green, social and sustainability-linked financial products and the EU Taxonomy. We also proactively inform clients about aligning their business activities with the Taxonomy and have started to incorporate published technical screening criteria into our loan assessment processes.

Collaboration

No one sector, much less one bank, has the ability to solve the world's problems. We believe that an inclusive approach is the only way we can make any meaningful positive impact. From climate to human rights and financial health, we seek to increase our sustainability impact through partnerships and coalition-building.

In 2022, alongside ongoing involvements with, for example, the 2 degree Investing Initiative, the UN-led Collective Commitment to Climate Action and the Net-Zero Banking Alliance, we collaborated with peer banks under the UNEP-FI Principles of Responsible Banking alliance, co-leading a working group that developed a set of standard indicators for financial health and financial inclusion for banks.

Following this, we started piloting the application of some of these indicators in the Netherlands, Spain and Romania. In the Netherlands, this included starting a context assessment and a baseline analysis on several of the indicators. Through these pilots, we aim to improve our customer segmentation and targeting of financial health actions. More information about our progress towards the PRB Commitment to Financial Health and Inclusion can be found on ing.com.

Dutch collaborations in the area of financial health also continued with Queen Máxima's work as UN ambassador for Inclusive Finance for Development, the debt prevention organisation Schuldhulproute, the Financial Health Index and the National Coalition for Financial Health, launched in 2022.

This report is also aligned with requirements from UNEP's FI Principles for Responsible Banking (PRB). A self assessment disclosure on PRB can be found in the technical appendix of this report. Selected sections of our 2022 PRB reporting and self-assessment have been assured by ERM CVS, an assurance provider, to a limited level of assurance. Full details of the scope, activities, limitations and conclusions of ERM CVS' assurance are included in the Assurance Statement, at the end of the technical appendix.

Managing climate-related, environmental and social risk

Assessing and managing the risks associated with a transition to net zero is critical. As climate risk becomes increasingly relevant, many banks are evaluating the potential negative impacts it could have on their business. Both transition risk, which can arise from changes in policy, law, technology and the market, and event-driven or longer-term physical risk, caused by events such as drought, flooding and extreme weather, could impact the economy, clients and therefore our business. Even after implementing measures to help mitigate the effects of climate change, physical risks could continue to occur since climate change is actual. Therefore, these risks need to be well understood and managed. The way we do this, as well as an explanation of the different risks involved, our performance and results, can be found in the 'Risk management' section.

Environmental and Social Risk (ESR) policy framework

ING's ESR policy framework helps us make informed choices about how, where and with who we do business. In 2022, the ESR framework was updated to reflect several minor amendments following the last comprehensive review cycle that took place in June 2021. The new release includes, among amendments to restrictions in the tobacco value chain, additional clarity on some of the requirements for the ESR client assessment process concerning specific group of companies. It also includes the required ESR due diligence for public authority entities. As well as restrictions, the ESR policy also sets guiding principles for biodiversity and human rights.

Biodiversity

According to the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES), the rate of species extinction is accelerating with grave impacts on people around the world. IPBES estimates that around one million animal and plant species are now threatened with extinction, many within decades. If the rapid decline of biodiversity continues, the livelihood of many businesses is at stake. The agricultural sector, for example, depends on healthy ecosystems, and the construction and pharmaceutical sectors both need access to natural resources to prosper. This can have an impact for banks.

Through our ESR policy framework, ING identifies and manages risks related to biodiversity loss. Our processes focus on avoiding a negative impact on biodiversity, where possible, and minimising impact that cannot be avoided. We also engage with clients to find and finance opportunities to do business in a way that respects nature.

Also through the framework, we apply strict ethical and environmental criteria to financing decisions. We don't finance projects that directly impact high-value ecosystems, such as UNESCO heritage sites, Ramsar wetland sites or areas designated for protection by the International Union for the Conservation of Nature (IUCN I and II areas). In addition, our screening criteria include enhanced due diligence for transactions that can impact rich biodiversity areas and ecosystems. In 2022, we expanded our due diligence to include 'key biodiversity areas', which are host to critical populations of the world's most threatened species.

To ensure employees understand the impact of biodiversity loss on business, we introduced two learning modules in 2022. The first, an internal video explaining biodiversity loss, why it is relevant to customers and to ING, what we are doing to protect biodiversity and how employees can help. It is part of a sustainability learning offering, available to the entire company. The second module was co-developed with the Biodiversity Working Group of the Dutch Sustainable Finance Platform, which is hosted by De Nederlandsche Bank. The e-learning is available on the platform's website.

Reducing deforestation is a priority for protecting biodiversity and can make major contributions to climate mitigation. We engage with clients around the world, active in cattle, palm oil, soy, wood, cocoa and coffee, calling on them to put in place no-deforestation and no-ecosystem conversion policies and commitments and to work towards full traceability in their supply chains.

To restore biodiversity globally, all stakeholders need to work together. That's why ING is an active member of external partnerships and initiatives. We work with peers and expert organisations to further develop the TNFD framework, which we intend to use as guidance in future reporting. ING is also a member of the finance workstream of the EU Business@Biodiversity platform, an EU-led initiative that aims to support financial institutions in integrating biodiversity risks and opportunities.

ING is a signatory of the Equator Principles, a financial industry benchmark for determining, assessing and managing environmental and social risk in projects. Projects financed under the Equator Principles framework that have an impact on natural ecosystems, are expected to carefully manage that impact. We have strict criteria in place to apply this framework, ensuring that biodiversity impact is not only avoided and minimised where possible in these projects, but also restored.

Human rights

We believe every person, everywhere, has the right to be treated with dignity and have their interests considered equally. ING and our clients have the potential to impact human rights through our operations and business relationships. Our impact is on different levels: how we do business, and with who we do business, not only as an employer but also through our supply chains.

We work to influence and support business partners to respect human rights in multiple ways. Our ESR policy framework includes an overarching policy on human rights to guide us when assessing clients and the transactions we finance. We also act on a variety of environmental, climate and social topics as well as highlighting their interconnectivity. For example, our approach acknowledges that biodiversity loss negatively impacts people's human rights, affecting their access to food, water, sanitation, culture, property, a healthy environment and more.

In 2022, we published a Human Rights Review 2021/2022 where we disclosed our most severe human rights issues in Retail Banking with an emphasis on individual customers (discrimination, financial distress and privacy abuses). We also provided updates on the management of our most severe human rights issues in our own operations (work-related stress and discrimination). We also developed a tool for analysing the human rights impact within our portfolio. We are currently piloting this tool and looking into ways to implement it as part of ING's existing processes.

We continue our human rights efforts in line with the UN Guiding Principles on Business and Human Rights (UNGP) as well as the OECD Guidelines for Multinational Enterprises. We do this by understanding regional and portfolio risks, engaging with clients, using financial leverage when needed, and being cognisant of human rights impacts when engaging with stakeholders. We consulted with human rights and civil society organisations in drawing up our ESR policy review.

Via platforms that set standards on this topic, ING aims to be transparent about our progress in the hope that others will join us and strive to be a step ahead of broader expectations. Read more in ‘Environmental, social and governance risk’ in ‘Risk management’. To understand the link between human rights and climate change, a section of our climate report is dedicated to human rights. The transition to a green economy may impact people. Transitioning out of fossil fuels may result in stranded assets and consequently affect surrounding communities. It could also increase energy poverty for vulnerable people reliant on fossil fuels. We recognise that as the world transitions from a carbon-intensive economy into a green economy, we must collectively acknowledge the needs of people, especially the most vulnerable.

Financial health and inclusion

Part of ING’s purpose to empower people to stay a step ahead in life and in business means helping customers and society stay a step ahead of the challenges they’re facing. One of the ways we can make a difference here is by aiming to advance financial health and inclusion for customers and communities.

Financially healthy people can contribute to a healthy economy and help drive social progress. At the same time, money is a leading cause of stress for people with half of European households struggling to make ends meet. According to the group European Pensions, one-third are unable to face unexpected financial expenses and close to 40 percent are not saving for retirement.

ING is committed to empowering customers and the community towards improved financial health, a state in which an individual, household, micro, small or medium-sized enterprise can manage their current financial obligations and have confidence in their financial future. This includes managing day-to-day finances to meet short-term needs, the capacity to absorb financial shocks (resilience), the capacity to reach future goals, and feeling secure and in control of finances (confidence).

According to a financial health working group convened by the UN Secretary-General’s Special Advocate for Inclusive Finance for Development, having financial health as a business purpose contributes to happier, more engaged customers with greater financial resilience, better management of day-to-day finances, an enhanced ability to set future goals, and improved confidence, security and control of finances. ING is part of this working group: the Special Advocate has showcased our approach as best practice.

Financial health can also be seen from a human rights perspective. Everyone has a basic right to be a full member of the economy and live life in a financially dignified way. ING strives to make sure it does not discriminate by giving customers different levels of essential information. We aim for our information to be comprehensible and accessible for all.

Advancing customers' financial health and inclusion

ING has built a financial health framework consisting of three pillars. For each pillar, best practices are shared between business units with the goal of learning from each other. Similar projects are running in several countries but tailored to local circumstances. Examples include a project in Spain on the avoidance of overdraft, which is now also running in Germany.

Other examples are campaigns in Germany, the Netherlands and Romania which aim to stimulate those with hardly any savings to adopt a savings habit and, if possible, to build a savings buffer. Tracking each project to measure effectiveness, we introduced 15 new financial health projects in Spain, Germany, Romania, Turkey, Australia and the Netherlands in 2022, reaching two million customers.

Financial inclusion, the first pillar, is about everyone who meets the bank's criteria having access to banking products and digital adoption, including those with seeing or hearing difficulties - what we refer to as 'leaving no one behind'. It also means that people have effective access to all types of financial products, not just basic ones. To achieve this, we want to create equal opportunities and make sure products, services and facilities are accessible to everyone and we want to engage people to effectively use them. Examples of this include voice-activated ATMs in Poland, the Netherlands and Turkey, and a bank card with a notch so the visually impaired can insert them correctly, in the Netherlands and Belgium. The card is also designed to support customers with limited hand functionality. In Australia, we provide phone banking for customers with speech or hearing impairments via the government’s National Relay Service. Sign language services are available in some bank branches in Poland.

ING also started a programme to align digital channels in all EU Retail Banking countries with the EU’s Web Content Accessibility Guidelines standard (WCAG 2.1). For example, in the Netherlands, the ‘MijnING’ app is accessible with a voice-over to transfer money or to get current account insights. Examples of improving digital inclusion include ING in Belgium partnering with Beego to help customers become digital by providing ‘digibuddies’ (computer science students) to assist them. And in Australia, more than 100,000 customers over 55 have received information to improve their digital awareness and skills. Financial inclusion will be included in the ING Compliance framework under the Client Protection Framework we are developing, as we want to uphold the same standards across the globe.

The second pillar of our financial health framework is about making sure that people’s monthly expenses don't exceed their income, and having healthy levels of debt and financial resilience. Everyday Round Up for example encourages customers in Poland, Australia, Turkey, Germany, Spain and Romania to build savings. We continue to partner with apps like Minna, which displays customer subscriptions in one place, and Dealwise, a shopping platform that gathers cashback deals and discounts in one place.

In 2022, ING in Spain introduced Money Up!, which aims to provide financial peace of mind by giving customers a clearer view of their income and expenses, with intuitive, customisable tools to improve their finances and make better informed decisions.

Skyrocketing energy costs and inflation, partly stemming from the war in Ukraine, had a significant effect on families across Europe and beyond. The cost-of-living crisis meant that many people struggled to pay their bills. ING assisted impacted Dutch customers (and non-customers), via a campaign directing them to www.geldfit.nl/energie to help manage their situation. In September 2022, more people were referred to Geldfit than in the whole of 2020 and 2021 combined.

The third pillar of our financial health framework is helping customers with their financial planning. In Germany, a personal budget tool is available for customers to plan and control expenses as well as discover potential savings. In Belgium, Easy self-invest gives customers access to information from ING investment experts and allows them to start investing with only small amounts of money.

Supporting financial health in the community

In 2022, the war in Ukraine resulted in months of escalating devastation and displacement for children and their families. Not only were children among the many killed, wounded or deeply traumatised, but their access to school, healthcare and other basic services was severely interrupted. In response to the crisis, ING, together with colleagues and clients, donated more than €6.5 million to UNICEF's emergency response and more than €7.5 million to local charities supporting people impacted by the war in Ukraine and in countries receiving refugees.

Both the Covid-19 pandemic and the war in Ukraine exposed and deepened existing inequalities. As a result of the war and soaring food and energy prices, the UN Development Programme noted that a staggering 71 million more people around the world experienced poverty in 2022. According to Ipsos research carried out in December 2022, people not just in the EU, but globally, listed cost-of-living as their biggest concern.

Our approach to community investment adapts to these changing needs. Through a combination of global and local funding, we support programmes that contribute to an inclusive economy, one where everyone can participate. In 2022, ING, together with colleagues and clients, donated an additional €13 million to a range of social programmes, €9 million of which was specifically focused on building financial health in communities, covering the areas of future-proof employment, financial capabilities and social enterprises.

As examples of supporting employment, in 2022 the ING Netherlands Foundation partnered with Hack your Future to train former refugees to become IT professionals and help them find jobs. It worked with Jong Ondernemen to increase opportunities for students to enter employment, and Springplank, which was set up to guide homeless people towards employment, housing, and financial capability. In Italy, we continued to partner with Fondazione Mondo Digitale to provide training for around 6,000 people, especially women, in digital and job-orientation skills. In Germany we partnered with MentorMe, a mentoring programme that supports vulnerable women in the job market. Mentees are matched with ING mentors for one year. In Belgium, we worked with the King Baudouin Foundation to fund projects that strengthen digital inclusion, helping people develop digital skills and ensuring that digital products and services are accessible to all. ING customers get involved by helping to choose which projects receive additional funding.

ING also initiated projects that assist with financial capabilities. In the Netherlands for example, the ING Netherlands Foundation supported Money Start to provide education on debt prevention while the Youth Perspective Fund helps young people to become debt-free. In Spain, together with Nantik Lum, we supported the CREA Salud Financiera programme to improve the financial health of women that are, or are at potential risk of, socio-economic exclusion. In Luxembourg, we worked with Jonk Entrepreneuren to inspire and prepare young people aged nine to 25 for entrepreneurship and employment. Twelve programmes provided hands-on learning in entrepreneurship, work readiness and financial literacy.

As examples of projects focused on social enterprise, in Romania, together with Impact Hub, we empower charitable associations with entrepreneurial education and guidance to help them improve interventions, generate alternative sources of funding and develop scalable solutions that increase their social impact.

Next to these examples, we also provided funding to projects in Australia, the Czech Republic, France, Poland and the United States.

Empowering employees on sustainability

Putting sustainability at the heart of what we do means making sure employees are fully engaged on this topic. We aim to give them the relevant knowledge, skills, and mindset to put sustainability into practice both inside and outside the workplace.

In 2022, to further develop awareness around sustainability, we hosted global and national webinars and townhalls addressing sustainability topics such as climate action, climate risk, human rights and biodiversity. In the Netherlands, we held 'Let’s talk sustainability' events, where ING experts, partners and employees came together to discuss relevant sustainability topics. In addition, a global sustainability e-learning was made available to empower employees with sustainability-related knowledge and skills. It included foundational and advanced learning modules. Some of these were developed specifically for ING, while others were provided by partners. Additional learnings on climate risk and biodiversity were included, in cooperation with the Dutch Banking Association (NVB). On an expert level, where employees required further skills, we provided online and offline training on sustainable finance, as well as environmental and social risk.

ESG governance

In March 2022, we updated our ESG governance approach, integrating and aligning ESG governance with existing business-as-usual governance of the bank. This allows us to steer holistically across ESG on themes like climate, biodiversity, human rights and financial health. As a result, ESG is now a regular topic on the MBB agenda. Our global head of Sustainability reports directly to ING's CEO. Sustainability/ESG leads in major countries have a functional line to the global head of Sustainability to create a stronger connection between global and local actions.

The ESG Committee, set up in 2022, assists the SB with matters relating to ESG, including, but not limited to, the development and integration of ESG across the company and its strategy. The ESG Committee also assists the SB by monitoring and advising on relevant ESG developments. In addition, we have created an ESG Sounding Board comprised of senior leaders from across the organisation and including representatives from Legal, Investor Relations and Corporate Strategy. The Sounding Board helps guide the development and implementation of our strategy for ESG topics as well as monitoring and reporting on our progress. We follow the recommendations of the Taskforce for Climate-related Financial Disclosure in our governance and reporting. We believe this new approach increases our effectiveness, efficiency and accountability as we strive to be a banking leader in building a sustainable future for customers, our company, society, and the environment.

Taxation

Our taxation policies and performance are key elements under the governance pillar of our ESG framework. We are mindful that every aspect of our business, including our approach to tax, has an impact on society. We have therefore chosen to formalise our approach to clarify our views on responsible tax behaviour and tax governance.

Our tax principles, which are applicable worldwide, mirror ING's values of integrity, honesty, prudence and responsibility. These values are the main drivers for our relationship with tax authorities and for the adoption of tax transparency as standard practice.

As a global bank, we play a crucial role in fighting financial crime and protecting the financial system from harmful behaviour. This includes criminal activities such as tax evasion, but also aggressive tax avoidance, which although not illegal can be damaging to the communities in which we operate. We aim not to facilitate such activities. We also believe in the principle that tax should follow business, so profits are allocated to the countries where business value is created. It is our policy to comply with domestic and international laws and regulations, taking account of both the letter and the spirit of the law, as well as standards such as the OECD guidelines for multinational enterprises, and we apply the arm's length principle.

Wherever we operate, we seek to establish and maintain an open and constructive dialogue with local tax authorities and other government bodies, based on the disclosure of all relevant facts and circumstances. In this dialogue we seek to provide clarity and establish certainty on all relevant local tax components in advance. We are transparent about our approach to tax and our tax position. In formulating this approach, we have taken account of the interests of our stakeholders, including (tax) authorities, non-governmental organisations, customers, shareholders and society in general.

Disclosures are made in accordance with relevant domestic regulations, as well as applicable reporting requirements and standards such as the International Financial Reporting Standards. Since 2015, each ING annual report has contained a country-by-country overview of the result (before tax) and the total corporate income tax charge per tax jurisdiction. ING also submits, annually, a similar type of overview to tax authorities which enhances their insight into our tax position. In 2022, ING was ranked third in the Association of Investors for Sustainable Development (VBDO's) yearly Tax Transparency Benchmark.

It is our policy not to advise clients on taxation matters. Clients remain responsible for their own tax position.

ING joined the Dutch Tax Governance Code developed by the Confederation of Netherlands Industry and Employers (known as VNO-NCW). ING embraces the principles of the code and will work consciously to comply with the targets set, as laid out in our Tax Governance Code. This is available on ing.com in the Compliance section under About Us. The financial information in the Tax Governance Code is recorded under notes to the consolidated financial statements in this annual report (see note 32, Information on geographical areas and note 34).

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 takes place on a continuous basis with annual reporting to the board and various other stakeholders. For SOx 404 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. As part of the tax risk assessment, if applicable, the potential use of (tax) incentives and/or subsidies is considered acceptable to the extent explicitly intended by the authorities.

In all countries in which ING is present, it is ING's position to be cooperatively tax compliant. This implies being transparent about, and disclosing, relevant tax risks towards tax authorities. Tax risks not only refer to ING's own tax position, but also our role as gatekeeper for the financial system as well risks in relation to our customers. In this respect, we have integrated a tax integrity assessment in our overall customer risk assessment process.

How we are making the difference

ING is making the difference by concentrating on two overarching strategic priorities: giving customers a superior experience and putting sustainability at the heart of what we do. To put these into practice, and to make that difference for all customers, we have defined four enablers: providing seamless digital services, using scalable technology and operations, staying safe and secure, and unlocking our people's full potential.

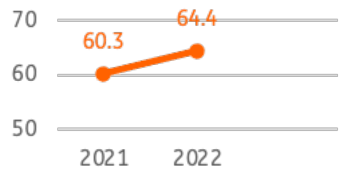
Channel availability [1]

Retail Banking
Netherlands & Belgium
99.38%

Wholesale Banking
Interactive payment channel
99.99%

Wholesale Banking
Host-to-host connection channel
99.97%

Digi Index Score (%)



Average of STP (straight-through-processing) rates of 341 Retail customer journeys; STP rate is the percentage of a customer journey that is handled without manual intervention

1 For details regarding the measurement of this KPI, we refer to paragraph "Digital access" on page 25

2 Weighted average availability during prime time (6:30 - 01:00); based on number of primary customers per country for channels: Internet banking Private Individual, Internet Business Banking and Mobile Banking App.

3 and 4 Average availability 24x7, measured frequently per hour, excluding planned changes.

Providing seamless digital services

In a world where accelerating digitalisation is one of the main global trends impacting banking, customers are spending more and more time online. That's why we want to make their lives easier by giving them a seamless digital service. Putting the customer at the centre remains our core strategy.

Customers deserve a personal, easy, relevant and instant experience at every touchpoint, from the way we communicate and onboard them to how we provide products and handle customer requests. ING facilitates this by developing, maintaining and enhancing personalised, reliable digital services that are available 24/7. Developing, maintaining and enhancing these basics provides the foundation for providing a superior customer experience, and in turn this will help us achieve our ambition of becoming the number-one bank for NPS in all ING countries.

Our emphasis continues to be on mobile and we are further improving our mobile capabilities. In 2022, 71 percent of our communication was personalised. As well as helping customers to make more informed financial decisions, personalising customer interactions helps boost mobile sales. In 2022, 58 percent of customers only engaged with us via mobile apps, up from 51 percent in 2021.

We use data analytics and machine learning to personalise digital services for customers. Given the importance of data for offering personal and relevant services, data security and privacy protection are crucial.

By digitalising key customer journeys we are enabling a superior customer experience at a reduced cost-to-serve, while measuring impact through NPS and cost efficiency. In 2022, our Digi Index Score was 64 percent, a figure that reflects the average of straight through processing (STP) rates of key customer journeys i.e. those that are handled without manual intervention. By 2025, we aim to reach a Digi Index Score of over 75 percent.

Data analytics

We use advanced analytics and machine learning to extract insights from data to personalise customer experiences, making the difference for both customers and colleagues. Our ambition as part of our strategy of seamless, digital/scalable operations is to increase our STP rate to facilitate a smoother customer experience. Call reduction and further digitalisation of our processes are a part of this. We have further invested in our chatbot, callbot and virtual assistant capabilities and now have active chatbots in Belgium, Italy, the Netherlands, Poland, Spain and Turkey, deflecting up to 40 percent of incoming chat volume automatically. Guided by chat and callbots, customers can now learn how to resolve issues themselves using the ING mobile app. Other benefits for customers include less waiting time if they want to speak to an agent because more chats and calls are handled through digital solutions, and it is easier for them to find quick answers to simple questions, even outside regular business hours. ING uses machine learning techniques to understand a customer's intent and thereby make it possible to respond in a more personal way to the customer request.

Analytics is also used to help create a safe and secure environment within the bank. Analytics has contributed to a bank-wide anti-fraud programme, supporting the reduction of fraud damage for both customers and ING. This was realised through machine learning models for certain fraud 'modus operandi'. We also use our AI insights and expertise to fight financial and economic crime. Our advanced AI model allows us to detect financial and economic crime better and earlier.

In addition, ING is a partner of the Kickstart AI initiative in the Netherlands, which aims to solve real business problems with the use of AI. This year, we joined other member companies in tackling the food waste challenge and improving the demand forecasting model at Delhaize Belgium that helps balance product availability and waste.

Scalable technology and operations

Reflecting our role as a digital first bank and to enable a superior customer experience, ING believes that scalable technology and operations are the foundation for becoming a successful digital bank and therefore have made this an integral part of our strategy. Standardisation and automation give us a shorter time to market, quicker time to volume, consistently high quality and improved productivity. Scalable technology and operations also help us attract and retain talent by offering employees the opportunity to not only work with technology but also collaborate across countries and make an impact globally. By creating foundational and scalable capabilities and services, we allow the business to grow at marginal costs.

Scalable technology

Our scalable technology strategy provides a foundation for the modular components we use to build and operate propositions. It allows ING countries to introduce propositions more quickly and easily, while providing the opportunity to add local flavour.

The technology is divided into three parts: ING's private cloud infrastructure (IPC), our engineering pipeline (OnePipeline) and our banking technology platform, with its extendable and reusable services and components. Given its flexibility and scalability, ING has chosen for a hybrid cloud strategy, i.e. using public cloud providers in addition to IPC. Cloud computing is an important component for scaling our digital capabilities. IPC is where we store and manage applications and data such as channel applications, core bank systems and other banking applications. We measure IPC adoption by the percentage of physical cores in IPC compared to the total number of physical cores in data centres globally. By the end of 2022, we ran 52 percent of our workloads on (private) cloud. By 2025, we expect that figure to have risen to at least 70 percent.

OnePipeline, our continuous integration and delivery pipeline, provides engineers with a consistent and secure global capability to develop, test and deploy software. We invest heavily in infrastructure, test and risk automation. Today, about 48 percent of applications are maintained through the pipeline. We measure the pipeline's adoption by the numbers of applications onboarded to the pipeline (used to develop and deploy to production), compared to the total number of applications registered in our IT management platform across all ING entities. We exclude those applications where a pipeline is not applicable, such as no-code or SaaS applications. Our ambition is to have 90 percent of applications on OnePipeline by 2025.

Touchpoint is part of our banking technology platform. In 2022, approximately 60 percent of customer logins used Touchpoint. By 2025, we expect that figure to be over 90 percent. By using common architecture and shared services, engineers can create propositions without the ‘heavy lifting’. Touchpoint provides modularity and a set of reusable shared services, freeing up capacity for engineers to create more value for customers and employees. We measure customer online traffic on the platform through the consumption of Touchpoint authentication services, represented by the number of Touchpoint-enabled unique customer authentications against the total number of unique customer authentications (Retail countries/Wholesale Bank).

Payment & Settlement Services

In 2022, as part of our strategy, we have bundled our strategic payments and settlement services (PSS) into a new unit under CTO (Chief Technology Office). This unit covers the full scope of payment and settlement services for Retail and Wholesale Banking and benefit from our scalable tech and ops. It provides high quality and efficient payment, settlement, and open banking services, leveraging our scalable payment and settlement solutions.

Through an increased focus on these payment and settlement services, we allow our business to provide a superior customer experience. We aim to further consolidate most of our payment services on this platform, improving quality and reducing price per transaction. As of 2022, PSS processed well over three billion transaction (65 percent of total volume) through our central payment engines.

Scalable operations

Our scalable operations are driven by digitalisation and capability hubs. These focus on becoming fully STP, leveraging expertise and using scale and sharing productive, quality services across the ING network.

Capability hubs provide shared solutions to ING Bank worldwide. The hubs are mainly located in the Netherlands, Poland, Romania, Slovakia and the Philippines. In 2022, 32 percent of operations were carried out with the support of these hubs, compared to 23 percent in 2021. Our aim for 2025, is to have at least 50 percent of operational work carried out by the hubs.

By digitalising client contacts, accelerating remote advice and increasing the use of chatbots, inbound calls to contact centres were reduced by 12 percent in 2022. We aim for 30 percent in 2025, which we expect will represent an annual gross cost saving of around €50 million. Similarly, by automating and centralising our KYC activities this year, we reached 49 percent of know your customer (KYC) in our hubs and expect to increase that to 60 percent by 2025 through more consolidation, automation and straight-through processing.

Staying safe and secure

Trust is the starting point, the most basic requirement, for all stakeholders. That's especially true for a digital-first bank like ING. People trust us with their money and with their data. Keeping it safe, and maintaining this trust is crucial (see also 'Risk management').

Digital access

In a digital society, customers expect to have round-the-clock access to digital channels including their banking services. To live up to their expectations, we strive to provide uninterrupted access to our banking services. In Retail Banking in 2022, our digital channel availability for the Netherlands and Belgium was 99.38%. For Wholesale Banking clients worldwide, the availability for our Inside Business payments channel was 99.97%, and for our Inside Business Connect channel (file transfer) the availability was 99.99%. These figures are based on outputs of availability monitoring processes, which are run with a high frequency per hour. The 2022 results are in line with the 2021 channel availability results.

Anti-money laundering and KYC

Knowing who we do business with helps to protect our clients, ING and the financial system against financial economic crimes. As part of our continuing anti-money laundering (AML) efforts, we carry out customer due-diligence checks and monitoring transactions for unusual or suspicious activities. We also assess the projects and companies we finance for environmental and social risks and aim to steer clear of activities in certain sectors or industries that could be harmful to people or the environment. In 2022, we strengthened our KYC with, for example, increased staff, upscaled skills and additional local requirements where needed. Read more about KYC and AML in 'Compliance risk' in 'Risk management'.

Cyberthreat landscape

As a gatekeeper to the financial system, we have an important role in protecting society against crime. Cybercrime remains a continuous threat to companies in general and to financial institutions in particular. Ransomware is still one of the prime threats, with phishing the most common way that attackers gain access to a company's system or network. Other high-ranking threats are attacks against availability, or Distributed Denial of Service (DDoS) attacks. However, the geopolitical situation resulted in increased awareness of cybersecurity threats, resulting in more attention for the global cybersecurity domain. While we still observe an increase in the number of threats, we also see a wider range of ways that attackers infiltrate company systems, such as exploiting unresolved vulnerabilities, notably 'zero-day exploits', i.e. vulnerabilities that are exploited before a patch is available.

Cybersecurity incidents

During 2022, one attack impacted our availability of digital services in Germany. Channels were unavailable for less than two hours. No other cybersecurity incidents were identified in 2022 that resulted in significant operational downtime, data theft or financial loss.

Different types of cyberthreats are not only relevant for the financial industry, but are increasingly hitting their supply chains. ING continues to invest in cybersecurity capabilities in all domains (prevention, detection, response and recovery).

Preventative measures

Being cybercrime resilient is a high priority. We continuously test our IT and organisational resilience, and perform crisis management and red-team exercises to improve our response to DDoS and targeted attacks. Cybersecurity risks from supplier's monitored and mitigation is initiated where needed. ING maintains a strong global cybercrime alliance within the financial industry and government institutions to monitor trends.

ING recognises the value of an effective regulatory framework and is in favour of cybersecurity being led more by actual cyberthreats and principles and less by prescriptive rule-based compliance. The adoption of threat-led penetration testing in the EU's new Digital Operational Resilience Act, which also ensures continuity of business, is a good example. Testing critical systems on real-life threats helps entities to gain insights. Our staff awareness and training programme is regularly updated with the latest cybercrime trends and prevention measures.

We have a responsible disclosure procedure for security researchers that may find issues in our business applications or infrastructure.

Identity and access management (IAM)

Identity and access management (IAM) is 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. ING has IAM global processes and controls in place which are periodically reviewed and tested. For more information go to 'Non-financial risk section' in 'Risk management'.

Fraud landscape

Types of fraud are also evolving. As the digital world continuously changes, fraudsters have become more international and their modus operandi more complex. Customers are being deceived in increasingly sophisticated ways. Online fraud has become a societal problem and in several countries banks have collaborated with governments, law enforcement entities and other sectors to find innovative ways to prevent and detect fraud. ING has an important role to play in preventing and detecting fraud in the digital world and wants to minimise the impact of fraud losses and the number of fraud victims.

We recognise this transformation in the fraud landscape with developments high on our agenda. We changed our fraud programme to improve its ability to monitor and react to fraud incidents and to adapt quickly to new fraud methods in a cost-efficient organisation. The global head of Fraud now reports directly to the global COO, and we have implemented a global delivery organisation (tribe) that brings detection and response services to all countries. This tribe uses several sources of information, and is able to assess whether a payment is done by a customer or by a fraudster. Also, we appointed a global head of fraud investigations and introduced innovative ways to share best practices across domains and countries.

Over 2022, we experienced an increase in the number of fraud incidents, but were able to respond quickly and adequately, resulting in a reduction of fraud losses compared to last year. The main modus operandi continues to be the phishing of customer credentials and fraudulent credit card transactions. We also see that authorised push payment fraud (e.g. impersonation of a bank employee) has become an important category to focus on. We are increasingly collaborating with peers and other relevant sectors, such as telecoms companies. More information can be found in the Risk management chapter.

Data privacy, protection and ethics

Customers trust us with confidential information and their personal data. It's important that we maintain that trust and keep their data safe from loss or misuse. In an environment that's increasingly open and connected, we must be ever more vigilant. ING is bound by global and local data protection laws, which can differ from country to country. We are transparent about what we do with the personal data of customers, employees, suppliers and business partners.

Our approach can be summarised as 'the right people use the right data for the right purpose'. In line with the EU's general data protection regulation (GDPR), we aim to only process personal data to support our business and in line with applicable legislation. 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. More information can be found in the Privacy Statement on our website.

In 2021, following the Schrems II ruling by the EU's Court of Justice in 2020 on the lawfulness of Privacy Shield, the EU-US personal data transfer mechanism, ING launched its own transfer impact assessment with necessary updates made to standard contractual clauses: contracts in scope were completed by the end of 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 Tech will be required to facilitate data portability and we expect a future proposal to establish PSD2-like data portability for finance.

In addition to complying with regulatory requirements around data use, ING assesses potential ethical questions, taking into account the rights and interests of our stakeholders, to verify whether we use data in a responsible way. Global and local data ethics councils guide our ethical decision-making and help to apply data ethics consistently.

As ethical standards can evolve over time, we closely monitor regulatory compliance, societal developments and potential new requirements to gain an 'outside-in' view on data ethics. We have assessed the impact of the EU's upcoming artificial intelligence legislation related to ethics and established an appropriate implementation plan. Everything we do is guided by ING's Orange Code, which describes the values and behaviours that underpin our way of working, and which puts integrity above all. Read more in 'Compliance risk', in the Risk management chapter. 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.

Unlocking our people's full potential

Ultimately, we are making the difference through the activities and actions of our people. We seek to attract, develop and retain the best people by creating an environment where they can unlock their full potential. ING's sustained success is founded on the continued commitment of our talented people. We unlock our people's full potential by ensuring all employees have skills and capabilities that equip them for the future, by promoting a diverse, inclusive and vitalised culture, where everyone feels they belong, and by providing an excellent employee experience.

In the past few years, our people have faced unprecedented challenges during the global pandemic. It has fundamentally changed the way people view their lives and has shifted employee expectations significantly. The hybrid way of working has worked well for ING. The pandemic allowed us to accelerate our digitalisation, we collectively pulled together and employees continued to deliver for our customers. We continue to support our people by offering hybrid working to make sure they have the autonomy to better balance their professional and personal lives. Eighty-five percent of our people strongly endorse hybrid working.

We care about giving our people this flexibility, especially since the changing dynamics following the pandemic has led to a change in employee expectations. It is important that our people feel supported and that, as well as a competitive total reward package, they receive good development opportunities and autonomy. This is reflected in our people offer, which is intended to create clarity on what we offer, and what we ask in return.

It matters to us that our people are engaged and that we have an open dialogue with them. We use a continuous listening approach, our Organisational Health Index (OHI), to get an ongoing sense of how our people are doing and how they feel and we make sure we act on that feedback. A full OHI was held in October, with a record number of participants: over 41,000 people, or 69% of our total workforce. On a global level, more colleagues indicated that they had clarity on our strategy, shared ING's vision and felt included in decision-making. Risk management remained one of our strongest practices and saw further improvement since 2021. We will use the outcomes of this survey to define action plans and priorities for 2023.

As well as making sure our people are engaged, we aim to unlock our people’s full potential by focusing on three elements: 'skills and learning', 'diversity, inclusion and vitality', and 'employee experience'.

Skills and learning

We want to attract, develop and retain the skills we need to deliver great performance. In 2022, we provided new tools to upskill and reskill our people, built the capabilities of our leaders and developed the pipeline of leaders for the future.

Upskilling our workforce

We want to equip our people to grow, upskill and reskill themselves, so that both our people and our business have the capabilities that are needed now and in the future. Together with an external partner, we launched a programme to boost learning content to 30 ING countries and the four ING Hubs (Philippines, Poland, Romania, Slovakia). It offers a wide range of learning courses in My Learning – ING’s open, digital learning platform that gives employees access to our complete learning offering in one location.

ING wants to be an organisation where learning and development play a major role and where our people feel supported in developing themselves. This is part of our culture. Development increased by 13%, with 1,317,760 courses completed and 1,509,938 learning hours undertaken. Over 44% of all learning completed was not mandatory, with more people than ever electing to learn new skills and build capabilities relevant to their job roles and functions.

At ING, we care about everyone being able to unlock their full potential and want to make sure all our people can access learning and development. We made learning solutions more accessible by implementing new guidelines for all required learning. We seek to provide digital services and workplace tools that promote disability inclusion and meet accessibility requirements set out in the Web Content Accessibility Guidelines (WCAG) 2.1. The WCAG is now our reference standard for all mandatory learning. We continued to embed this further into all content created for ING.

Building leaders for the future

To have strong leaders and an equally strong pipeline, we completed our annual succession review of the top 400 roles in the bank. We launched a new programme to accelerate leaders' readiness for bigger, global roles. Fifty-four percent of the talented participants in this programme were women and 10 countries were represented. We continued to build our internal talent pipeline through our early careers approach. We hired 81 trainees under our International Talent Programme under eight tracks: WB, Retail Banking, IT, Finance, Risk, HR, Operations & Change and Analytics.

We continued to strengthen our leadership offering through our Leadership Experience, which aims to develop greater leaders and better managers who can engage and grow talent and enhance team performance, and the Leadership Fundamentals programme, which aims to develop the foundational skills managers need to help themselves and their teams to be successful. Some 840 managers joined the

Leadership Experience and over 390 colleagues from 25 countries participated in the fully digital programme of our Leadership Fundamentals.

Diversity, inclusion and vitality

ING is committed to attracting, developing and retaining a workforce that reflects the customers and communities we serve. We believe that a diverse, inclusive and thriving culture makes people want to join and stay, and helps create an atmosphere where people can speak up, making us safer and more secure as a bank.

We introduced a 70% principle in 2018, which means we strive for no group or level to be comprised of more than 70% of the same gender, nationality or age group.

In addition to the broader benefits of a more gender-diverse senior management team - for our business, employees and customers - increasing representation of women in senior management is foundational to addressing our gender pay gap (i.e. the difference between the average remuneration of men and women), something ING committed itself to in 2022.

We deepened our focus on gender diversity by introducing a new target of at least 30% female representation in our senior management by 2025 and 35% in 2028. In 2022, that figure was 29%. The variable pay of our MBB is linked to delivery of these internal targets on gender diversity. We also defined 'senior management' consistently, in line with our Global Job Architecture (GJA, ING's global job catalogue).

To make sustainable improvements in gender diversity in senior management, we are changing how we hire, progress and retain talented women, with a bank-wide action plan introduced in 2022. For instance, by the end of 2022, we put a requirement in place with external recruitment firms to provide gender diverse candidate lists. We also use a structured and objective hiring process and aim to ensure our talent identification, succession, performance and reward processes are equitable and mitigate the risk of gender bias. We also created a more gender-inclusive and family-friendly workplace. We promote support for parental leave and flexible working to make sure all parents have the chance to be successful professionally while managing their family lives. The pandemic has showed us that our people continued to deliver for our customers and that flexible working enhances the lives of employees – especially those with care-giving responsibilities – and this matters to us. This is why we remain an advocate of hybrid working and give our people that flexibility.

To build a strong internal pipeline of talented women into leadership roles, we support and nurture top talent. We introduced a new leadership acceleration programme, with a 54 (female)/46 (male) percent gender split in the participant group and content that addresses gender-specific barriers to progression. We monitor the gender balance in our succession pipelines. We also extended targets to increase gender representation from our current top senior management roles to the leadership pipeline below. To understand women's experiences of ING, we launched a new, globally consistent exit survey, which will be analysed by gender, to identify the reasons for leaving and to make sure we take action to prevent regrettable loss of female talent.

To understand the experiences of all our employees, we use the OHI survey and psychological safety index. We identify different experiences based on gender and other organisational and personal demographics and then delve deeper to determine further actions. One of the ways we create a more equal and inclusive workplace is through external and independent review. ING is one of the 418 firms recognised in the 2022 Bloomberg Gender Equality Index (GEI). The Index offers public companies the opportunity to disclose information on how they promote gender equality across five separate areas: female leadership and talent pipeline, equal pay and gender pay parity, inclusive culture, sexual harassment policies, and pro-women brand. In 2022, ING scored 70.35%, a small improvement on the 70.26% score from 2021. This is the seventh year we have been included in the listing with feedback guiding our future actions.

In addition to our action on gender diversity, 32 thriving employee networks help us advance our diversity and inclusion efforts. These networks raise awareness and create connection, focusing on gender, LGBTIQ+, race and ethnicity, cultural diversity, accessibility and age. To celebrate the diversity of our global workforce, we held our fourth consecutive Global D&I Day, with 26 countries participating in over 120 events.

ING is a founding partner of Workplace Pride, dedicated to improving the lives of lesbian, gay, bisexual, transgender, intersex, and queer (LGBTIQ+) people in workplaces worldwide. Its activities include the Workplace Pride Global Benchmark. In 2022, ING scored 78.8% and was recognised as a Workplace Pride Ambassador.

Vitality

We care about our people. We seek to encourage and support healthy and effective working, so they can deliver on ING's strategic priorities and thrive in life. Our approach to this has developed since the pandemic as our way of working has evolved.

We seek to we embed vitality in our working culture and promote healthy working habits. We offer employee assistance programmes, toolkits for managers and employees, and various locally tailored programmes to support the physical and mental vitality of our people. We also promote learning content on vitality topics on our My Learning platform. To reinforce this priority, we have also created a new leadership position. Our global head of Vitality works across our bank-wide network to enhance the vitality and resilience of our people.

Many vitality initiatives are locally driven and specifically tailored to local needs. For instance, the My vitality platform, launched in the Netherlands, Belgium and Luxembourg in 2020. It inspires and supports over 7,500 registered users with high-impact programmes on physical, mental, emotional energy and purpose. In total, My vitality users registered over 4.8 million km via smart devices in walking, running, cycling, swimming and any other way to move forward.

In Germany, Turkey, the UK and the US, local initiatives were introduced including workshops on physical and mental vitality, sport events and health check-ups.

The situation in Ukraine required support for many colleagues, especially those in Eastern European countries. Since the war started, ING has organised fundraising, arranged support for employees and offered assistance programmes to employees and their families. Additionally, employees in the countries neighbouring Ukraine voluntarily hosted colleagues and their family members.

Employee experience

Providing a superior customer experience is a strategic priority. This matters just as much for employees and we are therefore focused on continuing to improve our employee experience. We aim to provide personal, easy, and efficient services that encourage our people to unlock their full potential and be the best they can be. In 2022, we continued to digitalise our people services with a new virtual assistant (available for employees 24/7 in the Netherlands, Poland hubs and Manila hubs) and the introduction of our HR system Workday to 60% of all employees. We also continued to review and improve critical moments in the employee journey such as onboarding and international assignments. We started to focus on high-volume services such as expense reimbursements, job changes and people recruitment, which are major contributors to a superior employee experience. Finally, we continued to safely manage our HR operations to protect employee data and keep people processes compliant.

Our performance

Financial developments

In 2022, ING Bank performed well, despite challenging operating conditions which had a far-reaching impact on people's lives, on societies and on economies, causing energy and price shocks and driving up inflation and interest rates. ING Bank's net result declined to €3,667 million from €4,770 million in 2021, fully due to higher net additions to loan loss provisions, which had been at a very low level in 2021. The effective tax rate in 2022 was 31.4%, up from 27.7% in 2021. The higher effective tax rate was caused by the impact of the following non-deductible items for corporate income tax purposes in 2022: hyperinflation accounting loss in Turkey, impairments on TTB and interest expenses in various countries.

Income was supported by a growing primary customer base and an increase in lending and deposits. Our global retail customer base (excluding France, after the announced exit from the retail market) remained flat at 37.2 million, but even more customers chose ING as their primary bank. In 2022, we gained 585,000 primary customers, bringing the total number to 14.6 million, which was 4% higher than at year-end 2021 (excluding France). Net core lending growth (adjusted for currency impacts and excluding Treasury and the run-off portfolios) was €18.2 billion in 2022, and net core deposits growth was €25.1 billion.

In our P&L, we saw the benefits of the rising rate environment, which boosted net interest income. This was on top of the structurally higher fee base, resulting from our efforts to diversify income. All these positive developments were largely offset, however, by several exceptional income items in 2022 (including the impact of Turkey hyperinflation, a mortgage moratorium in Poland and the unwinding of a deposits hedge in Belgium and our TLTRO-related derivative position), resulting in an income growth of 0.3% to €18,546 million.

Net interest income rose 1.0% to €13,745 million. The increase was driven by higher margins on liabilities, following the return of positive interest rates in 2022. This was only partly offset by lower margins on mortgages and other lending, as client rates generally track the higher cost of funds with a delay and prepayments on mortgages declined. After ECB's decision to change the conditions for the TLTRO programme, we had to unwind our TLTRO-related derivative position. Combined with the remaining TLTRO benefit until 23 November 2022, this led to a net TLTRO impact of €-87 million compared to a net benefit of €483 million in 2021. Net interest income in 2022 also included a €-343 million impact from new regulation in Poland for mortgages. ING Bank's full year net interest margin declined to 1.34% from 1.39% in 2021. Excluding TLTRO in both years and the impact of the Polish moratorium, the net interest margin showed an increase of 4 basis points year-on-year.

Net fee and commission income rose 2.0% to €3,586 million. Fee income for daily banking products strongly increased, reflecting growth in primary customers, an increase in payment package fees and new service fees. Lending fees also increased, driven by lending growth in Wholesale Banking. This was partly offset by lower fees from investment products and from Global Capital Markets, reflecting adverse market conditions.

Total investment and other income decreased to €1,215 million in 2022 from €1,354 million in 2021. This included the largest part of the impact of Turkey hyperinflation, €-288 million to unwind a macro fair value hedge of deposits in Belgium (of which €-247 million in Retail Banking and €-41 million in Wholesale Banking) and €165 million of impairments on our stake in TTB, while 2021 had included a €72 million recognition of a receivable recorded in Corporate Line. Other income in 2022 was supported by a €125 million gain from the transfer of our investment business in France, a €67 million gain from a legacy entity in Belgium and income from the sale of a non-performing loan portfolio in Spain.

Operating expenses decreased by €2 million to €11,193 million. Expenses in 2022 included €1,250 million of regulatory costs, slightly lower than in the previous year. Expenses in 2022 furthermore included €325 million of incidental items, largely related to restructuring provisions and impairments and also including €75 million for adding the interest-on-interest effect to the compensation for customers on certain Dutch consumer credit products. Incidental items in 2021 had amounted to €522 million, mainly reflecting a €180 million provision for the compensation to Dutch customers with certain consumer credit products and redundancy provisions and impairments related to the announced exit of the retail banking markets in France and the Czech Republic. Excluding regulatory costs and incidental items, expenses were up 2.2%, impacted by high inflation, which was mainly visible in staff costs. This was partly offset by continued cost-efficiency measures and earlier actions taken to change the footprint. The cost/income ratio was 60.4% versus 60.6% in 2021.

Net additions to loan loss provisions increased to €1,861 million, or 29 basis points of average customer lending, compared with only €516 million, or 8 basis points, in 2021. Risk costs in 2022 were heavily impacted by the Russian invasion in Ukraine, which led to a net addition of €533 million on our Russia-related exposure. The remainder was mainly due to an increase in Stage 3 individual risk costs, particularly in Wholesale Banking, and new overlays to reflect the risks from secondary impacts, such as an increase in energy prices, higher interest rates and inflation, as well as supply chain disruptions.

The return on IFRS-EU equity of ING Bank decreased to 8.2% in 2022 from 10.1% in 2021.

Retail Banking

Total Retail Banking

In 2022, Retail Banking showed a good commercial performance. However, net result declined 5.9% to €2,862 million due to the impact of exceptional items in income and higher risk costs in 2022. The result before tax decreased 6.3% to €3,983 million.

Income decreased by €171 million, or 1.4%, and this included the negative impact of unwinding our TLTRO-related derivative position in 4Q2022, as a result of ECB's decision to change the conditions for the TLTRO programme. The net TLTRO impact in 2022 was €-123 million compared to a €152 million benefit in 2021. Income in 2022 was also impacted by €-563 million of exceptional items, consisting of €-343 million impact from the introduction of the Polish mortgage moratorium, €-247 million to unwind a macro fair value hedge in Belgium and €-165 million for impairments on our stake in TTB, only partly offset by €125 million income from the transfer of our investment business in France and a €67 million gain from a legacy entity in Belgium. Excluding TLTRO and those exceptional items, income rose 5.5%. The increase was mainly in net interest income on liabilities following central bank rate increases while deposit tracking was still limited. Net interest income on lending products declined, reflecting delayed tracking of higher cost of funds in client rates as well as reduced levels of prepayments on mortgages. Net core lending growth, which excludes currency impacts, Treasury and the run-off in Westland Utrecht Bank and France (as from the second quarter of 2022), was €15.8 billion, of which €11.2 billion was in residential mortgages, largely in Germany. Net core deposits growth (also adjusted for the run-off in France) was €18.9 billion in 2022, primarily in the Netherlands. Net fee and commission income rose 2.5%, driven by a strong increase in daily banking products, reflecting higher package fees, recovery of international payments and the introduction of new fees. This compensated for lower fees from investment products due to a decline in stock markets and subdued trading activity.

Operating expenses declined by €140 million, or 1.8%, compared with 2021. Expenses in 2022 included €233 million of incidental items, largely related to restructuring provisions (mainly in Belgium and France) and the addition of the interest-on-interest effect to the compensation for customers of certain Dutch consumer credit products. In 2021, incidental items had amounted to €455 million, primarily reflecting redundancy provisions and impairments related to the decision to exit the retail banking markets in France and the Czech Republic and provisions in the Netherlands for the closure of branches and the compensation for certain consumer credit products. Expenses excluding regulatory costs and incidental items were well-contained, despite inflationary pressure, and increased 0.8%. The cost/income ratio was 62.0% in 2022 compared with 62.3% in 2021.

Net additions to loan loss provisions for Retail Banking increased to €639 million, from €399 million in 2021, but with 14 basis points of average customer lending remained well below the through-the-cycle average.

Risk costs in 2022 included €431 million of Stage 3 provisioning and €208 million of net additions in Stage 1 and 2, and were mainly recorded in Poland, Belgium and Germany.

Market Leaders

Retail Netherlands

The result before tax of Retail Netherlands increased 4.0% to €2,014 million from €1,936 million in 2021. This increase was attributable to lower expenses, mainly due to lower incidental cost items, partly offset by lower income and limited risk costs, after a net release in 2021.

Total income declined by €66 million to €4,196 million, fully due to a net TLTRO impact of €-78 million compared to a €53 million benefit in 2021. Excluding TLTRO, income rose 1.5%. Net interest income excluding TLTRO declined 8.4% due to lower margins on lending products, reflecting the lengthening of the duration of the book and lower prepayment penalties. This was partly offset by higher liabilities income as margins improved and volumes increased. Net core lending (which excludes Treasury products and a €0.8 billion decline in the Westland Utrecht Bank run-off portfolio) grew by €3.0 billion in 2022, of which €2.2 billion was in residential mortgages and €0.8 billion in other lending. Net core deposits growth (excluding Treasury) was €12.9 billion, mainly in savings accounts. Net fee and commission income strongly increased by €121 million, or 15.7%, mainly due to higher fee income from daily banking products, supported by increased fees for payment packages and new service fees for business banking. Investment and other income rose by €216 million, mainly attributable to higher results from Treasury-related products.

Operating expenses declined to €2,115 million from €2,403 million in 2021, mainly due to a drop in incidental cost items. 2022 included a €75 million provision for adding the interest-on-interest effect to the compensation for customers on certain Dutch consumer credit products, while 2021 had contained €289 million of incidental costs. Excluding these incidental items, expenses declined by €73 million, or 3.5%, mainly driven by lower staff and office-space-related expenses, as well as lower regulatory costs.

The net addition to loan loss provisions was €67 million, or 4 basis points of average customer lending, compared to a net release of €76 million, or -5 basis points, in the previous year. The limited net additions in 2022 were mainly related to business lending and consumer lending, while risk costs for the mortgage portfolio were negligible.

Retail Belgium

Retail Belgium includes ING's retail operations in Luxembourg.

The result before tax of Retail Belgium declined to €223 million compared with €583 million in 2021. The decline was almost fully due to an impact of €-247 million to unwind a macro fair value hedge and €97 million of incidental expenses in 2022.

Income fell by €328 million to €2,147 million from €2,475 million in 2021. Net interest income was 4.5% lower at €1,668 million, including a net TLTRO impact of €-29 million compared to a €76 million benefit in 2021. Excluding TLTRO, interest result rose 1.6%, driven by higher liabilities income as margins improved, partly offset by margin compression on lending products due to higher funding costs. Net core lending (excluding Treasury) increased by €3.6 billion in 2022, of which €1.4 billion was in mortgages, and €2.2 billion in other lending. Net core deposits (excluding Treasury) were flat on 2021, as an increase in savings and deposits was offset by a decline in current accounts. Net fee and commission income decreased by €8 million, or 1.5%, as lower fees on investment products were only partly compensated by price increases for payment packages. Investment and other income dropped by €241 million, due to the €-247 million impact of the hedge unwinding in 2022 and a €25 million capital gain on the sale of an associate in the prior year, partly offset by a €67 million gain from a legacy entity in 2022.

Operating expenses increased by €119 million and included €97 million of incidental costs which were mostly restructuring costs related to the optimization of the branch network. Excluding these incidental items, cost growth was limited to 1.3% as the impact of automatic salary indexation could largely be compensated by FTE reductions and lower IT expenses.

The net addition to the provision for loan losses decreased to €139 million, or 15 basis points of average customer lending. In 2021, the net addition had been €225 million, equivalent to 25 basis points. The decline year-on-year was driven by lower risk costs in the mortgage and consumer lending portfolios.

Challengers & Growth Markets

Retail Germany

Retail Germany included ING's retail operations in Austria until the sale in December 2021.

The result before tax increased 14.6% to €901 million compared with €786 million in 2021, driven by higher income and lower expenses, partly offset by increased risk costs.

Total income rose 8.1% to €2,172 million from €2,009 million in 2021. Net interest income increased 15.1%, supported by significantly higher margins on liabilities. The increase was only partly offset by lending margin pressure, a €35 million lower net TLTRO impact (€-19 million in 2022 compared to a €16 million benefit in 2021) and the impact of the discontinuation of ING's Retail Banking activities in Austria in the previous year. In 2022, net core lending growth (which excludes Treasury products and the Austrian run-off portfolio as from the second quarter of 2021) was €6.1 billion, almost entirely in residential mortgages. Net core deposits rose by €0.8 billion as a net outflow in the first half of the year was followed by a strong inflow in the second half of the year. Net fee income declined by €60 million, or 12.1%, mainly in investment products after a record-high level in 2021, partly compensated by higher fees from daily banking. Investment and other income increased by €4 million, as a €26 million one-off loss related to the transfer of our retail operations in Austria recorded in 2021 was partly offset by lower Treasury-related revenues in 2022.

Operating expenses decreased by €34 million, or 2.9%, to €1,140 million in 2022, reflecting savings following the discontinuation of the Austrian retail banking activities as well as lower regulatory costs due to an adjustment of the deposit guarantee contributions in 2022. These decreases were partly offset by higher staff costs and an increase in marketing expenses to support customer growth, as well as €10 million of incidental items for staff allowances and restructuring costs.

Net additions to loan loss provisions increased to €131 million (13 basis points of average customer lending) compared with only €49 million (5 basis points) in 2021. Risk costs in 2022 were primarily related to consumer lending.

Retail Other

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

Retail Other's result before tax declined to €845 million, from €949 million in 2021, mainly due to higher regulatory costs in Poland and higher risk costs.

Total income rose by €61 million to €3,663 million. Net interest income was up 0.5% to €2,726 million, despite a €-343 million impact from new mortgage moratorium regulation imposed by the Polish government. Excluding this impact, net interest income increased 13.2%. This increase mainly reflected higher margins on liabilities, notably in Poland, Australia and Spain, following increases in central bank interest rates. Interest income on lending products declined in most of the countries due to tighter lending margins. Net customer lending (adjusted for currency effects, Treasury and the run-off portfolio in France as from the second quarter of 2022) grew by €3.2 billion in 2022, with growth in all countries. Net core deposits growth (also adjusted for currency impacts and Treasury as well as the France run-off portfolio) was €5.2 billion, primarily driven by net inflows in Spain, Australia and Poland. Net fee and commission income rose by €5 million to €535 million, supported by higher daily banking and insurance fees. These increases were largely offset by lower fees from investment products, reflecting low stock markets and subdued trading activity and the impact of ING's exit from the French retail market. Investment and other income rose to €402 million and included €125 million income from the transfer of our investment business in France and

€-165 million for impairments on ING's equity stake in TTB. Excluding these exceptional income items, investment and other income increased by €81 million, mainly due to higher Treasury-related income and the proceeds from the sale of a non-performing loan portfolio in Spain.

Operating expenses rose by €64 million, or 2.6%, to €2,516 million. In 2022, expenses included €51 million of incidental items, mainly consisting of restructuring provisions related to the discontinuation of our retail banking activities in France and the Philippines and the refocusing of our partnership for insurance propositions. 2021 had included €166 million of incidental costs, mainly consisting of restructuring provisions and impairments related to ING's decision to exit the retail banking markets in France and the Czech Republic. Regulatory costs increased by €100 million as 2022 contained a €99 million contribution to the new Institutional Protection Scheme in Poland. Excluding incidental items and regulatory costs, expenses increased by €79 million, primarily attributable to inflationary pressure across all markets, investments in operational process improvements in Australia and €21 million for a litigation provision in Spain.

The net addition to loan loss provisions amounted to €302 million, or 28 basis points of average customer lending, in 2022. In the previous year this had been €202 million, or 20 basis points. Risk costs in 2022 were primarily attributable to net additions in Poland and Spain.

Wholesale Banking

In 2022, Wholesale Banking turned in a strong commercial performance. This was fully offset, however, by a sharp increase in risk costs, partly due to the Russian invasion in the Ukraine and compared with an exceptionally low level in 2021. Therefore the net result was 36.7% lower at €1,358 million. The result before tax decreased 30.7% to €1,991 million from €2,874 million in 2021.

Total income rose 6.9% to €6,325 million in 2022 compared with €5,916 million in 2021, primarily reflecting income growth in Daily Banking & Trade Finance and Financial Markets. Net interest income increased by €109 million, or 2.6%, driven by Payments & Cash Management which benefited strongly from higher interest rates. The increase was largely offset by a €168 million lower net TLTRO impact (which was €20 million in 2022 compared with €188 million in the previous year) and lower interest income in Financial Markets. The net core lending book (adjusted for currency impacts and excluding Treasury and the Lease run-off portfolio) grew by €2.4 billion in 2022. Strong growth in Lending was largely offset by a net outflow in Daily Banking & Trade Finance and in Financial Markets. Net core deposits (excluding currency impacts and Treasury) increased by €6.2 billion, primarily in Payments & Cash Management. Net fee and commission income rose by €20 million, or 1.7%, supported by strong fee growth in Lending, which was largely offset by the impact of a lower deal flow in Global Capital Markets due to adverse market conditions. Investment and other income surged by €281 million, mainly driven by higher trading results in Financial Markets, only partly offset by Treasury & Other which included a €-41 million hedge accounting impact in Belgium.

Operating expenses increased 6.4% to €3,114 million from €2,926 million in 2021. Expenses in 2022 included €38 million higher regulatory costs and €10 million of incidental items mainly related to restructuring costs, while 2021 had included a €44 million impairment on Payvision. Excluding these incidental items and regulatory costs, expenses increased 7.0%, of which 2.8% was FX impacts, reflecting the weakening of the euro relative to other currencies. The remaining increase was mainly attributable to higher staff costs (due to CLA increases and indexation), partly mitigated by continued cost-efficiency measures.

The addition to loan loss provisions was €1,220 million, or 65 basis points of average customer lending, while in 2021 risk costs had been exceptionally low at €117 million, or 7 basis points of average customer lending. Risk costs in 2022 were significantly impacted by the Russian invasion in Ukraine, which led to a net addition of €533 million on our Russia-related exposure. The remainder was mainly due to an increase in Stage 3 individual risk costs, partly as a result of a more negative macroeconomic outlook.

Lending income increased slightly to €3,157 million. Net interest income declined by €17 million fully due to a €57 million lower net TLTRO impact. Excluding TLTRO, interest result increased 1.6% as higher average volumes more than compensated for lower interest margins. Net fee and commission income increased by €88 million or 19.3%, reflecting significantly higher fee income from several sectors. Investment and other income declined by €42 million, mainly due to negative fair value adjustments and secondary sales discounts.

Income from Daily Banking & Trade Finance increased by €352 million to €1,662 million, predominantly driven by Payments & Cash Management, which benefited strongly from higher interest rates, and furthermore supported by Bank Mendes Gans.

Income for Financial Markets increased by €122 million to €1,226 million, supported by higher trading results, especially in forex and money markets which benefited from volatility on the markets following interest rate hikes, the strengthening of the US dollar and inflationary pressure. Commission income declined due to a lower deal flow in Global Capital Markets, reflecting a slowdown in the market.

Income for Treasury & Other decreased by €94 million due to a net TLTRO impact of €-51 million in 2022 (compared to a benefit of €4 million in the previous year), a €-41 million hedge accounting impact to unwind a macro fair value hedge in Belgium and a €28 million gain on an investment in an associate recorded in 2021. This was partly offset by mark-to-market gains from credit default positions in 2022.

Our leadership - members of the Management Board Banking

1. Aris Bogdaneris
Head of Retail Banking and Head of Challengers & Growth Markets

Born: 1963
Nationality: Canadian
Gender: Male

Aris was appointed as a member of the MBB in June 2015. He is responsible for Retail Banking and the Challengers & Growth Markets.

Relevant CRD IV positions:
Member of the MBB, member of the management board of ING Bank (Australia) Limited, member of the supervisory board of ING-DiBa AG and member of the supervisory board of ING Bank Śląski S.A.

2. Andrew Bester
Head of Wholesale Banking

Born: 1965
Nationality: British/South African
Gender: Male

Andrew was appointed as a member of the MBB in April 2021. He is responsible for Wholesale Banking.

Relevant CRD IV positions:
Member of the MBB.

3. Ljiljana Čortan
Chief risk officer (EB & MBB)

Born: 1971
Nationality: Croatian
Gender: Female
Term expires: 2025

Ljiljana was appointed as CRO and a member of the MBB in January 2021, and subsequently as a member of the EB in April 2021. She is responsible for ING's risk activities including formulating our risk framework and risk appetite, risk culture and awareness, risk governance and policies and compliance.

Relevant CRD IV positions:
CRO and member of the EB and the MBB.

4. Marnix van Stiphout
Chief operations officer & chief transformation officer

Born: 1970
Nationality: Dutch
Gender: Male

Marnix was appointed as a member of the MBB in September 2021. As chief operations officer and chief transformation officer, he is responsible for translating, overseeing and implementing ING's strategies into a strategy for the operations function.

Relevant CRD IV positions:
Member of the MBB.

5. Steven van Rijswijk
Chief executive officer (EB & MBB)

Born: 1970
Nationality: Dutch
Gender: Male
Term expires: 2025

Steven was appointed as CEO and chairman of the EB and the MBB in July 2020. Prior to this appointment, he was CRO (since May 2017). He is responsible for ING's strategy including ESG, decision-making, results, governance, culture, branding, reputation and people.

Relevant CRD IV positions:
CEO and chairman of the EB and the MBB.

Ancillary positions: Member of the management board of the Dutch Banking Association (NVB) and member of the Dutch Cyber Security Council.

6. Ron van Kemenade
Chief technology officer

Born: 1965
Nationality: Dutch
Gender: Male

Ron was appointed as a member of the MBB in May 2021. He is responsible for translating, overseeing and implementing ING's strategies into an IT, Data and information security strategy.

Relevant CRD IV positions:
Member of the MBB and member of the supervisory board of ING Groenbank N.V.

7. Pinar Abay
Head of Market Leaders

Born: 1977
Nationality: Turkish
Gender: Female

Pinar was appointed as a member of the MBB in January 2020. She is responsible for Market Leaders.

Relevant CRD IV positions:
Member of the MBB and chairwoman and non-executive member of the board of ING Belgium N.V./S.A.

8. Tanate Phutrakul
Chief financial officer (EB & MBB)

Born: 1965
Nationality: Thai
Gender: Male
Term expires: 2023

Tanate was appointed as CFO and a member of the MBB in February 2019, and subsequently as a member of the EB in April 2019. Tanate is responsible for ING's financial strategy, budgeting, cost control and the financing of the company.

Relevant CRD IV positions:
CFO and member of the EB and the MBB.

Our leadership - members of the Supervisory Board

1. Lodewijk Hijmans van den Bergh
Born: 1963
Nationality: Dutch
Gender: Male
Term expires: 2025

Lodewijk was appointed as a member of the SB in April 2021.
Former position:
partner/member of the management committee of De Brauw Blackstone Westbroek N.V.

Relevant CRD IV positions:
Member of the SB, deputy chairman of the supervisory board of HAL Holding N.V. and chairman of the supervisory board of BE Semiconductor Industries N.V.

Ancillary positions:
Chairman of the board of Utrecht University Fund and chairman of the executive committee of Vereniging Aegon.

2. Herman Hulst
Born: 1955
Nationality: Dutch
Gender: Male
Term expires: 2024

Herman was appointed as a member of the SB in April 2020.
Former position:
global vice chair EY Japan

Relevant CRD IV positions:
Member of the SB.

3. Mike Rees (vice-chairman)
Born: 1956
Nationality: British
Gender: Male
Term expires: 2023

Mike was appointed as a member of the SB in April 2019.
Former position:
deputy CEO of Standard Chartered Bank PLC.

Relevant CRD IV positions:
Vice-chairman of the SB, non-executive chairman of Athla Capital Management Ltd., non-executive chairman of Travelex Topco Limited and non-executive chairman of the board of Satsanga Fintech Holdings.

Ancillary positions: Non-executive chairman of Mauritius Africa FinTech Hub.

4. Mariana Gheorghe
Born: 1956
Nationality: Romanian and British
Gender: Female
Term expires: 2023

Marianne was appointed as a member of the SB in May 2015.
Former position:
CEO of OMV Petrom SA.

Relevant CRD IV positions:
Member of the SB and non-executive director of ContourGlobal Plc.

Ancillary positions:
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.

5. Hans Wijers (chairman)
Born: 1951
Nationality: Dutch
Gender: Male
Term expires: 2025

Hans was appointed as a member of the SB in May 2017 with effect from 1 September 2017. He has been chairman since April 2018.
Former position:
CEO and member of the executive board of AkzoNobel N.V.

Relevant CRD IV positions:
Chairman of the SB and supervisory board member of HAL Holding N.V.

Ancillary positions:
Member of the Temasek European Advisory Panel of Temasek Holdings Private Limited and chairman of the supervisory council of SEO Amsterdam Economics.

6. Margarete Haase
Born: 1953
Nationality: Austrian
Gender: Female
Term expires: 2025

Margarete was appointed as a member of the SB in May 2017.
Former position:
CFO of Deutz AG.

Relevant CRD IV positions:
Member of the SB, member of the supervisory board and chairwoman of the audit committee of Fraport AG, chairwoman of the supervisory board of AMS-OSRAM AG and member of the supervisory board of Marquard & Bahls AG.

Ancillary positions:
Chairwoman of the employers association of Kölnmetall and member of the German Corporate Governance Commission.

7. Harold Naus
Born: 1969
Nationality: Dutch
Gender: Male
Term expires: 2024

Harold was appointed as a member of the SB in April 2020.
Former position:
global head of Trading Risk Management and general manager Market Risk Management of ING Bank N.V.

Relevant CRD IV positions:
Member of the SB, CEO of Cardano Risk Management B.V., member of the executive board of Cardano Holding Limited and CEO of ACTIAM N.V.

Ancillary positions:
Chairman of the Curatorium VU Amsterdam 'Risk Management for Financial Institutions'.

8. Herna Verhagen
Born: 1966
Nationality: Dutch
Gender: Female
Term expires: 2023

Herna was appointed as a member of the SB in April 2019 with effect from 1 October 2019.
Former position: member of the supervisory board of SNS Reaal N.V. (now: SRH N.V.)

Relevant CRD IV positions:
Member of the SB, CEO of Post NL N.V. and member of the supervisory board of Koninklijke Philips N.V.

Ancillary positions:
Member of the supervisory board and 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.)

9. Juan Colombás
Born: 1962
Nationality: Spanish
Gender: Male
Term expires: 2024

Juan was appointed as a member of the SB in April 2020 with effect from 1 October 2020.
Former position:
chief operations officer and executive board member of the board of directors of Lloyds Banking Group.

Relevant CRD IV positions:
Member of the SB, non-executive member of the board of directors and chairman of the audit and control committee of Azora Capital, S.L. and non-executive chairman of the board of Bluserena Spa.

Ancillary positions:
Member of the global alumni advisory board of the IE Business School.

Supervisory Board report

In 2022, the Supervisory Board (SB) and its committees focused on overseeing and constructively challenging management on the update of ING's global strategy. The updated strategy is built around ING's purpose of ‘empowering people to stay a step ahead in life and in business’. The war in Ukraine and the ongoing geopolitical uncertainty and pressure on the global economy were closely monitored, managing and controlling risks, while assisting our employees and customers wherever possible. Emphasis continued to be placed on ING’s risk culture and further strengthening our global anti-money laundering (AML) and know your customer (KYC) activities. Sustainability was also a priority for the SB. To assist with performing its ESG-related duties, the Supervisory Board appointed an ESG committee.

In 2022, the Supervisory Board maintained a regular dialogue with the Management Board Banking (MBB) on ING's strategic priorities. Two overarching strategic priorities were defined: giving customers a superior experience and putting sustainability at the heart of what we do. For more information see the 'Our strategy' chapter. At the request of the Supervisory Board, deep dives were organised on various topics relating to strategy. This was the result of one of the priorities agreed by the Supervisory Board for 2022 to ensure time is spent in meetings on strategy and sustainability, business and financial performance, risk management and regulatory requirements. The Supervisory Board also monitored the execution of the strategy by discussing the challenges and opportunities of the strategic priorities, countries, business and projects on a quarterly basis with the MBB.

The year 2022 was marked by the war in Ukraine, which is having a devastating impact on people’s lives and is threatening international stability and security. The Supervisory Board and its committees closely monitored the ongoing geopolitical uncertainty and pressure on the global economy and its impact on ING and its stakeholders. Lower economic growth, exceptionally high inflation and high energy prices have severely impacted consumers and companies. The MBB provided the Supervisory Board and its committees with frequent updates on developments in Russia and Ukraine. This included how ING safeguards the safety and well-being of impacted employees, business continuity and operational resilience, how ING manages IT and cybersecurity risks, our exposure to Russia and Ukraine and complying with sanctions.

The Supervisory Board is committed to continue working with the MBB on further enhancing and embedding ‘environmental, social & governance’ (ESG) principles into ING’s internal processes and business activities. In this respect, the Supervisory Board appointed an ad-hoc ESG Committee from among its members to assist with overseeing ESG-related topics. See 'ESG Committee' for further details.

The Supervisory Board met 15 times in 2022 for its regular meetings. On average, 99% 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 demonstrates that Supervisory Board members are engaged with ING and are able to devote sufficient time and attention to overseeing its affairs.

SB Attendance 2022[1]

	SB	RiCo[2]	AC	NCGcom[3]	RemCo	ESGcom[4]
Hans Wijers (chair)	15/15	10/10	7/7	12/12	7/7	3/3
Mike Rees (vice-chair)	14/15	10/10	7/7			
Juan Colombás	14/15	10/10	7/7			
Mariana Gheorghe	15/15	10/10		12/12	7/7	3/3
Margarete Haase	15/15	10/10	7/7			
Lodewijk Hijmans van den Bergh	15/15	10/10				3/3
Herman Hulst	15/15	10/10	7/7			3/3
Harold Naus	15/15	10/10		1/1	6/7	
Herna Verhagen[5]	15/15	2/2		11/12	7/7	
Total attendance[6]	**99%**	**100%**	**100%**	**97%**	**96%**	**100%**

1 This SB attendance overview shows the SB (committee) meetings that took place during the year. In addition to these meetings, there were 12 internal SB meetings in 2022 in view of nomination and remuneration matters, with a total attendance rate of 99%. These are not shown separately in the overview for year-on-year, like-for-like comparison purposes.
2 In 2022, two RiCo meetings were held in combination with the RemCo on remuneration matters that also required a risk view.
3 In 2022, one NCGcom meeting was held in combination with the RemCo in view of changes to the management structure of ING Bank N.V. including the amended constellation of the Management Board Banking.
4 Attendance is shown as of the initiation of the ESGcom in the second quarter of 2022.
5 Harold Naus participated once in a NCGcom meeting in combination with the RemCo. Herna Verhagen participated twice in a RiCo meeting in combination with the RemCo.
6 The numbers exclude SB observers, if any. If SB members cannot join a meeting they will always 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; ESGcom = ESG Committee

The Supervisory Board discusses and reconfirms all of its members' outside positions on an annual basis. It approves among others, any intended outside positions as and when they occur, to safeguard this level of engagement.

In addition to the information included in this Supervisory Board report, information on the Supervisory Board can be found in 'Our leadership' and 'Corporate governance', which information is deemed to be incorporated, by reference, herein.

Supervisory Board meetings

The Supervisory Board discussed a wide range of topics during the year. In its deliberations on the various topics the Supervisory Board considers the customers' and other stakeholders' interests in view of ING's function in society.

In addition to the topics mentioned in the introduction, the Supervisory Board discussed, among others:

- The economic and political developments and their effects, such as the energy crisis, inflation, shortages in the economy and the rapidly slowing economy.
- Progress of ING's performance in the various business lines on key financial and non-financial metrics.
- Diversity and inclusion, including, e.g. the bankwide diversity & inclusion approach and specifically gender diversity in senior management.
- ESG related matters in relation to strategy, including, among others, sustainability, climate risk and energy transition.
- The continued impact of Covid-19 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).
- Ongoing supervisory developments, such as 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 (climate risk related) stress testing.
- ING's financial, non-financial and compliance risks, and in this respect, among other things, 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 'Strengthening ING's global AML/KYC capabilities' for further details on ING's AML/KYC measures); and strengthening ING's risk culture.
- Several topical regulatory themes with a global ING scope such as data strategy and management, IT and cybersecurity, sourcing, developments in Russia and Ukraine, compliance with sanctions, the KYC enhancement programme and leveraged transactions.
- The financing of the company in accordance with ING's capital and liquidity adequacy, ING's capital plan and ING's dividend and distribution policy.
- The audit plans of the internal and external auditor.
- Various nomination and succession planning related matters for the MBB and the Supervisory Board.
- Various remuneration-related matters, such as the annual review of the Reward and Appointment Framework and the ING Remuneration and Regulations Framework.
- The functioning of the Supervisory Board and its committees and the MBB, supported by annual collective self-evaluations, and the functioning of their individual members.

The MBB 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 without the MBB 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 MBB.

Outside of the collective meetings, there was frequent interaction between the chairs of the relevant SB committees and the members of the MBB to ensure that – at all times – everyone was up-to-date on the most recent developments. Furthermore, the chairs of the Risk Committee and the Audit Committee agreed that they will continue 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 best fit their skills, knowledge and experience to further enhance well-informed Supervisory Board decision-making and challenge. The 2022 focus areas were risk culture, models and stress testing, operational resilience, KYC, ESG (including sustainability and governance) and IT (including digital and cybersecurity).

Continuous dialogue with stakeholders

ING maintains continuous interaction with stakeholders, and aims to strike a balance between the interests of all stakeholders, including customers, shareholders, employees, regulators, supervisors and society at large. In 2022, the Supervisory Board had periodic conversations with various stakeholders. It exercised its oversight role, which aimed to ensure that, actions resulting from this, were embedded in the organisation and followed up, including actions related to strategy. 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 one of ING's top priorities. 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 SB, management and the relevant supervisors.

In 2022, 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, among others, the KYC enhancement programme as agreed with DNB. These sessions also contributed to the Supervisory Board's continuous learning.

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 SB 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.

The annual knowledge days, which were held on 13 and 14 January 2022, were combined with regular Supervisory Board meetings and focused on ESG.

As part of the annual business visit, the entire Supervisory Board, together with the MBB, visited ING in Germany in September 2022. This allowed the Supervisory Board to get a better understanding of local business challenges and the market opportunities of ING in Germany.

Throughout the year, a number of other educational sessions on specific topics facilitated by relevant experts were organised for the Supervisory Board. For 2022, a balance was sought between sessions focused on compliance, ESG, operational resilience and sessions focused on strategic business topics. The latter included in-depth sessions on (1) ING's Wholesale Banking business and Retail Banking business, including Business Banking, (2) technology and IT platforms, (3) digital services and assets and (4) several country updates. Additionally, thematic sessions were organised to focus specifically on certain themes that needed further attention and/or to look forward at emerging risks and developments. Furthermore, several deep dive sessions were organised on selected key topics. Both these thematic and deep dive sessions had a substantial risk management component and contributed to a more in-depth understanding of the matters discussed. For more information, see 'Risk Committee'.

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 held in person, virtually and in hybrid mode. 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

In 2022, ING introduced its updated strategy. The Supervisory Board had an active and continuous dialogue with the MBB on the strategy update. To successfully serve its purpose and make the difference for people and the planet, ING will focus on two overarching strategic priorities: giving its customers a superior experience and putting sustainability at the heart of what it does. ING has also defined four enabling priorities. ING will focus on (1) providing seamless, digital experience, (2) using its scalable technology and operations, (3) staying safe and secure and (4) unlocking the full potential of everyone working for ING.

By updating its strategy, ING is constantly adapting to the trends shaping the world around us and impacting customers, ING and the industry, with the aim of ensuring it seizes the opportunities flowing from today's reality and big trends to create long-term value.

The Supervisory Board acknowledges the responsibility it has to consider and balance the interests of all stakeholders of ING and makes sure to take this into account while delivery on the strategic priorities is being executed.

Financial and risk reporting

The MBB 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 2022. The full-year 2021 financial results were discussed and approved in March 2022. The financial statements will be submitted for adoption at the 2023 Annual General Meeting as part of the 2022 Annual Report. KPMG, in its role as ING's external auditor, audited ING's 2022 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' below.

The Supervisory Board was also informed in detail throughout the year of potential financial, non-financial and compliance risks for ING, including, the crisis with regard to the war in Ukraine, subsequent political and economic developments in various countries and regions, climate- and ESG related risks, the continued implications of Covid-19 and updates on (upcoming) regulatory changes. The Supervisory Board discussed how these and other risks could best be mitigated, which included reviewing stress test results performed by ING. In addition to internal stress tests and programmes related to known and anticipated risks, ING released its second integrated climate report in September 2022. It details ING's progress and targets on climate alignment in the nine sectors in ING's loan book most responsible for climate change. This progress and progress on other ESG related matters were monitored by the newly appointed ESG Committee.

Read more on risk management in 'Risk Committee' below.

Internal Supervisory Board meetings

During the 2022 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 MBB and its individual members. The Supervisory Board evaluates and assesses the functioning of the MBB, including questions of succession and remuneration, at least annually, in an internal meeting.
- The composition of the MBB.
- The composition of the Supervisory Board including its committee composition (this year including the appointment of the ESG Committee).
- 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 appointment/compensation/ severance proposals of high earners and senior management in control functions and (2) the Variable Remuneration Accrual Model (VRAM) process.
- The annual collective self-evaluation of the MBB and the Supervisory Board.

Supervisory Board annual collective self-evaluation

As in previous years, the Supervisory Board conducted an annual collective self-evaluation of 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 its meetings. The self-evaluation addressed the 'what' (roles and responsibilities) and the 'how' (culture and behaviour) of the Supervisory Board. In addition to the traditional themes, the self-evaluation over 2022 also reflected on ING's strategy, digital and data developments, ESG, and geopolitical events.

Approach

During the November 2022 Supervisory Board meeting, the Supervisory Board discussed and approved the annual collective self-evaluation process and design for the year 2022. In December 2022, input was gathered from the Supervisory Board members and frequent attendees. This, together with the outcome of the 2022 mid-year review and of the bilateral interactions between the chairman and each individual Supervisory Board member in January 2023, formed the basis for the collective Supervisory Board self-evaluation dialogue in February 2023. During this dialogue the Supervisory Board determined its collective positive points to maintain and its 2023 priorities for further improvement. This forms part of the Supervisory Board's practice to regularly deliberate on its collective performance i.e. 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 on 1 February 2023 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 continued focus on ESG and ongoing macroeconomic & geopolitical events? and (2) Priorities for further improvement: Did the Supervisory Board sufficiently progress in 2022 on the improvement areas previously defined? What are the priority areas to further improve in 2023?

The Supervisory Board's agreed priorities for 2022 included:

1. Regarding the 'what': (1) safeguarding balance in open, constructive dialogue with the Executive Board and the Management Board Banking on business/market developments, including emerging risks, and time spent on shareholders' and other stakeholders' views on performance of the company, and (2) continue to be provided with fit-for-purpose supporting materials for board meetings.

2. Regarding the 'how': (1) Covid-19 permitting, the importance of returning to physical meetings with the Executive Board, the Management Board Banking and other ING representatives, and (ii) continue investing in access to and leveraging on knowledge, skills and experiences relevant to the Supervisory Board in the context of ING.

During 2022, the Supervisory Board addressed all of the above and, where applicable, embedded enhancements in its standard working practice: With regard to the 'what', items (1) and (2) 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. With regard to the 'how', item (1) was completed by the implementation of the Hybrid Mode as the Supervisory Board's new way of working, and item (2) was addressed by broadening the focus areas of the non-chair Supervisory Board members including the interactions within the organisation on these.

Looking back on 2022, and compared to previous years, the Supervisory Board concluded that several positive points continued to be valid and had also further improved during 2022:

- Regarding the 'what', the following Supervisory Board strengths were recognised: (1) its effectiveness at overseeing, supervising, challenging and advising the Executive Board and Management Board Banking, (2) its understanding of the organisation's strategic priorities and relevant digital & data developments, the effectiveness with which ESG considerations are integrated into discussions and the monitoring of macroeconomic & geopolitical events, (3) its composition and the interface / working balance between the Committees and the Supervisory Board, and (4) its meeting management, meeting materials and the support available.
- Regarding the 'how', the following positives were recognised: (1) the relationships between the Supervisory Board members and with the Executive Board and Management Board Banking, and (2) the understanding of the views and requirements of key stakeholders.

Looking ahead, the Supervisory Board concluded that several priorities for further improvement are still relevant and the following areas require further attention during 2023:

- Regarding the 'what' it identified: (1) safeguarding balance in open, constructive dialogue with the Executive Board and the Management Board Banking on strategy/business/market developments, including emerging risks, and time spent on shareholders' and other stakeholders' views on performance of the company, and (2) continue to be provided with fit-for-purpose supporting materials for board meetings.
- Regarding the 'how' these attention points were identified: (1) Managing the change in composition of the Supervisory Board, and (2) Enhancing insight into people and talent processes.

Looking ahead, the Supervisory Board concluded that several priorities are still relevant and the following areas require further attention during 2023:

1. Further establish the Supervisory Board's oversight and governance on ESG through its dedicated ad-hoc Supervisory Board committee with a focus on further maturing the Social and Governance components.

2. On people related matters, ensure continued attention for diversity & inclusion and enhance the Supervisory Board's view of the broader talent pipeline.

3. Ensure continued focus is given to key topics, in addition to the aforementioned, such as ING's strategic priorities, digital & data, (non-financial) risk and geopolitical & macroeconomic developments, including the accessing of outside-in views of stakeholders.

4. Enhance the quality of board meeting materials by highlighting the topic's most significant challenges & dilemmas and by being mindful of the length of materials.

5. Maintain the effectiveness of the Supervisory Board throughout the imminent changes in its composition through continued team building events and attention for the individual members' areas of expertise.

6. Support the CEO throughout the imminent organisational and composition changes of the Management Board Banking.

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.

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.

For an overview of the composition of the committees on 31 December 2022, see the table under 'Overview of Supervisory Board committee members'.

Risk Committee

The Risk Committee met 10 times in 2022, of which meetings two were combined with the Remuneration Committee to address remuneration-related risk methodology elements, such as those relating to the Variable Remuneration Accrual Model (VRAM) that was introduced in 2018 (see also 'Remuneration Committee'). During another Risk Committee meeting there was a combined session with the ESG Committee on climate risk stress testing. Since 2020, almost all Supervisory Board members have been members of the Risk Committee, due to the continued importance of risk and how this is managed and supervised.

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.

The Risk Committee aims to ensure that integrity continues to come first for ING and that critical non-financial risk areas stay top of mind, as an integral part of ING's identity. Through risk management ING builds strong foundations, supported by structural solutions that continue to earn and maintain the trust of its stakeholders, including its customers and society at large.

During 2022, in light of the situation with regard to Russia and Ukraine and Covid-19, additional updates on financial, non-financial and compliance risk were provided, both separately and as recurring reporting to help continue and further bolster ING's customer diligence and stakeholder integrity. These updates included the status of ING's accompanying metrics 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 impact of such events on ING's credit portfolio, capital and liquidity position, and updates on credit developments in certain countries and portfolios. With respect to the situation in Russia and Ukraine, the committee also addressed risks related to non-financial risk (including cybercrime) and sanctions. 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. Additional broad risk topics in relation to these events included (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.

The Risk Committee also regularly discussed the status of reported whistleblower concerns. As part of the annual recurring topics, the Risk Committee discussed the following:

- 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.

As mentioned, in addition to current topical events throughout the year, deep dives and thematic sessions also took place on specific topics. Deep dives are technical discussions on selected key topics that have substantial risk management relevance and that contribute to a more in-depth understanding of the matters at hand. In 2022, there were deep dives on IT and cybersecurity, ING's Risk Appetite Framework, data strategy and data management, the bank-wide KYC enhancement programme and liquidity and funding. Thematic sessions focus specifically on certain themes that need further attention and/or are looking forward at emerging risks and developments. Thematic sessions in 2022 encompassed: cybersecurity, ICAAP (including Economic Capital and Stress Testing), internal controls and key control testing, compliance, climate risk stress testing and modelling. All Supervisory Board members had a standing invitation for these sessions and participated in several of these as deemed relevant to them.

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 seven times in 2022. During one of its meetings there was a combined session with the ESG Committee on ESG disclosures.

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

The Audit Committee addressed, among other things, the following recurring topics:

- The quarterly results and the financial statements, the press releases related to the periodic results and the Annual Report.
- Judgemental accounting topics.
- Key audit matters, as included in the auditors' reports.
- Financial reporting, including the quarterly results.
- (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 internal audit plan, including its support and progress monitoring.
- Critical and high rated overdue issues, as reported by the internal audit function.
- The updated internal audit charter.
- The 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 other things, the following recurring topics:

- ING's long-term CET1 ratio target level.
- ING's dividend and distribution policy.
- SOx Act framework and controls.
- Capital and liquidity management.

In addition, in 2022, the Audit Committee addressed, among others, the developments in Russia and Ukraine, ICAAP governance, external audit quality indicators, ESG-disclosures and matters in the context of Covid-19 uncertainty.

All relevant items discussed by the committee were reported to the SB, 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 12 times in 2022, of which one was combined with the Remuneration Committee to address topics that simultaneously covered nomination as well as remuneration.

The committee assists the SB with the performance of its duties in relation to selection and nomination of, among others, the members of the Supervisory Board and MBB, 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, ING aims to ensure that all of its boards are – at all times – adequately composed to perform their duties. As its standard practice, the Nomination and Corporate Governance Committee therefore discusses (1) the performance of the individual members of the MBB (also serving as input to the Remuneration Committee) and (2) medium- to long-term succession planning for the MBB and the Supervisory Board. A continuing conversation on MBB succession planning is facilitated by the chief human resources officer as part of the regular Nomination and Corporate Governance Committee meetings in the form of deep dives by function and business line.

When selecting suitable board succession candidates, various aspects are to be taken into account in view of board composition, such as regulatory requirements, suitability considerations, banking and other industry knowledge, outside positions, independence, no conflicts of interest and availability. Also the minimum and optimal size of a board and diversity aspects such as how to arrive at an appropriate balance in its representation of regions, age, gender, knowledge and expertise are to be taken into account. The generic profile of the Supervisory Board aims to capture these elements, which profile can be found on ing.com. Read more on the boards' composition in the 'Composition of the Management Board Banking and Supervisory Board' section that also includes a diversity and competence matrix.

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 and by accelerating refreshment where possible without jeopardising business continuity. The diversity policy is published on ing.com and explained in more detail in 'Unlocking our people's full potential'. 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 2022 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 2022 AGM.
- 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.
- The review of the scope of ING's key policies.

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 seven times in 2022.

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 prepares the discussions within and decisions of the Supervisory Board on such matters. In doing so, the Remuneration Committee takes 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 MBB. 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.

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 remuneration governance structure which is part of the above mentioned framework. In addition, the Remuneration Committee monitored the development of the gender pay gap.

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.

ESG Committee

In the second quarter of 2022, the Supervisory Board appointed an ESG Committee from among its members. The ESG Committee has been established for an initial duration of two years. After this period, the SB will determine whether the ESG Committee shall be made permanent.

To prevent an overlap between the ESG Committee and the other Supervisory Board committees and to safeguard an aligned and common view on ESG, the ESG Committee consists of at least one member of each of the other committees.

The ESG Committee assists the Supervisory Board with matters relating to the various areas of ESG ('environmental', 'social' and 'governance'), including but not limited to, the development of ESG and the integration of ESG in the company and its strategy. In addition, the ESG Committee assists the Supervisory Board by generally monitoring and advising on relevant ESG developments.

The ESG Committee met three times in 2022. During its first meeting, the ESG Committee discussed and supported a variety of topics with a focus on the role and scope of the ESG Committee and its Terms of Reference, which can be found on ING.com. During its subsequent meetings, the ESG Committee discussed progress and potential impediments as well as relevant trends on 'environmental', 'social' and 'governance' topics and how to connect them with ING's response and actions on the basis of ING's ESG dashboard. In addition, the ESG Committee discussed key updates and relevant ESG related matters, such as greenwashing, sustainability targets and ESG dilemmas. The ESG Committee also discussed any updates of key ESG policies and ESG related supervisory/regulatory letters and publications. In 2022, members of the ESG Committee participated in deep dives on ING's approach on environment challenges and key initiatives, including how we reduce our own footprint, our Terra alignment strategy and our biodiversity approach and ING's approach on social challenges and key initiatives with a focus on diversity and inclusion, financial health and human rights. There were thematic sessions on climate risk stress testing and ESG regulatory disclosures.

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 SB committee members

The table below reflects the composition of the Supervisory Board committees on 31 December 2022.

Supervisory Board	Risk Commitee	Audit Committee	Nomination and Corporate Governance Committee	Remuneration Committee	ESG Committee
Hans Wijers (chair)	Member	Member	Chair	Member	Member
Mike Rees (vice-chair)	Chair	Member	—	—	—
Juan Colombás	Member	Member	—	—	—
Marianna Gheorge	Member	—	Member	Member	Member
Margarete Haase	Member	Chair	—	—	—
Lodewijk Hijmans van den Bergh	Member	—	—	—	Chair
Herman Hulst	Member	Member	—	—	Member
Harold Naus	Member	—	—	Member	—
Herna Verhagen	—	—	Member	Chair	—

Composition of the Management Board Banking and Supervisory Board

ING aims to ensure that the boards are – at all times – adequately composed to perform their duties. In 2022, no members were (re-)appointed to the boards.

In line with ING's strategic priorities and in order to further simplify the management structure of ING Bank, it was announced on 15 December 2022 that the roles of head of Retail Banking, Challengers & Growth Markets and Market Leaders will be combined in 2023. Pinar Abay, currently head of Market Leaders, will be appointed to the role effective 15 May 2023 (subject to regulatory approval). Aris Bogdaneris, currently head of Retail Banking and Challengers & Growth Markets will step down from the Management Board Banking as of 15 May 2023 and will leave ING per 1 August 2023 to pursue other opportunities.

Furthermore, Ron van Kemenade, chief technology officer, announced to step down from his position as per 30 April 2023. Succession planning has been initiated for this role.

After more than seven years of dedicated service, Mariana Gheorghe announced that she will not be available for reappointment to the Supervisory Board at the 2023 AGM. Therefore in 2022, the Nomination and Corporate Governance Committee and the Supervisory Board initiated the process of selecting and nominating a candidate for appointment to the Supervisory Board at the 2023 AGM.

On 2 February 2023, it was announced that Hans Wijers has expressed the intention for personal reasons to hand over his duties as chairman and retire from the Supervisory Board in the second half of 2023. Hans Wijers was appointed to the Supervisory Board in 2017 and became its chairman in 2018. It was announced on 3 March 2023 that ING will propose to appoint Karl Guha to the Supervisory Board at the Annual General Meeting to be held on 24 April 2023. Upon decision by the General Meeting, it is the intention of the Supervisory Board to elect Karl Guha as its chairman effective 1 July 2023.

The Nomination and Corporate Governance Committee and the Supervisory Board will continue to strive for an adequate and balanced composition of the Supervisory Board when selecting and nominating new members for appointment, taking into account ING's diversity policy and other factors.

All Supervisory Board members, with the exception of no 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 this basis, the Supervisory Board confirms that all members of the Supervisory Board are to be regarded as independent on 31 December 2022. On this date all members of the Supervisory Board were also to be regarded as independent within the meaning of the NYSE listing standards.

Read more in the Corporate governance chapter on the composition of the Management Board Banking and the Supervisory Board. For the full list of Management Board Banking and Supervisory Board members and more details see 'Our leadership', which information is considered to be incorporated, by reference, in this Supervisory Board report.

Diversity and 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	⊛	●	⊛	●	●	⊛	●	●

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

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	⊛	●	●	●	●	⊛	⊛	⊛

⊛ Is in addition considered and expert in relation to previous or current roles.

Please note the following:

- The purpose of this matrix is to provide an overview on the experience and competencies that ING considers to be the most relevant for its stakeholders.
- The matrix represents to which extent ING's board members have such experience and competencies (either developed already before joining ING and/or 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.
- For the appointments of new board members, all relevant competencies are also shared with 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 MBB and ING employees

The SB would like to thank the members of the MBB for their contribution to ING's performance over the past year. It was certainly another challenging year with macroeconomic and geopolitical uncertainty impacting our customers, business and society in general. We're grateful for their efforts in navigating through these challenges and continuing to create long-term value for our stakeholders. Despite the uncertainty, ING coped well, continuing to support customers and intensifying our efforts to fight climate change. Our results for 2022 reflect the strength of our diversified business model and show our resilience and adaptability.

Of course, none of this would have been possible without our employees. We rely on them to implement ING's purpose and strategy. The SB appreciates their hard work and dedication in sometimes difficult circumstances. Our sincere thanks to all.

Amsterdam, 6 March 2023

Corporate governance

This section 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 booklet ‘Application of the Dutch Banking Code by ING Bank N.V. (FY2022)’, 9 March 2023, 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 the 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 the prevention or timely detection of unauthorised acquisition, use or disposition of assets that could have material effect on the financial statements.

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

Management Board Banking composition

ING aims to have an adequate and balanced composition of its Management Board Banking, 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 balance of experience and affinity with the nature and culture of the business of ING. Factors such as nationality, gender, age and education are also taken into account for the composition of the Management Board Banking.

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

The Gender Diversity Act, which came into force in the Netherlands on 1 January 2022, requires ING to set appropriate and ambitious targets for gender diversity in its Executive Board and senior management. ING considers its Management Board Banking to be part of this senior management group for which the target for gender diversity is set at at least 30% by 2025. See more information on diversity, including on gender diversity in senior management, in the paragraphs on Unlocking our people's full potential in 'How we are making the difference'.

Information on the members of the Management Board Banking

Reference is made to the Our leadership section for information on the members of the Management Board Banking, which information is deemed incorporated by reference.

Supervisory Board composition

ING aims to have an adequate and balanced composition of its Supervisory Board, 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.

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 2022, 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 2022 was 56 - 44%.

According to the Gender Diversity Act, which came 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. Over the year 2022, the Supervisory Board was compliant.

Relevant positions pursuant to CRD IV

Members of the Supervisory Board may hold other positions, including directorships, either paid or unpaid. The Capital Requirements Directive 4 (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

Reference is made to the Our leadership section for information on the members of the Supervisory Board, which information is deemed incorporated by reference. Also read more about the composition and duties of the Supervisory Board and its committees in the Supervisory Board report and on ing.com.

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. 2022 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. 2022 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 2022 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, 6 March 2023

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

Risk management

The war in Ukraine had, besides an immense impact on the lives of millions of people, a negative impact on the global economy. While businesses and households were still recovering from the economic consequences of Covid-19, developments in Ukraine further distorted supply chains, caused higher energy costs and aggravated an already high inflation rate environment. This, in combination with central bank rate hikes, worsened the macroeconomic outlook. This section explains ING's approach towards risk management.

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 strategic planning and daily business activities. 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 EB in formulating the risk appetite, strategies, policies and limits. It provides adequate steering, oversight, challenge 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 on solvency, credit, market, funding and liquidity, ESG, operational, IT, compliance, business and model risks.

Risk categories

ING's main risks are described in the categories below. Chapters in the risk management section are based on how risks are managed internally. Operational and IT risks are part of the Non-financial risk (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 costs 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	The risk of losses arising from any negative financial impact on the institution stemming from the current or prospective impacts of environmental, social or governance factors on the institution's counterparties or invested assets
	Business 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, non-compliant 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 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 where the impact on the organisation is currently more difficult to assess than other risk factors. These risks are on top of other existing risks.

The topics have mainly emerged as part of the annual risk assessment that feeds into, among others, the annual review 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 2022 risk assessment confirmed our top and emerging risks. The top risks in 2022 are related to geopolitical risk, financial crime, cybercrime and inflation risk. Climate change risk remains an emerging risk, and reflects the impact that climate change may have on the financial position and/or reputation of ING.

Geopolitical risk

This risk has obviously increased since the early start of 2022, mainly following the war in Ukraine and subsequent threats by Russia to limit or cut gas exports. Besides Russia's war in Ukraine, tensions between the US and China relating to Taiwan and trade issues have persisted this year.

The war in Ukraine

The war in Ukraine and rapidly escalating events in 2022 were, and still are, a significant tragedy to the people, causing disruption to business and economic activity in the region and worldwide. Subsequently, the US, the UK and the EU initiated sanctions against Russia in 2022. In response, the Russian central bank enforced liquidity and currency controls. The uncertainty about the outcome of the war will remain in the longer term.

Sanctions

The international community leveraged their sanction tools in response to the war in Ukraine. Accordingly, as part of ING's KYC and compliance risk governance and procedures, ING is continuously monitoring the situation to stay abreast on all relevant updates to implement effective and appropriate additional control measures and to manage the increased risk and financial impacts of these developments. For sanctions-related developments, more information is in 'Compliance risk'.

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. Investments in Russia are in government securities as required by a subsidiary under Russian law. As a result of the war in Ukraine and related international response measures, including sanctions and capital controls, we face an increased risk of default of counterparties located in Russia and Ukraine. These include counterparties the ultimate parent of which is located in Russia, which 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 the Russian rouble.

Remaining at risk for ING at year-end 2022 is €0.3 billion local equity and €2.5 billion credit exposures booked outside of Russia. In Ukraine, our exposure was approximately €500 million, mainly with liquidity facilities and other lending. Early in March 2022, we intensified monitoring of counterparties, continued managing our exposure and announced a decision to not do new Russia-related business.

The Russian and Ukrainian exposures are under continuous monitoring. Uncertainties on the evolution of the conflict will remain for some time to come. Since the start of the war, business and risk departments have worked on several sensitivity analyses and stress tests to assess the potential downside impact of the war, and the potential second order and stagflation impact in 2022. Furthermore, we are working together with counterparties, both onshore and offshore, to limit risks associated with derivatives exposures.

Financial crime risk

We're committed to fulfilling our role as a gatekeeper to the financial system, to protect 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 to create a safer environment for customers, our bank and society. In 2022, we further adjusted our financial crime risk appetite and framework of policies and procedures to reflect changes in the risk environment and responded to external developments.

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.

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. Read more in 'How we are making the difference' and 'Compliance risk'.

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.

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 remains one of the highest priorities. 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 Centre) and Internet Service Providers (ISPs). See also 'How we are making the difference' and 'Non-financial risk'.

Inflation risk

Inflation rates accelerated across the globe at the beginning of 2022, fuelled by the Russian invasion of Ukraine. Inflationary pressures prompted an adjustment of monetary policy stances by major central banks, leading to rising interest rates and tighter global financial conditions.

The mix of high inflation and rising interest rates further deteriorated macro-financial conditions, aggravating pre-existing vulnerabilities for both businesses and households, which were recovering from the economic consequences of the Covid-19 pandemic, and ultimately increasing banks' credit risk. Against this background, ING has taken additional provisions already in the course of 2022.

EU member states' governments have introduced several supporting measures to cushion the rise in energy prices and inflation. These measures, in conjunction with the reduced fiscal space resulting from the pandemic-related support measures and the normalisation of the monetary policy stance, increased sovereign vulnerabilities in financially weaker countries.

Climate change risk

ING is aware of the risks associated with climate change and how these can impact customers and their financial health. 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.

An internal programme was launched in 2020 to address impacts resulting from climate change. In March 2022, ING updated its governance approach to embrace ESG holistically in business strategy. An ESG Committee was created at Supervisory Board level, responsible for supervising the bank's overall ESG transformation and advising the MBB on relevant ESG developments. ING also established an ESG Sounding Board comprised of senior leaders to guide the development and implementation of our strategy for ESG topics, as well as monitoring and reporting on progress. All ESG-related key performance indicators are assigned to MBB members and cascaded down through business lines. Further, after a strategic review of ING's CRO function, an ESG Risk Centre of Expertise, part of the Integrated Risk department, has been established. Our 2022 Climate Report on ing.com details our approach and sector-specific insights. See the 'Sustainability' section of ing.com for more on climate change.

Risk governance (*)

Effective risk management requires company-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, mitigate and monitor risks.

This governance framework is designed in such a way that risk is managed in line with the risk appetite approved by the MBB, the EB and the SB, and this approach is cascaded throughout ING.

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 areas of responsibility. The CTO is responsible and accountable for proper security and controls of global applications and IT platforms servicing the bank and implementing proper processes. The COO domain builds bridges within ING linking to almost every part of the bank. Its purpose is to drive secure and efficient processes for customers and colleagues.

The second line of defence consists of oversight and specialised functions in risk management and compliance. They (1) 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, (2) objectively challenge risk management execution and control processes and coordinate the reporting of risks and controls by the first line of defence, (3) advise 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 (4) 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, 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, reappointment 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 (*)

Both the EB (for ING Group) and the MBB (for ING Bank) play an important role in managing and monitoring our 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 primarily responsible for: (i) supporting the board in its engagement with and oversight of the development of the risk appetite and risk appetite statements and for translating the risk appetite into a risk limits structure, actively engaged in monitoring performance relative to risk-taking and risk limit adherence; (ii) setting up the risk management framework and overseeing the development and implementation of risk and compliance policies, processes, models, compatible methodologies including both forward-looking and backward-looking tools, ongoing strengthening of risk management/people capabilities and reports, as necessary to ensure the effectiveness of robust internal control and risk systems to fully support its strategic objectives and all of its risk-taking activities; (iii) regularly providing comprehensive information on risks to the Management Board, the Risk Committee and other relevant functions; and (iv) advising about the current risk profile, current state of the risk culture, utilisation against the established risk appetite, and limits, limit breaches and mitigation plans. For more on the SB and EB roles and responsibilities see 'Corporate Governance'.

Executive level (*)

The 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.
- 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.
- Global Data Committee (GDC) oversees (identifies, measures, responds to change and monitors) the Global Data function and its contribution to wider society. The GDC meets every two months.

Further, in the Asset and Liability Committee Bank (ALCO Bank) risk related topics are discussed as well.

Regional and business unit level (*)

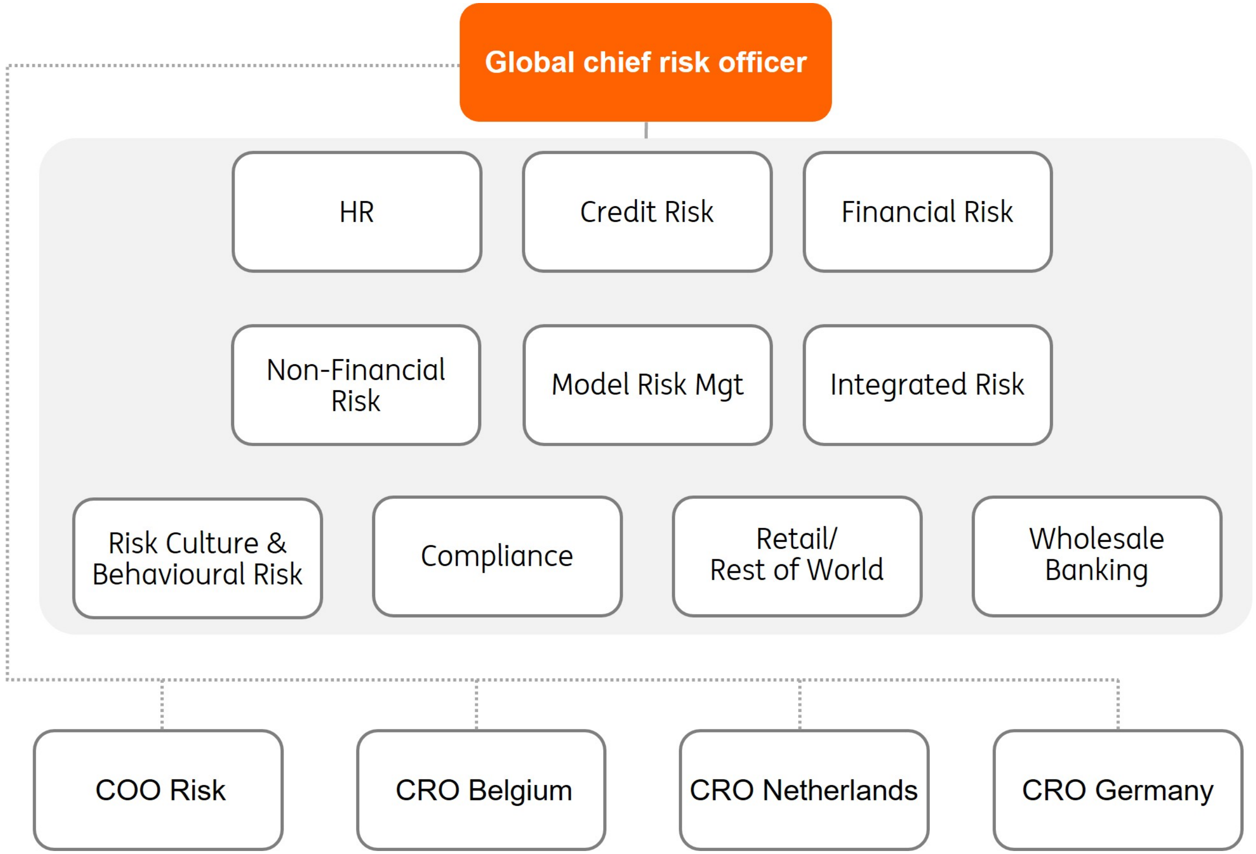
ING's regional and/or business unit management have primary responsibility for the management of risks (credit, market, funding and liquidity, operational, IT, compliance and model) that arise in their daily operations. They are accountable for the implementation and execution of appropriate risk frameworks 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) head of risk are involved in these activities. The local (regional and BU) head of risk 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 CRO function is organised along the lines of a matrix structure integrating (1) the Global Risk functions, (2) the Regional/Country Risk functions at entity level, and (3) the Risk Segments, with a uniform methodology and terminology, so that a holistic view of all risks is ensured. Global Risk functions, organised by risk types into risk domains (departments), are ultimately responsible and accountable for the functional steering of the respective risk type globally, ensuring a uniform taxonomy and methodology is used for the setting of the relevant risk appetite levels, further cascading risk appetite into detailed risk strategies and for the effective monitoring and reporting of risks, on an individual and consolidated basis.

The following organisation chart illustrates the reporting lines in 2022 for the risk management organisation. The fixed lines reflect hierarchical reporting lines, whereas the dotted lines are for the functional reporting lines:



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 explains its approach to mitigating risk outside ING's risk appetite. The internal control framework (ICF) translates 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 second line of defence (2nd LoD), while control standards are to be owned by the first line of defence (1st LoD). Global policy and control standard documents are approved by relevant approval bodies (e.g. SB, EB, MBB and NFRC Bank).

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 2022, we continued to drive 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. Furthermore, in 2022 we also handed over the responsibility of developing and maintaining the risk culture maturity model and risk culture monitoring dashboard to the Risk Culture & Behavioural Risk department.

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. ING employees are required to take an annual e-learning and attest to their adherence to the global Code of Conduct. In 2021, the global Code of Conduct was embedded into our employees' performance management cycle with the aim ensuring 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 the experts of the newly created Risk Culture & Behavioural Risk (RC&BR) department, as well as by local compliance experts and data ethics experts with the goal of enhancing balanced decision-making in line with the Orange Code decision-making model. This four-step model supports moral learning and well-balanced decision-making.

Following the initial incorporation of the model in the global Product Approval and Review Process (PARP) policy in 2020, it was further improved in the updated global PARP of 2022. ING's PARP takes an objective, helicopter-view to safeguard the long-term customer's interest (societal developments, changing customer behaviour, life-events and so on) when manufacturing and/or distributing a product. The RC&BR department 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 2022, we continued to expand and strengthen our required learning curriculum. This is foundational learning that is centrally created and rolled out to all staff across the bank. The focus in 2022 was on cybersecurity, fraud and KYC. Formats for our learning continue to be updated to increase engagement and to drive practical application of the knowledge gained by staff. The curriculum is tracked centrally to monitor timely completion.

We have expanded our learning for risk professionals, with the Risk Academy providing a range of learning for Risk staff to support their professional development. These take the form of a comprehensive offering of learning modules and learning channels that support employees in developing their knowledge, skills and behaviours.

Dutch Banker's Oath

In the Netherlands, all employees are required to take the Bankers' Oath and pledge this promise in a meaningful ceremony. The Oath came into force in the Netherlands on 1 April 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, 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 in the Netherlands held virtual Bankers' Oath ceremonies, instead of physical ones, to allow new employees (around 400 a month) to still take the Oath on time and in a meaningful ceremony. This was continued throughout 2022. Before taking the Oath, an e-learning is provided and the importance of the Oath is discussed. Also, dilemmas that the employees may come across in their daily work are shown, aimed at ensuring 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 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, go to the Capital Requirements Regulation (CRR) Remuneration Disclosure published on ing.com.

Risk Culture & Behavioural Risk department (RC&BR)

In March 2022, the Behavioural Risk department, the Risk Academy and Culture & Ethics department were combined to form a new Centre of Expertise for Risk Culture & Behavioural Risk, reporting directly to the CRO. The aim of the department is to provide a clear vision, aligned strategy and sound methodological approach to identify, assess and bring change to the way employees act on risks.

Behavioural risk

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.

Behavioural risk assessments

Behavioural risk assessments 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 Behavioural Risk Management Framework is used as the standard across ING to signal behavioural risks going forward. In 2022, behavioural risk assessments were carried out and focused on the topic of escalation behaviour.

Behavioural risk interventions

Based on the results of the executed behavioural risk assessments, the behavioural risk intervention team 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.

In 2022, the intervention team worked on several intervention plans. Together with Global KYC, the intervention team followed up on the previously held 'KYC World Cafe' – a large group change activity that drives common understanding, engagement and ownership and enhances learning and behavioural change, specifically designed for the KYC community. Another example that the team worked on in 2022 is the development and execution of new interventions that have been designed to improve speak-up and escalation behaviour in certain parts of the organisation.

The behavioural risk assessment and intervention team works closely with the business units and departments such as HR, Compliance and Internal Audit to align on and embed desired leadership and risk behaviours (i.e. speak up, psychological safety, communication, guiding leadership).

Risk Culture programme

Throughout 2021 and 2022, ING executed the risk culture programme that was developed based on the 2020 self-assessment. The emphasis in 2022 was on further evolving the risk culture dashboard as well as facilitating meaningful conversations on risk culture throughout the organisation. Risk culture is actively discussed by the MBB and the SB on a quarterly basis.

Risk cycle process

ING uses a step-by-step risk management approach to identify, manage and mitigate 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 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 reassessed 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 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 key elements of the ERM Framework. Its objective is to set an appropriate risk appetite at a consolidated level across different risk categories and to allocate the risk appetite throughout the organisation.

Policy

The RAF policy explains the setup of the overarching global risk appetite. Within the RAF, ING monitors a range of financial and non-financial risk metrics with an aim to keep our risk profile 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 (RAS) 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 MBB, the EB 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. Limits that need SB approval are called boundaries and the underlying metrics supporting the boundaries which need EB and MBB approval are called instruments.

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 executed following 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, like ALCO Bank, GCTP and Bank NFRC. Cascading is done via several detailed risk appetite statements which have been defined per risk type, the combination of which is aimed to ensure compliance with the overarching solvency, concentration and funding and liquidity RASs.

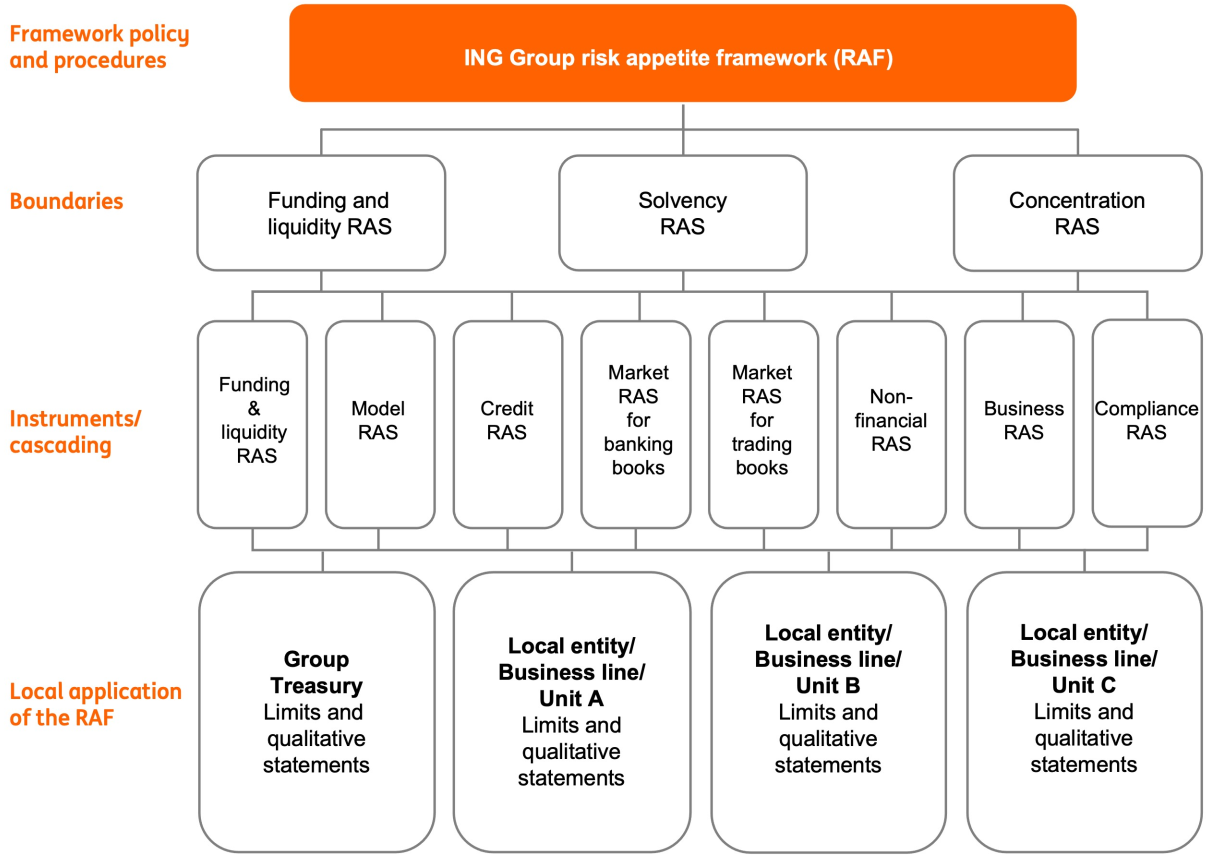
Examples of underlying risk metrics include:

- Solvency and profitability (e.g. CET1 ratio, MREL ratio and earnings at risk).
- Funding and liquidity (e.g. liquidity coverage ratio (LCR) and net stable funding ratio (NSFR)).
- Credit risk (e.g. 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 (e.g. net interest income (NII) at risk and revaluation reserve at risk).
- Non-financial risk (e.g. capital-at-risk and management of audit issues).
- Compliance risk (e.g. key risk indicators on fraud management and sourcing).
- Business risk (e.g. economic capital).
- Model risk (e.g. number of inadequate pillar 1 models).

ING has started including climate risk in its RAF by, among other things, 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 inclusion of climate risk impact on other risk types with the aim of ensuring that the potential risks stemming from e.g. transition risk and physical risk are properly captured in the RAF.

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 input for the quarterly planning process as well as for the establishment of key performance indicators and targets for senior management.



Step 4. Monitor and manage underlying risk limits

To verify that it remains within the RAF, 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 MBB, the EB and the SB and its Risk Committee. Moreover, every quarter the financial plan is checked for potential limit excess within a one-year horizon, where in the strategic dialogue the MBB can take mitigating measures or make adjustments to the dynamic plan.

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 Russia/Ukraine war, ING assessed the potential impact on its financial position via different types of stress tests. In addition to assessing P&L, capital and liquidity positions of ING for a range of different scenarios, idiosyncratic risks were also included. The outcome of these stress tests helped management get insight into the potential impact and define actions to mitigate this potential impact.

In the first half of 2022, ING executed the regulatory climate risks stress-test scenario, which is a part of the biannual ECB Single Supervisory Mechanism (SSM) stress test. This regulatory stress test, combined with internal analyses done on climate risk, is used for enhancing ING's internal climate risk stress testing. In the last quarter of 2022, ING has introduced a 'Climate Risk with Geopolitical Angle scenario', which will be reported quarterly together with the other standard scenarios.

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

ING's stress-testing process consists of several stages:

- 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.

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.

Governance

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.

ICAAP framework

ING's Internal Capital Adequacy Assessment Processes (ICAAP) aims to ensure that capital levels remain adequate both looking-forward and under adverse conditions in terms of covering material risks-to-capital from both a normative and economic (internal) perspective. The assessment of ING's capital adequacy takes into account its business strategy and risk profile, market environment, and operating macro environment. This implies that views of various stakeholders such as regulators, shareholders, investors, rating agencies, clients and customers do play an important role.

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 capital and funding strategy determines the underlying ICAAP elements and thereby contributes to the business continuity of ING from different perspectives.

Managing ING's capital entails finding the right balance between supply and demand while taking into account market and macro circumstances. The process of balancing these strategic goals is captured in the ICAAP framework and enabled by six building blocks and underlying 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.
- Solvency stress testing.
- Planning and forecasting.
- Capital management
- Continuity.

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 reassesses its risks as part of its Capital Adequacy Statement, a quarterly process to assess ING's capital adequacy.

Risk appetite

As explained in the RAF 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) and minimum requirement for own funds and eligible liabilities (MREL) based on RWA/leverage ratio and economic capital adequacy.

Solvency 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 steps that are described in the overall section on stress testing.

ING distinguishes the following three types of stress test analysis:

- Sensitivity analysis: Assess the impact of a pre-defined shock in one or more risk drivers. The main 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. In contrast with scenario analyses, sensitivity analyses are built on a predefined set of shocks that don't necessarily relate to a qualitative story line.
- Scenario analysis: Used to assess the 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 or geographical presence. To execute such a stress test, scenarios need to be determined that are dynamic and forward looking and incorporate the occurrence of a string of events through time.
- Reverse stress testing: The purpose is to identify scenarios that could lead to a pre-defined outcome. This could, for example, be a CET1 ratio or LCR to define the point at which the bank is considered not viable anymore. 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.

Planning and forecasting

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 aims to ensure that capital planning adheres to the solvency risk appetite set by the SB.

Capital management

Formulation of the CET1 target 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 target 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 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. See also Note 47 'Capital management'.

Continuity

Risk events with high severity or significant deteriorations of economic and market conditions beyond ING's control could cause deviations from the business and capital plans, which may result in a potential capital shortfall.

ING has therefore set up a continuity (safety) net of contingency and recovery planning. As part of this, ING set up ongoing monitoring of relevant indicators with the aim of awareness and preparedness to act pro-actively to ensure continuity. The intervention measures which can be activated when deemed necessary, consist of predefined RWA reduction measures, as well as direct capital increasing measures. The escalation mechanisms are defined, governed and detailed in the contingency and recovery plans.

Both plans aim to restore ING's capital adequacy. Depending on the severity of the situation, the contingency plan can be activated at this warning phase as well as triggering further management action and formation of the contingency crisis teams. Further drops in capital levels trigger the alert phase for recovery monitoring and/or the activation of the recovery plan and corresponding crisis teams.

Assessing capital adequacy: Capital Adequacy Statement (CAS)

The CAS is ING Bank'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 (economic capital/view).
- Coherence of the available capital with the (realisation of) strategic plans.
- 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 the 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.

Capital developments

ING Bank's capital ratios at the end of the year decreased compared to 2021 primarily due to higher risk-weighted assets and as most of the net profit of the year with EUR 2.75 billion additional distributions were up streamed to ING Group. Risk-weighted assets were mainly impacted by rating downgrades on Russia-related exposure, currency movements, the implementation of EBA guidelines on the treatment of structural FX positions and model impacts. Model impacts reflect the introduction of a risk-weight floor on Dutch residential mortgages by the Dutch Central Bank as well as ongoing redevelopment of internal models and EBA guidelines. ING continues to maintain a strong and high-quality capital level.

ING Bank paid EUR 3.5 billion of dividend to ING Group in relation to net profit and an additional EUR 2.75 billion for distribution to shareholders by the Group.

ING Bank N.V. has a CET1 ratio of 12.6% versus an overall CET1 requirement (including buffer requirements) of 7.10%. The Bank's Tier 1 ratio decreased from 16.5% to 14.5% compared to last year. The Banks's Total capital ratio decreased to 17.5%.

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 (RAF), 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.

A new Credit Risk department was established in 2022. This department is responsible for setting the credit risk strategy for ING and aims to ensure credit risk and credit restructuring are managed from an overarching point of view rather than per business line. The head of Credit Risk is supported by the following teams within this new department:

- Portfolio, Strategy & Governance team: responsible for setting up credit risk strategies and risk appetite statements, performing analysis and monitoring of the credit risk position of ING, as well as setting and maintaining the credit risk framework and policies.
- Credit Risk Control Unit: responsible for the design or selection, implementation, oversight and performance of the rating systems.
- Global Credit Risk Restructuring: responsible for a safe, compliant and data driven credit loss process by managing loan loss provisioning and finding solutions for business customers in financial difficulty. The team focuses on management of the global loan loss provisioning, not only of individual WB provisions, but also collective WB and Retail Banking provisions.

While the Credit Risk department has oversight of the Bank credit risk strategy and risk appetite across Retail Banking risk and Wholesale Banking risk, the head of Retail/Rest of World (RoW) Risk and head of Wholesale Banking Risk aim to ensure the management of the risk within these business lines. Also refer to the Risk governance and organisational structure in the introductory section of the Risk management chapter.

The credit risk function encompasses the following activities:

- Measuring, monitoring and managing credit risks in the bank's portfolio, including the measures taken in response to the war in Ukraine.
- Challenging and approving new and modified transactions and borrower reviews.
- Managing the levels of provisioning and risk costs, and advising on impairments.
- Providing consistent credit risk policies, systems and tools to manage the credit lifecycle of all activities.

Credit risk categories (*)

In the following table the different types of credit risk categories are described and a reconciliation with the notes in the financial statements is also included:

Reconciliation between credit risk categories and financial position (*)

Credit risk categories	Notes in the financial statements
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.	Note 2 Cash and balances with central banks Note 3 Loans and advances to banks Note 4 Financial assets at fair value through profit or loss Note 5 Financial assets at fair value through other comprehensive income Note 7 Loans and advances to customers Note 41 Contingent liabilities and commitments
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.	Note 4 Financial assets at fair value through profit or loss Note 5 Financial assets at fair value through other comprehensive income Note 6 Securities at amortised cost
Money market risk: arises when ING places short-term deposits with a counterparty in to manage excess liquidity. In the event of a counterparty default, ING may lose the deposit placed.	Note 2 Cash and balances with central banks Note 3 Loans and advances to banks Note 7 Loans and advances to customers
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).	Note 4 Financial assets at fair value through profit or loss Note 14 Financial liabilities at fair value through profit or loss Note 40 Offsetting financial assets and liabilities
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.	Note 4 Financial assets at fair value through profit or loss Note 11 Other assets 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 (RAF).

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 RAF. 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.
- Alignment of business strategies and key performance indicators of business units with ING's credit risk appetite through dynamic planning.

The credit risk appetite is set at different levels and dimensions within ING. The credit risk appetite framework 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 credit risk appetite framework has also been extended to embed climate risk elements. The first steps towards introducing climate risk elements in the credit risk appetite framework were taken in 2022 and these are expected to further evolve and mature. The climate risk elements within the credit risk appetite framework allow for more efficient steering of sector concentrations from a climate risk perspective.

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). 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 an established 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 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.
- Product approvals: The product approval and review process (PARP) assesses and manages risks associated with the introduction of new or modified products. Its goal is 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. The papers include the identification of 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 are reviewed and refined to limit the credit risk to portfolios particularly sensitive to certain market circumstances, such as Covid-19 at the time, or currently in the context of the deteriorating economic outlook.

Credit risk models (*)

Within ING, internal CRR-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 only used for 'low default portfolios', where limited historical defaults exist.

Credit risk rating process (*)

The majority of 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).
- Non-performing (risk rating 20-22).

The first three categories (1-19) are risk ratings for performing loans. Ratings are calculated in IT systems with internally developed models, based on manually or automatically fed data, or for part of the non-performing loans set by the global or regional credit restructuring department. Under certain conditions, the outcome of a manually fed model can be challenged through a rating appeal process. 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 and medium enterprise (SME) in the Netherlands, Belgium, Poland 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.

More frequent reviews (e.g. quarterly) are performed where considered necessary, for example portfolios and clients most at risk of being impacted by the Russian invasion of Ukraine and expected spillover effects.

After the introduction of IFRS 9 in 2018 and especially with the introduction of new regulations, including the new definition of default (DoD) in 2020, ING has also embarked on multi-year redevelopments of its credit risk 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 Bank. 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 Credit Risk department, manages the CRCU control framework offering quality assurance on the regulatory areas of responsibility: the design or selection, implementation, oversight, and performance of the rating systems. This framework leans on control execution in other teams such as Model Development in Integrated Risk where the combination of these different teams is considered for the CRCU self-assessment.

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 € million		Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Rating class		2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Investment grade	1 (AAA)	89,686	81,615	324	331	32,492	27,089	2,529	2,363	125,032	111,398
	2-4 (AA)	49,320	56,982	7,871	5,863	40,498	41,646	12	15	97,701	104,506
	5-7 (A)	79,292	72,052	45,471	28,456	61,422	59,040	320	482	186,505	160,029
	8-10 (BBB)	129,709	124,622	117,172	125,469	56,046	57,394	2,497	2,502	305,424	309,986
Non-Investment grade	11-13 (BB)	56,409	61,996	55,945	60,296	46,657	42,554	4	37	159,016	164,883
	14-16 (B)	13,693	16,699	14,224	14,560	11,662	10,800			39,579	42,059
	17 (CCC)	1,858	1,712	2,021	2,158	1,014	731	299	178	5,192	4,779
Substandard grade	18 (CC)	3,564	865	1,304	904	519	477			5,386	2,245
	19 (C)	731	126	962	1,162	490	451			2,183	1,739
Non-performing loans	20-22 (D)	4,354	3,937	4,762	5,035	2,592	3,153			11,708	12,124
Total		**428,616**	**420,606**	**250,056**	**244,232**	**253,391**	**243,334**	**5,662**	**5,577**	**937,725**	**913,749**
Industry											
Private Individuals		32	30	163,243	161,125	191,556	184,810			354,831	345,965
Central Banks		80,006	83,878			23,541	22,573	1,495	643	105,043	107,094
Natural Resources		44,695	51,937	1,160	1,225	694	692			46,549	53,855
Real Estate		26,426	26,472	22,648	22,691	3,439	3,536			52,513	52,699
Commercial Banks		42,036	39,582	194	230	5,721	6,390	2,911	3,006	50,863	49,208
Non-Bank Financial Institutions		54,274	46,597	1,379	1,473	504	395	102	124	56,258	48,590
Central Governments		41,622	40,530	2,880	1,730	3,838	3,686	1,016	1,696	49,356	47,642
Transportation & Logistics		25,474	24,123	4,038	4,206	1,471	1,269			30,982	29,597
Utilities		22,683	22,452	1,865	1,370	150	113			24,698	23,935
Food, Beverages & Personal Care		13,681	14,003	7,356	6,926	2,585	2,411			23,623	23,340
Services		9,926	9,449	11,606	11,290	981	974	33	30	22,546	21,743
General Industries		11,731	11,487	5,753	5,554	3,381	3,086			20,865	20,127
Lower Public Administration		6,020	6,163	5,921	5,079	9,725	8,029			21,666	19,271
Other		50,009	43,903	22,014	21,333	5,805	5,369	104	77	77,932	70,682
Total		**428,616**	**420,606**	**250,056**	**244,232**	**253,391**	**243,334**	**5,662**	**5,577**	**937,725**	**913,749**

Outstandings per line of business (*) - continued1, 2, 3

in € million		Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Region		**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Europe	Netherlands	61,143	74,175	154,253	152,597	254	173	2,898	2,826	218,548	229,771
	Belgium	27,144	32,205	88,767	84,748	669	948	0	19	116,580	117,919
	Germany	24,441	22,669	463	508	127,764	118,734	63	46	152,730	141,956
	Poland	16,350	15,454	49	45	26,831	26,560	0	4	43,229	42,063
	Spain	10,491	10,130	71	83	25,649	27,294	25	35	36,237	37,542
	United Kingdom	27,735	28,193	152	187	185	109	107	78	28,179	28,567
	Luxembourg	26,113	26,632	4,953	4,769	639	468	15	18	31,720	31,887
	France	18,484	18,786	643	606	4,448	7,123	1	3	23,576	26,517
	Rest of Europe	77,814	64,028	400	364	18,750	17,826	24	16	96,989	82,233
America		80,444	71,471	190	186	1,795	1,559	22	35	82,450	73,251
Asia		46,291	45,439	73	91	121	132	2,504	2,498	48,989	48,159
Australia		9,817	8,957	16	18	46,281	42,405	2	1	56,116	51,382
Africa		2,348	2,467	28	31	5	4	0	0	2,381	2,501
Total		**428,616**	**420,606**	**250,056**	**244,232**	**253,391**	**243,334**	**5,662**	**5,577**	**937,725**	**913,749**

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 2022, ING's portfolio size increased by €24.0 billion (+2.62%) to €937.7 billion outstandings. The net volume growth was spread across all the business lines. Foreign exchange rate changes had a positive impact on portfolio growth, mainly in WB, and increased total outstanding by €6.3 billion, driven by the appreciation of the US dollar (+6.2%) against the euro, partially compensated by the British pound sterling (-5.3%), the Polish new zloty (-1.8%), and new Turkish lira (-23.7%).

Rating distribution (*)

Overall, the rating class distribution remained stable in 2022. The share of investment grade rating classes increased from 75.1% to 76.2%, while the share of non-investment grade decreased, from 23.2% to 21.7%. Sub-standard grade outstandings increased from 0.4% to 0.8% of the total portfolio, whereas non-performing loans decreased from 1.3% to 1.2%.

With respect to the rating distribution within the business lines, in WB, investment grade increased to 81.2% (from 79.7%), where non-investment grade exposures decreased to 16.8% (from 19.1%) compared to 2021.

Substandard grade assets increased from 0.2% to 1.0% of total Wholesale Banking assets, primarily as a result of increases in Russia, in the natural resources industry. The share of non-performing loans for WB remained stable at 1.0% (from 0.9%).

The rating distribution for Retail Benelux improved mostly because of Dutch residential mortgages, shifting from rating class BB/BBB to A. The share of A-rated mortgages increased from 9.3% to 24.0% of the portfolio. In Belgium, residential mortgages showed a modest increase of BBB assets, from single A. Substandard grade Belgium mortgage outstandings increased to 1.0% (from 0.8%).

In Retail Challengers & Growth Markets, the distribution across rating classes remained rather stable in 2022. Overall share of investment grade decreased from 76.1% to 75.2%, NPL decreased to 1.0% (from 1.3%).

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 65.0% for Retail Benelux and 76.0% for Retail Challengers & Growth Markets.

In Market Leaders, the overall volumes increase is mainly explained by Belgium (+4.7%), whereas the Netherlands remained stable in 2022 (+1.1%). In C&G, the increase in volume is in private individuals, primarily in Germany, and to a lesser extent in Australia and Spain. A decrease in France is explained by the discontinuation of retail activities. Within WB, an increase in exposures is noted mainly in non-bank financial institutions (NBFI) of €7.7 billion (notably in Germany, France and the US). Apart from NBFI, an increase is observed in other industries (+€6.1 billion), compensated by a decrease in natural resources (€7.2 billion).

Outstandings by economic sectors and geographical area (*) [1]

in € million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	Luxembourg	France	Rest of Europe	America	Asia	Australia	Africa	2022
Private Individuals	114,625	44,193	101,529	13,767	24,865	138	3,486	2,731	13,654	161	131	35,528	24	354,831
Central Banks	35,202	14,338	21,041	1,060	347	427	6,820	35	18,092	0	4,962	2,695	24	105,043
Natural Resources	3,084	1,356	809	746	169	4,442	2,764	470	12,154	8,771	10,398	1,028	361	46,549
Real Estate	17,586	10,112	1,388	2,374	1,391	413	3,797	3,155	3,378	3,474	1,180	4,263	2	52,513
Commercial Banks	1,359	265	3,974	551	402	4,933	4,480	4,371	6,368	9,945	12,041	1,765	409	50,863
Non-Bank Financial Institutions	2,710	1,041	5,054	2,299	99	8,229	4,489	3,220	4,495	19,636	4,091	896	0	56,258
Central Governments	3,342	7,716	1,179	6,578	4,578	46	175	1,797	8,444	13,979	333	636	551	49,356
Transportation & Logistics	3,967	2,183	608	1,300	690	1,787	583	733	7,808	3,378	6,806	531	608	30,982
Utilities	1,551	1,630	2,814	679	1,227	2,953	572	980	4,302	4,347	1,545	1,897	200	24,698
Food, Beverages & Personal Care	7,249	3,002	573	2,334	475	739	1,667	469	2,668	3,245	942	248	13	23,623
Services	4,819	8,816	1,254	1,101	67	685	808	1,066	1,120	1,821	357	632	0	22,546
General Industries	5,430	2,689	1,007	2,849	311	330	604	245	3,152	2,926	1,311	9	0	20,865
Lower Public Administration	272	5,638	5,197	644	200	0	313	3,126	402	1,310	0	4,564	0	21,666
Other	17,353	13,602	6,302	6,946	1,416	3,058	1,164	1,179	10,952	9,457	4,891	1,424	188	77,932
Total	**218,548**	**116,580**	**152,730**	**43,229**	**36,237**	**28,179**	**31,720**	**23,576**	**96,989**	**82,450**	**48,989**	**56,116**	**2,381**	**937,725**
Rating class														
Investment grade	174,972	76,244	130,285	27,501	28,556	23,160	26,053	17,545	64,884	63,870	39,903	41,476	213	714,662
Non-Investment grade	40,325	36,036	20,967	14,596	7,330	4,634	5,442	5,814	27,617	17,615	7,638	13,914	1,858	203,786
Sub-standard grade	1,508	984	579	422	105	41	80	16	2,903	311	124	257	239	7,569
Non-performing loans	1,743	3,316	899	710	246	344	145	201	1,584	654	1,325	470	72	11,708
Total	**218,548**	**116,580**	**152,730**	**43,229**	**36,237**	**28,179**	**31,720**	**23,576**	**96,989**	**82,450**	**48,989**	**56,116**	**2,381**	**937,725**

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 € million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	Luxembourg	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	0	2,856	1,168	18	107,094
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
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
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	0	48,590
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
Transportation & Logistics	4,572	2,209	506	1,177	723	1,760	582	982	6,837	3,410	5,682	645	514	29,597
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
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
General Industries	5,389	2,891	1,011	2,612	381	395	532	271	3,363	2,116	1,151	15	0	20,127
Lower Public Administration	343	5,158	5,787	636	0	0	296	2,732	467	1,197	46	2,608	0	19,271
Other	15,485	13,424	5,573	6,319	940	2,277	1,168	1,210	9,297	8,803	4,732	1,454	0	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.

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 reduced to 23.3% (2021: 25.1%).

The most noticeable trend in the Netherlands was the decrease in exposure with central banks (-€11.7 billion). Outstandings to private individuals were stable at 62.5% (2021: 62.3%) of total outstandings (excl. Central Banks). In Belgium, no substantial moves were observed in the portfolio, apart from a decrease in central banks (€3.9 billion).

In terms of rating distribution in individual countries, the total share of investment grade/non-investment grade remains substantial for the Netherlands at 98.5% (2021: 98.5%) and in Belgium 96.3% (2021: 96.5%). Substandard grade assets increased slightly, in the Netherlands from 0.5% to 0.7% and in Belgium from 0.7% to 0.8%. In the Netherlands, the NPL share decreased in 2022, from 1.0% to 0.8%, whereas Belgium remained flat at 2.8%.

In Challengers & Growth Markets, ING has a strong market position in residential mortgages in Germany, Australia, Spain and Poland. Mortgage portfolios increased in Germany, Australia and Spain in 2022.

The top-five countries within Rest of Europe based on outstandings were: Switzerland (€25.0 billion), Italy (€17.7 billion), Romania (€10.3 billion), Turkey (€7.8 billion) and Ireland (€5.6 billion). Outstandings in Rest of Europe were primarily impacted by Switzerland (central bank outstandings +€15.3 billion).

In Europe, outside the Benelux, rating distribution in most countries remained stable. The most noticeable moves in rating distribution were observed in Rest of Europe, where the development of the Russian portfolio caused an increase in substandard from 0.4% to 3.0% and NPL from 1.3% to 1.6%. Note the paragraph on Russian exposures in section 'Risk management at ING Bank'. Apart from Russia, noticeable moves occurred in France, where NPL increased from 0.4% to 0.9% impacted by the decommissioning of the Retail business in France. And in the UK, where NPL decreased from 1.6% to 1.2%.

The increase in exposure in the Americas region was mainly driven by FX impact. In terms of rating distribution for America region, an increase in investment grade is observed to 77.6% (from 73.0%), non-investment grade decreased to 21.3% from 25.1%. Sub-standard grade increased to 0.4%, while NPL improved to 0.8% (from 1.5%). Australia's rating distribution improved with a decrease of NPL's from 1.9% to 0.8% of the portfolio.

Credit risk mitigation (*)

ING uses various 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, export credit insurances or third-party pledged mortgages. Insurance or reinsurance covers, including comprehensive private risk insurance (CPRI) may be recognised as guarantees and effectively function in an equivalent manner. ING accepts credit risk insurance companies and export credit agencies (ECAs) as cover providers.

Cover valuation methodology (*)

General guidelines for cover valuation are established with the objective 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 future cash flows. ING increased the haircuts applied to collateral values used in stage 3 individual provisions as at 31 December 2021 and 31 December 2022 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.

The next table gives an overview of the collateralisation of the ING's total portfolio.

Cover values including guarantees received (*)

in € million		Cover type				Collateralisation		
2022	Outstandings	Mortgages	Financial Collateral	Guarantees	Other covers	No Cover	Partially covered	Fully covered
Consumer lending	353,323	700,961	5,626	24,231	42,817	6.2 %	7.6 %	86.2 %
Business lending	379,070	167,122	29,501	118,294	438,864	37.5 %	22.3 %	40.2 %
Investment and money market	141,432	0	5	1,213	2	99.1 %	0.6 %	0.3 %
Total lending, investment and money market	**873,824**	**868,083**	**35,132**	**143,738**	**481,683**	**34.8 %**	**12.9 %**	**52.3 %**
Pre-settlement	63,901							
Total Bank	**937,725**							

Cover values including guarantees received (*)

in € million		Cover type				Collateralisation		
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**							

Excluding the pre-settlement portfolio, 52.3% (2021: 51.2%) of ING's outstandings were fully collateralised in 2022. Since investments traditionally do not require covers, the percentage for 'no covers' in this portfolio is above 95%. 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% (2021: 37.7%) of ING's total outstanding, primarily consisting of residential mortgage loans and other consumer lending loans. As a result, most collateral consists of mortgages. 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 (34.4%), Germany (28.0%), Belgium and Luxembourg (13.2%) and Australia (10.7%).

Relative to the overall developments in the housing markets and loan loss provisions for the mortgage portfolio's, note that management adjustments are recognised to maintain an appropriate level of provisions. See paragraph on 'management adjustments' in the loan loss provisioning section.

Business lending portfolio (*)

Business lending accounts for 40.4% (2021: 45.3%) of ING's total outstanding. Business lending presented in this section does not include pre-settlement, investment and money market exposures.

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 (*)

in € million	2022	2021
Performing not past due	799,655	819,183
Business lending performing past due	7,659	8,121
Consumer lending performing past due	780	1,142
Non-performing	11,691	12,021
Total lending and investment	**819,785**	**840,466**
Money market	**54,039**	**29,752**
Pre-settlement	**63,901**	**43,531**
Total	**937,725**	**913,749**

Past due obligations (*)

Retail Banking 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 applicable to private individuals, 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 reminding 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 WB, 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, WB 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]

in € million

Region		2022 Past due for 1–30 days	2022 Past due for 31–60 days	2022 Past due for 61–90 days	2022 Past due for >90 days	2022 Total	2021 Past due for 1–30 days	2021 Past due for 31–60 days	2021 Past due for 61–90 days	2021 Past due for >90 days	2021 Total
Europe	Belgium	294	27	18		339	599	53	61		714
	Germany	68	34	13		116	105	27	11		143
	Luxembourg	43	4	2		48	73	3	1	1	78
	Netherlands	36	10	5		50	31	9	3		43
	Poland	59	8	4		71	35	5	3		43
	Spain	13	9	5		27	13	7	5		26
	France	2				2	2				2
	United Kingdom										1
	Rest of Europe	60	15	8		83	52	9	5		66
America		1				1					
Australia		29	11	2		42	17	7	1		25
Total		**604**	**119**	**57**		**780**	**927**	**123**	**91**	**1**	**1,142**

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.

The past due but performing outstanding of consumer lending decreased by €362 million. The largest decrease was observed in Belgium (-€375 million), in term loans (-€188 million) and in Residential Mortgage (-€113 million). Moderate increase was seen in Poland (+€28 million), Rest of Europe (+€17 million) and Australia (+€16 million), with each mainly visible in the 1–30 days past due bucket.

Ageing analysis (past due but performing): Business lending portfolio by geographic area, outstandings (*)1

in € million		2022					2021				
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	579	49	10		639	1,676	178	8		1,863
	United Kingdom	1,147	77	512		1,736	1,036	108	16		1,159
	Luxembourg	302	1			303	586	270		1	856
	Netherlands	730	30	15		775	553	16	4		574
	Poland	279	35	14		329	94	5	2	1	102
	Spain						95		1		96
	France	83	6			90	36	5			41
	Germany	44	16			60	5		2		7
	Rest of Europe	474	239	1	1	715	571	57	1	1	629
America		1,901	67	19		1,986	2,076	71			2,146
Asia		553	48			601	276		25		302
Australia		359	61	4	2	426	327	17		1	345
Total		**6,452**	**629**	**575**	**4**	**7,659**	**7,331**	**727**	**60**	**3**	**8,121**

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.

Total past due but performing outstanding of business lending decreased by €462 million. These were mainly contributed by decreased outstanding in the 1-30 days (€879 million) past due bucket, partly offset by increased outstanding in 61–90 days past due bucket (€515 million). The top three areas of decrease in the 1-30 days bucket were Belgium (€1,097 million), Luxembourg (€284 million) and America (€175 million). The top three areas of increase in the 1-30 days bucket were Asia (€277 million), Poland (€185 million) and the Netherlands (€177 million).

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 termination 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 terminate 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 clients, 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 has 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 applied to forborne exposures that move from non-performing back to performing.

Summary Forborne portfolio (*)

in € million	2022				2021			
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	8,359	5,880	2,478	2.7 %	9,798	7,455	2,343	3.1%
Retail Banking	8,080	4,973	3,107	1.6 %	10,018	6,339	3,679	2.1%
Total	**16,438**	**10,853**	**5,585**	**2.0 %**	**19,816**	**13,793**	**6,022**	**2.5%**

Summary Forborne portfolio by forbearance type (*)

in € million	2022				2021			
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	15,317	10,428	4,889	1.9 %	18,311	13,128	5,183	2.3%
Refinancing	1,121	426	695	0.1 %	1,505	666	839	0.2%
Total	**16,438**	**10,853**	**5,585**	**2.0 %**	**19,816**	**13,793**	**6,022**	**2.5%**

As of 31 December 2022, ING's total forborne assets decreased by €3.4 billion compared to 31 December 2021. WB decreased by €1.4 billion and Retail Banking decreased by €1.9 billion.

Wholesale Banking (*)

As of December 2022, WB forborne assets amounted to €8.4 billion (2021: €9.8 billion), which represented 2.7% (2021: 3.1%) of the total WB portfolio.

Wholesale Banking: Forborne portfolio by geographical area (*)

in € million

Region		2022			2021		
		Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Europe	Netherlands	720	630	90	1,012	811	201
	Belgium	659	651	8	329	321	8
	Germany	580	466	115	868	658	210
	United Kingdom	1,044	721	323	1,344	913	432
	Italy	205	157	48	286	261	25
	Norway	33		33	79	29	50
	Poland	203	189	14	181	160	21
	Rest of Europe	2,176	1,749	427	2,381	2,181	200
America		1,353	1,032	321	1,900	1,326	574
Asia		1,107	143	964	685	292	393
Australia		217	132	85	568	416	152
Africa		61	10	51	164	88	76
Total		**8,359**	**5,880**	**2,478**	**9,798**	**7,455**	**2,343**

Wholesale Banking: Forborne portfolio by economic sector (*)

in € million

Industry	2022			2021		
	Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Natural Resources	1,239	603	636	2,047	1,177	870
Real Estate	2,000	1,917	84	1,665	1,570	95
Transportation & Logistics	1,073	868	205	1,336	1,061	274
Food, Beverages & Personal Care	1,082	543	539	1,202	749	452
Services	697	665	32	793	687	106
Automotive	172	125	46	581	535	46
Utilities	469	255	214	407	271	136
General Industries	255	176	80	366	321	45
Retail	302	227	76	361	304	57
Chemicals, Health & Pharmaceuticals	191	168	23	347	324	22
Builders & Contractors	168	94	74	177	135	41
Other	710	240	469	516	318	197
Total	**8,359**	**5,880**	**2,478**	**9,798**	**7,455**	**2,343**

The main concentration of forborne assets in a single country was in the United Kingdom with 12% (2021: 14%) of the total WB forborne assets and 13% (2021: 18%) of the total non-performing forborne assets.

WB forborne assets decreased by €1.44 billion compared to 2021, of which the performing forborne assets decreased by €1.58 billion. This was visible across all industries (except for Real estate) and locations (except for Belgium and Poland).

WB's forborne assets were mainly concentrated in natural resources, real estate, transportation & logistics and food beverages & personal care. These four economic sectors accounted for 65% of the total WB forborne outstandings. During 2022, an increase in forborne assets was visible in the real estate industry (+€ 0.3 billion), offset by a decrease in Natural Resources (-€0.8 billion), Automotive (-€ 0.4 billion), Food, Beverages & Personal Care (-€0.1 billion) and Transportation & Logistics (-€0.2 billion).

Retail Banking (*)

As of the end of December 2022, Retail Banking forborne assets totalled €8.1 billion, which represented 1.6% of the total Retail Banking portfolio.

Retail Banking: Forborne portfolio by geographical area (*)

in € million

Region		2022			2021		
		Outstandings	Of which: performing	Of which: non-performing	Outstandings	Of which: performing	Of which: non-performing
Europe	Netherlands	2,832	2,043	789	4,171	3,224	947
	Belgium	2,644	1,331	1,314	3,319	2,035	1,284
	Germany	804	610	194	497	306	191
	Poland	588	309	279	450	152	298
	Turkey	64	31	32	146	97	49
	Italy	131	52	79	129	47	82
	Romania	124	53	71	115	49	66
	Spain	35	15	20	35	11	23
	Rest of Europe	73	48	25	99	68	30
America		13	12		9	7	2
Asia		3	1	1	3	1	1
Australia		768	467	302	1,045	340	705
Africa		1			1		
Total		**8,080**	**4,973**	**3,107**	**10,018**	**6,339**	**3,679**

The main concentration of forborne assets in a single country was in the Netherlands with 35% (2021: 42%) of total Retail Banking forborne assets and 25% (2021: 26%) of the non-performing forborne assets. Next to that, Belgium had to 33% (2021: 33%) of the total Retail forborne assets.

Non-performing loans (*)

ING's loan portfolio is under constant review. Loans to obligors that are considered more than 90 days past due and above applicable thresholds 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 that have been classified as non-performing.

Non-performing Loans: outstandings by economic sector and business lines (*)[1]

in € million	Wholesale Banking		Retail Benelux		Retail Challengers & Growth Markets		Corporate Line		Total	
Industry	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Private Individuals			2,174	2,424	1,954	2,445			4,129	4,869
Natural Resources	1,369	1,325	34	46	17	27			1,421	1,398
Food, Beverages & Personal Care	672	681	438	428	122	130			1,233	1,239
Transportation & Logistics	367	575	165	180	51	52			583	807
Services	119	224	448	499	61	63			628	786
Real Estate	172	132	486	495	54	59			712	686
General Industries	114	66	268	272	100	123			482	461
Builders & Contractors	139	93	244	224	110	112			493	429
Retail	98	140	107	103	39	47			244	290
Utilities	387	199	7	10	7	11			401	221
Chemicals, Health & Pharmaceuticals	175	65	115	70	20	22			310	158
Telecom	288	28	12	1	3	3			303	31
Other	440	305	260	282	52	58			753	646
Total	**4,340**	**3,833**	**4,759**	**5,035**	**2,592**	**3,153**			**11,691**	**12,021**

1 Based on Lending and Investment outstandings.

Non-performing Loans: outstandings by economic sectors and geographical area (*)

in € million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	France	Luxembourg	Rest of Europe	America	Asia	Australia	Africa	2022
Private Individuals	574	1,538	739	185	194	4	11	36	470	3	4	370	1	4,129
Natural Resources	57	33		14				53	432	77	649	85	21	1,421
Food, Beverages & Personal Care	310	179	24	109		173	7		228	77	126			1,233
Transportation & Logistics	232	58	1	36	47	20		2	154	24	7	1		583
Services	136	375	2	43	5		3	2	21	40				628
Real Estate	89	376		54		84	25	19	7	47		11		712
General Industries	127	142	17	78			31	2	26	58				482
Builders & Contractors	65	187	2	86				20	101	32				493
Retail	31	85	38	26			18	1	13	22	7	2		244
Utilities	6	6	26	23					17	194	129			401
Chemicals, Health & Pharmaceuticals	51	100	2	15		14	100		28					310
Telecom	24	1		3						5	270			303
Other	40	232	48	38		50		10	79	75	130		51	753
Total	**1,742**	**3,312**	**899**	**710**	**246**	**344**	**196**	**145**	**1,578**	**654**	**1,324**	**470**	**72**	**11,691**

Non-performing Loans: outstandings by economic sectors and geographical area (*)

in € million	Region													Total
Industry	Netherlands	Belgium	Germany	Poland	Spain	United Kingdom	France	Luxembourg	Rest of Europe	America	Asia	Australia	Africa	
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
Real Estate	167	303		61		88	21	21	9			16		686
General Industries	110	173	18	91			4	3	34	27				461
Builders & Contractors	43	188	4	83				2	58	50				429
Retail	40	70	34	30			56	1	21	21	14	2		290
Utilities	8	9	71	26					28	30		48		221
Chemicals, Health & Pharmaceuticals	63	48	2	16					29					158
Telecom	13	1		2		10			1	5				31
Other	42	226	129	41		2	14	15	38	37	34	1	67	646
Total	**2,212**	**3,255**	**1,005**	**768**	**284**	**447**	**119**	**87**	**1,056**	**1,060**	**656**	**966**	**105**	**12,021**

In December 2022, the NPL portfolio decreased to €11.7 billion, (Dec 21: €12.0 billion). The decrease was driven by Challengers and Growth (-€561 million) and Market Leaders(-€276 million), while Wholesale Banking (+€494 million) increased. The decrease in Challengers & Growth Markets and Market Leaders was mainly witnessed in Private individuals, and was offset by an increase in Wholesale Banking mainly witnessed in Telecom and Utilities industries. The top three countries by NPL outstanding remained Belgium, the Netherlands and Germany. Together they accounted for 50.9% (€5.9 billion) of NPL outstanding (Dec 21: 53.8% (€6.5 billion).

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, and certain financial guarantees issued.

ING distinguishes between two types of calculation methods for credit loss allowances:

- Collective 12-month ECL (Stage 1) and collective Lifetime ECL (Stage 2) for portfolios of financial instruments, as well as Lifetime ECL for credit impaired exposures (Stage 3) below €1 million.
- Individual Lifetime ECL for credit-impaired (Stage 3) financial instruments with exposures above €1 million.

IFRS 9 models (*)

ING's 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 other types of adjustments to the IRB ECL parameters: (1) to the 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). ING has also aligned its definition of default between IFRS9 and the regulatory technical standards (RTS) and EBA guidelines. More information can be found in section 1.7.8 of the Consolidated financial statements.

Climate and environmental risks in IFRS 9 models (*)

ING is evolving in its credit risk management framework to further 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.
In 2022, ING continued to enhance the tools used to identify and assess climate and environmental (C&E) risks in our portfolio. We created C&E risk sector heatmaps for both WB and Retail Banking that facilitated the identification of exposure to C&E risks by means of scores assigned to transition and physical risk drivers. They also enabled us to understand the magnitude of the C&E risk impact on a sectoral level and pinpointed sectors with highest C&E risk exposure. In the past two years, we have improved our understanding of the physical risk impact of climate events on our mortgage portfolio.

The integration of quantified inputs from the heatmaps into risk modelling has not yet been implemented for a number of reasons including a lack of data to assess C&E risks at a client level. Refer to the section 'Environmental, social and governance risk' for further details on the heatmaps and the related challenges.

At this point in time it is not possible to incorporate climate risk separately into IFRS 9 ECL models given the lack of sufficient empirical historical data and the above-mentioned limitations in the risk assessments on client level. Where climate and environmental factors have impacted the economy in the recent past or present, these impacts are however currently implicitly embedded in ING's IFRS9 ECL models through the projected macroeconomic indicators (e.g. GDP growth and unemployment rates). We note that our ECL models are primarily sensitive to the short-term economic outlook as we use a three-year time horizon for macroeconomic outlook, after which a mean reversion approach is applied.

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 or management adjustments to ECL models. For example, we consider whether affected assets have suffered from a significant increase in credit risk (or are credit impaired) and whether the ECL is appropriate. As of 31 December 2022, reported ECL includes a management adjustment of €10 million to address the increased credit risk in ING’s livestock farming portfolio resulting from nitrogen reduction targets introduced by the Dutch Government. Refer to the section 'Management overlays' for further details.

Reconciliation gross carrying amount (IFRS 9 eligible) and statement of financial position

in € million	2022							2021						
	Gross Carrying Amount	Allowances for credit losses	Cash and on-demand bank positions	Reverse Repurchase transactions	Cash collateral	Other	Statement of financial position	Gross Carrying Amount	Allowances for credit losses	Cash and on-demand bank positions	Reverse Repurchase transactions	Cash collateral	Other	Statement of financial position
Amounts held at Central Banks	88,349	-12	-1,170			447	87,614	104,875	-6	1,650			1	106,520
Loans and Advances to Banks	8,796	-37	2,851	19,395	3,679	419	35,103	15,213	-22	1,674	3,403	3,287	36	23,591
Financial Instruments FVOCI Loans	640	-1				4	643	837	-1				3	838
Financial Instruments FVOCI Debt securities	28,752	-21				364	29,095	27,201	-12				150	27,340
Securities at Amortised Cost	48,372	-17				-195	48,160	47,358	-19				980	48,319
Loans and Advances to customers	642,678	-5,984		1,306	4,176	-6,619	635,557	622,100	-5,274		1,487	3,178	6,059	627,550
Total on-balance (IFRS 9 eligible)	**817,587**	**-6,071**	**1,681**	**20,701**	**7,855**	**-5,580**	**836,173**	**817,585**	**-5,334**	**3,324**	**4,890**	**6,466**	**7,229**	**834,158**
Guarantees and irrevocable facilities (IFRS 9 eligible)	149,732	-29						134,122	-34					
Total Gross Carrying Amount (IFRS 9 eligible)	967,319	-6,101						951,707	-5,368					

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 costs 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 91.5% (2021: 93.5%) of the total gross carrying amounts, mainly composed of investment grade, while Stage 2 makes up 7.3% (2021: 5.2%) and Stage 3 makes up 1.2% (2021: 1.3%) of the total gross carrying amounts, respectively.

Gross carrying amount per IFRS 9 stage and rating class (*)[1,2,3]

in € million 2022		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)	100,885	2	284				101,169	2
	2-4 (AA)	98,181	5	2,493	1			100,675	6
	5-7 (A)	177,617	23	4,596	4			182,214	27
	8-10 (BBB)	320,972	98	14,714	29			335,687	127
Non-Investment grade	11-13 (BB)	155,910	277	17,365	91			173,275	368
	14-16 (B)	23,649	168	19,386	471			43,035	639
	17 (CCC)	7,671	8	4,572	194			12,244	202
Substandard grade	18 (CC)			5,198	595			5,198	595
	19 (C)			2,116	293			2,116	293
Non-performing loans	20-22 (D)					11,708	3,841	11,708	3,841
Total		**884,886**	**581**	**70,725**	**1,679**	**11,708**	**3,841**	**967,319**	**6,101**

1 Compared to the credit risk portfolio, the differences are mainly undrawn committed amounts (€150.1 billion) and other positions (€4.4 billion) not included in Credit outstandings and non-IFRS 9 eligible assets (€116.1 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 (€109 million) are excluded.

Gross carrying amount per IFRS 9 stage and rating class (*)[1,2,3]

in € million

2021

Rating class		12-month ECL (Stage 1) Gross Carrying Amount	12-month ECL (Stage 1) Provisions	Lifetime ECL not credit impaired (Stage 2) Gross Carrying Amount	Lifetime ECL not credit impaired (Stage 2) Provisions	Lifetime ECL credit impaired (Stage 3) Gross Carrying Amount	Lifetime ECL credit impaired (Stage 3) Provisions	Total Gross Carrying Amount	Total Provisions
Investment grade	1 (AAA)	107,788	3					107,788	3
	2-4 (AA)	106,673	5	197				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.

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 €0.4 billion from €12.1 billion as of 31 December 2021 to €11.7 billion as of 31 December 2022, mainly as a result of write-offs and generally low inflow into NPL (credit impaired) in 2022. Stage 3 provisions remained however flat at €3.8 billion, reflecting worsened macroeconomic outlook.
- Stage 2 gross carrying amount increased by €21.2 billion from €49.5 billion as of 31 December 2021 to €70.7 billion. This is mainly caused by the significant lifetime PD trigger (€14.8 billion) driven by downgrades of the Russian portfolio and economic turmoil. Furthermore, the implementation of a stricter PD backstop methodology has driven the increase in Stage 2 gross carrying amounts,(€11.4 billion, mainly investment grade exposures). Other Stage 2 triggers such as the 30 Days past due and watchlist triggers (€1.2 billion and €1.1 billion respectively), were more than offset by the forbearance trigger (-€6.4 billion). For the latter, a two-year probation period is required before a client can move back to Stage 1 and the decrease relates to the fact that the start of the Covid-19 pandemic is now more than two years ago.
- Stage 2 provisions increased by €0.7 billion to €1.7 billion as of 31 December 2022, largely driven by the migration of the Russian portfolio to Stage 2 and worsened macro-economic outlook. The implementation of the threefold increase in lifetime PD backstop trigger had limited impact on provisions as it mainly impacts investment grade exposures.

- In 2022, the largest increases in Stage 2 by sector were in Non-bank financial institutions, Real estate, Chemicals health & pharmaceuticals and Lower public administration of €3.5 billion, €2.8 billion, €2.5 billion and €2.1 billion respectively The increase in Stage 2 for non-bank financial institutions mainly resulted from the implementation of the threefold increase in lifetime PD backstop trigger, that mainly impacts investment grade exposures. Other drivers were downgrades in the Russian portfolio and economic turmoil. The largest decreases were in Automotive and Transportation & logistics with €0.9 billion and €0.6 billion releases respectively. The largest Stage 2 outstandings per economic sector as of 31 December 2022 are Real estate, Services, Natural resources and Non-bank financial institutions representing 10%, 7%, 7% and 7% of the total Stage 2 gross carrying amounts respectively.

Additional information on macroeconomic scenarios is included in the section 'Macroeconomic scenarios and sensitivity analysis of key sources of estimation uncertainty'.

Changes in gross carrying amounts and loan loss provisions (*)[1, 2]

in € million	12-month ECL (Stage 1)		Lifetime ECL not credit impaired (Stage 2)		Lifetime ECL credit impaired (Stage 3)		Total	
2022	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions	Gross carrying amount	Provisions
Opening balance	890,158	501	49,476	1,016	12,072	3,851	951,707	5,368
Transfer into 12-month ECL (Stage 1)	8,513	21	-8,105	-142	-408	-47		-168
Transfer into lifetime ECL not credit impaired (Stage 2)	-42,439	-76	43,222	730	-784	-90		564
Transfer into lifetime ECL credit impaired (Stage 3)	-3,524	-8	-1,216	-82	4,740	1,234		1,144
Net remeasurement of loan loss provisions		8		223		199		430
New financial assets originated or purchased	248,443	228					248,443	228
Financial assets that have been derecognised	-138,250	-70	-11,312	-94	-2,805	-215	-152,366	-379
Net drawdowns and repayments	-78,015		-1,340		21		-79,334	
Changes in models/risk parameters		-8		13		25		30
Increase in loan loss provisions		95		648		1,106		1,849
Write-offs				-1	-1,129	-1,129	-1,130	-1,130
Recoveries of amounts previously written off						71		71
Foreign exchange and other movements		-15		16		-58		-57
Closing balance	**884,886**	**581**	**70,725**	**1,679**	**11,708**	**3,841**	**967,319**	**6,101**

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 €1.861 million of which €1.850 million related to IFRS 9 eligible financial assets, -€3 million related to non-credit replacement guarantees and €14 million to modification gains and losses on restructured financial assets.

Changes in gross carrying amounts and loan loss provisions (*)[1,2]

in € 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		-313
Transfer into lifetime ECL not credit impaired (Stage 2)	-19,737	-32	20,537	206	-800	-74		100
Transfer into lifetime ECL credit impaired (Stage 3)	-2,166	-13	-1,589	-96	3,755	820		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					-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.

Exposure per stage, coverage ratio and stage ratio's[2]

in € million				2022				2021
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)	97,146	49	0.1%		120,089	28		
Stage 1	95,788	9	%	99%	119,896	24		100%
Stage 2	1,339	20	1.5%	1%	193	4	2.0%	
Stage 3	20	20	100.0%					
Loans and advances to Customers	643,317	5,984	0.9%		622,100	5,274	0.8%	
of which: Residential mortgages	326,928	677	0.2%		310,068	513	0.2%	
Stage 1	312,165	75		96%	297,915	37		96%
Stage 2	11,877	176	1.5%	4%	8,777	128	1.5%	3%
Stage 3	2,886	426	14.8%	1%	3,376	348	10.3%	1%
Of which: Consumer Lending (excl. Residential mortgages)	26,348	990	3.8%		32,423	1,409	4.3%	
Stage 1	23,101	184	0.8%	88%	28,554	217	0.8%	88%
Stage 2	2,145	223	10.4%	8%	2,654	367	13.8%	8%
Stage 3	1,102	583	52.9%	4%	1,215	825	67.9%	4%
Of which: Loans to public authorities	17,272	17	0.1%		14,333	12	0.1%	
Stage 1	15,977	4		93%	13,906	2		97%
Stage 2	1,120	7	0.6%	7%	344	5	1.5%	2%
Stage 3	175	6	3.4%	1%	84	4	5.1%	1%
Of which: Corporate Lending	272,769	4,300	1.6%		265,276	3,340	1.3%	
Stage 1	227,167	279	0.1%	83%	229,906	185	0.1%	87%
Stage 2	38,497	1,225	3.2%	14%	28,568	505	1.8%	11%
Stage 3	7,105	2,795	39.3%	3%	6,801	2,649	39.0%	3%
Other IFRS 9 Eligible Financial Instruments[1]	226,856	67			209,518	66		
Stage 1	210,689	29		93%	199,982	35		95%
Stage 2	15,746	27	0.2%	7%	8,941	6	0.1%	4%
Stage 3	421	11	2.7%	%	596	24	4.1%	
Total Gross Carrying Amount (IFRS 9 eligible)	967,319	6,101	0.6%		951,707	5,368	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 € million	2022	2021
Financial assets modified during the period		
Amortised cost before modification	1,304	2,595
Net modification results	-124	-47
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	2,382	448

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 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 of ING experts. 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 statistical characteristics as they are based on the forecast deviations of the OEGEM.

To understand the baseline level of uncertainty around any forecast, Oxford Economics keeps track of all its deviations (so called 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 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 Bank. 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 2022 consensus forecasts.

Baseline assumptions (*)

The general picture that the consensus conveys is that global economic growth is being challenged by persistent inflationary pressures which are being met by central banks lifting interest rates. The consensus expects recession to occur in many European countries in 2022-2023, while the US economy is anticipated to stagnate. Economic growth is expected to resume in the years thereafter as inflation normalises and monetary conditions become less tight. In economies that have experienced a notable surge in house prices during the pandemic and its aftermath, affordability pressures amid the higher interest rate environment are expected to lead to a moderation of growth or price declines in the near to medium-term.

The December 2022 consensus expects global output (as measured by the weighted average GDP growth rate of ING's 25 main markets) to slow further from 6.0% in 2021, to 2.5% in 2022 and 1.3% in 2023. For 2024-2025, economic growth is expected to pick up again to 2.4%.

The US economy is expected to stagnate in 2023 as high inflation, rising interest rates, supply chain difficulties, softer labour market dynamics, and global headwinds weaken demand. Consumer spending growth is under downward pressure as slower employment gains curb income growth and pandemic-related savings have diminished. With the headwinds seen fading slowly, the US economy is expected to gather strength again in 2024. The consensus expects the growth rate of the US economy to fall from 1.9% in 2022 to 0.2% in 2023 and to recover to on average 1.7% in 2024-2025.

Eurozone economies are dealing with the consequences of the ongoing war in Ukraine, broadening inflationary pressures and a general deterioration of sentiment across industries and consumers.

The ECB has shifted to a hawkish tilt but government fiscal support targeting higher energy prices is softening the economic pain in many countries. Overall, the eurozone economy is forecasted to stagnate in 2023, but Germany – as well as some other countries – faces recession reflecting its large exposure to gas supply cuts, relatively large manufacturing sector and exposure to a slower growing Chinese economy.

Elsewhere in Europe, the outlook is equally bleak. In Poland, economic fallout from the war in Ukraine and the related energy price shock point to a significant economic slowdown from 5.0% in 2022 to 1.0% in 2023. However, the scope for a rise in unemployment is seen to be limited as the Polish labour market remains tight, partially due to population ageing. As in the eurozone, the central bank is tightening monetary policy, but fiscal policy remains expansive. The consensus expectation for Turkey is also for economic growth to ease as the economic slowdown in Europe weighs on external demand and high inflation persists. The consensus sees economic growth in Turkey slowing from 5.2% in 2022, to on average 2.4% in 2023-2024 and increasing again to 3.0% in 2025.

After a weak growth rate of 3.1% in 2022, economic growth in China is expected to pick-up to on average 4.7% in 2023-2025. The drag exerted by the authorities' Covid-19 policies is assumed to moderate, while state investment will support demand. However, the real estate downturn continues to weigh on the outlook.

The global economic slowdown, together with tighter monetary policy and high inflation is weighing on economic growth in Australia. After growing by 3.8% in 2022, the outlook sees a growth rate of 1.8% for 2023-2024 and some pick-up to 2.6% for 2025. However, despite the economic slowdown, conditions in the labour market are expected to remain tight.

When compared to the December 2021 consensus forecast, used for the 2021 Annual Report, the December 2022 forecast assumes much weaker economic circumstances. Global GDP was expected to increase by 2.5% in 2022 (compared to 4.1% assumed before) and 1.3% in 2023 (3.1% assumed before). The downgrade reflects the economic impacts of the war in Ukraine and tighter monetary conditions.

Alternative scenarios and risks (*)

Because of the possible consequences of the war in Ukraine, uncertainty surrounding the forecasts is higher than usual. This relates in particular to uncertainty about European energy supplies and worries about more persistent high inflation. To take the general increase of uncertainty surrounding the forecasts into account, the dispersion of the alternative scenarios has been set again at the widened level used for year-end 2021 provisioning (the half-widened dispersion). As a result, the near-term dispersion of the forward-looking distributions (from which the alternative scenarios are derived) is larger than in normal times. Meanwhile, at the end of the scenario horizon the dispersion has remained unchanged and hence is comparable to scenarios generated prior to the war in Ukraine.

The baseline scenario assumes a significant easing of inflation in 2023 and relatively resilient labour markets. However, a longer period of weakness, due to stickier inflation and more aggressive monetary policy tightening that triggers a more notable softening of the labour market and greater falls in financial asset and property prices, could lead to a more protracted and deeper economic slowdown. As such, the balance of risks to the baseline outlook is negative and the alternative scenarios have a downward skew in line with the outcomes of Oxford Economics' Global Risk Survey. The downward skew is less negative compared to what has been applied for year-end 2021 at which time – set against a higher baseline – apart from higher inflation, worries about supply chain disruptions and further corona virus waves were being seen as top near-term downside risks.

The downside scenario – though technical in nature – sees for most countries a fast deceleration of economic growth followed by a recession. Unemployment increases strongly in this scenario and house prices in most countries show outright falls. The downside scenario captures a possible escalation of the war in Ukraine and a more pronounced and prolonged surge in inflation.

The upside scenario – while equally technical in nature – reflects the possibility of a better economic outturn if the war in Ukraine ended quickly, fuelling a rebound in consumer spending. The recovery is further supported by looser monetary policy as weaker inflation prompts central banks to hold back tightening.

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 € million	2022	2021
Economic sector based adjustments	71	341
Second order impact adjustments	334	
Payment holiday adjustments		32
Mortgage portfolio adjustments	105	124
Other Post Model Adjustments[1]	-57	121
Total management adjustments	**453**	**618**

1 Prior period figure has been updated to conform to current year presentation.

December 2021 management adjustments included an economic sector-based management adjustment of €341 million because of delays in defaults occurring in the Covid-19-related crisis, mainly as a result of government support programmes. 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. In 2022, as it became clearer the Covid-19 pandemic had less impact than expected on the number of defaults, the economic sector-based management adjustment has been largely released and while at the same time management adjustments for the second order impact of the war in Ukraine were introduced (see below). Of the remaining economic sector based adjustments of €71 million as of 31 December 2022, €61 million relates to Business Banking clients that have benefited from Covid-19 related government support programmes in the Netherlands such as deferral of tax payments that ended in the second half of 2022, and €10 million relates to an overlay for livestock farming sector in the Netherlands. In the Netherlands, nitrogen reduction targets affect the livestock farming sector mainly because of endorsed closing activities nearby Natura 2000 areas and because of expected transition to other business models in the sector. As these specific risks are not incorporated in the model ECL, an overlay was recognised.

ING has performed an assessment for both WB and Retail Banking on the impact of the war in Ukraine, the increase in energy prices and other second order macroeconomic developments such as an increase in inflation and rising interest rates. This resulted in a second order impact overlay of €334 million in total as of 31 December 2022, of which €164 million relates to Retail Banking segments and €170 million to the Wholesale Banking segment.

As the credit risk models assume that these second order effects materialise via other risk drivers such as GDP and unemployment rates with a delay, an overlay approach was determined to timely estimate the Expected Credit Losses related to reduced repayment capacity and affordability for private individuals and business clients in the Retail Banking segment. The €164 million includes an overlay of €22 million for clients participating in the payment holiday scheme in Belgium that was introduced in 2022 to support customers impacted by the inflation and high energy prices.

In WB, it was assessed that the economic effects of Covid-19 was not the highest risk anymore and that other risks have emerged – mainly high energy prices, high interest rates and inflation, supply chain issues and staffing shortages. A heatmap approach was used to adjust the probability of default for clients that are expected to be significantly impacted by these emerged risks.

Given Covid-19-related payment holiday programmes have generally expired, this management adjustment has been fully released in 2022.

Model based ECL of mortgage portfolios has decreased over the past years and until the third quarter of 2022, driven by significant increase of house prices in various countries. Management adjustments of €105 million in total, mainly in Stage 2 and 3, have been recognised by ING in the Netherlands, Belgium, Germany and Australia to maintain an appropriate level of ECL and reflecting a potential impact of market uncertainty on the recovery value of residential real estate (impacted by higher inflation and interest rates). The management adjustment for the Netherlands and part of the Belgian 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 three 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 programme to update ECL models for the new definition of default. These adjustments will be removed once updates to the specific 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 WB 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.

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 2022 (*)

		2023	2024	2025	Un-weighted ECL (€ mln)	Probability-weighting	Reportable ECL (€ mln)[1]
Netherlands	Real GDP	2.2	2.3	2.9			
	Unemployment	4.0	3.9	3.8	274	20%	
Upside scenario	HPI	13.0	11.8	2.5			
	Real GDP	0.2	1.4	1.8			
Baseline Scenario	Unemployment	4.5	4.8	4.9	349	60%	381
	HPI	3.7	3.7	2.4			
	Real GDP	-4.2	0.7	0.9			
Downside scenario	Unemployment	6.4	7.8	8.7	583	20%	
	HPI	-8.0	-6.5	2.2			
Germany	Real GDP	1.7	2.3	1.8			
	Unemployment	2.6	2.2	1.8	606	20%	
Upside scenario	HPI	0.6	3.9	6.2			
	Real GDP	-0.7	1.4	1.5			
Baseline Scenario	Unemployment	3.2	3.1	3.1	726	60%	745
	HPI	-1.8	0.9	2.7			
	Real GDP	-4.8	0.1	1.0			
Downside scenario	Unemployment	4.8	5.3	5.6	942	20%	
	HPI	-6.2	-3.3	-1.4			
Belgium	Real GDP	1.7	2.1	2.1			
	Unemployment	5.5	5.5	5.3	535	20%	
Upside scenario	HPI	2.3	2.6	3.1			
	Real GDP	0.0	1.6	1.8			
Baseline Scenario	Unemployment	6.1	6.3	6.1	584	60%	596
	HPI	1.4	2.2	2.5			
	Real GDP	-3.2	1.0	1.5			
Downside scenario	Unemployment	7.5	8.5	8.4	692	20%	
	HPI	-1.2	0.9	1.2			
United States	Real GDP	3.0	1.5	3.4			
	Unemployment	3.4	2.8	2.5	100	20%	
Upside scenario	HPI	3.7	7.4	8.1			
	Real GDP	0.2	1.1	2.3			
Baseline Scenario	Unemployment	4.3	4.4	3.9	188	60%	221
	HPI	2.5	2.2	2.8			
	Real GDP	-4.1	0.2	0.6			
Downside scenario	Unemployment	6.4	7.7	8.2	442	20%	
	HPI	-1.2	-3.8	-3.5			

1 Excluding management adjustments.

Sensitivity analysis as at December 2021 (*)

		2022	2023	2024	Un-weighted ECL (€ mln)	Probability-weighting	Reportable ECL (€ 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.

When compared to the sensitivity analysis of 2021, the macroeconomic inputs for 2022 and 2023 are less favourable, driven by a worsened macroeconomic outlook as a result of the war in Ukraine as well as its indirect effects such as inflation and increasing interest rates. Both 2021 and 2022 contain half-widened dispersion around upside and downside scenarios, for 2021. This reflects continuing but decreased short-term uncertainty relating to the impact of Covid-19 and for 2022 reflecting short-term uncertainty around the war in Ukraine and its indirect effects. The increase in reportable ECL compared to 2021 is mainly caused by higher model ECL amounts as per December 2022 as a result of increased provisions for Russia-related exposures in Stage 2.

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 a total ING level, the unweighted ECL for all collective provisioned clients in the upside scenario was €2,680 million, in the baseline scenario €3,177 million and in the downside scenario €4,456 million compared to €3,209 million reportable collective provisions as at 31 December 2022 (excluding all management adjustments). This reconciles as follows to the reported ECL's:

Reconciliation of model (reportable) ECL to total ECL (*)

in € million	2022	2021
Total model ECL[1]	3,209	2,408
ECL from individually assessed impairments	2,439	2,342
ECL from management adjustments	453	618
Total ECL	**6,101**	**5,368**

1 Prior period figure has been updated to conform to current year presentation.

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 or 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 reached.

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 1.7.8 of Note 1 'Basis of preparation and significant accounting policies' for an exhaustive list. Furthermore, this analysis is rudimentary in the 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 WB 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. These have already been implemented for more than 20 percent of the portfolio, 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.

Average threshold ratio

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 2021 and year-end 2022.

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 (*)

	2022		2021	
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	2.3	2.7	2.2
Consumer Lending	2.8	1.8	2.8	1.7
Business Lending	2.8	2.1	4.0	2.2
Governments and Fin. Institutions	3.0	1.9	7.9	2.2
Other Wholesale Banking	2.8	1.9	4.5	2.0

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 difference between the average threshold applied to investment grade facilities and non-investment grade facilities. In 3Q 2022, following up an ECB request, a new backstop trigger was implemented. The new trigger forces Stage 2 classification in case the lifetime PD at reporting date has increased more than three times with respect to the origination, regardless of the actual staging thresholds in force for a given portfolio. The new requirement entails that the threshold ratio in the table above is effectively capped at a threefold increase for December 2022. The effect of this trigger is especially apparent in the average thresholds ratio for investment grade facilities when confronting 2021 and 2022 figures. Since for investment grade assets thresholds tend to be looser given the good quality of underlying counterparties ratings, the backstop trigger is more impactful.

In terms of impact on ING portfolio, the application of the new backstop trigger resulted in an increase of Stage 2 exposure. However, since the trigger impacts mainly good quality assets for which regular staging thresholds are typically above a threefold increase in PD, the corresponding impact in provisions was limited.

Sensitivity of ECL to PD lifetime PD thresholds

The setting of PD threshold bands requires management judgement and is a key source of estimation uncertainty. On Bank level, the total model ECL, which is the ECL collective-assessment without taking management adjustments into account, is €3,209 million (2021: €2,408 million) of which performing assets constitute €1,884 million (2021: €1,003 million) . To demonstrate the sensitivity of the ECL to these PD thresholds bands, an analysis was run on all collectively-assessed assets, which assumed all assets were below the threshold (Stage 1) and apportioned a 12-month ECL. On the same asset base, analysis was run which assumed all performing assets were above the threshold (Stage 2) and apportioned a lifetime ECL. This gave rise to hypothetical collective-assessment ECLs of €1,348 million (2021: €634 million) and €3,391 million (2021: €2,232 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 five recurring activities: risk identification, risk assessment, risk control, risk monitoring and risk reporting.

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.

FR maintains a limit framework in line with ING's Risk Appetite Framework. The businesses are responsible for adhering to the limits which are reviewed on an annual basis and are ultimately approved by the ALCO Bank. Limit excesses are reported to senior management in line with the ALM Limit excess reporting procedure upon which the business needs to act accordingly. 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.

The organisational structure facilitates top-down risk management by recognising that risk taking and risk management occur to a large extent at the regional/local level. Bottom-up reporting from regional/local units to head office units allows each management level to assess the market risks relevant at the respective levels.

Several committees govern communication between the parties involved in market risk management:

- The Market Risk Model Committee (MRMC, reporting to ALCO Bank), is the dedicated authority within ING for the approval of all funding and liquidity risk, banking and trading risk and counterparty credit risk models, methodologies and related parameters. This is comparable with the CTRC, which reports into the GCTP.
- The Valuation Model Committee approves pricing models for trading and banking books.

Financial Risk provides risk reporting to the EB and MBB, the ALCO Bank and the senior executive management of related business functions.

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.
- 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 in both banking portfolios and trading portfolios and includes interest rate risk, credit spread risk, equity price risk, foreign exchange rate risk, customer behaviour 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, the linear interest rate risk and other risk types as well as equity investments in the banking books, the Value at Risk (VaR) are 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.

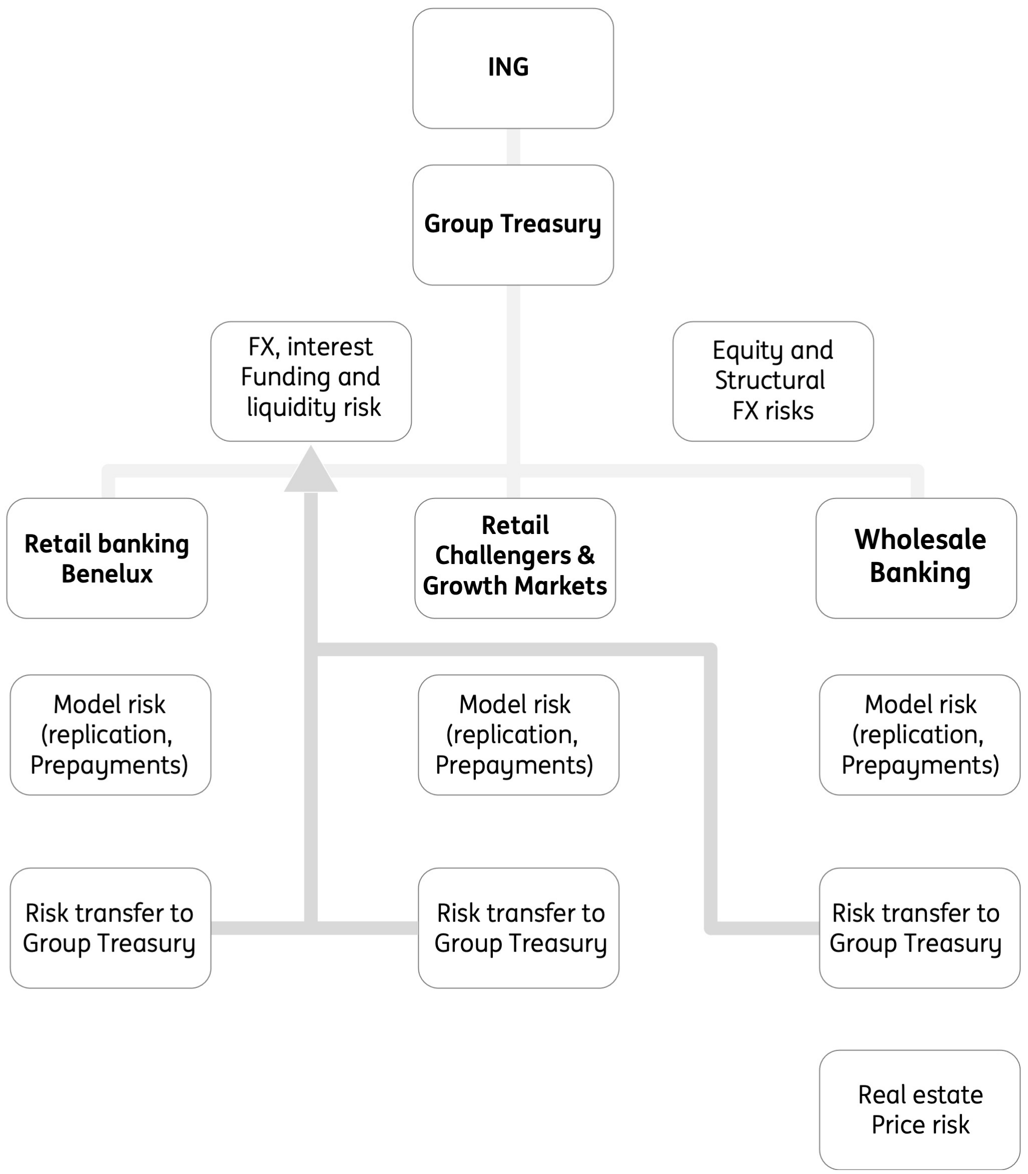
Market risk in banking books (*)

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-related market risk exposures are intended to be held until maturity, or at least for the long term.

Risk transfer (*)

Market risks in the banking book are managed via the risk transfer process. In this process the interest rate, FX, funding and liquidity risks are transferred from the commercial books through matched funding or replication 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 reviews and sets the risk appetite for interest rate risk, on an annual basis. The risk appetite is 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.
- 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 contribute to stable earnings within the risk appetite boundaries set by ALCO Bank. The main objective is to maximise the economic value of the capital investment book while having stable earnings.

Commercial activities can result in linear interest rate risk, for example, tenors and duration of new production and re-pricing of assets 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, among other things, include the state of the economy, competition, changes in regulation, legislation and tax regime, developments in the housing market and interest rate developments.

From an interest rate risk perspective, commercial activities can typically be divided into three main product types: funds entrusted as savings and demand deposits, mortgages and loans.

Savings and demand deposits are generally invested in such a way that both the value is hedged and the sensitivity of the margin to market interest rates is minimised. Interest rate risk can arise when there is a misalignment between the change in market rates and adjustment of savings rates, which can either have a positive or negative impact on the income as a consequence of the potential misalignment to the related (assumption based) investment strategy of ING's savings. 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 less sensitive to rate changes.

Interest rate risk for mortgages arises due to prepayment possibilities in these mortgages. In modelling this risk, both interest rate dependent pre-payments and constant prepayments are considered. Next to a 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 may be considered.

Wholesale Banking loans typically do not experience interest rate dependent prepayment behaviour, these portfolios are match-funded taking the constant prepayment model into account and 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. However, the substantial change in the interest rate environment makes extensive research more challenging than before and may increase model risk. 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 at least monthly. However, if deemed necessary, additional risk transfers can take place.

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 2022, the following activities related to the risk measurement for IRRBB were performed:
- Annual review of the risk appetite for Market Risks in the Banking Book including further enhancement.
- Further assessment and development of sub-risk types, such as tenor basis risk, vega optionality risk and client behaviour risk.
- Set up of standardised risk measurement related to climate risk.
- Annual review of the interest rates scenarios used for calculating NII-at-Risk and NPV-at-Risk.
- Annual savings/current account model updates.
- Annual update of parameters of prepayment models for market developments.
- A specific, internal firm-wide stress test relating to climate risk.
- Further enhancement of the IRRBB framework in relation to upcoming regulatory requirements (e.g. anticipation on implementation and measurement of the upcoming regulatory metric NII SOT, development of additional requirements coming forward from latest EBA guidelines).
- Improvement of the FX framework.

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, fees and fair value impact. Future projected balance sheet developments are included in this risk metric. NII-at-Risk is a metric that helps provide insight to what extent ING's NII under our Dynamic Plan deviates from the interest rates development assumed.

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 an expected increase or decrease in expected prepayments.
- Higher/lower returns of (re-)investments of capital investment.
- Open interest rate positions, leading to changes in return because of different market rates.
- Assumed volume development of the balance sheet in line with ING's dynamic plan.

For projecting the change in client deposit rates, ING uses a client rate model that describes the relation to market interest rates and client deposit rates. The model is calibrated under a range of interest rate scenarios. Per scenario the actual change in client deposit rates may deviate from this calibrated model. The actual NII development of customer deposits may, indeed, differ from the provided scenarios, depending on, amongst others, actual interest rate and savings client rate evolution, as well as changes to ING's balance sheet composition such as net deposit growth and relative share of savings deposits and non-remunerated current accounts.

The NII-at-Risk figures in the tables below reflect a parallel, linear interest rate movement during a year ('ramped') under the assumption of balance sheet developments in line with the ING's Dynamic Plan with a time horizon of one year.

NII-at-Risk banking books per business - year one (*)

in € million	2022		2021	
	Ramped, unfloored		Ramped, unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By business				
Wholesale Banking	4	-47	46	-33
Retail Banking Benelux	-88	59	-122	132
Retail Challengers & Growth Markets	-41	113	-93	75
Corporate Line Banking	-18	18	-58	58
Total	-142	142	-226	232

EUR ramped (unfloored) is at +/- 100bps in 1 year
USD ramped (unfloored) 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 € million	2022		2021	
	Ramped, unfloored		Ramped, unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By currency				
Euro	-119	114	-181	179
US Dollar	-1	2	-23	23
Other	-23	27	-23	30
Total	-142	142	-226	232

EUR ramped (unfloored) is at +/- 100bps in 1 year
USD ramped (unfloored) is at +/- 120bps in 1 year

At the end of 2022, the NII is projected to be slightly higher when interest rates rise. In this scenario, one-year (re-) investment returns are higher than the modelled increase in client deposit 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 deposit rates for the ramped parallel up scenario. Without increasing client deposit rates, the NII-at-Risk for the parallel ramped up scenario would be significantly higher, meaning that the actual client deposit 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 may not be equal. This is then 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 short-term interest rates were even negative. In 2022, interest rates in both short and longer tenors increased significantly. Central banks tightened monetary conditions to counter high inflation specifically as a follow up to high energy prices. In 2022, the rate environment was characterised by increasing interest rates. ING applied a dynamic hedging process, by which interest rate risk was transferred from the business to Group Treasury and subsequently hedged in the markets. This process mitigates interest rate risk resulting in a lower sensitivity for rate changes of ING's NII. However, the main drivers in a potential change of NII sensitivity are balance sheet developments, specifically relating to mortgages, loans and savings. In the eurozone, mortgage production was impacted by an increase in interest rates. Next to the impact on new production, the prepayment incentive decreased due to the increase in interest rates. The funds entrusted volume did not change significantly, The impact of explicit and implicit floors on both rates of client assets and savings phased out in the course of the year on the back of the interest rate increases. Pre-existing hedges, as executed by Group Treasury, were also adjusted continuously throughout the year to hedge any interest rate risk coming from higher interest rates. Given that Group Treasury is included in the Wholesale Banking risk numbers, these adjustments changed the Wholesale Banking NII-at-Risk. Furthermore, ING's investment of own funds took place against a lower duration reducing sensitivity. Excluding Model Risk, the total NII-at-Risk remains relatively limited in comparison to 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 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 materialise 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 € million	2022		2021	
	unfloored		unfloored	
	parallel ▼	parallel ▲	parallel ▼	parallel ▲
By business				
Wholesale Banking	-1,474	1,299	-1,477	1,444
Retail Banking Benelux	-307	-76	-953	-202
Retail Challengers & Growth Markets	1,327	-1,373	832	-1,111
Corporate Line Banking	1,049	-1,003	1,820	-1,712
Total	**594**	**-1,153**	**223**	**-1,580**

EUR (unfloored) +/- 100bp shock scenario
USD (unfloored) +/- 120bp shock scenario

Year-on-year variance analysis (*)

The overall NPV sensitivity for the rates-up scenario decreased in 2022. This is mainly due to the shorter duration at which ING strategically invests its own funds. These investments are done in the Corporate Line Banking.
The changes in NPV-at-Risk in the segments Retail Benelux and Retail Challengers & Growth Markets were partly offsetting, whereby the higher interest rates reduced the overall convexity. The resulting impact on retail sensitivity of the increase in interest rates was hedged by Group Treasury in line with the internal ALM practices. The Group Treasury exposure is reported under business line Wholesale Banking.

IBOR transition (*)

In line with the recommendations from the Financial Stability Board, a fundamental review of benchmarks for important interest rates has been undertaken. Some interest benchmarks have been reformed, while others have or will be replaced by risk-free rates (RFR) and discontinued. Following the cessation of GBP, CHF, JPY, and EUR LIBOR rates on 31 December 2021, USD LIBOR will cease on 30 June 2023.

In 2022, the focus shifted to USD LIBOR, with new USD lending now using the recommended alternative rates based on SOFR. This is consistent with guidance issued to limit the use of USD LIBOR from 1 January 2022 onward. Risk reduction trades to help manage the run-off of existing USD LIBOR contracts and positions are a permitted exception.

To enable these changes, the financial sector has issued several guidance papers and other initiatives to help phase this transition. For example, ISDA has issued an IBOR fallback supplement to help ensure clear fallback rates apply upon the discontinuation of key IBORs. For loans, various recommendations have been made to help ensure the inclusion of consistent robust fallback provisions. Public authorities have also recognised that many contracts do not contain provisions for any alternatives, contain inappropriate alternatives, or cannot be renegotiated prior to the expected cessation date ('tough legacy' contracts). For example, the Financial Conduct Authority (FCA) is expected to ask the USD LIBOR administrator to continue publishing a 'synthetic' LIBOR rate for 15 months beyond the cessation date to provide extra time for any remaining contracts. A similar action was taken for GBP and JPY LIBOR. The US has also implemented the Adjustable Interest Rate (LIBOR) Act, that will revise the contractual terms of in scope contracts to reference a rate based on SOFR upon cessation of USD LIBOR.

Due to the discontinuation of this important rate, ING, its customers, and the financial services industry face a number of risks. These risks include legal, financial, operational, and conduct risk. Legal risks are related to any required changes to existing transactions. Financial risks may arise due to declining liquidity and may impact a contract directly or the ability to hedge the risks in that contract. Operational risks arise due to the requirement to adapt IT systems, trade reporting infrastructure and operational processes. Conduct risk also plays a role, as renegotiation of loan contracts requires active engagement from all parties to a contract, and may lead to negotiations concentrated in a period close to actual cessation. ING continues to reach out to impacted clients to manage the relevant timelines.

During 2022, ING sought to ensure that a large portion of the derivative portfolio is covered by ISDA fallbacks. Regarding the loans, many facilities have already been transitioned to alternative rates. Additionally, for the remaining portfolio the parameters for the required changes have been communicated to counterparties, with many now in active discussions on the remaining steps.

The ING IBOR programme has governance in place with progress being tracked by business line steering committees reporting to 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 customers. ING continues to monitor market developments and reform plans for other rates, to anticipate the impact on the programme, our customers and any related risks.

One such development concerns key Polish Zloty benchmarks. The roadmap published by the Polish National Working Group in 2022 indicates that the plan is for the market to be ready for a cessation of WIBOR and WIBID Reference Rates in 2025. It is expected that the reform will be completed by the end of 2024, with the offering of financial products using the new benchmark (WIRON) to progress gradually in 2023 and 2024. The WIBOR rates are used in several of our lending and derivative products, and hence a project team has been established to manage the transition.

As at 31 December 2022, ING has exposures that have yet to transition related to USD LIBOR and WIBOR. The tables below summarise these approximate exposures. They exclude exposures that will expire before the transition date 30 June 2023 and 1 January 2025, respectively. The GBP LIBOR, CHF LIBOR and EONIA contracts included as at 31 December 2021 have all transitioned or matured.

Non derivative Financial instruments to transition to alternative benchmarks (*)

in € million at 31 December 2022	Financial Assets non-derivative	Financial Liabilities non-derivative	Off balance sheet commitments
	Carrying value	Carrying value	Nominal value
By benchmark rate			
GBP LIBOR			
USD LIBOR	30,040	1,637	7,644
CHF LIBOR			
EONIA			
WIBOR	22,154		1,411
Total	**52,194**	**1,637**	**9,055**

Non derivative Financial instruments to transition to alternative benchmarks (*)

in € 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[1]			
GBP LIBOR	764		350
USD LIBOR	41,805	1,542	16,435
CHF LIBOR	1		
EONIA		23	184
Total	**42,570**	**1,565**	**16,969**

1 WIBOR transition plans became concrete in 2022 and therefore no comparatives for 2021 are included.

For derivatives linked to USD LIBOR, the conduct risk is limited as the majority are transacted with clearing houses, which will transition through a standardised exercise in the second quarter of 2023. For USD LIBOR derivatives that are not centrally cleared, the main transition will occur via the ISDA IBOR fallback protocol at 30 June 2023.

Derivative Financial instruments to transition to alternative benchmarks (*)

	31 December 2022	31 December 2021
in € million	Nominal value	Nominal value
By benchmark rate[1]		
GBP LIBOR		822
USD LIBOR[2]	495,318	488,499
WIBOR[3]	136,318	
Total	**631,636**	**489,321**

1 For cross-currency swaps all legs of the swap are included that are linked to a main IBOR that is significant to ING.
2 The prior period has been updated to improve consistency and comparability.
3 WIBOR transition plans became concrete in 2022 and therefore no comparatives for 2021 are included.

In addition to the amounts in the table above, ING has interest rate swaptions that refer to the USD LIBOR ICE swap rate with a notional of €10,810 million (2021: €10,343 million) that are yet to transition. The transition of these contracts is in general governed by a specific ISDA protocol.

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 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.

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 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 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.

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's policy to cease to apply Phase 1 reliefs when the applicable contract (either hedging instrument or hedged item) is actually modified. As a result, for these hedge accounting relationships the applicable Phase 1 reliefs ceased to apply and Phase 2 became applicable. For USD LIBOR exposures, 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.

In addition, in 2022 ING started to apply Phase 1 reliefs to the hedge accounting relationships linked to WIBOR as there is uncertainty arising from the WIBOR reform with respect to the timing and the amount of the underlying cash flows to which ING is exposed.

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, while limiting the volatility in the profit and loss account due to this CET1 hedging and limiting the RWA impact under the regulatory framework. 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.

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.

To measure the volatility of the CET1 ratio from FX rate fluctuations, different metrics are used including the CET1 Ratio-at-Risk. The impact is controlled via the Solvency and Market Risk Banking Book RAS.

EBA Structural FX Guidelines

EBA guidelines on structural FX positions became effective in 2022. Upon permission from the competent authorities, certain currency positions are being excluded from the calculation of net open currency positions under CRR article 352(2). The resulting impact is presented in the Pillar 3 disclosure.

Foreign currency exposures banking books (*)

in € million	Foreign Investments		Hedges		Net exposures	
	2022	2021	2022	2021	2022	2021
US dollar[1]	10,470	8,218	-2,376	-99	8,093	8,119
Pound sterling	1,364	1,593	-58		1,306	1,592
Polish zloty	2,714	2,761	-321	-142	2,393	2,620
Australian dollar	3,781	3,774	-2,673	-2,511	1,108	1,263
Turkish lira	750	729			750	729
Chinese yuan	1,871	1,976		-107	1,871	1,869
Russian rouble	391	256		-174	392	82
Other currency	5,740	5,860	-3,761	-3,453	1,979	2,407
Total	**27,081**	**25,167**	**-9,189**	**-6,486**	**17,892**	**18,681**

Hyperinflation accounting and goodwill impairment had limited impact on the Turkish lira FX exposure to the CET1 Ratio. The structural Turkish lira exposure arising from ING Bank Turkey's assets and liabilities remains within risk limits.

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 €1,500 million (2021: €1,587 million) and equity securities held at fair value through other comprehensive income (FVOCI) of €1,887 million (2021: €2,457 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 2022, the revaluation reserve equity securities decreased by €95 million from €1,282 million to €1,187 million. In 2022, the equity securities at fair value through OCI decreased by €570 million mainly due to divestment of HQLA eligible equity instruments.

Revaluation reserve equity securities at fair value through other comprehensive income (*)

in € million	2022	2021
Positive re-measurement	1,190	1,291
Negative re-measurement	-4	-9
Total	**1,187**	**1,282**

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 2022, 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 the market risk limits both on an aggregated level and on a desk level. Financial Risk/ Trading Risk Management (FR/ TRM) advises both FMRC and ALCO Bank on the market risk appetite of the trading activities.

With respect to the trading portfolios, TRM 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. TRM 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. TRM also reviews trading mandates and global limits, and performs the gatekeeper role in the product review process. Trading activity is systematically reviewed and positioned 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.

As of June 2022, ING has received an official permission from the ECB to perform offsetting of positions with the exception of Ukraine, Russia and Turkey. Hence the regulatory capital numbers reported from Q2 2022 onwards, are calculated with offsetting for all base entities excluding Ukraine, Turkey and Russia.

Value at Risk (*)

TRM 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 or securities. A single model which diversifies general and specific risk is used. In general, a full revaluation approach is applied, while 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 10-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 percent 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 results (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 2022, there were five outliers for hypothetical P&L and three outliers for actual P&L. The actual and hypothetical outliers occurred during the past one year concentrated in 1Q2022 mainly due to large moves in Russian credit default swaps and Rouble volatility.

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. 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 multi-factor t-copula. In the multi-factor IRC model the supervisory asset correlations are no longer applicable and the calibration of the correlations are based on historical market data. 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 internal transition matrix along with internal LGDs is used, to comply with the consistency requirement. 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.

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 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.

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.

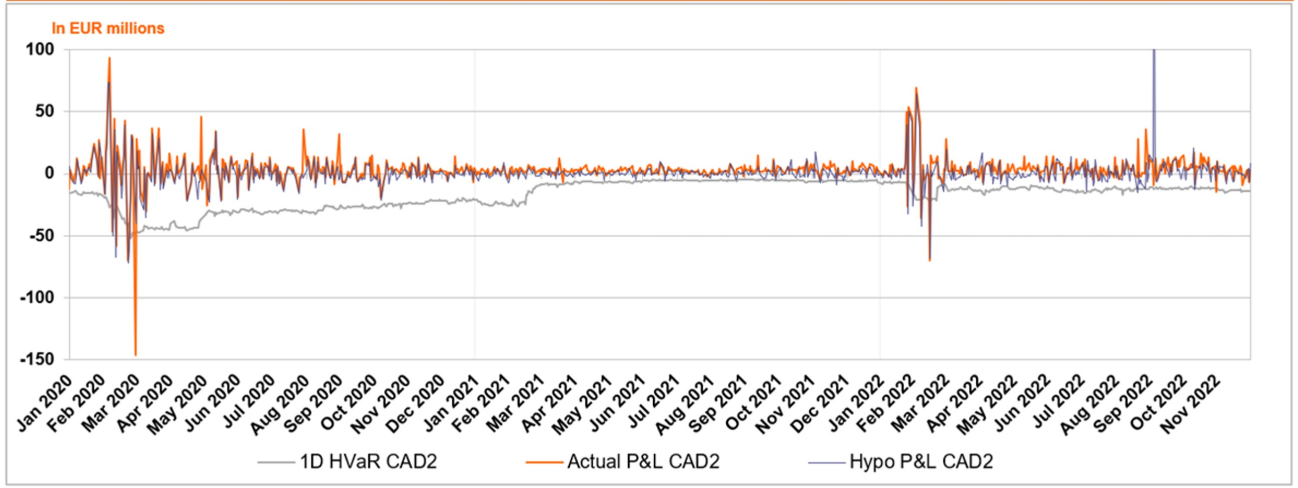
Other trading controls

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 percent 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 2020 to 2022.

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 € million	Minimum		Maximum		Average		Year end	
	2022	2021	2022	2021	2022	2021	2022	2021
Interest rate [1]	1	4	17	20	9	8	13	5
Equity and commodity	2	1	7	4	3	2	2	2
Foreign exchange	1		22	3	4	1	3	1
Credit spread	1	2	15	11	4	4	1	2
Diversification [2]					-9	-5	-5	-4
Total VaR [2]	5	4	22	26	12	10	14	6

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, IRC over 2022 has increased compared to 2021, the capital increase is driven by an increase in market volatility following the war in Ukraine as well as the FX and CDS hedges put in place as macro hedges and to hedge exposure to Russian counterparties. The average for all risk classes increased in 2022, especially for FX which increased due to the Russian crisis. The 1D HVaR at the period end of 2021 increased from €6 million to €14 million at period end of 2022, due to the market recovery from the Covid-19 crisis.

ING doesn't calculate comprehensive risk capital charge and therefore it appears as N/A in the table below.

EU MR3: Internal model approach values for trading portfolios

in € million	2022	2021
VaR (10 day 99%)		
1 Maximum value	79	78
2 Average value	37	27
3 Minimum value	15	12
4 Period end	42	18
Stressed VaR (10 day 99%)		
5 Maximum value	147	105
6 Average value	77	80
7 Minimum value	47	64
8 Period end	65	74
Incremental Risk Charge (99.9%)		
9 Maximum value	270	195
10 Average value	113	71
11 Minimum value	34	37
12 Period end	76	65
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 € million	2022	2021
	RWA	RWA
Outright products		
1 Interest rate risk (general and specific)	10	6
2 Equity risk (general and specific)		
3 Foreign exchange risk	5,332	
4 Commodity risk		
Options		
5 Simplified approach		
6 Delta-plus method		
7 Scenario approach		
8 Securitization (specific risk)		
9 Total	**5,342**	**6**

The MRWA under standardised approach have sharply increased compared to 2021. In 2022, MRWA is calculated for FX exposures, in line with the new CRR Standardized Approach that was introduced in 2022.

Internal model approach

Market risk regulatory capital decreased slightly during 2022 compared to 2021. The main reduction is coming from SVaR where December 2021 was calculated on a fully deconsolidated basis, while HVaR increased due to the high market volatility in 2022.

EU MR2-A: Market risk under Internal Model Approach

in € million		2022		2021	
		RWA	Capital requirements	RWA	Capital requirements
1	VaR (higher of values a and b)	2,732	219	1,179	94
(a)	Previous day's VaR (VaRt-1)		49		21
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)		219		94
2	SVaR (higher of values a and b)	3,427	274	6,336	507
(a)	Latest available SVaR (SVaRt-1))		70		112
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)		274		507
3	IRC (higher of values a and b)	1,934	155	1,314	105
(a)	Most recent IRC measure		76		94
(b)	12 weeks average IRC measure		155		105
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	516	41	200	16
6	**Total**	**8,609**	**689**	**9,029**	**722**

Sensitivities (*)

As part of the risk monitoring framework, TRM actively monitors the 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 € million	2022		2021
Foreign exchange		Foreign exchange	
US Dollar	-187	US Dollar	-160
Romanian Leu	88	Taiwan Dollar	42
Japanese Yen	86	Romanian Leu	32
Chinese Yuan	32	Japanese Yen	27
South Korean Won	28	South Korean Won	-24

Most important interest rate and credit spread sensitivities at year-end (*)

in € thousand	2022		2021
Interest Rate (BPV) 1		Interest Rate (BPV) 1	
Euro	-334	Euro	-501
British Pound	-95	US Dollar	185
US Dollar	-79	British Pound	-75
Taiwan Dollar	67	Taiwan Dollar	73
Japanese Yen	63	Japanese Yen	-57
Credit Spread (CSO1) 2		Credit Spread (CSO1) 2	
Netherlands	162	Netherlands	535
United States	151	Germany	408
Japan	102	United States	171
France	88	France	112
Germany	87	China	110

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 (*)

	2022		2021	
in € thousand	Corporate	Financial Institutions	Corporate	Financial Institutions
Credit Spread (CSO1) [1]				
Risk classes				
1 (AAA)	2	-1		-5
2–4 (AA)	-1	-7	-7	18
5–7 (A)	154	-13	141	578
8–10 (BBB)	249	-11	204	12
11–13 (BB)	7	7	40	-1
14–16 (B)	23	-4	52	-6
17–22 (CCC and NPL)	3	-7	-6	-12
Not rated				
Total	**437**	**-36**	**424**	**584**

1 Credit Spread Sensitivity (CS01) measures the impact on value of a 1 basis point increase in credit spreads.

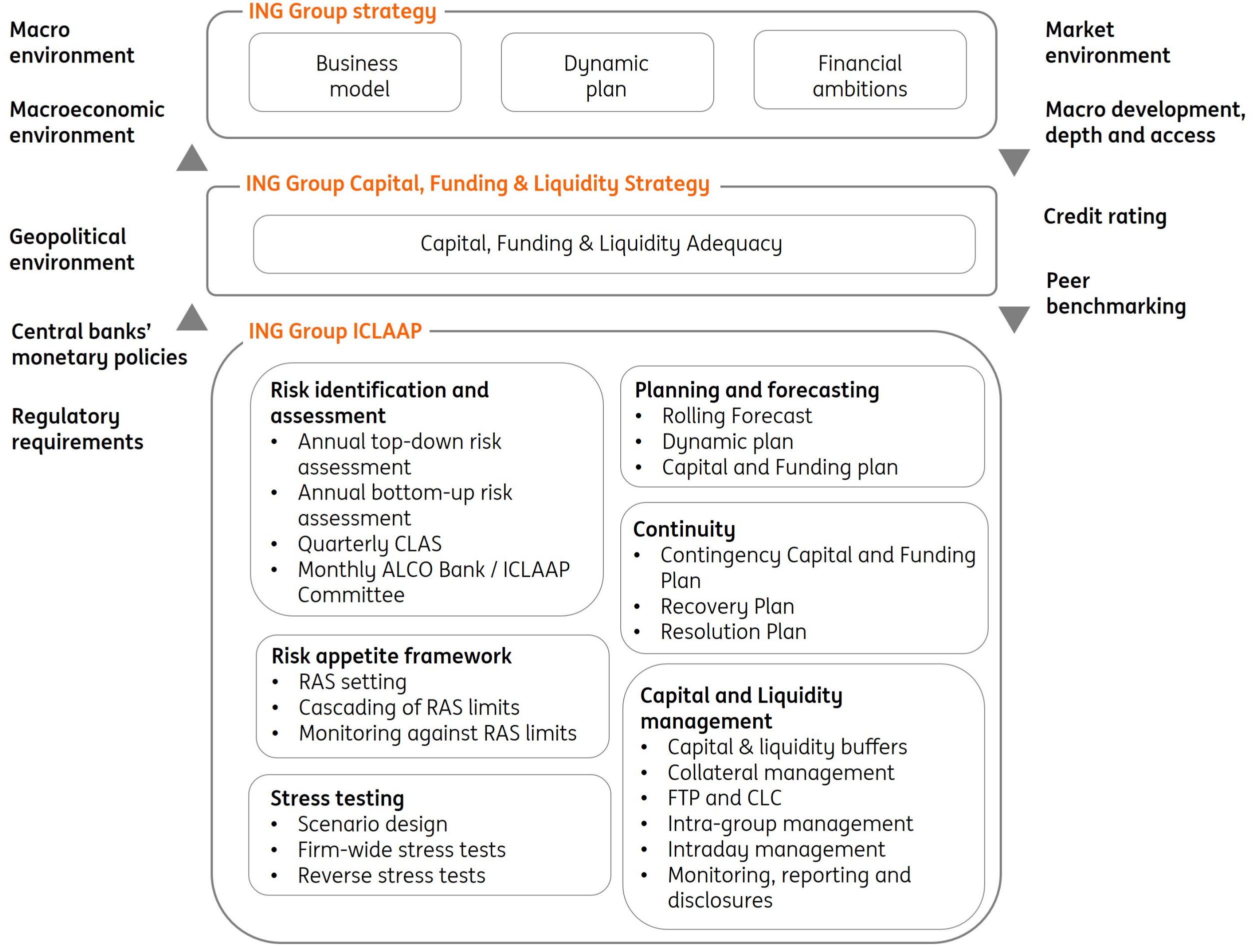
Funding and liquidity risk (*)

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 a 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 following chart.

(*)
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 the Internal Liquidity Adequacy Assessment Process (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 set a clear division of responsibilities as well as an independent risk control challenge process. Group Treasury and the business lines have the first line of defence functions which include management of ING's (regulatory) liquidity and funding position, maintaining access to the professional funding markets and managing the liquidity buffer. As 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 through stress testing and other risk measurement activities. 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 locations, currencies and tenors.

ING's funding consists mainly of retail and corporate deposits contributing around 50 percent and 25 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 with the aim of ensuring a sufficiently diversified and stable funding base.

Funding mix[1] (*)

	2022	2021
Funding type		
Customer deposits (retail)	51%	51%
Customer deposits (corporate)	28%	25%
Interbank	6%	9%
Lending/repurchase agreements	6%	5%
CD/CP	3%	3%
Long-term senior debt	4%	4%
Subordinated debt	2%	2%
Total	**100 %**	**100 %**

1 Liabilities excluding trading securities and IFRS equity.

Funding and liquidity adequacy and risk appetite (*)

ING identifies various key drivers of future liquidity and funding needs on an ongoing basis and through the periodic risk identification process. Taking into consideration the identified drivers, ING regularly assesses its current and future liquidity adequacy and, if deemed necessary, takes steps to further improve ING's liquidity position and to have sufficient counterbalancing capacity. A liquidity adequacy statement is formulated on at least a quarterly basis to substantiate and reflect the management view on the current funding and liquidity position as well as the potential future challenges. The quarterly liquidity adequacy statement is an important part of ING's ILAAP process.

ING assesses its F&L adequacy through three lenses – stress, economic and normative:

- Through the stress lens, ING evaluates its ability to withstand a period of prolonged F&L stress for both normative and economic requirements or limits under idiosyncratic, market-related or a combination of idiosyncratic and market-related scenarios, which lead to customer deposit outflows, deterioration of access to funding markets, and lower liquidity value of counterbalancing capacity.
- Through the economic lens, ING assesses the extent to which its customers, professional counterparties and investors are comfortable in providing deposits and funding in tenors, currencies and instruments necessary to sustainably fund the business (intraday, short-term and long-term) in a going-concern situation.
- Through the normative lens, ING ascertains that the bank is in the position to meet current and forthcoming home and host 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 aims to have sufficient counterbalancing capacity under various internally defined stress scenarios. Regarding the economic perspective, an internally defined Stable Funding to Loans (SFtL) ratio (supplemented by other metrics) is used to stimulate a diversified funding base and to prevent overreliance on professional funding. Finally, the liquidity coverage ratio (LCR) and the Net Stable Funding Ratio (NSFR) regulatory metrics are monitored in terms of both ING's risk appetite and normative 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 rates, 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 the more recent period of increased inflation.
- 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. An emphasis is placed on understanding overall market trends and developments, credit rating changes and peer comparisons.

Liquidity stress-testing (*)

Funding and liquidity stress-testing forms part of the overall F&L framework. It allows ING to examine the effects of exceptional but plausible future events on ING's funding and liquidity position and provides insight into which entities, business lines or portfolios are vulnerable to which types of risk drivers 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 (NLP) is the main stress-testing measure and is measured at different time buckets.

The stress-testing framework considers idiosyncratic, market-wide and combined (idiosyncratic and market-wide) stress scenarios. The design of the framework is based on empirical evidence supplemented by expert judgement. 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.

Outcomes of the stress tests are considered in the key aspects of ING's F&L risk framework and F&L risk management, including:

- 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.
- 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 form part of the F&L risk appetite statement. The results of all internal stress scenarios are monitored and assessed on a regular basis. In addition, ad-hoc scenarios based on current economic and market developments are run to determine their potential impacts on the funding and liquidity position of ING. In 2022, this included stress-test scenarios dedicated to the war in Ukraine, inflation, and the impact of monetary tightening. The internal stress scenarios also serve as input for decision making on additional contingency measures.

Contingent F&L risks are addressed in the Contingency Capital and 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 (ESG) risk is defined as the risk of losses arising from any negative financial impact on the institution stemming from the current or prospective impacts of environmental, social or governance factors on the institution's counterparties or invested assets.

Governance

The ESG governance is cascaded in the organisation through the ad-hoc ESG committee that is responsible for supervising ING's ESG direction, endorsing and monitoring progress, and advising the MBB on dilemmas. The ESG Sounding Board comprised of senior leaders guides the development and implementation of ESG topics as well as reporting on progress. Further details on ESG risk governance are provided in the section below. The overall ESG governance structure is described in the 'Sustainability at the heart' section.

Environmental and social risk

ESR is a risk function that is part of the second line of defence of ING. The ESR team is responsible for developing policies 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 (1) the risk profile of the client, project or business engagement, and (2) ING's exposure. In some locations an ESR delegated adviser 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 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 assess compliance with sustainability criteria.
- Spread ESR awareness throughout ING.
- Participate in European and global advisory groups (e.g. OECD advisory group, steering committee to the Equator Principles, Thun Group of Banks) to help bring all banks to the same high standard.

Climate risk initiative

The Climate Risk Initiative (CRI) is a programme aiming to address climate-related and environmental (C&E) risks across our organisation in accordance with the ECB's Guide on C&E risks. It is sponsored by the CRO and overseen by a Steering Committee. The programme addresses regulatory expectations on the topics of governance, business strategy, risk identification and assessment, risk appetite, stress testing and disclosures.

The governance of the programme was strengthened in early 2022 by extending the Steering Committee with representatives from the Wholesale Banking and Retail Banking business lines, the Risk domain and the Internal Audit function. In addition, a permanent Climate Risk Centre of Expertise (CoE) was established within the Global Sustainability department. This team supports workstreams in the establishment of their roadmaps and reports progress to the Steering Committee, internal and external stakeholders. Furthermore, the CoE collaborates with the ESG risk department on continuously embedding C&E risk management practices across the organisation.

ESG Risk Centre of Expertise

After a strategic review of our risk organisational structure, an ESG Risk Centre of Expertise, reporting to ING's CRO, was formed within the Integrated Risk department. This team aims to ensure that relevant ESG regulations are monitored, assessed and implemented in accordance with the expectations of both supervisors and society. Furthermore, it is responsible for developing the overarching ESG risk framework and policies, setting risk appetite as well as coordinating internal and regulatory ESG risk stress-testing.

Developments in 2022

External developments

Following the introduction of the EU Taxonomy Regulation in 2020 and the EBA consultation on ESG risks in 2021, global ESG regulation continues to evolve bringing new requirements for companies and also financial institutions to report on and prevent adverse impacts on climate, the environment, and human rights. Three of the key regulatory developments that were initiated in 2022 are:

- The European Commission adopted its proposal for the Corporate Sustainability Due Diligence Directive (CSDDD) in February 2022. However, the proposal is still under debate and needs to be approved in the trialogue between the EU Parliament, the EU Commission and the Council. The CSDDD is an important component of the European Green Deal, as well as a long-promised initiative in the EU's human rights strategy, and will necessitate strategic and operational changes by businesses globally as it aims to foster sustainable and responsible corporate behaviour and to anchor human rights and environmental

considerations in companies' operations and corporate governance. The CSDDD also applies to financial institutions.
- Earlier elements of the European Green Deal focused on disclosure: in particular, under the Sustainable Finance Disclosure Regulation, the Taxonomy Regulation and, most recently, the Corporate Sustainability Reporting Directive (CSRD), which was published in the Official Journal of the European Union on 16 December 2022, having been formally adopted by the European Parliament and Council of the European Union in November 2022. The CSRD will update and reinforce the EU's Non-Financial Reporting Directive and operate in tandem with the CSDDD. Member states are required to implement the CSRD, and its obligations will start to apply in January 2024.
- In March 2022, the US Securities Exchange Commission (SEC) proposed rules to require climate change disclosure in the annual reports and registration statements of public companies registered with the SEC, including any company (domestic or foreign) whose stock is listed on a US stock exchange. Hence, it is yet to be seen whether the proposed rules will eventually be implemented in this respect.

Environmental and Social Risk

The ESR framework

ING’s ESR policy framework helps us make informed choices about how, where and with who we do business. In 2022, the ESR Framework was updated to reflect several minor amendments following the last comprehensive review cycle that took place in June 2021. The new release includes among others amendments to the restrictions applied in the tobacco value chain, additional clarity on some of the requirements for the ESR client assessment process concerning a specific group of companies and the required ESR due diligence for public authority entities. For more information please refer to the ESR Framework on our corporate website ing.com

ESR in practice

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 and/or the environment (for example companies involved in clearance of primary forest), which we do not want to 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. However, we also have screening processes covering the Business Banking segment.

Wholesale Banking 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 approach, following the same rationale and principles of the ESR policy framework, 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 transactions are categorised as ‘ESR high risk’, and thus require a separate in-depth advice from the ESR team.

While we have a robust 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 improve our processes to further ensure adequacy of data necessary to steer and manage these risks at the level of granularity needed.

Of all WB engagements in scope of the ESR policy framework in 2022, 84 percent were considered ESR low-risk, seven percent ESR medium-risk and nine percent ESR high-risk. ESR high-risk cases require specialised advice from the global ESR team. 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, an advice is given that can only be overruled at Global Credit Committee level. Of the 309 ESR advices given in 2022, which are related to new requests, 48 percent were positive, 35 percent positive subject to conditions and 17 percent negative.

Conditions can play an important role in helping clients improve their environmental and social performance and transitioning and ensuring their continued compliance with our ESR policy.

The ESR team mainly focuses on policy development and transaction advice. 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 other teams, so that ESR knowledge is built on and spread.

Apart from above, ESR in cooperation with the KYC Academy has developed a new e-learning course on Environmental and Social Risk that was launched at the end of 2021. The purpose of this course is to further increase the awareness and understanding on ESR, outline the risks and the responsibilities of the various internal stakeholders and their roles in the process throughout the whole organisation. Since the roll out of the e-earning tool, more than 8,000 employees worldwide completed the course.

Other ESG-related initiatives within the bank

Our ESR approach helps our clients and ING 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 134 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, and was elected as a member of the EP Steering Committee in 4Q 2022.
- 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 (UNGP) on Business and Human Rights into banking activities. The group consists of bank representatives who informally share best practices among participant members to deepen the understanding and application of the UNGP across the range of different banking activities. ING participated in this year's virtual annual meeting. Amongst other topics, the latest developments on human rights due-diligence obligations and the human rights impacts of climate transition plans were discussed.

By taking part in the above-mentioned initiatives, we aim to contribute our viewpoint and those of our clients, employees and other stakeholders in support of collective ESG responsibilities that will be driving our further development and maintenance of guidelines that can serve as a standard for our industry.

Climate-related and environmental risk management

Climate change is increasingly exposing society to a range of physical risks (both acute and chronic) which are linked to environmental risk. ING's response to combatting climate change and environmental degradation is comprised of the incorporation of the C&E risks incorporated in the bank's risk management and client engagement practices.

Managing C&E risks covers both physical risks (e.g. extreme weather events) and transition risks (e.g. policy changes, shifts in market sentiment and consumer demand). The potential impacts that physical and transition risks could have on households, businesses as well as on the macroeconomy can translate into a range of financial risks for ING. The C&E risks can materialise through defaults of businesses and households, increased volatility in equity and commodity markets, disruptions to bank's and customers' operations, and litigation procedures. While ING has an inclusive approach for supporting clients in the transition to a net-zero economy, we also manage the financial impact of C&E risks on our clients' activities.

The C&E risk management practices in ING were subject to the ECB's industry-wide Thematic Review in 2022. ECB published the outcome of their review in a public report and shared their observations with individual banks. After the finalisation of the Thematic Review, ING updated its roadmap for the implementation of ECB's expectations to reflect regulatory observations and agreed remediation timelines.

ING endorses the recommendations of the Financial Stability Board's (FSB) Task Force on Climate-Related Financial Disclosures (TCFD). We continue to develop our approach for C&E disclosures as we build our methodology for identifying, measuring and managing these risks. See also 'The world around us'.

Risk management

Risk identification and assessment

In 2022, we continued to enhance the tools used to identify and assess C&E risks in our portfolio. We created C&E risk sector heatmaps for both WB and Retail Banking. The heatmaps facilitated the materiality assessment of C&E risks by means of scores assigned to transition and physical risk drivers. They also enabled us to understand the magnitude of the C&E risk impact on a sectoral level and pinpointed the sectors with highest C&E risk exposure.

The C&E risk heatmap is one of the tools used by ING to identify and assess C&E risks. For physical risk, the heatmap lists 26 individual climate-change-related physical risk hazards (both acute and chronic weather patterns) and environmental risk drivers (water stress, resource scarcity, biodiversity loss, pollution and waste). The assessment for transition risk is based on seven risk drivers related to policy and regulatory changes, technological developments, and shifts in market sentiment/ demand. For each of the factors under consideration, a low, medium or high score is based on a qualitative assessment taking into account industry standards following a three to five-year horizon. This assessment is performed at the level of the individual sectors of ING's WB portfolio. The geographic distribution of ING's clients is therefore implicitly taken into account but not assessed on an individual client basis.

The heatmap assessment for all WB sectors was completed in 2022. The results of the exercise are summarised in the following table. Conducting the assessment for medium and long-term horizons and applying a quantitative counterparty assessment approach, could potentially result in different sector scoring. An assessment for the medium to long term horizons may identify increased exposure to both physical and transition risks. For the identification of a financial impact on ING, we also need to take the readiness of ING's counterparties to address these risks into consideration.

Consolidated heatmap scores for Wholesale Banking

Sector	Transition risk	Physical risk	EAD / Total WB EAD
December 2022			
Building and construction	Medium	Low	1.3 %
Building materials	Medium	Medium	0.8 %
Mid and downstream oil and gas	Medium	Low	3.7 %
Offshore	High	Low	0.9 %
Upstream oil and gas	High	Low	1.7 %
Real estate holding and development	Medium	Low	0.3 %
Real estate investment	Medium	Low	3.5 %
Real estate property management	Medium	Low	5.8 %
Other sectors	Low	Low	82.2 %

Based on the total exposure at default (EAD), 0.8% of the WB portfolio has a medium/high score for physical risk (2021: 30.9%) and 17.8% has a medium/high score for transition risk (2021: 30.8%). Aggregated scores are presented. The decrease of the percentages in 2022 follows from further review of the ING portfolio. Given the short term horizon of the assessment, a lower financial impact was identified by various sectors and notably for exposure to physical risk.

The drivers that are considered medium/high risk by most sectors include extreme weather, resource scarcity, and pollution and waste for physical risk, while changes/adoption of regulatory requirements, environmental ING policy changes/adoption, and reputational risk are mostly selected with respect to transition risk.

Moreover, in the last two years we improved our understanding of the physical risk impact of climate events on our mortgage portfolio. For this assessment we collected granular location data and matched it with individual climate hazards provided by Royal HaskoningDHV, in partnership with Ambiental, a company of Royal HaskoningDHV. Applying this methodology, which puts a relative higher weight on the hydrological risks, we were able to cover 99% of our total residential mortgages book.

Consolidated heatmap scores for Retail Banking

Climate risk	O/S	Summary	Aggregated risk levels				Individual
December 2022 in € million			Meteorological	Geo-physical	hydrological	Fire	
Netherlands	113,042	Very low	Low	Very low	Very low	Very low	38
Germany	91,166	Very low	Low	Very low	Very low	Very low	1,309
Belgium	40,367	Very low	Low	Low	Very low	Very low	83
Australia	35,195	Very low	Medium	Very low	Very low	Very low	6,642
Spain	21,598	Very low	Low	Very low	Very low	Very low	5,231
Poland	11,906	Very low	Low	Very low	Very low	Very low	13
Italy	7,711	Very low	Low	Low	Very low	Very low	3,181
Romania	2,628	Very low	Low	Low	Very low	Very low	1
Luxembourg	3,167	Very low	Low	Very low	Very low	Very low	69
Other	146						
Total	**326,927**	**Very low**	**Low**	**Very low**	**Very low**	**Very low**	**16,568**

The column “individual” in the above table represents the total outstanding amount of positions with high risk exposure to individual physical hazards per country.

The initial assessment was based on the situation per September 2021, of which the outcome was included in the ING Climate Report 2022. The key insights from this assessment are as follows:

- The aggregated ING global mortgage portfolio is in the very low risk category, <1% of the portfolio has a high risk score.
- Assessing the portfolio on an individual hazard level, approximately five percent of ING’s mortgage book has at least one hazard with a high or very high score.
- Considering the medium and long-term horizons (2030, 2050 and 2100), the aggregated summary climate risk score is expected to increase most for Italy, Romania, and Spain although they will still remain in ‘low risk’ score category.

Furthermore, the outcome of ING’s bank-wide risk identification and assessment process indicates that climate risk is an emerging risk considering both its likelihood and impact. That means it has the potential to significantly affect our performance but its impact on the organisation is more difficult to assess than other risk drivers. The bottom-up risk identification process in the market risk and funding and liquidity (F&L) risk areas applies pre-defined financial impact materiality thresholds (CET1 ratio for Market Risk, LCR Surplus for F&L risk) to assess the significance of risk drivers. Based on these thresholds, it was concluded that climate change is a financially significant risk driver at ING Bank level for both risk types. The main portion of the impact is driven by physical risk (extreme weather conditions) for Funding & Liquidity Risk, and by transition risk (change in policy and regulation due to climate change) for both F&L Risk and Market Risk.

There is growing realisation that nature needs to be an important consideration in corporate decision-making. The Taskforce on Nature-related Financial Disclosures (TNFD) aims to build a risk management and disclosure framework that can be used by organisations to identify, assess, manage and disclose nature-related dependencies, impacts, risks and opportunities. ING supports the TNFD framework and intends to use it as guidance in processes and reporting. We are currently piloting TNFD's draft recommendations on sub-sectors to establish how the framework can be used to manage and report on ING's nature-related risks.

More detailed information on the risk identification and assessment process can be found in the ING Climate Report 2022.

Risk appetite

We used the outcomes of the C&E risk heatmap exercise to introduce climate risk elements in the 2022 credit risk appetite. A monitoring mechanism was established for WB at the start of 2022 that limits growth of sub-sectors with a higher exposure to C&E risks while allowing for growth within the overall sector limit. As from July 2022, this mechanism has become binding for WB sectors. For Business Banking (BB) sectors a similar approach was used and the BB credit risk appetite has been in a monitoring period since April 2022. In addition, climate risk has been incorporated into the 2023 market risk banking book risk appetite with the introduction of sensitivity metrics per climate risk category.

Stress testing

The regulatory climate risk stress test became part of the biannual ECB Single Supervisory Mechanism (SSM) stress test in 2022 and ING participated in it. The test consisted of three modules (questionnaire, peer benchmark, bottom-up stress test) aimed at testing our capabilities for assessing climate risk. The most significant impact of this scenario is observed in the credit risk area. The ECB shared its assessment of the climate risk stress test on an aggregated basis in its 2022 Climate Stress Test Report as well as in a bank-specific report. The key challenges of the stress test were related to data. The required attributes, such as GHG emissions and energy performance certificates (EPC), were not available for all counterparties and proxies were used. Other challenges were the modelling of new drivers such as carbon pricing and the long-term horizon of 30 years.

This regulatory climate stress test, combined with our own climate risk analyses, has been used to enhance ING's internal climate risk stress testing through the creation of an internal combined climate risk stress test. The scenario assumes a prolonged war in Ukraine triggering full stoppage of the Russian gas supply to Europe. Extreme weather events (i.e. fires in Southern Europe and floods in Northern Europe) create additional burdens on European economies and energy consumption patterns change. EU governments step up their efforts to meet the well-below 2° Paris Agreement target by creating a New Green Deal which leads to soaring carbon taxes. A disorderly transition follows. Moreover, ING faces greenwashing claims in this stress scenario.

Challenges

Bringing our current work to a more mature level is challenging. To fully understand the financial impact of any physical risk driver, we need to understand the transmission channels from physical risk to financial impact. Mapping out the transmission channels is a complex process which deserves better understanding by both banks and supervisors before making decisions. Another challenge is to translate our insights into specific actions for both current and future customers. In addition, we need to assess C&E risks on a client level. To that end we need to be aware of the clients' readiness to transition to a more sustainable economy and their capacity to adapt.

Additionally, the key challenge in transitioning from a qualitative to a data-driven approach for the C&E risk heatmaps is two-fold: sourcing data and interpreting data. Since our clients are active in various sectors and geographies, we need to consider multiple data sources that often vary in scope, granularity and quality. Access to real-time, consistent data is a major challenge for risk measurement as definitions and quantification methodologies are constantly evolving. In the absence of comprehensive company data, the use of proxies is necessary to assess C&E risks. Due to these limitations, the integration of quantified inputs into risk modelling has not yet been implemented.

Next steps

In 2023, we will continue our efforts to evaluate both C&E risks and opportunities by further refining our methodologies. We aim to establish quantitative methodologies for C&E risk identification, materiality assessment and risk appetite setting. This is supported by the integration of C&E risk considerations in risk policies and procedures, our C&E risk identification framework as well as the global ESG data management plan we are developing.

Moreover, access to relevant data is essential to managing nature-related risks. We aim to introduce further granularity in our biodiversity hotspot analysis. In relation to that we are testing an approach for measuring biodiversity impact which we expect to give us more detailed insight into the sectors in our portfolio that are both most dependent on and most impacted by biodiversity.

Furthermore, based on the inventory of training needs of critical functions in front office, risk management, leadership and support areas, ING will launch tailored learning journeys in the course of 2023 to educate staff on the C&E risk topic.

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. In addition to the global steering provided through the framework, the bank's Non Financial Risk Committee (NFRC), chaired by the Group chief risk officer, is the highest level of the non-financial risk committees within ING and is mandated by the MBB to opine on and approve non-financial risk matters, to monitor or verify whether appropriate action is taken by responsible management and endorse the non-financial risk appetite.

Non-financial risk management

Risk categories

ING categorises non-financial risks in the following areas:

- Compliance risk is the risk of ING's integrity being impaired, which can result in reputational damage, legal or regulatory sanctions, or financial loss, due to a failure (or perceived failure) to comply with applicable laws, regulations and standards. See more in 'Compliance risk'.
- 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.
- 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.
- Sourcing risk is the risk of financial loss, regulatory sanctions and/or reputational damage resulting from sourced activities (both IT and non-IT, including intra-group sourcing) not staying within ING's risk appetite and not being executed as agreed (with captives or partners), including non-compliance with internal or external regulations.

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.

Measurement approach

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.

Main developments in 2022

Personal and physical security

The war in Ukraine has had a fundamental impact on the lives of the families of more than a 100 Ukrainian colleagues and the way in which our Ukrainian operations are being conducted. Nevertheless, the impact of the war on ING's non-financial risk profile and on operational event losses continues to be limited thanks to an extensive set of mitigating measures which ING took over the past year.

Additionally, from the start of 2022 ING's focus continued to remain protecting its employees and their families from the Covid-19 virus by continuing to work partly at home and partly at the office and to continue servicing its customers as before.

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 continue to increase on a global scale. The sophistication and implications of ransomware attacks are of particular 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. See also 'The world around us' and 'How we make a difference'.

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). Additionally, through ING's Global Fraud Management team, which brings together fraud management experts from across domains, there is a central responsibility to ensure that ING's business and fraud strategy remains aligned on account fraud threats, market best practices, applicable law and legislation, risk appetite and cost targets.

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. Criminal actors are targetting 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 2022, these challenges have further increased with more sophisticated phishing attempts and improved social engineering fraud attempts.

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. Furthermore, 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 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. In 2022, the ING Data Strategy was aligned under a new chief data office, next to a newly organised COO/Data Operations domain to better create 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 an important risk for the bank, ING has created a holistic view and continues to build awareness of how ING manages risks 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 managed by a dedicated IAM team in the Chief Information Security Office (CISO), which aim to ensure improvements are identified to address developments both inside and outside ING. In 2022, ING continued to improve, with attention given to tooling, standardisation and harmonisation of processes, workflows and automation of IAM controls.

Personal data protection

On 25 May 2018, the European General Data Protection Regulation (GDPR) became effective. ING is bound by the GDPR which affords greater protection to individuals and requires more control on data and transparency regarding the use of data by companies. In 2022, ING continued to further enhance the data protection of customers and employees. See also 'The world around us'.

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 applicable to the bank's services and activities. 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 ING's workforce 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 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, employees 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.
- Data protection (personal data protection, data retention) risk refers to the personal data protection risk of financial loss, (regulatory fines, reputational damage) due to not protecting the personal data rights of individuals as required, so as to data retention risk, on having the records being destroyed too soon or retained too long.

Climate and ESG-related compliance risks are in the process of being added to the Compliance Risk Catalogue where appropriate in close collaboration with internal stakeholders with the aim of ensuring that roles and responsibilities with regard to identifying, assessing, managing and overseeing these risks are fully aligned with ING's organisation globally.

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. Geographical compliance (Wholesale Banking/Market Leaders/Challengers & Growth Markets) together with the functional lines in the countries are responsible for the execution of these standards, within the risk appetite set. Compliance is tasked with instructing, advising, challenging and having oversight of the first line of defence in their management of compliance risks and has an active role in 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 2022.

OneCompliance strategy

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. We achieve this by living up to the OneCompliance strategy that was launched in 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 compliance risks consistently across the organisation. In 2022, 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 a global dashboard to take smart decisions and keep oversight on steering within risk appetite and steering our global direction 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 department.

Financial crime risk

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 and other predicate offences to money laundering such as environmental crimes and human trafficking. 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 to protect our business and society at large from financial crime and its corrosive effects upon individuals and communities.

Financial crime risk management

The bank's NFRC, chaired by ING's CRO, is the principal risk management forum where, among other things, financial crime risk is discussed. This committee reviews, where appropriate, escalates key financial crime topics, threats and risks across ING to the EB and MBB. On KYC (know your customer), the Global KYC Committee), chaired by ING's COO, is mandated by the MBB to steer, prioritise and approve KYC-related topics undertaken across ING, and to oversee compliance with the relevant laws and regulations and internal rules related to KYC. The day-to-day 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 CRO.

We believe all of our people have a 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 workforce 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 to counter the financing of terrorism (AML/CFT), 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.

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 2022, we remained focused on our Financial Economic Crime Controls Maturity Programme (FCMP) (see also 'Know your customer (KYC)') by continuing to strengthen our financial crime risk management framework and supporting 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 continue to require our attention and commitment in future years.

In 2022, we continued to enhance 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 are approved by the Non-Financial Risk Committee.

Bribery and corruption

Corruption fuels instability and conflict and curbs economic growth. It undermines business confidence and corporate integrity, hinders fair business competition and harms international trade. 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 have continued to 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 2022, 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 facilitate or be involved in tax-related financial crime through servicing customers.

Key developments in 2022

War in Ukraine

2022 saw the Russian invasion of Ukraine. As well as the devastating political, social and economic consequences of the war, it has also had an impact on the nature and scale of FEC-related threats. Since the outbreak of the war, millions of refugees have fled the country making them vulnerable to exploitation by criminals involved in human trafficking and migrant smuggling. There has also been an increase in the scale of illegal trafficking of weapons.

During 2022, financial institutions have had to respond to new and complex targeted sanctions, but also remain vigilant to elevated and increased levels of various other financial crimes threats and risks. We have produced regular and actionable guidance on evolving financial crime developments resulting from the war that has been shared across ING, including potential scenarios to identify where these risks may manifest and datapoints that may detect unusual transactions.

Sanctions related developments

Russia's invasion of Ukraine has fundamentally changed the global and political landscape, resulting in a world-wide response, whereby new and significant sanctions packages were imposed against Russia and Belarus since the end of February 2022. More than 3000 new sanctions have been implemented. The unprecedented velocity and scope of sanctions imposed by the international community has resulted in a highly complex and changing compliance environment for global financial institutions.

The international community is leveraging their sanction tools in response to the escalation of Russia's invasion of Ukraine, however sanction measures of the US, UK and EU can differ in their scope and these differences present complex operational and legal challenges for business that operate globally or facilitate global trade and payment activities. These complexities and challenging require careful navigation.

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.

Operationally, the impact of these enhancements has resulted in the need for additional staff members to review and apply greater scrutiny of transactions alerted for heightened risk of noncompliance with applicable sanctions.

Covid-19 and cost of living

Opportunistic criminals were quick to exploit the disruption caused by the Covid-19 pandemic and continue to do so as economic uncertainty and cost of living increases. During 2022, we continued to focus on protecting customers from fraud and cyber-related crimes, as well as identifying evolving criminal money laundering methods.

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 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 risks to manage our risk exposure, while also complying with relevant data legislation (which can differ significantly depending on jurisdiction). Society's expectations with regard to financial institutions' accountability for safeguarding the integrity of the financial system also create an increasingly demanding environment.

We take our 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.

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 dialogue with PSPs, regulators and industry bodies on these challenges and aim to 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 countering the financing of terrorism (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. Though not yet finalised, ING welcomes this harmonisation, which removes a degree of regulatory complexity. ING has participated in workstreams and analysis 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.

DNB, the Dutch central bank, published its report 'From Recovery to Balance' on the use of risk-based approaches. ING actively participates in related DNB workshops to enhance the effectiveness of fighting financial crime by focusing on higher risks (prioritising these in terms of capacity allocation; i.e. do more where necessary and less where possible).

Virtual assets

Blockchain technology, which underlies most virtual assets, continued to evolve and be accepted by the public. Crypto assets can be used for legal and illegal purposes. In 2022, global regulators, private industry and policy makers continued to focus on where they may be used for illegal activity, including money laundering, evasion of capital and sanctions, controls and payments in ransomware attacks. While there has been maturity in understanding how virtual assets ecosystems may be potentially abused for financial crime purposes, they continue to pose challenges for financial institutions.

We continued to contribute to ongoing dialogue with regulators on this topic throughout 2022. We have created and shared guidance on the evolving risks to enhance the knowledge and understanding of the virtual-assets landscape and its convergence with financial crime risk and we strive to ensure that ING remains a safe and compliant bank.

Environmental crime

Environmental crime is among the most profitable criminal enterprises and covers a wide range of unlawful activities including the illegal wildlife trade, the illegal extraction and trade of forestry and natural resources as well as illegal waste and illegal fisheries crime. There is also an increasing interface between environmental crimes and other crimes, most notably corruption, human trafficking and modern slavery and trade-based fraud. Throughout 2022, the topic has gained significant attention from regulators, law enforcement and non-governmental organisations across the globe due to the scale, nature and cost of the crime as well as the damaging effects they have on society.

In 2022, we examined the risks arising from the illegal trade in wildlife and in waste and how to identify suspicious financial flows and actors linked to them. We continued our membership of the United for Wildlife Financial Taskforce, which also covers illegal forestry trade, We work with private, public and third-sector partners to detect, disrupt and prevent illegal crimes in the wildlife and forestry trade.

Know Your Customer (KYC)

Know your customer and financial crime compliance play a major role in ensuring we only engage and do business with people and entities that meet regulatory requirements. 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 are continuously working to further strengthen the KYC processes across the bank as and where required. This includes enhancing customer due diligence files and making structural improvements in frameworks, processes and systems.

Global approach

ING takes a global approach in its KYC improvement activities. In 2022, ING updated its KYC policies in line with external regulatory developments in anti-money laundering and financial sanctions and continued substituting local technology with centralised global technology enabling us to further improve the way we onboard, monitor and screen customers using a standardised approach across the world. In 2022, among other things, we progressed with the implementation of Global Transaction Monitoring tooling (with the last migration planned to take place in 2023), designed and implemented a global standard Quality Management Frameworks and further centralised operations, bundling expertise in dedicated operational hubs.

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 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.

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.

Throughout 2022, 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 Germany, ING joined the public-private partnership Anti-Financial Crime Alliance (AFCA) in 2020 to foster mutual exchange of information within the financial system. The alliance consists of approximately 30 members, among them BaFin as regulator, the FIU, other public authorities, the largest financial institutions as well as representatives from the non-financial sector. ING in Germany continues to contribute in various forums to the further development of industry-wide standards (e.g. related to digitalisation and information sharing as well as to SAR filing (suspicious activity report) obligations.

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 workforce 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 2022, our (mandatory) training programme for KYC staff continued, including our partnership with the Association of Certified Anti-Money Laundering Specialists (ACAMS) to develop and provide tailored, certified training. 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 27,000 ACAMS trainings were enrolled in 2022. Our internal training programme for 2022 included additional focus on further strengthening our risk management mindset.

Following work in 2021, bottom-up initiatives have been further developed into scalable solutions that address behavioural challenges related to decision-making, ownership and group dynamics. Examples are the ‘feedback loop’ and ‘discover and connect’, which is a way to connect employees across the different functions through department visits. Furthermore, as part of a top-down approach, senior leadership came together to discuss drivers and behavioural changes needed to improve decision making and collaboration throughout the entire KYC chain.

Read more on behavioural risk in ‘Risk culture’.

Conduct compliance and ethics

Conduct risk is defined by anything we do that can result either in customer detriment or an impact to market integrity. Conduct compliance and ethics includes client protection and transparency (treating customers fairly), market conduct (including market manipulation), anti-competitive conduct, conflicts of interest and ethics. Ethics risk includes the Orange Code, global Code of Conduct, as well as our Whistleblower framework.

Treating customers fairly

Improvements to our framework around Markets in Financial Services Directive (MiFID) have continued as planned allowing a more effective client protection and product approval committee (CPAC) framework focussing on investment and financial markets products to both WB and Retail clients. The Capital Markets Recovery Package (CMRP) with regards to MiFID, new ESMA Guidelines on appropriateness and execution-only requirements as well as ESMA's statement on payment for order flow (PFOF) have been implemented. Client protection and product approval governance was simplified to support a global and consistent application of risk appetite when offering investment products and services to our customers whether WB or Retail, while removing overlap from the MiFID implementation. A particular focus this year for CPAC has been to strengthen central guidance on cryptocurrencies and crypto-linked financial products.

Alongside direct consumer protection requirements as laid down in 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 rules were updated and rolled out globally providing further standardisation across all products, services and jurisdictions. This is further enforced by recent market developments such as increased inflation and interest rates, which require also requiring specific focus on customers in vulnerable positions. The range of products and services in scope will include mortgages and consumer lending.

Transaction reporting activities continued to improve both in terms of reporting quality and scope through a group-wide governance framework and controls. The upload of the main transaction reporting backlog is now completed. Preparations for future transaction reporting changes are being made, including the European Market Infrastructure Regulation (EMIR) Refit.

In relation to insurance products, global policy and controls are in place to align with the EU's Insurance Distribution Directive (IDD).

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 and ESG-related MiFID II and IDD amendments, measures on developing, selling and promoting sustainable products are being strengthened. Compliance is not an exception and ESG continues to be embedded within the ING organisation across all three lines of defence, strengthening compliance with both regulatory requirements and internal standards.

Market conduct

Market conduct risk stems from behaviour that can impact market integrity. Public confidence in smooth functioning markets is crucial for economic growth and wealth. As part of our work in 2022 to strengthen our market conduct framework, global procedures on maintaining information barriers, insider lists and communicating inside information were further improved across ING. Steps have been made towards automating, standardising and centralising our approach to personal account dealing rules across the group. Furthermore, two new e-learnings have been designed on inside information and detecting suspicious orders and transactions, with one already rolled out to targeted employees.

Conflicts of interest

The Conflicts of Interest policy sets the obligation to identify, assess and manage conflicts of interest when personal or organisational interests are in conflict over the interest of our customers, employees or other stakeholders. In 2022, the Conflicts of Interest policy was revised and implemented 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 European Bank Authority Guidelines on Internal Governance. Next to the updated policy, mandatory instructions on conflict-of-interest registers are implemented which provides instructions to identify, assess, mitigate or prevent and record all structural and incidental conflicts of interest.

Whistleblower

The programme launched in 2021 to enhance the global whistleblower process has been concluded. In 2022, whistleblowing enhancement activities continued with an emphasis on increasing employee awareness on misconduct reporting. Sanitised whistleblowing data has been shared within the organisation to provide more transparency on the types of concerns employees report and the rapidity of our response.

Innovation, analytics and digitalisation

In 2022, we took the strategic decision to adapt our innovation approach and unwind ING Neo. This will bring initiatives closer to our core business and functions, in line with our strategic focus of providing a superior customer experience and putting sustainability at the heart of what we do.

We continue to harness new and innovative technological capabilities to keep customers safer and to enhance their digital journey with ING. To this end, the Blacksmith solution for KYC has become our default tool for financial institutions and the CoorpID platform, which digitalises the KYC process for corporate clients, is now used in nine countries. Further, our Ventures team has also closed an investment in Sardine which provides AI-enabled KYC, compliance and fraud detection platforms to financial services firms. The initiatives and investments help us to respond swiftly and effectively to the changing regulatory landscape and underlying policies in relation to financial crime.

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.

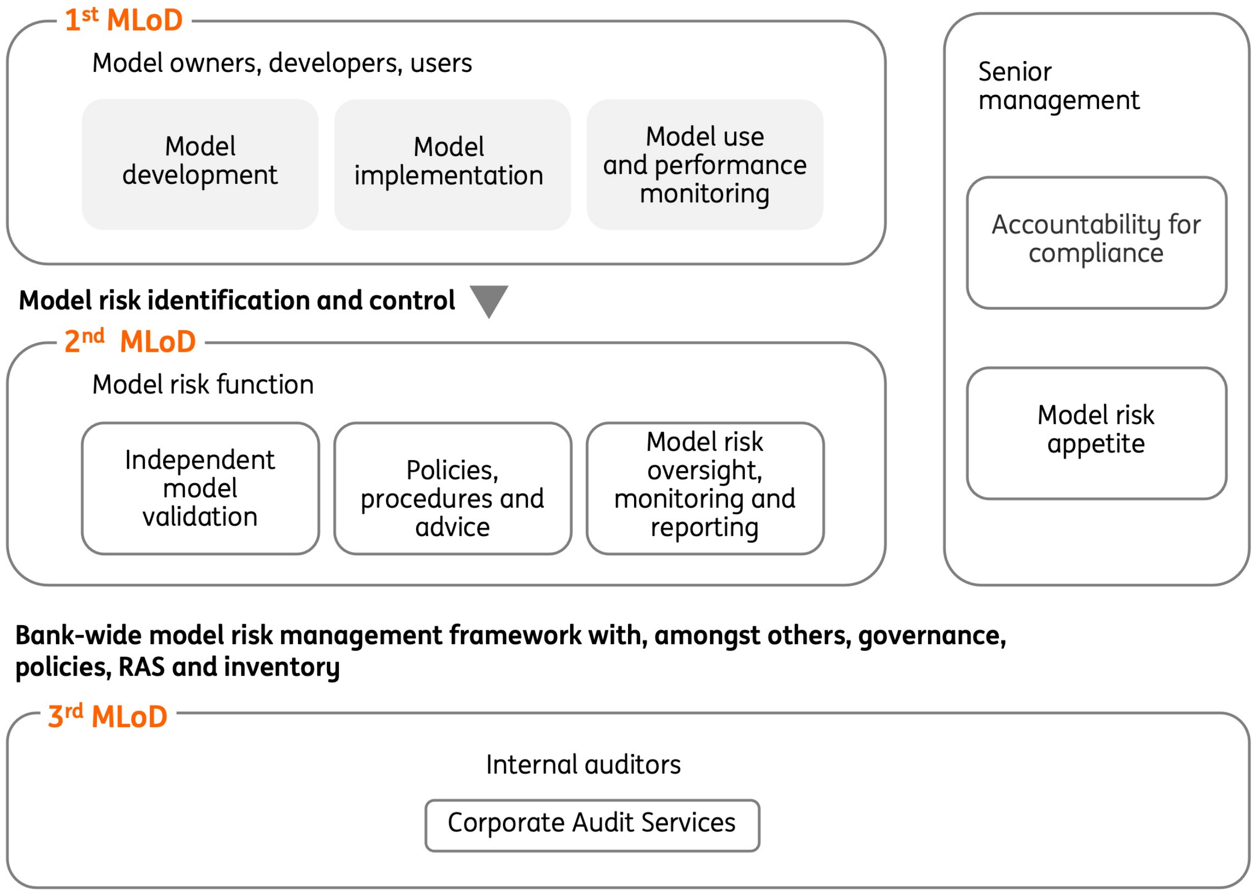
Governance (*)

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 MBB. 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 first MLoD is composed of the model owners, model users, data management and model development, and is accountable for the implementation of model risk controls which encompass model development, implementation and use of the models as well as monitoring of models' performance.
- The second 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 third MLoD is the internal audit, reviewing the quality of model risk management execution in all lines of defence and providing assurance over the first and second 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. Current model RAS metrics are focused on the most important models for ING: credit risk and other models with elevated supervisory attention. These metrics are reported to the MBB on a quarterly basis.

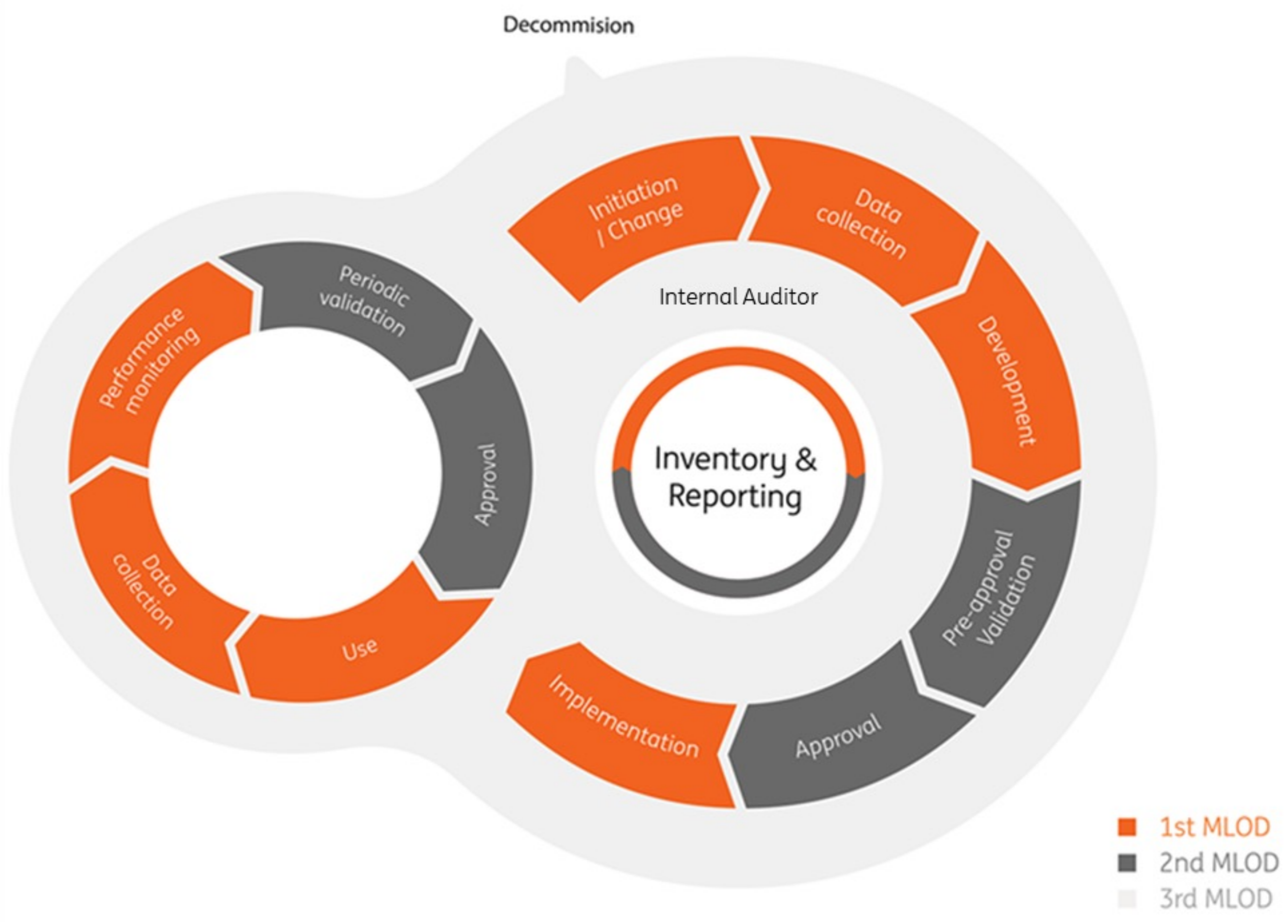
Model risk management (MoRM) (*)

The MoRM policy framework comprises the total set of measures and tools put in place to manage model risk.To enable setting model risk management standards that are proportionate to a model's importance, ING classifies models based on their materiality and reputational risk. The classification determines the depth and extent of the applied model risk management activities, including model validation. During 2022, the MoRM policy framework was updated and enhanced, incorporating ING model data-ethics principles and integrating a risk-based approach to model validation. Next to the generic MoRM policy framework, dedicated model validation frameworks are in place. These set the validation standards for the key model types such as credit, market, liquidity, operational risk, IRRBB, KYC, and other model categories. These frameworks are continuously being enhanced to keep up-to-date with regulatory and technical developments.

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 so that senior management can 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 first MLoD, grey represents the second MLoD and light grey is the third MLoD. The objectives of the different processes are outlined below.



Initiation or change: The initiation of the development of a new model or change in an existing model can be triggered by internal or external factors, such as business needs, regulation changes and/or model validation findings.

Data collection is the process of defining and collecting data that meets the requirements for model development. The process includes the definition of the data needed and assessment of data availability and data quality.

Model development is a structured process that leads to a model that is consistent with the model owner requirements, bank policy and relevant regulation where applicable.

Pre-approval validation is an independent assessment to determine whether a newly developed or materially changed model is valid for its intended use. The approach to model validation is proportional to the model risk as reflected in the ING model risk classification.

The objective of the **model approval** stage is to ensure models are formally approved bye the designated approval authority prior to deployment.

During the **implementation** stage, the model is deployed in a production environment, after completion of required model testing and corresponding approval.

In the **model use** stage the model is applied by the users for the specific purpose for which it was designed. The model may only be used after formal approval.

The objective of model **monitoring** is to determine if the model is performing as expected by regularly assessing model accuracy and/or predictive ability, considering internal or external developments that may influence model performance. Model performance monitoring begins when a model is deployed for use and continues until the model has officially been decommissioned.

Periodic validation assesses, on a regular basis, whether a model is still valid for its intended use and if the model is used as intended, taking into consideration any internal or external changes since the last validation. The 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**.

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 and incomes 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.

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Consolidated statement of financial position

As at 31 December

in EUR million	2022	2021
Assets		
Cash and balances with central banks 2	87,614	106,520
Loans and advances to banks 3	35,103	23,591
Financial assets at fair value through profit or loss 4		
– Trading assets	56,875	51,389
– Non-trading derivatives	3,893	1,536
– Designated as at fair value through profit or loss	6,159	6,355
– Mandatorily at fair value through profit or loss	46,844	42,684
Financial assets at fair value through other comprehensive income 5	31,625	30,635
Securities at amortised cost 6	48,160	48,319
Loans and advances to customers 7	635,557	627,550
Investments in associates and joint ventures 8	1,500	1,587
Property and equipment 9	2,446	2,515
Intangible assets 10	1,102	1,156
Current tax assets	349	533
Deferred tax assets 34	1,796	957
Other assets 11	8,839	5,991
Total assets	**967,861**	**951,317**

in EUR million	2022	2021
Liabilities		
Deposits from banks 12	56,632	85,092
Customer deposits 13	686,341	657,831
Financial liabilities at fair value through profit or loss 14		
– Trading liabilities	39,088	27,113
– Non-trading derivatives	3,048	2,120
– Designated as at fair value through profit or loss	50,883	41,808
Current tax liabilities	324	271
Deferred tax liabilities 34	257	603
Provisions 15	1,030	973
Other liabilities 16	13,344	12,695
Debt securities in issue 17	58,075	57,443
Subordinated loans 18	15,789	16,719
Total liabilities	**924,811**	**902,668**
Equity 19		
Share capital and share premium	17,067	17,067
Other reserves	-984	1,069
Retained earnings	26,462	29,778
Shareholders' equity (parent)	**42,546**	**47,914**
Non-controlling interests	504	736
Total equity	**43,050**	**48,650**
Total liabilities and equity	**967,861**	**951,317**

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	2022	2021	2020
Continuing operations			
Interest income using effective interest rate method	24,541	18,657	20,865
Other interest income	3,935	2,474	1,846
Total interest income	**28,476**	**21,131**	**22,711**
Interest expense using effective interest rate method	-10,969	-5,550	-7,507
Other interest expense	-3,761	-1,966	-1,603
Total interest expense	**-14,730**	**-7,516**	**-9,110**
Net interest income 20	**13,745**	**13,615**	**13,600**
Fee and commission income	5,085	5,004	4,514
Fee and commission expense	-1,499	-1,487	-1,503
Net fee and commission income 21	**3,586**	**3,517**	**3,011**
Valuation results and net trading income 22	1,503	847	852
Investment income 23	181	167	152
Share of result from associates and joint ventures 8	92	141	66
Impairment of associates and joint ventures 8	-192	-3	-235
Result on disposal of group companies	6	-29	-3
Net result on derecognition of financial assets measured at amortised cost 24	-5	0	189
Other net income 25	-369	230	12
Total income	**18,546**	**18,485**	**17,645**

	2022	2021	2020
Addition to loan loss provisions	1,861	516	2,675
Staff expenses 26	6,152	5,938	5,817
Other operating expenses 27	5,040	5,257	5,344
Total expenses	**13,053**	**11,711**	**13,835**
Result before tax	**5,493**	**6,774**	**3,810**
Taxation 34	1,723	1,876	1,317
Net result	**3,769**	**4,898**	**2,493**
Net result (before non-controlling interests)	**3,769**	**4,898**	**2,493**
Net result attributable to Non-controlling interests	102	128	78
Net result attributable to Shareholder of the parent	**3,667**	**4,770**	**2,415**
Dividend per ordinary share	13.50	6.72	0.09
Total amount of dividend paid (in million euros)	6,277	3,125	43

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	2022	2021	2020
Net result (before non-controlling interests)	3,769	4,898	2,493
Other comprehensive income			
Items that will not be reclassified to the statement of profit or loss:			
Realised and unrealised revaluations property in own use	15	-2	-7
Remeasurement of the net defined benefit asset/liability 33	-19	95	28
Net change in fair value of equity instruments at fair value through other comprehensive income	-126	96	-335
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss	165	37	-19
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	-428	-178	36
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss	-26	-42	-34
Changes in cash flow hedge reserve	-3,158	-1,955	355
Exchange rate differences [1]	436	143	-1,620
Share of other comprehensive income of associates and joint ventures and other income	0	-3	7
Total comprehensive income	**629**	**3,089**	**904**
Comprehensive income attributable to:			
Non-controlling interests	-190	-247	133
Shareholders of the parent	819	3,336	770
	629	**3,089**	**904**

1 Includes impact of application of hyperinflation accounting under IAS 29.

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 34 '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 2021	**17,067**	**1,069**	**29,778**	**47,914**	**736**	**48,650**
Impact IAS 29 on opening balance		627	-563	64		64
Balance as at 1 January 2022	**17,067**	**1,696**	**29,215**	**47,978**	**736**	**48,714**
Net change in fair value of equity instruments at fair value through other comprehensive income		-95	-23	-118	-7	-126
Net change in fair value of debt instruments at fair value through other comprehensive income		-406		-406	-22	-428
Realised gains/losses on debt instruments at fair value through other comprehensive income reclassified to the statement of profit or loss		-25		-25	-1	-26
Changes in cash flow hedge reserve		-2,901		-2,901	-257	-3,158
Realised and unrealised revaluations property in own use		-12	26	15	0	15
Remeasurement of the net defined benefit asset/liability 33		-19		-19	1	-19
Exchange rate differences and other		442		442	-5	436
Share of other comprehensive income of associates and joint ventures and other income		26	-26			0
Change in fair value of own credit risk of financial liabilities at fair value through profit or loss		150	15	165		165
Total amount recognised directly in other comprehensive income net of tax		**-2,840**	**-8**	**-2,848**	**-292**	**-3,140**
Net result		161	3,506	3,667	102	3,769
Total comprehensive income net of tax		**-2,679**	**3,498**	**819**	**-190**	**629**
Dividends			-6,277	-6,277	-41	-6,319
Employee stock option and share plans			27	27	0	27
Changes in the composition of the group and other changes			-1	-1	0	-1
Balance as at 31 December 2022	**17,067**	**-984**	**26,462**	**42,546**	**504**	**43,050**

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 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 33		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		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	Shareholders' 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 33		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 cash flows

for the years ended 31 December

in EUR million		2022	2021	2020
Cash flows from operating activities 28				
Result before tax		5,493	6,774	3,810
Adjusted for:	– Depreciation and amortisation	711	834	829
	– Addition to loan loss provisions	1,861	516	2,675
	– Other non-cash items in Result before tax	5,519	413	1,259
Taxation paid		-1,489	-1,871	-1,735
Changes in:	– Net change in Loans and advances to/from banks, not available/payable on demand	-32,813	8,700	53,076
	– Net change in Trading assets and Trading liabilities	6,490	-5,624	2,571
	– Loans and advances to customers	-19,306	-27,772	2,888
	– Customer deposits	34,005	18,339	40,576
	– Other 28	-3,241	-8,179	-2,770
Net cash flow from/(used in) operating activities		**-2,769**	**-7,869**	**103,179**
Cash flows from investing activities				
Investments and advances:	- Associates and joint ventures	-48	-91	-24
	- Financial assets at fair value through other comprehensive income	-18,806	-13,186	-16,949
	- Securities at amortised cost	-24,651	-44,945	-37,522
	- Property and equipment	-231	-184	-287
	- Other investments	-198	-179	-300

		2022	2021	2020
Disposals and redemptions:	– Associates and joint ventures	58	57	24
	– Disposal of subsidiaries, net of cash disposed	7	27	-3
	- Financial assets at fair value through other comprehensive income	14,526	17,750	14,571
	- Securities at amortised cost	23,943	46,933	31,918
	– Property and equipment	83	39	75
	– Loans sold			
	– Other investments	10	0	12
Net cash flow from/(used in) investing activities		**-5,307**	**6,220**	**-8,487**
Cash flows from financing activities 29				
Proceeds from debt securities		81,636	77,298	63,269
Repayments of debt securities		-78,609	-76,150	-99,212
Proceeds from issuance of subordinated loans		983	3,169	2,138
Repayments of subordinated loans		-1,090	-2,538	-2,608
Repayments of principal portion of lease liabilities		-296	-301	-273
Dividends paid		-6,319	-3,165	-46
Net cash flow from/(used in) financing activities		**-3,694**	**-1,686**	**-36,732**
Net cash flow		**-11,770**	**-3,335**	**57,960**
Cash and cash equivalents at beginning of year 30		**107,664**	**111,565**	**54,029**
Effect of exchange rate changes on cash and cash equivalents		-505	-565	-425
Cash and cash equivalents at end of year 30		**95,390**	**107,664**	**111,565**

Consolidated statement of cash flows - continued

As at 31 December 2022, Cash and cash equivalents includes cash and balances with central banks of EUR 87,614 million (2021: EUR 106,520 million; 2020: EUR 111,087 million). Reference is made to Note 33 '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	2022	2021	2020
Interest received	28,110	21,515	23,365
Interest paid	-14,201	-8,723	-9,690
	13,909	12,792	13,675
Dividend received [1]	229	172	144
Dividend paid	-6,319	-3,165	-46

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 2022, 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 2022, were authorised for issue in accordance with a resolution of the Management Board Banking on 6 March 2023. The General Meeting of the 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 1.7.4 'Derivatives and hedge accounting' of this note and to Note 36 '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.

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 Russian invasion in Ukraine

The war in Ukraine had, besides an immense impact on the lives of millions of people, a negative impact on the global economy. While businesses and households were still recovering from the economic consequences of Covid-19, developments in Ukraine further distorted supply chains, caused higher energy costs and aggravated an already high inflation rate environment. This, in combination with central bank rate hikes, worsened the macroeconomic outlook.

As a result of the economic effects of Russian invasion and second order effects uncertainty and level of management judgement remains at an elevated level in 2022, particularly in the estimation of loan loss provisions (including the need for management adjustments), the determination of fair values and impairment assessment of an investment in an associate.

Reference is made to the notes of the financial statements as well as Risk Management chapter for further information on the impact of the Russian invasion of Ukraine and second order impacts.

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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 2022, ING Bank updated the presentation in note 7 'Loans and advances to customers' to improve consistency and comparability. Comparative figures for 2021 have been updated accordingly.

1.4.1 Changes in IFRS effective in 2022

The following amended standards became 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).

The above changes did not have significant impact on ING Bank's Consolidated financial statements. ING Bank has not early adopted any standard, interpretation or amendment in 2022 which has been issued, but is not yet effective.

1.4.2 Upcoming changes in IFRS after 2022

The following published amendments are not mandatory for 2022 and have not been early adopted by ING Bank

Effective in 2023 (endorsed by the EU):

- IFRS 17 'Insurance Contracts' (issued in May 2017), including amendments to IFRS 17 (issued in June 2020).

IFRS 17 'Insurance Contracts' is 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 does not have an insurance business, but on a limited basis sells insurance products as a broker where it does not run the insurance risk. ING Bank performed an impact assessment which revealed that a portfolio of loans with death waivers in the Netherlands with a net carrying amount of approximately of EUR 750 million might be in scope of IFRS 17. Following the above mentioned amendments to IFRS 17 in 2020 which allow an accounting policy choice, ING Bank intends to account for assets in this portfolio in their entirety, including death waiver features, using IFRS 9 'Financial Instruments' and not IFRS 17. As a result, this portfolio will no longer meet the 'solely payments of principal and interest' (SPPI) criterion, causing the portfolio to no longer be recognised at amortised cost but rather at fair value through profit or loss. This reclassification is not expected to have a material impact on equity or result of ING Bank, as the fair value is expected not to differ materially from the current book value. Hence, the financial impact of IFRS 17 on ING Bank is expected to be limited.

The following amendments will also be effective in 2023. However, the implementation of these amendments is expected to have no significant impact on NG Bank's Consolidated financial statements.

- 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).

Effective in 2024 (not yet endorsed by the EU):

- Amendments to IFRS 16 'Leases': Lease Liability in a Sale and Leaseback (issued in September 2022).
- Amendments to IAS 1 'Presentation of Financial Statements': Classification of Liabilities as Current or Non-current (issued in January 2020).

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 or may not 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 1.7 'Financial instruments' (specifically 1.7.8 'Impairment of financial assets', 1.7.3 for 'Fair values of financial assets and liabilities', 1.11 'Investments in associates and joint ventures', 1.18 'Provisions, contingent liabilities and contingent assets' and 1.7.9 'Accounting for Targeted Longer-Term Refinancing Operations (TLTRO)') of this note and the applicable notes to the Consolidated financial statements.

1.6 Other developments

Application of IAS 29 'Financial Reporting in Hyperinflationary Economies'
During the second quarter of 2022 Turkey became a hyperinflationary economy for accounting purposes. As ING Bank has a subsidiary in Turkey, ING Bank applied IAS 29 'Financial Reporting in Hyperinflationary Economies' to its operations as if the economy in Turkey had always been hyperinflationary. Given that ING Bank presents its results in EUR, comparatives were not restated and IAS 29 was applied from 1 January 2022 with the impact of the first-time application and the effect for the period both shown in these Consolidated financial statements for the year ended 31 December 2022.

Under IAS 29, the results of the operations in Turkey should be stated in terms of the current purchasing power at the reporting date. For that, the consumer price index (CPI) as determined by the Turkish Statistical Institute was used.

The development of the CPI during the year ended 31 December 2022 was as follows (2003=100):

1 January 2022	686.95
31 December 2022	1,128.45
Change for the period	64.27%

To state all the items in the financial statements in terms of their current purchasing power at the reporting date, ING Bank restated the non-monetary items of ING Turkey (such as properties and equipment, intangibles, right-of use assets and shareholder's equity) for the changes in CPI up to the reporting date.

Monetary items (such as cash and balances with banks, loans and advances and deposits) are not restated as they are already expressed in the current purchasing power. Furthermore, all items in the statement of comprehensive income were also restated for the effects of inflation based on the developments in CPI during the 12 month period to reflect the purchasing power as at 31 December 2022.

The effect of such restatement of the statement of comprehensive income and the balance sheet for inflation in the current period has been recognised in the statement of profit or loss within 'Other net income' as a 'Net monetary gain or loss'. The net monetary loss for the period represents the loss of purchasing power by the net monetary position (monetary assets exceeding monetary liabilities) of ING Turkey.

After the application of the above restatement procedures in Turkish Lira under IAS 29, the financial position and the results for the period of ING Turkey are translated and presented in EUR at the exchange rate on 31 December 2022. For the statement of comprehensive income this is in contrast with the usual translation procedures where items of comprehensive income are translated at the exchange rate at the date of transaction. Furthermore, ING Bank selected to present both the restatement effect resulting from restating ING Bank's interest in the equity of ING Turkey as required by IAS 29; and the translation effect from translating at a closing rate that differs from the previous closing rate, in the Currency translation reserve.

Refer to Note 19 'Equity' for the impact of applying IAS 29 during the year ended 31 December 2022.

1.7 Financial instruments

ING Bank applies IFRS 9 'Financial Instruments' to the recognition, classification and measurement, and derecognition of financial assets and financial liabilities and the impairment of financial assets. The Group applies the requirements of IAS 39 'Financial Instruments: Recognition and Measurement' for hedge accounting purposes.

1.7.1 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 derecognised 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.

1.7.2 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 for other basic lending risks such as 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 Effective Interest Rate (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 net 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'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 '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'.

1.7.3 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 significant unobservable inputs become observable, or until the significant unobservable inputs become non-significant. 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 35 '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.

1.7.4 Derivatives and hedge accounting

IFRS 9 includes an accounting policy choice to defer the adoption of IFRS 9 hedge accounting and to continue with hedge accounting under IAS 39. ING Bank decided to exercise this accounting policy choice and did not adopt IFRS 9 hedge accounting as of 1 January 2018. Furthermore, ING Bank applies fair value hedge accounting for portfolio hedges of interest rate risk (macro fair value hedges) in accordance with the EU carve-out version of IAS 39.

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:

1. the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract;
2. a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
3. 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.

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.

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 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. Temporary exceptions under Phase 1 continued to be relevant for ING Bank as at 31 December 2022 (for USD and WIBOR).

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 36 '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.

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. During 2022, Phase 2 continued to be relevant for ING Bank when ING actually transitioned its financial instruments (designated in hedge accounting relationships) to the new benchmark rates (mainly, USD LIBOR).

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 Risk-Free Rate (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.

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.

1.7.5 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset, and the net amount is 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.

1.7.6 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.

1.7.7 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 41 'Contingent liabilities and commitments' for these off-balance sheet items. Collateral received is not taken into account when determining the 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 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.

1.7.8 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. Furthermore, any facility which shows an increase of 200% between the PD at the date of initial recognition and the lifetime PD at the reporting date (i.e. threefold increase in PD) must be classified as Stage 2. This is considered a backstop within the quantitative assessment of SICR. 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.

Consequently, if the above quantitative SICR thresholds are exceeded, 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.

ING Bank also relies on a number of qualitative indicators to identify and assess SICR. These include:

- Forbearance status;
- Watch List status;
- Intensive care management;
- Collective SICR assessment;
- 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 includes 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. 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 2022**

To reflect the risks that are not properly captured by the ECL models, a number of management adjustments to the model-based ECL were necessary as at 31 December 2022. Reference is made to the 'Management adjustments applied this year' paragraph in the 'Risk management' section of the Annual Report.

1.7.9 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/decreased 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. If the change relates to the periods already passed, the impact for those past periods is recognised in profit or loss immediately.

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. Treatment of changes in expectations of meeting the lending targets was an area of significant judgment in the comparative periods but no longer relevant in 2022.

1.8 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 subsidiary. 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 44 'Principal subsidiaries' and a description of ING's activities involving structured entities is included in Note 45 'Structured entities'.

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.

1.9 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 differ 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.

1.10 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 are translated at the closing rate at the date of the statement of financial position;
- Income and expenses 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). However, under hyperinflation accounting, income and expenses of ING Turkey are translated at the closing rate; 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.

1.11 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.

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.

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 the expected future earnings of TTB is based on forecasts derived from broker consensus over the short to medium term and reasonable and supportable assumptions capturing a combination of TTB specific and market data points for longer term and steady state expectations 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'.

1.12 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.

In principle, 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 net 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.

1.13 ING Bank as 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 and are therefore not included in 'Property and equipment'. Instead, 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.

1.14 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 Group's interest in the fair value of the 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 are 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 cash generating units (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 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.

1.15 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.

1.16 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.

1.17 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; including 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 net income/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'.

1.18 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 42 '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'.

1.19 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 effect Shareholders' equity and/or Net result, include mainly:

- Service cost which is 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.

1.20 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.

1.21 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.

1.22 Statement of cash flows

The statement of cash flows is prepared in accordance with the indirect method, distinguishing cash flows from operating, investing and financing activities. In the net cash flow from operating activities, the result before tax is adjusted for those items in the statement of profit or loss and changes in items per the statement of financial position, which do not result in actual cash flows during the year.

For the purposes of the statement of cash flows, Cash and cash equivalents comprise balances with less than three months' maturity from the date of acquisition, including cash and balances with central banks, treasury bills and other eligible bills, amounts due from other banks, and deposits from banks. Investments qualify as a cash equivalent if they are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

Cash flows arising from foreign currency transactions are translated into the functional currency using the exchange rates at the date of the cash flows.

The net cash flow shown in respect of Loans and advances to customers relates only to transactions involving actual payments or receipts. The Addition to loan loss provision which is deducted from the item Loans and advances to customers in the statement of financial position has been adjusted accordingly from the result before tax and is shown separately in the statement of cash flows.

The difference between the Net cash flow in accordance with the statement of cash flows and the change between the opening and closing balance of Cash and cash equivalents in the statement of financial position is due to exchange rate differences and is presented separately in the cash flow statement.

Liabilities arising from financing activities are debt securities, lease liabilities and subordinated loans.

1.23 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	2022	2021
Amounts held at central banks [1]	85,934	104,870
Cash and bank balances	1,681	1,650
	87,614	**106,520**

1 Amounts held at central banks include an amount of EUR -12 million (2021: EUR -6 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 39 '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	2022	2021	2022	2021	2022	2021
Loans and advances to banks	23,462	7,018	11,679	16,595	35,140	23,613
Loan loss provisions	-12	-10	-26	-13	-37	-22
	23,450	**7,009**	**11,653**	**16,582**	**35,103**	**23,591**

Loans include balances (mainly reverse repos) with central banks amounting to EUR 19,395 million (2021: EUR 3,403 million). Reference is made to Note 7 'Loans and advances to customers' for information on finance lease receivables included in Loans and advances to banks.

As at 31 December 2022 and 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	2022	2021
Trading assets	56,875	51,389
Non-trading derivatives	3,893	1,536
Designated at fair value through profit or loss	6,159	6,355
Mandatorily measured at fair value through profit or loss	46,844	42,684
	113,770	**101,964**

(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	2022	2021
Reverse repurchase transactions		
Loans and advances to banks	19,395	3,403
Loans and advances to customers	1,306	71
Trading assets, loans and receivables	9,732	8,026
Loans and receivables mandatorily measured at fair value through profit or loss	43,153	39,823
	73,587	**51,322**
Repurchase transactions		
Deposits from banks	3,809	4,138
Trading liabilities, funds on deposit	5,715	7,127
Funds entrusted designated and measured at fair value through profit or loss	43,131	34,608
	52,654	**45,873**

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, or Trading, as appropriate.

Reference is made to Note 39 '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	2022	2021
Equity securities	11,741	17,574
Debt securities	4,189	5,319
Derivatives	30,841	19,764
Loans and receivables	10,103	8,733
	56,875	**51,389**

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	2022	2021
Derivatives used in		
- fair value hedges	836	365
- cash flow hedges	814	300
- hedges of net investments in foreign operations	119	18
Other non-trading derivatives	2,124	852
	3,893	**1,536**

Reference is made to Note 36 '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	2022	2021
Debt securities	5,437	5,870
Loans and receivables	722	485
	6,159	**6,355**

‘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 and amounts to EUR 6,159 million (2021: EUR 6,355 million). The cumulative change in fair value of the loans and debt securities attributable to changes in credit risk is EUR 345 million (2021: EUR 99 million)

The notional value of the related credit derivatives is EUR 3,370 million (2021: EUR 2,640 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 3 million (2021: EUR -69 million) and the change for the current year is EUR 72 million (2021: EUR -53 million).

The changes in fair value attributable to changes in credit risk have been calculated by determining the changes in credit spread implicit in the fair value of loans and 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	2022	2021
Equity securities	203	161
Debt securities	821	787
Loans and receivables	45,820	41,735
	46,844	**42,684**

Equity securities are individually insignificant for ING Bank. For debt securities ING Bank total exposure reference is made to Note 6 'Securities at amortised cost'. Loans and receivables include mainly reverse repurchase agreements.

5 Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income by type

in EUR million	2022	2021
Equity securities	1,887	2,457
Debt securities [1]	29,095	27,340
Loans and advances [1]	643	838
	31,625	**30,635**

1 Debt securities include an amount of EUR -21 million (2021: EUR -12 million) and the Loans and advances includes EUR -1 million(2021: EUR -1 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	2022	2021	2022	2021
Investment in Bank of Beijing	1,614	1,700	111	97
Other Investments	273	757	38	25
	1,887	**2,457**	**149**	**122**

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 2022 ING holds approximately 13% (2021: 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 2022 (2021: 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	2022	2021	2022	2021	2022	2021
Opening balance	2,457	1,862	28,178	34,033	30,635	35,895
Additions	17	518	18,789	12,669	18,806	13,186
Amortisation			-18	-46	-18	-46
Transfers and reclassifications	10	-7			10	-7
Changes in unrealised revaluations [2]	-65	-88	-3,230	-1,209	-3,295	-1,296
Impairments				-5		-5
Reversals of impairments			3	4	3	4
Disposals and redemptions	-492	-19	-14,034	-17,730	-14,526	-17,750
Exchange rate differences	-39	191	49	460	10	651
Changes in the composition of the group and other changes			1	2	1	2
Closing balance	**1,887**	**2,457**	**29,739**	**28,178**	**31,625**	**30,635**

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 2022, disposals of EUR 492 million mainly relate to the sale in the second quarter of HQLA eligible equity instruments triggered by the changing interest rate environment and deteriorating market sentiment. This portfolio was built up in early 2021 (additions in 2021: EUR 499 million) and was a relatively small part of the HQLA portfolio. This was a diversified buy-and-hold portfolio aimed at generating stable dividend income stream.

In 2022, exchange rate differences of EUR -39 million are mainly related to the stake in Bank of Beijing following the depreciation of CNY vs EUR. Furthermore, changes in unrealised revaluations of equity securities are mainly related to negative revaluation of the stake in Bank of Beijing following a decline in share price (EUR -49 million).

FVOCI debt instruments

In 2022, changes in unrealised revaluations of EUR -3,230 million relate 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	2022	2021
Debt securities at fair value through other comprehensive income	29,095	27,340
Debt securities at amortised cost	48,160	48,319
Debt securities at fair value through other comprehensive income and amortised cost	**77,255**	**75,659**
Trading assets	4,189	5,319
Debt securities at fair value through profit or loss	6,258	6,658
Total debt securities at fair value through profit or loss	**10,447**	**11,976**
	87,703	**87,635**

ING Bank's total exposure to debt securities (excluding debt securities held in the trading portfolio) of EUR 83,513 million (31 December 2021: EUR 82,316 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	2022	2021	2022	2021	2022	2021	2022	2021
Government bonds	63	48	16,016	16,271	24,629	26,588	40,708	42,908
Sub-sovereign, Supranationals and Agencies	2,343	3,115	8,529	7,587	14,210	13,752	25,082	24,454
Covered bonds			2,663	1,729	5,543	5,063	8,206	6,792
Corporate bonds	857	778	108	156	26	90	991	1,024
Financial institutions' bonds	2,237	1,993	772	798	2,551	1,932	5,561	4,724
ABS portfolio	758	723	1,028	810	1,217	913	3,003	2,445
	6,258	**6,658**	**29,116**	**27,352**	**48,177**	**48,338**	**83,551**	**82,347**
Loan loss provisions			-21	-12	-17	-19	-39	-31
Debt securities portfolio	**6,258**	**6,658**	**29,095**	**27,340**	**48,160**	**48,319**	**83,513**	**82,316**

7 Loans and advances to customers

Loans and advances to customers by type [1]

	Netherlands		Rest of the world		Total	
in EUR million	2022	2021	2022	2021	2022	2021
Loans to public authorities	837	1,153	11,840	9,672	12,677	10,824
Residential mortgages	107,952	110,283	205,511	203,529	313,463	313,813
Other personal lending	5,835	6,551	30,345	31,511	36,180	38,063
Corporate Lending	68,128	68,104	211,092	202,020	279,220	270,124
	182,752	**186,091**	**458,789**	**446,733**	**641,541**	**632,824**
Loan loss provisions	-993	-1,119	-4,990	-4,156	-5,984	-5,274
	181,759	**184,972**	**453,798**	**442,577**	**635,557**	**627,550**

1 2021 presentation has been updated to improve consistency and comparability

For details on credit quality and loan loss provisioning, refer to ‘Risk management – Credit risk’ paragraphs ‘Credit quality’ and 'Loan loss provisioning'.

As at 31 December 2022 EUR 635,361 million (2021: EUR 627,390 million) of loans and advances to customers are non-subordinated.

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 to banks include finance lease receivables and are detailed as follows:

Finance lease receivables [1]

in EUR million	2022	2021
Maturities of gross investment in finance lease receivables		
- within 1 year	3,452	3,204
- between 1-2 years	2,463	2,311
- between 2-3 years	1,870	1,716
- between 3-4 years	1,294	1,178
- between 4-5 years	747	734
- more than 5 years	1,423	1,495
	11,251	**10,637**
Unearned future finance income on finance leases	-792	-525
Net investment in finance leases	**10,459**	**10,112**
Included in Loans and advances to banks	6	5
Included in Loans and advances to customers	10,453	10,106
	10,459	**10,112**

1 The total loan loss provision of EUR 160 million (2021: EUR 167 million) for finance lease receivables is classified into the following loan loss provision stages: Stage 1: EUR 9 million (2021: EUR 8 million), Stage 2: EUR 28 million (2021: EUR 30 million) and Stage 3: EUR 123 million (2021: EUR 129 million).

The finance lease receivables mainly relate to the financing of equipment and are mainly part of corporate lending. To a lesser extent, the finance lease receivables relate to real estate for third parties, where ING is the lessor. Interest income in 2022 on finance lease receivables amounts to EUR 292 million (2021: EUR 217 million).

8 Investment in associates and joint ventures

Investments in associates and joint ventures

in EUR million 2022	Interest held (%)	Fair value of listed investments	Balance sheet value	Total assets	Total liabilities	Total income	Total expenses
TMBThanachart Bank Public Company Limited	23%	849	1,109	49,506	43,677	1,303	957
Other investments in associates and joint ventures			391				
			1,500				

Investments in associates and joint ventures

in EUR million 2021	Interest held (%)	Fair value of listed investments	Balance sheet value	Total assets	Total liabilities	Total income	Total expenses
TMBThanachart Bank Public Company Limited	23%	866	1,208	46,478	40,957	1,286	1,038
Other investments in associates and joint ventures			379				
			1,587				

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.

Other investments in associates and joint ventures
Included in Other investments in associates and joint ventures are mainly financial services and (non) financial technology funds or vehicles operating predominantly in Europe, and 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	2022	2021
Opening balance	1,587	1,475
Additions	48	91
Revaluations	-8	-24
Share of results	92	141
Dividends received	-48	-34
Disposals	-10	-23
Impairments	-192	-3
Exchange rate differences	27	-31
Other	4	-5
Closing balance	**1,500**	**1,587**

Share of results from associates and joint ventures of EUR 92 million (2021: EUR 141 million) as included in the table above is mainly attributable to results of TTB of EUR 81 million (2021: EUR 61 million). In 2021, share of results from associates includes additional EUR 28 million gain on our stake in Ebusco.

Impairments
In 2022, Impairments of EUR 192 million is predominantly attributable to TTB of EUR 165 million. TTB is part of the Retail Other segment.

Impairment testing TTB
The fair value of TTB 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 quarterly impairment tests that led to impairment loss of EUR 165 million (2021: EUR nil).

The impairment test performed in 2022 led to an impairment at 31 March 2022 of EUR 150 million and EUR 15 million at 30 September 2022, as the recoverable amount as determined by a Value in Use calculation, was below the carrying amount at that point in time. The impairment test at year end resulted in no further impairments.

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:

- the estimation of future earnings over a 5 year forecast period; and
- 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 2022 (and as at 30 September 2022 resulting in impairment)
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: Short to medium term expectations are based on forecasts derived from broker consensus. Longer term and steady state expectations into perpetuity are derived using reasonable and supportable assumptions capturing a combination of TTB specific and market data points. 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): 9.71% (30 September 2022: 10.54%), based on the capital asset pricing model (CAPM) calculated for TTB using current market data.
- Terminal growth rate: 3.05% (30 September 2022: 3.82%) 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 2022, 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 836bps would reduce the recoverable amount to the carrying amount. An increase of 55bps in terminal growth rate and discount rate would cause the VIU to equal the carrying amount.

Reversal of the impairment loss recognised was not considered appropriate as at 31 December 2022 mainly due to the lack of sufficiently positive changes observed in the underlying performance of TTB since the impairment loss as reflected in the broker consensus. Furthermore, the share price remains below the original cost of the investment for a prolonged period of time.

9 Property and equipment

Property and equipment by type

in EUR million	2022	2021
Property in own use	681	702
Equipment:		
- Data processing equipment	213	207
- Other equipment	476	493
Right- of- use assets:		
- ROU property	1,000	1,009
- ROU cars	64	83
- ROU other leases	12	21
	2,446	**2,515**

Changes in property and equipment

	Property in own use		Equipment		Right-of-use assets		Total	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	702	745	699	842	1,113	1,255	2,515	2,841
Additions	2	9	229	175	173	164	404	348
Transfers	-1	-5	-1	1	-4	-20	-5	-24
Depreciation	-13	-15	-220	-287	-252	-271	-485	-573
Impairments[1]	-9	-10	-16	-8	-9	-15	-35	-33
Reversals of impairments	16	6				1	16	7
Remeasurements	15	17			67	6	81	24
Disposals	-67	-24	-15	-15	-15	-10	-98	-49
Exchange rate differences	36	-21	13	-7	3	4	52	-25
Closing balance	**681**	**702**	**688**	**699**	**1,076**	**1,113**	**2,446**	**2,515**
Costprice	847	910	3,554	3,581	1,680	1,738	6,081	6,229
Accumulated depreciation	-362	-373	-2,853	-2,871	-714	-644	-3,929	-3,888
Accumulated impairments	-107	-134	-12	-10	-21	-29	-140	-173
Accumulated revaluation surplus	304	299					304	299
Accumulated remeasurement					130	48	130	48
Net carrying value	**681**	**702**	**688**	**699**	**1,076**	**1,113**	**2,446**	**2,515**

1 Impairments of property and equipment are presented within Other operating expenses in the statement of Profit or Loss.

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 847 million (2021: EUR 910 million). Cost or the purchase price less accumulated depreciation and impairments would have been EUR 368 million (2021: EUR 403 million) had property in own use been valued at cost instead of at fair value.

The reported impairment losses of EUR -35 million (2021: EUR -33 million) mainly result from a change in the post-pandemic way of working through downscaling of physical office spaces.

10 Intangible assets

Changes in intangible assets

	Goodwill		Software		Other		Total	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	472	533	682	846	2	15	1,156	1,394
Opening balance adjustment	25						25	
Additions			54	44			54	44
Capitalised expenses			144	135			144	135
Amortisation			-226	-260		-1	-226	-261
Impairments [1]	-32		-22	-82		-12	-54	-94
Reversal of impairment								
Exchange rate differences	-1	-61	4				2	-62
Disposals			-3				-3	
Changes in the composition of the group and other changes			3	-1			3	
Closing balance	**464**	**472**	**636**	**682**	**2**	**2**	**1,102**	**1,156**
Gross carrying amount	464	472	2,491	2,521	8	59	2,962	3,052
Accumulated amortisation			-1,787	-1,710	-4	-9	-1,790	-1,719
Accumulated impairments			-69	-129	-2	-48	-70	-177
Net carrying value	**464**	**472**	**636**	**682**	**2**	**2**	**1,102**	**1,156**

1 Impairments of intangible assets are presented within Other operating expenses in the statement of Profit or Loss.

Goodwill

Following a change in monitoring from a centralised towards a de-centralised approach for Retail as from the beginning of 2022, goodwill related to the group of cash generating units (CGUs) 'Retail Growth Markets' was re-allocated to the underlying CGUs Retail Romania, Retail Poland and Retail Turkey using a relative value approach.

Goodwill is allocated to groups of cash generating units (CGUs) as follows:

Goodwill allocation to group of CGUs

in EUR million	Method used for recoverable amount	Discount rate	Terminal growth rate	Goodwill	Goodwill
Group of CGU's				2022	2021
Retail Netherlands	Value in use	8.46 %	2.04 %	30	30
Retail Germany	Value in use	8.35 %	1.82 %	349	349
Retail Poland	Value in use	10.31 %	2.50 %	69	70
Retail Romania	Value in use	12.32 %	2.60 %	15	15
Retail Turkey					7
				464	**472**

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. Furthermore, ING Bank tests goodwill whenever a triggering event is identified, as with the re-allocation from Group of CGUs to country level CGUs on 1 January 2022. The re-allocated goodwill to Turkey CGU, after first being adjusted for hyperinflation accounting for EUR 25 million, was fully impaired for the amount of EUR 32 million (based on discount rate 24.04% and terminal growth rate 10.40% as per 1 January 2022). Turkey is part of the Retail Other segment.

At the annual impairment test in the fourth quarter, the recoverable amount exceeds the carrying value of the CGUs as at 31 December 2022 and therefore no impairment is required.

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 one of the above key assumptions holding the other key assumptions constant, goodwill of the remaining CGUs will continue to be recoverable.

Other changes

Other changes in goodwill in 2022 relate to changes in currency exchange rates of Retail Poland and Retail Romania goodwill.

Software

Software includes internally developed software amounting to EUR 540 million (2021: EUR 573 million).

Software is reviewed for indicators of impairment. Irrespective of whether there is an indication of impairment, software under development is tested annually for impairment. In 2022, individually immaterial items were impaired for an amount of EUR 22million. 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.

11 Other assets

Other assets by type

in EUR million	2022	2021
Net defined benefit assets	617	783
Investment properties	18	26
Property development and obtained from foreclosures	34	52
Accrued assets	913	795
Amounts to be settled	5,190	2,424
Other	2,067	1,910
	8,839	**5,991**

Disclosures in respect of Net defined benefit assets are provided in Note 33 'Pensions 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	2022	2021	2022	2021	2022	2021
Non-interest bearing	86	570	315	321	400	891
Interest bearing	32,858	51,893	23,374	32,307	56,232	84,201
	32,943	**52,463**	**23,689**	**32,629**	**56,632**	**85,092**

Deposits from banks includes ING's participation in the Targeted Longer-Term Refinancing Operations (TLTRO) of EUR 36.0 billion (2021: EUR 65.5 billion). 2022 includes the impact of an early repayment of EUR 29.5 billion of ING's TLTRO III participation. 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	2022	2021
Savings accounts	321,005	314,893
Credit balances on customer accounts	283,886	280,028
Corporate deposits	43,308	28,183
Other	38,143	34,727
	686,341	**657,831**

Customer deposits by type

in EUR million	Netherlands 2022	Netherlands 2021	Rest of the world 2022	Rest of the world 2021	Total 2022	Total 2021
Non-interest bearing	2,332	1,860	24,307	27,712	26,639	29,573
Interest bearing	277,379	254,752	382,324	373,507	659,703	628,258
	279,711	**256,612**	**406,630**	**401,219**	**686,341**	**657,831**

Savings accounts relate to the balances on savings accounts, savings books, savings deposits, and time deposits of private individuals.

In 2022 Customer deposits includes EUR 48,410 million (2021: EUR 39,759 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	2022	2021
Trading liabilities	39,088	27,113
Non-trading derivatives	3,048	2,120
Designated at fair value through profit or loss	50,883	41,808
	93,019	**71,042**

Trading liabilities

Trading liabilities by type

in EUR million	2022	2021
Equity securities	935	322
Debt securities	1,291	753
Funds on deposit	5,993	7,513
Derivatives	30,869	18,525
	39,088	**27,113**

Non-trading derivatives

Non-trading derivatives by type

in EUR million	2022	2021
Derivatives used in:		
- fair value hedges	244	270
- cash flow hedges	1,275	485
- hedges of net investments in foreign operations	83	88
Other non-trading derivatives	1,446	1,278
	3,048	**2,120**

Reference is made to Note 36 '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	2022	2021
Debt securities	6,069	5,585
Funds entrusted	44,731	35,993
Subordinated liabilities	82	230
	50,883	**41,808**

As at 31 December 2022, 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 -75 million (2021: EUR 95 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 8,408 million (2021: EUR 6,853 million).

Funds entrusted include mainly repurchase agreements. In 2022, the balance increased to EUR 44,731 million as a result of rising customer demand.

15 Provisions

Provisions by type		
in EUR million	2022	2021
Reorganisation provisions	418	421
Litigation provisions	150	132
Other provisions	462	420
	1,030	**973**

Changes in provisions	Reorganisation		Litigation		Other		Total	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	421	381	132	105	420	180	973	666
Additions	217	310	59	50	227	354	503	715
Interest					-2	-2	-2	-2
Releases	-46	-96	-8	-11	-166	-79	-221	-186
Utilised	-170	-172	-33	-18	-15	-25	-218	-215
Exchange rate differences				-3		-2	-1	-4
Other changes	-4	-3		9	-1	-7	-4	-1
Closing balance	**418**	**421**	**150**	**132**	**462**	**420**	**1,030**	**973**

In 2022 and 2021 the additions to the reorganisation provisions 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, as well as to restructuring activities in Belgium in 2022.

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 42 'Legal proceedings' for developments in litigation provisions.

The additions to the Other provisions in 2022 include EUR 75 million which relates to the provision for the compensation of Dutch retail customers for past interest charges that did not sufficiently track market rates and largely reflects the impact of interest-on-interest compensation. This is in addition to the provision of EUR 180 million recognised in 2021.

In 2022, Other provisions include provisions of EUR 29 million (2021: EUR 34 million) that relate to credit replacement facilities and EUR 109 million (2021: EUR 114 million) that relate to non-credit replacement off balance facilities. The additions and releases in 2022 include EUR 138 million (2021: EUR 109 million) and EUR 141 million (2021: EUR 66 million) respectively related to these off balance facilities.

As at 31 December 2022, amounts expected to be settled within twelve months in provisions amount to EUR 815 million (2021: EUR 740 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 27 'Other operating expenses'.

16 Other liabilities

Other liabilities by type		
In EUR million	2022	2021
Net defined benefit liability	139	227
Other post-employment benefits	29	72
Other staff-related liabilities	633	612
Other taxation and social security contributions	365	409
Rents received in advance	30	19
Costs payable	2,014	2,015
Amounts to be settled	6,714	5,082
Lease liabilities	1,174	1,220
Other	2,247	3,038
	13,344	**12,695**

Disclosures in respect of Net defined benefit liabilities are provided in Note 33 'Pensions 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 have settled 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 2022 was EUR 296 million (2021: EUR 301 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	2022	2021
Fixed rate debt securities		
Within 1 year	18,044	31,785
More than 1 year but less than 2 years	1,217	3,135
More than 2 years but less than 3 years	4,702	1,235
More than 3 years but less than 4 years	2,903	1,729
More than 4 years but less than 5 years	2,880	2,914
More than 5 years	13,221	13,133
Total fixed rate debt securities	**42,969**	**53,930**
Floating rate debt securities		
Within 1 year	13,856	2,266
More than 1 year but less than 2 years	307	130
More than 2 years but less than 3 years	256	137
More than 3 years but less than 4 years	494	194
More than 4 years but less than 5 years	97	192
More than 5 years	96	593
Total floating rate debt securities	**15,106**	**3,513**
Total debt securities	**58,075**	**57,443**

Reference is made to Note 29 'Changes in liabilities arising from financing activities' for further information on issuances, redemptions and non-cash movements.

18 Subordinated loans

Subordinated loans		
In EUR million	2022	2021
Subordinated loans	15,789	16,719
	15,789	**16,719**

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 16,364 million (2021: EUR 15,879 million) have been placed with ING Bank N.V. by ING Groep N.V. Reference is made to Note 39 'Derivatives and hedge accounting' for details on fair value hedge accounting.

In 2022 ING Groep N.V. issued in August EUR 1 billion 4.13% Fixed Rate Subordinated Tier 2 Green Notes. This issuance was subsequently placed by ING Groep N.V. with ING Bank N.V. against the same conditions.

ING Bank N.V. redeemed with ING Group N.V. in April 2022 USD 1 billion 6.875% Perpetual Additional Tier 1 Contingent Convertible Capital Securities and in May 2022 JPY 10 billion 1.10% Subordinated Tier 2 Notes on the first call dates.

Reference is made to Note 32 'Changes in liabilities arising from financing activities' for further information on issuances and redemptions.

The average interest rate on subordinated loans is 4.00% (2021: 3.74%). The interest expense during the year 2022 was EUR 646 million (2021: EUR 573 million).

19 Equity

Total equity			
In EUR million	2022	2021	2020
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	1,187	1,282	1,181
- Revaluation reserve: Debt instruments at FVOCI	-339	92	296
- Revaluation reserve: Cash flow hedge	-3,055	-153	1,450
- Revaluation reserve: Credit liability	70	-80	-117
- Revaluation reserve: Property in own use	176	208	221
- Net defined benefit asset/liability remeasurement reserve	-232	-212	-307
- Currency translation reserve	-2,395	-3,483	-3,636
- Share of associates and joint ventures and other reserves	3,604	3,416	3,246
	-984	**1,069**	**2,334**
Retained earnings	26,462	29,778	28,273
Shareholders' equity (parent)	42,546	47,914	47,675
Non-controlling interests	504	736	1,022
Total equity	**43,050**	**48,650**	**48,697**

Adjustments for hyperinflation
In 2022 Turkey was deemed a hyperinflationary economy for accounting purposes and ING started applying IAS 29 'Hyperinflation' on its investment in Turkey. The IAS 29 indexation impact on equity was EUR 100 million in total including EUR 1,011 million in currency translation reserve, EUR -563 million in retained earnings, EUR -17 million in revaluation reserves and EUR -331 million in profit or loss.

Share capital and share premium

Share capital

Share capital						
	Ordinary shares (par value EUR 1.13)					
	Number x 1,000			Amount		
	2022	2021	2020	2022	2021	2020
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 2022, 2021 and 2020.

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 2022, 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 2022, 7 preference shares were issued and fully paid (2021: 7 preference shares; 2020: 7 preference shares) amounting to EUR 8 (2021: EUR 8 and 2020: 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 and Debt instruments at FVOCI

	Equity securities at FVOCI			Debt instruments at FVOCI		
In EUR million	2022	2021	2020	2022	2021	2020
Opening balance	1,282	1,181	1,580	92	296	299
Unrealised revaluations	-118	94	-337	-406	-164	31
Realised gains/losses transferred to the statement of profit or loss				-25	-40	-33
Realised revaluations transferred to retained earnings	23	6	-1			
Other changes			-62			
Closing balance	**1,187**	**1,282**	**1,181**	**-339**	**92**	**296**

Equity securities at FVOCI
In 2022, the unrealised revaluation of EUR -118 million (2021: 94 million and 2020: -337 million) includes revaluation of shares in Bank of Beijing for EUR -86 million(2021: 38 million and 2020: -339 million).

In 2020, 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 2020 is transferred to retained earnings.

Cash flow hedge
ING mainly hedges floating rate lending with interest rate swaps. Due to an increase in yield curves in 2022 the interest rate swaps had a negative revaluation of EUR -2,901 million which is recognised in the cash flow hedge reserve.

Changes in cash flow hedge and credit liability reserve

	Cash flow hedge			Credit liability		
In EUR million	2022	2021	2020	2022	2021	2020
Opening balance	-153	1,450	1,208	-80	-117	-114
Changes in credit liability reserve				165	37	-19
Unrealised revaluations	-2,901	-1,603	242			
Realised revaluations transferred to retained earnings				-15		16
Other changes						
Closing balance	**-3,055**	**-153**	**1,450**	**70**	**-80**	**-117**

Changes in Property in own use reserve

	Property in own use		
In EUR million	2022	2021	2020
Opening balance	208	221	253
Impact IAS 29 on opening balance [1]	-20		
Unrealised revaluations	15	-2	-7
Realised revaluations transferred to retained earnings	-26	-11	-26
Other changes			
Closing balance	**176**	**208**	**221**

1 Impact of application of hyperinflation accounting under IAS 29 from 1 January 2022.

Net defined benefit asset/liability remeasurement reserve
Reference is made to Note 33 'Pensions and other post-employment benefits'.

Currency translation reserve

Changes in currency translation reserve

In EUR million	2022	2021	2020
Opening balance	-3,483	-3,636	-2,079
Impact IAS 29 on opening balance [1]	647		
Unrealised revaluations	-7	-61	106
Realised gains/losses transferred to the statement of profit or loss	4		-1
Exchange rate differences	444	214	-1,662
Closing balance	**-2,395**	**-3,483**	**-3,636**

1 Impact of application of hyperinflation accounting under IAS 29 from 1 January 2022.

Unrealised revaluations relates to changes in the value of hedging instruments that are designated as net investment hedges. The hedging strategy is to protect the CET1 ratio against adverse impact from exchange rate fluctuations. The net increase of unrealized revaluations and Exchange rate differences of EUR 437 million is related to several currencies including USD (EUR 380 million), TRY (EUR 192 million including EUR 364 million IAS 29 indexation effect), GBP (EUR -73 million), PLN (EUR -49 million), CHF (EUR 41 million), AUD (EUR -20 million), UAH (EUR -27 million) and other currencies (EUR -7 million).

Share of associates and joint ventures and other reserves

Changes in share of associates, joint ventures and other reserves			
In EUR million	2022	2021	2020
Opening balance	3,416	3,246	3,189
Result for the year	161	191	94
Transfer to/from retained earnings	26	-21	-37
Closing balance	**3,604**	**3,416**	**3,246**

The Share of associates, joint ventures and other reserves includes non-distributable profits from associates and joint ventures of EUR 797 million (2021: EUR 738 million). Other reserves includes a statutory reserve of EUR 2,264 million (2021: EUR 2,103 million) related to the former Stichting Regio Bank and the former Stichting Vakbondsspaarbank SPN and a legal reserve of EUR 540 million (2021: EUR 573 million) related to own developed software.

Retained earnings

Changes in retained earnings			
In EUR million	2022	2021	2020
Opening balance	29,778	28,273	25,857
Impact IAS 29 on opening balance [1]	-563		
Transfer to/from other reserves	-8	26	108
Result for the year	3,506	4,579	2,321
Dividend and other distributions	-6,277	-3,125	-43
Employee stock options and share plans	27	28	23
Changes in composition of the group and other changes	-1	-3	7
Closing balance	**26,462**	**29,778**	**28,273**

1 Impact of application of hyperinflation accounting under IAS 29 from 1 January 2022.

Dividend
In 2022, a cash dividend and other cash distribution of EUR 6,277 million in total (2021: EUR 3,125 million and 2020: EUR 43 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 2022, an amount of EUR 2,264 million (2021: EUR 2,103 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 8,408 million (2021: 8,205 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	2022	2021	2020
Interest income on loans	18,537	13,979	15,766
Interest income on financial assets at fair value through OCI	510	346	512
Interest income on debt securities at amortised cost	591	468	508
Interest income on non-trading derivatives (hedge accounting)	4,011	2,361	3,392
Negative interest on liabilities	892	1,502	686
Total interest income using effective interest rate method	**24,541**	**18,657**	**20,865**
Interest income on financial assets at fair value through profit or loss	1,444	435	658
Interest income on non-trading derivatives (no hedge accounting)	2,390	2,025	1,156
Interest income other	101	14	31
Total other interest income	**3,935**	**2,474**	**1,846**
Total interest income	**28,476**	**21,131**	**22,711**

in EUR million	2022	2021	2020
Interest expense on deposits from banks	903	109	177
Interest expense on customer deposits	4,133	1,999	2,022
Interest expense on debt securities in issue	859	597	1,145
Interest expense on subordinated loans	646	573	613
Negative interest on assets	285	572	353
Interest expense on non-trading derivatives (hedge accounting)	4,144	1,700	3,198
Total interest expense using effective interest rate method	**10,969**	**5,550**	**7,507**
Interest expense on financial liabilities at fair value through profit or loss	1,237	304	514
Interest expense on non-trading derivatives (no hedge accounting)	2,411	1,605	1,029
Interest expense on lease liabilities	15	14	18
Interest expense other	98	43	42
Total other interest expense	**3,761**	**1,966**	**1,603**
Total interest expense	**14,730**	**7,516**	**9,110**
Net interest income	**13,745**	**13,615**	**13,600**

Total net interest income amounts to EUR 13,745 million (2021: EUR 13,615 million). Despite a one-off impact related to credit moratoria in Poland (EUR -343 million), net interest income is increasing: a reflection of the changing interest rate environment which reprices faster on the asset side than the liability side of the balance sheet.

Negative interest on liabilities in 2022, amounting to EUR 892 million (2021: EUR 1,502 million) includes ECB funding rate benefit from the TLTRO III programme of EUR 314 million (2021: EUR 808 million).

As ING met the 2020-2021 TLTRO III lending growth targets, the funding rate for TLTRO III amounted -100 bps during the special interest periods between 24 June 2020 and 23 June 2022 (of which -50 bps was unconditional and -50 bps was conditional). As a result, -100 bps was the applicable TLTRO III rate throughout the entire 2021 and the first half of 2022 until 23 June 2022.

In October 2022, the ECB changed the terms of the unconditional interest related to the periods before and after the special interest periods. Interest rate before 24 June 2020 and from 23 June 2022 until 22 November 2022 is now based on the average Deposit Facility (DF) rate during the period between the draw down date until 22 November 2022. As ING participated in series 3, 4 and 7 of TLTRO III, 3 different average DF rates apply to those and comprised -37 bps, -36 bps and -29 bps, respectively.

Under the revised terms of TLTRO III, interest rate after 22 November 2022 until maturity is now based on the average DF rate during that period instead of the average DF rate for the whole life of TLTRO III, as it was contemplated previously. The DF rate was at 150 bps between 22 November 2022 and 21 December 2022 and at 200 bps thereafter until the end of 2022.

Interest income recognised in 2022 within ‘Negative interest on liabilities’ is based on the above updated terms of TLTRO.

Furthermore, the above change in terms caused the discontinuation of the fair value hedge accounting relationship on TLTRO III, impacting net interest income for an amount of EUR -483 million (refer to Note 39 'Derivatives and hedge accounting' for more details).

21 Net fee and commission income

Net fee and commission income			
in EUR million	2022	2021	2020
Fee and commission income			
Payment Services	1,888	1,661	1,566
Securities business	632	853	700
Insurance and other broking	682	734	705
Portfolio management	600	617	525
Lending business	556	477	368
Financial guarantees and other commitments	496	458	364
Other	232	204	286
Total fee and commission income	**5,085**	**5,004**	**4,514**
Fee and commission expenses			
Payment Services	600	563	611
Securities business	160	164	133
Distribution of products (Externally)	555	591	548
Other	184	169	211
Total fee and commission expenses	**1,499**	**1,487**	**1,503**
Net fee and commission income	**3,586**	**3,517**	**3,011**

1 ING changed the presentation of net fee and commission income as of 2021. The comparative figure for 2020 has been updated accordingly. The reclassification does 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 31 '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	2022	2021	2020
Securities trading results	-356	787	-500
Derivatives trading results	11	-554	701
Other trading results	71	84	72
Change in fair value of derivatives relating to			
– fair value hedges	5,265	-85	246
– cash flow hedges (ineffective portion)	20	1	-5
– other non-trading derivatives	1,164	-53	222
Change in fair value of assets and liabilities (hedged items)	-5,150	113	-183
Valuation results on assets and liabilities designated at FVPL (excluding trading)	444	-12	-121
Foreign exchange transactions results	33	566	422
	1,503	**847**	**852**

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. In 2022 the market has been affected by a significant increase in interest rates volatility, interest rate hikes across EU, and US and a steady fall of the EUR value and appreciation of USD.

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 2022 amount to EUR -157 million (2021: EUR -268 million; 2020: EUR -690 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. During 2022, the interest rate movements significantly affected the fair value changes of other non-trading derivatives as well as the fair value changes of both the derivatives and the hedged items designated in fair value hedges. Reference is made to Note 36 'Derivatives and hedge accounting' for information on derivatives used for hedge accounting.

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 widened in 2022 compared to 2021 and the fair value changes increased.

In 2022, Derivatives trading results include EUR 43 million CVA/DVA adjustments on trading derivatives (2021: EUR 98 million; 2020: EUR 17 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 709 million (2021: EUR 56 million; 2020: EUR 8 million).

Interest income from trading assets in 2022 amounted to EUR 18,593 million (2021: EUR 13,737 million; 2020: EUR 13,412 million). Interest expense from trading liabilities in 2022 amounted to EUR 18,765 million (2021: EUR 14,079 million; 2020: EUR 13,052 million).

23 Investment income

Investment income in EUR million	2022	2021	2020
Dividend income	149	122	107
Realised gains/losses on disposal of debt instruments measured at FVOCI	32	45	44
Income from and fair value gains/losses on investment properties	-1		1
	181	**167**	**152**

In 2022, 2021 and 2020 dividend income mainly consists of dividend received from ING's equity stake in Bank of Beijing.

24 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	2022	2021	2020
Loans at amortised cost		1	4
Securities at amortised cost	-5	-1	185
	-5	**0**	**189**

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.

25 Other net income

In 2022, Other net income of EUR -369 million (2021: EUR 230 million; 2020: EUR 12 million) includes EUR -333 million net monetary loss reflecting the IAS 29 hyperinflation impact in Turkey related to the indexation of Turkey's statement of financial position and statement of profit or loss and is directly recognized in equity (retained earnings). Other net income as per 31 December 2022 also includes an amount of EUR -307 million loss recognised to unwind a macro fair value hedge of deposits, which led to a timing difference with expected fair value.

Furthermore, it includes the proceeds of the agreement with Boursorama after our exit from the retail banking market in France of EUR 125 million and a gain of EUR 67 million from a legacy entity in Retail Belgium.

In 2021, other net income included 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 net 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.

26 Staff Expenses

Staff expenses			
in EUR million	2022	2021	2020
Salaries	4,145	4,011	3,751
Pension costs and other staff-related benefit costs	390	408	395
Social security costs	584	563	538
Share-based compensation arrangements	27	28	23
External employees	738	699	881
Education	47	47	43
Other staff costs	222	182	186
	6,152	**5,938**	**5,817**

Share-based compensation arrangements include EUR 25 million (2021: EUR 29 million; 2020: EUR 17 million) relating to equity-settled share-based payment arrangements and EUR 1 million (2021: EUR 2 million; 2020: EUR 2 million) relating to cash-settled share-based payment arrangements.

Number of employees									
		Netherlands			Rest of the world				Total
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Total average number of internal employees at full time equivalent basis	14,488	15,138	15,201	43,081	42,523	40,701	57,569	57,660	55,901

Remuneration of senior management, Management Board Banking and Supervisory Board

Reference is made to Note 46 'Related parties'.

Share plans and Stock Options

ING grants various types of share awards, namely deferred shares, performance shares and upfront shares, which form part of the variable remuneration offering via the Long-term Sustainable Performance Plan (LSPP). The entitlement to the LSPP share awards is granted conditionally. If the participant remains in employment for an uninterrupted period between the grant date and the vesting date, the entitlement becomes unconditional, with the exception of the upfront shares which are immediately vested upon grant. Upfront and deferred shares awarded to the Management Board members of ING Bank as well as identified staff, have a retention obligation that must be adhered to upon vesting, typically a minimum retention of 12 months applies. ING has the authority to apply a holdback to awarded but unvested shares and a clawback to vested shares

The share awards granted in 2022 relate to the performance year 2021. In 2022, 55,651 share awards (2021: 0; 2020: 63,837) were granted to the members of the Executive Board, and 137,506 share awards (2021: 123,750; 2020: 186,176) were granted to the Management Board Banking. To senior management and other employees 2,913,926 share awards (2021: 3,267,372; 2020: 3,678,775) were granted.

Changes in share awards

	Share awards (in numbers)			Weighted average grant date fair values (in euros)		
	2022	2021	2020	2022	2021	2020
Opening balance	3,672,659	3,876,206	3,855,035	7.60	7.25	11.14
Granted	3,107,083	3,391,122	3,864,951	8.99	9.69	5.12
Vested	-2,962,698	-3,459,163	-3,690,340	8.60	9.25	9.01
Forfeited	-119,502	-135,506	-153,440	7.63	7.61	8.55
Closing balance	**3,697,542**	**3,672,659**	**3,876,206**	7.97	7.60	7.25

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 share prices, expected volatilities and the dividend yield of ING shares.

As at 31 December 2022, total unrecognised compensation costs related to share awards amount to EUR 13 million (2021: EUR 13 million; 2020: EUR 10 million). These costs are expected to be recognised over a weighted average period of 1.9 years (2021: 1.7 years; 2020: 1.6 years).

27 Other operating expenses

Other operating expenses

in EUR million	2022	2021	2020
Regulatory costs	1,250	1,265	1,105
Audit and non-audit services	31	34	29
IT related expenses	818	781	812
Advertising and public relations	331	305	335
External advisory fees	306	297	413
Office expenses	273	280	320
Travel and accommodation expenses	91	52	68
Contributions and subscriptions	109	112	109
Postal charges	31	38	38
Depreciation of property and equipment	485	573	578
Amortisation of intangible assets	226	261	251
(Reversals of) impairments of property and equipment	19	26	43
(Reversals of) impairments of intangible assets	60	95	515
Addition to / (unused amounts reversed of) provision for reorganisations	170	214	149
Addition to / (unused amounts reversed of) other provisions	117	254	39
Other	723	669	541
	5,040	**5,257**	**5,344**

Reference is made to Note 9 'Property and equipment' for (reversals of) impairments of property and equipment and Note 10 'Intangible assets' for (reversals of) impairments of intangible assets.

For further information on addition to (unused amounts reversed of) provision for reorganisations refer to Note 15 'Provisions' and for further information on addition to (unused amounts reversed of) other provisions refer to Note 15 'Provisions' and Note 42 'Legal proceedings'.

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 2022, are contributions to DGS of EUR 425 million (2021: EUR 435 million; 2020: EUR 413 million) mainly related to the Netherlands, Germany, Belgium, and Poland and contributions to the SRF and local resolution funds of EUR 354 million (2021: EUR 308 million; 2020: EUR 277 million). In 2022 local bank taxes decreased by EUR 51 million from EUR 522 million in 2021 to EUR 470 million (2020: EUR 414 million).

In 2022, ING Bank Slaski, together with seven other Polish banks, has established an Institutional Protection Scheme (IPS). The fund can be used to ensure the liquidity and solvency of each of its participants, and to assist in the resolution of participating and non-participating banks. The contribution by ING amounts to EUR 99 million and is recognized as regulatory costs (DGS).

Audit and non-audit services

Audit and non-audit services include fees for services provided by the Bank's auditors and remained stable for 2022. 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.

Notes to the consolidated statement of cash flows

28 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		2022	2021	2020
Cash flows from operating activities				
Result before tax		5,493	6,774	3,810
Adjusted for:	- Depreciation and amortisation	711	834	829
	- Addition to loan loss provisions	1,861	516	2,675
	- Other non-cash items included in result before tax	5,519	413	1,259
Taxation paid		-1,489	-1,871	-1,735
Changes in:	– Loans and advances to banks, not available on demand	-5,836	262	10,031
	– Deposits from banks, not payable on demand	-26,976	8,438	43,044
	Net change in loans and advances to/ from banks, not available/ payable on demand	**-32,813**	**8,700**	**53,076**
	– Trading assets	-5,485	-29	-2,095
	– Trading liabilities	11,975	-5,596	4,667
	Net change in Trading assets and Trading liabilities	**6,490**	**-5,624**	**2,571**
	Loans and advances to customers	-19,306	-27,772	2,888
	Customer deposits	34,005	18,339	40,576
	– Non-trading derivatives	-5,469	290	-1,420
	– Assets designated at fair value through profit or loss	56	-1,905	-1,371
	– Assets mandatorily at fair value through profit or loss	-4,143	1,650	-1,963
	– Other assets	-2,861	-121	1,092
	– Other financial liabilities at fair value through profit or loss	9,843	-6,795	1,190
	– Provisions and other liabilities	-667	-1,298	-298
	Other	**-3,241**	**-8,179**	**-2,770**
Net cash flow from/(used in) operating activities		**-2,769**	**-7,869**	**103,179**

29 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	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	57,443	55,573	16,719	15,897	1,220	1,339	75,382	72,809
Cashflows:								
Additions	81,636	77,298	983	3,169			82,620	80,467
Redemptions / Disposals	-78,609	-76,150	-1,090	-2,538	-296	-301	-79,995	-78,989
Non cash changes:								
Amortisation	281	-22	31	8	15	14	328	
Other	-66	-120	8	-27	239	161	180	14
Changes in unrealised revaluations	-3,746	-962	-1,470	-414			-5,216	-1,376
Foreign exchange movement	1,135	1,827	608	624	-4	6	1,739	2,456
Closing balance	**58,075**	**57,443**	**15,789**	**16,719**	**1,174**	**1,220**	**75,038**	**75,382**

Part of Debt securities in issue and subordinated loans are in fair value hedge accounting. Hence, 'Changes in unrealised revaluations' represent fair value adjustments to the hedged item attributable to the hedged interest rate risk. Reference is made to paragraph 'fair value hedge accounting' in Note 36 'Derivatives and hedge accounting'.

30 Cash and cash equivalents

Cash and cash equivalents

in EUR million	2022	2021	2020
Treasury bills and other eligible bills	1	23	
Deposits from banks/Loans and advances to banks	7,775	1,121	477
Cash and balances with central banks	87,614	106,520	111,087
Cash and cash equivalents at end of year	**95,390**	**107,664**	**111,565**

Treasury bills and other eligible bills included in cash and cash equivalents

in EUR million	2022	2021	2020
Treasury bills and other eligible bills included in trading assets	0	0	0
Treasury bills and other eligible bills included in FVOCI	0	0	0
Treasury bills and other eligible bills included in securities at AC	0	23	0
	1	**23**	**0**

Deposits from banks/Loans and advances to banks

in EUR million	2022	2021	2020
Included in cash and cash equivalents:			
– Deposits from banks	-6,172	-7,059	-8,788
– Loans and advances to banks	13,947	8,180	9,265
	7,775	**1,121**	**477**
Not included in cash and cash equivalents:			
– Deposits from banks	-50,460	-78,033	-69,310
– Loans and advances to banks	21,156	15,411	16,098
	-29,304	**-62,621**	**-53,212**
Total as included in the statement of financial position:			
– Deposits from banks	-56,632	-85,092	-78,098
– Loans and advances to banks	35,103	23,591	25,363
	-21,529	**-61,501**	**-52,734**

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 39 'Transfer of financial assets, assets pledged and received as collateral' for restrictions on Cash and balances with central banks.

Segment reporting

31 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 up to and including 2021, after which ING left the retail market). 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 Retail Banking Austria [1]
Other Challengers	Australia, Retail Banking Czech Republic [1], France [2], Italy, Spain, Portugal
Growth Markets	Poland, Romania, Turkey, Philippines [2] and Asian stakes
Wholesale Banking Rest of World	UK, Americas, Asia and other countries in Central and Eastern Europe [3]
Other	Corporate Line

1 Retail Banking Austria and Retail Banking Czech Republic up to and including 2021, after which ING left the retail market
2 In 2022, ING discontinued its retail activities in France and the Philippines.
3 As from 2022, Wholesale Banking Austria as well as Wholesale Banking Czech Republic are recorded in Wholesale Banking Rest of World. Previously these financials were reported in Germany and Other Challengers respectively.

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. 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. In 2022, results in the Corporate Line were impacted by the application of hyperinflation accounting in the consolidation of our subsidiary in Turkey.

Income in 2022 included a hyperinflation accounting impact of EUR -279 million and a net TLTRO impact of EUR 16 million, while previous year was supported by a EUR 143 million net TLTRO impact and the recognition of a EUR 72 million receivable related to the insolvency of a financial institution. The decline was partly compensated by higher income from foreign currency ratio hedging, mainly on US dollar and the Polish zloty. Expenses in 2022 included a hyperinflation impact of EUR 30 million and a EUR 32 million impairment loss related to the goodwill allocated to Turkey, while previous year had included EUR 87 million of regulatory costs due to an incidental 50% increase in the Dutch bank tax.

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 types of products and services from which each reportable segment derives its revenues, as this is not reported internally and is therefore not readily available.

Segments by line of business

12 month period in EUR million	2022							2021							2020						
	Retail Netherlands	Retail Belgium	Retail Germany	Retail Other [1]	Wholesale Banking	Corporate Line	Total	Retail Netherlands	Retail Belgium	Retail Germany [2]	Retail Other [2]	Wholesale Banking	Corporate Line	Total	Retail Netherlands	Retail Belgium	Retail Germany	Retail Other	Wholesale Banking	Corporate Line	Total
Income																					
– Net interest income	2,888	1,668	1,666	2,726	4,260	539	13,745	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
– Net fee and commission income	892	511	437	535	1,217	-6	3,586	771	519	497	530	1,197	3	3,517	681	413	437	412	1,069	-1	3,011
– Total investment and other income	417	-32	69	402	849	-490	1,215	201	209	65	361	568	-51	1,354	279	145	93	89	609	-180	1,034
Total income	**4,196**	**2,147**	**2,172**	**3,663**	**6,325**	**43**	**18,546**	**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**
Expenditure																					
– Operating expenses	2,115	1,786	1,140	2,516	3,114	523	11,193	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
– Addition to loan loss provisions	67	139	131	302	1,220	2	1,861	-76	225	49	202	117		516	157	514	57	593	1,351	3	2,675
Total expenses	**2,182**	**1,924**	**1,271**	**2,818**	**4,334**	**525**	**13,053**	**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**
Result before taxation	**2,014**	**223**	**901**	**845**	**1,991**	**-482**	**5,493**	**1,936**	**583**	**786**	**949**	**2,874**	**-353**	**6,774**	**2,078**	**122**	**950**	**199**	**827**	**-366**	**3,810**
Taxation	540	72	202	257	581	71	1,723	499	146	252	212	703	64	1,876	523	51	331	105	295	13	1,317
Non-controlling interests			3	47	52	1	102			4	98	26		128	-1		4	55	20		78
Net result IFRS	**1,474**	**151**	**696**	**541**	**1,358**	**-553**	**3,667**	**1,437**	**437**	**529**	**639**	**2,144**	**-417**	**4,770**	**1,556**	**71**	**615**	**39**	**512**	**-378**	**2,415**

1 In 2022, ING discontinued its retail activities in France and the Philippines.
2 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	2022								2021								2020							
	Nether-lands	Belgium	Ger-many	Other Challengers [1]	Growth markets [1]	Wholesale Banking Rest of World	Other	Total	Nether-lands	Belgium	Ger-many [2,3]	Other Challengers [2,3]	Growth markets	Wholesale Banking Rest of World [3]	Other	Total	Nether-lands	Belgium	Ger-many [3]	Other Challengers [3]	Growth markets	Wholesale Banking Rest of World [3]	Other	Total
Income																								
– Net interest income	3,782	2,065	2,126	1,988	1,464	1,786	534	13,745	4,068	2,109	1,938	1,833	1,532	1,866	269	13,615	4,178	2,116	2,083	1,744	1,578	1,697	204	13,600
– Net fee and commission income	1,171	714	494	312	376	526	-6	3,586	1,070	717	523	327	351	525	3	3,517	981	583	466	271	286	425	-1	3,011
– Total investment and other income	577	-14	94	192	416	435	-485	1,215	314	265	118	80	446	182	-51	1,354	398	196	125	28	215	244	-172	1,034
Total income	**5,531**	**2,765**	**2,714**	**2,491**	**2,256**	**2,746**	**43**	**18,546**	**5,452**	**3,092**	**2,578**	**2,240**	**2,330**	**2,574**	**221**	**18,485**	**5,557**	**2,896**	**2,674**	**2,043**	**2,078**	**2,366**	**31**	**17,645**
Expenditure																								
– Operating expenses	3,001	2,120	1,318	1,456	1,444	1,331	523	11,193	3,279	1,960	1,339	1,516	1,276	1,251	574	11,195	3,347	2,037	1,263	1,536	1,272	1,310	395	11,160
– Addition to loan loss provisions	181	230	460	241	230	517	2	1,861	28	184	118	100	110	-23		516	421	589	267	297	412	685	3	2,675
Total expenses	**3,182**	**2,350**	**1,778**	**1,696**	**1,674**	**1,847**	**525**	**13,053**	**3,307**	**2,143**	**1,457**	**1,616**	**1,386**	**1,228**	**574**	**11,711**	**3,769**	**2,627**	**1,530**	**1,833**	**1,684**	**1,995**	**397**	**13,835**
Result before taxation	**2,349**	415	936	795	581	899	-482	5,493	2,145	948	1,121	623	944	1,346	-353	6,774	1,788	269	1,144	209	395	371	-366	3,810
Retail Banking	2,014	223	901	547	298			3,983	1,936	583	786	206	742			4,253	2,078	122	950	-27	225			3,348
Wholesale Banking	335	192	34	248	284	899		1,991	209	365	336	417	202	1,346		2,874	-290	147	194	236	169	371		827
Corporate Line							-482	-482							-353	-353							-366	-366
Result before taxation	**2,349**	**415**	**936**	**795**	**581**	**899**	**-482**	**5,493**	**2,145**	**948**	**1,121**	**623**	**944**	**1,346**	**-353**	**6,774**	**1,788**	**269**	**1,144**	**209**	**395**	**371**	**-366**	**3,810**
Taxation	658	114	297	255	156	189	55	1,723	556	240	358	185	178	296	63	1,876	518	89	380	90	141	87	12	1,317
Non-controlling interests			3		98		1	102			4		124			128	-1		4		75			78
Net result IFRS	**1,691**	**301**	**636**	**540**	**327**	**710**	**-538**	**3,667**	**1,589**	**708**	**759**	**438**	**641**	**1,050**	**-415**	**4,770**	**1,271**	**180**	**760**	**119**	**178**	**284**	**-378**	**2,415**

1 In 2022, ING discontinued its retail activities France and the Philippines.
2 In the fourth quarter of 2021, ING exited from the retail banking markets in Austria and the Czech Republic.
3 As from 2022, Wholesale Banking Austria as well as Wholesale Banking Czech Republic are recorded in Wholesale Banking Rest of World. Previously these financials were reported in Germany and Other Challengers respectively. Historical figures have been adjusted.

32 Information on geographical areas

ING Bank's business lines operate in Seven main geographical areas: the Netherlands, Belgium, 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. In December 2021 the OECD released a draft legislative framework that is designed to ensure, from 2024 onwards, that large multinational groups pay income tax at a minimum rate of 15% in all the countries they are present in. At the date when these financial statements were authorized for issue, of all the countries ING is present in, only South Korea has enacted legislation to this effect. At 31 December 2022 ING Bank does not have sufficient information to determine the future potential quantitative impact.

The table below provide additional information, for the years 2022, 2021 and 2020 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		
				2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
Netherlands	Netherlands	ING Bank N.V.	Wholesale / Retail	14,488	15,138	15,201	5,017	5,671	5,422	308,931	301,446	286,119	1,069	1,442	934	418	506	493	392	428	591
Belgium	Belgium	ING België N.V.	Wholesale / Retail	6,582	6,965	7,397	2,353	2,719	2,581	127,085	130,687	133,843	286	808	156	81	204	61	152	174	66
	Luxembourg	ING Luxembourg S.A.	Wholesale / Retail	927	856	855	422	338	300	18,351	20,452	15,335	180	161	120	45	41	30	37	20	24
Rest of Europe	Poland [1]	ING Bank Slaski S.A	Wholesale / Retail	11,130	10,674	9,425	1,652	1,509	1,399	45,598	43,888	40,928	544	660	438	143	154	131	-23	235	232
	Germany	ING DiBa A.G.	Wholesale / Retail	5,573	5,521	5,059	2,815	2,387	2,545	161,997	159,805	162,935	1,039	1,012	1,065	328	338	364	189	493	409
	Romania [1]	Branch of ING Bank N.V.	Wholesale / Retail	3,580	3,319	3,049	584	495	456	10,555	9,635	8,526	324	273	141	51	41	20	67	21	24
	Turkey	ING Bank A.S.	Wholesale / Retail	3,076	3,338	3,724	64	335	420	5,400	5,818	7,316	-143	144	125	65	35	27	79	33	25
	Spain	Branch of ING Bank N.V.	Wholesale / Retail	1,439	1,380	1,228	877	743	679	32,262	32,559	29,899	299	212	104	98	57	37	101	59	52
	Italy	Branch of ING Bank N.V.	Wholesale / Retail	1,118	1,099	1,025	345	335	337	14,152	13,983	13,747	63	73	44	22	25	24	2	2	2
	UK	Branch of ING Bank N.V.	Wholesale	692	698	709	693	636	546	46,066	50,734	64,676	286	277	97	81	73	15	58	50	32
	France [2,3]	Branch of ING Bank N.V.	Wholesale	600	764	737	372	271	266	8,934	12,381	11,570	44	-107	-43	12	-27	-10	22	-7	9
	Russia	ING Bank (Eurasia) Z.A.O.	Wholesale	272	281	297	246	38	51	2,783	898	1,035	128	3	3	9	0	0	21	-7	-3
	Czech Republic [4]	Branch of ING Bank N.V.	Wholesale	137	285	355	78	121	83	3,192	2,894	3,851	38	54	-3	6	12	0	13	-2	4
	Hungary	Branch of ING Bank N.V.	Wholesale	120	119	131	82	44	43	1,993	1,148	1,092	38	12	6	5	3	2	2	2	1
	Slovakia [1]	Branch of ING Bank N.V.	Wholesale	1,129	983	878	15	15	18	391	352	385	-1	3	7	1	0	3	0	2	1
	Ukraine	PJSC ING Bank Ukraine	Wholesale	91	96	108	45	22	26	385	409	335	9	11	16	2	2	3	2	2	3
	Austria [4]	Branch of ING Bank N.V.	Wholesale	17	292	332	19	175	75	261	419	1,840	9	101	0	2	16	-5	3	6	-14
	Bulgaria	Branch of ING Bank N.V.	Wholesale	60	61	65	15	14	13	436	420	406	1	2	2	0	0	0	0	0	0
	Ireland	Branch of ING Bank N.V.	Wholesale	72	64	50	66	70	72	2,771	1,831	2,050	26	65	58	3	8	7	6	8	7
	Portugal	Branch of ING Bank N.V.	Wholesale	11	11	13	15	15	16	689	675	790	9	9	11	3	3	7	2	3	4
	Switzerland	Branch of ING Bank N.V.	Wholesale	277	259	256	290	241	187	9,513	11,081	7,939	182	148	88	25	21	13	45	67	14

1 Includes significant number of FTEs in relation to global services provided.
2 Public subsidies received, as defined in article 89 of the CRD IV, amounts to EUR 0.1 million (2021: EUR 0.0 million; 2020: EUR 0.3 million).
3 In 2022, ING discontinued its retail activities in France and the Philippines.
4 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		
				2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
North America	Canada	Payvision Canada Services Ltd.	In liquidation	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
	USA	ING Financial Holdings Corp.	Wholesale	586	563	600	892	936	720	65,024	55,582	48,205	413	779	39	115	182	16	135	148	38
Latin America	Brazil	Branch of ING Bank N.V.	Closed in 2022	30	63	89	17	13	30	57	288	1,813	9	1	3	1	5	19	5	8	4
	Colombia	ING Capital Colombia S.A.S.	Dissolved in 2021		0	3		0	1		0	2		0	0		0	0		0	0
	Mexico	ING Consulting, S.A. de C.V.	Wholesale	6	6	7	0	1	1	1	3	2	-2	-1	-1	0	0	0	0	0	0
Asia	China	Branch of ING Bank N.V.	Wholesale	76	79	90	30	26	26	1,181	1,654	1,598	4	0	-2	5	6	1	13	-1	-5
	Japan	Branch of ING Bank N.V.	Wholesale	31	30	32	30	25	29	5,128	2,256	3,104	20	4	-1	7	2	-1	-1	3	2
	Singapore	Branch of ING Bank N.V.	Wholesale	565	573	608	354	331	353	25,701	24,163	24,498	105	133	42	14	19	8	21	9	7
	Macau	Payvision Macau Ltd.	Liquidated in 2022		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	103	105	122	82	79	92	4,343	6,691	7,030	-33	5	-9	-5	1	-1	0	-7	15
	Philippines [1,3]	Branch of ING Bank N.V.	Wholesale	3,098	2,414	1,857	10	6	13	381	567	497	-39	-33	-26	8	-5	6	2	1	2
	South Korea	Branch of ING Bank N.V.	Wholesale	78	75	77	86	65	66	7,989	5,800	6,692	47	26	18	12	6	4	7	-2	10
	Taiwan	Branch of ING Bank N.V.	Wholesale	35	33	34	33	26	36	3,578	2,963	3,160	-16	-3	19	-5	-1	4	4	0	1
	Indonesia	PT ING Securities Indonesia	Liquidated in 2022		0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
	Malaysia	Branch of ING Bank N.V.	Closed in 2022		4	6	0	0	1	1	1	141	0	-1	-1	0	0	0	0	0	0
	Sri Lanka	Branch of ING Hubs B.V.	Global services	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	United Arab Emirates	Branch of ING Bank N.V.	Wholesale	10	10	10	-1	0	0	1	1	1	-1	-1	-2	0	0	0	0	0	0
Australia	Australia	ING Bank (Australia) Ltd.	Wholesale / Retail	1,556	1,503	1,472	948	782	740	52,728	49,826	46,014	557	500	362	172	149	40	135	121	181
Other	Mauritius	ING Mauritius Investment I	Liquidated in 2022		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total				**57,569**	**57,660**	**55,901**	**18,546**	**18,485**	**17,645**	**967,861**	**967,861**	**937,379**	**5,493**	**6,774**	**3,810**	**1,723**	**1,876**	**1,317**	**1,489**	**1,871**	**1,735**

1 Includes significant number of FTEs in relation to global services provided.
3 In 2022 ING discontinued its retail activities in France and the Philippines.

2022
The higher tax charge of 39% in the Netherlands (compared to the statutory rate of 25.8%) is mainly caused by the non-deductible Dutch bank tax (EUR 179 million) and the non-deductible impairments regarding goodwill ING Turkey (EUR 32 million) and TTB (EUR 165 million).
The higher positive tax charge of Turkey combined with its accounting loss based on hyperinflation accounting is mainly caused by the non deductibility of this loss for tax purposes.

Since the Russian invasion of the Ukraine our strategy is no new business with Russian clients, including Russian owned entities outside of Russia and to get existing Russia-related credit exposures repaid as quickly as possible. These exposures are booked in various countries and totalled EUR 6.7 billion, published on 4 March 2022. Remaining at risk for ING Group at year-end 2022 is EUR 0.3 billion local equity and EUR 2.5 billion credit exposures booked outside of Russia. In 2022, ING's results in connection with Russia-related credit exposures declined significantly, as we have recognized EUR 0.5 billion risk costs related to these exposures. The local results on a stand-alone basis were higher compared to 2021.

This was driven by the high local interest rate environment and increased rouble inflow from existing, predominantly non-Russian, clients. Under local law and banking regulations, ING Russia must accept these rouble inflows. Furthermore, the local result before tax expressed in euro (EUR 128 million) was positively impacted by the appreciation of the rouble against the euro for an amount of EUR 80 million throughout 2022. Going forward, we will continue to actively reduce our Russia-related credit exposure.

The higher tax charge in Poland is mainly caused by non-deductible regulatory and other costs.

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.

Additional notes to the Consolidated financial statements

33 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, including the defined contribution plan in the Netherlands, are principally determined as a percentage of remuneration. 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 and in other 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 the labour agreements with its employee's , 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 2022 EUR 364 million (2021: EUR 369 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	2022	2021	2022	2021	2022	2021
The Netherlands	310	427	400	578	-90	-151
United States	248	332	230	312	18	20
United Kingdom	1,277	1,968	750	1,236	527	732
Belgium	507	606	475	617	32	-11
Other countries	295	338	305	372	-10	-34
Funded status (Net defined benefit asset/liability)	**2,637**	**3,671**	**2,159**	**3,115**	**478**	**556**
Presented as:						
- Other assets					617	783
- Other liabilities					-139	-227
					478	**556**

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 2022. 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.

The current worldwide uncertainty due to the Russian invasion in the Ukraine and the resulting increasing interest rates and inflation has a strong negative impact on most investment markets in 2022, the effect on the fair value of ING Bank's plan assets and defined benefit obligation is significant however the funding status declined only by EUR -78 million mainly following the Liability Driven Investment (LDI) strategy in the United Kingdom.

Changes in the fair value of plan assets for the period were as follows:

Changes in fair value of plan assets

in EUR million	2022	2021
Opening balance	3,671	3,583
Interest income	54	37
Remeasurements: Return on plan assets excluding amounts included in interest income	-947	2
Employer's contribution	34	26
Participants contributions	3	2
Benefits paid	-126	-136
Exchange rate differences	-53	158
Closing balance	**2,637**	**3,671**
Actual return on the plan assets	**-894**	**39**

As at 31 December 2022 the defined benefit plans did not hold any direct investments in ING Groep N.V. (2021: nil). During 2022 and 2021 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 2023.

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	2022	2021	2022	2021
Opening balance	3,115	3,208	72	83
Current service cost	33	33	1	1
Interest cost	46	31	1	2
Remeasurements: Actuarial gains and losses arising from changes in demographic assumptions		-5		
Remeasurements: Actuarial gains and losses arising from changes in financial assumptions	-882	-122	-45	-16
Participants' contributions	3	1		1
Benefits paid	-129	-141	-1	-1
Past service cost			-1	
Effect of curtailment or settlement				-2
Exchange rate differences	-26	109	5	4
Closing balance	**2,159**	**3,115**	**29**	**72**

Amounts recognised directly in Other comprehensive income were as follows:

Changes in the net defined benefit assets/liability remeasurement reserve

in EUR million	2022	2021
Opening balance	-212	-307
Remeasurement of plan assets	-947	2
Actuarial gains and losses arising from changes in demographic assumptions		5
Actuarial gains and losses arising from changes in financial assumptions	882	122
Taxation and Exchange rate differences	46	-34
Total Other comprehensive income movement for the year	**-19**	**95**
Closing balance	**-232**	**-212**

In 2022 EUR -947 million (2021: EUR 2 million) remeasurement of plan assets, that is recognised as a loss in other comprehensive income, is driven by higher yields on investments. Also the war in Ukraine and high inflation had impact on the investment return. Material changes in interest rates and equity returns impacted plan assets negatively during 2022 substantially.

The EUR 882 million (2021: 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 -289 million(EUR -232 million after tax) as at 31 December 2022 (2021: EUR -296 million; EUR -212 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	2022	2021	2020	2022	2021	2020	2022	2021	2020
Current service cost	33	33	31	1	1	-2	34	34	29
Past service cost			2	-1					2
Net Interest cost	-8	-6	-6	1	2	2	-6	-4	-4
Effect of curtailment or settlement					-2			-2	
Defined benefit plans	**26**	**27**	**27**	**2**	**1**	**0**	**27**	**28**	**28**
Defined contribution plans							364	369	356
Pension and other post employment benefits							**392**	**397**	**383**
Other staff related benefits							-2	11	12
Pension and other staff-related benefits							**390**	**408**	**395**

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 2022 was 4.3% (2021: 1.5%) 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 in 2022 was 5.5% (2021: 2.9%)

Sensitivity analysis of key assumptions

ING performs sensitivity analyses 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 1.0% creates an impact on the defined benefit obligation of EUR 247 million (decrease) and EUR 287 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 2023 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 2023-2027 are estimated to be between EUR 128 million and EUR 150 million per year. From 2028 to 2032 the total payments made by the plan are expected to be EUR 739 million.

34 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

in EUR million 2022	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	-70	148	5	-3		80
Financial assets and liabilities at FVPL	107		-88	9		28
Depreciation	-7		-5	-2		-13
Cash flow hedges	-126	875		2		752
Pension and post-employment benefits	-49	6	-13	8	-7	-54
Other provisions	19		44	-4		59
Loans and advances	430		177	-3	7	612
Unused tax losses carried forward	199		137	-8		327
Other	-148	-123	26	-6		-251
	354	**907**	**283**	**-5**	**0**	**1,539**
Presented in the statement of financial position as:						
– Deferred tax liabilities	-603					-257
– Deferred tax assets	957					1,796
	354					**1,539**

The above table shows netted deferred tax amounts related to right-of-use assets and lease liabilities included in the row 'Other', and includes a deferred tax amount for right-of-use assets of EUR 205 million (2021: EUR 220 million and 2020: EUR 306 million) and a deferred tax amount for lease liabilities of EUR 231 million (2021: EUR 252 million and 2020: EUR 326 million)

Financial assets at FVOCI changes through equity in 2022 (EUR 148 million) relates to the decline in fair value of the debt securities FVOCI due to increased interest yield curves.

Financial assets and liabilities FVPL changes through net result in 2022 (EUR -88 million) and 2021 (EUR -39 million) relates to the decrease in fair value of derivatives due to increased interest yield curves.

The deferred tax on cash flow hedges relate to floating rate lending with interest rate swaps. Due to an increase in the interest rate yield curve in 2022 there was a negative revaluation through other comprehensive income of EUR 875 million (2021 EUR 233 million) and an increase of the deferred tax asset from EUR -126 million in 2021 to EUR 752 million in 2022.

The deferred tax on Loans and advances changes through net result in 2022 EUR 177 million (2021: EUR -83 million relates mainly to valuation changes of collectively assessed expected credit losses. The deferred tax changes through equity - Other in 2022 is EUR -123 million (2021: EUR -83 million) is due to FX developments following the USD depreciation and the application of IAS 29 Hyperinflation in Turkey and also due to the increase in the Liability Credit Reserve due to spread widening.

Changes in deferred tax

in EUR million 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
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		19
Loans and advances	517	-2	-83	-1		430
Unused tax losses carried forward	63		129	7		199
Other	-82	-83	15	1		-148
Total	**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**

Deferred tax in connection with unused tax losses carried forward

in EUR million	2022	2021
Total unused tax losses carried forward	2,668	2,165
Unused tax losses carried forward not recognised as a deferred tax asset	937	819
Unused tax losses carried forward recognised as a deferred tax asset	**1,731**	**1,345**
Average tax rate	21.1%	22.3%
Deferred tax asset	365	300

Total unused tax losses carried forward analysed by expiry terms

	No deferred tax asset recognised		Deferred tax asset recognised	
in EUR million	2022	2021	2022	2021
Within 1 year			591	
More than 1 year but less than 5 years	120	3	587	642
More than 5 years but less than 10 years	9	9	2	
More than 10 years but less than 20 years				
Unlimited	808	808	550	704
	937	**819**	**1,731**	**1,345**

The above mentioned deferred tax asset of EUR 365 million (2021: EUR 300 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 37 million (2021: EUR 102 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

in EUR million	2022	2021
Poland	391	265
France	70	66
Philippines	0	7
China	0	12
Czech	0	2
Hong Kong	6	1
United States of America	1	1
Turkey	7	
Taiwan	8	
	483	**354**

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 2022 and 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 clearing 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 224 million) is fully recognised. The remaining deferred tax asset in Poland of EUR 167 million relates to temporary tax differences on loans and advances and financial assets at fair value through profit and loss.

Recognition is based on the fact that it is probable that the entity will have taxable profits and/or can utilise tax planning opportunities before expiration of the deferred tax assets. Changes in circumstances in future periods may adversely impact the assessment of the recoverability. The uncertainty of the recoverability is taken into account in establishing the deferred tax assets.

At 31 December 2021 and 2022, ING Bank 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	2022	2021	2020	2022	2021	2020	2022	2021	2020
Current taxation	496	459	428	1,510	1,447	1,015	2,006	1,906	1,442
Deferred taxation	-79	47	64	-204	-78	-189	-283	-30	-125
	417	**507**	**492**	**1,306**	**1,369**	**826**	**1,723**	**1,876**	**1,317**

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

in EUR million	2022	2021	2020
Result before tax from continuing operations	5,493	6,774	3,810
Weighted average statutory tax rate	24.8 %	24.3 %	25.6 %
Weighted average statutory tax amount	**1,363**	**1,645**	**975**
Permanent differences affecting current tax			
Participation exemption	-64	-68	-46
Other income not subject to tax	-40	-32	-5
Expenses not deductible for tax purposes	403	201	320
Current tax from previously unrecognised amounts	10	51	17
State and local taxes	68	64	44
Adjustments to prior periods	-29	-12	-16
Differences affecting deferred tax			
Impact on deferred tax from change in tax rates	5	9	10
Deferred tax benefit from previously unrecognised amounts	-3	-18	-6
Write-off/reversal of deferred tax assets	10	37	24
Effective tax amount	**1,723**	**1,876**	**1,317**
Effective tax rate	**31.4 %**	**27.7 %**	**34.6 %**

The weighted average statutory tax rate in 2022 (24.8%) increased compared to that of 2021 (24.3%).

The effective tax rate of 31.4% in 2022 is higher than the weighted average statutory tax rate. This is mainly caused by the impact in 2022 of the following non-deductible items for income tax purposes: hyperinflation accounting loss in Turkey, impairments on TTB and interest expenses in various countries.

The weighted average statutory tax rate in 2021 (24.3%) was lower than the rate of 25.6% in 2020.

The effective tax rate of 27.7% in 2021 was significantly higher than the weighted average statutory tax rate. This is mainly caused by a high amount of expenses non-deductible for tax purposes like the non-deductible bank tax and a tax charge caused by the recapture of tax losses originated in the United Kingdom but previously deducted in the Netherlands.

The effective tax rate of 34.6% in 2020 was higher than the weighted average statutory tax rate. This is mainly caused by a high amount of expenses non-deductible for tax purposes like the non-deductible bank tax and non-deductible losses with respect to goodwill impairments and impairments on associates in the Netherlands and in some other European countries.

Adjustments to prior periods in 2020 relates to a release of a tax provision of EUR 68 million after concluding on a settlement with the Australian tax authorities with respect to an issue related to former insurance activities, which issue was fully indemnified by NN Group.

Equity – Other comprehensive income

Income tax related to components of other comprehensive income

in EUR million	2022	2021	2020
Unrealised revaluations financial assets at fair value through other comprehensive income and other revaluations	140	14	-3
Realised gains/losses transferred to the statement of profit or loss (reclassifications from equity to profit or loss)	8	12	10
Changes in cash flow hedge reserve	875	233	-23
Remeasurement of the net defined benefit asset/liability	6	-54	-8
Changes in fair value of own credit risk of financial liabilities at fair value through profit or loss	19	-8	-1
Exchange rate differences and other	-141	-77	63
Total income tax related to components of other comprehensive income	**907**	**120**	**38**

35 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.

In 2022 the financial market witnessed globally a higher-volatility due to a confluence of factors, such as changing expectations about the paths of future interest rates in major advanced economies, energy crisis and geopolitical tensions after Russia's invasion of Ukraine. Globally, interest rates hike across EU and US. The USD appreciates against EURO and various currencies during the year. These main factors drive the market-to-market movements across different asset classes and spread movement through the year.

Overall in 2022, financial assets and liabilities, including Level 3, continued to be valued using agreed methodologies and ING continued to limit the unobservable input to arrive at the most appropriate Fair Market value.

b) Valuation Control framework

The valuation control framework covers the product approval process (PARP), pricing, market data assessment and independent price verification (IPV), valuation adjustments, model use, fair value hierarchy and day one profit or loss. Valuation processes are governed by various governance bodies, including Local Parameter Committees, Global Valuation 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 Valuation 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 all valuation models used for the Fair valuation (IFRS) and Prudent Valuation (CRR) of positions measured at fair value. The Local Parameter Committee discusses the valuation results and monitors the performance of the valuation activities carried out on local or regional level. The Market Data Committee is responsible for the approval of the market data used in valuation.

c) Valuation Adjustments

Valuation adjustments are an integral part of the fair value. They are the adjustments to the output from a valuation technique in order to appropriately determine a fair value in accordance with IFRS13. ING considers various fair value adjustments including Bid-Offer adjustments, Model Risk adjustments, Bilateral Valuation Adjustments (BVA, consisting of Credit Valuation Adjustments or CVA, and Debit valuation Adjustments or DVA), Collateral Valuation Adjustment (CollVA) and Funding Valuation Adjustment (FVA).

For financial instruments where the fair value at initial recognition is based on one or more significant unobservable inputs, a difference between the transaction price and the fair value resulting from the internal valuation process can occur. Such difference is referred to as Day One Profit or Day One Loss (DOP). ING defers material Day One Profit or Loss of instruments with significant unobservable valuation inputs, which are the 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 significant unobservable inputs become observable, or until the significant unobservable inputs become non-significant. Both the impact on the profit and loss in 2022 and the Day One Profit or Loss reserve is disclosed in the below table.

The following table presents the models reserves for financial assets and liabilities.

Valuation adjustment reserves on financial assets and liabilities

in EUR million	2022	2021
Deferred Day One Profit or Loss [1]	-108	-7
Own credit adjustments [2]	75	-95
Bid/Offer	-216	-143
Model Risk	-13	-11
CVA	-192	-159
DVA [2]	99	30
CollVA	-8	-8
FVA	-78	-95
Total Valuation Adjustments	**-441**	**-489**

1.In 2022, the presentation of Day One Profit or Loss reserve has been included in the table above
2. The change in the DVA as of 2022 entails the split into DVA on derivatives and Own credit adjustments on own issued liabilities. Comparatives figures for 2021 have been updated accordingly.

Overall, the fair value adjustments balance move down compared to last year end explained by own credit adjustments on own issued liabilities, mainly driven by the widening of ING CDS curve spread across all tenors, and for DVA on derivatives.

Deferred Day One Profit or Loss Reserve

The table below summarizes the movement in the aggregate profit not recognised when financial instruments were initially recognised (Day One Profit or Loss), because of the use of valuation techniques for which not all the inputs were market observable data.

As at 31 December 2022 ING further refined the thresholds to identify trades with significant unobservable CVA which triggered more Day One Profit or Loss deferral. Reference is made to the table below.

Deferred day one profit or loss reserve

in EUR million	2022	2021
Opening balance at 1 January	-7	-5
DOP deferred on new transactions during the period	-107	-8
DOP recognised in the statement of profit or loss during the period	6	6
Closing balance at 31 December	**-108**	**-7**

Own Credit Adjustment

Own issued debt and structured notes that are designated at fair value through profit or loss are adjusted for ING`s own credit risk by means of DVA.

Bid-Offer Adjustment

For positions priced based upon mid-market input parameters, Bid-Offer adjustments are required in order to reflect the valuation of that position based on bid price or offer price. 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

Financial instruments that are valued using a valuation model can be subject to model risk. Model risk is the risk of possible financial loss resulting from pricing model or model-based parameter deficiencies and/or uncertainties.

Bilateral Valuation Adjustments (Credit and Debit Valuation Adjustments)

Bilateral Valuation Adjustment is the valuation adjustment reflecting the counterparty credit risk of derivative contracts. It has a bilateral nature, where both the counterparty’s credit risk (i.e. Credit Valuation Adjustment or CVA) and ING’s own credit risk (Debit Valuation Adjustment or DVA) are taken into account:

- CVA is the fair value adjustment applicable to derivative instruments to account for the possibility that the counterparty defaults (i.e. it is the market value of the counterparty’s credit risk).

- DVA is the fair value adjustment applicable to derivative instruments to account for the possibility that ING defaults (i.e. it is the market value of ING's credit risk).

The calculation of CVA and DVA on derivatives is based on their expected exposures, the counterparties' and ING's risk of default, 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) spreads. Where counterparty CDS spreads are not available, relevant proxy spreads are used. Additionally, wrong-way risk (which occurs when the probability of default by the counterparty increases (decreases) when ING's exposure to the counterparty increases (decreases)) and right-way risk (which occurs when the probability of default by the counterparty increases (decreases) when ING's exposure to the counterparty decreases (increases)) are included in the adjustment.

Collateral Valuation Adjustment (CollVA)
Collateral Valuation Adjustment is a fair valuation adjustment applied on derivative instruments to capture specific features of CSA (Credit Support Annex) with a counterparty that the regular OIS discounting framework does not capture. Non-standard CSA features may include deviations in relation to the currencies 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, etc.

Funding Valuation Adjustment (FVA)
Funding Valuation Adjustment (FVA) is a fair valuation adjustment applied on derivative instruments to address the asymmetry in funding costs or funding benefits between collateralized and uncollateralized derivatives portfolios. 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. 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 observable inputs, either directly or indirectly, other than quoted prices included within Level 1. The fair value for financial instruments in this category can be determined by reference to quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, inputs other than quoted prices that are observable or market-corroborated inputs. 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, as the significance assessment of the valuation input on the entire fair value measurement will determine whether the instrument should be classified as Level 2 or Level 3. Expert judgement is required on the significance assessment approach.

Level 3 – Valuation technique supported by unobservable inputs
This category includes financial instruments whose fair value is determined using a valuation technique for which a significant part of the overall valuation is driven by unobservable valuation inputs. Where valuation inputs are unobservable, the Group must use the best information available to value the instruments. This may require internally derived inputs taking into account market participants assumptions that are reasonably available, including assumptions on the risk inherent in a particular valuation technique used to measure fair value and the risk inherent in the inputs to the valuation technique. Unobservable inputs may include, among others, volatility, correlation, spreads to discount rates, default rates, 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	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Financial Assets								
Financial assets at fair value through profit or loss								
- Equity securities	11,787	17,599	2	2	156	134	11,945	17,735
- Debt securities	1,636	2,317	5,361	7,016	3,450	2,643	10,447	11,976
- Derivatives	22	6	34,229	21,154	483	140	34,734	21,299
- Loans and receivables			54,097	48,706	2,547	2,248	56,644	50,954
	13,445	**19,922**	**93,690**	**76,877**	**6,635**	**5,165**	**113,770**	**101,964**
Financial assets at fair value through other comprehensive income								
- Equity securities	1,639	2,232			247	225	1,887	2,457
- Debt securities	25,644	21,753	3,451	5,587			29,095	27,340
- Loans and receivables					643	838	643	838
	27,284	**23,984**	**3,451**	**5,587**	**891**	**1,063**	**31,625**	**30,635**
Financial liabilities								
Financial liabilities at fair value through profit or loss								
– Debt securities	444	377	5,574	5,227	53	135	6,072	5,739
– Deposits			50,803	43,582			50,803	43,582
– Trading securities	1,952	955	273	120	1		2,226	1,075
– Derivatives	40	63	33,200	20,388	678	195	33,917	20,646
	2,436	**1,395**	**89,851**	**69,317**	**732**	**330**	**93,019**	**71,041**

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 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. In addition, for these derivatives ING applies Funding Valuation Adjustment. See sections CVA/DVA and FVA 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 is generally 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 and debt instruments are classified as Level 2. Derivatives and debt instruments 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 change in observable inputs, ING recorded an EUR 1.8 billion transfer from Level 2 to Level 1 in debt securities measured at fair value through other comprehensive income. No significant transfers from Level 1 to Level 2 were recorded in the reporting period 2022.

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 2022 of EUR 7.5 billion (31 December 2021: EUR 6.2 billion), an amount of EUR 2.2 billion (29.2%) (31 December 2021: EUR 2.0 billion, being 32.5%) 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 4.2 billion (31 December 2021: EUR 2.9 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 1.1 billion (31 December 2021: EUR 1.3 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 2022 of EUR 0.7 billion (31 December 2021: EUR 0.3 billion), an amount of EUR 0.02 billion (2.5%) (31 December 2021: EUR 0.1 billion, being 42.0%) 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 0.6 billion (31 December 2021: 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 2021: EUR 0.1 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	2022	2021	2022	2021			2022	2021	2022	2021
At fair value through profit or loss										
Debt securities	3,447	2,643	1	1	Price based	Price (%)	0%	0%	125%	121%
						Price (price per share)	208		208	
					Present value techniques	Credit spread (bps)	60		100	
						Price (%)	97%		100%	
Equity securities	156	134			Price based	Price (price per share)	0	0	5,457	5,475
Loans and advances	1,485	1,598			Price based	Price (%)	0%	0%	100%	100%
					Present value techniques	Credit spread (bps)	2	0	12	250
(Reverse) repo's	1,062	650			Present value techniques	Interest rate (%)	3%	0%	5%	1%
Structured notes	3	0	53	135	Price based	Price (%)	84%	84%	107%	125%
					Option pricing model	Equity volatility (%)	13%	13%	42%	30%
						Equity/Equity correlation	0.5	n.a.	1.0	n.a.
						Equity/FX correlation	-0.4	0.0	0.6	0.0
						Dividend yield (%)	0%	3%	8%	4%
					Present value techniques	Credit spreads (bps)	96		96	
Derivatives										
– Rates	431	5	476	35	Option pricing model	Interest rate volatility (bps)	49	43	148	82
					Present value techniques	Reset spread (%)	0%	2%	1%	2%
						Interest rate (%)	2%		2%	
						Prepayment rate (%)	5%		13%	
– FX	5	27	4	30	Present value techniques	FX volatility (%)		1%		16%
					Option pricing model	Implied volatility (%)	6%	1%	20%	22%
– Credit	13	75	175	94	Present value techniques	Credit spread (bps)	5	1	623	359
					Price based	Price (%)	0%	0%	100%	100%
– Equity	33	30	22	27	Option pricing model	Equity volatility (%)	0%	11%	77%	119%
						Equity/Equity correlation	0.5	0.5	0.9	0.8
						Equity/FX correlation	-0.5	-0.7	0.1	0.1
						Dividend yield (%)	1%	0%	14%	18%
					Price based	Price (%)	n.a	0%	n.a	0%
– Other	1	3		9	Option pricing model	Commodity volatility (%)	0%	20%	63%	89%
At fair value through other comprehensive income										
– Loans and advances	643	838			Present value techniques	Prepayment rate (%)	6%	9%	6%	9%
					Price based	Price (%)	67%	99%	99%	100%
– Equity	247	225			Present value techniques	Credit spread (bps)	6.7	1.9	6.7	1.9
						Interest rate (%)	4%	3%	4%	3%
					Price based	Price (%)	n.a	1%	n.a	1%
					Price based	Other (EUR)	70	63	90	80
Total	**7,526**	**6,228**	**732**	**330**						

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

in EUR million	Trading assets		Non-trading derivatives		Financial assets mandatorily at FVPL		Financial assets designated at FVPL		Financial assets at FVOCI		Total	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	822	882	1	1	1,862	1,191	2,480	796	1,063	1,231	6,228	4,101
Realised gain/loss recognised in the statement of profit or loss during the period [1]	53	22	52		-57	32	122	-80	8	-12	178	-37
Revaluation recognised in other comprehensive income during the period [2]		0							-84	22	-84	22
Purchase of assets	694	453	15	3	1,586	1,496	772	1,919	221	165	3,288	4,036
Sale of assets	-49	-48	-4	-3	-669	-612	-191	-141	-275	-234	-1,187	-1,037
Maturity/settlement	-511	-14	-2		-617	-163		-13	-59	-109	-1,188	-299
Reclassifications		0			-18	-5			10	-6	-8	-11
Transfers into Level 3	288	43	474		605	-1	322		-43	-1	1,646	42
Transfers out of Level 3	-442	-517	-115	-1	-856	-98					-1,414	-615
Exchange rate differences	18	0			14	20	-12		49	9	68	29
Changes in the composition of the group and other changes		0								-2		-2
Closing balance	**873**	**822**	**421**	**1**	**1,849**	**1,862**	**3,492**	**2,480**	**891**	**1,063**	**7,526**	**6,228**

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 -171 million (2021: EUR 50 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 2022, the transfers into Level 3 mainly consisted of (non) trading derivatives that were transferred to Level 3 as a result of the valuation being significantly impacted by unobservable inputs. Furthermore, it relates to debt obligations of which the valuation is being significantly impacted by unobservable inputs.

In 2022, following the enhancement of the significance assessment, transfers into and out of Level 3 of financial assets mandatorily at fair value mainly relate to a portfolio of securitization loans. Furthermore, transfers out of Level 3 relate to two syndicated deals due to the unobservable parameters were insignificant.

In 2022, transfers into level 3 financial assets designated at fair value relate to government bonds of which the valuation 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.

Changes in Level 3 Financial liabilities

	Trading liabilities		Non-trading derivatives		Financial liabilities designated as at fair value through profit or loss		Total	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	160	180	35	39	135	180	330	398
Realised gain/loss recognised in the statement of profit or loss during the period[1]	131	101	59		-10	13	179	113
Additions	124	58	16	3	13	52	153	113
Redemptions	-38	-10		-3	-13	-140	-51	-153
Maturity/settlement	-282	-44	-7		-71	-1	-360	-45
Transfers into Level 3	254	48	368		88	233	710	282
Transfers out of Level 3	-117	-173	-21	-3	-88	-203	-226	-378
Exchange rate differences	-3						-3	
Closing balance	**229**	**160**	**449**	**35**	**54**	**135**	**732**	**330**

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 179 million (2021: EUR 113 million) of unrealised gains and losses recognised in the statement of profit or loss.

In 2022, the transfers into Level 3 mainly consisted of non-trading derivatives that were transferred to Level 3 as a result of the valuation being significantly impacted by unobservable inputs.

In 2021, financial liabilities transfers into and out of Level 3 mainly consisted of structured notes, measured as designated at fair value through profit or loss. The structured notes were transferred out of Level 3 as the valuation was no longer impacted by significantly 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.

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 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 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	
in EUR million	2022	2021	2022	2021
Equity (equity derivatives, structured notes)	12	3	-6	-27
Interest rates (Rates derivatives, FX derivatives)	22	15	-14	-1
Credit (Debt securities, Loans, structured notes, credit derivatives)	32	27	-28	-2
Loans and advances			-32	
	65	**45**	**-80**	**-30**

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	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Financial Assets												
Loans and advances to banks [1]	35,103	23,591	2,858	1,674		1	29,459	17,033	2,786	4,926	35,103	23,634
Loans and advances to customers	635,557	627,550	19,101	16,943			15,264	18,465	575,805	600,253	610,170	635,661
Securities at amortised cost	48,160	48,319			39,787	40,314	3,160	7,327	1,406	681	44,353	48,323
	718,820	**699,459**	**21,959**	**18,617**	**39,788**	**40,316**	**47,883**	**42,825**	**579,996**	**605,860**	**689,626**	**707,618**
Financial liabilities												
Deposits from banks	56,632	85,092	3,696	4,298			48,524	75,847	3,954	5,890	56,174	86,035
Customer deposits	686,341	657,831	590,321	586,151			80,305	61,158	15,511	11,861	686,136	659,171
Debt securities in issue	58,075	57,443			20,308	15,320	20,501	27,718	17,577	14,756	58,385	57,794
Subordinated loans	15,789	16,719					15,548	17,203			15,548	17,203
	816,838	**817,085**	**594,016**	**590,449**	**20,308**	**15,321**	**164,878**	**181,926**	**37,041**	**32,507**	**816,243**	**820,203**

1 The prior period has been updated to improve consistency and comparability of level 3 and 2.

The following methods and assumptions were used by ING Bank to estimate the fair value of the financial instruments which are nor recorded and measured at fair value. These fair values were calculated for disclosure purposes only. The carrying amount of financial instruments presented in the above table includes the fair value hedge adjustment, this explains why the carrying amount approximates 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 specific available market data, such as interest rates and appropriate spreads that reflects current credit risk or quoted bonds.

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.

36 Derivatives and hedge accounting

Use of derivatives

ING uses derivatives for economic hedging purposes to manage its asset and liability portfolios and structural risk positions. The primary objective of ING'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 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 1.7 'Financial instruments' of Note 1 'Basis of preparation and significant accounting policies'.

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 assessed the extent to which hedge relationships are subject to uncertainties driven by IBOR reform.

The 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 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 and continues to be available. Refer to section 1.7.4 of Note 1 'Basis of preparation and significant accounting policies' for more information on the Phase 1 amendments.

Phase 1 amendments to IFRS allow ING 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.

In Poland the local working group (the 'National Working Group') for benchmark reform issued a roadmap to replace the current Polish benchmark rate Warsaw Interbank Offered Rate (WIBOR) with a new rate named Warsaw Interest Rate Overnight (WIRON). The National Working Group indicated that the plan is for the market to be ready for a cessation of WIBOR by the start of 2025, consequently ING extended the application of the phase 1 reliefs to those hedge accounting relationships that will be subject to WIBOR reform.

Hedging relationships are being amended to incorporate the new benchmark rates. During 2022, ING focussed on USD LIBOR contracts. In the coming year, ING will continue the focus on the remaining USD LIBOR contracts as the used USD LIBOR tenors will cease to be published on 30 June 2023.

As of 31 December 2022, USD LIBOR and WIBOR indexed fair value and cash flow hedges are 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 assumes that the USD LIBOR and WIBOR 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 and WIBOR benchmark on which the hedged cash flows are based is not altered as a result of the reform.

The total gross notional amounts of hedging instruments as at 31 December that are used in the ING's hedge accounting relationships for which the Phase 1 amendments to IAS39 were applied are:

Notional amounts of Hedging instruments in EUR mln as at 31 December

Benchmark	2022	2021
USD LIBOR	28,316	41,473
WIBOR[1]	57,774	

1 WIBOR transition plans became concrete in 2022 and therefore no comparatives for 2021 are included.

Approximately 89% (31 December 2021: 72%) of the notional amounts for USD LIBOR have a maturity date beyond 30 June 2023. Approximately 71% of the notional amounts for WIBOR have a maturity date beyond 1 January 2025.

The notional amounts of the derivative hedging instruments provide a close approximation of the extent of the risk exposure ING manages through these hedging relationships.

TLTRO

ING hedged the interest rate risk of the TLTRO-III funding with derivatives and designated this in a fair value hedge relationship. In Q4 2022 the ECB changed the terms of the TLTRO-III, resulting in the discontinuation of the hedging relationship. The fair value hedge adjustment was amortized to profit or loss over the revised interest period (i.e. until the date the change in TLTRO-III terms became effective). The impact of this is recorded in net interest income. Refer to Note 20 'Net interest income' for more details.

Fair value hedge accounting

ING'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's approach to manage market risk, including interest rate risk, is discussed in 'Risk management –Market risk'. ING'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, SOFR, SONIA or TONAR, between others.

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

ING 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 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, ING 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 considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING 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 loan portfolio ING 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 uses the following derivative financial instruments in a fair value hedge accounting relationship:

Gross carrying value of derivatives designated under fair value hedge accounting

in EUR million	Assets 2022	Liabilities 2022	Assets 2021	Liabilities 2021
As at 31 December				
Hedging instrument on interest rate risk				
– Interest rate swaps	40,346	32,482	6,629	5,940
– Other interest derivatives	395	39	87	83

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 836 million (2021: EUR 365 million) respectively ‘Financial liabilities at fair value through profit or loss – Non-trading derivatives’ EUR 244 million (2021: EUR 270 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 0.54% (2021: 0.20%) for EUR and 3.86% (2021: 3.83%) 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

in EUR million

As at 31 December 2022	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	-15	-3,184	-1,343	-677	6,864	5,396	8,204	-29,530	-14,284
– Other interest derivatives	-10	-55	-190	180	61	349	147	933	1,416
As at 31 December 2021									
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		-102	-237	-286	153	119	243	1,026	917

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 in 'Valuation results and net trading income'. As a result, only the net accounting ineffectiveness has an impact on the net result.

Hedged items included in a fair value hedging relationship

in EUR million	Carrying amount of the hedged items Assets	Carrying amount of the hedged items Liabilities	Accumulated amount of fair value hedge adjustment on the hedged item included in the carrying amount of the hedged item Assets	Accumulated amount of fair value hedge adjustment on the hedged item included in the carrying amount of the hedged item Liabilities	Change in fair value used for measuring ineffectiveness for the period	Change in fair value hedging instruments	Hedge ineffectiveness recognised in the statement of profit or loss gain (+) / loss (-)
As at 31 December 2022							
Interest rate risk							
– Debt securities at fair value through other comprehensive income	19,816		n/a		-2,798		
– Loans at FVOCI	35		n/a		-4		
– Loans and advances to customers	58,673		-12,112		-11,466		
– Debt instruments at amortised cost	4,098		-448		-678		
– Debt securities in issue		26,040		-2,815	3,746		
– Subordinated loans		15,767		-1,344	1,470		
– Amounts due to banks					483		
– Customer deposits and other funds on deposit		36,843		-3,373	4,099		
– Discontinued hedges			2,966	34			
Total	**82,623**	**78,650**	**-9,594**	**-7,497**	**-5,150**	**5,265**	**115**
As at 31 December 2021							
Interest rate risk							
– 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							
– 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**

During 2022, the interest rate movements significantly affected the fair value changes of both the derivatives and the hedged items designated in fair value hedges. Refer to note 22 'Valuation results and net trading income'.

In addition, the decrease in customer deposits is due to the discontinuation of the customer deposits portfolio fair value hedge in Belgium. This hedge was discontinued and the related fair value adjustment released due to changes in expected repricing of client rates as a result of the steep increase in interest rates occurred in 2022. Discontinued hedges further 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'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 applies cash flow hedge accounting on micro and macro level. ING'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'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 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 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 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 considers whether the critical terms of the hedged item and hedging instrument closely align when assessing the presence of an economic relationship. ING 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, 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 uses the following derivative financial instruments in a cash flow hedge accounting relationship:

Gross carrying value of derivatives used for cash flow hedge accounting

in EUR million	Assets 2022	Liabilities 2022	Assets 2021	Liabilities 2021
As at 31 December				
Hedging instrument on interest rate risk				
– Interest rate swaps	10,038	14,836	-437	781
Hedging instrument on combined interest and FX rate risk				
– Cross currency interest rate derivatives	428	168	73	285

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 814 million (2021: EUR 300 million) respectively 'Financial liabilities at fair value through profit or loss – Non-trading derivatives' EUR 1,275 million (2021: EUR 485 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 0.51% (2021: -0.16%) for EUR, 3.27% (2021: 1.73%) for PLN, 1.96% (2021: 2.09%) for USD and 1.28% (2021: 0.55%) for AUD. The average currency exchange rates for cross currency swaps used in cash flow hedge accounting is for EUR/USD 0.99 (2021: 1.01) and for EUR/AUD 1.58 (2021: 1.61).

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

in EUR million

As at 31 December 2022	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	-562	-935	-6,730	-12,464	-8,926	-8,115	-3,620	-8,947	-50,300
Hedging instrument on combined interest and FX rate risk									
– Cross currency interest rate derivatives		-834	-1,535	-721	-2,140	-52	7	-48	-5,323
As at 31 December 2021									
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

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

in EUR million	Change in value of hedged item 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 2022						
Interest rate risk on;						
– Floating rate lending	4,817	-5,460	395			
– Floating rate borrowing	-775	923	-181			
– Other	-5	-2				
– Discontinued hedges		330	-263			
Total interest rate risk	**4,037**	**-4,210**	**-50**		**-4,279**	**21**
Combined interest and FX rate risk on;						
– Floating rate lending	-47	-16	-269			
– Floating rate borrowing	-7	-4	14			
– Other	4	-2	-3			
– Discontinued hedges		4	-5			
Total combined interest and Fx	**-51**	**-18**	**-263**		**296**	**-1**
Total cash flow hedge	**3,986**	**-4,227**	**-313**		**-3,982**	**20**
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		-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**

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. The risk arises from the fluctuation in spot exchange rates between the functional currency of the subsidiaries and ING's presentation currency, which causes the amount of the net investment to vary in the consolidated financial statements of ING. This risk may have a significant impact on ING's financial statements. ING'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 and its subsidiaries.

ING'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 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 in 'Valuation results and net trading income'.

ING has the following derivative financial instruments used for net investment hedging:

Gross carrying value of derivatives used for net investment hedging

in EUR million	Assets 2022	Liabilities 2022	Assets 2021	Liabilities 2021
As at 31 December				
– FX forwards and Cross currency swaps	119	83	18	88

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 119 million (2021: EUR 18 million) respectively 'Financial liabilities at fair value through profit or loss – Non trading derivatives' EUR 83 million (2021: EUR 88 million).

For ING's main currencies the average exchange rates used in net investment hedge accounting for 2022 are EUR/USD 1.06 (2021: 1.18), EUR/PLN 4.68 (2021: 4.58), EUR/AUD 1.52 (2021: 1.58) and EUR/THB 36.87 (2021: 37.84).

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

in EUR million As at 31 December 2022	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	-6,164	-2,638	-97						-8,899
As at 31 December 2021									
– FX forwards and Cross currency swaps	-4,462	-461	-590						-5,514

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

in EUR million As at 31 December 2022	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	0	-33		0	0
Discontinued hedges		304	-1		
As at 31 December 2021					
Investment in foreign operations	72	330		-72	-1
Discontinued hedges		-59			

1 The carrying amount is the gross amount, excluding tax adjustments.

37 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							
2022	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	87,614						87,614
Loans and advances to banks	28,733	1,633	2,331	2,190	216		35,103
Financial assets at fair value through profit or loss							
– Trading assets	15,520	5,399	9,991	13,062	12,904		56,875
– Non-trading derivatives	623	95	592	1,555	1,027		3,893
– Mandatorily at fair value through profit or loss	29,153	10,504	3,753	2,329	901	203	46,844
– Designated as at fair value through profit or loss	287	158	185	2,497	3,031		6,159
Financial assets at fair value through other comprehensive income							
– Equity securities						1,887	1,887
– Debt securities	167	420	2,458	12,587	13,463		29,095
– Loans and advances	3	1	7	226	407		643
Securities at amortised cost	1,810	1,719	4,566	24,689	15,376		48,160
Loans and advances to customers	54,482	23,554	54,056	197,275	306,190		635,557
Other assets[2]	7,151	272	1,154	1,436	1,418	4,600	16,031
Total assets	**225,545**	**43,754**	**79,093**	**257,846**	**354,933**	**6,690**	**967,861**
2021							
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**

1 Includes assets on demand.
2 Includes other financial assets such as 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.

38 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

in EUR million

2022	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	10,053	2,238	33,268	9,878	1,794		-598	56,632
Customer deposits	605,706	16,294	22,637	24,641	20,304		-3,240	686,341
Financial liabilities at fair value through profit or loss								
– Other trading liabilities	5,778	875	304	771	575		-83	8,219
– Trading derivatives	2,100	2,319	4,942	9,330	3,609		8,570	30,869
– Non-trading derivatives	345	288	216	1,204	470		525	3,048
– Designated at fair value through profit or loss	31,505	11,472	1,626	3,177	3,699	21	-618	50,883
Debt securities in issue	2,049	11,227	18,626	12,857	15,905		-2,587	58,075
Subordinated loans			760		9,936	6,307	-1,214	15,789
Lease liabilities	19	43	170	593	377		-28	1,174
Financial liabilities	**657,554**	**44,755**	**82,548**	**62,450**	**56,668**	**6,328**	**727**	**911,030**
Other liabilities [3]	9,659	683	2,395	638	406			13,781
Total liabilities	**667,213**	**45,438**	**84,943**	**63,089**	**57,074**	**6,328**	**727**	**924,811**
Coupon interest due on financial liabilities	426	719	3,171	6,408	3,166	348		14,237
Contingent liabilities in respect of								
– Discounted bills								
– Guarantees	28,304			4	550			28,859
– Irrevocable letters of credit	15,660	19	3					15,682
– other					3			3
Irrevocable facilities	161,147		194	434	166			161,940
	205111.478	**18.786**	**197.475**	**438.013**	**718.593**	**0**	**0**	**206,484**

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

in EUR million

2021	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	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 facilities4	143,891	1	13	184	78			144,167
	186,653	**1**	**15**	**189**	**628**	**0**	**0**	**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.

39 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

in EUR million	2022	2021
Banks		
– Cash and balances with central banks	364	465
– Loans and advances to banks	4,007	3,310
Financial assets at fair value through profit or loss	17,079	15,334
Financial assets at fair value through OCI	2,142	2,320
Securities at amortised cost	3,578	4,468
Loans and advances to customers	98,917	118,868
Other assets	596	796
	126,682	145,560

In addition, in some jurisdictions ING Bank N.V. has an obligation to maintain a reserve with central banks. As at 31 December 2022, the minimum mandatory reserve deposits with various central banks amount to EUR 11,108 million (2021: EUR 10,625 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

in EUR million	2022	2021
Total received collateral available for sale or repledge at fair value		
– equity securities	22,847	27,553
– debt securities	103,723	67,696
of which sold or repledged at fair value		
– equity securities	18,613	23,330
– debt securities	66,636	50,366

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	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Transferred assets at carrying amount								
Financial assets at fair value through profit or loss	2,087	3,109			6,357	4,384	7,178	5,863
Financial assets at fair value through other comprehensive income			499				453	527
Loans and advances to customers							4,637	4,386
Securities at amortised cost			435				261	992
Associated liabilities at carrying amount[1]								
Financial liabilities at fair value through profit or loss	n/a	n/a	n/a	n/a	6,245	4,130	8,932	7,538

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 on Financial assets at fair value through other comprehensive income and Securities at amortised cost 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 45 'Structured entities'.

40 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 settle net 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 set off 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 in the Risk Management Credit risk' section 'Credit risk mitigation'.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

in EUR million 2022		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		Net amount	Amounts not subject to enforceable netting arrangements	Statement of financial position total [1]
					Financial instruments	Cash and financial instruments received as collateral			
Statement of financial position line item	**Financial instrument**								
Loans and advances to banks [2]	Reverse repurchase, securities borrowing and similar agreements	2,576		2,576		2,549	27	16,820	19,395
	Other	1		1	1			-1	
		2,576		**2,576**	**1**	**2,549**	**27**	**16,819**	**19,395**
Financial assets at fair value through profit or loss									
Trading and Non-trading	Reverse repurchase, securities borrowing and similar agreements	51,870	-21,245	30,625	102	29,813	710	22,260	52,886
	Derivatives	134,253	-106,523	27,730	18,190	4,525	5,015	7,004	34,734
		186,123	**-127,768**	**58,355**	**18,292**	**34,337**	**5,726**	**29,264**	**87,619**
Loans and advances to customers [3]	Reverse repurchase, securities borrowing and similar agreements	155		155		155		1,151	1,306
	Cash pools	224,261	-222,857	1,404	74	889	441		1,404
		224,416	**-222,857**	**1,559**	**74**	**1,044**	**441**	**1,151**	**2,710**
Other items where offsetting is applied in the statement of financial position [4]		6,750	-5,899	851	74		**777**		**851**
Total financial assets		**419,865**	**-356,524**	**63,341**	**18,440**	**37,930**	**6,971**	**47,234**	**110,576**

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 2022, the total amount of 'Loans and advances to banks' excluding repurchase agreements is EUR 15,708 million which is not subject to offsetting.
3 At 31 December 2022, the total amount of 'Loans and advances to customers' excluding repurchase agreements is EUR 634,251 million of which the net cash pool position of EUR 1,404 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 5,190 million in the statement of financial position of which EUR 851 million is subject to offsetting as at 31 December 2022.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

in EUR million 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
	Other	1	-1						
		1,931	**-1**	**1,930**		**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			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**			**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 the net cash pool position of 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 liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

in EUR million 2022		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							3,809	3,809
	Other								
								3,809	**3,809**
Customer deposits [3]	Repurchase, securities lending and similar agreements								
	Cash pools	236,219	-222,857	13,362	52		13,310		13,362
		236,219	**-222,857**	**13,362**	**52**		**13,310**		**13,362**
Financial liabilities at fair value through profit or loss									
Trading and Non-trading	Repurchase, securities lending and similar agreements	57,871	-21,245	36,626	102	31,868	4,655	12,220	48,846
	Derivatives	127,937	-103,988	23,949	18,215	4,964	770	9,967	33,917
		185,808	**-125,233**	**60,575**	**18,317**	**36,833**	**5,425**	**22,187**	**82,762**
Other items where offsetting is applied in the statement of financial position [4]		**8,535**	**-8,435**	**100**	**70**		**30**		**100**
Total financial liabilities		**430,561**	**-356,524**	**74,037**	**18,440**	**36,833**	**18,765**	**25,996**	**100,033**

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 2022, the total amount of 'Deposits from banks' excluding repurchase agreements is EUR 52,823 million of which EUR 0 million is subject to offsetting.
3 At 31 December 2022, the total amount of 'Customers deposits' excluding repurchase agreements is EUR 686,341 million of which the net cash pool position of EUR 13,362 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 6,714 million in the statement of financial position of which EUR 100 million is subject to offsetting as at 31 December 2022.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

in EUR million 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		433		426	7	3,705	4,138
	Other	3	-1	2			2		2
		436	**-1**	**435**		**426**	**9**	**3,705**	**4,140**
Customer deposits [3]	Repurchase, securities lending and similar agreements								
	Cash pools	207,930	-194,522	13,408	19		13,389		13,408
		207,930	**-194,522**	**13,408**	**19**		**13,389**		**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**		**252**		**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 the net cash pool position of 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.

41 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

in EUR million	2022	2021
Contingent liabilities in respect of		
– Guarantees	28,859	26,461
– Irrevocable letters of credit	15,682	16,851
– Other	3	8
	44,544	**43,319**
Irrevocable facilities	161,940	144,167
	206,484	**187,486**

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 collateralized 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.

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.

In addition to the items included in contingent liabilities, ING Bank has issued certain guarantees as participant in collective arrangements of national banking funds and as a participant in required collective guarantee schemes which apply in different countries.

ING Bank N.V. provided a guarantee to the German Deposit Guarantee Fund ('Einlagensicherungsfonds' or ESF) under section 5 (10) of the by-laws of this fund, where ING Bank N.V. indemnifies the Association of German Banks Berlin against any losses it might incur as result of actions taken with respect to ING Germany. The ESF is a voluntary collective guarantee scheme for retail savings and deposits in excess of EUR 100,000.

Furthermore we refer to Note 42 'Legal proceedings' for any contingent liabilities in respect of legal proceedings.

42 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 the ING and/or the 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.

Payvision is the subject of a criminal investigation by Dutch authorities regarding money laundering and various requirements of the Dutch act on Anti-Money Laundering and Counter Terrorist Financing, focusing on the period from 1 January 2015 up to and including April 2020. Payvision is cooperating with such ongoing investigation. It is currently not feasible to determine how the ongoing investigation may be resolved or the timing of any such resolution, nor to estimate reliably the possible timing, scope or amounts of any resulting fines, penalties and/or other outcome.

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 March 2022, plaintiffs and ING executed a formal class settlement agreement. On 29 November 2022, the Court entered its final judgement, approving ING's settlement (and those of all other defendants) with plaintiffs. The case is now closed.

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. Pursuant to the acquisition contract, ING can claim compensation from SDIF if a court orders ING to pay amounts to the offshore account holders. SDIF has made payments to ING pursuant to such compensation requests, but filed various lawsuits to receive those amounts back. These lawsuits are ongoing. In April 2022 the Turkish Supreme Court decided that the prescription period for the offshore account holders' compensation claims starts on the transfer date of the account holders to the offshore accounts. The exact impact of this decision on the ongoing cases is not clear yet. 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.

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 and referred the case to the Court of Appeal in The Hague. The Court of Appeal also ruled in favour of the Dutch bank in October 2022. 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. The National Court has revoked the ruling and declared that the consumers will not be able to initiate an action for compensation based on the first instance ruling, as the claimant association intended. This last decision is not yet final, as it could be appealed in the Supreme Court. 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, in March 2018, ING Bank received another claim on the same subject matter from the Dutch Association of Stockholders (Vereniging van Effectenbezitters, "VEB"). In June 2022, VEB reiterated and further substantiated its claim in a letter to ING. 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.

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. In October 2022, a hearing of the European Court of Justice (CJEU) was held inter alia on the question whether, after cancellation of a contract regarding a Swiss franc loan by a court, banks may still charge interests for the amount borrowed under such loan prior to cancellation.

On 16 February 2023, the Advocate General (AG) of the CJEU provided his opinion on the matter. The AG opined that banks cannot claim any remuneration (i.e. interest) for the duration the principal amount was available to the customer. The customer, however, may assert claims against banks in addition to reimbursement of interest and instalments previously paid to the bank. The AG's opinion is not binding on the CJEU. His role is to propose to the CJEU a legal solution to this case. Should the CJEU follow the opinion of the AG, this will have negative effect for banks in Poland. The CJEU's ruling is expected within a few months.

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 EUR 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. Based on a recent Kifid ruling regarding similar products, ING will amend its previously announced compensation scheme by also compensating interest on interest. In the third quarter of 2022, ING increased its provision for this matter by EUR 75 million. In the fourth quarter of 2022, ING and the Dutch Consumers' Association reached an agreement on the compensation of customers who have had an overdraft or a revolving credit card with a variable interest rate. ING will compensate such customers according to Kifid jurisprudence about revolving credits including 'interest-on-interest'-effect. Compensation will start in the first half of 2023.

43 Consolidated companies and businesses acquired and divested

Acquisitions

There were no significant acquisitions in 2022, 2021 or 2020.

Divestments 2022

ING announced at 13 December 2022 that it has sold their interest (80%) in Intersoftware Holding BV to the Sky Group/ DIAS and realised a transaction result of EUR 11.0 million which consists of a profit of EUR 7.0 on sale of InterSoftware Holding BV and the release of the redemption liability of EUR 3.0 million.

Divestments 2021

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. In December 2021 the transaction was completed and a loss on disposal of EUR 26 million was realised. In 2022 some final closing activities resulted in an additional loss of EUR 1 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. 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.

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. ING and Boursorama (a subsidiary of Société Générale) have signed an agreement to offer the attractive services to retail customers of ING in France.

The contract allows ING customers to join Boursorama and benefit from a simplified account opening process and exclusive offers. The agreement also includes the transfer to Boursorama of 'assurance'vie' (investment products) contracts, for which ING acts as a broker with Generali Vie. Home loans and consumer loans are not included in the agreement and the portfolio will continue to be managed by ING.

The agreement follows ING's announcement in December 2021 to exit the French retail banking market. The exit is finalised end of 2022. ING's departure from the France retail banking market is proceeding well with EUR 9.7 billion saving accounts already transferred to Boursorama. ING will continue its Wholesale Banking activities in France, with a focus on strengthening its position and the ambition to be the go-to bank for sustainable finance.

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		1,404	1,404
Amounts due from banks		378	378
Miscalleneous other assets		8	8
Liabilities			
Customer deposits and other funds on deposit		1,725	1,725
Miscallaneous 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**

In 2020 there were no significant divestments.

44 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	
			2022	2021
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.

45 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 2022, these consisted of approximately EUR 65 billion (2021: EUR 74 billion) of senior and subordinated notes, of which approximately EUR 1 billion (2021: EUR 1 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 2022, 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 (2021: EUR 1 billion).

In addition ING Bank originated various securitisations for liquidity management optimisation purposes. As at 31 December 2022, these consisted of EUR 444 million (2021: EUR 662 million) 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	
in EUR million	2022	2021
Dutch Covered Bond Companies	21,379	16,586
	21,379	**16,586**

In addition, subsidiaries of ING in Germany, Belgium and Australia also issued covered bonds with pledged mortgages loans of approximately EUR 24,880 million (2021: EUR 22,597 million) 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 2,446 million (2021: EUR 2,581 million). The drawn liquidity amount is nil as at 31 December 2022 (2021: 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 2022 amounted to EUR -40 million (2021: EUR -34 million); fair value changes on this swap recognised in the statement of profit or loss in 2022 were EUR -6 million (2021: EUR 0 million). Service fee income recognised, for the role as administrative agent, in the statement of profit or loss in 2022 amounted to EUR 1 million (2021: EUR 1 million). The cumulative income recognised in profit or loss since derecognition amounts to EUR 18 million (2021: EUR 17 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.

46 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 33 'Pensions and other post-employment 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.

in EUR million	2022	2021
Assets	56	55
Liabilities	65,704	56,349
Income received	4	15
Expenses paid	1,426	1,158

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	
in EUR million	2022	2021	2022	2021
Assets	121	115		
Liabilities	309	417	1	3
Off-balance sheet commitments	28	24		
Income received	12	42		
Expenses paid				

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 2022 and 2021, 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)

2022 in EUR thousands	Executive Board of ING Groep N.V.	Management Board Banking [1]	Total
Fixed Compensation			
– Base salary	4,220	4,969	9,189
– Collective fixed allowances [2]	1,011	1,073	2,084
– Pension costs	70	116	186
– Severance benefits		932	932
Variable compensation			
– Upfront cash		803	803
– Upfront shares	268	803	1,071
– Deferred cash		1,204	1,204
– Deferred shares	401	1,204	1,605
– Other emoluments [3]	296	638	934
Total compensation	**6,266**	**11,742**	**18,008**

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 114,866.
3 This includes amongst others: housing, school/tuition fees, international health insurance, relocation costs and tax and financial planning.

Key management personnel compensation (Executive Board and Management Board Banking)

2021 in EUR thousands	Executive Board of ING Groep N.V. [3]	Management Board Banking [1,4]	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		1,075	1,075
Variable compensation			
– Upfront cash		664	664
– Upfront shares	265	691	956
– Deferred cash		997	997
– Deferred shares	398	1,036	1,434
– Other emoluments [5]	274	959	1,233
Total compensation	**5,791**	**11,776**	**17,567**

1 Excluding members of the Management Board Banking that are also members of the Executive Board of ING Groep N.V.
2 The collective fixed allowances consist of two savings allowances applicable to employees in the Netherlands; an individual savings allowance of 3.5% and a collective savings allowance to compensate for loss of pension benefits with respect to salary in excess of EUR 112,189.
3 In 2021 one member of the Executive Board joined ING during the year. The table includes compensation earned in the capacity as Executive Board member as of the appointment at the AGM on 26 April 2021.
4 One member of the Management Board Banking left ING during the reporting year 2021. In line with applicable regulation a severance payment was granted.
5 This includes amongst others: housing, school/tuition fees, international health insurance, relocation costs and tax and financial planning.

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

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

Key management personnel compensation is generally included in Staff expenses in the statement of profit or loss. The total remuneration of the Executive Board and Management Board Banking is disclosed in the table above. Under IFRS, certain components of variable remuneration are not recognised in the statement of profit or loss directly, but are allocated over the vesting period of the award. The comparable amount recognised in Staff expenses in 2022 relating to the fixed expenses of 2022 and the vesting of variable remuneration of earlier performance years, is EUR 14 million in 2022 (2021: EUR 13 million).

The table below shows the total of fixed remuneration, expense allowances and attendance fees for the Supervisory Board in 2022 and 2021

Key management personnel compensation (Supervisory Board)

in EUR thousands	2022	2021
Total compensation	1,048	994

Loans and advance to key management personnel

As at 31 December 2022 Loans and advances outstanding to key management personnel amounted to EUR 2.7 million (2021: EUR 2.4 million) and loan commitments to key management personnel amounted to EUR 203 thousand (2021: EUR 197 thousand). Total interest received in 2022 on these loans and advances amounted to EUR 62 thousand (EUR 37 thousand).

These loans and advances and loan commitments (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.

Deposits outstanding to key management personnel

As at 31 December 2022 Deposits outstanding from key management personnel amounted to EUR 11.5 million (2021: EUR 6.1 million). Total interest paid in 2022 on these deposits amounted to EUR 36 thousand (2021: EUR 14 thousand).

Number of ING Groep N.V. shares and stock options to key management personnel

	ING Groep N.V. shares	
in numbers	2022	2021
Executive Board members	108,217	91,853
Management Board Banking	294,574	237,525
Supervisory Board members	5,295	5,295
Total number of shares and stock options	**408,086**	**334,673**

47 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 decreased compared to 2021 primarily due to higher risk-weighted assets and as most of the net profit of the year with EUR 2.75 billion additional distributions were up streamed to ING Group. Risk-weighted assets were mainly impacted by rating downgrades on Russia-related exposure, currency movements, the implementation of EBA guidelines on the treatment of structural FX positions, and model impacts. Model impacts reflect the introduction of a risk-weight floor on Dutch residential mortgages by the Dutch Central Bank as well as ongoing redevelopment of internal models and EBA guidelines.

ING Bank paid EUR 3.5 billion of dividend to ING Group in relation to the 2022 profit and an additional EUR 2.75 billion for distribution to shareholders by the Group.

ING Bank N.V. has a CET1 ratio of 12.6% versus an overall CET1 requirement (including buffer requirements) of 7.10%. The Bank's Tier 1 ratio decreased from 16.5% to 14.5% compared to last year. The Banks's Total capital ratio decreased to 17.5%.

ING Bank capital position according to CRR II / CRD V

in EUR million	2022	2021
Shareholders' equity [1]	42,546	47,914
-Interim profits not included in CET 1 capital	-913	-934
- Other adjustments	332	-2,130
Regulatory adjustments	-580	-3,064
Available common equity Tier 1 capital	**41,966**	**44,850**
Additional Tier 1 securities	6,280	6,792
Regulatory adjustments additional Tier 1	78	78
Available Tier 1 capital	**48,324**	**51,720**
Supplementary capital Tier 2 bonds [2]	10,046	9,341
Regulatory adjustments Tier 2	41	21
Available Total capital	**58,411**	**61,081**
Risk weighted assets	332,853	312,616
Common equity Tier 1 ratio	**12.61%**	**14.35%**
Tier 1 ratio	14.52%	16.54%
Total capital ratio	17.55%	19.54%

1 Shareholders' equity is determined in accordance with IFRS-EU.
2 All T2 securities are CRR/CRD V-compliant for 2022 (2021: EUR 153 million was subject to CRR/CRD IV grandfathering rules).

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 6.0% and a Total capital ratio of 8.0% of risk-weighted assets.

The overall CET1 requirement (including buffer requirements) for ING Bank N.V. at a consolidated level was 7.10% in 2022. This requirement is the sum of a 4.5% Pillar I requirement, a 2.5% Capital Conservation Buffer (CCB) and a 0.10% Countercyclical Buffer (CCyB) (based on December 2022 positions).

Ratings

ING's credit ratings and outlook are shown in the table below. Each of these ratings reflects only the view of the applicable rating agency at the time the rating was issued, and any explanation of the significance of a rating may be obtained only from the rating agency.

Main credit ratings of ING Bank N.V. at 31 December 2022

	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.

48 Subsequent events

On 6 February 2023, a devastating earthquake with multiple aftershocks struck southern and central Turkey and northern and western Syria causing a significant tragedy for the people and is causing disruption to business and economic activity in the region. This qualifies as a non-adjusting subsequent event.

Authorisation of Consolidated Financial Statements

Amsterdam, 6 March 2023

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	2022	2021
Assets		
Cash and balances with central banks 2	42,013	57,958
Short-dated government paper 3	49	205
Loans and advances to banks 4	83,985	74,040
Loans and advances to customers 5	346,012	350,202
Debt securities 6	43,784	43,315
Equity securities 7	4,263	10,079
Investments in group companies 8	30,257	31,342
Investments in associates and joint ventures 9	1,240	1,354
Intangible assets 10	565	632
Equipment 11	828	901
Other assets 12	80,400	38,769
Total assets	**633,396**	**608,796**

in EUR million	2022	2021
Liabilities		
Deposits from banks 13	70,515	91,247
Customer deposits 14	375,858	363,162
Debt securities in issue	39,526	49,117
Other liabilities 15	88,197	39,161
General provisions 16	883	1,246
Subordinated loans 17	15,871	16,949
Total liabilities	**590,851**	**560,882**
Equity 18		
Share capital	525	525
Share premium	16,542	16,542
Revaluation reserves	-862	1,617
Legal and statutory reserves	361	-548
Other reserves	25,067	27,117
Unappropriated result	913	2,661
Total equity	**42,546**	**47,914**
Total liabilities and equity	**633,396**	**608,796**

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	2022	2021
Interest income	14,182	11,930
Interest expense	-8,260	-5,585
Net interest income 19	**5,922**	**6,345**
Investment income and results from participating interests 20	2,215	3,239
Fee and commission income	2,402	2,248
Fee and commission expense	-584	-502
Net fee and commission income 21	**1,818**	**1,746**
Results from financial transactions 22	**721**	**472**
Other income	153	85
Total income	**10,829**	**11,887**
Staff expenses 23	3,249	3,224
Depreciation, amortisation and impairments 24	405	408
Other expenses 25	2,150	2,523
Addition to loan loss provisions	705	261
Total expenses	**6,510**	**6,416**
Result before tax	**4,319**	**5,471**
Taxation 26	652	701
Result after tax	**3,667**	**4,770**

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 2021	525	16,542	1,617	-548	27,117	2,661	47,914
Realised and unrealised revaluations equity and debt instruments and other revaluations			-290	-212	-23		-525
Realised gains/losses transferred to the statement of profit or loss			-9	-15			-24
Changes in cash flow hedge reserve			-2,200	-701			-2,901
Unrealised revaluations property in own use			1	-33	26		-5
Remeasurement of the net defined benefit asset/liability			-131	112			-19
Exchange rate differences and other			149	1,089	15		1,253
Total amount recognised directly in equity			**-2,479**	**239**	**19**		**-2,221**
Net result				161		3,506	3,667
			-2,479	**400**	**19**	**3,506**	**1,446**
Transfer from unappropriated results					2,661	-2,661	
Dividends					-3,684	-2,594	-6,277
Employee stock options and share plans					27		27
Changes in the composition of the group and other changes				509	-1,073		-564
Balance as at 31 December 2022	**525**	**16,542**	**-862**	**361**	**25,067**	**913**	**42,546**

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 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	0
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’.

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

in EUR million					*Parent company financial statements*						
Assets as at 31 December 2022	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	42,013										**42,013**
Loans and advances to banks			67,769								**67,769**
Financial assets at fair value through profit or loss											
– Trading assets		6	1,105	8,906	3,941	2,395				52,769	**69,121**
– Non-trading derivatives										19,958	**19,958**
– Designated as at fair value through profit or loss			425	249	3,096						**3,770**
– Mandatorily at fair value through profit or loss			14,685	12,368	814	61					**27,928**
Financial assets at fair value through other comprehensive income					13,217	1,808					**15,025**
Securities at amortised cost		43			22,717						**22,760**
Loans and advances to customers				324,489							**324,489**
Investments in associates and joint ventures							1,240				**1,240**
Property and equipment									817		**817**
Intangible assets								565			**565**
Current tax assets										203	**203**
Deferred tax assets										993	**993**
Other assets									11	6,477	**6,489**
Total assets	**42,013**	**49**	**83,985**	**346,012**	**43,784**	**4,263**	**1,240**	**565**	**828**	**80,400**	**603,139**

Presentation Parent company financial statements versus Consolidated financial statements, Liabilities

in EUR million	*Parent company financial statements*						
Liabilities as at 31 December 2022	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	61,215						**61,215**
Customer deposits		357,078					**357,078**
Financial liabilities at fair value through profit or loss							
– Trading liabilities	1,724	4,238		56,389			**62,350**
– Non-trading derivatives				24,606			**24,606**
– Designated as at fair value through profit or loss	7,576	14,543	5,854			82	**28,055**
Current tax liabilities				99			**99**
Deferred tax liabilities					183		**183**
Provisions					693		**693**
Other liabilities				7,103	7		**7,111**
Debt securities in issue			33,672				**33,672**
Subordinated loans						15,789	**15,789**
Total liabilities	**70,515**	**375,858**	**39,526**	**88,197**	**883**	**15,871**	**590,851**

Notes to the Parent company statement of financial position

2 Cash and balances with central banks

Amounts held at central banks amount to EUR 41,206 million (2021: EUR 57,143 million). In 2022, 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 49 million (2021: EUR 205 million) for the company.

4 Loans and advances to banks

in EUR million	2022	2021
Non-subordinated receivables from:		
Group companies	34,181	33,583
Third parties	46,810	38,280
	80,991	**71,864**
Subordinated receivables from:		
Group companies	2,994	2,176
	83,985	**74,040**

As at 31 December 2022, Loans and advances to banks includes receivables with regard to securities, which have been acquired in reverse repurchase transactions amounting to EUR 39,304 million (2021: EUR 33,057 million).

5 Loans and advances to customers

Loans and advances to customers

in EUR million	2022	2021
Non-subordinated receivables from:		
ING Groep N.V.	51	42
Group companies	36,191	43,904
Third parties	308,367	304,856
	344,610	**348,802**
Subordinated receivables from:		
Group companies	1,403	1,400
	346,012	**350,202**

As at 31 December 2022, receivables included in Loans and advances to customers that are part of the trading portfolio amount to EUR 8,906 million (2021: EUR 8,009 million).

Loans and advances to customers includes receivables with regard to securities which have been acquired in reverse repurchase transactions amounting to EUR 20,638 million (2021: EUR 19,645 million) for the company.

6 Debt securities

Debt securities by issuer

in EUR million	2022	2021
Public sector	31,088	31,395
Other	12,696	11,920
	43,784	**43,315**

Debt securities analysed by listing		
in EUR million	2022	2021
Listed	32,555	30,593
Unlisted	11,229	12,721
	43,784	**43,315**

The above table includes the following non subordinated debt securities:		
in EUR million	2022	2021
Non-subordinated debt securities issued by:		
Third parties	42,949	42,594
	42,949	**42,594**

Changes in debt securities [1]		
in EUR million	2022	2021
Opening balance	34,693	34,672
Additions	19,105	14,907
Amortisation	-130	-142
Changes in unrealised revaluations	-2,135	-497
Disposals and redemptions	-16,118	-15,046
Exchange rate differences	490	781
Other changes	29	18
Closing balance	**35,934**	**34,693**

1 Excluding fair value through profit or loss portfolio.

7 Equity securities

Equity securities analysed by listing		
in EUR million	2022	2021
Listed	4,042	9,910
Unlisted	221	169
	4,263	**10,079**

Changes in equity securities at fair value through OCI.		
in EUR million	2022	2021
Opening balance	2,369	1,782
Additions	12	513
Changes in unrealised revaluations	-55	-98
Disposals	-491	-12
Exchange rate differences	-38	192
Other changes	10	-8
Closing balance	**1,808**	**2,369**

The cost or purchase price of the shares in the trading portfolio approximates their fair value. As at 31 December 2022 the cost or purchase price of shares excluding trading portfolio is EUR 1,171 million lower (2021: EUR 1,260 million lower) than the carrying amount.

8 Investments in group companies

Investments in group companies

in EUR million	2022		2021	
	Interest held (%)	Statement of financial position value	Interest held (%)	Statement of financial position value
ING België N.V.	100	9,566	100	10,001
ING Holding Deutschland GMBH	100	9,174	100	9,274
ING Bank (Australia) Limited	100	3,894	100	3,730
ING Financial Holdings Corporation	100	2,804	100	2,634
ING Bank Slaski S.A.	75	1,496	75	2,188
ING Bank A.S.	100	758	100	726
Bank Mendes Gans N.V.	100	789	100	737
ING Real Estate B.V.	100	71	100	227
ING Australia Holdings Limited	100	10	100	10
ING Corporate Investments B.V.	100	157	100	252
Other (including financing companies)		1,539		1,562
		30,257		**31,342**

As at 31 December 2022, Investments in group companies includes credit institutions of EUR 17,016 million (2021: EUR 17,829 million).
As at 31 December 2022 listed investments in group companies amount to EUR 1,496 million (2021: EUR 2,188 million).

Changes in investments in group companies

in EUR million	2022	2021
Opening balance	31,342	32,056
Repayment of capital injection	-226	-155
Revaluations	-788	-1,038
Results from group companies	2,193	3,029
Dividends received	-2,502	-2,232
Capital contribution	14	-137
Mergers and liquidations	-14	-7
Exchange rate differences	237	-191
Other changes		15
Closing balance	**30,257**	**31,342**

9 Investments in associates and joint ventures

Investments in associates and joint ventures

in EUR million	2022		2021	
	Interest held (%)	Statement of financial position value	Interest held (%)	Statement of financial position value
TMBThanachart Bank Public Company	23	1,109	23	1,208
Other		131		147
		1,240		**1,354**

Changes in investments in associates and joint ventures

in EUR million	2022	2021
Opening balance	1,354	1,332
Additions	24	30
Share of results	66	70
Dividends received	-38	-28
Disposals	1	-10
Impairments	-192	-3
Revaluations	-7	1
Exchange rate differences	27	-31
Other changes	5	-7
Closing balance	**1,240**	**1,354**

10 Intangible assets

Changes in intangible assets

	Goodwill		Software		Other		Total	
in EUR million	2022	2021	2022	2021	2022	2021	2022	2021
Opening balance	122	184	508	569	2	2	632	755
Additions			115	122			115	122
Disposals			1				1	
Amortisation			-155	-166			-155	-166
Impairments	-32		-17	-16			-49	-16
Exchange rate differences	-1	-61					-1	-62
Other changes	25		-3	-2			23	-2
Closing balance	**114**	**122**	**449**	**508**	**2**	**2**	**565**	**632**

Goodwill is tested for impairment annually.

11 Equipment

Changes in equipment

in EUR million	2022	2021
Opening balance	901	1,062
Additions	139	89
Depreciation	-183	-213
Disposals	-15	-4
Impairments	-19	-15
Reversal of impairments	1	2
Exchange rate differences	-2	9
Other changes	7	-28
Closing balance	**828**	**901**
Gross carrying amount as at 31 December	2,240	2,220
Accumulated depreciation as at 31 December	-1,412	-1,319
Net carrying value	**828**	**901**

12 Other assets

Other assets

in EUR million	2022	2021
Derivatives	72,726	34,038
Deferred tax assets	993	364
Income tax receivables	203	234
Accrued interests and rents	47	41
Other accrued assets	484	420
Pension asset	515	717
Other receivables	5,431	2,957
	80,400	**38,769**

Derivatives includes transactions with group companies of EUR 44,988 million (2021: EUR 16,954 million).

Other receivables includes EUR 3,784 million (2021: EUR 1,479 million) related to transactions still to be settled at balance sheet date. As at 31 December 2022, an amount of EUR 655 million (2021: EUR 844 million) is expected to be settled after more than one year from the balance sheet date.

13 Deposits from banks

Deposits from banks

in EUR million	2022	2021
Group companies	24,369	26,227
Third parties	46,147	65,021
	70,515	**91,247**

14 Customer deposits

Customer deposits by group companies and third parties

in EUR million	2022	2021
ING Groep N.V.	49,338	40,467
Group companies	12,526	18,666
Third parties	313,994	304,029
	375,858	**363,162**

Customer deposits from ING Groep N.V. includes EUR 37,806 million (2021: EUR 34,303 million) Senior non-preferred debt.

Customer deposits by type		
in EUR million	2022	2021
Savings accounts	126,597	124,901
Credit balances on customer accounts	149,042	144,018
Corporate deposits	47,576	45,379
Other	52,642	48,864
	375,858	**363,162**

15 Other liabilities

Other liabilities		
in EUR million	2022	2021
Derivatives	79,360	31,948
Trading liabilities	1,634	845
Accrued interest	18	7
Costs payable	984	1,274
Income tax payable	99	112
Other taxation and social security contribution	81	64
Other amounts payable	6,021	4,910
	88,197	**39,161**

Derivatives includes transactions with group companies of EUR 51,849 million (2021: EUR 14,499 million).

Other amounts payable includes EUR 4,001 million (2021: EUR 2,940 million) related to transactions still to be settled at balance sheet date. As at 31 December 2022, an amount of EUR 249 million (2021: EUR 530 million) is expected to be settled after more than one year from the balance sheet date.

16 General provisions

General provisions		
in EUR million	2022	2021
Deferred tax liabilities	183	553
Pension liabilities and other staff-related liabilities	7	8
Reorganisations and relocations	237	308
Other	456	377
	883	**1,246**

As at 31 December 2022, an amount of EUR 232 million (2021: EUR 616 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		
in EUR million	2022	2021
Group companies	16,441	15,955
Third parties	(570)	993
	15,871	**16,949**

Subordinated loans by type		
in EUR million	2022	2021
Capital debentures	1,761	1,935
Private loans	14,111	15,014
	15,871	**16,949**

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

18 Equity

Equity		
in EUR million	2022	2021
Share capital	525	525
Share premium	16,542	16,542
Revaluation reserves	-862	1,617
Legal and statutory reserves	361	-548
Other reserves	25,067	27,117
Unappropriated result	913	2,661
Total equity	**42,546**	**47,914**

Share capital

	Ordinary shares (par value EUR 1.13)			
	Number x 1,000		Amount in EUR million	
	2022	2021	2022	2021
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 2022 and 2021.

Changes in revaluation reserves

in EUR million

2022	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	22	1,260	-63	292	186	-80	1,617
Unrealised revaluations	1	-112	-201			165	-147
Realised gains/losses transferred to the statement of profit or loss			-9				-9
Realised revaluations reclassified to retained earnings		23				-15	8
Changes in cash flow hedge reserve				-2,200			-2,200
Change in net defined benefit assets/liability					-131		-131
Closing balance	**24**	**1,171**	**-272**	**-1,908**	**55**	**70**	**-862**
2021							
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**

Changes in legal and statutory reserves

in EUR million

2022	Share of associates and joint ventures reserves	Currency translation reserve	Statutory reserves	Capitalised software	Total
Opening balance	385	-3,488	2,103	452	-548
Result for the year			161		161
Unrealised revaluations available-for-sale investments and other	-252				-252
Realised gains/losses transferred to the statement of profit or loss	25				25
Changes in cash flow hedge reserve	-701				-701
Unrealised revaluation property in own use	-33				-33
Changes in net defined benefit asset/liability remeasurement reserve	112				112
Exchange rate differences and other	-94	1,183			1,088
Changes in composition of the group and other changes	559			-50	509
Closing balance	**0**	**-2,305**	**2,264**	**402**	**361**
2021					
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**

The Share of associates and joint ventures reserve includes the following components: Reserve for non-distributable retained earnings of associates of EUR 938 million (2021: EUR 862 million), Revaluation reserve of associates and joint ventures EUR -1,044 million (2021: EUR -83 million), Currency translation reserve of EUR -89 million (2021: EUR 5 million) and Net defined benefit asset/liability remeasurement reserve of EUR -286 million (2021: EUR -398 million).

Due to an increase in yield curves in 2022 the interest rate swaps had a negative revaluation of EUR -701 million recognised in the cash flow hedge reserve which is presented as part of share of participating interests reserve in the parent company financial statements. Due to this negative revaluation, the share of participating interest reserve became negative, which is not allowed under Dutch law, and is replenished out of retained earnings (EUR 482 million, included in the line Changes in the composition of the group and other changes).

The Statutory reserves include non-distributable reserves of EUR 2,264 million (2021: EUR 2,103 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		
in EUR million	2022	2021
Opening balance	27,117	25,953
Transfer from unappropriated result	2,661	2,321
Dividends	-3,684	-1,207
Employee stock options and share plans	27	28
Changes in the composition of the group and other changes	-1,054	23
Closing balance	**25,067**	**27,117**

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 8,408 million (2021: EUR 8,205 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

in EUR million	2022	2021
Interest income on loans	9,511	6,865
Interest income on impaired loans	73	59
Negative interest on liabilities	650	1,211
Total interest income on loans	**10,233**	**8,135**
Interest income on financial assets at fair value through OCI	153	101
Interest income on financial assets at amortised cost	275	210
Interest income on securities at fair value through profit or loss	763	299
Interest income on non-trading derivatives (no hedge accounting)	1,650	2,037
Interest income on non-trading derivatives (hedge accounting)	1,091	1,129
Other interest income	17	19
Interest income	**14,182**	**11,930**

	2022	2021
Interest expense on deposits from banks	400	50
Interest expense on customer deposits	3,041	1,300
Interest expense on debt securities	501	489
Interest expense on subordinated loans	646	573
Interest expense on securities at fair value through profit or loss	565	274
Interest expense on non-trading derivatives (no hedge accounting)	1,869	1,846
Interest expense on non-trading derivatives (hedge accounting)	884	453
Other interest expense	41	37
Negative interest on assets	313	563
Interest expense	**8,260**	**5,585**
Net interest income	**5,922**	**6,345**

20 Investment income and results from participating interests

Investment income and results from participating interests		
in EUR million	2022	2021
Results from shares and other non-fixed income securities	141	142
Results from group companies	2,193	3,029
Results from associates, joint ventures and other participations	74	70
Impairment of associates and joint ventures	-192	-3
	2,215	**3,239**

Impairments
In 2022, Impairments of EUR 192 million is predominantly attributable to TTB of EUR 165 million.

21 Net fee and commission income

Fee and commission income		
in EUR million	2022	2021
Payment services	1,093	928
Securities business	205	284
Insurance and other broking	128	120
Portfolio Management fees	259	259
Lending business	299	279
Financial guarantees and other commitments	301	284
Other	118	93
	2,402	**2,248**

Fee and commission expenses		
in EUR million	2022	2021
Payment services	292	252
Securities business	107	99
Distribution of products (Externally)	93	76
Other	92	75
	584	**502**

22 Results from financial transactions

Results from financial transactions		
in EUR million	2022	2021
Results from securities trading portfolio	-382	787
Results from currency trading portfolio	-157	101
Results from non-trading derivatives	1,742	68
Other	-519	-484
	683	**473**

In 2022, Other includes EUR -288 million (2021: EUR -419 million) related to fair value changes on trading derivatives.

23 Staff expenses

Staff expenses		
in EUR million	2022	2021
Salaries	2,127	2,124
Social security costs	252	243
Pension costs and other staff related benefit costs	294	305
Other staff expenses	576	552
	3,249	**3,224**

Remuneration of Senior management, Management board and Supervisory board
Reference is made to Note 46 'Related parties' in the ING Bank Consolidated financial statements.

24 Depreciation, amortisation and impairments

Depreciation and amortization		
in EUR million	2022	2021
Depreciation of equipment	183	213
Amortisation of software and other intangible assets	155	166
Impairments and reversal of impairments	67	29
	405	**408**

2022 Impairments includes impairment of goodwill (EUR 32 million, 2021: nil), software (EUR 17 million, 2021: EUR 16 million) and equipment (EUR 19 million, 2021: EUR 15 million).

25 Other expenses

Other expenses

in EUR million	2022	2021
Computer costs	508	481
Office expenses	110	104
Travel and accommodation expenses	29	9
Advertising and public relations	141	134
External advisory fees	231	244
Regulatory costs	609	707
Addition/(releases) of provision for reorganisations and relocations	53	220
Other	469	623
	2,150	**2,523**

26 Taxation

in EUR million	2022	2021
Current taxation	743	682
Deferred taxation	(91)	20
	652	**701**

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

in EUR million	2022	2021
Result before tax from continuing operations	4,319	5,471
Weighted average statutory tax rate	22.4 %	23.7 %
Weighted average statutory tax amount	967	1,296
Permanent differences affecting current tax		
Participation exemption	-548	-809
Other income not subject to tax	-16	0
Expenses not deductible for tax purposes	191	135
Current tax from previously unrecognised amounts	10	61
State and local taxes	22	32
Adjustments to prior periods	5	-17
Differences affecting deferred tax		
Impact on deferred tax from change in tax rates	5	10
Deferred tax from previously unrecognised amounts	-3	-18
Write-off/reversal of deferred tax assets	21	11
Effective tax amount	**652**	**701**
Effective tax rate	**15.1 %**	**12.8 %**

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

in EUR million 2022	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	34,312	2,655	7,968	15,828	7,000	16,222	83,985
Loans and advances to customers	37,620	12,260	25,469	97,261	151,886	21,517	346,012
Liabilities							
Deposits from banks	23,088	2,555	26,115	8,227	803	9,727	70,515
Customer deposits	280,922	13,288	18,392	25,870	21,459	15,926	375,858
Debt securities in issue	1,974	4,582	7,402	5,835	8,459	11,274	39,526
Subordinated loans			760		16,243	-1,132	15,871

Analysis of certain assets and liabilities by maturity

in EUR million 2022	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

28 Assets not freely disposable

Assets not freely disposable

in EUR million	2022	2021
Equity and debt instruments	12,662	14,026
Lending	58,336	81,926
Banks	15,932	9,236
Other assets	538	733
	87,468	**105,921**

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

in EUR million	2022	2021
Guarantees	47,452	40,221
Irrevocable letters of credit	13,180	14,295
Other	0	0
Contingent debts	**60,632**	**54,517**
Irrevocable facilities	86,259	75,606
	146,891	**130,123**

Contingent debts

in EUR million	2022	2021
Group companies	27,902	23,260
Third parties	32,730	31,257
	60,632	**54,517**

Irrevocable facilities

in EUR million	2022	2021
Group companies	3	3
Third parties	86,256	75,603
	86,259	**75,606**

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 Hubs 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 2022, it is proposed that the result, insofar at the disposal of the General Meeting, will be appropriated as follows.

Proposed appropriation of result	
in EUR million	2022
Net result	**3,667**
- Addition to reserves pursuant to Article 24 of the Articles of Association	161
- Proposed to be added to the Other Reserves pursuant to Article 24 of the Articles of Association	
- Available for dividend distribution	3,506

The total dividend of EUR 3,506 million was paid in May 2022 (EUR 430 million), August 2022 (EUR 1,180 million), November 2022 (EUR 983 million) and in February 2023 (EUR 913 million) as an interim dividend.

32 Subsequent events

On 6 February 2023, a devastating earthquake with multiple aftershocks struck southern and central Turkey and northern and western Syria causing a significant tragedy for the people and is causing disruption to business and economic activity in the region. This qualifies as a non-adjusting subsequent event.

Authorisation of Parent company financial statements

Amsterdam, 6 March 2023

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

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Independent auditor's report

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

Report on the audit of the financial statements 2022 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 2022 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 2022 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 2022 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 2022;
2. the following consolidated statements for 2022: 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 company financial statements comprise:

1. the parent company statement of financial position as at 31 December 2022;
2. the parent company statement of profit or loss and the statement of changes in equity for 2022; and
3. the notes comprising a summary of the 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 N.V. 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).

We designed our audit procedures in the context of our audit of the financial statements as a whole and in forming our opinion thereon. The information in respect of fraud, non-compliance with laws and regulations, going concern, climate-related risks and the key audit matters was addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

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

Information in support of our opinion

Summary

Materiality

- Group materiality of EUR 250 million (2021: EUR 250 million).
- 4.5% of profit before taxation from continuing operations (2021: 3.7% of profit before taxation from continuing operations).

Group audit

- 83% of profit before taxation from continuing operations covered by audit procedures performed by component auditors (2021: 81%).
- 92% of total assets covered by audit procedures performed by component auditors (2021: 93%).

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Fraud, non-compliance with laws and regulations, going concern and climate-related risks

- Fraud & non-compliance with laws and regulations related risks: in our audit we incorporated the pervasive presumed fraud risk of management override of controls and the fraud risk of management override specifically over the collective loan loss provisioning.
- Going concern related risks: no going concern risks identified.
- Climate-related risks: we have considered the impact of climate-related risks on the financial statements and described our approach and observations in the section 'audit response to climate-related risks'.

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 (2021: EUR 250 million). The materiality is determined with reference to profit before taxation from continuing operations and represents 4.5% (2021: 3.7%) of that balance. 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 (2021: 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 in 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 group audit, 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 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 41 components globally, in total covering 17 countries. This resulted in a coverage of 83% of profit before tax from continuing operations and 92% of total assets. For the remaining 17% of profit before tax from continuing operations and the remaining 8% of total assets, procedures were performed at the group level including analytical procedures in order to corroborate that our scoping remained appropriate throughout the audit.

The consolidation of components in the group, the disclosures in the financial statements and certain accounting topics that are performed on 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 and hyperinflation accounting, and certain elements of the expected credit loss provisioning process.

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 identified risks of material misstatement on a group level and further set out the information that is required to be reported to the group audit team.

We performed site visits with local management and local audit teams, also to perform file reviews in The Netherlands, Belgium, Germany, Italy, Luxembourg, Poland, South Korea, and Turkey. We performed a remote file review for the USA and Australia. We visited Singapore and Australia during the year to meet local management and local audit teams to discuss the design and progress of their audit work.

For all components in scope of the group audit, we held our annual planning conference in The Netherlands. This was the first time after the COVID-19 period. Our component auditors were directly informed by the Bank CFO, Bank CRO, Global Head of Sustainability and Head of CSI on current developments. In addition, we had conference calls with these component audit teams and we attended closing meetings with management for components in The Netherlands, Belgium and Germany. 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 performing the procedures mentioned above together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about ING Bank's financial information to provide an opinion about the financial statements.

Our procedures as described above can be summarized as follows:

Profit before tax from continuing operations

83%

Covered by audit procedures performed by component auditors

17%

Covered by additional procedures performed at group level

Total assets

92%

Covered by audit procedures performed by component auditors

8%

Covered by additional procedures performed at group level

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

Introduction

In chapters 'Strategy and performance' and 'Risk management - non-financial risk and compliance risk' of the annual report and note 42 of the financial statements, the Management Board Banking describes its procedures 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 design and implementation and where considered appropriate tested operating effectiveness of the Company's internal controls that mitigate fraud and non-compliance risks.

Our procedures included, among other things, assessing the Company's code of conduct, the whistle blower process, and its procedures to investigate indications of possible fraud and non-compliance. Furthermore, we performed relevant inquiries with management, the Supervisory Board and other relevant functions, such as the General Legal Counsel and the head of Compliance and Internal Audit.

In performing these procedures, we involved our forensic specialists.

As part of our audit procedures, we:

- obtained an understanding of how the Company uses information technology (IT) and the impact of IT on the financial statements, including the potential for cybersecurity incidents to have a material impact on the financial statements;
- assessed other positions held by Management Board Banking members and/or other employees and paid special attention to procedures and governance/compliance in view of possible conflicts of interest;
- evaluated reports from Compliance and Internal Audit and investigation reports on indications of possible fraud and non-compliance;
- evaluated correspondence with supervisory authorities and regulators as well as legal letters.

Non- compliance with laws and regulations

We performed procedures to obtain an understanding of the legal and regulatory frameworks that are applicable to the Company and identified the following areas as those most likely to have a material effect on the financial statements:

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

With respect to the bank wide Know Your Customer enhancement program (the 'KYC enhancement program') as disclosed in the Management Board Banking report in order to improve governance, systems and tools around client due diligence and transaction monitoring, we inquired with senior management, the General Legal Counsel and the heads of Compliance and 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 also visited one of the Company's hubs, in Slovakia, together with our forensic specialist. This hub performs client due diligence and transaction monitoring activities on behalf of many ING Bank companies. We deepened our understanding of the work performed in this hub.

We observed that the KYC enhancement program made further progress in 2022, and the finalisation of the KYC enhancement program will continue to require ongoing attention from management, the Audit Committee and the Supervisory Board.

We evaluated the fraud and non-compliance risk factors to consider whether those factors indicate a risk of material misstatement in the financial statements.

Revenue recognition (a presumed risk)

We assessed the presumed fraud risk on revenue recognition. We disaggregated revenues and considered interest income, fee and commission income, valuation results and net trading income, and other income. We considered the relative size and nature of these revenue categories and based on that focused on interest income and fee and commission income. For both revenue categories we assessed the composition of these revenues, taking into account homogeneity, routine or non-routine characteristics, whether there is an estimation uncertainty in recognising income, whether there is significant related party involvement and whether there are complexities in the related reporting.

Based on these procedures we concluded the fraud risk as irrelevant, because the accounting of interest income and fee and commission income is predominantly based on automatically generated accruals based on static data taken from source systems and therefore contain routine transactions not subject to management judgement. As a consequence, we did not identify an incentive nor pressure for the Management Board Banking members to achieve certain results or specific finance income targets and there appears to be limited perceived opportunity to commit a material fraud in this area.

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

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Management override of controls (a presumed risk)

Management is in a unique position to manipulate accounting 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.

We evaluated the design and the implementation and were considered appropriate tested the operating effectiveness of internal controls that mitigate fraud 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, including making changes to our high-risk criteria that we applied to journal entry testing, varying the timing of audit procedures including testing of controls and a site visit to a remote entity (South Korea).

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 to banks'.

We communicated our risk assessment, audit responses and results to the Management Board Banking and the Audit Committee of the Supervisory Board. Our evaluation of procedures performed related to fraud and non-compliance with laws and regulations did not result in an additional key audit matter.

Our audit procedures did not reveal indications and/or reasonable suspicion of fraud and non-compliance that are considered material for our audit.

Audit response to going concern

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

- we considered whether the Management Board Banking'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 going concern risks;
- we inspected documentation of stress testing of the economic and regulatory capital position performed during the year by management;
- we inspected regulatory correspondence to obtain an understanding of the Company's capital and liquidity 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 Banking's going concern assessment.

Audit response to climate-related risks

In planning our audit, we considered the potential impact of risks arising from climate change on the Company's business and its financial statements. The Company has set out its commitments and ambitions relating to climate change in the chapter 'Strategy and performance' ('Sustainability at the heart') of the annual report. The Company aims to reach net zero in their own operations, to steer the most carbon-intensive parts of the loan portfolio towards net zero by 2050 or sooner, and to finance and advise specific clients in line with a net-zero economy.

Management extensively assessed how climate-related risks and opportunities and the company's own commitments and ambitions could have a significant impact on its business or could impose the need to adapt its strategy and operations.

Management considered the impact of both transition and physical risks on the financial statements in accordance with the applicable financial reporting framework, specifically the expected credit losses of loans and advances, as described in the chapter 'Risk management – environmental, social and governance risk' and the section 'Risk management – climate and environmental risks in IFRS9 models' of the annual report. Management disclosed considerations directly impacting the financial statements captions as well as the medium to longer term risk drivers that do not have a material direct impact on the 2022 financial statements.

Management prepared the financial statements, including considering whether the implications from climate-related risks and commitments and ambitions have been appropriately accounted for and disclosed. In the Supervisory Board report, the involvement of the Audit Committee and the ESG-Committee in overseeing the financial statement process in relation to climate-related risks is reflected on.

The Management Board Banking is responsible for the analysis of the impact of climate-related risks on the Company's business and operations going forward and on the financial statements.

As part of our audit, we performed a risk assessment of the impact of climate-related risks, the commitments and ambitions made by the Company in respect of climate change on the financial statements and our audit approach. In doing this we performed the following:

- To understand management's processes, against the background of ING's business and operations:
  - we made inquiries with the Management Board Banking and other senior management and inspected relevant documents to understand management's assessment of the potential impact of climate-related risk and opportunities on the Company's financial statements and the Company's preparedness for this;
  - we inquired on this topic with members of the ESG Committee and the Audit Committee of the Supervisory Board;
  - we read the minutes of meetings of the Management Board Banking and the Supervisory Board. We also inspected regulatory correspondence to obtain an understanding of management's assessment of climate risk and the related risk management thereof;
  - we performed an analysis of the external environment and obtained an understanding of relevant sustainability themes and issues relevant for ING;

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- we gained an understanding whether any current and/or future regulations may impact the Company, such as greenhouse gas emission regulations, potential increases in taxes on current products and future climate reporting obligations.

— We evaluated climate-related fraud risk factors on reporting inappropriate disclosures on climate-related risk and pressures for management to meet the climate targets, since that such targets are linked to the Management Board Banking's remuneration.

— We used our climate change subject matter experts to assist in understanding how climate-related risks and pressures for management to meet the climate targets and opportunities may affect the Company and its accounting in the current year's financial statements.

— We used our climate change subject matter experts and modelling experts to assist in gaining understanding how climate-related risks are of impact on the expected credit loss estimation, including the credit risk models, as determined by the Company.

Based on the procedures performed above we concluded that climate-related risks have no material impact on the 2022 financial statements under the requirements of the International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code and no impact on our key audit matters.

Furthermore, we have read the 'Other information' with respect to climate-related risks as included in the annual report and considered the material consistency with the financial statements, our knowledge obtained through the audit, as described above and our knowledge obtained otherwise.

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.

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 64-96 and in Note 3 and Note 7 in the consolidated financial statements, the loans and advances to customers amount to EUR 636 billion and loans and advances to banks amount to EUR 35 billion as at 31 December 2022. These loans and advances are measured at amortized cost, less expected credit losses ('ECL') of EUR 6.0 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 judgmental 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 judgment and specialised skills and knowledge required to evaluate the following elements of the overall ECL estimate:

— The judgements used to develop the PD, LGD, EAD, including model or manually determined expected future recovery cash flow assessments of individual loan provisions for impaired loans.

— Use of forward-looking macroeconomic forecasts in ECL, including GDP, HPI and unemployment rate.

— The consistent identification and application of criteria for significant increase in credit risk ('SICR') in an increased uncertain and worsened macroeconomic environment and geopolitical situation.

— Calculation of management overlays to the modelled ECL due to the increased uncertainty in the macroeconomic outlook in the global economy. These management overlays included economic sector-based adjustments in the Netherlands, second order impact adjustments for both wholesale bank and retail bank, and overlays to residential mortgages.

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 loans and advances to banks. This included controls related to the assumptions (including PD, LGD, EAD and macroeconomic forecasts), review of model outputs, the application of the 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. This included reperforming back-testing of certain models to evaluate the current model performance. In addition, we tested management overlays recorded to the ECL, including economic sector-based adjustments in the Netherlands, second order impact adjustments for both wholesale bank and retail bank, and overlays to residential mortgages. 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.

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— We assessed whether the credit risk management disclosures appropriately reflect and address the uncertainties which exist in 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 inappropriate access or changes to information technology 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. The IT environment of ING Bank evolves over time. One of these changes regards the implementation of automation to support control execution related to user access management and change management.

Due to the above, we consider the operation of IT systems relevant for financial reporting and the related internal controls a key audit matter.

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 IT technical characteristics of this part of the audit, IT auditors are an integral part of our engagement 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 application controls;

— assessed the reliability and continuity of the IT environment when 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 and change management;

— held corroborative inquiries with the personnel at the Security Operations Center and with the Company's Chief Information Security Officer (CISO).

We performed testing of operating effectiveness of user access and change management controls. We developed our understanding and tested key controls in the new automated tooling to support control execution related to user access management and change management where relevant to our audit. We performed test procedures to respond to specific risks such as the ongoing data migration to the ING Private Cloud and replacement of their global identify and access management system.

We identified areas for improvement in the control execution relating to information used in the control, interface testing and change management. Control deficiencies relate to both automated and manual 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 mitigating controls that lowered the risk of the deficiency and performed additional substantive testing.

As for the continuity of its operations and financial reporting ING Bank has established a framework to ensure operational resilience in business and IT services and to mitigate the risks related to cybercrime. We developed our understanding of key controls supporting their cyber operations. Incidents that occurred during 2022, were handled by management in accordance with that framework and without impact to ING assets.

Our observation

The combination of the tests of the controls and the 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.

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 Banking 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 the General Meeting of Shareholders as auditor of ING Bank N.V. 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 annual report in ESEF. The requirements for this are set out in the Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (hereinafter: the RTS on ESEF).

In our opinion the annual report prepared in XHTML format, including the (partly) marked-up consolidated financial statements as included in the reporting package by ING Bank, complies in all material respects with the RTS on ESEF.

The Management Board Banking is responsible for preparing the annual report including the financial statements in accordance with the RTS on ESEF, whereby the Management Board Banking combines the various components into one single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the annual report in this reporting package complies with the RTS on ESEF. We performed our examination in accordance with Dutch law, including Dutch Standard 3950N 'Assurance-opdrachten inzake het voldoen aan de criteria voor het opstellen van een digitaal verantwoordingsdocument' (assurance engagements relating to compliance with criteria for digital reporting). Our examination included among others:

— Obtaining an understanding of the entity's financial reporting process, including the preparation of the reporting package.
— Identifying and assessing the risks that the annual report does not comply in all material respects with the RTS on ESEF and designing and performing further assurance procedures responsive to those risks to provide a basis for our opinion including:
  - 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; and
  - examining the information related to the consolidated financial statements in the reporting package to determine whether all required mark-ups 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 Banking and the Supervisory Board for the financial statements

The Management Board Banking 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 Banking is responsible for such internal control as the Management Board Banking 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 Banking, 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 Banking is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, the Management Board Banking should prepare the financial statements using the going concern basis of accounting unless the Management Board Banking either intends to liquidate the company or to cease operations or has no realistic alternative but to do so. The Management Board Banking 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, 6 March 2023

KPMG Accountants N.V.

P.A.M. de Wit RA

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

KPMG

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 Banking;
- concluding on the appropriateness of the Management Board Banking'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 appropriate audit evidence regarding the financial information of the entities or business activities within the group 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.

Risk factors

Summary of risk factors

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

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

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

Risks related to the regulation and supervision of the Group

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

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

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

Risks related to the Group's business and operations

- ING may be unable to meet internal or external aims or expectations with respect to ESG-related matters.
- ING may be unable to adapt its products and services to meet changing customer behaviour and demand, including as a result of ESG-related matters.
- ING's business and operations are exposed to physical risks, including as a direct result of climate change.
- ING's business and operations are exposed to transition risks related to climate change.

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

Risks related to the Group's risk management practices

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

Risks related to the Group's liquidity and financing activities

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

Risk factors

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

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

ING Group is a holding company whose principal asset is its investments in the capital stock of ING Bank, its primary banking subsidiary. As a result, the risks applicable to ING Bank are substantially similar to those impacting ING Group.

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

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

Because ING is a multinational banking and financial services corporation, with a global presence and serving around 37 million customers, corporate clients and financial institutions in over 40 countries, ING's business, results and financial condition may be significantly impacted by turmoil and volatility in the worldwide financial markets or in the particular geographic areas in which we operate. In Retail Banking, our products include savings, payments, investments, loans and mortgages in most of our Retail Banking markets. In Wholesale Banking, we provide specialised lending, tailored corporate finance, debt and equity market solutions, payments & cash management, trade and treasury services. As a result, negative developments in financial markets and/or countries or regions in which we operate, have in the past had and may in the future have a material adverse impact on our business, results and financial condition, including as a result of the potential consequences listed below.

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

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

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

In particular, we are exposed to financial, economic, market and political conditions in the Benelux countries and Germany, from which we derive a significant portion of our revenues in both Retail Banking and Wholesale Banking, and which could present risks of economic downturn. Though less material, we also derive substantial revenues in the following geographic regions: United States, Turkey, Poland and the remainder of Eastern Europe, Southern Europe, East Asia (primarily Singapore among others) and Australia. In an economic downturn affecting some or all of these jurisdictions, we expect that higher unemployment, lower family income, lower corporate earnings, higher corporate and private debt defaults, lower business investments and lower consumer spending would adversely affect the demand for banking products, and that ING may need to increase its reserves and provisions, each of which may result in overall lower earnings. Securities prices, real estate values and private equity valuations may also be adversely impacted, and any such losses would be realised through profit and loss and shareholders' equity. We also offer a number of financial products that expose us to risks associated with fluctuations in interest rates, securities prices, corporate and private default rates, the value of real estate assets, exchange rates and credit spreads. Further, while the Covid-19 pandemic and related response measures have eased, the effects of these measures are still being felt in the financial performance and stability of certain of our business customers. As a result, their impact may continue to affect our business. We also have wholesale banking activities in both Russia and Ukraine, as well as investments in Russia, some of which are denominated in local currency. In response to Russia's invasion of Ukraine, the international community imposed various punitive measures, including sanctions, capital controls, restrictions on SWIFT access and restrictions on central bank activity. These measures have significantly impacted, and may continue to significantly impact, Russia's economy and have contributed to heightened instability in global markets and increased inflation due in part to supply chain constraints, as well as higher energy and commodity prices. Should prices remain elevated for an extended period, most businesses and households would be negatively impacted, and our business in Russia and Ukraine, as well as our broader business, may be adversely affected, including through spill-over risk to the entire wholesale banking portfolio (e.g. commodities financing, energy and utilities and energy-consuming clients).

Environmental and/or climate risks may also directly and indirectly impact ING, for example through (among other things) losses suffered as a result of extreme weather events, the impact of climate related transition risk on the risk and return profile or value of security or operations of certain categories of customer to which ING has exposure. In addition, these risks may also increase ING's reputational and litigation risk if the economic activity that ING supports is not in line with community expectations or ING's external commitments (this includes, but is not limited to, greenwashing risk).

For further information on ING's exposure to particular geographic areas, see Note 32 'Information on geographical areas' to the consolidated financial statements.

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

The Covid-19 pandemic and the related response measures introduced by various national and local governmental authorities (such as restrictions on social activity, travel, movement and certain economic activity) have had, and are expected to continue to have, adverse effects on global economic conditions, including inflation, depressed global economic growth, disrupted supply chains, manufacturing, tourism, reduced consumer spending, lower asset prices and higher unemployment levels, as well as increased volatility and uncertainty across the global economy and financial markets.

If these effects are prolonged, or if new Covid-19 variants emerge which require reimplementation of the response measures outlined above, the economies in which we and our customers and counterparties operate may experience heightened stress and an increased risk of recession, which may increase the risk of customer defaults and materially adversely affect ING's business, results, financial condition and prospects.

Additionally, as of December 31, 2022, a significant portion of our staff continue to work from home on a full- or part-time basis. If due to illness, technical limitations or other restrictions, employees are unable to work or are not able to operate as effectively and efficiently remotely as they did in the office, this may adversely affect our business, results and financial condition.

In addition, a situation in which most or some of our employees continue working from home may raise operational risks, including with respect to information security, data protection, availability of key systems and infrastructure integrity. There is also a risk that we will not be effective in implementing regulatory or strategic change programs in the current environment. The Covid-19 pandemic has led to new banking behaviour from customers. There has been an increase in the digital behaviour of our customers leading to reduced traffic in branches. Over 95% of our customers now interact with us via digital channels only. This increased reliance on digital banking and remote working may increase the risk of cybersecurity breaches, loss of personal data and related reputational risk. If any of these risks were to materialise that may adversely affect our business, results and financial condition.

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

Changes in prevailing interest rates may negatively affect our business, including the level of net interest revenue we earn, and the levels of deposits and the demand for loans. In response to rising inflation globally, central banks (including the ECB, the US Federal Reserve and the RBA and RBNZ) have begun to rapidly increase policy rates. This cycle is expected to continue throughout FY2023. This rapid rise in policy rates may result in:

- a decrease in the demand for loans;
- higher interest rates to be paid on customer deposits and on debt securities that we have issued or may issue on the financial markets from time to time to finance our operations, which would increase our interest expenses and reduce our results;
- changes to customer demand, particularly an increase in the attractiveness of certain products, such as fixed term deposits, which may lead to ING being required to pay higher rates on its liabilities;
- higher interest rates which can lead to lower investments prices and reduce the revaluation reserves, thereby lowering IFRS equity and the capital ratios. Also the lower securities value leads to a loss of

liquidity generating capacity which needs to be compensated by attracting new liquidity generating capacity which reduces our results;
- prepayment losses if prepayment rates are lower than expected or if interest rates increase too rapidly to adjust the accompanying hedges; and/or(depending on the position) a significant collateral posting requirement associated with our interest rate hedge program.

Further, a sustained increase in the inflation rate in our principal markets and related interest rate volatility may also reduce disposable income for households and may increase household and business financial stress, and therefore negatively affect our business, results and financial condition. A failure to accurately anticipate inflation on an ongoing basis and factor it into our product pricing assumptions may result in mispricing of our products, which could materially and adversely impact our results.

Despite the recent rise in policy rates, in which policy rates in various jurisdictions in which we operate have risen at a rapid pace as set out above, interest rates are still relatively low by historical standards and have been low for a prolonged period, which has resulted in, and may (if the expected rate rises do not materialise) continue to result in:

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

Each of the preceding risks, should they materialise, may adversely affect our business, results and financial condition.

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

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

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

Our global business and results are materially affected by conditions in the global capital markets and the economy generally. In Europe, there are continuing concerns over weaker economic conditions, levels of unemployment in certain countries, the availability and cost of credit, as well as credit spreads. In addition, geopolitical issues, including trade tensions between the US and China, increasing protectionism between key countries, and issues with respect to the Middle East and North Korea may all contribute to adverse developments in the global capital markets and the economy generally. In addition, Russia's invasion of Ukraine and related international response measures have had, and are expected to continue to have, a negative impact on regional and global economic conditions, including heightened instability in global markets and increased inflation due in part to supply chain constraints, as well as higher energy and commodity prices. Should prices remain elevated for an extended period, most businesses and households would be negatively impacted, and our business in Russia and Ukraine, as well as our broader business, may be adversely affected, including through spill-over risk to our entire wholesale banking portfolio, in areas such as commodities financing, energy and utilities and energy-consuming clients.

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

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

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

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

Discontinuation of interest rate benchmarks may negatively affect our business, results and financial condition.

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

The most used USD LIBOR tenors will continue to be published until 30 June 2023 to support existing contracts, with the use of USD LIBOR for new contracts only allowed in limited circumstances.

Public authorities have recognised that many contracts do not contain reference to alternative rates, or reference inappropriate alternatives, or cannot be renegotiated or amended prior to the cessation of the relevant benchmark. In response the 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 used these powers to ensure GBP and JPY LIBOR continued to be available using this "synthetic" methodology for a limited time to assist in transition. The FCA has proposed a requirement for the LIBOR benchmark administrator to publish synthetic 1-, 3- and 6-month USD LIBOR until 30 September 2024 to support those contracts not transitioned by 30 June 2023. This proposal is currently in consultation. The U.S has also passed legislation to assist in benchmark transition covering most contracts governed by U.S law that involve USD LIBOR. The legislation has the effect, for those contracts that do not include suitable "fallback" rate provisions, of amending the contractual terms to switch to the recommended fallback rate for USD LIBOR (being the Secured Overnight Financing Rate), which is economically similar to synthetic LIBOR.

Additionally, in 2022 the Polish National Working Group published a roadmap indicating that the market should be prepared for a cessation of, among others, the WIBOR reference rate in 2025. It is expected that the reform will be completed by the end of 2024, with the offering of financial products using the new benchmark (WIRON) to progress gradually in 2023 and 2024.

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

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

ING continues to monitor market developments and reform plans for other rates to anticipate the impact on our customers and any related risks.

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

Globally, inflation increased significantly during FY2022. If the increased in inflation are prolonged in our principal markets, this could have multiple impacts on us and may negatively affect our business, results and financial condition. For example, a sustained increase in the inflation rate may result in an increase in market interest rates, which may:

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

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

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

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

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

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

We are exposed to the risk that our borrowers (including sovereigns) may not repay their loans according to their contractual terms and that the collateral securing the payment of these loans may be insufficient. We may see adverse changes in the credit quality of our borrowers and counterparties, for example, as a result of their inability to refinance their indebtedness, with increasing delinquencies, defaults and insolvencies across a range of sectors. This may lead to impairment charges on loans and other assets, higher costs and additions to loan loss provisions. A significant increase in the size of our provision for loan losses could have a material adverse effect on our business, results and financial condition.

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

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

Since 2015, the EU has been discussing the introduction of a pan-European deposit guarantee scheme (‘EDIS’), (partly) replacing or complementing national compensation schemes in two or three phases. Proposals contain elements of (re)insurance, mutual lending and mutualisation of funds. The new model is intended to be ‘overall cost-neutral’.

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

Risks related to the regulation and supervision of the Group

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

ING has faced, and in the future may continue to face, the risk of consequences in connection with non-compliance with applicable laws and regulations. For additional information on legal proceedings, see Note 42 'Legal proceedings' to the consolidated financial statements. There are a number of risks in areas where applicable regulations may be unclear, subject to multiple interpretations or under development, or where regulations may conflict with one another, or where regulators revise their previous guidance or courts overturn previous rulings, which could result in our failure to meet applicable standards. Regulators and other authorities have the power to bring administrative or judicial proceedings against us, which could result, among other things, in suspension or revocation of our licenses, cease and desist orders, fines, civil penalties, criminal penalties or other disciplinary action, which could materially harm our results and financial condition as well as ING's reputation. If we fail to address, or appear to fail to address, any of these matters appropriately, our reputation could be harmed and we could be subject to additional legal risk, which could, in turn, increase the size and number of claims and damages brought against us or subject us to enforcement actions, fines and penalties.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ING Capital Markets LLC is also registered with the SEC as a security-based swap dealer pursuant to Dodd-Frank and SEC regulations enacted thereunder with respect to security-based swaps and that became required on 1 November 2021. While ING Capital Markets LLC, as a security-based swap dealer, is required to comply with SEC rules with respect to most of these requirements, SEC rules have permitted an Alternative Compliance Mechanism that allows for compliance, subject to eligibility requirements, with CFTC capital and margin rules applying to swap dealers in lieu of SEC capital and margin rules applying to security-based swap dealers. ING Capital Markets LLC has elected to use the Alternative Compliance Mechanism. However, should ING Capital Markets LLC in the future be ineligible for the Alternative Compliance Mechanism it would be subject to SEC capital and margin security-based swap dealer rules instead of the CFTC capital and margin security-based swap dealer rules which could be more capital intensive. Registration as a security-based swap dealer requires compliance with SEC regulatory requirements, which may be burdensome, impose additional compliance costs and could adversely affect the profitability of this business, as well as exposing ING to the risk of non-compliance with these regulations.

In March 2023, ING Capital Markets LLC determined that errors in its calculation of its regulatory capital resulted in ING Capital Markets LLC holding less than the minimum capital required under CFTC rules during prior periods and self-reported the issue to the CFTC and SEC. This issue could lead to regulatory investigations, enforcement actions and sanctions by the CFTC and/or SEC.

On 15 December 2021, the SEC proposed new rules that would for the first time impose public reporting requirements for some significant security-based swaps positions. The rules would apply even to trades between non-US counterparties, including ING Bank, provided that the issuer of the reference securities underlying the security-based swaps is organised in the US, the issuer of the reference securities underlying the security-based swaps has its principal place of business in the US, or the securities are in certain categories registered with the SEC.

These proposed regulations, if adopted in their current form, could constrain trading activity in security-based swaps. In addition, there are, or may be in the future, regulatory requirements or limitations related to other categories of equity derivatives, such as options or forwards, that could similarly constrain trading activity in such instruments as well. These various requirements and limitations with respect to equity derivatives generally could have a significant impact on the liquidity and utility of these markets, materially impacting ING's business in this market.

In addition, position limit requirements under Dodd-Frank applicable to the derivatives market generally for futures contracts based on any of 25 commodity futures contracts on physical commodities have been imposed by the CFTC. On 1 January 2023, these position limits were extended to certain positions in swaps that are "economically equivalent" to the enumerated futures contracts. The position limits on futures and related swaps could limit ING's position sizes in these futures contracts and similarly limit the ability of counterparties to utilise certain of our products to the extent hedging exemptions from the position limits are unavailable. In addition, position limits on swaps on the same physical commodities will become effective in January 2023, which could further limit the ability of ING and its counterparties to enter into such swaps. Such regulation of the derivative markets and market participants will likely result in increased cost of hedging and other trading activities, both for ING and its customers, which could expose our business to greater risk and reduce the size and profitability of our customer business. The imposition of these regulatory restrictions and requirements, could also result in reduced market liquidity, which could in turn increase market volatility and the risks and costs of hedging and other trading activities.

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

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

We are subject to several recovery and resolution regimes, including the Single Resolution Mechanism (SRM), the 'Bank Recovery and Resolution Directive' (BRRD) as implemented in national legislation, such as the Dutch Financial Supervision Act. The SRM applies to banks that are supervised by the ECB under the SSM, with the aim of ensuring an orderly resolution of failing banks at minimum cost for taxpayers and the real economy. The BRRD establishes a common framework for the recovery and resolution of banks within the European Union, with the aim of providing supervisory authorities and resolution authorities with common tools and powers to address banking crises pre-emptively to safeguard financial stability and minimise taxpayers' exposure to losses. Any application of statutory write-down and conversion or other powers would not be expected to constitute an event of default under our securities entitling holders to seek repayment. If any of these powers were to be exercised in respect of ING, there could be a material adverse effect on both ING and on holders of ING securities, including through a material adverse effect on credit ratings and/or the price of our securities. Investors in our securities may lose their investment if resolution measures are taken under current or future regimes.

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

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

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

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

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

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

We may be subject to US tax investigation if we fail to comply with our obligations as a Participating Financial Institution in respect of the Foreign Account Tax Compliance Act ("FATCA") and as a Qualified Intermediary in respect of other US tax regulations

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

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

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

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

The negative publicity associated with any sales practices, any compensation payable in respect of any such issues and regulatory changes resulting from such issues, has had and could have a material adverse effect on our reputation, business, results, financial condition and prospects. For additional information regarding legal proceedings or claims, see Note 42 'Legal proceedings' to the consolidated financial statements.

Risks related to the Group's business and operations

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

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

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

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

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

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

ING's business and operations may be exposed to the impacts of physical risks arising from climate and weather-related events, including heatwaves, droughts, flooding, storms, rising sea levels, other extreme weather events or natural disasters, and to the impacts of physical risks arising from the environmental degradation, including loss of biodiversity, water or resources scarcity, pollution or waste management. Such physical risks could disrupt ING's business continuity and operations or impact ING's premises or property portfolio, as well as its customers' property, business or other financial interests. These risks could potentially result in impairing asset values, financial losses, declining creditworthiness of customers and increased defaults, delinquencies, write-offs and impairment charges in ING's portfolio, etc. In particular, changing climate patterns resulting in more frequent and extreme weather events, such as the severe flooding that occurred in Western Europe in July 2021, the long-lasting bushfires in Australia in February 2021 or the severe flooding in the eastern states of Australia in early 2022, could lead to unexpected business interruptions or losses for ING or its customers.

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

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

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

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

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

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

We face the risk that the design and operating effectiveness of our controls and procedures may prove to be inadequate. Operational and IT risks are inherent to our business. Our businesses depend on the ability to process and report a large number of transactions efficiently and accurately. In addition, we routinely transmit, receive and store personal, confidential and proprietary information by email and other electronic means. Losses can result from inadequately trained or skilled personnel, IT failures (including due to a computer virus or a failure to anticipate or prevent cyber attacks or other attempts to gain unauthorised access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or impairing operational performance, or security breaches by third parties), inadequate or failed internal control processes and systems, regulatory breaches, human errors, employee misconduct, including fraud, or from natural disasters or other external events that interrupt normal business operations. Such losses may adversely affect our reputation, business and results.

We depend on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. The equipment and software used in our computer systems and networks may not always be capable of processing, storing or transmitting information as expected. Despite our business continuity plans and procedures, certain of our computer systems and networks may have insufficient recovery capabilities in the event of a malfunction or loss of data. We are consistently managing and monitoring our IT risk profile globally. ING is subject to increasing regulatory requirements including EU General Data Protection Regulation ('GDPR') and EU Payment Services Directive ('PSD2'). Failure to appropriately manage and monitor our IT risk profile could affect our ability to comply with these regulatory requirements, to securely and efficiently serve our clients or to timely, completely or accurately process, store and transmit information, and may adversely impact our reputation, business and results. For further description of the particular risks associated with cybercrime, which is a specific risk to ING as a result of its strategic focus on technology and innovation, see "We are subject to increasing risks related to cybercrime and compliance with cybersecurity regulation" below.

Widespread outbreaks of communicable diseases may impact the health of our employees, increasing absenteeism, or may cause a significant increase in the utilisation of health benefits offered to our employees, either or both of which could adversely impact our business. In addition, other events including unforeseeable and/or catastrophic events can lead to an abrupt interruption of activities, and our operations may be subject to losses resulting from such disruptions. Losses can result from destruction or impairment of property, financial assets, trading positions, and the loss of key personnel. If our business continuity plans are not able to be implemented, are not effective or do not sufficiently take such events into account, losses may increase further.

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

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

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

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

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

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

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

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

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

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

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

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

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

We routinely execute a high volume of transactions, such as unsecured debt instruments, derivative transactions and equity investments with counterparties and customers in the financial services industry, including brokers and dealers, commercial and investment banks, mutual and hedge funds, insurance companies, institutional clients, futures clearing merchants, swap dealers, and other institutions, resulting in large periodic settlement amounts, which may result in us having significant credit exposure to one or more of such counterparties or customers. As a result, we could face concentration risk with respect to liabilities or amounts we expect to collect from specific counterparties and customers. We are exposed to increased counterparty risk as a result of recent financial institution failures and weakness and will continue to be exposed to the risk of loss if counterparty financial institutions fail or are otherwise unable to meet their obligations. As a result of the Russian invasion of Ukraine and related international response measures, including sanctions and capital controls, we may be exposed to increased risk of default of counterparties located in Russia and Ukraine, counterparties of which the ultimate parent is located in Russia or may be considered effectively controlled or influenced through Russian involvement, and other counterparties in sectors affected by the response measures. Also liquidity or currency controls enforced by the Russian central bank may impact Russian companies' ability to pay. In addition, we have counterparty exposure to Russian entities in connection with foreign exchange derivatives for future receipt of foreign currencies against Russian rouble (RUB). Remaining at risk for ING at year-end 2022 is €0.3 billion local equity and €2.5 billion credit exposures booked outside of Russia, and €0.5 billion with clients in Ukraine. A default by, or even concerns about the creditworthiness of, one or more of these counterparties or customers or other financial services institutions could therefore have an adverse effect on our results or liquidity.

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

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

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

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

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

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

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

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

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

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

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

Risks related to the Group's risk management practices

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

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

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

We employ various economic hedging strategies with the objective of mitigating the market risks that are inherent in our business and operations. These risks include currency fluctuations, changes in the fair value of our investments, the impact of interest rates, equity markets and credit spread changes, the occurrence of credit defaults and changes in client behaviour. We seek to control these risks by, among other things, entering into a number of derivative instruments, such as swaps, options, futures and forward contracts, including, from time to time, macro hedges for parts of our business, either directly as a counterparty or as a credit support provider to affiliate counterparties. Developing an effective strategy for dealing with these risks is complex, and no strategy can completely insulate us from risks associated with those fluctuations.

Our hedging strategies also rely on assumptions and projections regarding our assets, liabilities, general market factors and the creditworthiness of our counterparties that may prove to be incorrect or prove to be inadequate. Accordingly, our hedging activities may not have the desired beneficial impact on our results or financial condition. Poorly designed strategies or improperly executed transactions could actually increase our risks and losses. Hedging strategies involve transaction costs and other costs, and if we terminate a hedging arrangement, we may also be required to pay additional costs, such as transaction fees or breakage costs. There have been periods in the past, and it is likely that there will be periods in the future, during which we have incurred or may incur losses on transactions, possibly significant, after taking into account our hedging strategies. Further, the nature and timing of our hedging transactions could actually increase our risk and losses. Hedging instruments we use to manage product and other risks might not perform as intended or expected, which could result in higher realised or unrealised losses, such as credit value adjustment risks or unexpected P&L effects, and unanticipated cash needs to collateralise or settle such transactions. Adverse market conditions can limit the availability and increase the costs of hedging instruments, and such costs may not be recovered in the pricing of the underlying products being hedged. In addition, hedging counterparties may fail to perform their obligations, resulting in unhedged exposures and losses on positions that are not collateralised. As such, our hedging strategies and the derivatives that we use or may use may not adequately mitigate or offset the risks they intend to cover, and our hedging transactions may result in losses.

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

Risks related to the Group's liquidity and financing activities

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

Adverse capital market conditions have in the past affected, and may in the future affect, our cost of borrowed funds and our ability to borrow on a secured and unsecured basis, thereby impacting our ability to support and/or grow our businesses. Furthermore, although interest rates are still relatively low by historical standards and have been since the financial crisis in 2008, interest rates are rising and we have experienced, and may continue to experience, increased funding costs due in part due to the withdrawal of perceived government support of financial institutions in the event of future financial crises. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures adjust to new regulations.

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

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

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

Disruptions, uncertainty or volatility in the capital and credit markets may also limit our access to capital. Such market conditions may in the future limit our ability to raise additional capital to support business growth, or to counterbalance the consequences of losses or increased regulatory capital and rating agency capital requirements. This could force us to (1) delay raising capital, (2) reduce, cancel or postpone payment of dividends on our shares, (3) reduce, cancel or postpone interest payments on our other securities, (iv) issue capital of different types or under different terms than we would otherwise, or (v) incur a higher cost of capital than in a more stable market environment. This would have the potential to decrease both our profitability and our financial flexibility. Our results, financial condition, cash flows, regulatory capital and rating agency capital position could be materially adversely affected by disruptions in the financial markets.

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

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) ongoing and residual effects of the Covid-19 pandemic and related response measures on economic conditions in countries in which ING operates (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 concerning financial services, financial economic crimes 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) ING's ability to meet minimum capital and other prudential regulatory requirements (16) changes in regulation of US commodities and derivatives businesses of ING and its customers (17) application of bank recovery and resolution regimes, including write-down and conversion powers in relation to our securities (18) 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 (19) changes in tax laws and regulations and risks of non-compliance or investigation in connection with tax laws, including FATCA (20) 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 (21) risks and challenges related to cybercrime including the effects of cyberattacks and changes in legislation and regulation related to cybersecurity and data privacy (22) changes in general competitive factors, including ability to increase or maintain market share (23) inability to protect our intellectual property and infringement claims by third parties (24) inability of counterparties to meet financial obligations or ability to enforce rights against such counterparties (25) changes in credit ratings (26) business, operational, regulatory, reputation and other risks and challenges in connection with climate change and ESG related matters (27) inability to attract and retain key personnel (28) future liabilities under defined benefit retirement plans (29) failure to manage business risks, including in connection with use of models, use of derivatives, or maintaining appropriate policies and guidelines (30) 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 (31) 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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Any forward looking statements made by or on behalf of ING speak only as of the date they are made, and ING assumes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or for any other reason.

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