2022 Annual Report

Nationale-Nederlanden Bank N.V.

nationale nederlanden

Annual Report contents

Composition of the Boards

The composition of the Management Board and the Supervisory Board of Nationale-Nederlanden Bank N.V. (NN Bank) as at 31 December 2022 was as follows:

Management Board

Composition as at 31 December 2022

A.J.M. (Marcel) Zuidam (1970), CEO and chair

C.H.A. (Kees) van Kalveen (1971), CFO[1]

P.C.A.M. (Pieter) Emmen (1969), CRO

F.E.G. (Femke) Jacobs (1980), CTO[2]

Resigned in 2022

D.C. (Dennis) Brussel (1973), CIO/CTO[3]

Resigned in 2023

C.H.A. (Kees) van Kalveen (1971), CFO[1]

Appointed in 2023

N.A.M. (Nadine) van der Meulen (1974), CFO[4]

Supervisory Board

Composition as at 31 December 2022

A.A.G. (André) Bergen (1950), chair

T. (Tjeerd) Bosklopper (1975)

A.M. (Anne) Snel-Simmons (1968)

A.T.J. (Annemiek) van Melick (1976)[5]

Resigned in 2022

D. (Delfin) Rueda (1964)[6]

1 Resignation as at 1 January 2023 by resignation letter.
2 Appointment as at 1 November 2022. Non-statutory Board member as defined by Company Internal Governance.
The Management Board includes both the statutory and non-statutory members, which is required by IAS 24. Part 9 of Book 2 of the Dutch Civil Code requires NN Bank to present only the statutory members of the Management Board.
3 Resignation as at 1 November 2022 by resignation letter.
4 Appointment as at 1 February 2023 by the General Meeting on 23 January 2023.
5 Appointment as at 1 July 2022 by the General Meeting on 23 June 2022.
6 Resignation as at 1 July 2022 by resignation letter.

NN Group and NN Bank at a glance

NN Group profile

NN Group N.V. (NN Group) is an international financial services company, active in 11 countries, with a strong presence in a number of European countries and Japan.

Led by our purpose and ambition, guided by our values and brand promise, and driven by our strategic commitments, we are committed to creating long-term value for all our stakeholders: customers, shareholders, employees, business partners and society at large.

With all our employees, we provide retirement services, pensions, insurance, investments and banking products to approximately 20 million customers. We are a leading financial services provider in the Netherlands. We provide our products and services under the following brand names: Nationale-Nederlanden, Woonnu, OHRA, Movir, AZL and BeFrank, as well as through our joint venture, ABN AMRO Verzekeringen and our partnership with ING Insurance.

Our roots lie in the Netherlands, with a rich history that stretches back more than 175 years. NN Group is listed on Euronext Amsterdam (NN).

NN Group strategy

Our purpose is to help people care for what matters most to them. Because what matters to them, matters to us.

Our ambition is to be an industry leader, known for our customer engagement, talented people and contribution to society. All parts of our business contribute to the delivery of our ambition.

NN is committed to creating long-term value for all our stakeholders. Our strategy aims to address the interests of all stakeholders, which is why we have both strategic and financial targets. Our five strategic commitments will help us achieve our ambition.

1. Customers and distribution - We see our customers as the starting point of everything we do
2. Products and services - We develop and provide attractive products and services
3. People and organisation - We empower our colleagues to be their best
4. Financial strength - We are financially strong and seek solid, long-term returns for shareholders
5. Society - We contribute to the well-being of people and the planet

Our values

To fulfil our purpose, we base our work on three core values: care, clear, commit. These values express what we hold dear, what we believe in and what we aim for. They guide, unite and inspire us. They are brought to life through our day-to-day work. Our values, which we published under the name 'NN statement of Living our Values', set the standard for conduct and provide a compass for decision-making. Every single NN Bank employee is responsible and accountable for living up to them. More information is available in the 'Who we are' section of NN Group - Our values (nn-group.com).

Key figures NN Bank

Financial

Interest income
EUR 585.8m
(2021: EUR 573.5m)

Risk costs (IFRS9)
EUR –0.8m
(2021: EUR –9.7m)

Net result
EUR 81.5m
(2021: EUR 101.8m)

Cost / Income ratio
62.9%
(2021: 59.5%)

Mortgages portfolio*
Origination EUR 8.7bn
Net growth EUR 1.3bn
(2021: Origination EUR 9.9bn
Net growth EUR 0.8bn)

Savings portfolio
Net growth
EUR 0.3bn
(2021: EUR 0.2bn)

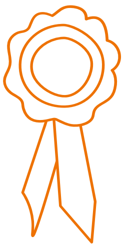
Return on equity
7.6%
(2021: 9.1%)

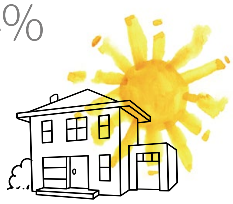
Total capital ratio
16.6%
(2021: 18.8%)

Non-Financial

Number of customers
954,000

(2021: 959,000)

Mortgage originator in the Netherlands
Top 4

(2021: Top 5)

Mortgage portfolio with energy label ‘A’
24%

(2021: 24%)

Emission intensity mortgage portfolio
25.7 kg CO_2/m²

(2021: 27.8 kg CO_2/m²)

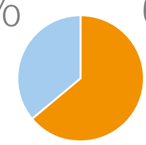
Net Promoter Score
+19.6

(2021: +21.4)

Employee engagement
7.6

(2021: 7.5)

Average number of employees
Total 1,312 FTE
(internal and external)
(2021: total 1,246 FTE)

Gender diversity in Management Team
Male 40%
Female 60%

(2021: Male 50%/Female 50%)

* The residential mortgage portfolio excludes notary amounts in transit, staged payments and accounting effects such as premiums and the fair value hedge adjustment.

NN Bank

NN Bank is a Dutch retail bank. It is a fully owned subsidiary of NN Group, and its broad range of banking products is complementary to Nationale-Nederlanden's (NN's) individual Life and Non-life insurance products for retail customers in the Netherlands.

NN Bank has two fully owned subsidiaries:

Woonnu B.V., with a registered office in The Hague and a separate AFM licence. Through Woonnu B.V., NN Bank originates mortgage loans under a separate label and via a third-party mortgage servicer.

HQ Hypotheken 50 B.V., with a registered office in Rotterdam. Through this subsidiary, NN Bank offered mortgage loans to customers via a third-party mortgage servicer. This is a closed-book mortgage portfolio.

Our Bank today

NN Bank has experienced strong growth over the past ten years and account for 6% of NN Group's 2022 operating result. We are a Top 4 retail bank in the Netherlands, serving close to one million customers in the Dutch market. We will continuously improve our services, to become more efficient, more innovative, more personal and more relevant. We have also taken major steps in the field of digitalisation. Furthermore, we enable our customers to contribute to society by helping them make sustainable choices.

We distribute our products via the direct channel (nn.nl) and via distribution partners (intermediaries). In addition, we provide administration and management services to other NN Group entities and institutional investors. This makes us an important supplier of mortgages as an asset class for NN Group.

Our frequent customer interactions support NN's strategy to boost relevance and value for all customers. We have been a distributor of NN Non-life insurance products since 2022. With this proposition, we strengthen our relationship with customers. In addition, this creates synergies by integrating marketing, customer service, IT-related activities and data that can be leveraged to enhance customer propositions.

We offer a motivating, healthy and inclusive workplace, where talented people can develop, colleagues enjoy work and efforts are valued and respected. We firmly believe that we can better serve our customers and achieve our business goals if all our people are encouraged to use their talents, skills and knowledge.

Based on our strong foundation and strategic commitments, we can build our Bank for tomorrow.

Our Bank tomorrow

We are in the midst of a transformation, and are becoming a digital and data-driven bank with industry-leading and personalised customer experiences. This means providing safe, reliable and compliant solutions for our customers together with our distribution partners. Our aim is to increasingly support our customers with relevant insights and actions, that are digitally available, 24/7.

We strive to be a sustainable business leader, and this is embedded in how we support our customers. We are future-oriented and focused on creating long-term value for our customers, employees and society. It is our purpose to help people care for what matters most to them, now and in the future.

To realise our ambitions, we focus on four strategic priorities.

1. Strong customer relationships

In order to become more relevant to our customers, we aspire to establish strong customer relationships through personal interaction. Collecting customers' data, with their consent, will be crucial to enabling us to provide relevant and personalised services. Together with our knowledge of the customer, we will be able to use these data to help customers make conscious choices that have a positive impact on their lives and the world around them. In doing so, we focus on the important moments in the lives of our customers, most notably those related to the themes Living and Financial Companion.

2. Digitalisation & data-driven way of working

In the coming years, we will continue to invest in digital products and propositions and in our secure and reliable banking platform. This enables our colleagues to serve our customers as personally as possible. We digitise and automate processes for customers, intermediaries and our colleagues. We further simplify our system landscape and work with as much standardised, cloud-based software as possible, so that our systems are always up to date.

3. Sustainable company & society

Our responsibility is about people, society, reliability and professionalism. As a Bank, we want, and need, to be compliant and in control. We will also help our customers to live more sustainably, based on the knowledge we have and the data we collect. In addition, we reflect our sustainability ambitions in our products and services. This also makes us attractive to institutional investors who invest in the green (covered) bonds we issue and the mortgage loans we offer. In this way, we strive for sustainable value creation for our customers, employees and society. We aim to be a stable and strong Bank for all our stakeholders and continue to broaden our investor base both for mortgage loans and for funding instruments.

> **"We strive to be a sustainable business leader, and this is embedded in how we support our customers.**

NN at a glance – Who we are continued

4. Learning & agile organisation
The digital transformation also requires an investment from our employees. Technology helps us, but our colleagues are crucial to realising our ambition. That is why, as an employer, we want to be the bank employees choose.

As a company, we will become more and more at home in the world of data and technology. We are a learning organisation and it is our aim to gain the competencies that belong to a digital bank.

We help our employees by offering a wide range of development options, so that colleagues can both grow personally and continue to contribute to the acceleration of our digitalisation. They make this possible with their knowledge, competencies and behaviour. With our way of working, we help teams work more and more autonomously. This places our colleagues at the helm of their own development and, therefore, the Bank's digitalisation.

> "We are a learning organisation and it is our aim to gain the competencies that belong to a digital bank.

Marcel Zuidam, CEO of NN Bank:

Striking the Right Balance

> 2022 made it even more apparent that being a financially robust bank is essential. We do this by managing our risks properly and by staying financially strong. And also by continuing to work on the services we offer to help our customers in uncertain times.
>
> **Marcel Zuidam**
> CEO of NN Bank

Marcel Zuidam, CEO of NN Bank, reflects on a challenging 2022. A year filled with a lot of uncertainty in the world which, consequently, had a major economic impact. Market conditions in 2022 emphasize the importance of remaining a financially robust bank. But it was also a year in which our focus was on building and reinforcing the foundations of the Digital Retail Bank. It meant that the Bank was able to make great strides in further digitising its customer processes, maturing the data landscape, handling capital more efficiently and keeping the Bank compliant and secure. In addition, we were able to further strengthen our relationship with our customers through a range of sustainable initiatives.

How do you look back on 2022?

Marcel: '2022 triggered a lot of uncertainty in the world. Amid challenging economic circumstances, we spent last year working hard on building and reinforcing the foundations of our Digital Retail Bank strategy. We focused on further digitalising our mortgage customer processes, maturing our data landscape, dealing with capital more efficiently and keeping our bank compliant and safe by centralising our Financial Economic Crime operations. All of these initiatives contribute to our Digital Retail Bank, and we made great strides in this area in 2022. Our Living and Financial Companion customer mission teams help customers address many societal issues such as sustainable and healthy living and becoming more financially independent. Furthermore, as a result of the digital intermediary portal going live, intermediaries now have full access to the status of their mortgage applications. And by embedding sustainability in our business operations, we can make even more of an impact. Issuing our first green covered bond and winning Green and Golden Lotus awards for the most innovative consumer service for Woonnu and our Healthy Living platform are great examples of this. But what I'm most proud of is that in these challenging market conditions, we've been able to take these huge steps with all of our colleagues. We've done this by striking the right balance when it comes to maintaining our focus and making choices for a robust bank. This gives us strong foundations from which to build in 2023.'

Given the economic uncertainties, what is your view on the impact on NN Bank? And what was NN Bank's response?
Marcel: 'We had the after-effects of Covid and the war in Ukraine, which has had a domino effect in terms of its financial consequences. High energy prices are keeping inflation high, and this is pushing mortgage interest rates. As a result, the housing market is slowing down. Both household borrowing capacity for mortgages and the average borrowing amount have fallen. That had a negative impact on the mortgage market, and consequently our mortgage production. This makes it even more apparent that being a financially robust bank is essential. We do this by managing our risks properly and by staying financially strong. And also by continuing to work on the services we offer to help our customers in uncertain times. We want to stand shoulder-to-shoulder with our customers in good and bad times. Our positioning and customer promise describe how we help customers with their financial well-being. By providing customers with insight into managing their finances, we help them make conscious choices with a positive impact on their own lives and the world around them. We also support customers when they run into financial difficulties.'

> **We are increasingly organising around societal themes. For example, through our Living and Financial Companion customer mission teams. This approach helps us to respond better to our customers' changing expectations and priorities.**

The world, the market, the life of customers, everything is constantly changing. What is NN Bank doing in response to an ever-changing environment? Marcel: 'We learned how important it is to be flexible, so that we can respond to a changing environment and can align our organisation accordingly. These things aren't new in the Digital Retail Bank strategy, but further digitalisation and automation is crucial. In 2022, we made great strides in this area and we'll be building on this further in 2023. Our Strategic Workforce Planning is a response to the future, provides a framework for the learning organisation and helps colleagues with their development. We are increasingly organising around societal themes. For example, through our Living and Financial Companion customer mission teams.

This approach helps us to respond better to our customers' changing expectations and priorities. We also ran a campaign that includes a home sustainability checker that allows customers to see how sustainable their house is and what they can do to make it more sustainable. The website has had a lot of traffic. In just a few months, there have been more than 75,000 checks. And we've also seen a massive rise in traffic to our re-named Sustainable and Healthy Living platform. The teams who work on these important societal themes build digital solutions and propositions for our customers autonomously, so that they can independently solve a problem. We've focussed a lot on attracting engineering and UX Design talent. We deliberately integrate these colleagues' knowledge and expertise into the existing teams, so that they can learn from each other and develop as teams. The experiences from this way of working are now being deployed throughout Nationale-Nederlanden in the form of a programme we call "Making NN".'

NN Bank is part of NN Group. How do you see NN Bank's role in NN Group and how has NN Bank developed this role in 2022?
Marcel: 'As NN Bank, we deliver a healthy return and thus contribute to NN Group's financial targets and ambitions. We are also seeing that we're shifting to a leading role when it comes to serving our retail customers. Increasingly, the Bank is a customer's entry point. An example of this is NN bancassurance, where we started distributing

> **By embedding sustainability in our business operations, we can make even more of an impact. Issuing our first green covered bond and winning Green and Golden Lotus awards for the most innovative consumer service for Woonnu and our Healthy Living platform are great examples of this.**

Non-life retail insurance products through our direct channel. NN Bank is therefore making an important contribution to NN Group's strategy to be more relevant to our customers.'

Shifting into the next year: what are the ambitions for 2023?
Marcel: 'In 2023, we will build further on the steps we took in 2022. We will continue to build and reinforce the foundations of our Digital Retail Bank and digitise and automate our processes to further improve the ease of doing business with us for our customers and intermediaries. We will introduce new propositions and respond to relevant themes to further strengthen our relationship with customers. We will continue to help customers with their sustainability transition. And we will take the next steps in our way of working, in creating empowered teams, in further developing our existing colleagues and in attracting new skills and new talent to build on tomorrow's bank. And we will help our customers make conscious financial choices, step by step, so they can tackle changes with confidence. We want to be the Digital Retail Bank that helps people care for what truly matters most to them. That's what are building on and what we'll carry forward in 2023.'

Report of the Management Board

2 Our operating environment

The Dutch economy recovered strongly from the Covid-19 pandemic, but new challenges have emerged. The war in Ukraine and the disruptions caused by the pandemic have led to a sharp rise in inflation. In particular the very rapid rise in energy prices affects a growing number of households. As a result, consumption growth has all but stopped. Inflation – and central banks' interest rate hikes to curb it - are also holding back economic growth. The Netherlands Bureau for Economic Policy Analysis (CPB) predicts that growth will decrease to 0.6% in 2023.

Due to the high levels of inflation, the European Central Bank (ECB) has increased interest rates for the first time since 2014. This ended an eight-year period of negative deposit rates, which at the end of December 2022 was 2%. Due to rising rates and the increasing economic uncertainty, mortgage origination volumes are expected to decline.

Housing market

A significant number of changes took place in the Dutch housing and mortgage market in 2022. There continues to be a housing shortage in the Netherlands. The sharp rise in house prices has come to an end, and a decreasing, but flattening, trend is now noticeable. However, houses are still more expensive than a year ago.

As mortgage rates have risen, affordability has further decreased. Currently, there is an increase in the number of homes for sale, which gives potential home buyers more choice than in 2021.

The sharp increase in energy prices has also impacted the housing market, as customers are now looking for more energy-efficient homes. Houses with a better energy label also sell for a higher price than those with a lower label.

The number of newly built houses increased by 4% in 2022 compared with 2021. However, the new-build sector faces a lot of challenges as the granting of permits has declined by 13%[1]. In addition to the higher mortgage rates and more economic uncertainty, the recent ruling by the Council of State that the CO_2 building exemption does not comply with European nature conservation law puts even more pressure on the granting of permits. This will result in a drop in the number of newly built homes in 2023 and might also affect their prices in 2023 as well.

Mortgage market

An increase in market interest rates has led to higher customer mortgage rates. However, continued competition in the Dutch mortgage market held back the pace of mortgage rates rises in the beginning of the year. At the end of 2022 mortgage rates had increased substantially compared with the previous year.

This significant increase in mortgage rates led to several changes in the mortgage market. The refinancing market was dominant in the low interest period, but decreased significantly in the second half of 2022, as it is no longer financially beneficial for customers to refinance their mortgage. Overall the market for new mortgages dropped substantially in 2022.

1 As of November 2022

Report of the Management Board continued

The 'meeneemregeling' enables second-time home buyers to take their current mortgage rate with them when they move house, if that mortgage rate is lower than the current market rate. More and more home owners are eager to take advantage of the 'meeneemregeling'. Finally, the higher interest rates resulted in a shift to shorter fixed-rate interest periods, with the majority of customers opting for fixed interest periods of 10 years. Previously, customers preferred the mortgages with 20- or 30-year fixed-rate periods.

Savings market
In 2022, the Dutch savings market continued to grow. However, at a slower pace compared with 2021.

Driven by rising inflation, the ECB increased its interest deposit rates, and banks followed suit. For the first time in years, savings rates have increased. By the end of December 2022, the interest rate for internet savings at NN Bank was 0.35%.

Consumer lending market
In line with the rising market rates, interest rates for consumer lending also rose in 2022.

When rates were low, customers refinanced more personal loans. Now with higher rates, this has become financially less interesting. The majority of our customers use consumer lending to renovate their houses. This deviates from the market where customers mostly use consumer lending to finance a car purchase.

Retail investments under management market
The number of investing households in the Netherlands declined in 2022. Given the mix of stock market volatility, rapidly rising interest rates and geopolitical uncertainties this is a minor downturn in a market that has witnessed an historically long period of year-on-year growth. The reason to start investing did not significantly change.

Dutch retail investors prefer execution only over any other product category, with online asset management coming in second. Online asset management customers consider the convenience of this investment product to be the most important advantage. In addition, many recognise their lack of investment knowledge, thus make use of their supplier's expertise.

Outlook
Due to higher interest rates and other market circumstances, we expect house prices to continue to decrease in 2023. Economic challenges are expected to lead to fewer houses being sold, as affordability continues to be an issue. This will affect both consumers and investors. Projects for newly built houses will face more pressure in 2023, due to the stagnation in the number of permits being granted. Furthermore, the building exemption that relates to the permitted amount of CO_2 emissions does not comply with European nature conservation law, which will increase the challenges for this sector.

We believe that the period of negative interest rates is behind us. However, other disruptions remain and are expected to persist and affect Dutch consumers in the near future. Geopolitical tensions, inflation and an expected mild recession will impact household purchasing power.

We expect that all aforementioned challenges will result in a significant decline in the market for new mortgages.

In 2023, the 10-year interest rate tenors will likely remain the primary choice among customers. In addition, making existing homes more sustainable will play a major role, due to the increased energy prices. Also, the increase in the purchase price threshold for state-guaranteed mortgages (NHG) will result in a higher percentage of state-guaranteed mortgages being originated in 2023 compared to prior years.

Report of the Management Board continued

Consumer needs

The Covid-19 pandemic accelerated the adoption of mobile banking. Digital and mobile banking services continue to be the predominant banking model. As a result, consumers have become more accustomed to digital processes and services, sometimes supported by Artificial Intelligence (AI), and they are experiencing the advantages of digital over old-fashioned manual processes. Advances in technology, big data and AI mean that customers are increasingly willing to switch to online services.

Consequently, there is a need for banks to embrace data and AI and use them to enable personal customer relationships and offer relevant products.

Given the greater transparency and comparability between products and providers, customers are more willing to switch to other financial service providers. Customers make more deliberate choices, in part based on a provider's brand or company identity and purpose. This also – and perhaps especially - applies to banks. People expect banks to contribute to a better climate and support and embrace social responsibility.

> **There is a need for banks to embrace data and AI and use them to enable personal customer relationships and offer relevant products.**

Our role in society

NN Bank focuses on helping people care for what matters most to them. We help our customers make conscious choices that have a positive impact on their lives and the world around them. We contribute to society by helping our customers make sustainable living choices and by supporting them in managing their daily financial matters. We invest in developing digital products, propositions and customer journeys in a secure and reliable banking platform.

We are also there for people who have financial difficulties. The Bank provides a tailored approach including coaching and tools intended to generate more income, reduce living expenses, reduce monthly mortgage payments or a combination of all of these.

We are involved in a coalition of creditors, the Schuldeiserscoalitie. In the coalition, large Dutch businesses work together to combat poverty in the Netherlands. The participating businesses abide by an ethical manifesto about how to deal with customers who encounter payment difficulties. NN Bank also takes part in the Nederlandse schuldhulproute (Dutch Debt Relief Route, NSR). Various organisations are part of the NSR, whose aim is to identify people with potentially problematic debts at an early stage. Companies such as banks, health and other insurers, telecom businesses, energy companies and housing corporations can identify actual or imminent payment arrears.

We strive for an excellent digital customer journey. But at the same time we realise that not everyone can or wants to deal with their bank matters digitally. That is why, for example, we have set up an Onboarding Desk. A team of specialised call agents, who help new customers through the onboarding process in a personal way. This is how we ensure that every customer feels welcome and included.

NN Bank employees are given the opportunity to get involved in people's financial well-being outside of their role at the Bank. Colleagues can do volunteer work, for example, during Money Week, aimed at teaching students how to handle their money matters. Furthermore, colleagues have the option to request a donation to a charity that they support through our 'Stichting Wij en de Maatschappij' (Together for Society) foundation.

Going forward, we will continue to work on our role in society through NN Group's global Community Investment Programme, which aims to support the financial, physical and/or mental well-being of 1 million people by 2025. For more information, please see the 2022 Community Investment Report, available on NN's corporate website, in the 'Financial Reports' section (nn-group.com).

> **"We contribute to society by helping our customers make sustainable living choices and by supporting them in managing their daily financial matters.**

Patricia Plass, Sitske Mauritsz, Arlo Hemkes:

Making Sustainability Easier

We've put a lot of effort into knowing exactly what our mortgage portfolio looks like. We have a detailed picture of our emissions.

Patricia Plass – Head of ESG Office and CEO of Woonnu
Sitske Mauritsz – Director Mortgages and Consumer Loans
Arlo Hemkes – Senior Manager at Powerly

By signing the National Climate Agreement, Nationale-Nederlanden committed to the collective goal to limit the global temperature increase to less than 1.5 degrees. As one of the largest mortgage providers in the Netherlands, NN Bank believes it has an important role in supporting and engaging customers to make their homes sustainable and healthy. Certainly by raising awareness, but above all by joining forces to make a change. Our sustainability strategy is therefore aimed at genuinely helping customers and advisors and working together to make sustainability even easier. Because at NN Bank, we believe that you can only make this transition through collaboration.

What's NN's climate goal?

Patricia: 'Among other things, NN has signed the Dutch Climate Agreement. By signing, we and many other Dutch businesses and organisations agreed to limit the global temperature increase to less than 1.5°C. To achieve this goal, we aim for net zero by 2050. This applies to our own emissions, such as the energy we consume in our offices, as well as to our products and services. We do this by closely examining our own activities, by moving our mortgage portfolio to net zero, and by helping our customers and financial advisors make the transition too. We aim for net zero in all areas by 2050 at the latest.'

Ambitious targets. How do you plan to reach them?

Sitske: 'It starts by having the right insight. So, we've put a lot of effort into knowing exactly what our mortgage portfolio looks like. We have a detailed picture of our emissions. And that underpins the next step, which is to help our customers and financial advisors make the transition. For us, it also goes much further than signing a climate agreement. We're one of the largest mortgage providers in the Netherlands and believe that we have an important role to play in supporting and engaging our mortgage customers to make their homes sustainable and healthy. Of course, that starts with awareness. But for us, it's about joining forces more than anything. We don't believe it's a transition you can make on your own.'

So, working together?

Patricia: 'Yes, and that starts within our own walls. As a bank, we want to fully incorporate sustainability into everything we do and that affects all our departments. First because it's embedded in legislation and regulation, but it's also our way to bring our colleagues along with us in the transition, and to develop new products and initiatives to serve this specific goal. This calls for coordination, which we do via the ESG office. We're also looking to work together across Nationale-Nederlanden.

Our customer mission teams are an example of how we add customer value across the entire organisation.'

Sitske: 'In addition to growing our added value by cooperating organisation-wide, we want to use our scale and volume in the move we all need to make. We're facing a huge challenge and we can only meet that challenge if we join forces. We do this by learning from each other and by sharing knowledge and expertise. Working together with the government and municipalities, for example, as well as with the sector.'

Helping customers transition is a key element. How are you doing that?
Sitske: 'By offering our insights and professional help when it comes to implementing sustainable and health related solutions in and around the home. By giving our customers peace of mind. Our Powerly proposition is a great example of that.'

Arlo: 'We've discovered that customers think sustainability is a pretty complicated topic. Many customers don't know how to make their home more sustainable in practice. They are not aware of what steps to take. Powerly guides the customer through the process: from reliable, independent and tailored sustainability advice to support during the process itself. Our trusted partners provide a lot of help with that, but customers are also free to choose their own partner. And we can also support and advise the customer to find the right partner, for example, by checking the quality standards or the price quoted. We've got reference data, because Powerly combines artificial intelligence and cadastral data.'

> "We're facing a huge challenge and we can only meet that challenge if we join forces. We do this by learning from each other and by sharing knowledge and expertise. Working together with the government and municipalities, for example, as well as with the sector.

Sitske: 'It's also important to provide insight to intermediaries who advise customers on a mortgage. Financial advisors are not energy experts. And you cannot expect them to be either. But they can add value for customers by giving the correct insight. We're also investing in that, and we're really pleased that financial advisors trust us with this: our Healthy living platform received the most votes from financial advisers in the Netherlands last year, winning us the Golden Lotus Award. And the 'Duurzaam Voordeel Hypotheek' (Sustainable Advantage Mortgage) pilot, in which our Woonnu label offers homeowners the option of making their homes sustainable by moving to an A energy label for a fixed, guaranteed price, won the Green Lotus Award.

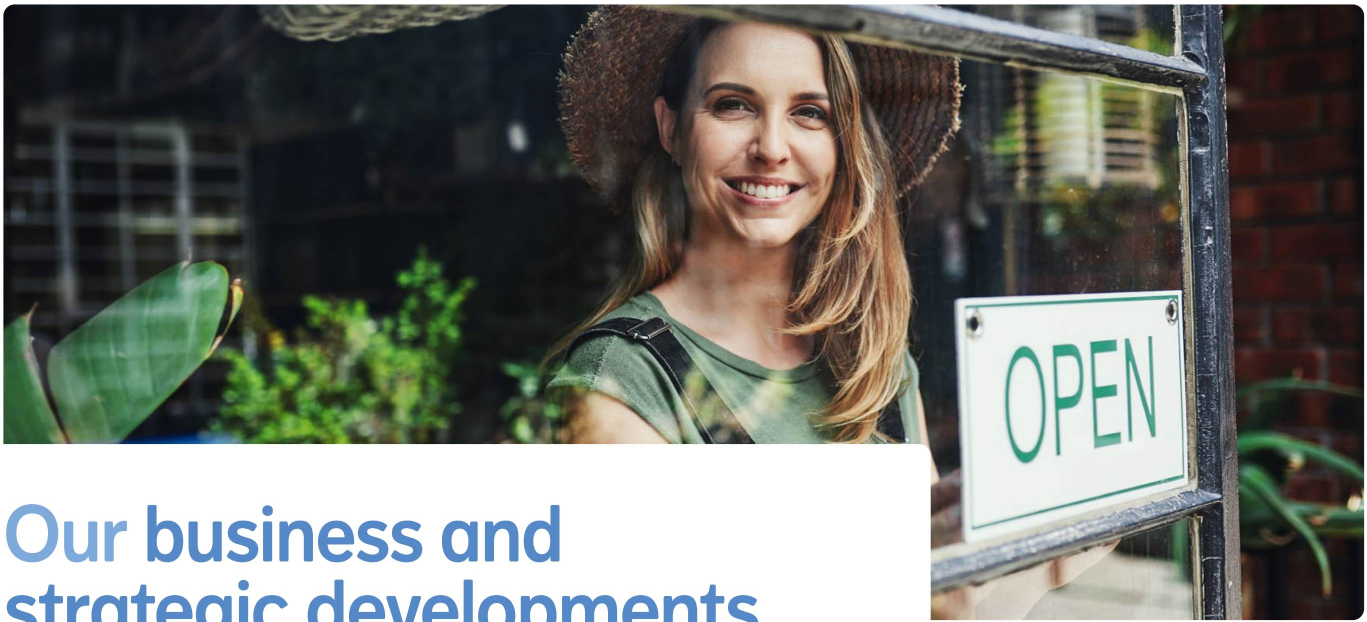
Patricia: 'Receiving the Golden and Green Lotus awards is recognition that our initiatives are really helping our customers and intermediaries. And together, we can make sustainability even easier.'

What are the steps for 2023 and beyond?
Arlo: 'We launched Powerly to our mortgage customers when sustainability was still a latent need. We experimented a lot and learned what the customer wanted and what we needed to get started and act. The increase in energy prices has made this an even more urgent issue. Now, we want to use our lessons learned to create volume and to approach the market as a whole. We want to be inclusive. I hope that in the future, no one has to say: It's something I wanted to do, but there wasn't a suitable option for me.'

> "Receiving the Golden and Green Lotus awards is recognition that our initiatives are really helping our customers and intermediaries. And together, we can make sustainability even easier.

Sitske: 'Consumers can meet on our renamed Sustainable and Healthy Living (Duurzaam en Gezond Wonen) platform, and find great inspiration. We saw a huge rise in traffic to our platform in 2022, in part because of a successful campaign that included a home checker. I think the volume we can reach as NN Bank in a community like this is a great example of using our scale in our joint sustainability goals. I can imagine that our platform will become even more popular in the future as a place where consumers can share ideas, but also as a place to meet. This will allow us to develop even more volume-led initiatives. For example, helping a whole street or an entire neighbourhood to acquire solar panels. But also by thinking about the collective storage of solar power in the summer and its recovery in the winter.'

Patricia: 'The real strength is being able to find one another more easily. We need broad-scale cooperation to achieve our common climate goals. And to make sustainability possible for everyone.'



Our business and strategic developments

We look back on a challenging year in terms of commercial and financial results, due to substantial changes in the market environment. In these dynamic and complex market conditions, we continue to focus on achieving our strategic goals.

Mortgage portfolio

Despite rapidly changing market circumstances, our share in the mortgage market remained steady in 2022.
We became the fourth-largest mortgage originator in the Netherlands (2021: fifth-largest), and our market share of new originated mortgage loans decreased only slightly, from 7.1% to 6.8% in 2022.

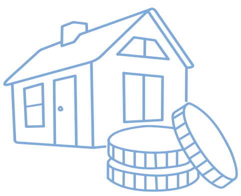
After a record level of new mortgage origination in 2021, mortgage origination dropped by 12% in 2022: EUR 8.7 billion, compared with EUR 9.9 billion in 2021. Our residential mortgage portfolio increased by EUR 1.2 billion to EUR 22.1 billion in 2022. Our portfolio and the portfolio under management for other group entities and third parties increased to EUR 55.9 billion (2021: EUR 54.6 billion).

Since its start in August 2020, Woonnu has originated EUR 2.5 billion in mortgages and has secured its place as a sustainable mortgage lender in the Netherlands. Woonnu supports sustainable living with a discount on mortgage interest for homes with a high energy label (A and B). Furthermore, Woonnu makes an important contribution to broadening our business model, by generating more fee income through internal and external institutional investors. As an independent subsidiary of NN Bank, Woonnu enables external investors to invest in the Dutch housing market, whilst also making it more sustainable. NN and Woonnu's success on the mortgage market is the result of continuing excellent collaboration with NN Bank's most important business partners, the independent intermediaries.

In December 2021, we began migrating to a new mid-office system. All mortgage advisors are now connected to the mid-office and 30% of the mortgage applications are processed through this system. The aim is to process all mortgage applications, including the more complex ones, via our new mid-office system in the first half of 2023.

Mortgage origination

EUR 8.7 billion



Since September 2022, advisors have been able to track their mortgage applications with NN Bank via the new mortgage portal at adviseur.nn.nl. With this development, we are taking the next step in digital collaboration with intermediaries. In the portal, advisors can see all their mortgage applications with NN Bank in one overview and immediately see which actions are required to complete an application. Other process statuses, like changes and cancelations, will follow soon.

Customer savings portfolio

The customer savings portfolio remains the main funding source for NN Bank. The net inflow of retail savings amounted to EUR 0.3 billion in 2022 and our savings portfolio grew by 2% to EUR 16.2 billion, resulting in a market share of 3.7% of the total savings balance of Dutch households. The savings portfolio consists of EUR 7.1 billion in internet savings, EUR 6.8 billion in bank annuities, EUR 1.8 billion in BSP-savings related to the Bankspaar Plus mortgages and EUR 0.6 billion in other savings.

Report of the Management Board continued

Consumer lending portfolio
Our consumer lending portfolio decreased by 17.5% to EUR 86 million.

Following Kifid rulings regarding variable interest claims in revolving consumer credit loans, at the end of December 2021 we announced our intention to also compensate customers for overcharged interest on such loans. In November 2022, we started to compensate customers who were overcharged interest on their revolving credit.

The consumer credit market is changing. For example, there is less demand for personal loans and alternative forms of credit are emerging. Because of this, the market for personal loans is expected to shrink in the coming years. As a result, the strategic importance of consumer lending has decreased for us, and we will cease new production in March 2023.

Retail investments under management portfolio
Our retail investments under management portfolio decreased by 23.4% to EUR 893 million.

The primary reason for this significant decline is the stock market volatility caused by rising inflation and interest rates, which go hand-in-hand with geopolitical uncertainties. Because of this, more customers chose to save instead of invest. In 2022, we improved both the customer onboarding journey and the retail investment [Beheerd Beleggen] website's performance.

Bancassurance
In 2022, NN launched bancassurance, and made NN Bank a distributor of online, execution-only, NN -label Non-life products. With this proposition, NN is able to further build upon primary relationships with customers around their daily finances. This will also help to create synergies by integrating marketing, customer service and IT-related activities. Furthermore, data can be leveraged to enhance propositions and enable cross-sell.

In terms of premium volume, the retail insurance market (fire, motor, mobility) has been increasing in the last few years. This is driven by an increased number of insurable assets (cars and houses), leading to both higher premiums and higher provisions. In this highly competitive market, traditional bancassurance propositions are growing more slowly than efficient, digital and data-driven propositions. Mandated brokers show moderate growth and market consolidation.

Growth in embedded insurance is in line with the clear customer need to make life easier with solutions that cover the full challenge and not just parts of it. Great examples, and highly relevant for NN Bank, is insurance for energy/climate-change-related assets such as solar panels.

Financial Economic Crime
To fulfil our role as gatekeeper for the financial system, we centralised our first-line Financial Economic Crime and Anti-Money Laundering activities in 2022. Furthermore, to decrease the related risks, we decided to increase the staffing for these activities

Strong data foundation
Data has become vital for customer-oriented and efficient banking. We continue to invest in a strong data foundation for our customers that ensures compliance with regulatory requirements, and strong data and AI capabilities to accelerate the growing number of data-driven projects in our organisation.

The Bank has continued to work on completing its 360° Customer View, which provides key customer insights and allows for more personalised solutions for the customer. We have broken down data silos to enable a true 360° Customer View across the organisation and product lines. This will allow for improved view of the customer's (financial) situation, more personalised cross-sell and more efficient operations. For example, we are experimenting with calculating expected processing times in customer journeys to better manage customers' expectations. A deeper understanding of the customer's points of (dis)satisfaction in a customer journey allows for process optimisation, with higher customer satisfaction (NPS) as a result. The 360° Customer View is set up in compliance with the General Data Protection Regulation (GDPR/AVG).

In addition to our strong data foundation and the 360° Customer View, we continue to apply AI models in existing operations and new propositions. Projects include AI models to assist our operational teams in preventing mortgage fraud and to assist our arrears teams in predicting mortgage defaults. We also experiment with applying AI to summarise customer calls, in order to make customer contact more efficient and customer-friendly.

> “By collectively focusing on customers’ challenges or problems instead of product propositions, the Bank is shifting more and more towards relevant and personal customer solutions.

Further improvement in customer experience

We believe it is vital to continuously improve our services and offer new ones. The Bank closely monitors changes in customer needs and responds to these changes by improving or adapting products, services and customer processes. Our customers and business partners are actively involved in many of these improvements. By offering an exceptional experience, we want to strengthen our relationship with our customers and attract customers who choose NN products and services, and ultimately want to remain an NN customer for the long term. Our efforts led to a further improvement in customer experience on several processes. By the end of 2022, the overall transactional NPS, a measure of customer satisfaction was 19.6 (2021: 21.4). Although the NPS for 2022 decreased slightly, we anticipate that the improvements made will lead to higher scores in the future.

Business improvements

We intensified internal collaboration with focus on specific customer themes, namely Living and Financial Companion. By collectively focusing on customers' challenges or problems instead of product propositions, the Bank is shifting towards relevant and personal customer solutions. An example is the new Duurzaam Voordeel Hypotheek (Sustainable Advantage Mortgage) product, which Woonnu launched in October 2022. Woonnu guarantees to improve home buyers' energy label to A for a fixed price. In anticipation of the home improvement, clients receive the label A discount on their mortgage interest rate.

We introduced NOVA, a digital budgeting app that provides direct insight into customers' financial matters in November 2020. With NOVA, the user can see exactly where, when and what purchases have been made. In 2021, the NOVA app functionality was extended to support the aggregation of multiple banks. In 2022, the app was integrated with the NN app for the first group of users. We expect to roll out this functionality as an option to all NN app users in 2023. This so-called 'PSD2 solution' will also be available for people who are not yet NN customers. With solutions like this, we can become more relevant for customers and prospects and further strengthen the customer relationship.

> “We consider it our responsibility to contribute to society and the environment. In that regard, we want to embed sustainability into all business activities.

We consider it our responsibility to contribute to society and the environment. In that regard, we want to embed sustainability into all business activities. In order to guide the organisation through this transformation, and to make sure that we comply with all ESG-related hard and soft regulation, we set up an ESG office in 2022. The ESG office's mission is to accelerate execution of our integrated ESG approach by connecting our organisation to sustainably driven businesses and society.

The scale-up of Powerly is one of the first accelerations, leading to a more impactful sustainable product proposition and a contribution to our sustainability targets. The main objective of Powerly is to make existing Dutch homes more sustainable. By offering Powerly activities to our NN mortgage customers, we are better able to help them realise their sustainability ambitions and, with that, decrease our mortgage portfolio's carbon footprint.

Report of the Management Board continued

For our customers

We continued to support customers experiencing (potential) payment problems. In 2022, there were fewer Covid restrictions, and subsequently, only 0.01% of the portfolio was in need of a payment holiday.

All customers who were granted a payment holiday in previous years received a customised arrangement to repay the outstanding balance in line with the customer's personal financial situation.

Due to unforeseen market circumstances and rising energy costs, we faced a significant rise in inflation in 2022. Nevertheless, the number of customers in arrears did not increase significantly. Where necessary, we offer customers measures, like restructuring and budget coaching, to help them through difficult times.

Awards in 2022

In 2022, we received several awards. These include the Green Lotus Award for Woonnu. InFinance awards this prize annually to the mortgage lender that is seen as the most progressive in the field of home sustainability. We also won the Golden Lotus Award in the category 'Innovation service consumer-entrepreneur' for the Healthy Living platform. Furthermore, we won the Cashcow Award 2022 in the category 'Best Online Asset Manager' for the Beheerd Beleggen online investment proposition. Beheerd Beleggen received a 5-star (out of 5) rating from comparison site Finner.nl. Finner rates all suppliers and their investment propositions. In Spain, NN Bank received an award, for the third year in a row, for our excellent customer service in relation to our savings products.

Jonne Scholten, Peter Falk, Marieke Osterloh:

Joining Forces in Customer Mission Teams

"Customer mission teams are a concrete example of putting the customer at the heart of what we do.

Jonne Scholten – Head of Transformation Office at NN Bank
Peter Falk – Product Lead at NN Bank Mortgages & Consumer Loans
Marieke Osterloh – Head of Strategy, Innovation and Marketing & Communications at NN Bank Savings & Investments

Nationale-Nederlanden wants to be a partner-in-life for customers. Every Nationale-Nederlanden business unit offers customers specific products for all situations and stages of life. By combining these products logically into new propositions, based on themes that are relevant to the customer, our new customer mission teams can provide a framework for customer needs. This is a result of the different business units joining forces, and a concrete example of putting the customer at the heart of what we do. NN Bank's Living and Financial Companion customer mission teams implement the themes that are relevant to customers. It's fully aligned with the Digital Retail Bank strategy to further strengthen customer relationships.

What's the idea behind the customer mission teams?

Jonne: 'Customer mission teams are a concrete example of putting the customer at the heart of what we do. Our customers' requirements differ according to their stage of life and the issues that are relevant to them: Financial Companion and Living. The themes that are relevant to our customers are the starting point for our services. We don't say that the Bank wants to support customers by offering them mortgage products. We say that we want to support our customers and add value for them in the relevant issue of Living.'

How are the customer mission teams put together?

Jonne: 'We've set up the customer mission teams as virtual teams. They extend beyond the current organisational structure and develop cross-sell propositions around the customer themes. We offer our customers logical product and service concept combinations across the organisation. And of course, it's great for us as a large bank/insurance provider, to have everything combined into one team. Last year centred around what we call the "quick start". Each business unit supplied people – and therefore knowledge and expertise – to the customer mission teams and we made a start. For Nationale-Nederlanden, it was a new way of working with a team compiled from the various business units and separate from the organisational structure. It's something we wanted to experience. The quick start provided us with the lessons learned of course, but there were also lots of successes. It reinforced our belief in this way of working.'

How does a customer mission team make the difference?

'A customer mission team revolves around the key question of: "What motivates our customer?" And instead of saying, "we've got this or that product", we look at a proposition that directly aligns with what the customer needs. And we find a way to meet that need. Sometimes the customer is aware of this need, but sometimes they're not. Or they're aware of it, but don't know how to address it yet. For example, in our Sustainability proposition, we inspire customers to not only make their homes more sustainable and healthier; we also help them to achieve this step by step.'

Marieke: 'Say you live in a house built in the 1930s with a G energy rating and you know that in 15 years, the children will have left home and you'll want to move into your dream home. In that case, you should already be thinking about making your current home more sustainable.
Do you know that you'll be running a risk in the future? What would it cost if you had to do all the work at once? And will you have the money then? By having insight into the customer's full financial picture and wishes, NN Bank can help contribute ideas. And because we've got all financial products under one roof – pensions, insurance and banking products – we can also offer our customers these insights and really make a difference.'

> "The quick start provided us with the lessons learned of course, but there were also lots of successes. It reinforced our belief in this way of working.

How does that work, connecting with customers based on a specific theme?

Marieke: 'Everyone has dreams and goals. Some people want to travel, while others dream of having their own business or owning a second home. Whatever their dream is, they need financial freedom to achieve it. NN Bank wants to help turn dreams into goals and assist in realising them. We do this by thinking strategically along with customers and helping them gradually gain insight into their current situation and future goals, so they can make conscious financial choices. To do this, we need to be there for our customers when they really need us. And that means responding to questions with tips, inspiring content and tooling that helps customers make the right choices. With the right products at the right time. And with a fantastic customer experience. We're constantly researching customer needs and important life events. We identify customer journeys and use lots of data analyses.'

Peter: 'From our extensive customer research and identified customer journey, we find alignment with the customer when it comes to both sustainable and healthy living. It's a very logical combination for the customer: if you install double glazing in your home, it doesn't take much to add an air vent at the same time, but doing so will improve your indoor environment straight away. And the indoor environment has a major impact on your health, an issue that has received more awareness since Covid. Our recently renamed Sustainable and Healthy Living platform provides information about the importance of good indoor air quality and offers specific tools. One of the ways we do this is by working with organisations such as TNO and the 'Longfonds' (Dutch Lung Fund). The success of our recent campaign showed that the issue resonated with our customers. And the Sustainable and Healthy Living platform was recognised last year with a Golden Lotus Award from the InFinance trade publication. This is a way for financial advisors in the Netherlands to also highlight the importance of a healthy indoor environment for their customers. It shows us that we're on the right track and it gives us the right foundation to develop further propositions.'

> "Customer mission teams focus on the issues that are relevant to our customers as the starting point for our services.

Jonne: 'Working on issues that are relevant to our customers is exactly what we're doing here. It's about knowing your customers, knowing where your customers are on their journey and what kind of support they need. Because of course you need the right products with the right conditions, but you can only truly support your customers by providing the right services at important times for them.'

So, you're continuing with this?

Jonne: 'Yes, it's just logical to have a team that works from a joint backlog and with the same customer insights. As soon as you work on a customer-centred issue, you are better aligned as a team and you create a well-oiled machine. The goal of the customer mission teams is to boost customer and intermediary satisfaction. But it's also about employee satisfaction. The people in these teams are working on the same mission and have the same belief. They're better able to respond to movements in the market and can also launch products more quickly. After an 11-month pilot, the customer mission teams will now be formalised, and the Living and Financial Companion customer mission teams will be set up at NN Bank. Thinking and acting across business units, having insight into products and processes offered by other business units: that's a win-win for our employees, our business, and above all, our customers.'

Report of the Management Board continued

Our employees

The different talents, personalities and expertise of our people ensure that we provide excellent service to our customers and that we achieve our business goals. At NN Bank, people really matter.

We want to be an attractive employer for current and future colleagues, which means that we offer more than just favourable financial remuneration. We also offer a motivating, healthy and inclusive workplace, where talent can develop, colleagues enjoy their work and where their efforts are valued and respected. The average number of NN Bank employees (internal and external) rose slightly during 2022, from 1,246 FTEs (2021) to 1,312 FTEs (2022). Of these, there were 974 internal FTE employees and 338 external FTE employees.

Employee engagement is crucial, which is why we conduct employee engagement surveys on a regular basis. The engagement score was 7.5 in 2021 and improved slightly to 7.6 in 2022. The engagement score and the underlying scores are important input for us to further improve our employee engagement.

The Bank is also working on Workforce Transformation, focused on the future of work. The world around us is changing rapidly, in part due to, changing customer requirements, digitalisation and automation. But also due to remote working and the tight labour market. Within Workforce Transformation, together with the people from our organisation, we look at how we move towards a future-proof organisation together. To remain relevant for our customers and to be – and remain – an employer for whom people enjoy working. It starts with the dot on the horizon, the objectives that we have as a bank. We want our colleagues to understand where we want to go, and we want them to be and feel involved. Also, by planning ahead, we make sure that we have the right employees, with the right skills, in the right place to achieve our strategic objectives, and to help our colleagues continue to grow.

In this regard, we aim to achieve a transformation that will bring rapid and sustainable change to our digital ambitions. In order to do so, we are creating more 'maker time' and nurturing a culture of learning by stimulating training, development and initiative. These initiatives are brought together in the Making NN programme. For example, by extending team capabilities with the right competencies and knowledge, we aim to accelerate our strategic missions.

Total 1,312 FTE

(internal and external)

Report of the Management Board continued

Our financial developments

Analysis of results

Amounts in millions of euros	2022	2021
Interest result	256.5	244.4
Gains and losses on financial transactions and other income	-0.6	1.6
Net fee and commission income	98.1	129.8
Valuation results derivatives	12.6	3.8
Total income	**366.6**	**379.7**
Impairment charges on financial instruments	-0.8	-9.7
Staff expenses	140.4	128.4
Regulatory levies	26.8	27.2
Other operating expenses	90.2	97.6
Total expenses	**256.7**	**243.5**
Result before tax	**109.9**	**136.2**
Taxation	28.4	34.4
Net result	**81.5**	**101.8**

Key figures

Amounts in millions of euros	2022	2021
Loans	20,335	21,228
Customer deposits and other funds on deposit	16,228	15,904
Net interest margin[1]	1.06%	0.98%
Cost/Income ratio[1]	62.9%	59.5%
Return on assets[1]	0.3%	0.4%
Return on equity[1]	7.6%	9.1%
Total assets	24,160	24,363
CET1 capital[2]	981	1,062
CET1 ratio[2]	15.3%	17.4%
Total capital[2]	1,066	1,148
Total capital ratio[2]	16.6%	18.8%
Leverage ratio	3.8%	4.3%
Liquidity Coverage Ratio (LCR)	183%	165%
Average number of internal FTE	974	936

1 These ratios are calculated as follows:
- Net interest margin: calculated as interest result divided by the average total assets in a year (for reference, see Note 18 'Interest result').
- Cost/Income ratio: calculated as staff expenses plus other operating expenses divided by total income.
- Return on assets: calculated as net result divided by the average total assets in a year.
- Return on equity: calculated as net result divided by the average equity in a year.

2 'Total capital' would be EUR 1,098 million, 'CET1 ratio' would be 15.8% and 'Total capital ratio' would be 17.1% after inclusion of the net result for the year 2022.

Profit or loss

The significantly changed market conditions are visible in our results. The Bank's 2022 net result was EUR 81.5 million, a decrease of EUR 20.3 million compared with 2021, resulting in a return on equity of 7.6% in 2022, down from 9.1% in 2021.

Interest result increased from EUR 244.4 million in 2021 to EUR 256.5 million in 2022, mainly driven by rising interest rates. This was partly offset by lower income from prepayment compensation. Furthermore, 2021 included the provision formed for consumer credits compensation. The higher interest result led to an increase in net interest margin from 1.0% in 2021 to 1.1% in 2022.

Gains and losses on financial transactions and other income decreased to an expense of EUR 0.6 million, compared with income of EUR 1.6 million in 2021, mainly reflecting the EUR 1.6 million in gains on bonds sold in 2021.

Fee and commission income decreased by EUR 31.7 million, as we transferred fewer mortgages to investors in NN mortgage loans. This was partly offset by higher service fees received, as the mortgage portfolio that we service increased by EUR 1.3 billion to EUR 55.9 billion.

Total expenses increased by EUR 13.2 million. Staff and other operating expenses increased by EUR 4.6 million to EUR 230.6 million. This increase was mainly caused by investments in our capabilities to combat financial economic crime and higher project investments in digitalisation. In addition, we continued to invest in our strategic priorities. The release of the loan loss provision decreased by EUR 8.9 million to EUR 0.8 million, due to increasing levels of inflation and interest rates. The cost/income ratio was 62.9%, compared with 59.5% in 2021, reflecting higher expenses and lower income.

Targets and regulatory requirements

NN Bank has set the following financial targets for 2025: a cost/income ratio below 55% and a net operating return on equity of 9% or higher on a statutory basis[1]. In addition to these financial targets, we also have capital targets:

- Total capital ratio: NN Bank aims to have a total capital ratio of 16.7% (including the 1% CCyB[2] to be introduced in May 2023)

Capital, funding & liquidity

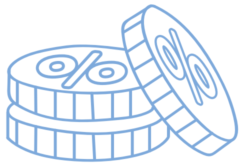
Attracting funding and liquidity from institutional and professional investors is key to the financing of our balance sheet. We aim to have access to diversified funding sources, in terms of investors, markets and maturities. Funding activities in 2022 included the following:

- In April 2022, following a successful consent solicitation, we novated all former Conditional Pass-Through (CPT) covered bonds, for a total amount of EUR 2.6 billion, to its Soft Bullet Covered Bond Programme. This allows us to reduce the operational burden and operating costs of maintaining both the CPT and Soft Bullet Covered Bond Programmes. Only the Soft Bullet Programme will be used for future issuance. The AAA ratings of our covered bonds were confirmed by Standard & Poor's after the novation.
- In May 2022, we raised EUR 500 million in secured funding, issuing a 10-year green Soft Bullet Covered Bond. This transaction was the first green covered bond issued from the Benelux and received high investor demand. Issuing a green covered bond supports our sustainability strategy to reduce our mortgage portfolio's carbon footprint. The transaction contributed to further reducing our funding costs and optimising the duration matching of the mortgage portfolio.
- We will further optimise our funding sources by integrally managing retail savings products and wholesale funding solutions. As a consequence, we expect to remain an active issuer in the wholesale markets going forward.

1 A net operating return on equity of 9% on statutory basis equals a return on equity of approximately 12% on Group reporting basis.
2 Countercyclical capital buffer

Interest result 2022

EUR 256.5 million



To manage the Liquidity Coverage Ratio (LCR), we have a large portfolio of retained RMBS notes, in addition to the on-balance-sheet High Quality Liquid Assets (HQLA) portfolio and cash. Following the redemption of Hypenn RMBS VI in December 2022, we currently have two RMBS programmes outstanding (Hypenn RMBS I and RMBS VII), that jointly provide for sufficient contingent liquidity if and when needed. We maintained a solid liquidity position, with an LCR of 183% at year-end 2022. In addition to the available liquidity as captured by the LCR, we also have other sources of liquidity available.

We have a portfolio of interest rate swaps for the hedging of the banking book. The market value of the derivatives is settled daily through variation margin. This can lead to large margin calls if the interest rates drop sharply. To offset this risk, we have had a contract with NN Group (central clearing borrowing margin facility) since August 2019, which enables us to draw a loan up to EUR 1.3 billion in order to pay for the variation margin. This facility is available for the variation margin only and cannot be used for other purposes.

> **"We will further optimise our funding sources by integrally managing retail saving products and wholesale funding solutions.**

Report of the Management Board continued

NN Bank has maintained a solid capital position, with a total capital ratio of 16.6% (2021: 18.8%) and a CET1 ratio of 15.3% at year-end 2022 (2021: 17.4%).

The decrease in the capital ratios was mainly driven by the 2021 final dividend of EUR 111.6 million paid to NN Group in June 2022. NN Bank manages its capital based on its total capital ratio and meeting all capital targets. In line with NN Group's policy to manage excess capital at Group level, dividend is paid if NN Bank's total capital ratio exceeds its target total capital ratio.

In February 2022, DNB released its updated countercyclical capital buffer (CCyB) framework. In May 2022, DNB announced the activation of the 1% CCyB by May 2023. DNB aims to reach a CCyB of 2% in normal risk environment, but has not yet decided whether the CCyB will increase to 2% by May 2024. If another increase of 1% in CCyB is announced, the target for the Total capital ratio, all other things being equal, will increase to 17.7% from May 2024 onwards. Due to this anticipated increase in the total capital ratio target, NN Bank will not propose a final dividend to be paid out from the full-year result for 2022. The total capital ratio would increase from 16.6% to 17.1% after inclusion of the full-year result as at 31 December 2022.

Non-financial statement

NN Bank is a direct subsidiary of NN Group. NN Group includes the non-financial information as per the Decree disclosure of non-financial information (Besluit bekendmaking niet-financiële informatie) in its consolidated Report of the Management Board for NN Group. Financial undertakings subject to the Decree will have to disclose the proportion in their GAR assets of exposures to Taxonomy-eligible and Taxonomy non-eligible economic activities and certain other disclosures. For this non-financial information, NN Bank will not appeal for the consolidation exemption pursuant to the Decree, but make its EU Taxonomy eligibility disclosure in the chapter, 'Sustainability matters'.

Ernst Naezer, Leontine Dekker:

The Journey to Digital Success

"By having empowered teams, we ensure that there are sufficient skills and capabilities in a team to solve the problem and that they have freedom and creativity to execute.

Ernst Naezer – Head of Engineering at NN Bank
Leontine Dekker – Domain Lead at NN Bank Mortgages & Consumer Loans

One of NN Bank's key objectives is to further improve services through digitalisation and automation. And building digital products requires not only knowledge and expertise, but also a way of working that aligns with this digital mindset. Nationale-Nederlanden calls this way of working 'Making NN'. At its heart are the 'makers': digital experts working in autonomous and empowered teams to build our Digital Retail Bank. Together, they work from a shared direction on digital solutions that make our customers happy and work for our business. Both by solving their challenges and with extras that makers add to a solution. It's all part of NN Bank's growing engineering culture and the next step in our digital transformation journey.

What does Making NN stand for?

Leontine: 'Making NN is a way of working aimed at more swiftly and efficiently developing more relevant digital products and services for our customers. Essentially, it incorporates everything we've learned so far from our way of working. The foundations were laid in the Scaling Excellence programme, an experiment at NN Bank to attract engineering and UX Design talent and to blend these new capabilities into the existing teams. This also led to a new mindset. The teams didn't want to create a feature; they wanted to think about a solution to a problem. And they wanted to do as much as possible themselves, as quickly as possible. This is where the need for empowered teams arose.'

Ernst: 'Scaling Excellence gave us more teams that were building digital solutions simultaneously. With Making NN, we are optimising the interaction between teams, so that teams can develop solutions independently as much as possible. And when they do work together, they can generate the greatest value. Making NN is basically the next step in our journey and our efforts to put our way of working on a mature footing.'

And what is that next step?

Leontine: 'To empower teams, we've launched an Objective Key Result mechanism: we define the goals we want to achieve together and the problem we want to solve. Next, we give teams the scope to interpret that goal in their own way and determine themselves how to achieve it. The objectives relate to customer or business problems that need to be solved instead of simply delivering a feature that is requested. It enables us to ask the question behind the question. "What does the customer want to achieve in this process? And is this solution the correct answer?'

Ernst: 'This approach makes better use of the team's creativity and expertise. Because if you're presented with a problem, it automatically triggers a thought process. And that's what we want. By having empowered teams, we ensure that there are sufficient skills and capabilities in a team to solve the problem and that they have freedom and creativity to execute.'

Leontine: 'We've introduced the same methodology in the Bank's Management Team to align the objectives with Digital Retail Bank strategy. This also allows a team to see how they're contributing to the bigger picture.'

Ernst: 'One of our first steps was to determine a common product vision for our customer services. And we've repeatedly defined the objectives and the key results based on this joint vision. As a result, the NN Bank-wide strategy has cascaded to the individual teams.'

How did Making NN come about?
Leontine: 'Scaling Excellence showed us that we can improve the engineering culture and the way of working in the Bank. And it's something that we believe in so strongly that we're now deploying it across the organisation. That's also when we started calling it "Making NN".'

Ernst: 'We also plan to solve more and more complex and organisation-wide issues. Whereas initially, we were able to solve relatively isolated problems within these teams, you need the entire organisation for more complex issues.'

> **"Making NN is basically the next step in our journey and our efforts to put our way of working on a mature footing.**

Leontine: 'It's a system: as a team you've got radars you can tune, but the rest of the radars need to be tuned too. The Objective Key Result mechanism ensures that everything is linked, and everyone is working on the same goals. And you're also working together on the same results for our customers.'

Why is it important to take this step?
Ernst: 'It has to do with scale. If you want to use several teams to build simultaneously, you need to make sure that the teams don't need each other all the time or must consult with each other too often, because that causes huge delays. On the one hand, the Objective Key Results provide the direction we need, and on the other hand, they ensure that teams can work independently. We've also put a lot of effort into building platforms and writing comprehensive and detailed documentation, adding "Golden Paths" that set out exactly how a team can build a scalable and secure API, for example. The team responsible for the app platform views the teams building the app functions as their customers, making sure that standard building blocks are readily and easily available for them. This is how we enable a network of teams to work autonomously and encourage ownership and entrepreneurship.'

So, direction and frameworks, but with autonomy?
Ernst: 'Yes. Teams are also responsible for understanding the significance of their products and what business results they should achieve. This automatically leads to the questions: "How do we know what we're achieving, which metrics we do need to monitor and what is their status?" This creates a much higher level of ownership and continuity within a team.'

Leontine: 'Direction helps teams to know where they're going, but they then choose which path to take. So, no-one should feel disappointed if the team decides to take a different path than expected. It's about finding a solution that our customers are happy with and that works for our business. It's the outcome that counts. Our colleagues also value this autonomy. You can see it in NN Bank's employee satisfaction survey. The score for "meaningful work" within these teams has increased.'

> **"Scaling Excellence showed us that we can improve the engineering culture and the way of working within the Bank. And it's something that we believe in so strongly that we're now deploying it across the organisation. That's also when we started calling it 'Making NN'.**

Making NN originates from a journey, so how will that journey continue?
Leontine: 'I think that it's especially important that we continue scaling the transformation. Pioneering often generates the initial mindset and learnings. But we're now entering a phase in which we're transitioning from being a genuine pioneer to embracing a standard way of working. For me, this means letting go and enjoying the process of seeing a larger environment evolve - an environment in which the right things are happening - with a small push in the right direction every now and then. But change is and remains a process. It's a journey people need to undertake to understand in full what it entails. For me, it's essential that everyone takes that opportunity to enable colleagues to go on their own journey. As an organisation, we support this.'

Ernst: 'We've called it "Making NN" because it's about the makers. If I look at the continuation of this journey, I'd like to see us spend more time on the making side. By interacting more smartly, establishing platforms and digitalising our standards, we can boost autonomy. So that our makers can build our Digital Retail Bank more quickly and efficiently and we can make our customers happy with smart digital solutions.'

Conclusions for 2022 and looking ahead

Despite a turbulent year, we reported a good financial performance. Our strong balance sheet and diversified income has enabled us to deal with the changing economic environment. Interest rates increased substantially, the mortgage market in volumes turned around, housing prices are no longer expected to increase, inflation is high and many more challenges occurred in 2022. These developments have allowed us to demonstrate our ability to adapt to these new market conditions.

We have made progress on our funding ambitions, while focusing on our sustainability deliverables. In order to realise our ESG ambition and transition to a more sustainable society, we will continue this focus in 2023 and beyond. In 2022, we also started our preparations for the upcoming Corporate Sustainability Reporting Directive (CSRD) reporting and have defined the measures to be taken in 2023 to achieve our ESG disclosure ambitions as of the 2024 financial year.

In 2023, we will continue to implement our strategy and build on our solid foundations. In addition, we will continue to focus on the resilience of the Bank and our customers. If economic uncertainty leads to more challenges for our customers, we will remain the financial companion they can rely upon. Our focus on a sustainable company and society, continued growth, a strengthened customer relationship and further development of our digitalisation, data-driven way of working and learning & agile organisation will continue to be important.

Appreciation for NN Bank employees

We are an ambitious bank in a dynamic environment. Realising our strategic goals and remaining agile and sound under these circumstances puts high demands on our employees. NN Bank's Management Board is grateful for our colleagues' commitment and devotion, for their contribution to these goals and for the results achieved in 2022. We look forward to continuing to work with our colleagues in 2023 on the Bank's strategy and our relevance for customers, society and other stakeholders.

“NN Bank's Management Board is grateful for our colleagues' commitment and devotion, for their contribution to these goals and for the results achieved in 2022.

Sustainability matters

Our vision

NN Bank aims to be a sustainable business leader in the markets in which it operates. That includes creating long-term value for our customers, colleagues and society. This offers us an opportunity to fulfil our purpose of helping people care for what matters most to them, now and in the future.

Our values care, clear, commit, and our brand promise, You matter, guide our actions. Our strategic commitments, focus on promoting the well-being of people and the planet. We do business with the future in mind and aim to contribute to a world in which people can thrive for generations to come.

Our sustainable strategy

Sustainability is one of the cornerstones of our strategy and strategic decision-making. It is a core component of our Digital Retail Bank vision. The Bank focuses on two key topics that will have a profound impact on the lives of our customers and the way they make financial decisions:

1. Customer empowerment:
   We want to provide customers with the tools and resources needed to make better informed financial choices and exercise greater control over their personal financial situation. This includes helping them reduce individual housing and energy costs by providing them with insights and facilitating solutions.
2. Climate change and environment:
   - We will steer our banking product portfolio, including our HQLA investment portfolio, towards net zero by 2050 or sooner, to align with the Paris Agreement 1.5°C pathway. To better serve our customers, we will pro-actively develop products and services that support our customers through the challenges of these transitions.
   - We aim to reach net zero in our own operations by 2040 or sooner, in accordance with NN Group's sustainability goals.

Our governance

To achieve our sustainability ambitions, we must have an organisational structure that ensures our sustainability strategy is sufficiently embedded. In 2022, NN Bank set up an Environmental, Social and Governance (ESG) Office that provides ESG knowledge, programme management and monitoring of NN Bank's ESG strategy. The Bank's CEO is accountable for ESG matters. The Management Team is responsible for strategic direction and implementing the ESG strategy. The Supervisory Board performs structural oversight of ESG issues on the Board level.

In addition to having a clear organisational structure, it is crucial to have a clear scope. Therefore, we have both a product- and a customer-activation scope for each of NN Bank's business lines. The customer activation scope aims to activate our current and future customers to take steps towards sustainability. The product scope is focused on sustainably organising NN Bank's products and services.

We are in the process of finalising key metrics for both scopes. This will enable us to monitor progress and performance as we work towards net zero. We will also use these metrics on a continuous basis to evaluate our own performance and progress in relation to our peers and other relevant benchmarks.

Climate Change and Environment

Climate and environmental risks

In recent years, the impact of climate change has become increasingly tangible all over the world. Temperatures and sea levels are rising, storms are intensifying, floods are more common and heat waves or droughts are more frequent. Supervisory authorities are paying increased attention to ESG risks – sometimes called 'sustainability risks' – and these risks are steadily gaining importance in banks' risk management processes.

In response to these developments, NN Bank formulated an ESG roadmap that outlines the Bank's contribution to mitigating climate change and environmental risks, aligned with supervisory guidelines and regulatory requirements. The roadmap addresses the entire Bank, including risk management. Our primary risk management areas comprise the Risk Control Cycle, Risk Strategy, Risk Appetite and NN Bank Policies.

Sustainability matters continued

Climate change and emerging environmental developments pose risks to NN Bank's products, customers and operations. They require the ability to adequately adapt to new circumstances, as well as market and regulatory expectations. This means considering the increasing risks of, for example, flooding and drought, but also the increasing risk that the Bank could become (in)directly linked to violations of environmental standards through investments, business partners, products or customers. Another risk lies within the rapidly changing environment (e.g., with regards to policies) and can occur if new external developments are missed and/or the interconnectedness of climate and environmental themes are misunderstood.

Risk profile

NN Bank aims for prudent ESG risk management by fully embedding it into its risk management frameworks. As part of scenario analysis and stress testing, NN Bank has undertaken stress tests to cover climate risk from both physical- and transition-risk perspectives. In both cases, the Bank's capital adequacy was well above the minimum regulatory requirements.

In addition, NN Bank assessed foundation damage due to pole rot, and analysed flood risk for its entire NN Bank-originated mortgage portfolio. This was part of our first attempt to quantify climate risk on several levels and in addition to stress-testing. In 2023, we will continue to develop insights into ESG risks and further include them in the Bank's risk processes.

Our climate journey so far

- **July 2019** – NN Group signs the Dutch Climate Commitment
- **June 2020** – NN Group announces its ambition to align with Paris Agreement 1.5°C target and transition its investment portfolio to net zero by 2050
- **August 2020** – NN Bank launches WoonNu
- **May 2021** – NN Bank and WoonNu founding members Energy Efficient Mortgage (EEM) NL Hub
- **June 2021** – NN Bank establishes its Green Bond Framework
- **September 2021** – NN Bank issues first Green Bond
- **October 2021** – NN Group signs the Net-Zero Insurance Alliance
- **Januari 2022** – NN Bank develops ESG strategy
- **May 2022** – NN Bank issues first Green covered Bond in the Netherlands
- **September 2022** – NN Bank becomes PCAF NL chair
- **October 2022** – NN Bank launches sustainability campaign for homeowners
- **December 2022** – NN Group publishes net-zero targets, incl. emission reduction target on mortgages book

Sustainability matters continued

Our actions

1. Spark customer activation with an innovative platform

We aim to engage our customers through a platform for relevant sustainability propositions, information and tools, including financial solutions. Recently, we developed several propositions (e.g., Powerly and Better Living [Beter Wonen]) to provide customers with actionable insights and professional assistance in implementing sustainable and healthy living solutions in and around their homes.

2. Develop new mortgage-specific propositions and services

To better serve our customers, we will develop products and services that support their transition to a more sustainable house. This includes specific product propositions that offer new mortgage customers assistance and incentives to make their homes greener, such as the Woonnu label introduced in 2020. To ensure that both our existing and new customers are motivated and encouraged to improve the sustainability of their homes, we will assess, and when necessary and possible adjust, our mortgage-related products' policies. As we develop new, mortgage-specific propositions and services, we will focus on safeguarding an inclusive transition by empowering all customers, including our more vulnerable ones.

3. Leverage NN Bank's Green Bond Framework

NN Bank issues green bonds under its Green Bond Framework in order to align the Bank's funding strategy with its ESG strategy. The framework, with a focus on green buildings, allows NN Bank to raise sustainable financing that meets regulatory criteria and market best practices with regard to sustainability. It is fully aligned with the ICMA Green Bond Principles and recommendations from the EU Taxonomy.

The Green Bond Framework reflects NN Bank's commitment to sustainability and contributes to the Dutch Climate Agreement and the development of sustainable markets. We fund assets that mitigate climate change by reducing emissions, and thereby make a positive impact that will help steer the total mortgage portfolio emissions towards intermediate target levels and ultimately achieve our net-zero ambition. Separate reporting on the Green Bond portfolio, assets and climate impact is available on NN's corporate website (nn-group.com).

4. Evaluate and adjust all other products to help customers

We believe we can also play a role in initiating and driving sustainability in our savings and retail investment under management products. For example, by offering SFDR article 8 products in our investment portfolio. But also by developing relevant content for our customers in presentations, webinars, blogs and videos.

5. Contribute to (sector) initiatives and partnerships

To underline our ambition, NN Group endorses various commitments, such as the Commitment of the financial sector to the Dutch Climate Agreement (Klimaatakkoord). NN Group is also a member of the UN Principles for Sustainable Insurance and the UN Global Compact.

To strengthen our customer propositions, NN Bank has joined various initiatives to gain and share knowledge and expertise on healthy and sustainable living. For example, we are a partner of 'Gezond Binnen' (Healthy Indoors), actively working together with TNO (Netherlands Organisation for Applied Scientific Research) and Longfonds (Lung Funds). We have also entered into a network initiative with The Green Village (Delft University of Technology). In addition, we will further intensify our cooperation with financial intermediaries who play a pivotal role for us in the sustainability transition.

High-quality, standardised data is essential to ensuring consistent reporting on our assets, allowing us to gain additional insight into our mortgage portfolio to help steer towards decarbonisation. In this respect, we

work with industry peers in the Partnership for Carbon Accounting Financials (PCAF) and the EEM NL Hub, which NN Bank and Woonnu helped to initiate, to develop harmonised standards and frameworks for energy-efficient mortgages and carbon footprint measurement.

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Our carbon footprint

In our 2022 carbon footprint analysis, we included the gross mortgage portfolio originated and/or serviced by NN Bank, as represented on the NN Bank balance sheet. This amounted to approximately 100,000 homes, with a total value of EUR 21.7 billion.

We account for the scope 1 and 2 emissions of each house (i.e., the natural gas used to heat the house + the electricity purchased by the occupant of the house = the energy consumed by the building occupant). In 2022, we updated our carbon footprint methodology and data sources. We measure the carbon footprint of every house based on energy label, floor space, building type and corresponding emission factor. Our previous methodology was based on estimated building energy consumption per energy label and average emissions factors specific to the respective energy source.

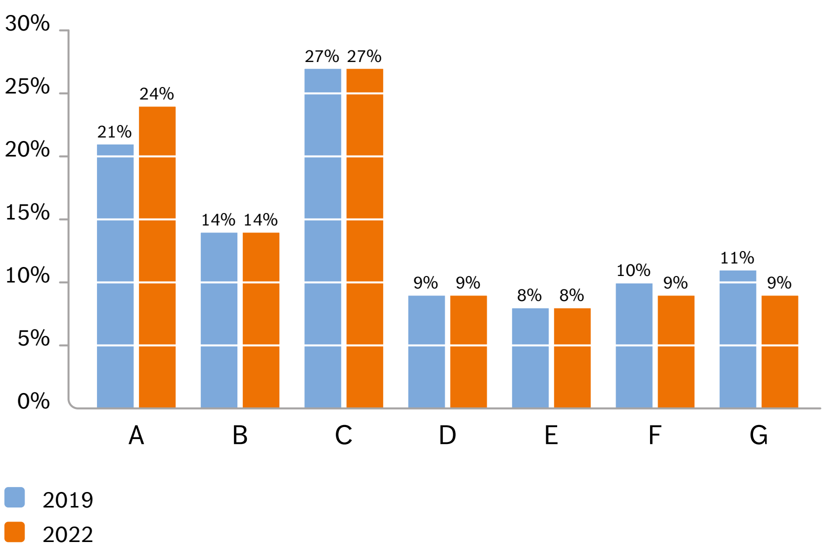
The new methodology has been aligned with participants in the PCAF NL Mortgages working group, which worked on instructions and principles for consistent carbon measurement. These instructions and principles draw on data from public data sources. The new method, combined with better data availability, achieves a PCAF data quality score 3 (scale from 1-5, with 1 being the highest quality) whereas the previous method had a quality score of 5. By improving the monitoring of household CO_2 emissions, we bring the results closer to the actual emitted emissions.

We have adjusted last year's reported financed emissions to ensure comparability.

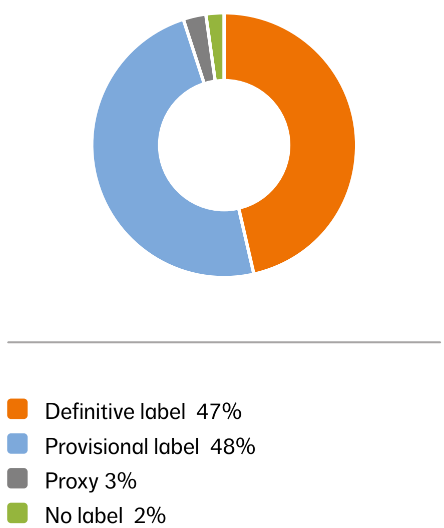
The energy label remains an important data input for the methodology. The chart below shows the energy label distribution of NN's mortgage portfolio. Compared to three years ago (2019), when we first gathered this information, the share of label A in our portfolio has increased from 21% to 24%, labels B and C remained unchanged, labels D, E, F and G (taken together) declined from 38% to 35%.

As shown in the graph below, about 47% of the houses in our mortgage portfolio have a definitive energy label. If no definitive energy label is available, we matched the addresses with a provisional energy label (48%), as this currently is the best estimate available. For the rest of the mortgage portfolio, we looked at the building year of the property. Based on the building year and the corresponding building standards at that time, an energy label could be assumed for some properties (3%). For a small number of properties (2%), we could not make a match at all due to missing information.

NN Bank portfolio: Energy label distribution
(based on number of houses, comparative figures 2019–2022)



NN Bank portfolio: Basis of label choice



Sustainability matters continued

Carbon emission figures

Year	Total carbon emissions	Attribution factor	Total financed carbon emissions	Carbon intensity	Carbon intensity	Data quality indicator
	kilotonnes CO_2e		kilotonnes CO_2e	per EUR million	per m²	based on PCAF
2021 (old method)	384	57%	221	11	n.a.	5
2021 (restated)	350	69%	237	12	27.8	3
2022	329	67%	215	10	25.7	3

Emissions are attributed to NN Bank according to the loan-to-value (LTV) ratio. The LTV used is the current loan-to-original-market-value ratio, which is the net outstanding mortgage amount divided by the original property value. If these original values are not available, the latest available property value will be used as denominator. We also take into account the latest available market value when improvements have been made to the property.

Emissions were previously attributed to the current loan-to-indexed-market-value ratio. However, our new approach is more aligned with the global PCAF Standard, which recommends using the original property value to dampen the volatility that an LTV attribution approach brings in the financed emission figures.

Carbon emissions over 2021 were recalculated based on the changes to our methodology. This resulted in a difference compared to our previous report, mainly explained by our use of original market values in the attribution factor instead of indexed market values used previously. The restated total carbon emissions of 350 kilotonnes CO_2e are 9% lower compared to the old methodology figure of 384 kilotonnes CO_2e due to the methodology change.

In 2022, using the new methodology, the total carbon emissions amounted to 329 kilotonnes CO_2e. This translates to an emission intensity of 10 tonnes CO_2e per EUR million. Compared to 2021 (restated figures), the decline is mainly due to a lower attribution factor and lower emission factors, which improved by 7% in 2022 as energy production in the Netherlands became more sustainable.

Furthermore, to align with CRREM, SBTi and the 1.5°C pathway, we also calculated the CO_2e per square metre, which NN will use going forward for target-setting and to monitor progress towards our net-zero ambition. We used data from Kadaster to convert the current emissions to this metric. For 2022, this figure is 25.6 $kgCO_2/m^2$, which is an improvement of 7% compared to the 2021 figure of 27.8 $kgCO_2/m^2$.

Limitations and next steps

The method used is based on theoretical average consumption data and not on actual consumption data. The PCAF prefers that institutions work with actual consumption data. This can ensure that a PCAF data quality score of 1 can be achieved. The Dutch financial institutions that are part of the PCAF – including NN – are presently exploring ways to obtain actual consumption data.

Our approach to mortgage target-setting

Together with other financial institutions within PCAF, we developed a model to calculate the carbon footprint of a mortgage portfolio. The model covers the absolute scope 1 and scope 2 emissions related to the energy use of the property financed through the mortgage (i.e., the natural gas used to heat a building + the electricity purchased by the owner/ occupant of the building = the total energy consumption of the building). Construction emissions are not taken into account.

Methodological decisions
CRREM's scenario is specific to real estate and mortgages, meaning it considers the sector's carbon budget and relevant technological developments in the decarbonisation pathway. While various pathways can be analysed, we have chosen the available 1.5°C pathway for the Netherlands, as it represents the current and expected emission intensity more accurately than a global or European pathway.

As CRREM uses physical emission intensity per square metre of a building, we use data from the Dutch Land Registry (Kadaster) to convert current emissions from our residential mortgage portfolio to this metric.

External dependencies
The work to model decarbonisation pathways for residential mortgages in the Netherlands provided us with important insights. First, the CRREM (Netherlands) 1.5°C scenario suggests an average CO_2 footprint per household equal to an energy label A+ footprint in 2030, based on the currently used methodology. At year-end 2021, 29% of NN's mortgage portfolio was label A or better (provisional and definitive labels, source: RVO). This shows that there is still substantial progress to be made.

Second, the model shows us that we also depend on government policy and action. Decarbonisation of the residential housing market can be achieved by greening the electricity grid. The Dutch government aims to accelerate the availability of renewable energy, with a target of a 70% renewable share by 2030. In addition, the government can provide subsidies and financial incentives to support homeowners in the sustainability transition of their homes.

External factors and ability to influence
As part of the sustainability target-setting process, NN Bank has made an inventory of all external dependencies. It provides us with input to continue developing our strategy. For instance, we believe that societal impact will be a determining factor in the speed of decarbonisation. In the current environment, we see broader societal challenges emerging. Households that are confronted with rising energy bills have an incentive to improve their homes' energy efficiency. Financial room to do so is limited, however, because of the rising cost of living. Home improvements are also hindered by the lack of a technically schooled labour force and materials. As a financial institution, we can support awareness and educate homeowners as they upgrade their homes, as well as provide the finances to do so.

Data accuracy is key to determining our progress and reaching our climate ambitions. We depend on proxies for energy labels, as in the Netherlands only 57.5% of homes have a definitive label (Source: RVO, per January 2022). Improved data availability and accuracy will help NN Bank gain additional insights into our portfolio and will provide more opportunities to steer our portfolio towards decarbonisation.

Furthermore, a standardised approach and data collection would enhance comparability and collaboration, which could support target realisation. Whilst we are collaborating with other financial institutions, we also see opportunities to cooperate more with the government to help address these challenges.

Finally, while we aim to set our targets according to the best scientific practices currently available, our targets and pathways are likely to change as new information, methodologies, technologies and science emerge. Our approach will also evolve as we improve our data gathering, analysis and reporting.

Social impact

Goverment action

Data accuracy

Technological advancements

Market standardisation

Public awareness and education

Supply chain developments

Availability of labour

Pricing effects

Sustainability matters continued

EU Taxonomy

The Taxonomy Regulation is a unified classification system for sustainable economic ('green') activities, which was established by the European Commission as part of the 2018 EU Green Deal.
NN Bank's activities directed towards providing retail customers with mortgage loans are directly linked with Taxonomy-eligible economic activities as described in the Taxonomy Regulation and its Delegated Acts. The exposures to Taxonomy-eligible and Taxonomy non-eligible activities and the related proportion of total assets (percentages) are shown here:

	2022 Amount	2022 Proportion	2021 Amount	2021 Proportion
Exposures to	in thousands of euros	of GAR assets	in thousands of euros	of GAR assets
Taxonomy-eligible economic activities	20,398,065	93.4%	21,274,756	93.2%
Taxonomy non-eligible economic activities	938,947	4.3%	974,268	4.3%
Non-NFRD counterparties	255,570	1.2%	265,996	1.2%
Derivatives	46,675	0.2%	9,599	0.0%
On-demand interbank loans	39,275	0.2%	63,394	0.3%
Other	170,144	0.8%	234,617	1.0%
Total GAR assets	**21,848,676**	**100%**	**22,822,631**	**100%**
Trading portfolio	0		0	
Sovereigns & central banks	2,327,436		1,552,476	
Total assets	**24,176,112**		**24,375,107**	

At year-end 2022, EUR 20,398 million of the total assets on the balance sheet of EUR 24,176 million are EU Taxonomy-eligible. This corresponds to 84% of total assets on the balance sheet being exposed to EU Taxonomy-eligible economic activities. The disclosed exposures are based on actual information from the Bank's records and can further be explained as follows:

- 'Non-NFRD counterparties' comprise parties not subject to Taxonomy Regulation, e.g., counterparties outside the EU, which are not subject to NFRD requirements
- 'Derivatives' relates to derivatives held for fair value hedge accounting, balanced guaranteed swaps and interest rate swaps not used in hedge accounting
- 'On-demand interbank loans' comprises current account and accrued interest with banks
- 'Other' comprises intangible assets and other assets

The 'Sovereigns' counterparties are defined as 'General government', supranational issuers and central banks in regulatory reporting and are excluded from both numerator and denominator, since there are not yet adequate eligibility calculation methods available. Local government counterparties are for example municipalities and are assessed as either 'Taxonomy-eligible' or 'Taxonomy non-eligible' activities. NN Bank did not use estimates and considers counterparties as non-eligible in the case where an underlying counterparty has not yet disclosed its taxonomy eligibility. For the relevant economic activities, the Bank is analysing its contribution to climate change mitigation based on the technical screening criteria, leading to alignment expressed in a Green Asset Ratio (GAR).

Corporate governance

General

NN Bank has a two-tiered Board system, which comprises a Supervisory Board and a Management Board (the Boards). The members of the Audit & Risk Committee have been appointed from among the Supervisory Board members. The task of this committee is to prepare the decisions of the Supervisory Board on audit issues, risk management and financial reporting. The Management Board determines, and is responsible for, NN Bank's mission, strategy, policy and objectives. It focuses on business continuity, taking into account a balanced assessment of customer, investor and employee interests. The Supervisory Board advises the Management Board and supervises the Management Board's pursuit of policy and performance of its duties and the company's course of affairs.

The general meeting of NN Bank (General Meeting) appoints the Statutory Management Board members.

The NN Bank Management Board consists of four members: a CEO, CFO, CRO and a CTO. The CTO is a non-statutory member of the Management Board as per NN Bank's Articles of Association and has no statutory role within the Management Board.

The governance and control structure for NN Bank forms the basis for its sound management and is founded on the following principles:

- A governance structure based on a Management Board, with supporting committees authorised to establish policies, set limits and organise checks and balances within the strategic mandate of NN Group
- An independent risk management function, responsible for implementing an adequate framework for risk and control policy, directly anchored in the Management Board via the CRO
- An adequate policy framework that guides the mechanics involved in placing the organisation on an operational footing, set out in the NN Group policy framework, unless waived by NN Group
- The embedding of the policy framework, guidelines and procedures in the Three Lines of Defence model

In order to preclude potential legal sanctions, financial losses and reputational damage, NN Bank's policy guidelines are regularly reviewed and adjusted. Each policy area has an owner, who is responsible for establishing and maintaining the specific guidelines within the policy area concerned. The specific policy guidelines also give attention to how they relate to existing NN Group policy in the areas concerned.

Composition of the boards, diversity and inclusion

NN Group aims to have an adequate and balanced composition of its Boards. In order to ensure such composition at all times, several relevant selection criteria are balanced and (re)appointments to these Boards are made on the basis of harmonised policies and in accordance with legal and regulatory requirements.

Although the statutory target figure regulation as previously included in the Dutch Civil Code expired on 1 January 2020, NN Group continued to (voluntarily) apply gender diversity targets for the Boards in scope of the former regulation. As of 1 January 2021, NN Group aims to have a gender balance of at least 40% women and 40% men for its Boards. As of 2021 NN Group also has a target to have at least 40% women in senior management positions. In 2021, these positions included the Management Board and managerial positions reporting directly to a Management Board member. To further improve and strengthen the impact of its gender diversity ambition, NN Group extended the scope of the target in 2022 to include all senior managerial positions reporting to a business unit CEO, in addition to the Management Board and managerial positions reporting directly to the Management Board.

In addition, in 2022, a target was set to have at least 40% women in Management Team positions within each Dutch NN Group company in scope of the Gender Diversity in Boards of Dutch Companies Act (Wet tot wijziging van Boek 2 van het Burgerlijk Wetboek in verband met het evenwichtiger maken van de verhouding tussen het aantal mannen en vrouwen in het bestuur en de raad van commissarissen van grote naamloze en besloten vennootschappen, [the Gender Diversity Act]), which entered into force on 1 January 2022.

In support of these ambitious gender diversity targets, NN Group has set an action plan that has been adopted by all NN Group companies in scope of the Gender Diversity Act. This action plan supports a healthy and diverse succession pool for senior management throughout the organisation, as part of our Diversity and Inclusion (D&I) and Key Talent Management policy and processes. We have set out various actions on the different drivers behind our D&I roadmap, such as enhanced processes, data & monitoring, visibility& networks, and mindset & awareness. Actions include, amongst others,:

- The 40% target must be taken into account in the succession planning and process for appointments of persons in Board and senior management positions
- At least once a year, Talent Review & Succession Planning sessions are organised for senior management
- We strive for a minimum of 50% female candidates on shortlists for senior management positions
- A list of the female talent pool is kept and participation in Succession Planning sessions and Leadership and Development programmes is ensured
- We engage with the female talent pool and increase their visibility (e.g., networking events, Women in Leadership Network mentoring programme)
- We regularly perform equal pay analyses

Composition of NN Bank's Boards and Management Team

NN Bank aims to have an adequate and balanced composition of its Boards. In 2022 however, the composition of the statutory Management Board, consisting of three members, did not meet NN Group's target to have a gender balance of at least 40% women and 40% men for its boards as it consisted of only males.

Following the appointment of Nadine van der Meulen as Kees van Kalveen's successor, effective 1 February 2023, the composition of the NN Bank's Management Board, meets said target as of this date.

NN Bank's Supervisory Board consists of four members. Until 1 July 2022, the composition of the Supervisory Board was 25% female and 75% male and did not meet the target to have a gender balance of at least 40% women and 40% men. With the succession of Delfin Rueda by Annemiek van Melick on 1 July 2022, this board now comprises 50% female and 50% male board members and therefore meets the target.

NN Bank's Management Team consists of its three statutory Management Board members, its CTO and six other positions. Comprising of six females and four males, 60% of NN Bank's Management Team positions were held by women, and 40% by men on 31 December 2022. The appointment of Nadine van der Meulen as Kees van Kalveen's successor, resulted in NN Bank's Management Team consisting of 70% female and 30% male members, as from 1 February 2023.

In future (re-)appointments of Board members and Management Team members, NN Bank will continue to take into account all applicable laws and regulations and relevant selection criteria, including gender diversity targets.

We believe our company is strongest when we embrace the full spectrum of humanity. Regardless of what we look like, where we come from, or who we love. That is why NN Group, including NN Bank, takes a stand for diversity, inclusion and equal opportunities for all. When people inside of our company represent the people outside our company, we can be more responsive to what they expect, want and need, also in changing circumstances. After all, change is a constant factor in our lives, also in the financial sector.

More information can be found in the Diversity and Inclusion section on page 41 of the 2022 NN Group Annual Report, our NN Statement on Diversity and Inclusion, and NN Group's 2021 Diversity and Inclusion Report. NN Group's 2022 Diversity and Inclusion Report will be published in the course of 2023.

External auditor

On 19 May 2022, the NN Group General Meeting reappointed KPMG Accountants N.V. (KPMG) as the external auditor of NN Group for the financial years 2023 through 2025. On 23 May 2022, the General Meeting reappointed KPMG as external auditor of NN Bank for the financial years 2023 through 2025.

The external auditor attended the meetings of the Audit & Risk Committee of the Supervisory Board on 13 March and 23 August 2022.

More information on NN Group's policy on external auditor independence is available on the NN Group website (nn-group.com).

Legislation and regulations

NN Bank adheres to the legislation and regulations by which it is governed. For

Corporate governance continued

NN Bank, this includes:

- Conduct of business supervision regulations, such as MiFID II and MiFIR, the Financial Supervision Act, Sustainable Finance Disclosure Regulation, the (Anti-) Money Laundering and Terrorist Financing (Prevention) Act and Sanction laws, Payment Services Directive 2 (PSD2), Mortgage Credit Directive, Credit Consumer Directive;
- Prudential regulations, such as the Capital Requirements Directive/Capital Requirements Regulation, Basel III;
- Other regulations, such as the Dutch Civil Code, the General Data Protection Regulation, the Telecommunications Act, Trade name act and Trade register act and Corporate Sustainability Reporting Directive (CSRD), Taxonomy Regulation and the further regulation based on these legislations.

As a member of the Nederlandse Vereniging van Banken (Dutch Banking Association, NVB), NN Bank also upholds the NVB Code of Conduct and decisions that are binding for its members, as well as the Codes of Conduct generally applicable to the banking sector, such as the Banking Code, the Code of Conduct for Financial Institutions on the Processing of Personal Data, the Code of Conduct for Consumer Lending and the Code of Conduct for Mortgage Loans.

Banking Code
NN Bank has implemented the Banking Code and applies it. The Code helps to increase awareness of the role of banks and their responsibilities towards society. NN Bank devotes a great deal of attention to the Code in the Bank's operations, risk management and in its dealings with customers and other stakeholders. The Code can be downloaded from the Dutch Banking Association's website (nvb.nl). NN Bank publishes its full report regarding the 'Application of the Banking Code' on the Nationale-Nederlanden website (nn.nl).

Remuneration policy
As a subsidiary of NN Group, NN Bank falls within the scope of the NN Group Remuneration Framework.

NN Group's remuneration policies take into account all applicable regulations and codes, including the Banking Code. The NN Group Remuneration Framework strikes a balance between the interests of its customers, employees, shareholders and society at large. The NN Group Remuneration Framework supports NN Group's overall ambition to be an industry leader, known for our customer engagement, talented people and contribution to society.

The general principles underpinning the NN Group Remuneration Framework are (amongst others) as follows:

- Support the attraction, motivation and retention of employees, whilst complying with applicable legislation and with the aim of applying best practices within the financial industry
- Take into account NN Group's business strategy, objectives, its role in society, values and risk appetite, as well as long-term value creation for all stakeholders
- Be mindful of the role of the financial sector in society
- Contribute to an inclusive working environment by ensuring equal opportunities, equal working conditions and equal pay for equal work
- Promote robust and effective risk management, including risk management of sustainability risks (such as ESG and employee-related matters) in the integration thereof in the risk management system and procedures. It supports balanced risk-taking, long-term value creation and the protection of a sound capital base. This will amongst others be supported by performance objective-setting processes.
- Avoid improper treatment of customers and employees
- Comply with legislation as applicable to NN Group from time to time, apply best practices in the industry and act in the spirit of (inter)national regulations and guidance on remuneration

The limited variable remuneration remaining is predominantly linked to strategic targets.

NN Group's Code of Conduct
All individual employees of NN Group are obliged to observe NN Group's Code of Conduct and the NN statement of Living our Values. NN Group, and therefore NN Bank, expects exemplary behaviour from its entire staff, irrespective of their job function. Effective business contacts, both within and outside NN Group, should be based on honesty, integrity and fairness. NN Group's Code of Conduct also includes a whistle-blower procedure, which ensures anonymity when reporting irregularities, albeit violations of laws and regulations.

Risk management organisation
In line with NN Group, the Three Lines of Defence model, on which NN Bank's risk management structure and governance are based, defines three risk management levels. Each line has distinct roles, decision authorities, execution responsibilities and oversight responsibilities. This framework ensures that risk is managed in line with NN Bank's risk appetite as defined by the Management Board and ratified by the Supervisory Board, and that NN Bank's risk appetite is consistent with that of NN Group.

The First Line of Defence is formed by NN Bank Business Management, and has primary accountability for the performance of the business, operations, compliance and effective control of risks affecting NN Bank's business. The Second Line of Defence consists of oversight functions, with a major role for the risk management organisation and the legal and compliance functions. The CRO steers a functional independent risk organisation, which supports the commercial departments in their decision-making, but which also has sufficient countervailing power to prevent risk concentrations and other forms of unwanted or excessive risk.
The Third Line of Defence is provided by Corporate Audit Services (CAS) and offers an independent assessment of the standard of internal control with respect to NN Bank's business and support processes, including governance, risk management and internal controls.

Corporate governance continued

NN Bank is exposed to various financial and non-financial risks. For a more detailed description of these risks and the way in which they are managed, reference is made to Note 39 'Risk management'.

Risk Appetite Framework

The Risk Appetite Framework consists of the overall NN Bank Risk Appetite Statement (RAS), the Risk Appetite Statements for credit risk, market risk and non-financial risk derived from the overall statement, and the underlying limits framework per risk category. The overall RAS states the degree of risk that NN Bank is prepared to accept in all risk categories, given its proposed activities in pursuit of its objectives.

The Risk Appetite Framework consists of qualitative and quantitative statements as to risk preferences, risk tolerances, risk limits and risk controls. The RAS and the underlying limits frameworks are based on the annual Internal Capital and Liquidity Adequacy Assessment Processes, and on the business plan in force, including capital and funding plans. The RAS provides constraints for the business plan. NN Bank's risk committees monitor usage of the risk limits per risk category.

Within the Management Board, the CRO is responsible for drawing up an RAS proposal in close consultation with the CFO. The risk management organisation, including the compliance function, assists the CRO, including providing analyses of the current risk positions and risk tolerances. The Management Board and Supervisory Board approve the proposed risk appetite as part of the input for the annual business plan.

Internal capital and liquidity adequacy

In terms of capital and liquidity, De Nederlandsche Bank (Dutch Central Bank, [DNB]) requires an annual internal evaluation to determine whether the capital and liquidity position and risk management is sufficient, given NN Bank's operations now and in the near future, including stress testing. This internal evaluation is performed using an Internal Capital and Liquidity Adequacy Assessment Process (ICLAAP). The ICLAAP and Supervisory Review & Evaluation Process (SREP) show that NN Bank has a robust capital and liquidity position.

Financial reporting process

As NN Bank is part of NN Group, the policies and procedures for establishing and maintaining adequate internal control over financial reporting are similar to those applied by NN Group for its Consolidated financial statements.

Internal control over financial reporting is a process designed under the supervision of the CFO, to provide reasonable assurance of the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

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 NN Bank's assets
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that NN Bank's receipts and expenditures are handled only in accordance with authorisation of its management and directors
- Provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use or disposition of the assets that could have a material effect on NN Bank's financial statements

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Loan Loss Provisioning (LLP) process

At NN Bank, Loan Loss Provisioning (LLP) is a quarterly process, carefully executed and well monitored and controlled. This process encompasses the following key phases:

- Identification: assets that, based upon the IFRS business model test, require the determination of a Loan Loss Provision are selected for further processing
- Determination of significant increase of credit risk (SICR) and provisions: NN Bank's credit risk exposure models are used to calculate the level of 12-month Expected Loss (for Stage 1) and the Lifetime Expected Loss (for Stage 2 and Stage 3 exposures), as well as the provision for Purchased Other Credit Impaired (POCI) assets. The LLP is the sum of Stage 1, 2, 3 and POCI provisions
- Approval: The NN Bank Impairment and Provisioning Committee (IPC) reviews the figures for approval
- Reporting: The figures are booked in the NN Bank General Ledger and used for internal and external reporting (e.g., DNB)

The Hague, 23 March 2023

The Management Board

Report of the Supervisory Board

Duties
The Supervisory Board is responsible for supervising and advising the Management Board on its conduct and general management of the business, as well as on NN Bank's strategy, also within the context of NN Group's strategy. Supervisory Board approval is required for important business-related decisions, such as strategic decisions, transfer of a significant part of the business, entering into or terminating a long-term partnership, major participations and investments, and the termination of employment of a large number of employees.

Meetings
In 2022, the Supervisory Board convened four times. NN Bank's Audit & Risk Committee convened twice. Important items on the Supervisory Board's agenda were the full-year and half-year results, the progress on implementation of NN Bank's strategy and its strategic projects, the Bank's Internal Capital Adequacy Assessment (ICAAP) and Internal Liquidity Adequacy Assessment (ILAAP) submission, risk appetite, balance sheet transactions, the Capital and Funding Plans and the strengthening of the internal organisation. In addition, in the context of its permanent education session, the Supervisory Board performed a deep dive into the sustainability of the Bank's mortgage portfolio, and discussed the functioning of the external auditor, including its independence, with the Management Board.

Risk
At each regular meeting of the Supervisory Board, the Bank's key risk and position reports were discussed and monitored against the Risk Appetite Statements (RAS), as well as the required actions. The Supervisory Board also approved NN Bank's RAS and ICAAP/ILAAP submissions.

Committees
The primary purpose of the Audit & Risk Committee is to provide oversight of the financial reporting process, the audit process, the company's system of internal controls and compliance with laws and regulations. An Audit & Risk Committee removes the inherent difficulty of the Supervisory Board acting as both a mentor and an assurer. Both roles are integral to a healthy risk management culture. It provides the auditor with an independent point of reference. In order to facilitate the Supervisory Board's decision-making, the Audit & Risk Committee reports to the Supervisory Board and provides appropriate advice and recommendations on matters related to NN Bank's corporate reporting processes, risk management and compliance framework.

In 2022, the Audit & Risk Committee, which is composed of two members of the Supervisory Board, met twice. The Bank's Management Board, Internal Audit (CAS) and the external auditor attended these meetings. The Audit & Risk Committee discussed in depth and monitored the key risk topics covering all risk types, including the functioning of the internal governance, the risk framework, the functioning of the Second Line of Defence as well as NN Bank's IT Security. The internal and external audit plans were approved and monitored, and the progress made in the resolution of audit issues, including IT, compliance and legal matters, was discussed. FEC, Compliance and Legal Risks passed in review as well. Furthermore, key financials, financial reporting, reports of the specific audits of the internal auditors and the external auditor and reports of DNB and AFM were discussed.

Functioning of the Management Board
The Supervisory Board performed its annual Self-Assessment and the review of the functioning of the Management Board in 2022. The Supervisory Board concluded that the Management Board was capable and effective. The Management Board met the Supervisory Board's expectations to the fullest.

Composition of the Management Board
The composition of the NN Bank Management Board did not change in 2022. On 1 January 2023, the Bank's CFO, Kees van Kalveen, resigned. As of 1 February 2023, Nadine van der Meulen, was appointed as the Bank's new CFO. Please refer to page 3 of this Annual Report for the current composition.

Composition of the Supervisory Board
Members of the Supervisory Board are selected based on a profile that includes the required professional background, education, international experience, skills, diversity and independence. The composition of the Supervisory Board is such that its members can perform their duties properly because of an appropriate mix of experience and expertise.

One of the members of the Supervisory Board resigned and a new member was appointed on 1 July 2022. The Supervisory Board therefore consists of four members, including its chair, Mr André Bergen, with Ms Anne Snel presiding over the Audit & Risk Committee.

Please refer to page 3 of this Annual Report for the current composition of the Supervisory Board.

Annual Report, Banking Code and dividend
The Management Board has prepared the Annual Report and discussed it with the Supervisory Board. The Annual Report will be submitted for adoption at the 2023 annual General Meeting. NN Bank will not propose a final dividend to be paid out from the full-year result for 2022.

Appreciation for the Management Board and NN Bank's employees
The Supervisory Board would, last but not least, like to express our gratitude to the Management Board and to all colleagues for their hard work, personal dedication and ongoing commitment, as well as for their achievements in 2022, especially in view of the continuing challenges that current uncertain times create.

The Hague, 23 March 2023

The Supervisory Board

Conformity statement

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

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

The Management Board 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, and for making judgements and estimates that are prudent and reasonable. It is also responsible for establishing and maintaining internal procedures that ensure that all major financial information is known to the Management Board, 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 Nationale-Nederlanden Bank N.V. 2022 Annual accounts, as referred to in section 2:361 of the Dutch Civil Code including the relevant additional information as referred to in section 2:392 paragraph 1 of the Dutch Civil Code, give a true and fair view of the assets, liabilities, financial position and profit or loss of Nationale-Nederlanden Bank N.V. and the entities included in the consolidation taken as a whole
- The Nationale-Nederlanden Bank N.V. 2022 Report of the Management Board, as referred to in section 2:391 of the Dutch Civil Code, gives a true and fair view of the position at the balance sheet date, and the development and performance of the business during the financial year 2022 of Nationale-Nederlanden Bank N.V. and the entities included in the consolidation taken as a whole, together with a description of the principal risks Nationale-Nederlanden Bank N.V. is confronted with
- Based on the current state of affairs, it is justified that the financial reporting is prepared on a going-concern basis
- The Nationale-Nederlanden Bank N.V. 2022 Report of the Management Board includes those material risks and uncertainties that are relevant to the expectation of Nationale-Nederlanden Bank N.V.'s continuity for the period of 12 months after the preparation of the report

The Hague, 23 March 2023

The Management Board
A.J.M. (Marcel) Zuidam, CEO and chair
N.A.M. (Nadine) van der Meulen, CFO
P.C.A.M. (Pieter) Emmen, CRO

Consolidated annual accounts

Consolidated statement of financial position

Amounts in thousands of euros, unless stated otherwise

Consolidated statement of financial position

	notes	2022	2021
Assets			
Cash and balances at central banks	2	2,182,806	1,324,778
Amounts due from banks	3	350,037	267,969
Financial assets at fair value through profit or loss:			
– non-trading derivatives	4	45,473	8,353
Investment securities	5	1,023,654	1,271,432
Loans	6	20,335,474	21,227,558
Intangible assets	7	27,186	23,690
Other assets	8	192,514	239,678
Deferred tax assets	25	2,998	0
Total assets		**24,160,142**	**24,363,458**
Liabilities			
Amounts due to banks	9	245,000	0
Customer deposits and other funds on deposit	10	16,227,542	15,904,147
Financial liabilities at fair value through profit or loss:			
– non-trading derivatives	11	0	12,571
Other borrowed funds	12	318,000	638,000
Other liabilities	13	90,345	76,006
Deferred tax liabilities	25	0	8,142
Provisions	14	27,394	25,761
Debt securities issued	15	6,125,471	6,519,192
Subordinated debt	16	85,000	85,000
Total liabilities		**23,118,752**	**23,268,819**
Equity			
Shareholders' equity		1,041,390	1,094,639
Total equity	17	**1,041,390**	**1,094,639**
Total equity and liabilities		**24,160,142**	**24,363,458**

References relate to the notes starting on page 48. These form an integral part of the Consolidated annual accounts.

Consolidated statement of profit or loss

Amounts in thousands of euros, unless stated otherwise

Consolidated statement of profit or loss

	notes		2022		2021
Interest income		585,771		573,470	
Interest expenses		329,257		329,045	
Interest result	18		256,514		244,425
Gains and losses on financial transactions and other income	19		-625		1,609
– gross fee and commission income		112,748		144,793	
– fee and commission expenses		14,652		14,979	
Net fee and commission income	20		98,096		129,814
Valuation results on non-trading derivatives	21		12,589		3,842
Total income			**366,574**		**379,690**
Impairment charges on financial instruments			-804		-9,693
Staff expenses	22		140,442		128,429
Regulatory levies	23		26,828		27,162
Other operating expenses	24		90,185		97,639
Total expenses			**256,651**		**243,537**
Result before tax			**109,923**		**136,153**
Taxation	25		28,380		34,386
Net result			**81,543**		**101,767**

Consolidated statement of comprehensive income

Amounts in thousands of euros, unless stated otherwise

Consolidated statement of comprehensive income

		2022		2021
Net result		**81,543**		**101,767**
– unrealised revaluations on investment securities at fair value through other comprehensive income	-55,250		-5,205	
– macro fair value hedge accounting effect on investment securities at fair value through other comprehensive income transferred to the statement of profit or loss	31,991		0	
– realised gains or losses transferred to the statement of profit or loss	0		-1,245	
Items that may be reclassified subsequently to the statement of profit or loss		-23,259		-6,450
Total other comprehensive income		**-23,259**		**-6,450**
Total comprehensive income		**58,284**		**95,317**
Comprehensive income attributable to:				
Shareholder of the parent		58,284		95,317
Total comprehensive income		**58,284**		**95,317**

Consolidated statement of changes in equity

Amounts in thousands of euros, unless stated otherwise

Consolidated statement of changes in equity (2022)

	Share capital	Share premium	Reserves	Total equity
Equity - 1 January 2022	**10,000**	**481,000**	**603,639**	**1,094,639**
Unrealised revaluations on investment securities at fair value through other comprehensive income	0	0	-55,250	-55,250
Macro fair value hedge accounting effect on investment securities at fair value through other comprehensive income transferred to the statement of profit or loss	0	0	31,991	31,991
Realised gains or losses transferred to the statement of profit or loss	0	0	0	0
Total amount recognised directly in equity (Other comprehensive income)	**0**	**0**	**-23,259**	**-23,259**
Net result	**0**	**0**	**81,543**	**81,543**
Total comprehensive income	**0**	**0**	**58,284**	**58,284**
Dividend paid	0	0	-111,600	-111,600
Change in employee share plans	0	0	73	73
Other	0	0	-6	-6
Equity - 31 December 2022	**10,000**	**481,000**	**550,390**	**1,041,390**

Consolidated statement of changes in equity (2021)

	Share capital	Share premium	Reserves	Total equity
Equity - 1 January 2021	**10,000**	**481,000**	**644,710**	**1,135,710**
Unrealised revaluations on investment securities at fair value through other comprehensive income	0	0	-5,205	-5,205
Macro fair value hedge accounting effect on investment securities at fair value through other comprehensive income transferred to the statement of profit or loss	0	0	0	0
Realised gains or losses transferred to the statement of profit or loss	0	0	-1,245	-1,245
Total amount recognised directly in equity (Other comprehensive income)	**0**	**0**	**-6,450**	**-6,450**
Net result	0	0	101,767	101,767
Total comprehensive income	**0**	**0**	**95,317**	**95,317**
Dividend paid	0	0	-136,466	-136,466
Change in employee share plans	0	0	78	78
Other	0	0	0	0
Equity - 31 December 2021	**10,000**	**481,000**	**603,639**	**1,094,639**

Consolidated statement of cash flows

Amounts in thousands of euros, unless stated otherwise

Consolidated statement of cash flows

	notes	2022	2021
Result before tax		109,923	136,153
Adjusted for:			
– amortisation and disposals of intangible assets	7	3,366	7,570
– amortisation of mortgage premium	6	29,607	39,593
– amortisation premium investment securities	5	9,477	10,791
– modifications	6	-1,707	-1,985
– net impairment charges on financial instruments		-804	-9,693
– net addition to provisions	14	6,929	22,713
– fair value change on hedged items	6	1,435,596	364,745
– increase (decrease) deferred tax	25	-3,053	-1,242
– change in employee share plans	17	73	78
– other		-6	0
Taxation paid		-17,435	-41,885
Changes in:			
– amounts due to banks	9	245,000	-438,583
– non-trading derivatives	4/11	-49,691	-111,442
– loans	6	-1,087,237	-461,601
– other assets	8	47,164	-21,987
– customer deposits and other funds on deposit	10	323,395	161,412
– other liabilities	13	-1,903	-179,617
Net cash flow from operating activities		**1,048,694**	**-524,980**
Investments and advances:			
– investment securities	5	-17,094	-772,165
– intangible assets	7	-6,862	-6,571
Disposals and redemptions:			
– investment securities	5	180,962	414,605
Net cash flow from investing activities		**157,006**	**-364,131**
Proceeds from issuance of subordinated debt	16	15,000	0
Repayments of subordinated debt	16	-15,000	0
Proceeds from issuance of debt securities	15	504,197	997,272
Repayments of debt securities	15	-338,201	-765,671
Proceeds from other borrowed funds	12	543,000	150,000
Repayments of other borrowed funds	12	-863,000	-772,000
Dividend paid	17	-111,600	-136,466
Net cash flow from financing activities		**-265,604**	**-526,865**
Net cash flow		**940,096**	**-1,415,976**

Interest included in net cash flow from operating activities

	2022	2021
Interest received	584,329	580,331
Interest paid	-329,317	-385,581
Interest received and paid	**255,012**	**194,750**

Cash and cash equivalents

	2022	2021
Cash and cash equivalents at beginning of the period	1,592,747	3,008,723
Net cash flow	940,096	-1,415,976
Cash and cash equivalents at end of the period	**2,532,843**	**1,592,747**

	2022	2021
Cash and balances at central banks	2,182,806	1,324,778
Amounts due from banks	350,037	267,969
Cash and cash equivalents at end of the period	**2,532,843**	**1,592,747**

Notes to the Consolidated annual accounts

Nationale-Nederlanden Bank N.V. (NN Bank) is a public limited liability company (*naamloze vennootschap*) incorporated under Dutch law. NN Bank has its official seat and its office address in The Hague, the Netherlands. NN Bank is recorded in the Commercial Register, no. 52605884. Amounts in the annual accounts are in thousands of euros, unless stated otherwise.

NN Bank's principal activities are providing retail customers with mortgage loans, (online) savings, bank annuities, bancassurance, consumer lending and retail investment products. In addition, NN Bank provides mortgage administration and management services to Nationale-Nederlanden Levensverzekering Maatschappij N.V. (NN Life), Nationale-Nederlanden Schadeverzekering Maatschappij N.V. (NN Non-life), NN Insurance Belgium N.V. (NN Belgium) and the NN Dutch Residential Mortgage Fund and ING Bank N.V..

1 Accounting policies

NN Bank prepares its Consolidated annual accounts in accordance with International Financial Reporting Standards as endorsed by the European Union (IFRS-EU) and Part 9 of Book 2 of the Dutch Civil Code. In the Consolidated annual accounts, the term IFRS-EU is used to refer to these standards, including the decisions NN Bank made with regard to the options available under IFRS-EU. NN Bank applies fair value hedge accounting to portfolio hedges of interest rate risk (macro hedging) under the EU 'carve-out' of IFRS-EU.

NN Bank's accounting policies under IFRS-EU, and its decisions on the options available, are included below. The principles are IFRS-EU and do not include other significant accounting policy choices made by NN Bank. The accounting policies that are most significant to NN Bank are included in the section 'Critical accounting policies and significant estimates'.

The preparation of the Consolidated annual accounts requires the use of estimates and assumptions. These estimates and assumptions affect the reported amounts of the assets and liabilities and the amounts of the 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.

NN Bank has extended its application of macro fair value hedge accounting under the EU 'carve-out' of IFRS-EU by starting macro fair value hedge accounting for the interest rate risk in the sub-portfolio investment securities measured at FVOCI. The effect of this macro fair value hedge is charged from the Statement of comprehensive income to the Statement of profit or loss in 2022.

The presentation of, and certain terms used in, the Consolidated statement of financial position, Consolidated statement of profit or loss, Consolidated statement of cash flows, Consolidated statement of changes in equity and the Notes were changed to provide additional and more relevant information or (for changes in comparative information) to better align with the current period presentation. The impact of these changes is explained in the respective notes, when significant.

Upcoming changes in IFRS-EU

There are no upcoming changes in IFRS-EU that were issued by the IASB, are effective after 2022 and are material to NN Bank.

Changes in accounting policies

In 2022, no changes to IFRS-EU became effective that had any impact on the NN Bank annual accounts.

Critical accounting policies and significant estimates

NN Bank has identified the accounting policies that are most critical to its business operations and to the understanding of its results. These critical accounting policies are those that involve the most complex or subjective judgements and assumptions, and relate to impairments and the determination of the fair value of financial assets and liabilities. In each case, the determination of these items is fundamental to the financial condition and results of operations, and requires management to make complex judgements based on information and financial data that may change in future periods. As a result, determinations regarding these items necessarily involve the use of assumptions and subjective judgements as to future events and are subject to change, as the use of different assumptions could produce significantly different results. All valuation techniques used are subject to internal review and approval. For further details on the application of these accounting policies, reference is made to the applicable notes in the Consolidated annual accounts and the information below.

Reference is made to Note 39 'Risk management' for a sensitivity analysis of certain assumptions as listed below.

Impairments

IFRS 9 contains multiple impairment models for different portfolios. These are applied to all financial assets measured at amortised cost and at fair value through 'Other comprehensive income' (Equity). The expected-loss impairment model requires at balance sheet date accounting for expected credit losses within the 12 months following the time when financial instruments are first recognised, and recognising full lifetime expected losses in case of a significant increase in credit risk. For further details on the accounting policy pertaining to this estimate, reference is made to 'General accounting policies' under the heading 'Impairment'.

Fair value of financial assets and liabilities

The fair value of financial assets and liabilities is based on unadjusted quoted market prices at the balance sheet date, where available. Such quoted market prices are primarily obtained from exchange prices for listed instruments. When an exchange price is not available, market prices may be obtained from independent market vendors, brokers or market-makers. In general, positions are valued taking the bid price for a long position and the offer price for a short position. In some cases, positions are marked at mid-market prices. For further details on the accounting policy pertaining to this estimate, reference is made to 'General accounting policies' under the heading 'Fair value of financial assets and liabilities'.

Notes to the Consolidated annual accounts continued

General accounting policies

Consolidation

NN Bank comprises Nationale-Nederlanden Bank N.V. and all its subsidiaries. The Consolidated annual accounts of NN Bank comprise the accounts of Nationale-Nederlanden Bank N.V. and all entities over which NN Bank has control. NN Bank has control over an entity when NN Bank has existing rights that give it the ability to direct the relevant activities, and is exposed to, or has rights to, variable returns from its involvement with the entity. NN Bank has the ability to affect those returns through its power over the entity. The assessment of control is based on the substance of the relationship between NN Bank and the entity, and considers existing and potential voting rights that are substantive. For a right to be substantive, the holder must have the practical ability to exercise that right.

NN Bank's activities involve transactions with structured entities in the normal course of business. A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in determining who controls the entity. For example, when any voting rights relate only to administrative tasks and the relevant activities are directed by means of contractual arrangements. NN Bank uses structured entities for securitisation transactions of residential mortgages and in the Covered Bond Programme. NN Bank consolidates these entities in its financial statements on the basis of the economic relationship between NN Bank and the structured entities, as NN Bank has the power to control those entities.

For interests in investment entities, the existence of control is determined while taking into account both NN Bank's financial interests for its own risk and in its role of managing mortgage assets.

The net result 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.

All intercompany transactions, balances and unrealised gains and losses on transactions between group companies are eliminated. Where necessary, the accounting policies used by subsidiaries are changed to ensure consistency with NN Bank policies. The reporting dates of subsidiaries are the same as NN Bank's reporting date.

A list of principal subsidiaries is included in Note 34 'Principal subsidiaries'.

Foreign currency translation

Functional and presentation currency

The Consolidated annual accounts are presented in euros, which is NN Bank's functional and presentation currency.

Transactions and balances

NN Bank does not conduct transactions in foreign currency.

Recognition and derecognition of financial instruments

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired, or when NN Bank has transferred substantially all risks and rewards of ownership. If NN 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.

Financial assets are generally (de)recognised at trade date, which is the date on which NN Bank commits to purchasing or selling the asset. Settlement date accounting is generally applied for financial liabilities. Loans and receivables are recognised at settlement date, which is the date on which NN Bank receives or delivers the asset.

Realised gains and losses on investments are determined as the difference between the sales proceeds and (amortised) cost. For debt securities, the cost is determined by specific identification, generally First In, First Out (FIFO).

Classification and measurement financial assets

IFRS 9 contains a classification and measurement approach for financial assets that reflect the business model in which assets are managed, as well as their cash flow characteristics. Financial assets are initially recognised at fair value and subsequently measured at amortised cost using the effective interest method less any impairment losses. Transaction costs (including qualifying fees and commissions) are part of the amortised cost. Subsequent measurement of financial assets depends on the classification, driven by cash flow characteristics and the business model in which an asset is held. The standard contains three principal classification categories for financial assets: measured at amortised cost (AC), fair value through other comprehensive income (FVOCI) and fair value through profit and loss (FVTPL).

A financial asset is measured at amortised cost only if both of the following conditions are met:

- It is held within a business model whose objective is to hold assets to collect contractual cash flows
- The contractual terms of the financial asset represent contractual cash flows that are solely payments of principal and interest

Amortised cost is the amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any impairment losses.

Notes to the Consolidated annual accounts continued

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset or to the amortised cost of a financial liability.

The investment securities portfolio is divided in two sub-portfolios. The objective of the 'hold-to-collect' sub-portfolio is to hold and maintain critical mass in high-quality liquid assets in order to meet liquidity and capital needs. This portfolio is measured at amortised cost. The other sub-portfolio is measured at fair value through 'Other comprehensive income (FVOCI)', since the objectives are both 'hold-to-collect' and selling investment securities.

Financial liabilities are initially recognised at fair value incurred and are subsequently measured at amortised cost. Any difference between the proceeds (transaction costs) and the redemption value is recognised in the statement of profit or loss over the period of the financial liability using the effective interest method.

Impairments of financial assets

Measurement of expected credit losses (ECL)

The recognition and measurement of impairments under IFRS 9 is forward-looking. The IFRS 9 impairment requirements apply to all financial assets measured at amortised cost and at fair value through 'Other comprehensive income' (Equity). Initially, a provision is required for credit losses expected within the next 12 months. This is referred to as 'Stage 1'. If there is a significant increase in credit risk between the moment of origination and the reporting date, but the exposure is not in default, the exposure is in 'Stage 2'. If the exposure is in default, this is referred to as 'Stage 3'. For both 'Stage 2' and 'Stage 3', a provision is required for expected credit losses over the remaining lifetime of the financial asset.

The lifetime expected credit losses are calculated based on different macro-economic scenarios (up, neutral, down) with individual weights for the probability that these scenarios will occur. Those weights are influenced by the macro-economic outlook. The outlook is highly uncertain following the war in Ukraine, high levels of inflation, and the subsequent interest rate hikes and drop in house prices. Moreover, covid-19 remains a concern as we saw another reminder that the pandemic was far from over having seen how China was hit by what it calls an "exit wave". Due to this uncertainty, the weight of the macro-economic down scenario is set to 40%. The neutral and up scenario are weighted 50% and 10% respectively.

Inputs into measurement of expected credit losses

NN Bank uses the following components to calculate the expected credit losses:

- Probability of Default (PD): the statistically determined likelihood that a customer will experience a default event over a 12-month horizon. This probability is modelled over a time horizon that encompasses a full economic cycle, i.e., Through-The-Cycle (TTC).
- Exposure at Default (EAD): the expected exposure amount in the case of default
- Loss Given Default (LGD): the percentage of the EAD that is expected to result in a loss, taking into account the potential that the defaulted customer will be able to cure, and the potential proceeds of primary and/or secondary collateral. As with PD, LGD is determined on a TTC basis.

In the IFRS 9 model, these components are transformed from TTC for regulatory purposes to Point in Time (PIT) for accounting purposes, in order to present the current state of the economy. TTC PD represents the credit worthiness of a customer in an average economy, while the PIT PD represents the credit worthiness of a customer in the economy at a certain point in time. The further modelling is clarified in the paragraph below.

Definition of default

The Capital Requirements Regulation (CRR) refers to 'default', while IFRS refers to 'credit-impaired' with potential differences between these two concepts. In addition, the European Banking Authority (EBA) often refer to 'Non-performing exposures' (NPE). In order to align definitions, NN Bank has implemented these three definitions in exactly the same way. A customer at NN Bank is credit-impaired, non-performing and in default if:

- The customer is more than 90 days past due, or
- The customer was in default the previous month, and the minimum holding period (MHP) is active, or
- The customer is deemed to be unlikely to pay

The Days Past Due (DPD) counter is based upon the EBA's Regulatory Technical Standards on the materiality threshold for credit obligations past due under Article 178 of Regulation (EU) No 575/2013' as well as the EBA Q&A. The DPD counter is based on the number of days between the reporting period and the date the arrears amount breached the threshold.

The conclusion of NN Bank is that DPD is calculated differently for two purposes:

Notes to the Consolidated annual accounts continued

- For the default classification, the Days Past Due counter starts counting when the arrears amount is greater than or equal to EUR 100 and the arrears amount is greater than 1% of the carrying value
- For all other purposes, the Days Past Due counter starts on the first day after any amount has not been paid that is greater than or equal to EUR 100

The amount past due is calculated on a First In, First Out (FIFO) basis. This means that if a customer misses one payment and continues with regular and full payments of single monthly terms, it is assumed that the last payment is used to catch up on the delinquent amount. The calculation of the amount past due includes missed payments on secondary collateral, such as pledged savings or insurance policies.

The main criterion for lifting the default status will be that no arrears greater than EUR 250 occurred during the MHP. For defaulted customers that are classified as 'distressed restructuring', the MHP is 12 months. For all other defaulted customers, the MHP is 3 months.

Purchased or Originated Credit-Impaired (POCI) assets
POCI assets are financial assets that are credit-impaired on initial recognition and stem from mortgage portfolio transfers from ING Bank. Impairment on a POCI asset is determined based on lifetime 'expected credit loss' (ECL) from initial recognition. POCI assets are recognised initially at an amount net of impairments and are measured at amortised cost using a credit-adjusted effective interest rate. In subsequent periods, any changes to the estimated lifetime ECL are recognised in the statement of profit or loss. Favourable changes are recognised as an impairment gain if the lifetime ECL at the reporting date is lower than the estimated lifetime ECL at acquisition of the asset.

Credit risk grades
The PD model for mortgages consists of two sub-models, a model for customers without payment arrears and a model for delinquent customers. All PDs are mapped to a Master Rating Scale.

Determination significant increase of credit risk
For IFRS 9, a lifetime expected loss needs to be calculated for Stage 2 and 3 loans. Credit-impaired loans are placed in Stage 3. A loan will be placed in Stage 2 if a Significant Increase in Credit Risk (SICR) has been observed. A threshold is set for this significant increase. To determine whether a significant increase in credit risk has occurred, two lifetime PDs are calculated:

- Lifetime PD at reporting date
- Lifetime PD determined at initial recognition with a horizon from reporting date to maturity date

For these lifetime PDs, a relative threshold of 50% and an absolute threshold of 5% are determined. Both the absolute and relative differences are monitored. When both thresholds are breached, the loan is placed in Stage 2.

In addition, the following backstops exist:

- Loans that are >30 days past due, or
- Forborne performing customers, or
- Bridge-loans that are active for longer than the contractually agreed time (> 2 years), or
- Loans that have an interest-only part above 70% with either having an LTV above 100%, or having an LTV above 80% and close to maturity/retirement (< 5 years).

Mortgage offers are assumed to always have a low credit risk profile, without the possibility to experience a significant increase in credit risk. Therefore, only a 12-month ECL is calculated for mortgage offers.

Term structure of default probabilities
An important methodological component is the determination of the lifetime PD. For the mortgage portfolio, NN Bank uses migration matrices to create PD forecasts. Migration matrices are matrices that show migration probabilities. At NN Bank, migration matrices are constructed based on the rating changes in a 12-month period. These 12-month migration matrices are referred to as 'PIT migration matrices'. Using historical rating observations of customers, NN Bank is able to create a time series of historical Point in Time (PIT) migration matrices.

NN Bank links historically observed migration matrices to macro-economic factors. Subsequently, NN Bank forecasts the development of macro-economic factors. Thereafter, using the historically observed relationship between the macro-economic factors and migration matrices, and the forecasted macro-economic factors, NN Bank is able to forecast migration matrices. The first forecasted migration matrix contains the forecasted 12-month PDs. By multiplying consecutive migration matrices, lifetime PD estimates are obtained. Finally, the forecasted migration matrices can be used to calculate marginal PD forecasts. These marginal PDs are the PDs that serve as input in the IFRS 9 mortgage ECL model.

Forward-looking information
IFRS 9 adjusted input parameters are estimated over the remaining lifetime of the asset. A macro-economic forecast is used to estimate the future development of PD and LGD. The following macro-economic time series are taken into consideration:

Notes to the Consolidated annual accounts continued

- Unemployment rate (PD model of mortgages as well as consumer lending)
- Gross Domestic Product (LGD model of mortgages as well as consumer lending)
- Housing price index (LGD model of mortgages)

Unemployment rate
The unemployment rate is defined as the unemployed labour force as a percentage of the total labour force. NN Bank has chosen to follow Central Bureau of Statistics (CBS) figures. The unemployed labour force refers to persons without work who are actively searching for paid work and who are directly available to work. The labour force refers to persons willing to work at least twelve hours per week, and requires prompt availability for the labour market within a period of three months.

Gross domestic product
Gross domestic product (GDP) expresses the size of an economy. The volume change of GDP during a reference period expresses the growth or shrinkage of the economy. NN Bank has chosen to follow the expenditure approach of GDP, as this definition is also used in the forecasts of, amongst others, CPB and DNB. In the expenditure approach, GDP is the sum of final uses of goods and services by resident institutional units (final consumption and gross capital formation), plus exports and minus imports of goods and services. The GDP growth refers to the relative change of GDP compared with the year before.

Housing prices
Calculation of housing price index is based on the housing price index of existing homes. The housing price index of existing homes is based on the Dutch Land Registry Office's (Kadaster) registration of sales of homes in the Netherlands. The housing price index is corrected for various characteristics of the homes, such as size and location.

Consumer lending
NN Bank's consumer lending includes the following product types:

- Instalment Loans are consumer loans that repay to a fixed maturity date
- Revolving Loans do not mature. Furthermore, a customer can withdraw from them to increase the exposure.
- Second Mortgages are mortgages in which another financial institution holds the first lien. In case of a forced sale, the owner of the first lien first needs to be fully compensated. Only mortgages with low Loan-To-Values result in a (partial) compensation for the owner of the second mortgage. That is why the credit risk for these loans is comparable with loans without a cover (Instalment Loans and Revolving Loans) or lower as a result of the increasing house prices. Most second mortgages are interest-only loans; they do not have a maturity date.

The set of macro-economic factors used to calculate future PDs and LGDs is limited for consumer lending. Unemployment rate has been used to project PDs, and GDP has been used to project LGDs. The relationship between the macro-economic factors and PD respectively LGD has been estimated on the basis of historical correlations in combination with expert opinion. Rather than using migration matrices, the future values are derived on a marginal basis (e.g., PD curve).

Non-retail book
NN Bank applies a simple approach to calculate the ECL for its investments in bonds, securitisations and other similar publicly traded securities. In determining the level of sophistication of the selected approach, NN Bank considered entity factors (including: credit quality, size, business model, complexity, cross-border activity, use of SA or IRB approach) and portfolio factors (including: complexity, materiality and available data). Given these factors, NN Bank concluded that it is appropriate to use a simple approach to calculate ECLs for non-retail assets.

Following the investment mandate regarding Investment securities, only investment-grade assets are held in the non-retail portfolio. The assets in the non-retail portfolio always have a low credit risk, as a significant increase in credit risk would place these securities outside the investment mandate and are to be divested. Therefore, only a 12-month ECL is calculated for assets in the non-retail portfolio.

Loan loss provisions do not apply to derivatives. The rationale is that all interest rate swaps are cleared through a Qualified Central Clearing Party, through two separate clearing brokers. Over-collateralisation is taken into account, leading to a situation in which initial margins posted are no longer considered to be exposure. In addition, the total credit risk exposure has regulatory risk weight of 2%. Hence, the risk on this exposure is deemed to be very low.

Private banking portfolio
The private banking portfolio from the former Delta Lloyd Bank is a run-off portfolio with a small number of loans and marginal exposure. The calculation of lifetime expected losses is based on arrears, credit risk score ratings and defaults in combination with expert-based staging.

Revenue from contracts with customers
NN Bank is in the business of originating mortgage loans and servicing mortgage loan portfolios for other NN Group companies, NN Dutch Residential Mortgage Fund and ING Bank. In addition, NN Bank is active in the business of servicing investment portfolios for retail customers. Revenue from contracts with customers is recognised when services are transferred to the customer at an amount that reflects the consideration NN Bank expects to be entitled in exchange for those services.

Notes to the Consolidated annual accounts continued

Revenue related to servicing mortgage loan and investment portfolios is recognised over time, since customers simultaneously receive and consume the benefits provided by NN Bank's performance of the services. The revenue of the services is a variable consideration, since the remuneration fluctuates based on the number of mortgages or investments serviced over a specified period. At the end of this period, when the invoice is issued, it is highly probable that any significant revenue reversal would not occur. The servicing fees are recognised as revenue at the end of the period and presented in the line item 'Service management fee' under 'Net fee and commission income'.

Revenue related to origination of mortgage loans is recognised as soon as the origination of mortgage loans has been completed. The criteria for over-time recognition are not met. The origination fees are presented in the line item 'Brokerage and advisory fees' under 'Net fee and commission income'.

In certain contracts, NN Bank is allocating the agreed transaction price to origination and servicing as performance obligations. In line with the Bank's allocation objectives, subsequent changes in the transaction price following behaviour in the underlying portfolio are assigned to servicing fees and recognised as 'Service management fee' or as a reduction of this fee.

Certain contracts regarding origination of mortgages contain a significant financing component, since the payment of the origination fee is done over the lifetime of mortgages, even though the performance obligation is satisfied at a point in time. The fee is split into a consideration for the origination service and a consideration for the financing service. In the statement of profit or loss, the fee for the financing service is presented under 'Interest result'.

NN Bank acts as an execution-only intermediary in NN Non-life retail insurance products. In this capacity, NN Bank is active in servicing and retaining retail customers and in the acquisition of new customers. Revenue related to servicing and retaining is recognised over time, since customers simultaneously receive and consume the benefits provided by NN Bank's performance of services. Revenue related to the acquisition of new customers is recognised at a point in time as soon as the acquisition has been completed. The criteria for over-time recognition are not met. The fees are presented under 'Net fee and commission income'.

Partial transfer of mortgage loans

NN Bank and related parties are involved in the issuance of savings mortgages. Initially, one party recognises the full savings mortgage loan. The customer saves the total amount to redeem the savings mortgage at maturity date at the other party. If the savings amount increases, consequently, the share of ownership of the savings mortgage by the other party increases. NN Bank has arrangements to transfer savings mortgage parts when mortgages are sold leading to the situation that mortgage and savings are at different parties. In certain arrangements, NN Bank receives the mortgage parts. In other arrangements, NN Bank transfers the mortgage parts. Transferred mortgage parts are recognised and derecognised at their nominal value. Following these arrangements, the changes are added or deducted from the amount of 'Loans'.

For the former Delta Lloyd Bank portfolio, these objectives are realised with help of sub-participation agreements. The mechanism is the same as described above, but the ownership is not transferred. NN Bank has a receivable when there are arrangements to transfer mortgage parts in an intercompany account, or NN Bank has a payable that represents the claim on related parties at the level of built-up savings premiums for the former Delta Lloyd Bank portfolio.

Offsetting of financial assets and financial liabilities

Financial assets and liabilities with the same party are offset, and the net amount is reported in the statement of financial position, when NN 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 at the same time.

Fair value of financial assets and liabilities

The fair values of financial assets and liabilities are based on unadjusted quoted market prices at the balance sheet date, where available. Such quoted market prices are primarily obtained from exchange prices for listed instruments. The quoted market price used for financial assets held by NN Bank is the current bid price. The quoted market price used for financial liabilities is the current offer price. When an exchange price is not available, market prices may be obtained from external market vendors, brokers or market-makers. In general, positions are valued taking the bid price for a long position and the offer price for a short position. In some cases, positions are marked at mid-market prices. 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 the fair value.

For certain financial assets and liabilities, quoted market prices are not available. For these financial assets and liabilities, fair value is determined using valuation techniques, based on market conditions existing at each balance sheet date. These valuation techniques range from discounting of cash flows to 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.

Valuation techniques are subjective in nature, and significant judgement is involved in establishing the fair value 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 the fair value.

Reference is made to Note 26 'Fair value of financial assets and liabilities' for the basis of determination of the fair value of financial assets and liabilities.

Notes to the Consolidated annual accounts continued

Maximum credit risk exposure

The maximum credit risk exposure for items in the statement of financial position is generally the carrying value, not considering any impairments or loan loss provisions, 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 32 'Contingent liabilities and commitments' for these off-balance-sheet items. Collateral received is not taken into account when determining the maximum credit risk exposure. As a large part of the loans on NN Bank's statement of financial position consists of loans secured by mortgages, the actual credit exposure is significantly lower. The manner in which NN Bank manages credit risk and determines credit risk exposures is explained in Note 39 'Risk management'.

Leases

The accounting model for lessees is not applicable, since NN Bank has no significant contracts with group companies and external parties that qualify for lease accounting.

Taxation

NN Bank is part of the Dutch fiscal unity of NN Group for corporation tax purposes, making it jointly and severally liable for the total tax payable by the fiscal unity. The tax receivables and payables concern the receivables and payables to NN Group.

Income tax on the result for the year consists of current and deferred tax. Income tax is generally recognised in the statement of profit or loss, but is recognised directly in equity if the tax relates to items that are recognised directly in equity.

Deferred tax is provided in full, using the liability method, on all temporary differences arising between the tax bases of assets and liabilities and their carrying values in the statement of financial position. Deferred tax is determined using tax rates (and laws) applicable that have been enacted or substantively enacted at the balance sheet date, and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled. Deferred tax assets and liabilities are not discounted.

Deferred tax assets are recognised when it is probable that future taxable profits will be available, against which the temporary differences can be used. Deferred tax is provided on temporary differences arising from investments in subsidiaries, except when the timing of the reversal of the temporary difference is controlled by NN 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 when it is probable that future taxable profits will be available, against which these losses can be used.

Offsetting deferred tax assets with deferred tax liabilities is allowed when there is a legally enforceable right to offset current tax assets against current tax liabilities together with the intention to do so and the deferred taxes relate to income taxes levied by the same taxation authority on the same entity or on the same fiscal unity.

Employee benefits

Defined contribution pension plans

For defined contribution plans, NN Bank pays contributions to the NN CDC Pensioenfonds and BeFrank on a contractual basis. NN Bank has no further payment obligations once the contributions have been paid. The contributions are recognised as staff expenses in the statement of profit or loss when they are due.

Share-based payments

Share-based payment expenses are recognised as staff expenses over the vesting period. A corresponding increase in equity is recognised for equity-settled share-based payment transactions. The fair value of equity-settled share-based payment transactions is measured at the grant date. For cash-settled share-based payment transactions, a liability is recognised at fair value. This fair value is remeasured at every balance sheet date.

Interest income and expenses

Interest income and expenses 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 expenses over the relevant period. The effective interest rate is the rate that exactly discounts the estimated future cash payments or receipts throughout the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying value of the financial asset or financial liability. When calculating the effective interest rate, NN 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 basis 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. In the event of a change in the interest rate during the fixed interest period (interest mediation), the gross carrying amount is adjusted, reflecting a revised estimate of receipts of cash flows in the original effective interest calculation including a receivable based on the estimated future penalty cash flows.

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 income and expenses from non-trading derivatives are classified as interest income and interest expenses in the statement of profit or loss, except for interest income and expenses on derivatives for which no hedge accounting is applied. The latter is classified in 'Valuation results on non-trading derivatives', together with the changes in the (clean) fair value of these derivatives.

Notes to the Consolidated annual accounts continued

Statement of cash flows

The Consolidated statement of cash flows is prepared in accordance with the indirect method, classifying cash flows as 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 in the statement of financial position, which do not result in actual cash flows during the year.

Cash and cash equivalents comprise balances with less than three months' maturity from the date of acquisition. Investments qualify as 'cash equivalent' if they are readily convertible into a known amount of cash and are not subject to significant risk of changes in value.

The net cash flow shown in respect of 'Loans' relates only to transactions involving actual payments or receipts. The 'Addition to loan loss provisions', which is deducted from the item 'Loans' 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.

Accounting policies for specific items

Financial assets and liabilities at fair value through profit or loss (Notes 4 and 11)

A financial asset or liability is classified as at fair value through profit or loss if it is acquired principally for the purpose of selling in the short term or if designated by management as such. Management will make this designation only if this eliminates a measurement inconsistency or if the related assets and liabilities are managed on a fair-value basis. Transaction costs on initial recognition are expensed as incurred. Interest income from debt securities and receivables classified as at fair value through profit or loss is recognised in the statement of profit or loss using the effective interest method.

Derivatives and hedge accounting

Derivatives are initially recognised and subsequently measured at fair value. Derivatives are presented as assets when the fair value is positive and as liabilities when the fair value is negative. In general, NN Bank designates certain derivatives as hedges of the fair value of recognised assets or liabilities or firm commitments. NN Bank applies this fair value hedge accounting, whereby the movement in measurement of derivatives is offset by the movement in measurement of the hedged item in statement of profit or loss. NN Bank has designated derivatives as fair value hedge accounting on the interest rate risk inherent in its mortgage portfolio and High Quality Liquid Assets (macro hedge), as well as on the interest rate risk related to debt securities issued (micro hedge). Hedge accounting is used for derivatives designated in this way, provided certain criteria are met.

At the inception of the hedge transaction, NN Bank documents the relationship between hedging instruments and hedged items, its risk management objectives, together with the methods selected to assess hedge effectiveness. In addition, NN Bank 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 value of the hedged items. NN Bank applies fair value hedge accounting to portfolio hedges of interest rate risk (macro hedging) under the EU 'carve-out' of IFRS-EU. The EU 'carve-out' 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 deposits and under-hedging strategies. Under the IFRS-EU 'carve-out', hedge accounting may be applied to deposits, and ineffectiveness only arises when the revised estimate of the amount of cash flows in scheduled time buckets falls below the designated amount of that bucket. In further Notes, macro fair value hedge accounting is referred to as 'Fair value hedge accounting'.

IFRS 9 and hedge accounting

The hedge accounting requirements of IFRS 9 aim to simplify hedge accounting. As these simplifications currently exclude macro hedge accounting under the EU 'carve-out' of IFRS-EU, the impact on NN Bank is limited. NN Bank has chosen to continue applying IAS 39 for macro fair value hedge accounting.

Fair value hedge accounting

Changes in the fair value of derivatives that are designated and qualify as fair value hedge accounting 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.

Non-trading derivatives that do not qualify for hedge accounting

Derivatives that NN Bank uses as part of its risk management strategies that do not qualify for hedge accounting under NN 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 'Valuation results on non-trading derivatives' in the statement of profit or loss.

Reference is made to Note 26 'Fair value of financial assets and liabilities' for the basis of determination of the fair value of the derivatives.

Loans (Note 6)

Loans are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are initially recognised at fair value plus transaction costs. Subsequently, loans are carried at amortised cost using the effective interest method less any impairment losses. Interest income from loans is recognised in 'Interest result' in the statement of profit or loss using the effective interest method.

Notes to the Consolidated annual accounts continued

NN Bank has refined its application of effective interest regarding extension of fixed interest tenors prior to the end of the current interest period (interest rate averaging). A receivable under 'Loans' based on the change in net present value of the contract is now accrued at the time of change of interest tenor.

Intangible assets (Note 7)

Intangible assets consist mainly of computer software that has been purchased or generated internally for own use, and 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'.

At each reporting period, NN Bank assesses whether there is an indication that an intangible asset may be impaired. Irrespective of whether there is an indication of impairment, intangible assets with an indefinite useful life and intangible assets not yet available for use are tested annually for impairment. This is done by comparing the carrying value with the best estimate of the recoverable amount of the individual intangible asset. Impairment, if applicable, is included in the statement of profit or loss under 'Other operating expenses'.

Other assets (Note 8)

Other assets include a receivable for origination fees, which is a non-current asset and relates to origination fees to be received following a long-term contract. Its measurement is based on a discounted cash flow calculation.

Customer deposits and other funds on deposit (Note 10)

Customer deposits and other funds on deposit are non-derivative financial liabilities that are not quoted in an active market. They are carried at amortised cost using the effective interest method. Interest expenses on customer deposits and other funds on deposit are recognised in 'Interest expenses' in the statement of profit or loss using the effective interest method.

Other borrowed funds, debt securities issued and subordinated debt (Notes 12, 15 and 16)

Other borrowed funds, debt securities issued and subordinated debt are recognised initially at their issue proceeds (fair value of consideration received) net of transaction costs incurred. Borrowings are subsequently measured at amortised cost. Any difference between proceeds, net of transaction costs, and the redemption value is recognised in the statement of profit or loss over the period of the borrowings, using the effective interest method.

Financial liabilities include only instruments of which the terms and conditions represent a contractual obligation to pay interest and/or principal. Instruments that are similar in substance, but of which the terms and conditions do not include a contractual obligation to pay interest and principal, are classified as equity.

Provisions (Note 14)

Provisions consist of restructuring provisions and other provisions. Restructuring provisions include employee termination benefits when NN Bank is demonstrably committed to either terminating the employment of current employees according to a detailed formal plan without the possibility of withdrawal, or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Provisions are discounted when the effect of the time value of money is significant, using a before-tax discount rate. The determination of provisions is an inherently uncertain process involving estimates regarding amounts and timing of cash flows.

Net fee and commission income (Note 20)

Fees and commissions are generally recognised as the service is provided. Portfolio and other management advisory and service fees are recognised based on the applicable service contracts when the service is provided.

Notes to the Consolidated annual accounts continued

2 Cash and balances at central banks

Cash and balances at central banks

	2022	2021
Amounts held at central banks	2,182,806	1,324,778
Cash and balances at central banks	**2,182,806**	**1,324,778**

'Amounts held at central banks' reflects the demand balances. 'Amounts held at central banks' includes a mandatory reserve deposit of EUR 83.3 million (2021: EUR 85.1 million), which is not freely disposable to NN Bank. Reference is made to Note 30 'Assets not freely disposable'. The remainder of 'Amounts held at central banks' is at free disposal of NN Bank.

3 Amounts due from banks

Amounts due from banks

	2022	2021
Bank balances	39,276	63,395
Collateral posted	310,761	204,574
Amounts due from banks	**350,037**	**267,969**

'Bank balances' comprises current accounts and accrued interest with banks.

'Collateral posted' concerns posted collateral regarding centrally cleared swaps. The increase in 'Collateral posted' from EUR 204.6 million to EUR 310.8 million is caused by higher initial margin requirements due to increased volatility in the market. 'Collateral posted' is not freely disposable.

4 Financial assets at fair value through profit or loss

Non-trading derivatives

	2022	2021
Derivatives held for fair value hedge accounting	45,473	0
Balanced guaranteed swaps	0	8,353
Non-trading derivatives	**45,473**	**8,353**

For further clarification on 'Derivatives held for fair value hedge accounting', reference is made to Note 27 'Derivatives and hedge accounting'.

For 'Balanced guaranteed swaps', which were used in securitisation transactions, reference is made to Note 35 'Structured entities'.

5 Investment securities

Investment securities by type 31 December 2022

	AC[1]	FVOCI[2]	2022
Government bonds[3]	95,764	183,360	279,124
Covered bonds	0	704,246	704,246
Corporate bonds	0	12,228	12,228
Financial institution bonds	500	0	500
Asset backed securities	27,614	0	27,614
Investment securities - before loss provisions	**123,878**	**899,834**	**1,023,712**
Investment securities loss provisions	-20	-38	-58
Investment securities - after loss provisions	**123,858**	**899,796**	**1,023,654**

1 AC = Amortised Cost.
2 FVOCI = Fair Value through Other Comprehensive Income.
3 Government bonds includes supranational and government bonds from member states of the European Union and Great Britain.

Notes to the Consolidated annual accounts continued

Investment securities by type 31 December 2021

	AC[1]	FVOCI[2]	2021
Government bonds[3]	207,242	205,174	412,416
Covered bonds	0	753,513	753,513
Corporate bonds	1,947	14,037	15,984
Financial institution bonds	61,993	0	61,993
Asset backed securities	27,612	0	27,612
Investment securities - before loss provisions	**298,794**	**972,724**	**1,271,518**
Investment securities loss provisions	-46	-40	-86
Investment securities - after loss provisions	**298,748**	**972,684**	**1,271,432**

1 AC = Amortised Cost.
2 FVOCI = Fair Value through Other Comprehensive Income.
3 Government bonds includes supranational and government bonds from member states of the European Union and Great Britain.

Changes in investment securities

	2022	2021
Investment securities – opening balance	1,271,518	933,418
Additions	17,094	772,165
Amortisation	-9,477	-10,791
Changes in unrealised revaluations	-74,461	-8,669
Disposals and redemptions	-180,962	-414,605
Investment securities – closing balance	**1,023,712**	**1,271,518**

There were only sales from the FVOCI portfolio, and the sales did not have an impact on the business model classification.

In 2022, the rising market interest rates led to higher unrealised losses on investment securities. EUR 43.1 million (after tax EUR 32.0 million) of these unrealised losses is hedged by macro fair value hedge accounting. Reference is made to Note 1 'Accounting policies' and to the Statement of comprehensive income.

6 Loans

Loans by type

	2022	2021[1]
Loans secured by mortgages, guaranteed by public authorities	5,445,571	5,270,858
Loans secured by mortgages	15,988,971	15,004,608
Loans secured by mortgages, hedged items	-1,523,213	428,984
Consumer lending	86,107	104,341
Other loans	69,053	152,583
Group companies	279,066	277,079
Loans – before loan loss provisions	**20,345,555**	**21,238,453**
Loan loss provisions	-10,081	-10,895
Loans	**20,335,474**	**21,227,558**

1 For purposes of comparison, the amounts from 2021 have been reclassified.

'Loans secured by mortgages' includes Purchased or Originated Credit-Impaired loans. 'Other loans' relates to a short-term receivable from NN Dutch Residential Mortgage Fund for mortgages sold, but not yet transferred. 'Group companies' relates to a receivable, following arrangements to transfer mortgage parts in a current account for the former Delta Lloyd Bank portfolio.

Loans by stage 31 December 2022

	Stage 1	Stage 2	Stage 3	Purchased or Originated Credit-Impaired	No allocated stage	2022
Loans - before loan loss provisions	21,292,815	417,666	95,059	29,025	-1,489,010	20,345,555
Loan loss provisions	-652	-4,336	-5,016	-77	0	-10,081
Loans - after loan loss provisions	**21,292,163**	**413,330**	**90,043**	**28,948**	**-1,489,010**	**20,335,474**

'No allocated stage' relates mainly to mortgage premium and fair value changes of hedged items.

Notes to the Consolidated annual accounts continued

Loans by stage 31 December 2021

	Stage 1	Stage 2	Stage 3	Purchased or Originated Credit-Impaired	No allocated stage	2021
Loans - before loan loss provisions	19,931,845	614,481	103,383	31,483	557,261	21,238,453
Loan loss provisions	-1,482	-1,846	-7,322	-245	0	-10,895
Loans - after loan loss provisions	**19,930,363**	**612,635**	**96,061**	**31,238**	**557,261**	**21,227,558**

No individual loan has terms and conditions that significantly affect the amount, timing or certainty of the Consolidated cash flows of NN Bank. For additional details, see Note 39 'Risk management'.

Reference is made to Note 26 'Fair value of financial assets and liabilities', for disclosure by fair value hierarchy and Note 39 'Risk management' for NN Bank's credit risk exposure and on significant credit risk exposures.

Changes in loans by stage

	Stage 1	Stage 2	Stage 3	Purchased or Originated Credit-Impaired	No allocated stage	2022	2021
Loans – opening balance	19,931,845	614,481	103,383	31,483	557,261	21,238,453	21,280,660
Mortgage portfolio transfer	352,221	10,674	1,709	156	0	364,760	239,044
Partial transfer of mortgage loans	4,984	-1,439	-426	0	0	3,119	24,902
Origination	3,640,553	71,520	5,890	0	0	3,717,963	3,012,851
Premium new mortgages	0	0	0	0	-7,591	-7,591	14,056
Amortisation mortgage premium	0	0	0	104	-29,711	-29,607	-39,593
Fair value change hedged items	0	0	0	0	-1,952,197	-1,952,197	-461,527
Other changes[1]	-74,453	-35,951	20,214	145	-58,479	-148,524	-48,868
Modifications[2]	0	0	0	0	1,707	1,707	1,985
Redemptions	-2,684,476	-117,340	-37,848	-2,863	0	-2,842,527	-2,777,786
Transfers to[3]:						0	
– Stage 1	0	-283,473	-3,596	0	0	-287,069	-104,133
– Stage 2	-145,659	0	-31,885	0	0	-177,544	-383,414
– Stage 3	-19,268	-18,350	0	0	0	-37,618	-33,578
Transfers from[3]:						0	
– Stage 1	0	145,659	19,268	0	0	164,927	258,885
– Stage 2	283,471	0	18,350	0	0	301,821	110,197
– Stage 3	3,597	31,885	0	0	0	35,482	144,772
Loans – closing balance	**21,292,815**	**417,666**	**95,059**	**29,025**	**-1,489,010**	**20,345,555**	**21,238,453**

1 'Other changes' mainly reflects the differences that result from 'Transfers to / Transfers from', which are based on year to date (YtD) and other movements based on month to date (MtD). The transfers are based on the YtD methodology to avoid double counting movements where a loan can change stages multiple times a year. Additionally, it reflects changes in the drawn amounts of the construction deposits, and changes in 'Other loans'.
2 'Modifications' relates to the impact of the modification of the outstanding mortgage loans as a result of the amended interest rate pricing system for NN and former Delta Lloyd mortgage portfolios.
3 'Transfers to' shows the outflow from the stage in the column to the stage stated on row level. 'Transfers from' shows the inflow from stage on row level to the stage in the column. Differences between 'Transfers to' and 'Transfers from' arise due to changes in balance amount between the moment of outflow and inflow.

In 2022, the mortgage portfolio transfer from ING Bank amounted to EUR 187 million and is presented under Mortgage portfolio transfer. As at 31 December 2022, both parties had already determined to transfer EUR 5 million in mortgage loans for the first four months of 2023. As settlement date accounting is applied, these mortgages are not recognised in the statement of financial position as at 31 December 2022.

NN Bank sold mortgage loans to securitisation entities that, in turn, issued notes to investors that are collateralised by the purchased assets. In addition, mortgage loans are structured through the extended Soft Bullet Covered Bond Programme. These mortgage loans continue to be recognised on NN Bank's statement of financial position, as NN Bank retained all or substantially all of the risks and rewards of the mortgage loans. Reference is made to Note 30 'Assets not freely disposable' and Note 35 'Structured entities'.

The percentage of the total loans to customers in Stage 3 decreased from 0.5% (EUR 103 million) at the beginning of the year to 0.4% (EUR 95 million) at the end of 2022. The slight drop in Stage 3 loans is the result of low unemployment environment and the limited effect of high inflation and rising interest rates. As for Stage 2, we observe a decrease from 3.0% to 1.9% at the end of 2022 (EUR 418 million), as the customers with payment problems decreases.

The movement of 'Fair value change hedged items' is due to increasing interest rate curves. Reference is made to Note 21 'Valuation results on non-trading derivatives' and Note 27 'Derivatives and hedge accounting'.

Notes to the Consolidated annual accounts continued

Purchased or Originated Credit-Impaired loans (POCI)

	2022	2021
POCI - opening balance	31,483	35,783
Mortgage portfolio transfer	156	1,102
Amortisation value adjustment	104	243
Redemptions	-2,863	-5,962
Unfavourable changes in credit quality	-93	-465
Favourable changes in credit quality	238	782
POCI - closing balance	**29,025**	**31,483**

Purchased or Originated Credit-Impaired (POCI) loans are purchased from ING Bank and recognised initially at an amount net of impairments. They are measured at amortised cost using a credit-adjusted effective interest rate. In subsequent periods, any deteriorating changes to the estimated lifetime ECL are recognised in the statement of profit or loss.

Loan loss provisions by type

	2022	2021
Loans secured by mortgages	5,439	4,413
Consumer lending	4,642	6,482
Loan loss provisions by type	**10,081**	**10,895**

In 2022, the loan loss provisions decreased by EUR 0.8 million to EUR 10.1 million. For mortgages, the provision increased by EUR 1.0 million due to a management overlay of EUR 3.0 million against the potential negative consequences of high inflation and increasing interest rates. This was partly offset by a strong housing price increase between the third quarter of 2021 and the third quarter of 2022[2] (11.9%[3]) and a decrease in Stage 3 loans due to low unemployment. For consumer loans, the provisions decreased by EUR 1.8 million to EUR 4.6 million due to repayment and write-offs in the portfolio.

Inflation and increasing interest rate
In an effort to tackle the high levels of inflation, central banks have hiked-up interest rates several times this year. As a result, mortgage interest rates have increased and new production has dropped. The war in Ukraine has had many effects on the European markets, most notably on energy prices.

The impact of those adverse events has yet to fully materialise. Therefore, NN Bank has taken a management overlay to ensure that the level of Loan Loss Provisions is sufficient. The management overlay is at EUR 3.0 million. The management overlay is calculated based on the expected impact of high inflation and the rise in interest rates on the most vulnerable customer segments (e.g., interest rate reset in the near future or energy-inefficient households).

Macro-economic scenarios
Furthermore, NN Bank has updated its macro-economic scenarios. The assumptions on GDP, unemployment, and housing prices are used as input in the calculation of the expected credit losses under IFRS 9, where it is required to use forward-looking information. The Bank has taken into account the most recent scenarios as published by the CPB, DNB and other institutions. Uncertainty over the economic outlook was already high as a result of the Covid-pandemic. Due to the war in Ukraine and its economic consequences and the increase in inflation and interest rates this remains the case. As a result, the weights of the macro-economic scenarios remain with a higher weight for the downturn scenario of 40%. The scenario weights are assigned as follows: neutral scenario 50%, upside 10%, downside 40%. These assumptions will be assessed on a continuing basis and adjusted if necessary, based on the further developments of the war in Ukraine and other macroeconomic developments.

In 2022, the Dutch economy initially showed strong growth. However, in the second half of year the economy slowed and now seems to be at a turning point. This is especially evident in regard to the housing market. In the neutral scenario, NN Bank expects the GDP to increase by 1% in 2023 and for later years to return to the long-term rate (2.0%). The unemployment rate is expected to be 4.0% in 2023 in the neutral scenario and for subsequent years to remain at the long-term rate. Housing prices are expected to decrease by 3.5% in 2023.

To provide an indication of the expected credit losses' sensitivity to the macro-economic environment, the column 'Unweighted ECL' shows the impact on mortgages and consumer lending ECL of applying a 100% weighting to each scenario. The expected credit losses are relatively insensitive, because the mortgage portfolio is well-collateralised with an average LTV of 53%.

[2] Fourth quarter figures were unavailable at year-end.
[3] Based on CBS.

Notes to the Consolidated annual accounts continued

Scenario / Weighting	Macro-economic variable	2023	2024	2025	Long-Term Rate	Unweighted ECL	Weighted ECL
	Unemployment	3.4%	2.6%	3.3%			
Up / 10%	Housing Price index growth	10.7%	17.4%	9.8%		9,790	
	GDP growth	4.2%	7.0%	4.5%			
	Unemployment	4.0%	4.1%	4.1%	4.1%		
Neutral / 50%	Housing Price index growth	-3.5%	1.2%	2.1%	2.1%	10,004	10,081
	GDP growth	1.0%	2.0%	2.0%	2.0%		
	Unemployment	4.7%	5.6%	4.9%			
Down / 40%	Housing Price index growth	-3.5%	-8.3%	-3.1%		10,249	
	GDP growth	1.0%	-1.7%	0.1%			

Changes in loan loss provisions by stage – Loans secured by mortgages

	Stage 1 12-month ECL non-credit impaired	Stage 2 Lifetime ECL non-credit impaired	Stage 3 Lifetime ECL credit impaired	Purchased or Originated Credit-Impaired	2022	2021
Loan loss provisions – opening balance	1,154	1,100	1,914	245	4,413	13,783
Addition (release from) to the loan loss provisions	-185	2,316	-1,086	-202	843	-2,968
Changes in models and methodologies	-603	511	377	34	319	0
Transfers to[1]:						
– Stage 1	0	-437	-73		-510	-891
– Stage 2	-9	0	-463		-472	-6,630
– Stage 3	-1	-58	0		-59	-120
Transfers from[1]:						
– Stage 1	0	249	256		505	475
– Stage 2	5	0	338		343	390
– Stage 3	0	57	0		57	374
Loan loss provisions – closing balance	**361**	**3,738**	**1,263**	**77**	**5,439**	**4,413**
Write-offs	0	0	227	0	227	860
Recoveries	0	0	-647	0	-647	-859

1 'Transfers to' shows the outflow from the stage in the column to the stage stated on row level. 'Transfers from' shows the inflow from stage on row level to the stage in the column. Differences between 'Transfers to' and 'Transfers from' arise because the provision changes as a result of the change in stage.

Changes in loan loss provisions by stage – Consumer lending

	Stage 1 12-month ECL non-credit impaired	Stage 2 Lifetime ECL non-credit impaired	Stage 3 Lifetime ECL credit impaired	2022	2021
Loan loss provisions – opening balance	328	746	5,408	6,482	11,481
Addition (release from) to the loan loss provisions	-129	-365	-2,127	-2,621	-4,873
Changes in models and methodologies	95	218	254	567	-614
Transfers to[1]:					
– Stage 1	0	-201	-217	-418	-550
– Stage 2	-13	0	-458	-471	-505
– Stage 3	-6	-110	0	-116	-338
Transfers from[1]:					
– Stage 1	0	198	524	722	1,211
– Stage 2	11	0	369	380	590
– Stage 3	5	112	0	117	80
Loan loss provisions – closing balance	**291**	**598**	**3,753**	**4,642**	**6,482**
Write-offs	0	0	2,310	2,310	6,376
Recoveries	0	0	-1,742	-1,742	-1,426

1 'Transfers to' shows the outflow from the stage in the column to the stage stated on row level. 'Transfers from' shows the inflow from stage on row level to the stage in the column. Differences between 'Transfers to' and 'Transfers from' arise because the provision changes as a result of the change in stage.

In 2022, the loan loss provisions for mortgages increased by EUR 1.0 million. The increase was mainly driven by a management overlay of EUR 3.0 million against the potential negative consequences of high inflation and increasing interest rates. Furthermore, the provisioning model was updated which resulted in an increase in the provision of EUR 0.3 million. The increase was partly offset by a strong housing price increase and a decrease in Stage 3 loans due to low unemployment.

For consumer loans, the provisions decreased by EUR 1.8 million to EUR 4.6 million mainly due to write-offs and redemptions in the portfolio. The effect was partly offset by an update in the provisioning model which resulted in an increase in the provision of EUR 0.6 million.

Write-offs minus reversals for mortgages were EUR -0.4 million due to low unemployment and a strong housing price increase in 2022. For consumer lending, the write-offs minus reversals were EUR 0.6 million due to an update in the write-off policy that resulted in a one-time write-off of EUR 0.8 million.

Notes to the Consolidated annual accounts continued

7 Intangible assets

Intangible assets

	2022	2021
Intangibles	**27,186**	**23,690**

	2022	2021
Intangibles – opening balance	23,690	24,689
Additions	6,862	6,571
Amortisation	-3,342	-2,284
Disposals	-24	-5,286
Intangibles – closing balance	**27,186**	**23,690**
Gross carrying value	36,125	33,133
Accumulated amortisation	-8,939	-9,443
Net carrying value	**27,186**	**23,690**

'Additions' to the intangible assets relate to renewal and expansion of our core banking platform and to strategic initiatives.

Part of 'Gross carrying value' relates to projects in progress (EUR 16.3 million). The amortisation period is generally five years from the date of full implementation of the new systems.

8 Other assets

Other assets

	2022	2021
Accrued interest mortgages	44,567	41,690
Accrued interest other	4,767	6,202
Current account NN Insurance Eurasia N.V.	23,173	72,682
Current account other group companies	7,353	2,589
Debtors	111,960	114,770
Other	694	1,745
Total other assets	**192,514**	**239,678**

'Current account NN Insurance Eurasia N.V.' is mainly used for daily settlement of mortgage flows and expenses.

9 Amounts due to banks

'Amounts due to banks' includes non-subordinated debt due to banks, other than amounts in the form of debt securities issued, including accrued interest with banks.

Amounts due to banks by type

	2022	2021
Interest-bearing	245,000	0
Amounts due to banks	**245,000**	**0**

The increase in 'Amounts due to banks (interest-bearing)' of EUR 245 million relates to new loans with third parties. Part of this increase relates to a participation in longer-term refinancing operations (EUR 200 million).

As at 31 December 2022, NN Bank had unused bank lines of credit available of EUR 123 million (31 December 2021: EUR 130 million).

10 Customer deposits and other funds on deposit

Customer deposits and other funds on deposit by type

	2022	2021
Savings	7,621,106	7,357,477
Bank annuities	6,852,389	6,838,588
Bank annuities related to mortgages	1,622,111	1,581,230
Corporate deposits	0	3,500
Group companies	131,936	123,352
Customer deposits and other funds on deposit	**16,227,542**	**15,904,147**

'Group companies' relates to a payable, following arrangements to transfer mortgage parts in a current account for the former Delta Lloyd Bank portfolio.

The interest payable on savings accounts is contractually added to the accounts and is presented in the balance as such.

Notes to the Consolidated annual accounts continued

Customers have not entrusted any funds to NN Bank on terms other than those prevailing in the normal course of business.

Changes in customer deposits and other funds on deposit

	2022	2021
Customer deposits and other funds on deposit – opening balance	15,904,147	15,742,735
Deposits received	3,855,309	4,848,716
Withdrawals	-3,531,914	-4,687,304
Customer deposits and other funds on deposit – closing balance	**16,227,542**	**15,904,147**

11 Financial liabilities at fair value through profit or loss

Non-trading derivatives

	2022	2021
Derivatives held for fair value hedge accounting	0	4,218
Balanced guaranteed swaps	0	8,353
Non-trading derivatives	**0**	**12,571**

For further clarification on 'Derivatives held for fair value hedge accounting', reference is made to Note 27 'Derivatives and hedge accounting'.

For 'Balanced guaranteed swaps', which were used in securitisation transactions, reference is made to Note 35 'Structured entities'.

12 Other borrowed funds

Other borrowed funds

	2022	2021
NN Group	0	438,000
Other funds	318,000	200,000
Other borrowed funds	**318,000**	**638,000**

	2022	2021
Other borrowed funds – opening balance	638,000	1,260,000
Issuances	543,000	150,000
Redemption	-863,000	-772,000
Other borrowed funds – closing balance	**318,000**	**638,000**

Funds received from third parties amounted to EUR 543 million, while EUR 425 million was repaid in 2022, resulting in an increase in 'Other funds' to EUR 318 million (2021: EUR 200 million).

NN Group provided a revolving credit facility commitment to NN Bank up to an amount of EUR 250 million (2021: EUR 250 million). The credit facility was fully undrawn in 2022. In addition, NN Group provided a Central Clearing Borrowing Facility up to an amount of EUR 1,300 million (2021: EUR 1,300 million) for the funding of variation margin calls regarding centrally cleared interest rate derivatives contracts. During 2022, the drawdown under the Central Clearing Borrowing Facility provided by NN Group decreased to EUR 0 million (2021: EUR 438 million).

13 Other liabilities

Other liabilities

	2022	2021
Income tax payable	14,942	3,997
Other taxation and social security contributions	13,739	14,255
Accrued interest non-trading derivatives	0	1,030
Accrued interest other	23,936	17,047
Current account other group companies	6,541	17,835
Costs payable	16,064	12,896
Other	15,123	8,946
Other liabilities	**90,345**	**76,006**

'Accrued interest other' mainly relates to accrued interest regarding other borrowed funds and debt securities issued.

'Other' mainly relates to year-end accruals and other payables to third parties in the normal course of business.

Notes to the Consolidated annual accounts continued

14 Provisions

Provisions

	2022	2021
Provision for client compensation schemes	23,127	22,904
Restructuring provisions	4,237	2,827
Other provisions	30	30
Provisions	**27,394**	**25,761**

Changes in provisions

	Provision for client compensation schemes		Restructuring provisions		Other provisions	
	2022	2021	2022	2021	2022	2021
Provisions - opening balance	22,904	0	2,827	6,375	30	27
Additions	5,077	22,904	4,881	1,716	0	90
Releases	-1,768	0	-1,260	-1,910	0	-87
Charges	-3,086	0	-2,211	-3,354	0	0
Provisions - closing balance	**23,127**	**22,904**	**4,237**	**2,827**	**30**	**30**

'Provision for client compensation schemes' is mainly recognised for the interest compensation consumer credit, which is a compensation scheme regarding revolving consumer credit with a floating interest rate. This provision was created in 2021 and updated in 2022. In this respect, reference is made to Note 33 'Legal proceedings'.

'Restructuring provisions' are recognised for expected future redundancy costs. The addition is mainly the result of a reorganisation within NN Bank's mortgages & consumer loans department. The releases mainly resulted from staff that NN Bank was able to transfer to another internal position. The remaining restructuring provision at the balance sheet date represents the best estimate of the expected future redundancy costs and is expected to be sufficient to cover the remaining costs of the restructuring programme.

'Additions' or 'Releases' are recognised in the statement of profit or loss.

15 Debt securities issued

'Debt securities issued' relates to debentures and other issued debt securities with either fixed or floating interest rates. NN Bank does not have debt securities that are issued on terms other than those available in the normal course of business. The maturities, based on the earliest contractual payment date of the debt securities, are as follows:

Debt securities issued – maturities 31 December 2022

	Less than 1 year	1-2 years	2 - 3 years	3 - 4 years	4 - 5 years	Over 5 years	Total
Floating rate debt securities	0		0	0	0	0	0
Subtotal RMBS securitisation programmes	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Covered bond issuances	0	979,505	481,244	0	0	2,884,251	4,345,000
Fixed rate unsecured debt securities	764,408	0	483,888	0	32,408	474,923	1,755,627
Floating rate unsecured debt securities	0	0	0	24,844	0	0	24,844
Debt securities issued	**764,408**	**979,505**	**965,132**	**24,844**	**32,408**	**3,359,174**	**6,125,471**

Debt securities issued – maturities 31 December 2021

	Less than 1 year	1-2 years	2 - 3 years	3 - 4 years	4 - 5 years	Over 5 years	Total
Floating rate debt securities	332,988	0	0	0	0	0	332,988
Subtotal RMBS securitisation programmes	**332,988**	**0**	**0**	**0**	**0**	**0**	**332,988**
Covered bond issuances	0	0	1,006,050	504,529	0	2,796,396	4,306,975
Fixed rate unsecured debt securities	0	772,279	0	497,395	0	584,650	1,854,324
Floating rate unsecured debt securities	0	0	0	0	24,905	0	24,905
Debt securities issued	**332,988**	**772,279**	**1,006,050**	**1,001,924**	**24,905**	**3,381,046**	**6,519,192**

Notes to the Consolidated annual accounts continued

Secured debt securities

NN Bank has the right to redeem the Residential Mortgage Backed Securities under the Hypenn RMBS securitisation programme at First Optional Redemption Date (FORD). These dates for the debt securities issued are presented in the table below. The amounts are balance sheet amounts, excluding retained notes.

	FORD	2022	2021
Hypenn RMBS I A3	17-11-2024	0	0
Hypenn RMBS VI	17-12-2022	0	332,988
Hypenn RMBS VII	17-9-2026	0	0
Total		**0**	**332,988**

As per FORD, on 17 December 2022, Hypenn RMBS VI has been fully redeemed.

The outstanding notes of Hypenn RMBS I and Hypenn RMBS VII are fully held (retained) by NN Bank.

	Maturity date	2022	2021
Soft Bullet Covered Bond October 2017	10-10-2024	499,590	499,308
Soft Bullet Covered Bond June 2018	11-9-2025	498,432	497,951
Soft Bullet Covered Bond September 2018	25-9-2028	495,847	495,282
Soft Bullet Covered Bond February 2019	27-2-2024	499,509	499,102
Soft Bullet Covered Bond March 2019 - 1	18-3-2039	24,827	24,833
Soft Bullet Covered Bond March 2019 - 2	21-3-2039	19,917	19,926
Soft Bullet Covered Bond July 2019	25-9-2028	52,173	52,300
Soft Bullet Covered Bond September 2019	24-9-2029	498,524	498,423
Soft Bullet Covered Bond July 2020	8-7-2030	495,962	501,031
Soft Bullet Covered Bond September 2020	24-9-2035	497,199	496,365
Soft Bullet Covered Bond November 2020	12-11-2040	247,360	247,038
Soft Bullet Covered Bond March 2021	4-3-2041	499,857	497,244
Soft Bullet Covered Bond May 2022	17-5-2032	496,744	0
Fair value change hedged items		-480,941	-21,828
Total		**4,345,000**	**4,306,975**

On 8 April 2022, following a consent solicitation with investors all bonds under the Conditional Pass-Through Programme (issue dates October 2017 until September 2019 with a total nominal size of EUR 2,595 million) have been transferred to the Soft Bullet Covered Bond Programme.

On 17 May 2022, NN Bank raised EUR 500 million in secured funding by issuing a 10-year Soft Bullet Covered Bond under the Soft Bullet Covered Bond Programme.

Unsecured debt securities

	Maturity date	2022	2021
Debt Issuance Programme May 2019	31-5-2023	499,884	499,066
Debt Issuance Programme August 2019	3-9-2029	19,933	19,875
Debt Issuance Programme November 2019	26-2-2025	498,416	497,838
Debt Issuance Programme September 2021	21-9-2028	497,600	497,254
Other unsecured debt securities	n/a	347,136	347,029
Fair value change hedged items		-107,342	-6,738
Fixed rate unsecured debt securities		**1,755,627**	**1,854,324**
Floating Rate Note July 2019 - 2	10-7-2026	24,844	24,905
Floating rate unsecured debt securities		**24,844**	**24,905**

'Debt securities issued' includes the bonds issued under the Soft Bullet Covered Bond Programme, the Debt Issuance Programme and 'Schuldschein' debt. The debt securities issued to third parties amounted to EUR 6,125 million as at 31 December 2022 (31 December 2021: EUR 6,519 million), of which EUR 4,345 million relates to the Covered Bonds (31 December 2021: EUR 4,307 million) and EUR 1,780 million relates to unsecured debt securities (31 December 2021: EUR 1,879 million). At 31 December 2022, no notes were issued to related parties (31 December 2021: EUR 0 million).

For the Hypenn RMBS securitisation programmes and the Covered Bond Programme, reference is made to Note 35 'Structured entities'.

The notes issued by the Hypenn RMBS entities that are held by NN Bank are not presented in the table above. The notes issued and retained by NN Bank amounted to EUR 2,144 million as at 31 December 2022 (31 December 2021: EUR 2,722 million) and consist of EUR 263 million junior notes (31 December 2021: EUR 327 million) and EUR 1,881 million senior notes (31 December 2021: EUR 2,395 million).

The cash inflow of the repayment of the mortgage loans is first used to redeem the noteholders of the senior notes. After the redemption of Class A noteholders, repayment of the junior noteholders will take place. NN Bank is holder of all class (A, B and C) notes issued by the Special-Purpose Entities (SPEs). The cash inflows of the interest of the mortgages are used for the payment of interest on the notes and follow the same waterfall structure as described above.

Notes to the Consolidated annual accounts continued

Green bonds issued

NN Bank issues green bonds under its Green Bond Framework in order to align the Bank's funding strategy with its ESG strategy. The framework enables NN Bank to finance or refinance green residential properties in the Netherlands, and allows the Bank to raise sustainable financing that meets regulatory criteria and market best practices with regards to sustainability. Under the framework, NN Bank is able to issue green unsecured debt under the Debt Issuance Programme, green covered bonds under the Soft Bullet Covered Bond Programme, as well as green (subordinated) loans. Since the publication of the Framework in 2021, the Bank has issued the following debt instruments under the framework (in notional amounts):

	Maturity date	2022	2021
Senior Non-Preferred Bond, September 2021 issued under Debt Issuance Programme 2021	21-09-2028	500,000	500,000
Subordinated Debt, February 2022	27-2-2032	15,000	0
Soft Bullet Covered Bond, May 2022	17-5-2032	500,000	0
Total		**1,015,000**	**500,000**

16 Subordinated debt

Subordinated debt

				Notional amount		Balance sheet value	
Interest rate	**Year of issue**	**Due date**	**First call date**	**2022**	**2021**	**2022**	**2021**
2.55%	2022	27 February 2032	27 February 2027	15,000	0	15,000	0
1.29%	2020	26 February 2030	26 February 2025	30,000	30,000	30,000	30,000
1.38%	2019	26 September 2029	26 September 2024	25,000	25,000	25,000	25,000
1.83%	2019	26 June 2029	26 June 2024	15,000	15,000	15,000	15,000
3.02%	2017	27 February 2027	27 February 2022	0	15,000	0	15,000
Subordinated debt				**85,000**	**85,000**	**85,000**	**85,000**

NN Group provided four subordinated loans to NN Bank for an amount of EUR 85.0 million, which qualify as Tier 2 capital under the CRR. Under IFRS-EU, these debt instruments are classified as liabilities. They are considered capital for regulatory purposes. NN Bank has the right to pay off the debt at the call date.

The EUR 15.0 million subordinated loan issued in 2017 was restructured on 27 February 2022, and NN Group extended the maturity date by five years. The new interest rate is 2.55%. This restructured loan is considered to be a new loan under IFRS.

All subordinated debt is euro denominated.

17 Equity

Total equity

	2022	2021
Share capital	10,000	10,000
Share premium	481,000	481,000
Revaluation reserve	-28,006	-4,747
Retained earnings and unappropriated result	578,396	608,386
Shareholder's equity	**1,041,390**	**1,094,639**

Share capital

			Ordinary shares	
	Shares (in numbers)		Amount (in EUR thousand)	
	2022	**2021**	**2022**	**2021**
Authorised share capital	5,000,000	5,000,000	50,000	50,000
Unissued share capital	4,000,000	4,000,000	40,000	40,000
Issued share capital	**1,000,000**	**1,000,000**	**10,000**	**10,000**

Changes in equity (2022)

2022	Share capital	Share premium	Reserves	Total shareholders' equity
Equity – opening balance	10,000	481,000	603,639	1,094,639
Total amount recognised directly in equity (Other comprehensive income)	0	0	-23,259	-23,259
Net result for the period	0	0	81,543	81,543
Dividend paid	0	0	-111,600	-111,600
Change in employee share plans	0	0	73	73
Other	0	0	-6	-6
Equity – closing balance	**10,000**	**481,000**	**550,390**	**1,041,390**

Notes to the Consolidated annual accounts continued

Changes in equity (2021)

2021	Share capital	Share premium	Reserves	Total shareholders' equity
Equity – opening balance	10,000	481,000	644,710	1,135,710
Total amount recognised directly in equity (Other comprehensive income)	0	0	-6,450	-6,450
Net result for the period	0	0	101,767	101,767
Dividend paid	0	0	-136,466	-136,466
Change in employee share plans	0	0	78	78
Other	0	0	0	0
Equity – closing balance	**10,000**	**481,000**	**603,639**	**1,094,639**

Ordinary shares
All shares are in registered form. Shares may be transferred by means of a deed of transfer, subject to the approval of the General Meeting. On 31 December 2022, issued and fully paid ordinary share capital consists of 1,000,000 ordinary shares, with a par value of EUR 10.00 per share.

Distributable reserves
NN Bank is subject to legal restrictions regarding the amount of dividends it can pay to its shareholder. The Dutch Civil Code contains the restriction that dividends can only be paid up to an amount equal to total shareholder's equity less the paid-up and called share capital and less the reserves required pursuant to law or the Articles of Association. In case of negative balances for individual reserves legally to be retained, no distributions can be made out of retained earnings to the level of these negative amounts.

In addition to the legal and regulatory restrictions on distributing dividends, there are various other considerations and limitations that are taken into account in determining the appropriate levels of equity. These considerations and limitations include, but are not restricted to, rating agency and regulatory views, which can change over time. It is not possible to disclose a reliable quantification of these limitations. Reference is also made to Note 40 'Capital management'.

Legally distributable reserves, determined in accordance with the financial reporting requirements included in Part 9 of Book 2 of the Dutch Civil Code, from NN Bank and its subsidiaries are as follows:

Distributable reserves based on the Dutch Civil Code

		2022		2021
Total shareholders' equity		1,041,390		1,094,639
– share capital	10,000		10,000	
– revaluation reserve	-28,006		-4,747	
– intangible assets reserve	27,186		23,690	
Total non-distributable part of shareholders' equity		9,180		28,943
Distributable reserves based on the Dutch Civil Code		**1,032,210**		**1,065,696**

Proposed appropriation of result
The result is appropriated pursuant to article 21 of the NN Bank Articles of Association, the relevant provisions of which state that the General Meeting, having heard the advice of the Management Board and the Supervisory Board, shall determine the appropriation of result. It is proposed to increase the retained earnings with the 2022 net result of EUR 81.5 million.

Appropriation of result 2021
On 23 May 2022, following the General Meeting's adoption of the 2021 Consolidated annual accounts, the 2021 net result of EUR 101.8 million, less the proposed final cash dividend of EUR 111.6 million, was deducted from the retained earnings.

Dividend 2022
NN Bank paid no interim dividend and will not propose a final dividend over 2022.

Notes to the Consolidated annual accounts continued

18 Interest result

Interest result

	2022	2021
Interest income on loans	502,294	522,663
Modifications	1,728	2,009
Interest income on non-trading derivatives	72,579	46,115
Negative interest on liabilities	879	2,683
Other interest income	8,291	0
Total interest income	**585,771**	**573,470**
Interest expenses on amounts due to banks	344	470
Interest expenses on customer deposits and other funds on deposit	124,740	134,742
Interest expenses on debt securities issued and other borrowed funds	47,755	38,485
Interest expenses on non-trading derivatives	144,725	137,946
Interest expenses on subordinated loans	1,400	1,459
Negative interest on assets	6,694	10,092
Other interest expenses	3,599	5,851
Total interest expenses	**329,257**	**329,045**
Interest result	**256,514**	**244,425**

'Modifications' relates to the impact of the modification of the outstanding mortgage loans as a result of the amended interest rate pricing system for NN and former Delta Lloyd mortgage portfolios.

'Negative interest on liabilities' consists of negative interest expenses on other borrowed funds.

'Negative interest on assets' includes negative interest income charged by DNB of EUR 4.4 million (2021: EUR 8.2 million). The remainder concerns interest on investment securities.

Interest margin in percentages

	2022	2021
Interest margin	**1.06%**	**0.98%**

'Interest margin' is calculated by dividing the interest result by the average of the total assets for the year ending 2022 and 2021, respectively.

19 Gains and losses on financial transactions and other income

Gains and losses on financial transactions and other income

	2022	2021
Realised gains or losses of investment securities	0	1,660
Results from financial transactions	0	66
Net income from loans measured at FVTPL	0	-46
Other income	-625	-71
Gains and losses on financial transactions and other income	**-625**	**1,609**

20 Net fee and commission income

Net fee and commission income

	2022	2021[1]
Service management fee	50,811	47,402
Brokerage and advisory fees	61,929	97,346
Other fees	8	45
Gross fee and commission income	**112,748**	**144,793**
Asset management fees	11,300	11,153
Brokerage and advisory fees	1,571	3,813
Other fees	1,781	13
Fee and commission expenses	**14,652**	**14,979**
Net fee and commission income	**98,096**	**129,814**

1 For purposes of comparison, the amounts from 2021 have been reclassified.

NN Bank services a total loan portfolio of EUR 35.3 billion (2021: EUR 35.3 billion) for NN Life, NN Non-life, NN Belgium, NN Dutch Residential Mortgage Fund (DRMF), ING Bank and other entities.

Notes to the Consolidated annual accounts continued

NN Bank originates mortgages directly on behalf of NN Life, NN Non-life and NN Belgium and receives an origination fee for this service. The origination fee for the NN Life loan portfolio amounts to EUR 44.6 million (2021: EUR 62.0 million), for the NN Non-life loan portfolio this amounts to EUR 4.6 million (2021: EUR 8.1 million) and for the NN Belgium loan portfolio this amounts to EUR 1.0 million (2021: EUR 0.9 million). The origination fee for DRMF amounts to EUR 8.8 million (2021: EUR 20.7 million). The origination fees are included in 'Brokerage and advisory fees'.

21 Valuation results on non-trading derivatives

Valuation results on non-trading derivatives

	2022	2021
Gains or losses (fair value changes) in fair value hedge accounting relating to:		
– the hedging instrument (non-trading derivatives)	1,440,158	352,184
– the hedged items (mortgages/debt securities) attributable to the hedged risk	-1,431,525	-354,608
Gains or losses (fair value changes) in other non-trading derivatives	3,956	6,266
Valuation results on non-trading derivatives	**12,589**	**3,842**

Included in 'Valuation results on non-trading derivatives' are the fair value movements used to economically hedge exposures. Changes in market conditions, such as interest rates, influence the fair value movements on the derivatives.

Gains and losses on hedged items and hedging instruments in 2022 increased compared with those of 2021, mainly due to increasing interest rate curves.

Included in the 'Valuation results on non-trading derivatives' are the results from balanced guaranteed swaps included in structured entities. Reference is made to Note 35 'Structured entities'.

22 Staff expenses

Staff expenses

	2022	2021
Salaries	72,530	67,736
Pension and other staff-related benefit costs	14,261	13,136
Social security costs	9,532	8,366
Share-based compensation arrangements	73	78
External staff costs	40,655	35,692
Education	1,147	1,238
Other staff costs	2,244	2,183
Staff expenses	**140,442**	**128,429**

NN Personeel B.V. employs all NN Bank staff. NN Personeel B.V. charges NN Bank for its staff expenses under a service level agreement. Although these costs are not paid out in the form of staff expenses by NN Bank, they do have the characteristics of staff expenses and they are therefore recognised as such. NN Personeel B.V. recognises a provision for holiday entitlement and bonuses. Actual costs are charged to NN Bank when accrued.

Pension costs

Defined contribution plans

NN Bank is one of the sponsors of the NN Group defined contribution plans (NN CDC Pensioenfonds, until 1 October 2022 and BeFrank, as of 1 October 2022). The assets of all NN Group's defined contribution plans are held in independently administered funds. Contributions are generally determined as a percentage of salary. These plans do not give rise to balance sheet provisions, other than relating to short-term timing differences included in 'Other assets' or 'Other liabilities'.

Number of employees

	2022	2021
Average number of internal employees on full-time equivalent basis	974	936
Average number of external employees on full-time equivalent basis	338	310
Total	**1,312**	**1,246**

Remuneration of Management Board and Supervisory Board

Reference is made to Note 37 'Key management personnel compensation'.

Share plans

NN Group has granted shares to a number of senior executives. The purpose of the share schemes is to attract, retain and motivate senior executives.

Share awards comprise upfront shares and deferred shares. The entitlement to the deferred shares 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. A retention period applies from the moment of vesting these awards (five years for Management Board and one year for Identified Staff).

Notes to the Consolidated annual accounts continued

Share awards on NN Group shares

Changes in share awards on NN Group shares outstanding for NN Bank

	Share awards (in numbers)		Weighted average grant date fair value (in euros)	
	2022	2021	2022	2021
Share awards outstanding – opening balance	2,397	2,715	31.70	28.01
Granted	1,688	2,099	42.90	40.32
Vested	-1,928	-2,417	36.05	35.04
Forfeited	-40	0	39.10	-
Share awards outstanding – closing balance	**2,117**	**2,397**	**36.53**	**31.70**

In 2022, 1,688 share awards on NN Group shares (2021: 2,099) were granted to the members of the NN Bank Management Board. To other employees of NN Bank, 0 share awards on NN Group shares (2021: 0) were granted.

As at 31 December 2022, the share awards on NN Group shares consist of 2,117 share awards (2021: 2,397) relating to equity-settled share-based payment arrangements, and no share awards to cash-settled share-based payment arrangements.

The fair value of share awards granted is recognised as an expense under 'Staff expenses' and is allocated over the vesting period of the share awards.

As at 31 December 2022, total unrecognised compensation costs related to share awards amount to EUR 36 thousand (2021: EUR 28 thousand). These costs are expected to be recognised over a weighted average period of 1.9 years (2021: 1.3 years).

23 Regulatory levies

Regulatory levies

	2022	2021
Regulatory levies	26,828	27,162
Regulatory levies	**26,828**	**27,162**

'Regulatory levies' represents contributions to Deposit Guarantee Schemes (DGS) and the Single Resolution Fund (SRF). Contributions to DGS were EUR 17.2 million (2021: EUR 19.2 million) and contributions to the SRF were EUR 9.6 million (2021: EUR 8.0 million).

24 Other operating expenses

Other operating expenses

	2022	2021
Computer costs	21,139	28,305
Office expenses	395	329
Travel and accommodation expenses	1,539	1,138
Advertising and public relations	2,616	2,461
Bank costs	257	250
Net release from (addition to) restructuring provisions	3,621	-194
Amortisation of intangible assets	3,342	2,284
Other	6,000	14,542
Other operating expenses	**38,909**	**49,115**
Customer & Commerce	20,560	16,577
IT	8,515	10,577
Facility Management	6,024	6,459
General Management	11,930	11,250
Group HR	3,078	2,534
Finance Service Centre	1,169	1,127
Total Group Services	**51,276**	**48,524**
Total other operating expenses	**90,185**	**97,639**

For 'Net release from (addition to) restructuring provisions', reference is made to the disclosure on the restructuring provisions in Note 14 'Provisions'.

'Other' mainly consists of audit fees and contributions to, amongst others, AFM, DNB and ECB.

Fees of auditors

Reference is made to Note 50 'Fees of auditors' in the Consolidated annual accounts of NN Group for audit fees and audit-related fees. The services rendered by the auditor, in addition to the statutory audit, include audits in relation to reporting to regulators, audit of annual accounts

Notes to the Consolidated annual accounts continued

of subsidiaries, review of interim report, assurance on internal control reports provided to third parties and regulators, services in relation to prospectuses and issuance of debt and reports of factual findings to external parties and regulators.

25 Taxation

NN Bank is part of the Dutch fiscal unity of NN Group for corporate income tax purposes, making it jointly and severally liable for the total tax payable by the fiscal unity. The tax receivables and payables concern the receivables from and payables to NN Group. Income tax payable amounts to EUR 19,943 thousand and concerns tax payable to NN Group for the most recent quarter. Reference is made to Note 13 'Other liabilities'.

Deferred tax (2022)

	Net liability 2021[1]	Change through equity	Change through net result	Net asset 2022[1]
Investments	-988	-8,087	-113	9,188
Loans	-533	0	-621	1,154
Provisions	-707	0	-536	1,243
IFRS ruling	10,418	0	-1,831	-8,587
Intangible assets	-48	0	48	0
Deferred tax	**8,142**	**-8,087**	**-3,053**	**2,998**

1 Positive amounts are liabilities, negative amounts are assets.

IFRS ruling

In 2017, Delta Lloyd Bank was added to the Dutch fiscal unity of NN Group. Within the Dutch fiscal unity, the former Delta Lloyd group entities operate under the general Dutch fiscal policies, whereas NN Bank operates under an IFRS ruling. As from 1 January 2018, after the legal merger, the IFRS ruling is applied for the former Delta Lloyd Bank's assets and liabilities. This resulted in a difference between fiscal and financial figures of the Delta Lloyd Day One premiums. These premiums are being amortised over a period of multiple years, thereby reducing the difference.

Deferred tax (2021)

	Net liability 2020[1]	Change through equity	Change through net result	Net liability 2021[1]
Investments	1,359	-2,219	-128	-988
Loans	-1,209	0	676	-533
Provisions	-1,622	0	915	-707
IFRS ruling	13,075	0	-2,657	10,418
Intangible assets	0	0	-48	-48
Deferred tax	**11,603**	**-2,219**	**-1,242**	**8,142**

1 Positive amounts are liabilities, negative amounts are assets.

Taxation on result

	2022	2021
Current tax	31,433	35,628
Deferred tax	-3,053	-1,242
Taxation on result	**28,380**	**34,386**

Taxation in 2022 decreased by EUR 6.0 million to EUR 28.4 million, from EUR 34.4 million in 2021.

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

	2022	2021
Result before tax	109,923	136,153
Weighted average statutory tax rate	25.8%	25.0%
Weighted average statutory tax amount	**28,360**	**34,038**
Expenses not deductible for tax purposes	20	20
Tax rate changes	0	328
Effective tax amount	**28,380**	**34,386**
Effective tax rate	**25.8%**	**25.3%**

The statutory tax rate in 2022 was 25.8% (2021: 25.0%). The effective tax rate in 2022 was 25.8% (2021: 25.3%).

Taxation on components of other comprehensive income

	2022	2021
Unrealised revaluations	8,087	1,791
Realised gains or losses transferred to the statement of profit or loss	0	428
Total income tax related to components of other comprehensive income	**8,087**	**2,219**

Notes to the Consolidated annual accounts continued

26 Fair value of financial assets and liabilities

The following table presents the estimated fair value of NN Bank's financial assets and liabilities. Certain balance sheet items are not included in the table, as they do not meet the definition of a financial asset or liability. The aggregation of the fair value presented below does not represent, and should not be construed as representing, the underlying value of NN Bank.

Fair value of financial assets and liabilities

	Balance sheet value		Estimated fair value	
	2022	2021	2022	2021
Financial assets				
Cash and balances at central banks	2,182,806	1,324,778	2,182,806	1,324,778
Amounts due from banks	350,037	267,969	350,037	267,969
Financial assets at fair value through profit or loss:				
– non-trading derivatives	45,473	8,353	45,473	8,353
Investment securities	1,023,654	1,271,432	1,020,626	1,271,381
Loans	20,335,474	21,227,558	19,562,289	22,335,777
Financial assets	**23,937,444**	**24,100,090**	**23,161,231**	**25,208,258**
Financial liabilities				
Amounts due to banks	245,000	0	245,693	0
Customer deposits and other funds on deposit	16,227,542	15,904,147	15,751,336	16,599,460
Financial liabilities at fair value through profit or loss:				
– non-trading derivatives	0	12,571	0	12,571
Other borrowed funds	318,000	638,000	318,842	637,901
Debt securities issued	6,125,471	6,519,192	5,688,930	6,582,205
Subordinated debt	85,000	85,000	79,213	85,154
Financial liabilities	**23,001,013**	**23,158,910**	**22,084,014**	**23,917,291**

For the other financial assets and financial liabilities not included in the table above, including short-term receivables and payables, the carrying amount is a reasonable approximation of fair value.

'Estimated fair value' represents the price at which an orderly transaction to sell the financial asset or to transfer the financial liability would take place between market participants at the balance sheet date (exit price). The fair value of financial assets and liabilities is based on unadjusted quoted market prices, where available. Such quoted market prices are primarily obtained from exchange prices for listed instruments. Where an exchange price is not available, market prices are obtained from independent market vendors, brokers or market-makers. Because substantial trading markets do not exist for all financial instruments, various techniques have been developed to estimate the approximate fair value of financial assets and liabilities that are not actively traded. The fair value presented may not be indicative of the net realisable value. In addition, the calculation of the estimated fair value is based on market conditions at a specific point in time and may not be indicative of the future fair value. Where exposures of a group of financial assets and financial liabilities are managed on a net basis, NN Bank measures the fair value of the group of financial assets and financial liabilities on the basis of the price that would be received to sell a net long position or settle a net short position.

NN Bank used the following methods and assumptions to estimate the fair value of the financial instruments:

Cash and balances at central banks

'Cash and cash equivalents' are recognised at their nominal value, which approximates the fair value.

Amounts due from banks

'Amounts due from banks' consists of cash advances, overdrafts and other balances. These comprise current accounts and accrued interest with banks. Current accounts and accrued interest are recognised at their nominal value, which approximates the fair value.

Financial assets and liabilities at fair value through profit or loss

Derivatives

Derivative contracts can either be exchange-traded or over-the-counter (OTC). The fair value of exchange-traded derivatives is determined using quoted market prices in an active market and those derivatives are classified in Level 1 of the fair value hierarchy. For those instruments that are not actively traded, the fair value is estimated based on valuation techniques. OTC derivatives and derivatives trading in an inactive market are valued using valuation techniques, because quoted market prices in an active market are not available for such instruments. The valuation techniques and inputs depend on the type of derivative and the nature of the underlying instruments. The principal techniques used to value these instruments are based on discounted cash flows, Black-Scholes option models and Monte Carlo simulation. These valuation models calculate the present value of expected future cash flows, based on 'no-arbitrage' principles. These models are commonly used in the financial industry. Inputs to valuation models are determined from observable market data, where possible. Certain inputs may not be observable in the market directly, but can be determined from observable prices via valuation model calibration procedures. The inputs used 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. These inputs are determined with reference to quoted prices, recently executed trades, independent market quotes and consensus data, where available.

Notes to the Consolidated annual accounts continued

The exposure of derivative contracts has been reduced, since NN Bank has converted its centrally cleared interest rate derivative contracts of a clearing member from collateralised-to-market (CTM) to settled-to-market (STM). Reference is made to Note 27 'Derivatives and hedge accounting'.

Investment securities

Debt securities

The fair value for debt securities is based on quoted market prices, where available. Quoted market prices may be obtained from an exchange, dealer, broker, industry group, pricing service or regulatory service. If quoted prices in an active market are not available, fair value is based on an analysis of available market inputs, which may include values obtained from one or more pricing services or by a valuation technique that discounts expected future cash flows using market interest rate curves, referenced credit spreads, maturity of the investment and estimated prepayment rates where applicable.

Loans

For loans that are repriced frequently and have had no significant changes in credit risk, carrying values represent a reasonable estimate of the fair value. The fair value of other loans is estimated by discounting expected future cash flows using a discount rate that reflects credit risk, liquidity and other current market conditions. The fair value of mortgage loans is estimated by taking prepayment behaviour into account. Loans with similar characteristics are aggregated for calculation purposes.

Amounts due to banks

'Amounts due to banks' consists of payables including accrued interest. The fair value is based on estimates based on discounting future cash flows using available market interest rates and credit spreads for payables to banks with similar characteristics.

Customer deposits and other funds on deposit

The carrying values of 'Customer deposits and other funds on deposit' with no stated maturity approximate their fair value. The fair values of deposits with stated maturities have been estimated based on discounting future cash flows using a discount rate that reflects credit risk, liquidity and other current market conditions.

Other borrowed funds

The fair value of other borrowed funds 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 debt and debt securities issued

The fair value of subordinated debt and debt securities issued is estimated using discounted cash flows based on interest rates and credit spreads that apply to similar instruments listed on the market place.

Notes to the Consolidated annual accounts continued

Financial assets and liabilities at fair value and amortised cost

The fair value of the financial instruments carried at fair value and amortised cost (where fair value is disclosed) was determined as follows:

Methods applied in determining the fair value of financial assets and liabilities (2022)

	Balance sheet value	Total fair value	Level 1	Level 2	Level 3
Financial assets measured at fair value					
Non-trading derivatives	45,473	45,473	0	45,473	0
Investment securities - FVOCI	899,796	899,834	236,029	663,805	0
Financial assets not measured at fair value					
Cash and balances at central banks[1]	2,182,806	2,182,806	2,182,806	0	0
Amounts due from banks[1]	350,037	350,037	350,037	0	0
Investment securities - AC	123,858	120,792	69,766	51,026	0
Loans - AC	20,335,474	19,562,289	0	0	19,562,289
Financial assets	**23,937,444**	**23,161,231**	**2,838,638**	**760,304**	**19,562,289**
Financial liabilities measured at fair value					
Non-trading derivatives	0	0	0	0	0
Financial liabilities not measured at fair value					
Amounts due to banks	245,000	245,693	0	245,693	0
Customer deposits and other funds on deposit[1]	16,227,542	15,751,335	10,311,089	5,412,304	27,942
Other borrowed funds	318,000	318,842	0	318,842	0
Debt securities issued	6,125,471	5,688,931	5,345,673	343,258	0
Subordinated debt	85,000	79,213	0	79,213	0
Financial liabilities	**23,001,013**	**22,084,014**	**15,656,762**	**6,399,310**	**27,942**

1 Financial assets and liabilities measured at amortised cost that are on demand are classified in Level 1 in the table above. Their fair value approximates the carrying value.

Methods applied in determining the fair value of financial assets and liabilities (2021)

	Balance sheet value	Total fair value	Level 1	Level 2	Level 3
Financial assets measured at fair value					
Non-trading derivatives	8,353	8,353	0	0	8,353
Investment securities - FVOCI	972,684	972,724	217,865	754,859	0
Financial assets not measured at fair value					
Cash and balances at central banks[1]	1,324,778	1,324,778	1,324,778	0	0
Amounts due from banks[1]	267,969	267,969	267,969	0	0
Investment securities - AC	298,748	298,657	140,987	157,670	0
Loans - AC	21,227,558	22,335,777	0	0	22,335,777
Financial assets	**24,100,090**	**25,208,258**	**1,951,599**	**912,529**	**22,344,130**
Financial liabilities measured at fair value					
Non-trading derivatives	12,571	12,571	0	4,218	8,353
Financial liabilities not measured at fair value					
Amounts due to banks	0	0	0	0	0
Customer deposits and other funds on deposit[1]	15,904,147	16,599,460	9,983,455	6,586,659	29,346
Other borrowed funds	638,000	637,901	438,000	199,901	0
Debt securities issued	6,519,192	6,582,205	6,164,610	417,595	0
Subordinated debt	85,000	85,154	0	85,154	0
Financial liabilities	**23,158,910**	**23,917,291**	**16,586,065**	**7,293,527**	**37,699**

1 Financial assets and liabilities measured at amortised cost that are on demand are classified in Level 1 in the table above. Their fair value approximates the carrying value.

NN Bank has categorised its financial instruments that are either measured in the balance sheet at fair value or for which the fair value is disclosed, into a three-level hierarchy, based on the priority of the inputs to the valuation. The fair value hierarchy gives the highest priority to (unadjusted) quoted prices in active markets for identical assets or liabilities, and the lowest priority to valuation techniques supported by unobservable inputs. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide reliable pricing information on an ongoing basis.

The fair value hierarchy consists of three levels, depending on whether the fair value is determined based on (unadjusted) quoted prices in an active market (Level 1), valuation techniques with observable inputs (Level 2) or valuation techniques that incorporate inputs that are unobservable and that have a more than insignificant impact on the fair value of the instrument (Level 3). Financial assets in Level 3 include, for example, certain complex loans (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), mortgage loans and consumer lending.

Notes to the Consolidated annual accounts continued

Observable inputs reflect market data obtained from independent sources. Unobservable inputs are inputs that are based on NN Bank'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. Transfers into and transfers out of levels in the fair value hierarchy are recognised on the date of the event or change of circumstances that caused the transfer.

Level 1 – Quoted prices in active markets

This category includes financial instruments whose fair value is determined directly by reference to published quotes in an active market that NN Bank can access. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency, and those prices represent actual and regularly occurring market transactions with sufficient frequency and volume to provide reliable pricing information on an ongoing basis.

Level 2 –Valuation technique supported by observable inputs

This category includes financial instruments whose 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. If certain inputs in the model are unobservable, the instrument is still classified in this category, provided that the impact of those unobservable input elements on the overall valuation is insignificant. Included in this category are items whose value is derived from quoted prices of similar instruments, but for which the prices are modified based on other market observable external data and items whose value is derived from quoted prices, but for which there was insufficient evidence of an active market.

Level 3 –Valuation technique supported by unobservable inputs

This category includes financial instruments whose fair value is determined using a valuation technique (e.g., a model) for which more than an insignificant part of the inputs in terms of the overall valuation are not market-observable. This category also includes financial assets and liabilities whose fair value is determined by reference to price quotes, but for which the market is considered inactive. An instrument is classified in its entirety as Level 3 if a significant portion of the instrument's fair value is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which the price at which an orderly transaction would likely occur can be derived.

Changes in Level 3 Financial assets

	2022	2021
Level 3 Financial assets – opening balance	8,353	25,563
Amounts recognised in the statement of profit or loss during the year	-8,353	-13,530
Additions	0	782
Sale of assets	0	-4,462
Level 3 Financial assets – closing balance	**0**	**8,353**

Changes in Level 3 Financial liabilities

	2022	2021
Level 3 Financial liabilities – opening balance	8,353	21,916
Amounts recognised in the statement of profit or loss during the year	-8,353	-13,563
Level 3 Financial liabilities – closing balance	**0**	**8,353**

Level 3 – Amounts recognised in the statement of profit or loss during the year

	2022	2021
Financial assets		
Non-trading derivatives	-8,353	-13,563
Loans - FVTPL	0	33
Financial assets	**-8,353**	**-13,530**
Financial liabilities		
Non-trading derivatives	8,353	13,563
Financial liabilities	**8,353**	**13,563**

'Non-trading derivatives' consists of balanced guaranteed swaps. In the valuation of these swaps, prepayment behaviour of underlying mortgage loans is included. The maturity of these swaps is based on the First Optional Redemption Date (FORD).

Level 3 financial assets and liabilities at fair value

Financial assets measured at fair value in the balance sheet as at 31 December 2022 of EUR 945.3 million (31 December 2021: EUR 981.1 million) include an amount of EUR 0 million (0%) that is classified as Level 3 (31 December 2021: EUR 8.4 million, 0.9%).

Financial liabilities measured at fair value in the balance sheet as at 31 December 2022 of EUR 0 million (31 December 2021: EUR 12.6 million) include an amount of EUR 0 million (0%) that is classified as Level 3 (31 December 2021: EUR 8.4 million, 66.4%).

Unrealised gains and losses in 'Level 3 financial assets and liabilities' relating to non-trading derivatives are included in the statement of profit or loss as 'Valuation results on non-trading derivatives'.

Notes to the Consolidated annual accounts continued

27 Derivatives and hedge accounting

Use of derivatives and hedge accounting

NN Bank uses derivatives for effective portfolio management and the management of its asset and liability portfolios. In this respect, NN Bank has designated derivatives as fair value hedge accounting on the interest rate risk inherent in its mortgage portfolio and investment securities measured at FVOCI portfolio (macro hedge), as well as on the interest rate risk related to debt securities issued (micro hedge). The objective of economic hedging is to enter into positions with an opposite risk profile to an identified exposure to reduce that exposure. The impact of NN Bank's hedging activities is to mitigate the market risk that would otherwise arise from structural imbalances in the duration and other profiles of its assets and liabilities. In addition, hedging activities are undertaken to hedge against the interest rate risk in the mortgage-offer period in relation to retail mortgages and to lock in the interest margin in relation to interest-bearing assets and related funding.

To qualify for hedge accounting under IFRS-EU, strict criteria must be met. Certain hedges that are economically effective from a risk management perspective do not qualify for hedge accounting under IFRS-EU. The fair value changes of derivatives relating to such non-qualifying hedges are taken to the statement of profit or loss. If hedge accounting is applied under IFRS-EU, it is possible that during the hedge, a hedge relationship no longer qualifies for hedge accounting and hedge accounting cannot be continued, even if the hedge remains economically effective. As a result, the volatility arising from undertaking economic hedging in the statement of profit or loss may be higher than would be expected from an economic point of view.

With respect to interest rate derivative contracts, the notional or contractual amount of these instruments is indicative of the nominal value of transactions outstanding at the balance sheet date; however, they do not represent amounts at risk.

The fair value of the non-trading derivatives is as follows:

	Positive value		Negative value		Balance	
	2022	**2021**	**2022**	**2021**	**2022**	**2021**
Derivatives held for macro fair value hedge accounting	1,621,886	46,099	0	428,706	1,621,886	-382,607
Derivatives held for micro fair value hedge accounting	0	29,227	591,420	58,428	-591,420	-29,201
Balanced Guaranteed Swaps	0	8,353	0	8,353	0	0
Other non-trading derivatives	160,454	23,601	198,534	63,521	-38,080	-39,920
Interest rate swaps Settled-to-Market	-1,782,340	-98,927	-789,954	-550,655	-992,386	451,728
Position to be settled STM	45,473	0	0	4,218	45,473	-4,218
	45,473	**8,353**	**0**	**12,571**	**45,473**	**-4,218**

The fair value of the non-trading derivatives increased in 2022 to EUR 45.5 million (31 December 2021: EUR -4.2 million).

Non-trading derivatives comprises centrally cleared interest rate swaps for which Settled-to-Market (STM) is applied, in accordance with which the Variation Margin paid/received is treated as a settlement of the daily marked-to-market revaluations. The 'Position to be settled STM' represents the marked-to-market revaluation of the last day of the year, which has not yet been settled with the clearing member.

Macro fair value hedge accounting

NN Bank applies fair value hedge accounting to portfolio hedges of interest rate risk (macro hedging) under the EU 'carve-out' of IFRS-EU. The EU 'carve-out' 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. Under the IFRS-EU 'carve-out', hedge accounting may be applied to core deposits, and ineffectiveness only arises when the revised estimate of the amount of cash flows in scheduled time buckets falls below the designated amount of that bucket. NN Bank applies the IFRS-EU 'carve-out' to its hedge of the interest rate risk of mortgage loans and investment securities measured at FVOCI.

NN Bank discontinues and restarts the hedging relationships with each change in its hedging instruments, but at least once per month. The main sources of ineffectiveness are the sensitivity to multiple interest rate curves, differences in payment frequencies and maturity mismatches between the designated hedging instruments and hedged items. Any results on the discontinuation of hedge relations are included under 'Interest result'. Reference is made to Note 18 'Interest result'.

Gains and losses on derivatives designated included in fair value hedge accounting are recognised in the statement of profit or loss. The effective portion of the fair value change on the hedged item is also recognised in the statement of profit or loss. As a result, only the net accounting ineffectiveness has an impact on the net result.

NN Bank has extended its application of macro fair value hedge accounting under the EU 'carve-out' of IFRS-EU by starting macro fair value hedge accounting for the interest rate risk in the sub-portfolio investment securities measured at FVOCI. The effect of this macro fair value hedge is charged from the Statement of comprehensive income to the Statement of profit or loss in 2022.

Notes to the Consolidated annual accounts continued

The valuation result on macro fair value hedge accounting is as follows:

	2022	2021
Fair value movements in hedging instruments	2,002,377	449,923
Fair value movements in hedged item attributable to hedged risks	-1,991,241	-451,390
Net effect macro fair value hedge	**11,136**	**-1,467**

Micro fair value hedge accounting

NN Bank also entered into derivative transactions in order to limit the interest rate risk of its funding operations. Fair value micro hedge accounting for those derivatives is applied. The hedged item consists of individual external borrowings in 'Debt securities issued', while the hedging instrument consists of interest rate swaps. NN Bank periodically assesses the fair value change of the micro hedge in the hedged part of 'Debt securities issued' attributable to the hedged risk, on the basis of the expected interest reset date. When NN Bank assesses the hedge as effective, it recognises the fair value change in the hedged part of 'Debt securities issued' in the balance sheet and the gain or loss in the statement of profit or loss.

The valuation result on micro fair value hedge accounting is as follows:

	2022	2021
Fair value movements in hedging instruments	-562,219	-97,739
Fair value movements in hedged item attributable to hedged risks	559,716	96,782
Net effect micro fair value hedge	**-2,503**	**-957**

Non-trading derivatives

The following table shows the non-trading derivatives by type and maturity.

Non-trading derivatives by type and maturity (2022)

	notionals, amounts in millions of euros				amounts in millions of euros	
	< 1 year	Between 1 and 5 years	> 5 years	Total	Positive fair value	Negative fair value
Interest rate swaps	1,239	3,282	11,144	15,665	45	0
Balanced Guaranteed Swaps	0	0	0	0	0	0
Total non-trading derivatives	**1,239**	**3,282**	**11,144**	**15,665**	**45**	**0**

Non-trading derivatives by type and maturity (2021)

	notionals, amounts in millions of euros				amounts in millions of euros	
	< 1 year	Between 1 and 5 years	> 5 years	Total	Positive fair value	Negative fair value
Interest rate swaps	660	3,959	9,855	14,474	0	4
Balanced Guaranteed Swaps	925	0	0	925	8	8
Total non-trading derivatives	**1,585**	**3,959**	**9,855**	**15,399**	**8**	**12**

Notes to the Consolidated annual accounts continued

28 Assets by contractual maturity

Amounts presented in these tables by contractual maturity are the amounts as presented in the balance sheet.

Assets by contractual maturity (2022)

	Less than 1 month[1]	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Assets						
Cash and balances at central banks	2,182,806	0	0	0	0	2,182,806
Amounts due from banks	39,276	0	0	0	310,761	350,037
Financial assets at fair value through profit or loss:						
– non-trading derivatives[2]	45,473	0	0	0	0	45,473
Investment securities	15,511	64,121	57,753	878,656	7,613	1,023,654
Loans	104,306	90,540	229,317	1,524,430	18,386,881	20,335,474
Intangible assets	295	590	2,653	2,103	21,545	27,186
Other assets	76,911	46,821	1,314	0	67,468	192,514
Deferred tax assets	0	0	2,998	0	0	2,998
Total assets	**2,464,578**	**202,072**	**294,035**	**2,405,189**	**18,794,268**	**24,160,142**
Risk management derivatives:						
– inflow	3,876	20,800	240,450	1,185,557	1,642,334	3,093,017
– outflow	-6,986	-10,717	-70,422	-349,932	-592,055	-1,030,112

1 Includes assets on demand.
2 Contractual cash flows for non-trading derivatives are presented on a gross basis. Risk management derivatives shows the contractual interest cash flows on derivatives. The cash flows of the floating legs are based on forward rates, based on the interest rate swap curve per 30 December 2022.

Assets by contractual maturity (2021)

	Less than 1 month[1]	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Assets						
Cash and balances at central banks	1,324,778	0	0	0	0	1,324,778
Amounts due from banks	63,395	204,574	0	0	0	267,969
Financial assets at fair value through profit or loss:						
– non-trading derivatives[2]	0	0	8,353	0	0	8,353
Investment securities	1,466	102,253	77,642	1,082,458	7,613	1,271,432
Loans	149,927	110,595	220,781	1,551,971	19,194,284	21,227,558
Intangible assets	190	381	1,656	3,359	18,104	23,690
Other assets	123,163	116,222	293	0	0	239,678
Total assets	**1,662,919**	**534,025**	**308,725**	**2,637,788**	**19,220,001**	**24,363,458**
Risk management derivatives:						
– inflow	1,297	39,097	14,517	663	138,535	194,109
– outflow	-3,280	-24,785	-11,871	-175	-50,842	-90,953

1 Includes assets on demand.
2 Contractual cash flows for non-trading derivatives are presented on a gross basis. Risk management derivatives shows the contractual interest cash flows on derivatives. The cash flows of the floating legs are based on forward rates, based on the curve per 31 December 2021.

Notes to the Consolidated annual accounts continued

29 Liabilities by maturity

The tables below include all financial liabilities by maturity based on contractual, undiscounted cash flows. Furthermore, the 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 (discounted) balance sheet amounts by expected maturity. Reference is made to the Liquidity Risk paragraph in Note 39 'Risk Management' for a description on how liquidity risk is managed.

Liabilities by maturity (2022)

	Less than 1 month[1]	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Liabilities						
Amounts due to banks	0	225,000	20,000	0	0	245,000
Customer deposits and other funds on deposit	10,425,736	148,698	574,180	2,175,085	2,903,843	16,227,542
Financial liabilities at fair value through profit or loss:						
– non-trading derivatives[2]	0	0	0	0	0	0
Other borrowed funds	0	33,000	285,000	0	0	318,000
Debt securities issued	0	0	764,408	2,001,888	3,359,175	6,125,471
Subordinated debt	0	0	0	0	85,000	85,000
Financial liabilities	**10,425,736**	**406,698**	**1,643,588**	**4,176,973**	**6,348,018**	**23,001,013**
Other liabilities	21,249	44,596	24,500	0	0	90,345
Deferred tax liabilities	0	0	0	0	0	0
Other provisions	2,036	10,532	14,826	0	0	27,394
Non-financial liabilities	**23,285**	**55,128**	**39,326**	**0**	**0**	**117,739**
Total liabilities	**10,449,021**	**461,826**	**1,682,914**	**4,176,973**	**6,348,018**	**23,118,752**
Risk management derivatives:						
– outflow	0	995	16,302	54,279	62,560	134,136
– inflow	-466	-19,948	-111,367	-493,892	-419,629	-1,045,302
Coupon interest due on financial liabilities	-5,487	-8,268	-37,814	-253,603	-254,138	-559,310

1 Includes deposits on demand, arranged by the earliest possible contractual maturity without taking into account expected customer behaviour and other factors.
2 Contractual cash flows for non-trading derivatives are presented on a gross basis. 'Risk management derivatives' shows the contractual interest cash flows on derivatives. The cash flows of the floating legs are based on forward rates, based on the curve per 30 December 2022.

Liabilities by maturity (2021)

	Less than 1 month[1]	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Liabilities						
Amounts due to banks	0	0	0	0	0	0
Customer deposits and other funds on deposit	10,110,810	146,634	588,957	2,105,095	2,952,651	15,904,147
Financial liabilities at fair value through profit or loss:						
– non-trading derivatives[2]	4,218	0	8,353	0	0	12,571
Other borrowed funds	25,000	125,000	50,000	438,000	0	638,000
Debt securities issued	0	0	332,988	2,805,158	3,381,046	6,519,192
Subordinated debt	0	0	0	0	85,000	85,000
Financial liabilities	**10,140,028**	**271,634**	**980,298**	**5,348,253**	**6,418,697**	**23,158,910**
Other liabilities	16,233	52,051	7,722	0	0	76,006
Deferred tax liabilities	0	0	8,142	0	0	8,142
Other provisions	37	75	7,399	18,115	135	25,761
Non-financial liabilities	**16,270**	**52,126**	**23,263**	**18,115**	**135**	**109,909**
Total liabilities	**10,156,298**	**323,760**	**1,003,561**	**5,366,368**	**6,418,832**	**23,268,819**
Risk management derivatives:						
– outflow	16,043	292,959	82,789	9,929	458,115	859,835
– inflow	-6,740	-43,612	-9,382	0	-211,690	-271,424
Coupon interest due on financial liabilities[1]	-5,285	-6,945	-21,806	-251,601	-244,774	-530,411

1 Includes deposits on demand, arranged by the earliest possible contractual maturity without taking into account expected customer behaviour and other factors.
2 Contractual cash flows for non-trading derivatives are presented on a gross basis. 'Risk management derivatives' shows the contractual interest cash flows on derivatives. The cash flows of the floating legs are based on forward rates, based on the curve per 31 December 2021.

Notes to the Consolidated annual accounts continued

30 Assets not freely disposable

Assets not freely disposable

	2022	2021
Loans	8,168,756	8,060,287
Cash and balances at central banks	83,304	85,144
Amounts due from banks	34,653	51,055
Assets not freely disposable	**8,286,713**	**8,196,486**

The amount not freely disposable for 'Loans' reflects the securitised mortgages portfolios to Hypenn RMBS I and VII and the mortgage loans structured through the Soft Bullet Covered Bond Programme.

'Cash and balances at central banks' concerns the mandatory reserve deposit at DNB.

'Amounts due from banks' reflects the money held by the Hypenn RMBS entities and the NN Covered Bond Company.

31 Transferred but not derecognised financial assets

The majority of NN Bank's financial assets that have been transferred but do not qualify for derecognition are mortgage loans incorporated in notes issued by the Hypenn RMBS entities. NN Bank retains substantially all risks and rewards of those transferred assets. The assets are transferred in return for cash or other financial assets.

Mortgage loans transferred to consolidated securitisation entities are not included, as these related mortgage loans are not transferred from a consolidated perspective. Reference is made to Note 35 'Structured entities'.

32 Contingent liabilities and commitments

In the normal course of business, NN Bank is party to activities whose risks are not reflected in whole or in part in the Consolidated annual accounts. In response to the needs of its customers, NN Bank offers financial products related to loans. These products include traditional off-balance-sheet, credit-related financial instruments.

Contingent liabilities and commitments (2022)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Guarantees	0	0	0	0	639	639
Irrevocable credit facilities	48,227	0	0	0	0	48,227
Mortgage and consumer lending offerings	82,446	240,112	192,945	0	0	515,503
Construction deposits	47,423	79,099	261,144	118,170	0	505,836
Contingent liabilities and commitments	**178,096**	**319,211**	**454,089**	**118,170**	**639**	**1,070,205**

Contingent liabilities and commitments (2021)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Guarantees	0	0	0	0	656	656
Irrevocable credit facilities	51,224	0	0	0	0	51,224
Mortgage and consumer lending offerings	34,435	359,667	414,730	0	0	808,832
Construction deposits	54,462	72,757	189,547	123,240	0	440,006
Contingent liabilities and commitments	**140,121**	**432,424**	**604,277**	**123,240**	**656**	**1,300,718**

'Irrevocable credit facilities' relates to liabilities arising from irrevocable undertakings and include credit facilities, except mortgage offerings. These are mortgage loans with undrawn facilities and undrawn revolving credit facilities.

In 2022, NN Bank adhered to the contractual agreement with ING Bank. In this contract, NN Bank commits to the purchase of resetting loans until all NN-labelled mortgages owned by ING have been transferred. This is expected to continue until approximately 2036. In addition, the resetting loans now also contain certain other loans with an adjustment in interest rates. As per 31 December 2022, the size of the portfolio of NN-labelled mortgages held by ING Bank was EUR 385 million (2021: EUR 658 million).

Tax liabilities

Together with the other group companies that are part of the fiscal unity, NN Bank is jointly and severally liable for income tax payable by NN Group. The income tax receivable by NN Group at the end of 2022 amounted to EUR 308 million (2021: EUR 74 million receivable).

Notes to the Consolidated annual accounts continued

33 Legal proceedings

General
NN Bank could be, and is, involved in litigation and other binding proceedings involving claims by and against NN Bank that arise in the ordinary course of its business, including in connection with its activities as bank, investor and its position as employer and taxpayer. Such proceedings could entail that large or indeterminate amounts are sought. It is not feasible to predict or determine the ultimate outcome of all pending or threatened legal and regulatory proceedings. At the date of this Annual Report, there are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which NN Bank is aware) that may have, or have in the recent past had, a significant effect on the financial condition or profitability of NN Bank and its subsidiaries.

Interest compensation consumer credit
In previous years, Kifid ruled that a number of banks did not sufficiently move in line with market rates when calculating the floating rate on revolving consumer credits. An NN Bank analysis revealed that certain customers, including customers from OHRA Bank and former Delta Lloyd Bank, paid too much interest when applying the concepts underlying the Kifid rulings. Although NN Bank is not involved in any civil, Kifid or arbitration proceedings in this respect, NN Bank issued a press release on 23 December 2021 communicating that customers will be compensated for overcharged interest. NN Bank has already started compensating customers for overcharged interest. Reference is made to Note 14 'Provisions'.

34 Principal subsidiaries
NN Bank has two fully owned subsidiaries:

- Woonnu B.V., which was founded on 13 August 2019 with a registered office in The Hague. Through Woonnu B.V., NN Bank originates mortgage loans under a new label and via a third-party mortgage servicer (Quion Hypotheekbemiddeling B.V.). Woonnu B.V. has a separate AFM licence.
- HQ Hypotheken 50 B.V., which was founded on 21 August 2012 with a registered office in Rotterdam. Through this subsidiary, NN Bank offered mortgage loans to customers via a third-party mortgage servicer (Quion Hypotheekbemiddeling B.V.).

The Hypenn RMBS entities (I and VII) and NN Covered Bond Company B.V. are not legal subsidiaries of NN Bank. As NN Bank has control over the structured entities, these Special-Purpose Entities (SPEs) have been consolidated as group companies. Reference is made to Note 35 'Structured entities'.

No country-by-country reporting has been included, as NN Bank has no retail activities abroad (apart from a limited savings activity in Spain), and as such this will not provide additional insights.

35 Structured entities
NN Bank's activities involve transactions with structured entities in the normal course of business. A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in determining who controls the entity. For example, when any voting rights relate only to administrative tasks and the relevant activities are directed by means of contractual arrangements. NN Bank uses structured entities for securitisation transactions of residential mortgages and in the Covered Bond Programme. NN Bank consolidates these entities in its financial statements on the basis of the economic relationship between NN Bank and the structured entities, as NN Bank has the power to control those entities.

NN Bank has established a EUR 10.0 billion Soft Bullet Covered Bond Programme and a EUR 5.0 billion Debt Issuance Programme. Under the Soft Bullet Covered Bond Programme, the payment of interest and principal on the bonds issued by NN Bank is guaranteed by the NN Bank-administered structured entity, NN Covered Bond Company B.V. (SB). In order for the SB to fulfil its guarantees, NN Bank legally transfers Dutch prime residential mortgage loans originated by NN Bank to the SB. Economically, the mortgages are on the NN Bank balance sheet. NN Bank consolidates SB. Until 8 April 2022, NN Bank had a Conditional Pass-Through (CPT) Covered Bond Programme outstanding. Under the programme, the Bank issued EUR 2,595 million in covered bonds from 2017 up to and including 2019. Following a successful consent solicitation, NN novated all outstanding CPT covered bonds to its Soft Bullet Covered Bond Programme. After the novation, the CPT Programme was terminated. As a result, NN Bank only has a Soft Bullet Covered Bond Programme outstanding.

NN Bank has the following bonds outstanding under the Soft Bullet Covered Bond Programme, which were placed with a wide range of institutional investors:

	Due date	Notional amount	Fixed coupon
Soft Bullet Covered Bond October 2017	10-10-2024	500,000	0.500%
Soft Bullet Covered Bond June 2018	11-9-2025	500,000	0.625%
Soft Bullet Covered Bond September 2018	25-9-2028	500,000	1.000%
Soft Bullet Covered Bond February 2019	27-2-2024	500,000	0.250%
Soft Bullet Covered Bond March 2019 - 1	18-3-2039	25,000	1.400%
Soft Bullet Covered Bond March 2019 - 2	21-3-2039	20,000	1.432%
Soft Bullet Covered Bond July 2019	25-9-2028	50,000	1.000%
Soft Bullet Covered Bond September 2019	24-9-2029	500,000	0.125%

Notes to the Consolidated annual accounts continued

Soft Bullet Covered Bond July 2020	8-7-2030	500,000	0.010%
Soft Bullet Covered Bond September 2020	24-9-2035	500,000	0.050%
Soft Bullet Covered Bond November 2020	12-11-2040	250,000	0.050%
Soft Bullet Covered Bond March 2021	4-3-2041	500,000	0.375%
Soft Bullet Covered Bond May 2022	17-5-2032	500,000	1.875%
		4,845,000	

Securitisation transactions are used to diversify NN Bank's funding sources and to manage its liquidity profile. In these transactions, NN Bank sells a portfolio of mortgage receivables (e.g., mortgage loans) to a structured entity that issues notes. The notes are issued both to third parties and to NN Bank. With the proceeds of the notes, the SPE can finance the purchase of the mortgage receivables. With the received interest on the mortgage receivables, the SPE can pay the interest on the notes. The Bank services the assigned portfolio of mortgage receivables. All securitised assets are originated in the Netherlands by NN Bank. Noteholders only have recourse to the SPEs and not to NN Bank.

NN Bank uses derivative financial instruments for selected securitisation transactions. These financial instruments relate to balanced guaranteed swap agreements with a swap counterparty, which have been structured in such a manner that NN Bank pays the swap counterparty the interest expenses on the notes and the swap counterparty pays NN Bank the interest received on the mortgage receivables, less third-party operation expenses and additions to the Loan Loss Provision. The SPE also uses these derivative financial instruments, which are exactly the opposite of the financial instruments of NN Bank. The fair value of these balanced guaranteed swap transactions amounted to EUR 0 million as at 31 December 2022 (31 December 2021: EUR 8.4 million) and are presented gross. Offsetting is not applicable, as it concerns separate contracts. Due to the redemption of Hypenn RMBS VI on 17 December 2022, the balanced guaranteed swap has matured.

In the table below, the carrying amounts of the Residential Mortgage Backed Securitisation transactions issued and Covered Bond transactions issued, including the related mortgage loans, are summarised:

	Maturity Year		Related mortgage loans		Notes / bonds issued
		2022	**2021**	**2022**	**2021**
Hypenn RMBS I	2024	1,048,309	1,168,575	0	0
Hypenn RMBS VI	2022	0	502,779	0	332,988
Hypenn RMBS VII	2026	1,302,032	1,563,000	0	0
Covered Bonds	2024-2039	0	2,925,396	0	2,587,125
Soft Bullet Covered Bonds	2024-2041	5,818,415	1,900,537	4,825,941	1,741,678
Total		**8,168,756**	**8,060,287**	**4,825,941**	**4,661,791**

36 Related parties

In the normal course of business, NN 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. Transactions between related parties have taken place on an arm's length basis, and include rendering and receiving of services, transfers under finance arrangements and provisions of guarantees or collateral. There are no significant provisions for doubtful debts or individually significant bad debt expenses recognised in outstanding balances with related parties.

NN Bank is part of NN Group and conducts transactions with its parent company and its subsidiaries. The following categories of transactions are conducted on terms equivalent to those prevailing in an arm's length transaction:

- The management of financial instruments via a management agreement with NN Investment Partners Holdings N.V. (NN IP). On 19 August 2021, NN Group announced that it has reached an agreement to sell its asset management activities executed by NN IP to Goldman Sachs. The sale of NN IP was completed in April 2022.
- NN Bank and related parties are involved in the issuance of savings mortgages. Initially, one party recognises the full savings mortgage loan. The customer saves the total amount to redeem the savings mortgage at maturity date at the other party. If the savings amount increases, consequently, the share of ownership of the savings mortgage by the other party increases. NN Bank has arrangements to transfer savings mortgage parts. In certain arrangements, NN Bank receives the mortgage parts. In other arrangements, NN Bank transfers the mortgage parts. All transfers of mortgage parts take place against their nominal value and are recorded in the current accounts with other group companies. These current accounts are classified under Note 6 'Loans' for received mortgage parts and classified under Note 10 'Customer deposits and other funds on deposit' for paid mortgage parts. Reference is also made to Note 1 'Accounting policies' in the paragraph 'Partial transfer of mortgage loans'.
- Transactions with NN Group concerning financing arrangements and the payment of taxes, as NN Group heads the fiscal unity. Reference is made to Notes 12 'Other borrowed funds', 16 'Subordinated debt', 25 'Taxation' and 32 'Contingent liabilities and commitments'.
- Asset management services to group companies, carried out by NN Bank. Reference is made to 'Income received' in the table 'Other group companies'.
- Facility and other services carried out by group companies
- Transactions relating to the remuneration of Board members. Reference is made to Note 37 'Key management personnel compensation'.
- For defined contribution plans, NN Bank pays contributions to the NN CDC Pensioenfonds (until 1 October 2022) and to BeFrank (as of 1 October 2022) on a contractual basis. Reference is made to Note 22 'Staff expenses' for further details.

Notes to the Consolidated annual accounts continued

The tables below present the outstanding financial positions, as at the end of the year, and income received and expenses paid for the year, resulting from transactions with related parties.

Parent company (NN Group)

	2022	2021
Assets	0	0
Liabilities	15,453	458,387
Income received	-1,916	-911
Expenses paid	20,467	21,769

'Liabilities' mainly consists of subordinated loans from NN Group amounting to EUR 85 million, tax positions and interest to be paid.

The interest paid on loans from NN Group is included in 'Income received' and is presented in 'Interest result' as part of 'Total income' in the Consolidated statement of profit or loss. 'Expenses paid' includes mainly expenses charged by staff departments on behalf of NN Group, especially for IT, Human Resources and General Management. Reference is also made to Note 24 'Other operating expenses'.

Other group companies

	2022	2021
Assets	403,887	409,706
Liabilities	139,187	141,287
Income received	95,379	118,419
Expenses paid	34,258	29,368

'Assets' mainly comprises the current account with NN Insurance Eurasia N.V. of EUR 19 million (2021: EUR 67 million) and positions resulting from partial transfer of mortgage loans with NN Life of EUR 297 million (2021: EUR 260 million). With NN Belgium, loans mortgage savings amount to EUR 71 million (2021: EUR 71 million).

'Liabilities' mainly consists of paid mortgage parts to NN Life of EUR 132 million (2021: 123 million).

'Income received' mainly reflects fee income on mortgage origination and servicing on behalf of NN Life of EUR 78 million (2021: EUR 92 million), on behalf of NN Non-life of EUR 7 million (2021: EUR 10 million) and on behalf of NN Belgium of EUR 5 million (2021: EUR 5 million). Interest result on received and paid mortgage parts amounts to EUR 4 million (2021: EUR 3 million). Income from loan portfolio servicing fees and negative income on asset management fees to NN IP are also included and amounts to EUR 3 million (2021: EUR 10 million).

'Expenses paid' mainly comprises expenses by Customer & Commerce and Facility Management for work done by these entities on behalf of NN Bank.

37 Key management personnel compensation

Transactions with key management personnel (Management Board and Supervisory Board) are transactions with related parties. These transactions are disclosed in more detail as required by Part 9 of Book 2 of the Dutch Civil Code.

Management Board[1]

	2022	2021
Fixed compensation:		
- base salary	971	924
- pension costs[2]	99	98
- termination benefit	0	0
- individual savings allowance[2]	125	116
Variable compensation:		
- up-front cash	21	38
- up-front shares	21	38
- deferred cash	21	38
- deferred shares	21	38
Other benefits	199	179
Fixed and variable compensation	**1,478**	**1,469**
Internal pay ratio[3]	4:1	4:1

1 The Management Board includes both the statutory and non-statutory members, which is required by IAS 24. Reference is made to Composition of the Boards on page 3. Part 9 of Book 2 of the Dutch Civil Code requires NN Bank to present only the statutory members of the Management Board. This is not separately disclosed, as otherwise the compensation is traceable to one individual person.

2 'Pension costs' consists of an amount of employer contribution (EUR 99 thousand) and an individual savings allowance (EUR 125 thousand, which is 23.3% of the amount of base salary above EUR 114,866).

3 The pay ratio compares the total CEO compensation and the remuneration of all staff (Pay ratio). For the CEO, the total remuneration used in the pay ratio is the total amount of fixed and variable compensation as disclosed above. For the staff members, the total remuneration used in the pay ratio is the total remuneration as disclosed in the Consolidated annual accounts Note 22 'Staff expenses'. In order to provide a meaningful comparison, the total remuneration of the staff population excludes external staff costs and the remuneration of the CEO of NN Bank.

Notes to the Consolidated annual accounts continued

The Management Board members were eligible for a range of other emoluments, such as travel insurance. The Management Board members were also able to obtain banking and insurance services in the ordinary course of business and on terms that apply to all employees of NN Group in the Netherlands.

Remuneration of the members of the Management Board is recognised in the profit and loss account in 'Staff expenses' as part of 'Total expenses'. The NN Bank Supervisory Board members do not receive any compensation for their activities, except for two Supervisory Board members who are not employees of NN Group (2021: two external Supervisory Board members). The remuneration of EUR 78,000 (2021: EUR 65,416, including VAT) is recognised in the profit and loss account in 'Operating expenses'. Some Supervisory Board members hold remunerated (Board) positions within NN Group, but not within NN Bank. Their remuneration is part of the allocation of headquarter expenses, and they do not receive any (additional) allowances for their role as Supervisory Board members. NN Bank does not provide the Supervisory Board with a pension arrangement, termination arrangements (including termination of retirement benefits) or variable remuneration in cash or in shares.

The total remuneration of EUR 1,478 thousand (2021: EUR 1,469 thousand), as disclosed in the table above, includes all variable remuneration related to the performance year 2022. Under IFRS-EU, certain components of variable remuneration are not recognised in the profit and loss account directly, but are allocated over the vesting period of the award. The comparable amount recognised in 'Staff expenses' in 2022 and therefore included in 'Total expenses' in 2022, relating to the fixed expenses of 2022 and the vesting of variable remuneration of 2022 and earlier performance years, is EUR 1,501 thousand (2021: EUR 1,420 thousand).

Remuneration policy

As a direct subsidiary of NN Group, NN Bank is in scope of the NN Group Remuneration Framework. NN Bank is well aware of the public debate about pay in the financial industry and the responsibility the industry is taking in that light. The remuneration policies of NN Group take into account all applicable regulations and codes, including the Banking Code and the recommendations of the ECB and DNB under the current Covid-19 pandemic. The NN Group Remuneration Framework strikes a balance between interests of its customers, employees, shareholders and society at large, and supports the long-term objectives of the company. The variable remuneration is linked to clear targets. These targets are for a large part non-financial.

The general principles underpinning the NN Group Remuneration Framework are (amongst others) as follows:

- Support the attraction, motivation and retention of employees, whilst being compliant with applicable legislation and with the aim of applying best practices within the financial industry.
- Take into account NN Group's business strategy, objectives, its role in society, values and risk appetite, as well as long-term value creation for all stakeholders.
- Be mindful of the role of the financial sector in society.
- Contribute to an inclusive working environment by ensuring equal opportunities, working conditions and equal pay for equal work.
- Promote robust and effective risk management, including risk management of sustainability risks (such as environment, society, governance and employee-related matters) in the integration thereof in the risk management system and procedures. It supports balanced risk taking, long term value creation and the protection of a sound Capital Base. This will amongst others be supported by performance objective-setting processes.
- Avoid improper treatment of customers and employees.
- Comply with legislation as applicable to NN Group from time to time, apply best practices in the industry, and act in the spirit of (inter)national regulations and guidance on remuneration.

Loans and advances to key management personnel

	Amount outstanding 31 December		Average interest rate		Repayments	
	2022	2021	2022	2021	2022	2021
Management Board members	0	651	-	2.69%	0	29
Supervisory Board members	0	0	-	-	0	0
Loans and advances to key management	**0**	**651**			**0**	**29**

As at 31 December 2022, the members of the Management Board and Supervisory Board did not have loans outstanding with NN Group regulated entities.

38 Subsequent and other events

Subsequent events

Soft Bullet Covered Bond issuance

On 28 February 2023, NN Bank settled a transaction under its Soft Bullet Covered Bond programme. An amount of EUR 750 million was raised from a large group of international investors through the issuance of a covered bond with a tenor of 4.25 years and a fixed coupon of 3.25%.

Notes to the Consolidated annual accounts continued

39 Risk management

Introduction
Risk management is a fundamental part of the banking business that must be addressed appropriately to enable NN Bank to successfully meet its obligations towards customers, regulators and other stakeholders. Accepting risk is an integral part of NN Bank's business: having the right functions, risk culture and systems in place to manage risks is important. NN Bank has developed and implemented a risk management structure that is designed to identify, assess, control and monitor the risks associated with its business. Through its risk management practices, NN Bank seeks to meet its obligations to customers and creditors, manage its capital efficiently and comply with applicable laws and regulations.

In line with NN Group, NN Bank has defined and categorised its generic inherent risk types in a mutually exclusive and collectively exhaustive risk taxonomy, and subsequently expressed its appetite for these risk types.

Mission
The mission of our risk management function is to have a sustainable competitive advantage, by fully integrating risk management into daily business activities and strategic planning. The following principles support this mission:

- Products and portfolios are structured, underwritten, priced, approved and managed appropriately; compliance with internal and external rules and guidelines is monitored and managed
- NN Bank's risk profile is transparent, is managed to remain within risk appetite and is consistent with delegated authorities
- Delegated authorities are consistent with overall bank strategy and risk appetite
- Communication to internal and external stakeholders on risk management and value creation is transparent

Risk management system and governance
NN Bank's organisational risk management structure comprises the governance and policy measures designed to manage all the risks associated with the business of NN Bank, as effectively as possible, for all relevant parties involved. At all times, we aim to avoid a situation in which the risk position and the ensuing potential losses seriously threaten NN Bank's profitability, solvency or liquidity. This involves an independent risk management function – in accordance with the relevant regulatory requirements (Wft, Wwft, CRR and EBA) and the policy frameworks of NN Group and NN Bank.

NN Bank's approach to risk management is based on the following main components:

- Risk governance: NN Bank's risk governance follows the 'Three Lines of Defence' concept, which outlines the decision-making, execution and oversight responsibilities for the implementation of NN Bank's risk management
- Risk management system: NN Bank's risk management structure takes into account the relevant elements of risk management, including its integration into NN Bank's strategic planning cycle, the management information generated and a granular risk assessment. This includes a comprehensive set of risk management policies, standards and processes, which are updated regularly to align with market-leading practices, applicable laws and regulations, and to changes in NN Bank's business and risk profile. These risk management policies, standards and processes apply throughout NN Bank and are used by NN Bank to establish, define and evaluate NN Bank's risk tolerance levels and risk control processes. They also ensure that the tolerance levels and policies are communicated throughout the organisation.

Risk Governance
Management Board and its committees
NN Bank's Management Board is responsible for defining, installing and monitoring the risk management organisation in order to ensure its control systems are effective. It has full management responsibility for all of NN Bank's activities, including setting, implementing, monitoring and, if necessary, adjusting NN Bank's policy. Within the Board, the division of duties regarding operational direction of the Second Line rests with the CRO, in accordance with EBA guidelines on internal governance. The Management Board or its committees approve all risk management policies, as well as the quantitative and qualitative elements of NN Bank's risk appetite. NN Group is informed of the resolutions of the NN Bank Management Board within the policy frameworks NN Group has set. The Management Board reports and discusses these topics with the Supervisory Board on a quarterly basis.

NN Bank's Management Board has delegated a number of activities to specific committees within NN Bank. These committees have an advisory role to NN Bank's Management Board, and have been granted delegated authority. In addition, the NN Bank committees inform the relevant NN Group committees of decisions taken.

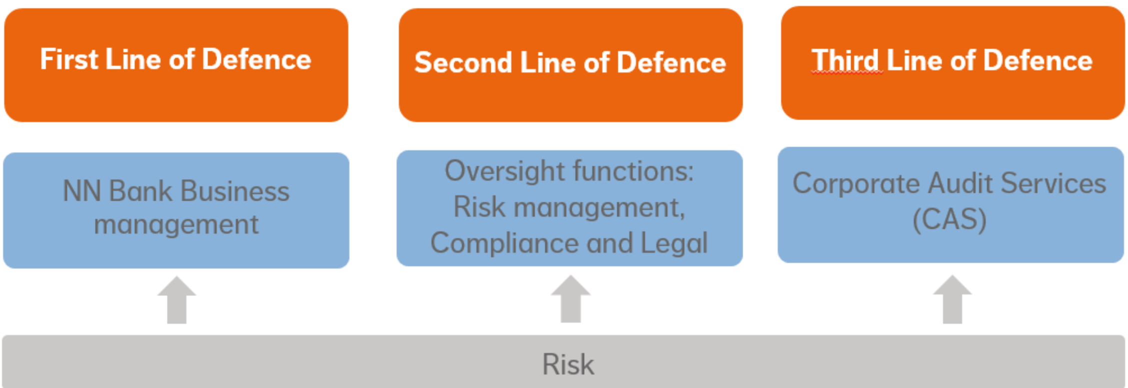
Notes to the Consolidated annual accounts continued

Committees	Responsibilities	Chairperson
Accounting Committee (AC)	Management of accounting policies for financial reporting in accordance with IFRS-EU	CFO
Asset & Liability Committee (ALCO)	Policy and management of interest-rate risk, liquidity risk and customer behaviour risk, determination of funding and capital instruments to be deployed and overseeing the implementation of (new) funding and capital instruments	CRO
Balance Sheet Management Committee (BSMC)	Management of the pricing of savings and mortgages to ensure that they meet ROE/profitability targets, whilst striving for economic profit per product. Decisions made in the BSMC are mandatory guidance for the pricing committees	CFO
Client Acceptance Review Committee (CARC)	Review and decision-making regarding the Customer Risk Ratings in terms of our customers	CEO
Credit Risk Committee (CRC)	Policy and management of all credit risks incurred by NN Bank for existing credit portfolios, assigned or acquired credit portfolios and new loans	CRO
Crisis Committee (CC)	Management of financial and non-financial risk-related crises	CEO
Data Governance Committee (DGC)	Maintenance and implementation of the Data Governance & Quality Management Policy	CDO
Disclosure Committee (DISCOM)	Advising on relevant disclosures. Ensuring that all disclosures (including insider) information are accurate, complete and appropriate, and that it fairly presents NN Bank's condition in all material respects	CFO
Impairment & Provisioning Committee (IPC)	Establishing the level of the provisions formed by NN Bank in accordance with its credit risk policy	CFO
Model Committee (MoC)	Managing model risk, which is the risk of incorrect model design, implementation and usage. Approval authority for the models, methodologies and parameters	CRO
Non-Financial Risk Committee (NFRC)	Policy and identification, measurement and monitoring of significant non-financial risks and the adequate mitigation thereof by (line) management	CRO
Product Approval & Review Committee (PRC)	Periodic review of existing products and review for approval of new products	CEO

Any sub-committees are not included above.

Risk policy framework

NN Bank's risk policy framework ensures that all risks are managed consistently and that NN Bank as a whole operates within its risk tolerances. The policies/minimum standards focus on risk measurement, risk management and risk governance. To ensure that policies are efficient and effective, they are governed by the Board committee structure. Potential waivers to the policies have to be approved through the Management Board or its Board committees.



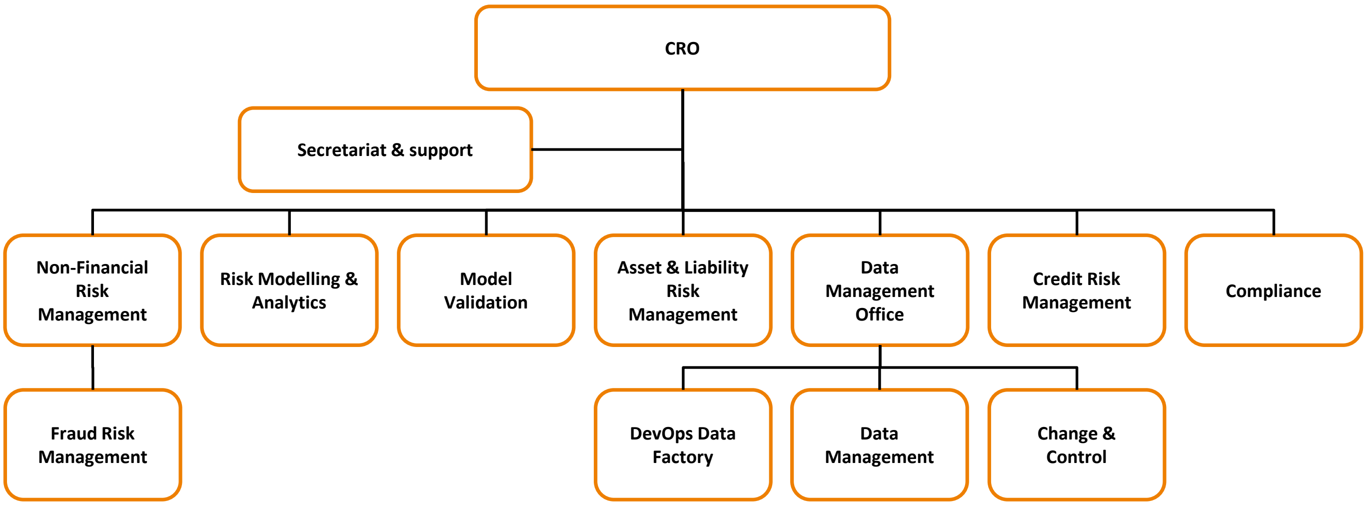
Three Lines of Defence concept

In line with clear segregation of the 'Three Lines of Defence' concept, on which NN Bank's risk management structure and governance are based, NN Bank defines three risk management levels, each with distinct roles, decision authorities, execution responsibilities, and oversight responsibilities. This framework ensures that risk is managed in line with the risk appetite as defined by the Management Board, ratified by the Supervisory Board, and that it is consistent with NN Group's risk appetite:

Notes to the Consolidated annual accounts continued

- First Line of Defence: NN Bank Business Management has primary accountability for the performance and all risks of the business, operations, compliance and effective control of risks affecting their business. This includes responsibility for tracking control effectiveness. Finance and Treasury departments are part of the First Line of Defence.
- Second Line of Defence: Oversight performed by the internal control functions of NN Bank i.e., the NN Bank risk management, compliance, and legal functions. The functionally independent Second Line supports the commercial departments in their decision-making, but also has sufficient countervailing power to prevent risk concentrations and other forms of unwanted or excessive risk. These oversight functions include:
  - Developing the policies and guidance for their specific risk and control area
  - Encouraging and objectively challenging/monitoring sound risk management throughout the organisation and coordinating the reporting of risks
  - Supporting the First Line of Defence in making proper risk/return trade-offs
  - Exercising escalation power in relation to business activities that are judged to present unacceptable risks to NN Bank
- Third Line of Defence: Corporate Audit Services (CAS) offers an independent assessment of the standard of internal control with respect to NN Bank's business and support processes, including governance, risk management and internal controls

Independent risk management function (Second Line of Defence)
The CRO is a member of NN Bank's Management Board. The following departments report to the CRO: Asset & Liability Management Risk, Compliance, Credit Risk, Data Management Office, Non-Financial Risk, Model Validation, and Risk Modelling and Analytics.



In accordance with the EBA Guidelines on Internal Governance, the heads of Asset & Liability Risk Management, Credit Risk Management, Model Validation and Non-Financial Risk Management are heads of Risk Management internal control functions, and the Head of Compliance is the head of the Compliance internal control function. The head of Compliance reports functionally to the NN Group Chief Compliance Officer.

The main objectives of risk management within NN Bank are as follows:

- To create and safeguard transparency, awareness and understanding of the risks associated with the products and portfolios, ensuring that the risk positions taken are carefully considered and in line with the formulated risk appetite
- To retain (potential) customers' and other stakeholders' confidence in NN Bank as a reliable financial service provider
- To generate sustainable profitability and stable shareholder value
- To comply with all relevant laws and regulations

Please find below a summary description of the scope of work per department:

- Asset & Liability Risk Management: manage interest rate risks in the banking book and liquidity risks which impact on the realisation of NN Bank's strategic business objectives
- Credit Risk Management: manage lending risk, investment issuer/issue risk, professional counterparty risk, and ESG risk which impact the realisation of NN Bank's strategic business objectives
- Compliance: an independent function aimed at implementation, monitoring and maintaining adherence to relevant laws and regulations including internal policies and procedures. The objective is to ultimately prevent integrity and conduct risk materialisation for NN Bank.
- Data Management Office: data management for financial reporting and modelling purposes
- Model Validation: the validation of financial (risk) models
- Non-Financial Risk Management: all non-financial risks that impact the realisation of NN Bank's strategic business objectives, including emerging and strategic risk
- Risk Modelling & Analytics: risk modelling in support of provisioning, capital, and liquidity requirements

The CRO ensures that NN Bank's Management Board and NN Group are well informed and understand NN Bank's risk position at all times. At least every quarter, the CRO reports to the Supervisory Board on NN Bank's risk appetite levels and on NN Bank's risk profile. In addition, the

Notes to the Consolidated annual accounts continued

CRO briefs NN Bank's Supervisory Board on developments in internal and external risk-related issues and ensures the Board committees understand specific risk concepts.

The CRO is responsible for the implementation and management of an adequate risk management system and a set of policy guidelines. The aim is to ensure that NN Bank's risk appetite, product offering and operations are within statutory limits set by the prudential supervisor, De Nederlandsche Bank (DNB) and the behavioural supervisor Autoriteit Financiële Markten (AFM), and that they are compliant with the frameworks set by the NN Group Policy House and NN Group's business principles.

Risk management system

The risk management system is not a sequential process, but a dynamic and integrated system. The system comprises three important and interrelated components:

- A risk control cycle, embedded in
- An appropriate organisation, with
- A comprehensive risk appetite framework

NN Bank's business environment exposes NN Bank to inherent risks and obligations. As such, the environment determines the 'playing field' and rules with which to calibrate all risk management activities. These activities are carried out within an internal environment reflected by NN Bank's risk appetite and framework.

Every employee has a role in identifying risk in their area of responsibility, and the role of management is to decide how to manage that risk. It is paramount to know which risks we take and why, to be aware of significant existing and emerging risks, and to ensure an adequate return for the risk assumed in the business.

With risk management, we do not try to predict the future, but instead prepare proactively for a wide range of possibilities.

When assessing and managing risks, we work systematically, aim for completeness and document what we do. Each risk analysis performed shall be focused and relevant. It thus becomes clear and transparent throughout the organisation, for the benefit of management and stakeholders alike.

Risk profile NN Bank

NN Bank is exposed to various risks because of its business model. We provide mortgages to customers, and so we are exposed to credit risks, since it is uncertain whether customers will be able to pay their mortgages in the future. As we use savings to fund our activities, we are exposed to liquidity risk, since it is uncertain when customers will withdraw these savings. In addition, unforeseen regulatory changes may affect the positions on the balance sheet. In this section, we give an overview of the various risks that can affect NN Bank.

NN Bank recognises the following risk types (financial as well as non-financial) that are associated with its business activities.

Solvency and liquidity risks

- Credit risk: the risk of potential loss due to default of NN Bank's debtors
- Interest rate risk in the banking book: the exposure of a bank's financial condition to adverse movements in interest rates originated from positions in the banking book. This includes customer behaviour risk.
- Business risk: the exposure to value loss due to fluctuations in volumes, margins and costs, as well as due to the design of products from a financial perspective
- Liquidity risk: the risk that NN Bank cannot meet its financial liabilities when they come due, at reasonable cost and in a timely manner

Non-financial risks

- Emerging and strategic risks: Risks related to future external uncertainties that could pose a threat to NN Bank and risks arising from making incorrect business decisions, implementing decisions poorly, or being unable to adapt to changes in the operating environment
- Operational risk: the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.
- Business conduct risk: the risk of impairment of NN Bank's integrity
- Compliance risk is the risk of impairing our company's integrity and reputation through a failure to comply with either our own values and/ or our obligations under applicable laws, regulations and standards. A failure to comply might not only damage our reputation and the trust put in our organisation and its services, it could also lead to legal and/or regulatory sanctions and financial losses through for instance claims.

Risk control cycle

In line with the NN Group Risk Control Framework, NN Bank's risk control cycle consists of four steps: strategy, assessment, control and monitoring. The cycle starts with business processes that support business and risk objectives-setting (the latter resulting in a risk strategy: risk appetite, policies and standards). This is followed by business processes aimed at realisation of those objectives, leading to risks that need to be managed by identifying/assessing them, effective mitigation through controls and continuous monitoring of the effectiveness of controls, including reporting of risk levels.

Notes to the Consolidated annual accounts continued

The risk control cycle, combined with the Business Plan/financial control cycle and performance management/HR cycle, enables the realisation of business objectives by ensuring that NN Bank operates within the risk appetite.

Risk Strategy – Risk Appetite Framework

NN Bank uses an integrated risk management approach for its banking activities. NN Bank's Management Board uses the NN Bank Risk Appetite Framework to determine which risks NN Bank wishes to take, to avoid, to retain and/or to remove. The Risk Appetite Framework consists of qualitative and quantitative statements as to risk preferences, risk tolerances, risk limits and risk controls. In order to verify that NN Bank remains within the Risk Appetite Framework, risk positions are monitored on at least a monthly basis, and reported to NN Bank's Management Board through its risk committees.

Within NN Bank, the CRO is responsible for advising on the risk appetite, in close consultation with the CFO. NN Bank's Management Board reviews the advised risk appetite for approval at least annually. The risk appetite set by NN Bank's Management Board needs to be consistent with NN Group's risk appetite and must be endorsed by NN Bank's Supervisory Board. The Supervisory Board supervises NN Bank's execution of the risk policies and verifies that they are in accordance with the set risk appetite.

Qualitative risk appetite metrics

NN Bank key qualitative risk appetite statements are as follows:

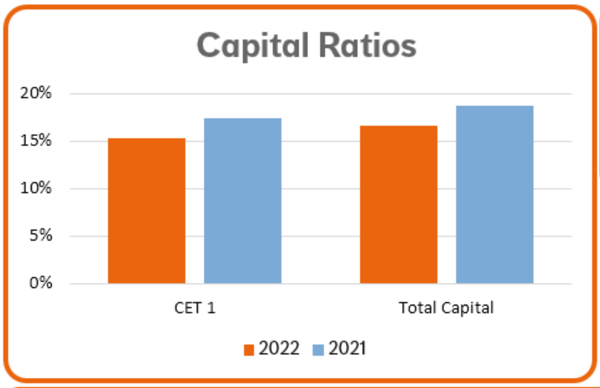
Risk Appetite Statement	Risk class	Risk strategy
Strategic Challenges (Shaping the business)	Emerging & Strategic Risks	We manage our portfolio of businesses on a risk/return basis to meet our strategic objectives, whilst considering the interests of all stakeholders. We respond and adapt to emerging external challenges, and act as a firm with responsibility to society at large.
Strong Balance Sheet (Running the business – financially)	Solvency Risk	On our balance sheet, we accept financial risks that we understand and can effectively manage insofar as we are required to accept them in order to produce products for our customers. We design and price products responsibly, yet we will limit credit, concentration and interest rate risks.
	Liquidity Risk	We want to meet our payment and collateral obligations, even under severe liquidity stress scenarios.
Sound Business Performance (Running the business – operationally)	Operational and Compliance Risks	We do not accept breaches of applicable laws and regulations, or material breaches of NN Group policies and standards.
		We actively monitor and manage employee conduct and foster a business culture demonstrating that we live the NN Values.
		We only market products and services that add value to our customers over their expected lifetimes, and can be explained in a simple, transparent manner.
		We accept – but limit – losses from non-financial risk and therefore manage to agreed tolerances.
		We accept – but limit – losses arising from IT risks, and therefore we ensure our IT assets (internal and trusted data, systems and infrastructure) are sufficiently available, reliable and protected.
		We have no appetite for material errors in external financial reports and internal reports used for managerial decision-making.
		We avoid, to the extent possible and even under severe circumstances, sustained discontinuation of business.

Quantitative risk appetite metrics

For financial risks, NN Bank expresses its risk appetite as the tolerance to allow key metrics to deviate from their target levels. The following key risk metrics have tolerance levels set at Bank level, and are monitored on a monthly basis. These metrics are shown below, along with their levels at year-end:

Notes to the Consolidated annual accounts continued

Key risk metrics



Leverage Ratio I 3.8%
2021 4.3%

Liquidity Coverage Ratio I 183%
2021 165%

Mortgages
EUR 21,748 million
2021: 20,577 million

Consumer Lending
EUR 86 million
2021: 104 million

		Level end of
	2022	**2021**
Common Equity Tier 1 ratio[1]	15.3%	17.4%
Total capital ratio[1]	16.6%	18.8%
Leverage ratio	3.8%	4.3%
Liquidity Coverage Ratio (LCR)	183%	165%

1 The figures per 31 December 2021 differ slightly from the figures in the Annual Report 2021 due to rounding.

NN Bank has maintained a solid capital position with a Total capital ratio of 16.6% and a CET1 ratio of 15.3% at year-end 2022. The leverage ratio stands at 3.8% at the end of December 2022. The ratio's decreased slightly due to dividend pay-outs, but are still well above regulatory and internal targets. NN Bank had an LCR of 183% in 2022. This is well above the regulatory target of 100% and the internal minimum. It shows a solid liquidity position, given our liquidity risks.

Risk Assessment & Control

Risk assessments are regularly performed throughout NN Bank. Risks that do not directly impact the balance sheet generally require more professional judgment to be identified and quantified. Risk footprints (non-financial risks) and scenario analysis (strategic/emerging risks) are used to assess, report on and follow up on identified risks.

Risk Appetite Statement	Risk class	Risk assessment and example mitigation technique
Strategic Challenges (Shaping the business)	Emerging & Strategic Risks	Scenario analysis, strategic planning, strategic risk assessments, monitoring & management of emerging and strategic risks against risk appetite.
Strong Balance Sheet (Running the business – financially)	Solvency Risk	Financial risk assessments, ICAAP, monitoring & management of retail & non-retail credit risk, interest rate risk in the banking book and business/customer behaviour risk against risk appetite, using models as appropriate
	Liquidity Risk	Financial risk assessments, ILAAP, monitoring & management of liquidity risks against risk appetite, using models as appropriate
Sound Business Performance (Running the business – operationally)	Operational and Compliance Risks	Non-financial risk assessments, recovery and resolution planning, monitoring & management of operational and compliance risks against risk appetite. First Line non-financial risk monitoring and key control testing and independent Second Line reviews, PARP

Some of the risk assessments mentioned in the table above will be further described below.

Product approval and review process (PARP)

The product approval and review process (PARP) has been developed to enable effective design, underwriting and pricing of all products, as well as to ensure that they can be managed throughout their lifetime. This process establishes requirements as to the product risk profile features to ensure that products are aligned with NN Bank's strategy. The PARP takes into account customer benefits and product suitability, expected sales volumes, value-oriented pricing metrics and relevant policies. It includes requirements and standards to assess risks as per the risk categories, as well as the assessment of the administration and accounting aspects of the product.

Internal capital adequacy assessment (ICAAP) and liquidity adequacy assessment (ILAAP) processes

At least once a year, NN Bank performs an ICAAP and ILAAP in compliance with European Banking Authority (EBA) requirements. ICAAP and ILAAP test whether NN Bank is sufficiently resilient against severe but plausible stress. Stress testing is a key part of NN Bank's internal capital and liquidity adequacy assessment processes.

Notes to the Consolidated annual accounts continued

Stress testing is a key tool of risk management that involves consideration of the impact of adverse movements in one or more risk factors. The Capital Requirement Regulation (CRR), and, in particular, supervisory review under Pillar II, requires institutions to take a forward-looking view in their risk management, strategic planning and capital planning. The guidelines of NN Bank's stress-testing policy are based on the framework and the guidelines as presented by the European Banking Authority (EBA).

Stress tests focus on topical issues and the sensitivity of NN Bank's capital and liquidity position to certain risks. A stress test can cover a single risk type or multiple risk types. It can include the entire balance sheet, but it can also be used to analyse the potential impact on certain asset classes or certain activities. These analyses determine risk appetite and provide input that helps to steer strategic direction and support decision-making to ensure that NN Bank can survive severe but plausible stress. In addition, this information is important input for the annual Supervisory Review and Evaluation Process (SREP) performed by the regulator, resulting in capital requirements for NN Bank.

Stress-testing approaches include the following:

- Sensitivity analysis is the simple stressing of one risk driver to assess the sensitivity of the institution to that risk driver
- Forward-looking hypothetical and historical scenario analysis is a core part of the NN Bank stress-testing approach. The scenario design takes systematic and institution-specific changes in the present and near future into account
- Reverse stress-testing consists of identifying a significant negative outcome for NN Bank, and then identifying the causes and consequences that could lead to such an outcome

Recovery and resolution planning

NN Bank has determined a set of measures for early detection of – and potential response to – a crisis, should it occur. These include monitoring indicators that are expected to provide early warning of emerging crises, advance preparation of options to raise or release capital, allocation of roles and responsibilities in case of a crisis, and other practical arrangements that may be required depending upon the type of crisis.

Risk Monitoring

The risk profile is monitored against risk appetite; risk assessments are performed to determine risk appetite and to set risk limits. Risk monitoring reports, including deficiencies, conclusions and advice, are regularly provided to the NN Bank Management Board or the respective Board committees. Management takes action when monitoring indicates that risks are not adequately controlled.

Specifically, the Credit Risk Committee and the Asset and Liability Committee, respectively, monitor credit risk, interest rate risk in the banking book, business/customer behaviour risk and liquidity risk and funding risk on a monthly basis. On a monthly basis, the Non-Financial Risk Committee monitors non-financial risks, i.e., emerging, strategic, operational and compliance risks. At least on a quarterly basis, the NN Bank Management Board monitors the integrated risk profile across all risk types. All risk reporting and monitoring is performed in a forward-looking manner.

Regulatory environment

Basel III revisions, CRRIII/CRDVI and upcoming regulations

Since the financial crisis, financial institutions have been under more scrutiny from the public, supervisors and regulators. The resulting revised regulations are intended to ensure that a crisis in the financial system can be avoided in the future. To achieve a more robust banking sector, regulatory changes – primarily the implementation of Basel III – have focused primarily on topics such as the ability of the banking sector to absorb shocks arising from financial and economic stress, improvements to risk management and governance practices, and strengthening banks' transparency and disclosures. In December 2017, the Basel Committee on Banking Supervision (BCBS) announced Basel III revisions. These consist of a revision to the standardised approach to credit risk, the introduction of a capital floor based on standardised approaches, changes to the use of advanced internal ratings-based approach and the introduction of a standardised measurement approach for operational risk, amongst others. The European Council has left the already-delayed implementation date unchanged. It remains 1 January 2025 as proposed by the European Commission last year. There are some revisions, including the output floor to be phased in until 1 January 2030. The European Commission has stated that it is committed to this agreement and its faithful implementation in the EU, taking into account European specificities and the objective stated by co-legislators for the reforms not to result in a significant increase in the overall capital requirements for the banking sector.

NN Bank monitors regulatory developments closely and, as appropriate, seeks opportunities for the public to comment and to ensure timely compliance. NN Bank complies with current CRR liquidity and capital requirements and is well prepared for any upcoming changes.

Risk developments 2022

Russia's invasion of Ukraine in February 2022, and the subsequent outbreak of war continues to cause untold levels of human suffering. One of the consequences of the war was an energy crisis in Europe and a search for alternatives to Russian natural gas. The conflict affected supply chains, threatened global food markets and fuelled global inflation. Containing this surge by raising interest rates has been the main preoccupation of the world's central banks, which they were able to somewhat achieve. The increase in interest rates also translated into higher mortgage rates which led to a downward effect on housing prices and further led to an increase in uncertainty in the markets. Even though the housing market is at a turning point, the real impact on house prices, unemployment and payment problems is still limited. In order to account for such uncertainty in the near future, NN Bank has taken a management overlay. The management overlay is held to account for the expected impact of increasing interest rates and energy prices on customers' ability to repay their loans. Reference is made to page 94 'Risk Costs'.

Notes to the Consolidated annual accounts continued

Credit risk

This section provides information about the credit risk profile of the NN Bank portfolio, and NN Bank's Credit Risk Management. Please note that in the credit risk tables in this section, the loan exposures of the financial statement (without subtracting the provisions) are used. These figures differ slightly from the notional amounts (gross credit risk exposures) that are used in the NN Group Annual Report. The loan exposures in the NN Bank Annual Report are adjusted for (amongst others) construction depots, savings, accrued interest and mortgage premiums.

Credit risk profile

Credit risk is the risk of loss from the default and/or credit rating deterioration of counterparties (including bond issuers). Credit risks arise in NN Bank's lending and investment activities. Credit risk exposure is the total amount of outstanding, plus the unused portion of, commitments. As the distribution of the exposures across relevant metrics (e.g., Probability of Default, or Loss Given Default) is essential for correctly managing the credit risk exposure, NN Bank has established a Credit Risk Appetite Framework that is derived from the overall NN Bank risk appetite.

- Retail credit risk: arises when NN Bank grants a loan to a retail counterparty, or issues guarantees on behalf of a retail counterparty. This includes term loans, mortgages, revolving credits and construction deposits.
- Non-retail credit risk: is the credit default and risk-rating migration risk that is associated with NN Bank's investments in bonds, securitisations and other similar publicly traded securities. This can be viewed as the worst-case scenario loss that NN Bank may incur as a result of holding a position in underlying securities whose issuer's credit quality deteriorates or defaults. The sole purpose of NN Bank's investments in the banking book is for liquidity management purposes. Within NN Bank, (pre)settlement risk, money market risk, counterparty lending risk and issuer risk on investment are categorised under counterparty credit risk and are part of the non-retail credit risk framework. Within NN Bank, the pre-settlement credit risk category is currently associated with OTC derivatives. The interest rate swap portfolio is transferred to mandatory central clearing through a Central Clearing Counterparty (CCP) under the European Market Infrastructure Regulation (EMIR).

Credit risk portfolio & credit quality

Apart from an investment portfolio, which is solely held for liquidity purposes, NN Bank's credit exposure is related to traditional retail lending. The credit risk profile within this retail-lending book largely stems from residential mortgage lending. In addition to mortgages, the retail-lending book consists of a small consumer lending credit book.

Net exposure on mortgages

Amounts in thousands of euros	2022	2021
Balance amount[1]	21,748,458	20,576,851
Indexed market value primary cover	48,021,660	41,477,528
Secondary cover value	1,889,521	1,830,970
State-guarantee value[2]	5,445,571	5,270,858
Total cover + state-guarantee value capped at balance amount	21,740,762	20,565,437
Remaining exposure at risk[3]	7,696	11,414

1 'Balance amount' reconciles to Stages 1-3 and Purchased or Originated Credit-Impaired loans, excluding the category 'No allocated stage'. Reference is made to Note 6 'Loans'.
2 NHG guarantees
3 'Remaining exposure at risk' is calculated on loan level as 'Balance amount' minus 'Total cover + guarantee value capped at balance amount'.

The table above shows the credit risk mitigants (covers and state-guarantee) of NN Bank's mortgage book. In addition to the total value of the different covers and guarantees, the 'Remaining exposure at risk' is calculated. This risk measure is calculated at loan level without double-counting any cover value or guarantee value. The value is capped at the carrying value. 'Remaining exposure at risk' is exposure without any type of cover or guarantee. This amount decreased in 2022, mainly due to the strong increase in house prices between the third quarter of 2021 and the third quarter of 2022[4] (11.9%[5]). The low 'Remaining exposure at risk', in combination with a low number of customers with payment problems, results in negative risk costs over 2022 (EUR -0.8 million). For more information on risk costs, reference is made to page 94 'Risk Costs'.

Please note that the state-guarantee value is lower than the exposure that is flagged as such. This is because the state-guarantee value decreases in time following an annuity scheme. For example, for interest-only loans, the loan exposure is stable, while the state-guarantee value decreases. For mortgages that originated after 31 December 2013, the state- guarantee value is also corrected by 10% for the own risk (on the granted guarantee claim) that applies to all banks.

Lastly, NN Bank is continuously investigating the effects of climate change (and more broadly speaking ESG risks) on its customers and the credit quality of its portfolio. To that end, NN Bank carried out various assessments such as foundation damage due to pole rot and flood risk of the mortgage portfolio. The conclusion is that there is limited short-term risk for NN Bank. For more information on ESG risks, reference is made to page 100 'Environmental, Social and Governance risk'.

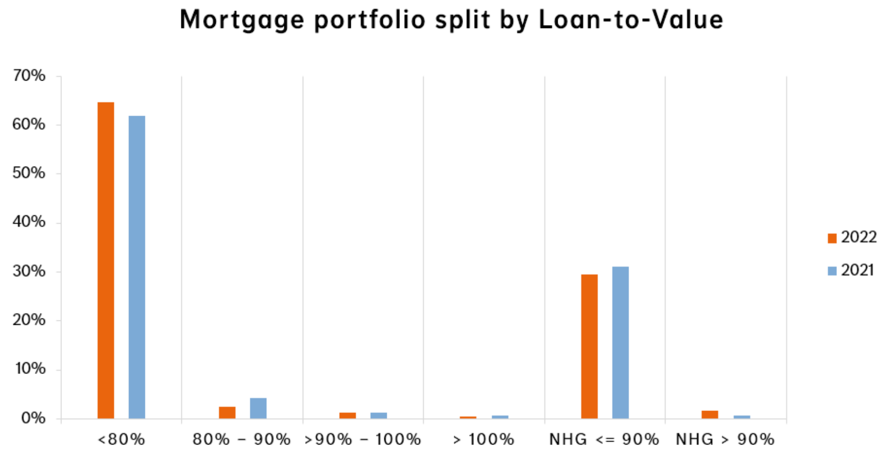
[4] Fourth quarter figures were unavailable at year-end.
[5] Based on CBS.

Notes to the Consolidated annual accounts continued

Loan-to-value

As at the end of 2022, NN Bank's mortgage book had a current loan to indexed market value ratio of 53% (2021: 57%). Due to increasing house prices, the outstanding amount of the portfolio without state guarantee and an LTV below 80% increased from 62% in 2021 to 65% in 2022. The outstanding without state guarantee and an LTV in excess of 100% decreased from 1% in 2021 to 0% of total outstanding in 2022. NN Bank actively approaches customers with an interest-only mortgage and high LTV to discuss changing their mortgage product.

Effective in 2022, new residential mortgage loans that have a purchase price below EUR 355,000 were eligible for coverage by state guarantee under NHG scheme in the Netherlands. That amount can be up to EUR 376,300 when accounting for the possibility to receive an extra budget of 6% for energy-saving work. NHG guarantees, to a large extent, the repayment of a loan in case of a forced property sale. The relative guarantee coverage slightly decreased from 32% of total outstanding in 2021 to 31% of total outstanding in 2022 as fewer mortgages are eligible for state-guarantee under NHG. This is because the average purchase price increased beyond the state guarantee limit. To allow more homebuyers to take out a state-guaranteed mortgage, the state-guarantee limit will sharply increase in 2023 to EUR 405,000. That amount can be up to EUR 429,000 when including an extra budget for energy-saving work.



The increasing housing prices resulted in a migration towards lower LTV buckets compared with previous year.

Credit approval process

The credit approval process ensures that individual transactions are assessed on a name-by-name basis. Each customer is assessed individually. The credit approval process is supported by, amongst others, a credit approval system that ensures consistency with the underwriting policy. A 'Probability of Default' (PD)-based risk weighting system is used to ensure that, at monthly intervals, each customer in the books is given a proper rating. The rating model is used to indicate a customer's creditworthiness.

Past-due loans

The outstanding loans with a delinquency decreased in 2022 by EUR 43 million to EUR 172 million (0.8% of total outstanding). The portfolio is of good quality because of strict underwriting criteria and adequate problem loan management. Furthermore, the mortgage portfolio grew relatively quickly in the past few years because of a substantial level of newly originated loans (which typically have fewer delinquencies).

Delinquency

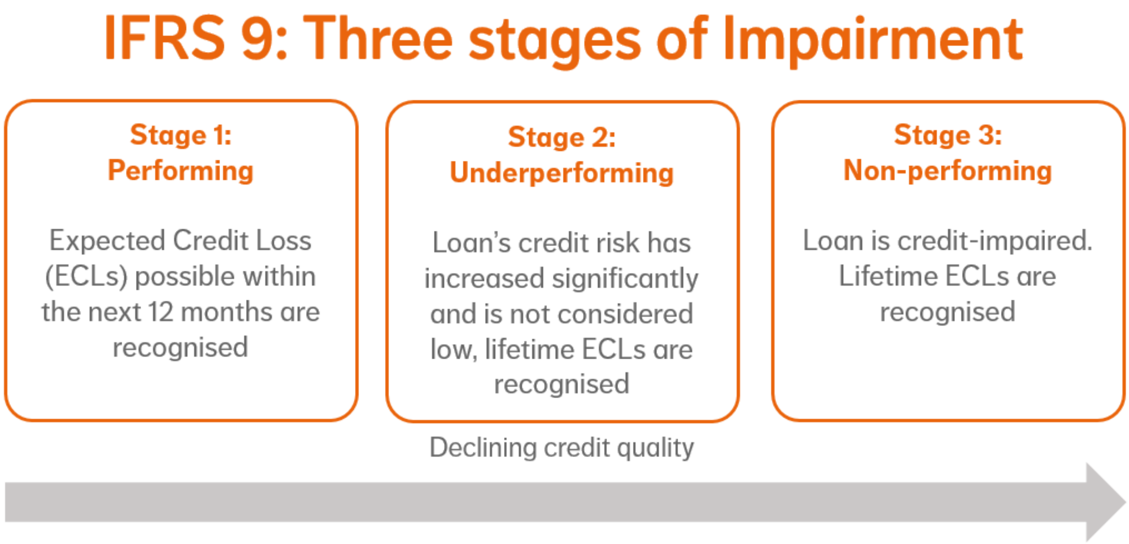
	Mortgages		Consumer lending		Total	
	2022[1]	**2021[1]**	**2022[1]**	**2021[1]**	**2022[1]**	**2021[1]**
0 days	21,581,047	20,369,193	81,351	96,556	21,662,398	20,465,749
1 – 30 days	33,191	32,260	562	830	33,753	33,090
31 – 60 days	15,988	19,190	353	521	16,341	19,711
61 – 90 days	31,886	30,494	175	203	32,061	30,697
> 90 days	86,346	125,714	3,666	6,231	90,012	131,945
Total	**21,748,458**	**20,576,851**	**86,107**	**104,341**	**21,834,565**	**20,681,192**

1 'Total' reconciles to Stages 1-3 and Purchased or Originated Credit-Impaired loans, excluding the category 'No allocated stage'. Reference is made to Note 6 'Loans'.

NN Bank measures its portfolio in terms of payment arrears on a continuous basis. A loan is considered 'delinquent' if a payment of interest or principal is late by more than one day and the arrears amount is greater than or equal to EUR 100. When this happens, a specialised team contacts the customer to explore the possibilities to get the customer back into financial health as soon as possible.

The delinquent portfolio shows a migration to lower delinquency buckets. The improvement can be largely attributed to the low unemployment environment, despite adverse macroeconomic developments such as high inflation. For consumer lending, the relative improvement is mainly the result of writing off protracted defaults.

Notes to the Consolidated annual accounts continued



IFRS 9 Stages 1 and 2

Under IFRS 9, most of the loans in the portfolio fall in Stage 1 where the 12-month expected loss is calculated. Loans that show a significant increased level of credit risk (SICR) at reporting date (versus origination date) are classified as Stage 2 loans, and then a lifetime expected loss is calculated. To establish whether a SICR has taken place, (internally determined) absolute and relative thresholds have been set (quantitative triggers).

Past-due loans (that are not qualified as non-performing), and loans with previous delinquencies receive an elevated PD classification. This can lead to Stage 2 when the quantitative triggers are hit. There are also four backstops:

- Loans that are >30 days past due, or
- Forborne performing customers (discussed more thoroughly later in this paragraph), or
- Bridge loans that are active for longer than the contractually agreed time (> 2 years), or
- Loans that have an interest-only part above 70% with either having an LTV above 100%, or having an LTV above 80% and close to maturity/retirement (< -5 years)

IFRS 9 Stage 3

Stage 3 loans are qualified as a non-performing loan (NPL) and receive a PD of 100%, a lifetime expected loss is calculated under IFRS 9. As can be derived from the table below, 0.4% (EUR 95 million) of the total loans to customers as at the end of 2022 (0.5% at the end of 2021), are classified as Stage 3. Despite the high level of inflation and the war in Ukraine, the number of mortgage loans qualified as Stage 3 has slightly decreased due to low unemployment. The drop in Stage 3 balance for consumer lending can mainly be attributed to the write-offs of protracted defaulted loans because of a change in the write-off policy.

Purchased and Originated Credit-Impaired (POCI) loans

POCI loans are financial assets (i.e., mortgages) transferred from ING Bank while being in default at the moment of transfer. Therefore, a discount is applied to the carrying amount that equals the expected loss. Unlike the regular mortgages, which can change from one stage to another over different reporting dates, POCI loans never return to Stage 1. Instead, they remain in IFRS9 Stage 2 or Stage 3, depending on their status due to their initial impairments. For its internal processes, NN Bank reports the POCI assets separately. As can be derived from the table below, 0.1% (EUR 29 million) of the total exposure is classified as POCI loans at the end of 2022 (0.2%, EUR 31 million at the end of 2021).

Loans exposed to credit risk (Stages by exposure)

	Stage 1		Stage 2		Stage 3		POCI assets		Total	Total
Amounts in millions of euros	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022[1]**	**2021[1]**
Mortgages	21,214.7	19,839.3	413.6	609.5	91.1	96.6	29.0	31.5	21,748.5	20,576.9
Consumer loans	78.2	92.5	4.0	5.0	3.9	6.8	0.0	0.0	86.1	104.3
Total	**21,292.8**	**19,931.8**	**417.7**	**614.5**	**95.1**	**103.4**	**29.0**	**31.5**	**21,834.6**	**20,681.2**

1 'Total' reconciles to Stages 1-3 and Purchased or Originated Credit-Impaired loans, excluding the category 'No allocated stage'. Reference is made to Note 6 'Loans'.

Risk costs

Risk costs are defined as net additions to the loan loss provisions, plus write-offs, minus recoveries, and minus interest correction for non-performing loans. NN Bank's total risk costs over 2022 were EUR -0.8 million (-0.4 bps) compared to risk costs of EUR -9.7 million (-4.7 bps) in 2021.

Notes to the Consolidated annual accounts continued

Provisions by stage

Amounts in millions of euros	2022	Stage 1 2021	2022	Stage 2 2021	2022	Stage 3 2021	2022	POCI assets 2021	Total 2022[1]	Total 2021[1]
Mortgages	0.4	1.2	3.7	1.1	1.3	1.9	0.1	0.2	5.4	4.4
Consumer loans	0.3	0.3	0.6	0.7	3.8	5.4	0.0	0.0	4.6	6.5
Total	**0.7**	**1.5**	**4.3**	**1.8**	**5.0**	**7.3**	**0.1**	**0.2**	**10.1**	**10.9**

Note: Under IFRS 9, NN Bank also calculates provisions for bonds (non-retail), which amounts to EUR 0.1 million per year-end 2022 (2021: EUR 0.1 million).

For the mortgages, consumer loans and bonds portfolio, the stock of provisions amounts to EUR 10.1 million at the end of 2022 (2021: EUR 10.9 million). The following remarks can be made:

- For mortgages, the provision increased by EUR 1.0 million due to a management overlay of EUR 3.0 million against the potential negative consequences of high inflation and increasing interest rates. The management overlay is calculated based on the expected impact of high inflation and the rise in interest rates on the most vulnerable customer segments (e.g., interest rate reset in the near future or energy-inefficient households). The increase was partly offset by the strong house price increase, and a decrease in Stage 3 loans due to low unemployment.
- For consumer loans, the provision decreased by EUR 1.8 million to EUR 4.6 million due to write-offs and redemptions in the portfolio
- For bonds, the provision decreased by EUR 27 thousand to EUR 58 thousand due to a decrease in the size of the portfolio
- Write-offs minus reversals were EUR 0.1 million, of which EUR -0.4 million for mortgages. Write-offs were low due to low unemployment and a strong house price increase.
- The correction for interest on non-performing loans amounted to EUR -0.1 million

Forbearance

According to NN Bank's definition, forbearance occurs when NN Bank decides to grant concessions through either loan modification or refinancing towards the customer who is unable to meet their financial commitments under the current contract. Modification is defined as changing the terms and conditions of the contract to enable the customer to service the debt. Refinancing relates to issuing a new loan to ensure the total or partial repayment of an existing loan. Examples of forbearance measures can be the reduction of loan principal or interest payments, a temporary payment break, or debt consolidations.

NN Bank has established clear criteria to determine whether a client is eligible for a modification or refinancing, as well as procedures to manage, monitor and report the forbearance activities.

Customers who are granted forbearance measures can be either performing or non-performing depending on conditions of the loan prior to (or after) granting the measure. The customer is seen as *performing forborne* for a minimum of two years if the loan is considered to be performing prior to any forbearance measure. In contrast, a customer is seen as *non-performing forborne* for a minimum of one year if the loan is considered to be non-performing or *performing forborne* prior to any (additional) forbearance measure.

It is noteworthy to point out that the status of loans with forbearance measures can also change during the forbearance reporting period. A *performing forborne* loan can become *non-performing forborne* if it either becomes more than 30 days past due after forbearance measures have been granted, or receives additional forbearance measures during the probation period under certain conditions. The forbearance classification for a loan shall be discontinued when the loan is deemed to be performing and has been reported as *performing forborne* for a minimum of two years, and the loan is less than 30 days past due at the end of the forbearance reporting period.

The underlying NN Bank exposure classified as *forborne* as at year-end 2022 amounted to EUR 245 million (1.1% of mortgage exposure). The loans with a 'Terms & Conditions' forbearance measure decreased as the probation period ends for customers flagged as forborne due to corona related payment breaks. Currently NN Bank applies no measures that classify as 'Refinancing'.

Forbearance category in percentage of total lending exposure

	2022	2021
Refinancing	0.00%	0.00%
Terms & Conditions	1.12%	1.70%
Total forbearance	**1.12%**	**1.70%**

Interest rate risk in the banking book

Interest rate risk

Interest rate risk in the banking book is defined as the exposure of a bank's financial condition to adverse movements in interest rates originated from positions in the banking book. Commercial activities result in interest rate risk as, for example, repricing tenors of assets differ from those of liabilities. Changes in interest rates affect earnings and economic value. These two perspectives are complementary, and both are necessary to comprehensively capture interest rate risk. Interest rate risk in the banking book, including interest rate-related customer behaviour risk, is covered under Pillar II. ALM Risk Management is responsible for determining adequate policies and procedures for managing interest rate risk and for monitoring the compliance with these guidelines.

Notes to the Consolidated annual accounts continued

Customer behaviour modelling

NN Bank is exposed to interest rate risk arising from embedded options in products like mortgages and savings. Customer behaviour towards these options influences future volumes and margins. Behaviour modelling is applied in the Bank's key interest rate risk measurements. Models and parameters are reviewed at least annually and updated when deemed necessary. In the modelling of savings, different elements play a role: pricing strategies under various interest rate scenarios, outstanding and expected volumes, and the level of the yield curve. The analyses result in replication rules for the various portfolios. With respect to mortgages and consumer loans, prepayment behaviour and the interest sensitivity of the embedded offered rate options are modelled, if applicable.

Risk profile

At least annually, NN Bank conducts a financial risk assessment aimed at the identification and assessment of key interest rate risks. The outcomes are used as input to the ICAAP and risk appetite reviews. The Bank has a high inherent exposure to interest rate gap risk which it mitigates by attracting long-term funding that matches the repricing tenors of its mortgages. Further, the position is steered by entering into interest rate swaps. Exposure to risk from embedded behavioural options is accounted for in the computation of economic capital. In the following sections, the interest rate risk exposures in the banking book are presented. NN Bank uses risk measures from both an earnings perspective and a value perspective. Earnings at Risk (EaR) is used from an earnings perspective. Duration and Net Present Value (NPV) at Risk are used from a value perspective. Exposures are monitored on a monthly basis by the NN Bank ALCO.

Value perspective

Value-based interest rate risk measures quantify the uncertainty in the future economic value as a result of changes in interest rates. In the steering of the position NN Bank focuses on the following measures:

- Effective duration
- NPV at Risk

Both measures are based on the NPV, sometimes also referred to as economic value. The NPV is an Alternative Performance Measure (non-GAAP financial measure) and is not a measure of financial performance under IFRS-EU. The NPV is defined as the current value of all future cash flows. Given the current market circumstances and in line with EBA GL/2018/02, risk-free discounting is applied with exclusion of commercial margins and spreads from cash flows.

Duration measures the sensitivity of the value of an instrument for parallel (small) interest rate shifts. To determine the sensitivity for non-parallel shifts, key rate durations are calculated as well. These duration measures are the key instrument in the steering of the interest rate risk position of the Bank.

The duration and key rate durations are interest rate risk measures for small changes in interest rates. To determine the impact of large changes in interest rates, the NPV at Risk (NPVaR) measure is used. This risk figure measures the impact of changing interest rates on the economic value of NN Bank's balance sheet. It is measured for both parallel and non-parallel scenarios. In the table below, the impact of a 2% interest rate shock on the economic value of the balance sheet is presented. The NPVaR captures the interest rate sensitivity of the investments of own funds. The NPVaR is expressed as a percentage of regulatory capital, taking the worst-case impact of the up-and-down 200 basis points parallel shock scenarios. A negative percentage means a negative impact on the value of equity. NN Bank measures NPVaR for both parallel and non-parallel scenarios. The NPVaR metric is based on unconditional cash flow modelling with an add-on for automatic options. Scenario-dependent execution of behavioural options is accounted for in the computation of economic capital that is reported under ICAAP.

The loss of economic value has no direct measurable impact on the reported equity or profit and loss. This loss in value will materialise through time in NN Bank's profit and loss. Therefore, the NPVaR cannot be directly linked with the statement of financial position or statement of profit or loss.

NPVaR

Percentage of total equity	**2022**	**2021**
Parallel shift 200 basis points	0.2%	-0.4%

Exposure to NPVaR per end-of 2022 is well within appetite; as per end of 2021, it was close to 0%, in line with the duration of equity which was close to zero per the end of December. In this case, value impact of both the up and down 200bp shocks was positive for the bank due to yield curve convexity. The duration and NPVaR measures are based on unconditional cash flows; they do not capture the option risk arising from embedded options in NN Bank's retail portfolios. For NN Bank, the conditionality impact of prepayment is a primary driver of economic value sensitivity. It is accounted for in the Bank's Pillar II capitalisation. In 2022 we moved to include the expected impact from prepayment in the economic value measurement for the supervisory outlier test. Highest outlier test exposure per December 2022 is found for the parallel up 200bp scenario at 7% of regulatory capital, against 0% for the corresponding (unconditional) NPVaR sensitivity. The difference illustrates both the limited linear position (duration of equity close to zero) and the sensitivity to option risk.

Earnings at Risk

Earnings at Risk (EaR) measures the impact of changing interest rates on the projected interest results (net interest income) over a certain time horizon. The EaR is an Alternative Performance Measure (non-GAAP financial measure) and is not a measure of financial performance under IFRS-EU. The EaR reflects the repricing mismatch in the balance sheet on a horizon of a maximum of three years. For this horizon, the main risk drivers are the repricing of investments and floating receiver swaps on the asset side, versus the repricing of variable savings on the liability side.

Notes to the Consolidated annual accounts continued

The repricing of variable savings is determined by the tracking speed, which captures how fast, and to what extent, a change in market rates is adopted in the savings rates.

In the table below, the EaR figure for a 1% parallel shock with a one-year horizon is shown under a constant balance sheet assumption. The EaR is expressed as a percentage of the interest result, taking the worst-case impact of the up-and-down 100 basis points parallel shock scenarios. A negative percentage means a negative impact on the expected interest income. NN Bank measures EaR for both parallel and non-parallel scenarios.

Earnings at Risk

Percentage of interest result	2022	2021
Parallel shift 100 basis points	-2.0%	-3.8%

EaR exposure remained at a relatively low level, with a positive net repricing gap on the one-year horizon creating earnings sensitivity to IR down scenarios. The exposure has been well within appetite during 2022.

Liquidity risk

Liquidity risk is defined as the risk that NN Bank cannot refinance its assets against a reasonable price (funding liquidity risk) or cannot meet its financial liabilities when they come due, at reasonable cost and in a timely manner (market liquidity risk).

Risk profile

NN Bank aims for prudent liquidity risk management to ascertain that sufficient liquidity is maintained, in order to ensure safe and sound operations in all circumstances.

For the management of liquidity risk, a distinction is made between the short and long term. The main objective for the short term is that NN Bank has sufficient liquid assets to meet short-term obligations both on a going-concern basis and in stress circumstances during its defined survival period. For the long term, the funding profile is managed in such a way that long-term compliance to both internal and external targets is ensured. This implies that the maturities of the assets and the corresponding funding should be matched as well as possible. Given the profile of NN Bank, the long-term mortgage portfolio and the ability to attract long-term funding are the main causes of funding liquidity risk. For the short term, the main liquidity risk is caused by the potential outflow of customer savings.

Strategic liquidity risk profile

NN Bank manages its balance sheet prudently, whereby the Bank aims to fund the longer-term assets with stable and longer-term liabilities. Monitoring and control of funding is achieved through a dedicated funding and liquidity framework. Each year, the business strategy is translated into a funding plan for a minimum of three years. The funding plan and corresponding liquidity gap are monitored in the ALCO on a monthly basis. On 17 May 2022, NN Bank issued the first green covered bond in the Benelux. This long term covered bond was issued, as part of the Soft Bullet Covered Bond Programme, to manage the long-term mismatch between assets and liabilities. The notes of the Hypenn RMBS VI have been fully repaid in December 2022. The notes of the Hypenn RMBS I and Hypenn RMBS VII are still included in NN Bank's liquidity buffer. In 2022 the First Optional Redemption Date for the Hypenn I has been extended from November 2023 to November 2024 to increase the liquidity. The Hypenns RMBS serve as a backup in case of a liquidity crisis.

Tactical liquidity risk management

The regulatory and internal limits for funding and liquidity risk are monitored on a daily and/or monthly basis. These limits are also directly linked to stress testing. NN Bank maintains a liquidity position with conservative internal targets and a robust liquidity buffer. On a daily basis, the liquidity position has to be sufficient to meet NN Bank's short-term obligations. The position is managed by maintaining sufficient liquid investments and the capacity to generate additional cash.

On a monthly basis, NN Bank performs several stress tests with respect to NN Bank's funding and liquidity position. Some of these stress tests are regulatory-driven, and others are based on internal stress scenarios.

Also on a monthly basis, NN Bank reports a number of stress scenarios, based on regulatory requirements, including those based on CRR regulation, such as:

- Liquidity Coverage Ratio (LCR)
- Net Stable Funding Ratio (NSFR)
- ALMM maturity ladder

Besides these regulatory stress scenarios, stress tests are performed in which the time-to-survival is calculated given internal stress scenarios. The scenarios assume stress like severe outflow of savings and unavailability of additional funding sources.

Contingency liquidity risk

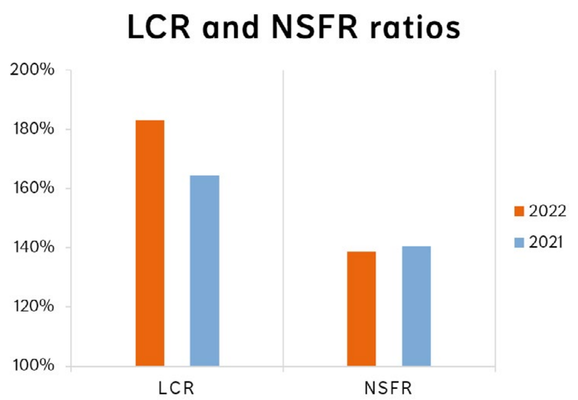
Contingency liquidity risk specifically relates to the organisation and planning for liquidity management in times of stress. Within NN Bank, for contingency purposes, a specific crisis team – consisting of key Board members and representatives from staff departments (e.g., Finance, Risk and Treasury) – is responsible for liquidity management in times of crisis. Throughout the organisation, an adequate and up-to-date contingency funding plan is in place to enable senior management to act effectively and efficiently in times of crisis.

Notes to the Consolidated annual accounts continued

Liquidity position

Liquidity measures

	2022	2021
LCR	183%	165%
NSFR	139%	141%



At the end of December 2022, NN Bank had an LCR of 183% and an NSFR of 139%. This is well above the regulatory and internal minimums. It shows a solid liquidity position given our liquidity risks. In addition to the available liquidity as captured by the LCR and the NSFR, NN Bank has other sources of liquidity available.

Non-financial risk management

Emerging, strategic, operational, legal and related second-order risks – such as reputational risks – are monitored. To ensure that these risks are controlled and proactively managed, NN Bank has a framework in place to govern the process of identifying, assessing, mitigating, monitoring and reporting non-financial risks.

In 2022 the following risks gained attention and further focus: cyber risk (including fraud), ESG risk, lack of agility risk, lack of (customer/partner) relevance risk, business model disruption risk and workforce transformation risk.

Climate change and emerging environmental developments pose risks on NN Bank's products and operations and require the ability to adequately adapt to new circumstances, and market and regulatory expectations. A risk arises of being (in)directly linked to violations of environmental standards through investments, business partners, customers, or other links. A risk occurs if we miss new external developments or misunderstand the interconnectedness of the climate change and environmental themes across the various NN Bank domains. Another risk is that a chosen strategy cannot be adequately implemented if the organisation is unable to realise changes in products and related data, processes and IT and to respond to ongoing external developments and regulations.

Emerging and strategic risks

Risk profile

Risks related to future external uncertainties that could pose a threat to the sustainability and viability of NN Bank's business model and risks arising from making incorrect business decisions, implementing decisions poorly, or being unable to adapt to changes in the operating environment. Emerging and strategic risks encompass disruptive technology risk, political and regulatory risk, environmental, social and governance risk, business model risk, algorithm/model risk from a decision-making perspective and HR risk.

Risk mitigation

NN Bank's strategy and strategic initiatives are important emerging and strategic risk mitigants. These mitigants aim to deal with emerging and strategic risk to further ensure the sustainability and viability of NN Bank's business model. Emerging and strategic risk identification and mitigation is supported by business environment scenario planning, strategic risk assessments and through monitoring and management of emerging and strategic risks. Emerging and strategic risks are first managed by the NN Bank MB itself, supported by its NN Bank Management Team. The Board committees manage non-financial risks, either in a dedicated manner, as with the Non-Financial Risk Committee and Model Committee, or a specific manner, as through the Data Governance Committee, or as part of a committee with a broader risk management mandate, such as through the Product Approval & Review Committee and the Crisis Committee.

Furthermore, NN Bank has implemented an ESG roadmap with NN Bank's contribution to mitigating Climate change and environment risks, aligned with ECB expectations and covering all domains including Risk management. Main risk management areas are covered based on the Risk Control Cycle, Risk Strategy, Risk Appetite, and NN Bank policies.

Operational risk

Risk profile

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes, for instance, IT risk, outsourcing risk, fraud risk and legal risk, but excludes strategic and reputational risk for the purpose of a minimum regulatory operational risk capital charge. Operational risk concerns NN Bank's ability to execute its chosen strategy whilst meeting stakeholder expectations.

Notes to the Consolidated annual accounts continued

Risk mitigation
For operational risk, NN Group has developed an Enterprise Control Framework (ECF) that governs the risk cycle: i.e., the process of identifying, assessing, mitigating, monitoring and reporting financial and non-financial risks. Non-financial risk assessments are conducted on a strategic level (strategic risk assessments) and a business level, and are forward-looking. Based on the identified risks, measures have been implemented to mitigate them within the risk appetite. NN Bank conducts regular risk and control monitoring to evaluate the risks and the effectiveness of the controls. The business owners are responsible for the actual execution of the controls, and for assessing the adequacy of their internal controls. In 2022 the Control Framework was further enhanced to include dedicated fraud controls. The improved risk cycle resulted in a high effectiveness rate of the controls.

Business conduct risk
Risk profile
Business conduct risk is the risk of impairment of NN Bank's integrity. It is the risk of failure (or perceived failure) to comply with NN Group's business principles and related laws, regulations and standards that are relevant to the specific financial services offered by NN Bank or its ensuing activities, which could damage NN Bank's or NN Group's reputation and lead to legal or regulatory sanctions and financial loss.

Risk mitigation
NN Bank is committed to upholding its reputation and integrity through compliance with applicable laws, regulations and ethical standards in each of the markets in which the Bank operates. All employees are expected to adhere to these laws, regulations and ethical standards, and management is responsible for ensuring such compliance. Compliance is therefore an essential ingredient of good corporate governance.

NN Bank has taken steps to strengthen its compliance function. In December 2021 a Head of Compliance was appointed and the reporting line for the compliance function was changed from CEO to CRO. Additionally, the compliance function also has a functional line with the Chief Compliance Officer of NN Group.

The compliance function has executed a programme to further enhance their compliance cycle. This cycle effectively manages compliance risk by identifying, assessing, mitigating, monitoring and reporting business conduct risks. The compliance function provides advice to the businesses to effectively manage their business conduct risks. NN Bank continuously enhances its business conduct risk management programme to ensure that NN Bank and its subsidiaries comply with applicable standards and laws and regulations.

In addition to effective reporting systems, NN Bank has a whistle-blower procedure that protects and encourages staff to speak up if they know of or suspect a breach of external regulations, internal policies or business principles. NN Bank also has policies and procedures regarding anti-money-laundering, sanctions and anti-terrorist-financing, gifts and entertainment, anti-bribery, customer suitability and confidential and insider information. The NN Group Code of Conduct is applicable for its personnel.

NN Bank is fully committed to complying with all applicable sanction legislation, and with all obligations and requirements under those applicable laws, including freezing and reporting obligations with regard to transactions involving a US-, EU- or UN-sanction target. Furthermore, NN Group designates specific countries as ultra-high risk, and prohibits customer engagements and transactions (including payments or facilitation) involving those countries. Certain exceptions to this policy are allowed, after explicit and case-specific consent, and provided that the applicable sanctions laws and regulations are met. At present, the specified ultra-high-risk countries are Cuba, Iran, North Korea, Sudan and Syria. Each of these countries is subject to a variety of EU, US, and other sanction regimes. NN Bank has its own FEC Standard, taking into account laws and regulations that are stricter then the NN Group FEC Policy.

When developing products, NN Bank performs product reviews and implements risk management, legal and compliance procedures to monitor current sales practices. Customer protection regulations, as well as changes in interpretation and perception by both the public at large and governmental authorities of acceptable market practices, might influence customer expectations. The risk of potential reputational and financial

Notes to the Consolidated annual accounts continued

impact from products and sales practices exists because of the market situation, customer expectations and regulatory activity and needs to be monitored continuously. The compliance function and the business work closely together to optimise products and services and to meet customers' needs.

Environmental, Social and Governance risk (ESG risk)

In recent years, supervisory authorities have been particularly focused on environmental, social and governance risks (ESG risks). These risks are steadily growing in importance in the risk management processes of banks.

Risk profile

There is an emergence of new and increasing sources of financial and non-financial risks arising from the impacts of rising global temperatures, and the increased focus on climate change and the transition to a net-zero economy. These include the physical risks arising from extreme weather events such as biodiversity loss and the increased risk of flood, which are growing in frequency and severity, as well as transition to a net-zero economy that can also create exposure to transition risks. These risks can impact NN Bank across a broad range of financial and non-financial risk types.

One of the topics that has been assessed in relation to ESG risk is foundation damage due to pole rot. From these analyses, it can be concluded that the risk for NN Bank is currently limited. However, the impact for individual clients may be substantial and may be further amplified by extended periods of drought due to climate change.

NN Bank will continue to monitor foundation damage among other ESG risks.

NN Bank is committed to managing our business activities and operations in a sustainable manner. We are continuing to develop and implement our approach to environmental risk assessments and management in order to promote the integration of environmental-related factors across our business activities. This includes the ability to identify, monitor, and manage ESG risks and to conduct regular scenario analysis and stress testing.

NN Bank therefore aims for prudent ESG risk management by embedding ESG risks into its risk management frameworks. We are enhancing our existing risk management frameworks in alignment with emerging regulatory guidance on ESG and ensuring that we accurately portray the impacts of our activities on ESG aspects. Climate change and emerging environmental developments pose risks for NN Bank's products and operations and require the ability to adequately adapt to new circumstances, and to market and regulatory expectations. A risk arises that the Bank could be (in)directly linked to violations of environmental standards through investments, business partners, customers, or other links. There is a risk we will miss new external developments and/or misunderstand the interconnectedness of the climate change and environmental themes across the various NN Bank domains. Another risk is that a chosen strategy cannot be adequately implemented if the organisation is unable to realise changes in products and related data, processes and IT and to respond to ongoing external developments and regulations.

Risk mitigation

NN Bank has formulated an ESG roadmap that includes the Bank's contribution to mitigating climate change and environmental risks, aligned with ECB expectations and covering all domains including risk management. The primary risk management areas are covered based on Risk Control Cycle, Risk Strategy and NN Bank Policies. In 2022, NN Bank assessed the impact of a number of climate-related risks on our portfolio. Namely flood risk, pole rot damage and the transition to a more carbon-neutral economy. For the assessment, we undertook scenario analysis and stress-testing. NN Bank has undertaken stress tests to cover climate risk that includes both physical and transition risk. In both cases, the Bank's capital adequacy was well above the minimum regulatory requirements.

In addition, with regards to the NN Bank originated mortgage portfolio an assessment of foundation damage due to pole rot was also undertaken and flood risk was further analysed, as part of our first attempts to quantify climate risk apart from scenario analysis and stress-testing.

In 2023, NN Bank will continue to take steps, in order to further develop insights into climate-related risks and to refine our methodologies, undertake assessment of material climate risks and their incorporation into our risk taxonomy. ESG factors will be incorporated into the credit risk policies and risk framework. Efforts will be made to enhance knowledge and importance of ESG risks across the whole bank, and to further include it into the Bank's risk processes.

Notes to the Consolidated annual accounts continued

40 Capital management

Regulatory requirements

Capital adequacy and regulatory required 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 DNB for supervisory purposes.

NN Bank publishes risk-weighted assets (RWA), Common Equity Tier 1, Total capital and accompanying capital ratios based on CRR, as applicable. For the calculation of RWA, NN Bank applies the Standardised Approach for Credit Risk and the Basic Indicator Approach for Operational Risk. NN Bank does not have a trading book, and therefore Market Risk RWA is not applicable.

Capital management process

In conjunction with the annual MTP process, capital, liquidity and funding plans are prepared each year. These plans are updated on a monthly basis, and the extent to which additional management actions are required is assessed. At all times, maintaining sufficient financial flexibility should be preserved to meet important solvency and liquidity targets. NN Bank's risk appetite statements, which determine risk limit and target-setting, form the foundation of the capital, liquidity and funding plans.

Important inputs to the capital and liquidity planning and management process are provided by stress testing that is performed on a regular basis as part of the ICAAP and ILAAP processes. These stress tests focus on topical issues and the sensitivity of NN Bank's capital position to certain risks. These analyses determine risk appetite and provide input that help to steer strategic direction. In addition, this information is important input for the annual Supervisory Review and Evaluation Process (SREP) performed by the regulator, resulting in capital requirements for NN Bank.

Recovery planning is a natural extension, and follows NN Bank's Risk Management Framework. MREL requirements have been established to ensure that NN Bank has sufficient equity and eligible liabilities at all times, so that NN Bank can be settled in a manner consistent with the resolution objectives in the event of failure. The MREL requirements are expressed in two percentages, as % of TREA and as % the total exposure measure (TEM, leverage ratio requirement). NN Bank must comply with both the MREL requirements expressed in TREA and in TEM at all times. The MREL requirements for NN Bank are set as follows: (i) 21.00% van TREA and (ii) 5,18% van TEM. NN Bank already meets the MREL requirements that must be met as of 1 January 2024.

Capital adequacy

Capital position

Amounts in millions of euros	2022	2021
Common Equity Tier 1 Capital[1]	981	1,063
Total capital[1]	1,066	1,148
Risk Weighted Assets	6,408	6,120
Common Equity Tier 1 ratio[1]	15.3%	17.4%
Total capital ratio[1]	16.6%	18.8%

1 'Total capital' would be EUR 1,098 million, 'CET1 ratio' would be 15.8% and 'Total capital ratio' would be 17.1% after inclusion of the net result for the year 2022, less the payment of the proposed final cash dividend. The figures per 31 December 2021 differ slightly from the figures in the Annual Report 2021 due to rounding.

NN Bank has maintained a solid capital position with a Capital Requirements Regulation (CRR) total capital ratio of 16.6% (31 December 2021: 18.8%) and a CRR CET1 ratio of 15.3% as of 31 December 2022 (31 December 2021: 17.4%). Common Equity Tier 1 Capital amounts to EUR 981 million (31 December 2021: EUR 1,063 million) and has decreased mainly due to dividend payment to NN Group.

Liquidity adequacy

During 2022, NN Bank maintained an adequate liquidity position.

	2022	2021
Liquidity Coverage Ratio (LCR)	183%	165%
Net Stable Funding Ratio (NSFR)	139%	141%
Loan-to-Deposit ratio (LtD)	134%	129%

On 31 December 2022, NN Bank had an LCR ratio of 183%. This is well above regulatory and internal minimum requirements. In addition to the available liquidity as captured by the LCR, NN Bank has other sources of liquidity available. NN Bank has previously issued RMBSs for which the notes are included in NN Bank's liquidity buffer. These can be used for ECB standing facilities (excluding emergency facilities) and commercial repo transactions. Further, NN Bank had intra-group facilities in place for use when necessary.

In addition to its liquidity ratio, NN Bank uses two ratios to measure and monitor the Bank's funding position. The NSFR ratio is defined as the amount of available stable funding relative to the amount of required stable funding. The objective of the NSFR is to incentivise banks to fund their activities from stable sources of funding on an ongoing basis. On 31 December 2022, NN Bank had a NSFR ratio of 139%. This is well above regulatory and internal minimum requirements.

Notes to the Consolidated annual accounts continued

The LtD ratio is a statistic for assessing a bank's deposit funding gap by dividing the bank's total volume of commercial loans by its retail deposits. This ratio is used for a diversified funding base and gives an indication of the bank's dependence on wholesale funding for financing customer loans. On 31 December 2022, NN Bank had an LtD ratio of 134%, which is well within the internal threshold.

In addition to these ratios, stress tests are performed in which the time-to-survival is calculated given internal stress scenarios. The scenarios assume stressors such as severe outflow of savings and unavailability of additional funding sources.

Dividend policy

NN Bank aims to pay dividends to its shareholder on a semi-annual basis, whilst ensuring that the capital ratios show stable development that remains well within NN Bank's risk appetite and the regulatory required capital ratios.

In June 2022, after the General Meeting's adoption of the 2021 Consolidated annual accounts, NN Bank paid a final dividend of EUR 111.6 million relating to the profit of 2021. The 2021 final dividend was paid in cash, and was deducted from the retained earnings.

NN Bank paid no interim dividend and will not propose a final dividend over 2022.

Authorisation to the Consolidated annual accounts

The Consolidated annual accounts of NN Bank for the year ended 31 December 2022 were authorised for issue in accordance with a resolution of the NN Bank Management Board on 23 March 2023.

The Hague, 23 March 2023

The Management Board

A.J.M. (Marcel) Zuidam, CEO and chair

N.A.M. (Nadine) van der Meulen, CFO

P.C.A.M. (Pieter) Emmen, CRO

The Supervisory Board

A.A.G. (André) Bergen, chair

T. (Tjeerd) Bosklopper

A.M. (Anne) Snel-Simmons

A.T.J. (Annemiek) van Melick

Confirmed and adopted by the General Meeting, dated ....

Parent company annual accounts

Parent company statement of financial position

Amounts in thousands of euros, unless stated otherwise

Parent company statement of financial position

As at 31 December before appropriation of result	notes	2022	2021
Assets			
Cash and balances at central banks		2,182,806	1,324,778
Amounts due from banks	2	315,096	216,008
Financial assets at fair value through profit or loss:			
– non-trading derivatives		45,473	8,353
Investment securities		1,023,654	1,271,432
Loans	3	19,736,054	20,515,243
Receivables from group companies	4	528,909	649,285
Other assets	5	151,251	151,086
Deferred tax assets		2,997	0
Investments in group companies	6	147,458	130,053
Intangible assets		26,624	23,106
Total assets		**24,160,322**	**24,289,344**
Liabilities			
Amounts due to banks		245,000	0
Customer deposits and other funds on deposit		16,227,542	15,904,147
Financial liabilities at fair value through profit or loss:			
– non-trading derivatives	7	0	4,218
Other borrowed funds		318,000	200,000
Other liabilities	8	79,660	56,862
Deferred tax liabilities		0	8,191
Provisions		27,394	25,761
Debt securities issued	9	6,125,471	6,186,203
Loans from group companies	10	10,865	724,323
Subordinated debt		85,000	85,000
Total liabilities		**23,118,932**	**23,194,705**
Equity			
Share capital		10,000	10,000
Share premium		481,000	481,000
Revaluation reserve		-28,006	-4,747
Retained earnings		496,853	506,619
Unappropriated result		81,543	101,767
Shareholders' equity	11	**1,041,390**	**1,094,639**
Total equity and liabilities		**24,160,322**	**24,289,344**

References relate to the notes starting on page 108. These form an integral part of the Parent company annual accounts.

Parent company statement of profit or loss

Amounts in thousands of euros, unless stated otherwise

Parent company statement of profit or loss

For the year ended 31 December	notes		2022		2021
Interest income		617,994		603,819	
Interest expenses		418,224		446,400	
Interest result	12		199,770		157,419
Income from group companies	6		17,405		24,343
Gains and losses on financial transactions and other income	13		44,999		74,482
– gross fee and commission income		102,982		135,799	
– fee and commission expenses		12,331		13,841	
Net fee and commission income	14		90,651		121,958
Valuation results on non-trading derivatives	15		4,236		-9,722
Total income			**357,061**		**368,480**
Impairment charges on financial instruments			-826		-9,644
Staff expenses			137,589		126,222
Regulatory levies			26,828		27,162
Other operating expenses			89,599		96,700
Total expenses			**253,190**		**240,440**
Result before tax			**103,871**		**128,040**
Taxation			22,328		26,273
Net result			**81,543**		**101,767**

Parent company statement of changes in equity

Amounts in thousands of euros, unless stated otherwise

Parent company statement of changes in equity (2022)

	Share capital	Share premium	Revaluation reserve	Other reserves[1]	Total equity
Equity - 1 January 2022	**10,000**	**481,000**	**-4,747**	**608,386**	**1,094,639**
Unrealised revaluations after taxation	0	0	-55,250	0	-55,250
Macro fair value hedge accounting effect transferred to the statement of profit or loss	0	0	31,991	0	31,991
Realised gains or losses transferred to the statement of profit or loss	0	0	0	0	0
Total amount recognised directly in equity (Other comprehensive income)	**0**	**0**	**-23,259**	**0**	**-23,259**
Net result	0	0	0	81,543	81,543
Total comprehensive income	**0**	**0**	**-23,259**	**81,543**	**58,284**
Dividend paid	0	0	0	-111,600	-111,600
Change in employee share plans	0	0	0	73	73
Other	0	0	0	-6	-6
Equity - 31 December 2022	**10,000**	**481,000**	**-28,006**	**578,396**	**1,041,390**

1 'Other reserves' include Retained earnings and Unappropriated result.

Parent company statement of changes in equity (2021)

	Share capital	Share premium	Revaluation reserve	Other reserves[1]	Total equity
Equity - 1 January 2021	**10,000**	**481,000**	**2,457**	**642,253**	**1,135,710**
Unrealised revaluations after taxation	0	0	-5,205	0	-5,205
Macro fair value hedge accounting effect transferred to the statement of profit or loss	0	0	0	0	0
Realised gains or losses transferred to the statement of profit or loss	0	0	-1,245	0	-1,245
Total amount recognised directly in equity (Other comprehensive income)	**0**	**0**	**-6,450**	**0**	**-6,450**
Net result	0	0	0	101,767	101,767
Total comprehensive income	**0**	**0**	**-6,450**	**101,767**	**95,317**
Dividend paid	0	0	0	-136,466	-136,466
Change in employee share plans	0	0	0	78	78
Other	0	0	-754	754	0
Equity - 31 December 2021	**10,000**	**481,000**	**-4,747**	**608,386**	**1,094,639**

1 'Other reserves' include Retained earnings and Unappropriated result.

Notes to the Parent company annual accounts

Amounts in thousands of euros, unless stated otherwise

1 Accounting policies for the Parent company annual accounts

The Parent company accounts of NN Bank are prepared in accordance with the financial reporting requirements included in Part 9 of Book 2 of the Dutch Civil Code. The accounting policies applicable to presentation and disclosures are in accordance with the financial reporting requirements included in Part 9 of Book 2 of the Dutch Civil Code. The principles of valuation and determination of results stated in connection with the Consolidated statement of financial position and Consolidated statement of profit or loss are also applicable to the Parent company statement of financial position and statement of profit or loss, with the exception of investments in group companies. These are recognised at net asset value with goodwill, if any, recorded under 'Intangible assets'.

In accordance with Article 379 (1), Book 2 of the Dutch Civil Code, reference is made to Note 34 'Principal subsidiaries' in the Consolidated annual accounts.

2 Amounts due from banks

	2022	2021
Bank balances	4,335	11,434
Collateral posted	310,761	204,574
Amounts due from banks	**315,096**	**216,008**

3 Loans

Loans analysed by type

Loans analysed by type	2022	2021[1]
Loans secured by mortgages, guaranteed by public authorities	4,915,323	4,653,971
Loans secured by mortgages	15,919,771	14,909,174
Loans secured by mortgages, hedged items	-1,523,213	428,984
Consumer lending, other	86,107	104,341
Other loans	69,053	152,583
Group companies	279,066	277,079
Loans – before loan loss provisions	**19,746,107**	**20,526,132**
Loan loss provisions	-10,053	-10,889
Loans	**19,736,054**	**20,515,243**

1 For purposes of comparison, the amounts from 2021 have been reclassified.

Structured entities

Reference is made to Note 35 'Structured entities' in the Consolidated annual accounts. As these securitisation transactions did not transfer substantially all the risk and rewards, NN Bank continues to recognise mortgage receivables.

Changes in loans

	2022	2021
Loans to third parties – opening balance	20,526,132	20,429,608
Mortgage portfolio transfer	364,760	239,044
Partial transfers of mortgage loans	3,119	24,902
Origination	3,708,676	3,010,137
Change in mortgage premium	-36,773	-24,985
Fair value change hedged items	-1,952,197	-461,527
Other changes	-147,532	-50,173
Modifications	1,707	1,985
Redemptions	-2,721,785	-2,635,588
Changes in staging	0	-7,272
Loans to third parties – closing balance	**19,746,107**	**20,526,132**

4 Receivables from group companies

Changes in receivables from group companies

	2022	2021
Receivables from group companies – opening balance	649,285	813,792
Movement	-120,376	-164,507
Receivables from group companies – closing balance	**528,909**	**649,285**

'Receivables from group companies' mainly consists of a loan to HQ Hypotheken 50 B.V. for the funding of the third-party loans as serviced by Quion. The interest rate for 2022 is based on Euro Short-Term Rate (€STR) with an add-on of 0.6% (2021: EONIA + 0.6%). The related interest income for 2022 amount to EUR 2.4 million (2021: EUR 0.6 million).

Notes to the Parent company annual accounts continued

5 Other assets

Other assets by type

	2022	2021
Accrued assets	44,452	39,073
Other receivables	106,799	112,013
Other assets	**151,251**	**151,086**

All other assets are expected to be recovered or settled within 12 months, except for an amount of EUR 67.5 million relating to origination fees to be received following a long-term contract.

6 Investments in group companies

Investment in group companies

	Interest held 2022	Balance sheet value 2022	Interest held 2021	Balance sheet value 2021
HQ Hypotheken 50 B.V.	100%	135,375	100%	124,569
Woonnu B.V.	100%	12,083	100%	5,484
Investments in group companies		**147,458**		**130,053**

Changes in investments in group companies

	2022	2021
Investments in group companies – opening balance	130,053	107,961
Results from group companies	17,405	24,343
Value adjustment group companies	0	-2,128
Changes in the composition of the group and other changes	0	-123
Investments in group companies – closing balance	**147,458**	**130,053**

7 Financial liabilities at fair value through profit or loss

Non-trading derivatives

	2022	2021
Derivatives held for fair value hedge accounting	0	4,218
Non-trading derivatives	**0**	**4,218**

8 Other liabilities

Other liabilities

	2022	2021
Income tax payable	14,285	1,775
Other taxation and social contribution	13,739	14,255
Accrued interest	23,052	16,229
Costs payable	14,804	11,995
Other amounts payable	13,780	12,608
Other liabilities	**79,660**	**56,862**

‘Other amounts payable’ mainly relates to year-end accruals and other payables to third parties in the normal course of business.

All other liabilities are expected to be settled within 12 months.

9 Debt securities issued

	2022	2021
Covered bond issues	4,345,000	4,306,975
Unsecured debt securities	1,780,471	1,879,228
Total	**6,125,471**	**6,186,203**

Reference is made to Note 35 ‘Structured entities’ in the Consolidated annual accounts, specifically the Covered Bond Programme.

Notes to the Parent company annual accounts continued

10 Loans from group companies

This position reflects mainly liabilities towards SPEs. Reference is made to Note 35 'Structured entities' in the Consolidated annual accounts. The securitised mortgage portfolios do not qualify for derecognition, since NN Bank retains substantially all risk and rewards. As a consequence, the SPEs account a loan to NN Bank and NN Bank accounts a loan to SPEs, which is included in the line item 'Loans from group companies'.

11 Equity

Equity

	2022	2021
Share capital	10,000	10,000
Share premium	481,000	481,000
Revaluation reserve	-28,006	-4,747
Retained earnings	496,853	506,619
Unappropriated result	81,543	101,767
Total equity	**1,041,390**	**1,094,639**

Share capital

			Ordinary shares	
	Shares in number		Amount (in EUR thousand)	
	2022	2021	2022	2021
Authorised share capital	5,000,000	5,000,000	50,000	50,000
Unissued share capital	4,000,000	4,000,000	40,000	40,000
Issued share capital	**1,000,000**	**1,000,000**	**10,000**	**10,000**

Changes in revaluation reserve, retained earnings and unappropriated result (2022)

	Revaluation reserve	Retained earnings	Unappropriated result	Total
Revaluation reserve, retained earnings and unappropriated result – opening balance	-4,747	506,619	101,767	603,639
Net result for the period	0	0	81,543	81,543
Dividend paid	0	-111,600	0	-111,600
Unrealised revaluation	-23,259	0	0	-23,259
Transfers to/from retained earnings	0	101,767	-101,767	0
Change in employee share plans	0	73	0	73
Other	0	-6	0	-6
Revaluation reserve, retained earnings and unappropriated result – closing balance	**-28,006**	**496,853**	**81,543**	**550,390**

Changes in revaluation reserve, retained earnings and unappropriated result (2021)

	Revaluation reserve	Retained earnings	Unappropriated result	Total
Revaluation reserve, retained earnings and unappropriated result – opening balance	2,457	516,995	125,258	644,710
Net result for the period	0	0	101,767	101,767
Dividend paid	0	-136,466	0	-136,466
Unrealised revaluation	-6,450	0	0	-6,450
Transfers to/from retained earnings	0	125,258	-125,258	0
Change in employee share plans	0	78	0	78
Other	-754	754	0	0
Revaluation reserve, retained earnings and unappropriated result – closing balance	**-4,747**	**506,619**	**101,767**	**603,639**

'Revaluation reserve' cannot be freely distributed. Share premium reserves are not freely distributable up to the negative amount of 'Retained earnings'.

The total amount of 'Equity' in the Parent company annual accounts equals 'Shareholder's equity' in the Consolidated annual accounts.

The 'Distributable reserves' based on the Dutch Civil Code in the Parent company annual accounts are equal to the Distributable reserves included in the Consolidated annual accounts, except for the positive components of 'Share of associates reserve', which is EUR 0.0 million (2021: EUR 0.1 million). The total 'Distributable reserves' based on the Dutch Civil Code in the Parent company annual accounts is EUR 1,033.4 million (2021: EUR 1,066.3 million).

Notes to the Parent company annual accounts continued

12 Interest result

Interest result

	2022	2021
Interest income on loans	536,058	553,012
Modifications	1,728	2,009
Interest income on non-trading derivatives	71,106	46,115
Negative interest on liabilities	879	2,683
Other interest income	8,223	0
Total interest income	**617,994**	**603,819**
Interest expenses on amounts due to banks	344	470
Interest expenses on customer deposits and other funds on deposit	124,740	134,742
Interest expenses on debt securities issued and other borrowed funds	46,115	37,597
Interest expenses on non-trading derivatives	135,557	122,883
Interest expenses on subordinated loans	1,400	1,459
Negative interest on assets	6,407	9,638
Other interest expenses	3,473	5,660
Interest expenses on structured entities	100,188	133,951
Total interest expenses	**418,224**	**446,400**
Interest result	**199,770**	**157,419**

'Negative interest on assets' includes negative interest income charged by DNB of EUR 4.1 million (2021: EUR 7.7 million). The remainder concerns interest on investment securities.

Interest margin in percentages

	2022	2021
Interest margin	**0.82%**	**0.63%**

'Interest margin' is calculated by dividing the interest result by the average of the total assets for year-end 2022 and 2021, respectively.

13 Gains and losses on financial transactions and other income

	2022	2021
Realised gains or losses of investment securities	0	1,660
Results from financial transactions	37,283	59,396
Net income from loans measured at FVTPL	0	-46
Other income	7,716	13,472
Gains and losses on financial transactions and other income	**44,999**	**74,482**

14 Net fee and commission income

Net fee and commission income

	2022	2021[1]
Service management fee	52,012	51,447
Brokerage and advisory fees	50,962	84,306
Other fees	8	46
Gross fee and commission income	**102,982**	**135,799**
Asset management fees	9,826	12,655
Brokerage and advisory fees	2,495	1,174
Other fees	10	12
Fee and commission expenses	**12,331**	**13,841**
Net fee and commission income	**90,651**	**121,958**

1 For purposes of comparison, the amounts from 2021 have been reclassified.

15 Valuation results on non-trading derivatives

	2022	2021
Gains or losses (fair value changes) in fair value hedge accounting relating to:		
– the hedging instrument (non-trading derivatives)	1,440,158	352,184
– the hedged items (mortgages) attributable to the hedged risk	-1,431,525	-354,608
Gains or losses (fair value changes) in other non-trading derivatives	-4,397	-7,298
Valuation results on non-trading derivatives	**4,236**	**-9,722**

Notes to the Parent company annual accounts continued

16 Maturity of certain assets and liabilities

Analysis of certain assets and liabilities (2022)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Assets						
Cash and balances at central banks	2,182,806	0	0	0	0	2,182,806
Amounts due from banks	4,335	0	0	0	310,761	315,096
Loans	102,882	87,627	216,168	1,453,681	17,875,696	19,736,054
Liabilities						
Amounts due to banks	0	225,000	20,000	0	0	245,000
Customer deposits and other funds on deposit	10,425,736	148,698	574,180	2,175,085	2,903,843	16,227,542
Financial liabilities at fair value through profit or loss:						
– non-trading derivatives	0	0	0	0	0	0
Debt securities issued	0	0	764,408	2,001,889	3,359,174	6,125,471

Analysis of certain assets and liabilities (2021)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Assets						
Cash and balances at central banks	1,324,778	0	0	0	0	1,324,778
Amounts due from banks	11,434	204,574	0	0	0	216,008
Loans	148,589	108,223	208,900	1,477,655	18,571,876	20,515,243
Liabilities						
Amounts due to banks	0	0	0	0	0	0
Customer deposits and other funds on deposit	10,110,810	146,634	588,957	2,105,095	2,952,651	15,904,147
Financial liabilities at fair value through profit or loss:						
– non-trading derivatives	4,218	0	0	0	0	4,218
Debt securities issued	0	0	0	2,805,158	3,381,046	6,186,204

17 Contingent liabilities and commitments

Contingent liabilities and commitments (2022)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Guarantees	0	0	0	0	639	639
Irrevocable credit facilities	48,227	0	0	0	0	48,227
Mortgage and consumer lending offerings	79,020	230,103	184,903	0	0	494,026
Construction deposits	46,808	78,618	260,863	118,170	0	504,459
Contingent liabilities and commitments	**174,055**	**308,721**	**445,766**	**118,170**	**639**	**1,047,351**

Contingent liabilities and commitments (2021)

	Less than 1 month	1-3 months	3-12 months	1-5 years	Over 5 years	Total
Guarantees	0	0	0	0	656	656
Irrevocable credit facilities	51,224	0	0	0	0	51,224
Mortgage and consumer lending offerings	30,646	320,847	370,197	0	0	721,690
Construction deposits	53,633	72,472	189,445	122,810	0	438,360
Contingent liabilities and commitments	**135,503**	**393,319**	**559,642**	**122,810**	**656**	**1,211,930**

18 Related parties

NN Bank has entered into transactions with its principal subsidiary, HQ Hypotheken 50 B.V. and Woonnu B.V. 'Receivables from group companies' comprises a loan for funding purposes of the mortgage origination by Quion Hypotheekbemiddeling B.V. on behalf of NN Bank's subsidiary. The related interest income for 2022 amount to EUR 2.4 million (2021: EUR 0.6 million).

Woonnu B.V. originates mortgages directly on behalf of NN Bank and receives an origination fee for this service. The related origination fee amounts to EUR 0.9 million (2021: EUR 2.9 million).

For more details about related parties, reference is made to Note 36 'Related parties' in the Consolidated annual accounts.

Notes to the Parent company annual accounts continued

19 Other

Fiscal unity

NN Bank and its subsidiaries (excluding consolidated structured entities) are part of the Dutch fiscal unity of NN Group for corporation tax purposes, making it jointly and severally liable for the total tax payable by the fiscal unity. The tax receivables and payables concern NN Group's receivables and payables.

Authorisation of the Parent company annual accounts

The Parent company annual accounts of NN Bank for the year ended 31 December 2022 were authorised for issue in accordance with a resolution of the Management Board on 23 March 2023.

The Hague, 23 March 2023

The Management Board

A.J.M. (Marcel) Zuidam, CEO and chair

N.A.M. (Nadine) van der Meulen, CFO

P.C.A.M. (Pieter) Emmen, CRO

The Supervisory Board

A.A.G. (André) Bergen, chair

T. (Tjeerd) Bosklopper

A.M. (Anne) Snel-Simmons

A.T.J. (Annemiek) van Melick

Confirmed and adopted by the General Meeting, dated ....

Other information

Independent auditor’s report

Independent auditor's report

To: the General Meeting of the Shareholder and the Supervisory Board of Nationale-Nederlanden Bank N.V.

Report on the audit of the annual accounts 2022 included in the annual report

Our opinion

In our opinion:

- the accompanying consolidated annual accounts give a true and fair view of the financial position of Nationale-Nederlanden 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 annual accounts give a true and fair view of the financial position of Nationale-Nederlanden 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 annual accounts 2022 of Nationale-Nederlanden Bank N.V. (the ‘Company’ or ‘NN Bank’) based in The Hague. The annual accounts include the consolidated annual accounts and the parent company annual accounts.

The consolidated annual accounts 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 and the statements of comprehensive income, changes in equity and cash flows; and
3. the notes comprising a summary of the significant accounting policies and other explanatory information.

The parent company annual accounts comprise:

1. the parent company statement of financial position as at 31 December 2022;
2. the parent company statement of profit or loss for 2022;
3. the parent company statement of changes in equity; and
4. the notes comprising a summary of the accounting policies and other explanatory information.

Independent auditor's report continued

KPMG

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 annual accounts' section of our report.

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

We designed our audit procedures in the context of our audit of the annual accounts as a whole and in forming our opinion thereon. The information in respect of going concern, fraud and non-compliance with laws and regulations 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

- Materiality of EUR 6 million
- 4.3% of three-year average of results before tax

Group audit

- Audit coverage of 100% of total assets
- Audit coverage of 100% of revenue

Fraud/Noclar and going concern

- Fraud & Non-compliance with laws and regulations (Noclar)-related risks: presumed risk of management override of controls identified
- Going concern related risks: no going concern risks identified

Independent auditor's report continued

Key audit matters
- Estimation uncertainty with respect to impairment losses on mortgage and consumer credit loans - Reliability and continuity of electronic data processing

Opinion
Unqualified

Materiality

Based on our professional judgment we determined the materiality for the annual accounts as a whole at EUR 6 million (2021: EUR 6 million). The materiality is determined with reference to the three-year average of results before tax (4.3%). We consider result before tax as the most appropriate benchmark based on our assessment of the general information needs of users of the annual accounts and given the fact that NN Bank is a profit-oriented entity. We have averaged the result before tax because the results have been volatile in recent years due to among other things, the financial impact of the recent interest rate developments and associated developments in the mortgage origination market. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the annual accounts for qualitative reasons.

We agreed with the Supervisory Board that misstatements identified during our audit in excess of EUR 300 thousand (2021: EUR 300 thousand) 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

NN Bank has two fully owned subsidiaries: HQ Hypotheken 50 B.V. and Woonnu B.V. Through HQ Hypotheken 50 B.V., NN Bank offers mortgage loans to customers via a business partner. Woonnu B.V. serves as a mortgage loan originator under the label 'Woonnu' for and on behalf of NN Bank and other entities.

The financial information of these subsidiaries is included in the annual accounts of NN Bank. We are ultimately responsible for the opinion on these annual accounts and therefore we are responsible for directing, supervising and performing the group audit. In addition, part of the account balances included in the consolidated annual accounts of NN Bank are serviced by external business partners or service providers within NN Group. In this respect, we have determined the nature and extent of the audit procedures to be carried out for group purposes.

Independent auditor's report continued

We have:

- performed audit procedures ourselves at NN Bank;
- made use of the work of other auditors, appointed by the business partners (service organisations) of NN Bank, for the account balances of HQ Hypotheken 50 B.V. and the mortgage portfolio originated by Woonnu for and on behalf of NN Bank. Furthermore, we made use of the work performed by auditors of certain service providers within NN Group in respect of investment securities and personnel-related accounts and disclosures; and
- sent audit instructions to the aforementioned auditors (hereafter also referred to as 'component auditors'), covering significant areas, including the relevant risks of material misstatements, and set out the information required to be reported to us.

As group auditor we have satisfied ourselves that the audit work performed by the component auditors meets the requirements set out in the audit instructions that we have sent. Our procedures included regular communication about the assessment of risks and audit responses thereto. Furthermore, we discussed the information reported to us, including audit observations, and performed a review on a selection of the audit files to ensure these are consistent with the instructions sent by us and support the audit opinion provided by the component auditor on the financial information that we relied upon in the completion of our audit of NN Bank.

By performing the procedures mentioned above at group components, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the annual accounts.

We have obtained an audit coverage of 100% of total assets and revenues of the group.

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

In the risk management paragraph of the annual accounts, the Management Board describes its procedures in respect of the risk of fraud and non-compliance with laws and regulations and the Supervisory Board reflects on this.

As part of our audit, we have gained insights into the Company and its business environment, and assessed the design and implementation of the Company's risk management in relation to fraud and non-compliance. Our procedures included, among other things, assessing the Company's code of conduct, whistleblowing procedures, incidents register and its procedures to investigate indications of possible fraud and non-compliance. Furthermore, we performed relevant inquiries with management, those charged with governance and other relevant functions, such as Internal Audit, Legal and Compliance. 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 annual accounts, including the potential for cyber security incidents to have a material impact on the annual accounts;
- assessed other positions held by Management Board members and/or other employees and paid special attention to procedures and governance/compliance in view of possible conflicts of interest;

Independent auditor's report continued

- evaluated internal reports from Internal Audit and Compliance on indications of possible matters of fraud and non-compliance;
- evaluated correspondence with supervisory authorities and regulators.

In addition, 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 annual accounts:

- 'Wet op het financieel toezicht' (Wft, Act on Financial Supervision);
- banking-specific regulatory requirements as imposed by the prudential regulator DNB;
- regulations related to data privacy (GDPR, General Data Protection Regulation);
- Laws and regulations on Anti-Money Laundering ('AML') and Financial Economic Crime ('FEC') (i.e., the 'Wet ter voorkoming van witwassen en financieren van terrorisme (Wwft, Anti-Money Laundering and Anti-Terrorist Financing Act)); and
- Capital Requirements Directive IV (CRD IV).

We evaluated the fraud and non-compliance risk factors to consider whether those factors indicate a risk of material misstatement in the annual accounts.

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

Based on the above and on the auditing standards, we identified the following fraud risk that is relevant to our audit, which entails the relevant presumed risk laid down in the auditing standards, and responded as follows:

Management override of controls (a presumed risk)

Risk:

- Management is in a unique position to manipulate accounting records and prepare fraudulent annual accounts by overriding controls that otherwise appear to be operating effectively such as via fictitious journal entries or estimates such as the impairment losses on mortgage and consumer credit loans.

Responses:

- We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness of internal controls that mitigate fraud risks, such as processes related to journal entries and estimates related to the impairment losses on mortgage and consumer credit loans.
- We performed a data analysis of high-risk journal entries and evaluated key estimates and judgments for bias by the Company's management, including retrospective reviews of prior years' estimates with respect to impairment losses on mortgage and consumer credit loan. 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.

Independent auditor's report continued

- We incorporated elements of unpredictability in our audit by making use of random sampled items for substantive testing.

Our evaluation of procedures performed related to fraud and non-compliance with laws and regulations did not result in a key audit matter.

We communicated our risk assessment, audit responses and results to management and the Supervisory Board. Our audit procedures did not reveal indications and/or reasonable suspicion of fraud and non-compliance that could have a material effect on amounts recognised or disclosures provided in the annual accounts.

Audit response to going concern

The Management Board has performed its going concern assessment and has not identified any going concern risks. To assess the Management Board's assessment, we have performed, inter alia, the following procedures:

- we considered whether the Management Board's assessment of the going concern risks includes all relevant information of which we are aware as a result of our audit;
- we analysed the Company's financial position as at year-end and compared it to the previous financial year in terms of indicators that could identify going concern risks; and
- we inspected regulatory correspondence and the minutes of board meetings and performed substantive audit procedures to obtain an understanding of the Company's minimum regulatory and internal capital and liquidity position, respectively and the related adequacy assessment of all capital targets, that underpins management's assessment of the going concern assumption for financial reporting.

The outcome of our risk assessment procedures on the going concern assessment, including our consideration of findings from our audit procedures on other areas, did not give reason to perform additional audit procedures on management's going concern assessment.

Our key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts. We have communicated the key audit matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

Estimation uncertainty with respect to impairment losses on mortgage and consumer credit loans
Description The loan portfolio of NN Bank is classified as 'hold to collect' and therefore measured at amortised cost. The mortgage and consumer credit loans measured at amortised cost amount to EUR 21.5 billion (gross) as at 31 December 2022. The amortised cost is determined by subtracting the provision for loan losses from the outstanding balance of the loans, amounting to EUR 10.1 million as at 31 December 2022.

In accordance with IFRS 9, NN Bank applies an expected credit loss (ECL) approach to determine the provision for loan losses. The loan loss provision is determined using complex models on a portfolio basis using expert judgment. There is a risk that the models do not reflect the accurate or complete loan loss provision. This could stem from incorrect underlying assumptions, insufficient control over the modelling process or insufficient data (quality) used to develop the model or as input in the model. Certain aspects of the determination of expected loan losses require significant judgment of management, such as the definition of significant increase in credit risk and the definition of default, the determination of the probability of default using migration matrices, the application of macro-economic scenarios and estimating the recoverable amount to determine the 'Loss Given Default'. In addition, 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.

Based on these facts and circumstances, we consider the estimation uncertainty with respect to impairment losses on mortgage and consumer credit loans a key audit matter.

Our response

Our audit approach included risk assessment procedures, testing the effectiveness of internal controls around determining the loan loss provision, as well as substantive audit procedures. As part of our risk assessment procedures, we obtained an understanding of management's process, systems and controls implemented. Our procedures over internal controls focused on controls around the accuracy of loan and collateral data, and the process for identifying increases in credit risk, such as arrears and the management thereof, and included an assessment of the relevant General IT Controls of the systems involved.

In our substantive procedures:

- we recalculated the 'Probability of Default', 'Loss Given Default' and 'Exposure at Default' for a sample of mortgage and consumer credit loans, and determined that the provision is calculated as the product of these elements;
- we inspected model validation reports and the updated technical model documentation for the mortgage provision models which were redeveloped in 2022, the model monitoring reports and the changes in the updated technical model documentation for the consumer credit models which were updated in 2022, and performed reperformance testing on these model validation and monitoring reports on a sample basis.

  In our audit we challenged management's assessment whether the models are still 'fit-for-purpose' and considered the need for post-model adjustments to accurately capture credit risk developments. We involved credit risk specialists from KPMG Financial Risk Management to assist us in these procedures;
- we tested the accuracy and completeness of the data used for the ECL calculations. As part of that, we tested whether the source data could be reconciled with the data captured in risk systems and the general ledger;

Independent auditor's report continued

KPMG

- we inspected for a selection of loans whether the data administered could be reconciled to source documentation. Important data to determine the provision for loan losses includes among other things the collateral value and the payment history of the client;
- we performed procedures on the non-performing and forbearance classification of mortgage and consumer credit loans, in respect of the staging of loans. Therefore, we inspected for a selection of loans whether their classification is in line with source documentation and in accordance with the definitions of default and significant increase in credit risk as described in the staging policy;
- we assessed whether the macroeconomic scenarios and scenario weights used in the determination of the provision for loan losses are a fair reflection of the macroeconomic data and forecasts (GDP, unemployment and house price index) as at 31 December 2022;
- we performed sensitivity analyses for several parameters applied in the loan loss provision models and performed a peer bank benchmarking analysis;
- with the support of our credit risk specialists, we assessed the management overlay which was recognised in response to the sharp inflation and rising interest rates. We assessed the methodology and assumptions applied to estimate the impact of these macroeconomic developments on the expected credit losses to verify that the calculation methodology is conceptually sound and in accordance with industry practice. Furthermore, we assessed the indicators of vulnerability to rising interest rates and inflation used by management as input data to the calculation and performed a recalculation of the management overlay to determine its mathematical accuracy; and
- we assessed whether the disclosures appropriately address the uncertainty that exists when determining the expected credit losses, including the impact of applying different macroeconomic scenarios, and whether the disclosure of the key judgments and assumptions made was sufficiently clear. This was relevant given the changed conditions and increased estimation uncertainty resulting from the recent developments in macroeconomic conditions.

Our observation

Based on our procedures performed, we conclude that the expected credit losses for the portfolio of mortgage and consumer credit loans as determined by NN Bank is within an acceptable range and that NN Bank adequately disclosed information in accordance with EU-IFRS on the estimation uncertainty in note 1, note 6 and note 39 to the annual accounts. We have made recommendations to management to enhance the documentation of data quality and consistent data flows between NN Bank's source systems and to further strengthen the model development and model validation process.

Independent auditor’s report continued

KPMG

Reliability and continuity of electronic data processing

Description

NN Bank and its financial reporting process are highly dependent on the reliability and the continuity of information technology due to the significant number of transactions that are processed daily. An adequate IT infrastructure ensures the reliability and continuity of the Company’s business processes and the accuracy of financial reporting. As the reliability and continuity of IT systems may have an impact on automated data processing and given the pervasive nature of the IT general control environment, we consider this a key audit matter.

Our response

- We obtained an understanding of the IT organisation and developments in the IT infrastructure to determine how it impacts the Company’s processes.
- We assessed the impact of changes to the IT environment during the year, either from ongoing internal process optimisation initiatives or in order to meet external reporting requirements.
- We tested the design, implementation and operating effectiveness of General IT Controls related to user access management and change management across applications, databases, networks and operating systems.
- In some areas where we had observations in terms of the effectiveness of internal controls, we performed additional procedures over the remedial control actions taken by management on access and change management for the related systems.
- We tested application controls over automated data processing, data feeds and interfaces when relevant for financial reporting.
- We assessed the reliability and continuity of automated data processing only to the extent necessary within the scope of the audit of the annual accounts.
- We inquired with management on security incidents and their initiatives and processes to address cyber security risks.

Our observation

Based on the testing of General IT Controls, we obtained sufficient and appropriate audit evidence to support our IT-driven audit approach.

The results of the procedures performed regarding user access management and change management, including the testing of remedial control actions, were satisfactory in relation to our audit. Based on the procedures performed, we noted points for improvement in these areas that we have shared with the Management Board and the Supervisory Board.

Independent auditor's report continued

Report on the other information included in the annual report

In addition to the annual accounts 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 annual accounts 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 annual accounts 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 annual accounts.

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

Report on other legal and regulatory requirements

Engagement

We were engaged by the General Meeting of the Shareholder as auditor of NN Bank on 28 May 2015, as of the audit for the years 2016 and have operated as statutory auditor ever since that financial year.

We have been reappointed by the General Meeting of the Shareholder on 23 May 2022 to continue to serve as the external auditor of NN Bank for the financial years 2022 through 2025.

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 agreed-upon procedures and assurance engagements to NN Bank and its controlled undertakings. These services were rendered for the benefit of external users, largely driven by regulatory reporting requirements.

Independent auditor's report continued

Description of responsibilities regarding the annual accounts

Responsibilities of the Management Board and the Supervisory Board for the annual accounts

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

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

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

Our responsibilities for the audit of the annual accounts

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 annual accounts. 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 annual accounts is located at the website of de 'Koninklijke Nederlandse Beroepsorganisatie van Accountants' (NBA, Royal Netherlands Institute of Chartered Accountants) at eng_oob_01.pdf (nba.nl).This description forms part of our auditor's report.

Amstelveen, 23 March 2023

KPMG Accountants N.V.

B.M. Herngreen RA

Appropriation of result

The result is appropriated pursuant to article 21 of the NN Bank Articles of Association, the relevant stipulations of which state that the General Meeting, having heard the advice of the Management Board and the Supervisory Board, shall determine the appropriation of result. Reference is made to Note 17 'Equity' of the Consolidated annual accounts, for the proposed appropriation of result.

Contact and legal information

Contact us

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Nationale-Nederlanden Bank N.V. is part of NN Group N.V.

Disclaimer

Small differences are possible in the tables due to rounding.

Certain of the statements in this 2022 Annual Report 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, without limitation: (1) changes in general economic conditions, in particular economic conditions in NN Bank's core markets, (2) the effects of the Covid-19 pandemic and related response measures, including lockdowns and travel restrictions, on economic conditions in countries in which NN Bank operates, on NN Bank's business and operations and on NN Bank's employees, customers and counterparties, (3) changes in performance of financial markets, including developing markets, (4) consequences of a potential (partial) break-up of the euro or European Union countries leaving the European Union, (5) changes in the availability of, and costs associated with, sources of liquidity as well as conditions in the credit and capital markets generally, (6) changes affecting interest rate levels, (7) changes affecting currency exchange rates, (8) changes in investor and customer behaviour, (9) changes in general competitive factors, (10) changes in laws and regulations and the interpretation and application thereof, (11) changes in the policies and actions of governments and/or regulatory authorities, (12) conclusions with regard to accounting assumptions and methodologies, (13) changes in ownership that could affect the future availability to NN Bank of net operating loss, net capital and built-in loss carry forwards, (14) changes in credit and financial strength ratings, (15) NN Bank's ability to achieve its strategy, including projected operational synergies, (16) operational risks, such as system disruptions or failures, breaches of security, cyber-attacks, human error, or inadequate controls including in respect of third parties with which we do business, (17) the inability to retain key personnel, (18) catastrophes and terrorist-related events, (19) adverse developments in legal and other proceedings and (20) the other risks and uncertainties detailed in the Risk management section and/or contained in recent public disclosures made by NN Bank and/or related to NN Bank.

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

This document does not constitute an offer to sell, or a solicitation of an offer to purchase, any securities.