DNB Annual Report 2021

Striking a new balance

DeNederlandscheBank

EUROSYSTEEM

De Nederlandsche Bank N.V.
2021 Annual Report

Striking a new balance

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The cut-off date for this report is 10 March 2022.

Notes
The original Annual Report, including the financial statements, was prepared in Dutch. In the event of discrepancies between the Dutch version and this English translation, the Dutch version prevails.

Gross domestic product (GDP), used to express quantities in some tables and charts, is GDP at market price unless stated otherwise.

Legend
0 (0.0) = the figure is less than half of the rounding used or nil
blank = a figure cannot logically occur or the data is not reported (to DNB)
- = data unavailable

Rounding
Figures may not add up due to automatic rounding per series. As figures are rounded for each table, the individual tables do not always fully reconcile.

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The year under review in perspective

Two years ago, it was perhaps feared, but certainly not expected, that the pandemic would hold societies and economies all over the world in its grip for so long. The crisis phase of the pandemic is now behind us and we find ourselves facing the next – geopolitical – crisis.

The economy took a surprising turn for the better in 2021. Another surprise, though not in a positive sense, was the development of inflation, which is currently above the target set by the European Central Bank (ECB). In this respect, the year under review clearly seems to represent a turning point. In previous years, inflation did not come close to the ECB's target despite a very accommodative monetary policy and generally favourable economic development.

Another negative event in all respects is Russia's military aggression in Ukraine after the close of the year under review. Alongside the vast human suffering caused, the situation is giving rise to new uncertainties for the world economy. Although the full consequences have not yet been felt, it is highly likely that this aggression will negatively affect growth in the Netherlands and throughout Europe, while inflation is likely to remain high for longer. We are publishing an initial analysis of these effects simultaneously with this Annual Report.

The global economy is in the process of being transformed as it seeks to strike a new balance. Firstly, as mentioned, the pandemic has left its mark, and society and the economy must find ways to adapt. Secondly, the Glasgow climate summit was an important step towards creating a climate-neutral economy, although further international efforts are still needed. Finally, digitisation is also making itself felt more and more plainly in our economy and especially in the financial system. It is up to policymakers, including central banks, governments and social partners, to do what they can to ensure the success of this transformation.

In any case, elements of this transformation can be found in the new Dutch government's policy agenda, including an earnest commitment to making our economy more sustainable, in line with European objectives in this area. The government's coalition agreement also addresses other major challenges such as the overheated housing market, labour market imbalances and digitisation.

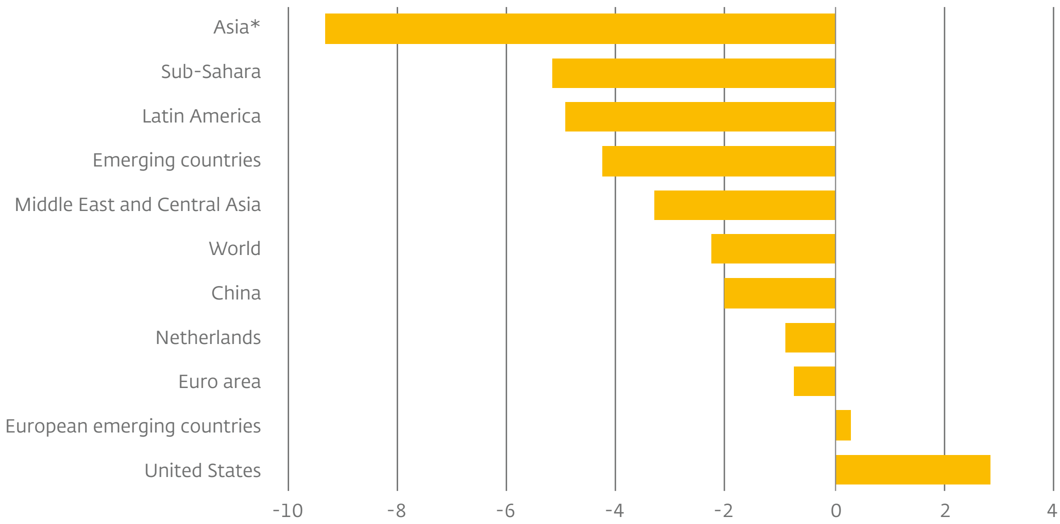
This Report first examines the general contours of the economic and financial developments in this eventful year. This is followed by a look ahead, arranged according to the three developments that characterise our economy's transformation: a balanced recovery from the pandemic, sustainability and digitisation.

Following an unprecedented shock, a robust but unbalanced recovery

The outbreak of the COVID-19 pandemic and the associated containment measures resulted in a significant economic contraction in 2020, followed by a robust recovery in 2021. This recovery was unbalanced worldwide, however. Developed economies in particular recovered, some even fully, from the pandemic-induced recession of 2020. These economies are even returning to pre-pandemic growth trajectories, which means the pandemic has hardly caused any lasting growth loss in these countries (Figure 1).

Figure 1 GDP growth loss in 2024 compared to pre-pandemic projections

Cumulative since 2020



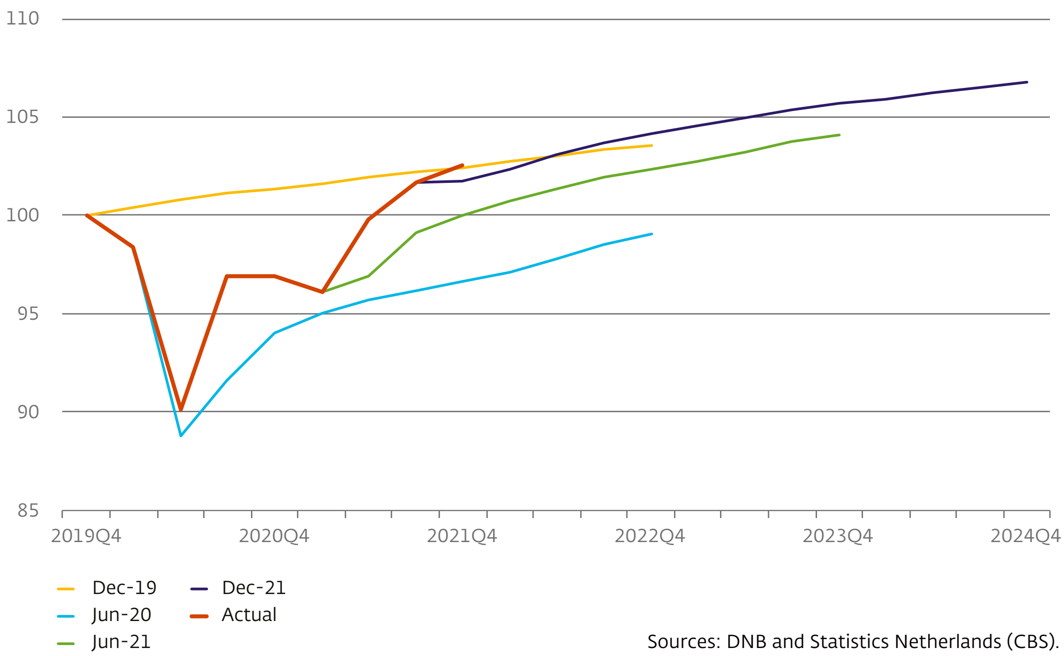
Source: IMF WEO October 2021.

* Excl. China.

At the same time, the economy, at least in the Netherlands, seems to be better armed against successive waves of the pandemic and is also recovering more rapidly from it. Figure 2 compares the actual growth and the most recent DNB growth projection for the Dutch economy (December 2021) with previous projections since the start of the pandemic. The graph clearly shows that the adverse impact of the pandemic on the economy has consistently been overestimated. Meanwhile, Dutch gross domestic product (GDP) is back above the year-end 2019 level, and at the end of the year under review it had even returned to its pre-pandemic growth trajectory.

Figure 2 Dutch growth, projections and actual

Index 2019Q4 = 100



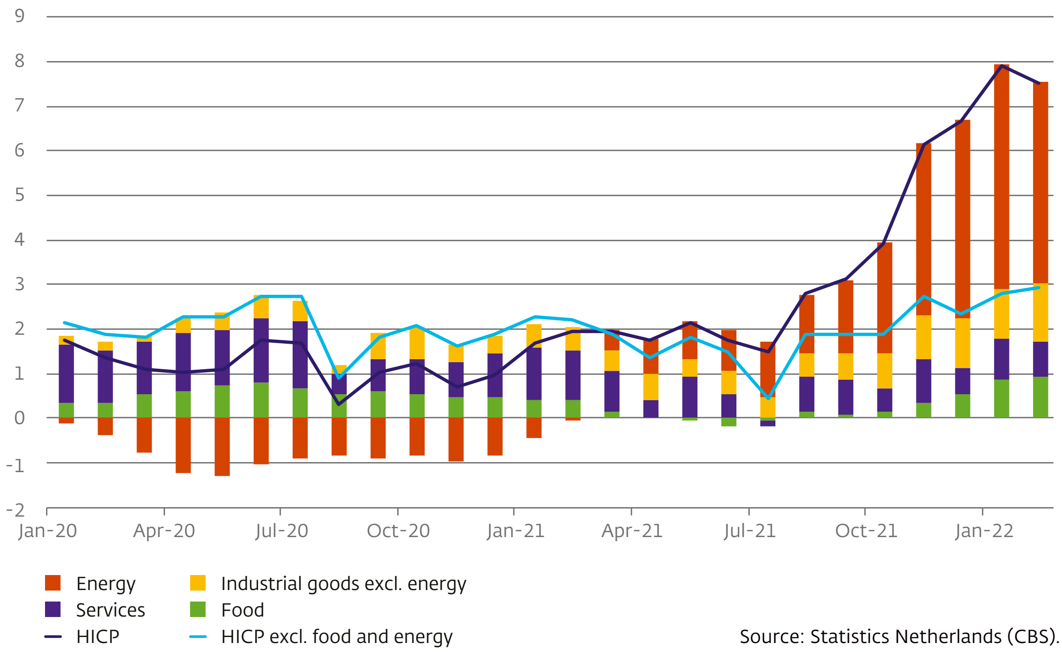
Sources: DNB and Statistics Netherlands (CBS).

The rapid recovery that followed the easing of pandemic-related restrictions demonstrates the economy's resilience. Concurrently, however, there are also bottlenecks impeding recovery. The demand for raw materials, energy, semi-manufactured products such as semiconductors, and also transport has increased more rapidly than supply, resulting in rising prices. Moreover, the positive macroeconomic figures conceal significant differences between sectors. Successive lockdowns and containment measures were a hard blow for companies in sectors such as travel, hospitality, events and culture in particular, severely challenging their resilience, despite government support.

Inflation fell in the initial phase of the COVID-19 crisis as a result of the containment measures and the pandemic-induced recession. In the second phase, when measures were eased, economies in developed countries in particular experienced a robust recovery accompanied by a marked rise in inflation (see Figure 3). Both the Netherlands and the euro area have seen inflation increase to high levels since the second half of 2021, as has the United Kingdom, while inflation has surged even more strongly in the United States.

Figure 3 Harmonised inflation (HICP), Netherlands

Percentage contribution to annual HICP change



Source: Statistics Netherlands (CBS).

A combination of factors are responsible for these price increases (see the DNB analysis). Some of them are temporary, for example the price drops at the beginning of the pandemic that have now reversed and that are contributing to temporarily higher inflation. These factors had generally subsided by the end of the year under review. Other transitory factors seem to be more persistent than initially expected. These include pent-up demand, supply chain bottlenecks and higher prices for raw materials. The sharp rise in inflation in the second half of the year under review is mainly due to the exceptionally strong surge in energy prices of more than 40%. There is great uncertainty about the development of energy prices and there are upside risks: Russia's invasion of Ukraine will most likely keep energy prices high for longer and they may even rise further. Moreover, the much-needed measures by governments to curb climate change also have the potential to push energy prices higher. As a result, inflation is expected to remain high throughout 2022.

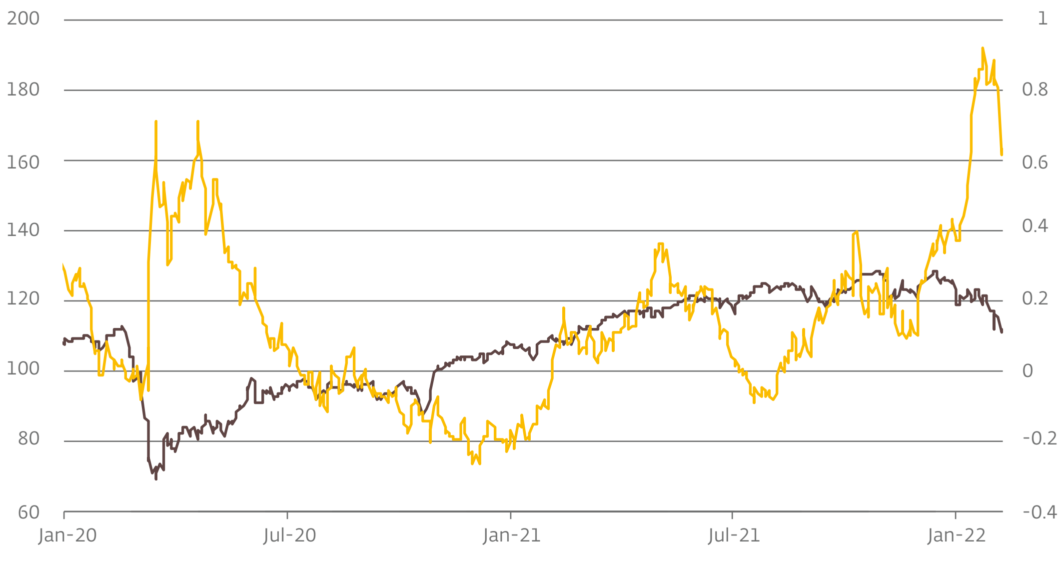
A DNB analysis shows that inflation is due less and less to a number of specific factors, but is increasingly driven by a broad range of goods and services, thus increasing the likelihood that inflation will persist for longer. The longer the high inflation rate lasts, the greater the risk that this higher level will become anchored in inflation projections and thus in household and corporate behaviour.

A higher level of inflation in the longer term must also be reflected in higher wages, which can give rise to a wage-price spiral. For the time being, wage growth is relatively modest, and we are not yet seeing these second-round effects. However, second-round effects are particularly difficult to predict, especially in these uncertain times of successive shocks that are unprecedented both in their nature and magnitude. It is therefore important to closely monitor inflationary developments and the dynamics of inflation projections so that monetary policy can be adjusted in a timely manner if necessary.

Developments in financial markets are painting a similar picture of economic recovery. By the end of the year under review, for example, share prices were well above pre-pandemic levels, despite a sharp fall when the pandemic struck. Interest rate developments also point to economic recovery (Figure 4). The high valuations in the financial markets are largely due to low interest rates, which continue to be unusually low from a historical perspective. When interest rates rise, the likelihood of a correction in the financial markets increases, especially if higher inflation is the cause of the rise in interest rates (also see the Financial Stability report, autumn 2021). The combination of rising interest rates and geopolitical unrest has already resulted in declining and rather volatile stock prices in early 2022.

Figure 4 Euro area stock exchange and interest rate developments

Index 2019 = 100; percentages

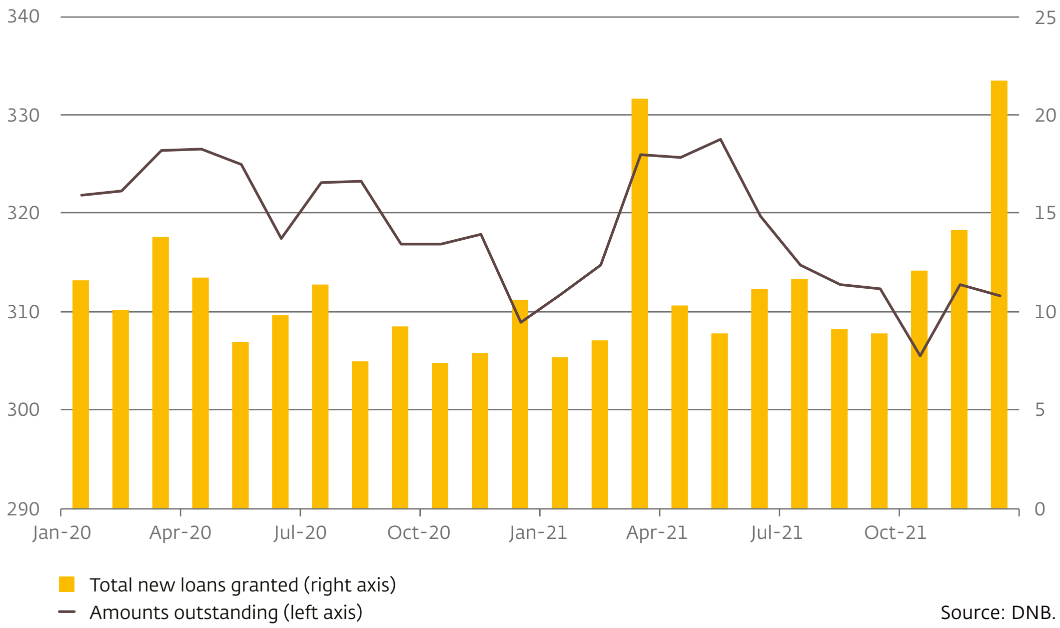


Share prices (MSCI, left axis)
10-year capital market interest rates (ECB, weighted average for euro area countries, right axis)

Several factors are responsible for the economy's rapid recovery. Firstly, businesses and consumers have adapted more readily to circumstances than previously anticipated. Whereas growth was negatively affected by the sudden dominance of the omicron variant and subsequent containment measures in the autumn of 2021, significant growth is still expected for 2022 as a whole. In the Netherlands, various factors in the structure of the economy have helped to mitigate the negative effects of the pandemic. These include the limited dependence on tourism and the relatively limited share of contact-intensive sectors in the economy. Government support policies have also served to limit the impact of the crisis (also see Box 1). In addition, monetary policy fostered favourable financing conditions, and supervisory measures enabled banks to maintain lending levels (see Figure 5).

Figure 5 Bank lending to non-financial corporations

EUR billions



Source: DNB.

Box 1 Policy mix during pandemic bolsters economy

Policymakers around the world have taken a wide range of measures to mitigate the economic impact of the pandemic. Monetary authorities have pursued an accommodative policy. In the year under review, for instance, the European Central Bank (ECB) and the national central banks in the euro area acquired financial assets worth €1,054 billion, including through the pandemic emergency purchase programme (PEPP) to promote favourable financing conditions and to bolster price stability. Under PEPP, assets worth €1,670 billion have been purchased so far (as of 25 February 2022). Loans totalling €594 billion were also granted to the European banking sector, including through targeted longer-term refinancing operations (TLTROs). In December of the year under review, the ECB's Governing Council decided to terminate PEPP as of the end of March 2022, as the crisis phase of the pandemic has come to an end and price stability is more and more likely in the medium term.

Macroprudential authorities and supervisors have also been active. In response to the crisis, we reduced the systemic risk buffer in early 2020 to temporarily shore up bank lending during the pandemic. The intention is to compensate for this reduction by introducing a countercyclical buffer. The introduction of a lower limit for the risk weighting of mortgages on banks' balance sheets was postponed. We have now introduced this lower limit as of 1 January 2022, meaning banks are required to hold more capital to cover their mortgage lending exposure. One of the decisions taken in the European context in 2020 was to restrict the distribution of profits by banks and insurers. This kept the capital available within the institutions to maintain lending levels and absorb any losses. Supervisory requirements were further normalised in the year under review once it became clear that the financial sector was resilient enough to absorb the effects of the pandemic and the crisis phase was over.

Governments made widespread use of fiscal policy to mitigate the pandemic-induced recession through direct support measures, credit guarantees and tax deferrals. The EU initiated the implementation of the Next Generation EU (NGEU) recovery fund, which is aimed not only at repairing the economic damage caused by the pandemic, but also at structurally strengthening the European economy. In the Netherlands, direct relief to companies and the self-employed amounted to more than €16 billion (1.9% of GDP).[1] Tax payments have also been deferred to the tune of more than €19 billion at the time of writing. Such large-scale support in the Netherlands was possible because Dutch public finances were in order before the start of the pandemic, with a debt-to-GDP ratio of 48.6% of GDP in 2019. In the year under review, this is expected to have risen to 55.7% of GDP, which is still well below the European limit of 60%.

Overall, the policy mix during the pandemic has proved to be appropriate. In the years to come, policy normalisation and the restoration of new policy buffers will need to be addressed to ensure that the economy is able to cope with future shocks.

1 Direct relief through the NOW, TVL and Tozo schemes, based on the 2020 Autumn Memorandum.

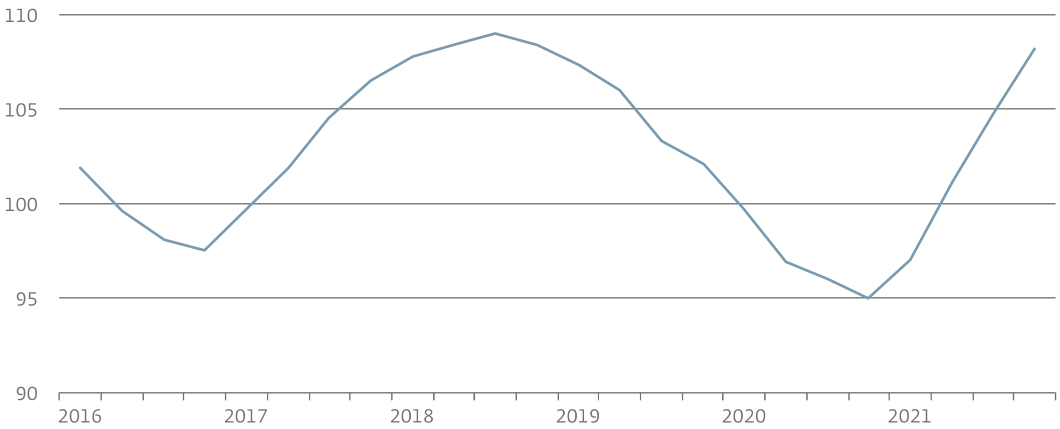
The economic recovery has been accompanied by a reversal in the initial rise in unemployment: significant labour market tightness prevailed at the end of the year under review. Moreover, bankruptcies remained limited not only thanks to government support measures, but also due to payment deferrals offered by banks and other creditors. Whereas at the beginning of the pandemic it was still feared that the hard-hit real economy would contaminate the financial sector, the pandemic-induced recession did not devolve into a financial crisis. The strengthening of banks' capital position following the Great Financial Crisis has proved its worth, thus preserving trust in the financial sector. The accommodative monetary policy, government support measures as well as measures taken by supervisors and macroprudential authorities were instrumental in achieving this.

As the pandemic progressed and the economy recovered quickly after a sharp downturn, banks were able to release their previously formed provisions. The solvency of Dutch banks and insurers remained stable in the year under review, while the policy funding ratio of pension funds improved significantly (see Figure 6). It increased from 95% on average at year-end 2020 to 108.2% a year later, both due to rising interest rates and stock market gains. This removes the prospect of reductions in pension entitlements and will potentially allow pension benefits to be adjusted in line with wage or price inflation. Nevertheless, it is important to press ahead with the reform of the pension system in 2022, as the alternative system has a number of advantages over the current system. For example, the new pension contract is more in line with the current labour market because it does away with flat-rate contributions, a system which currently hinders labour mobility, especially among older workers. The new contract also takes better account of the desired risk appetite of pension scheme members, based on the idea that younger members can bear greater investment risk than older members. At the same time, the positive elements of the current pension contract are preserved, such as risk sharing that cannot take place via financial markets plus the advantages of a collective investment policy.

In recent years, financial institutions have felt the pressure of low interest rates, which erode banks' interest margins, make it more difficult for life insurers to earn sufficient returns and make financing funded pensions more expensive. The recent rise in interest rates may, if this trend continues, alleviate the pressure on the business models of these financial institutions. At the same time, an abrupt rise in interest rates also poses risks, as financial institutions are unable to adapt readily to the new situation. Corrections in the housing market or financial markets resulting from rising interest rates may lead to a sudden depreciation of assets held by financial institutions. In addition to interest rate shocks, there are other uncertainties that are relevant for financial institutions going forward. For example, a higher than expected increase in bankruptcies may lead to an increase in the number of past-due or non-performing loans. In addition, Russia's invasion of Ukraine and the accompanying economic sanctions could result in losses for financial institutions. Companies that depend on trade with these countries will be affected, possibly resulting in losses for them as well.

Figure 6.1 Pension fund policy funding ratios

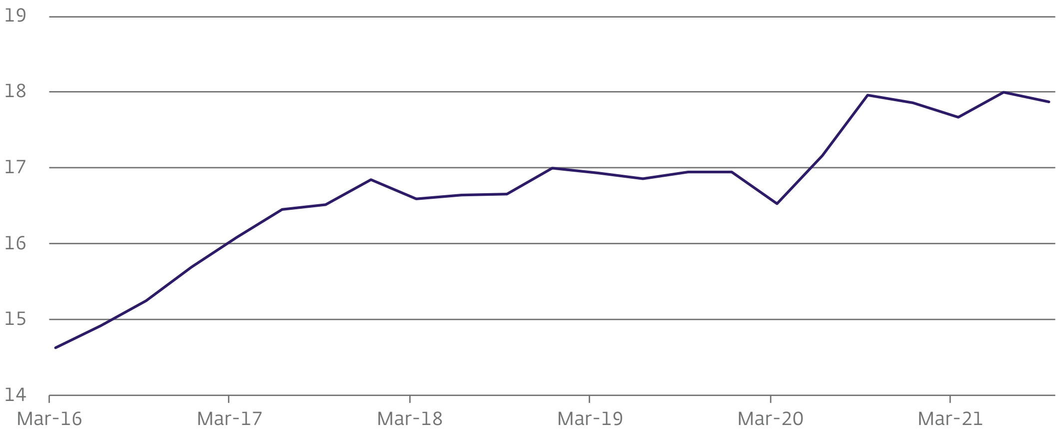
Percentages



Source: DNB.

Figure 6.2 Bank CET1 ratios

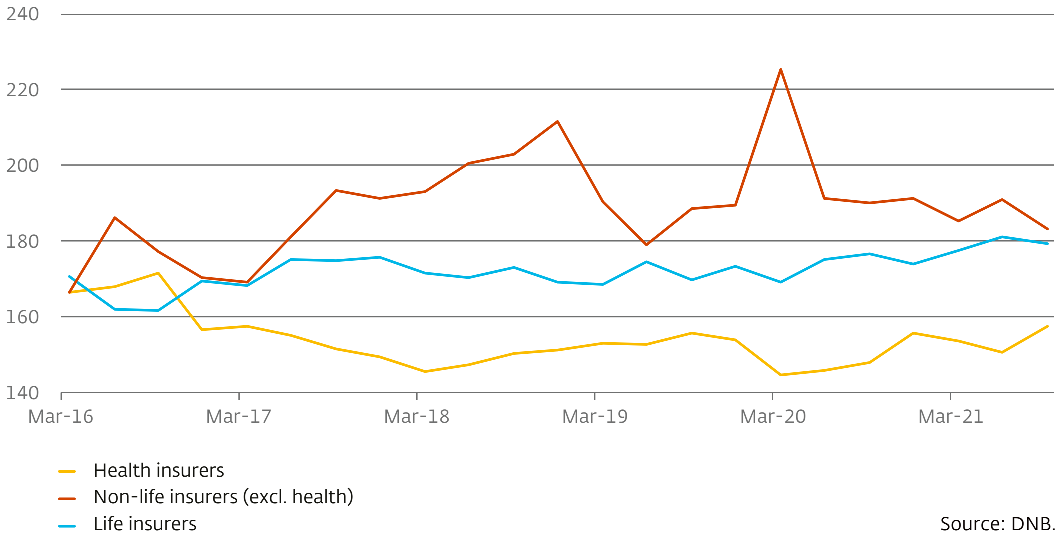
Percentages



Source: DNB.

Figure 6.3 Insurer solvency ratios

Percentages



Source: DNB.

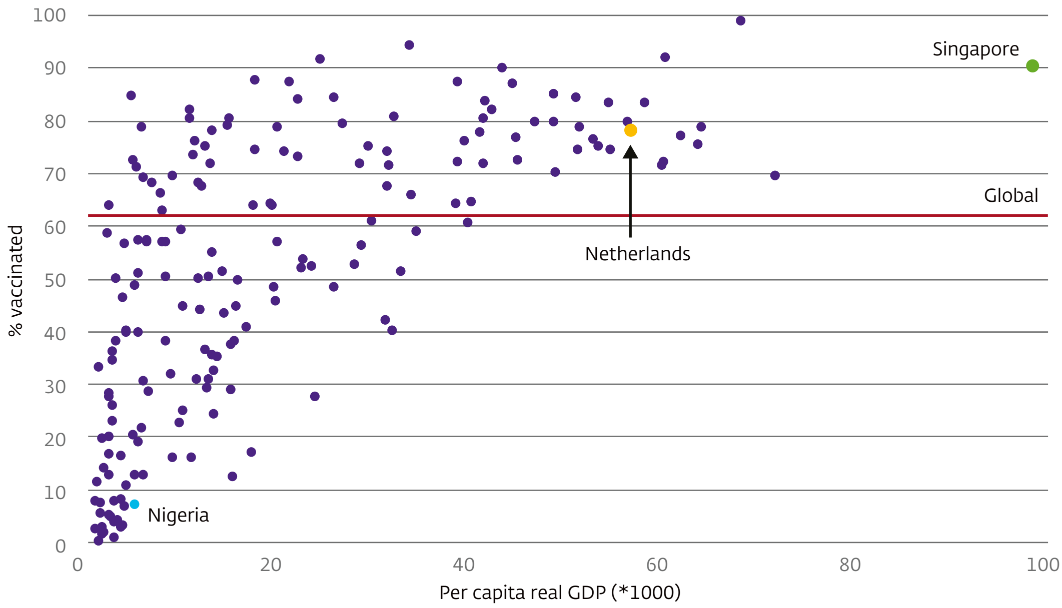
Transformation to a more balanced economy

As the smoke from the crisis phase of the pandemic slowly clears, underlying imbalances are re-emerging. Moreover, these imbalances have often worsened and become more urgent. Now, in the aftermath of the crisis, there is both the momentum and a need to address these imbalances. If the pandemic becomes more endemic, then policies will have to be adjusted accordingly, with large-scale support measures becoming less of a go-to remedy: they are costly and they disrupt economic dynamism. Against this backdrop, the efforts of the new government are commendable: develop a clear strategy that offers businesses and consumers predictability and greater scope for action. The resilience of the healthcare sector is another important issue. In the event of a new upsurge of the virus, we no longer wish to shut down parts of the economy immediately; it is vital that people retain perspective. In so far as relief measures are necessary, they should be targeted at specific sectors that are severely affected by containment measures. Moreover, the financing of support measures should be accommodated within the agreed budgetary rules.

More generally, there is an increasing tendency to take it for granted that the government will step in to compensate individuals for the negative impact of shocks. This attitude is clearly fuelled by the positive experiences with the pandemic support measures, the continued health of Dutch public finances in combination with low interest rates, and an increased conviction that the economy can be manipulated and fine-tuned, despite heightened economic uncertainties. Experiences from the past, in particular during the 1970s, show that there are limits to this supposed ability to manipulate the economy and that an excess of government intervention can also derail economic dynamism and prosperity.

Existing inequalities have been exacerbated by the COVID-19 crisis. Firstly, the divergence between economies has increased as a result of the pandemic (Figure 1), with a relationship between the number of vaccinations and per capita GDP clearly visible (Figure 7). Full recovery from the pandemic can only be achieved when populations in less developed economies are also vaccinated on a large scale. Moreover, large-scale, worldwide vaccination drives will hamper the genesis of new virus variants. As noted in our 2020 Annual Report, the pandemic underscores the need for greater international cooperation.

Figure 7 One or more vaccinations, by country (as of 8 February 2022)
Percentages; real per capita GDP

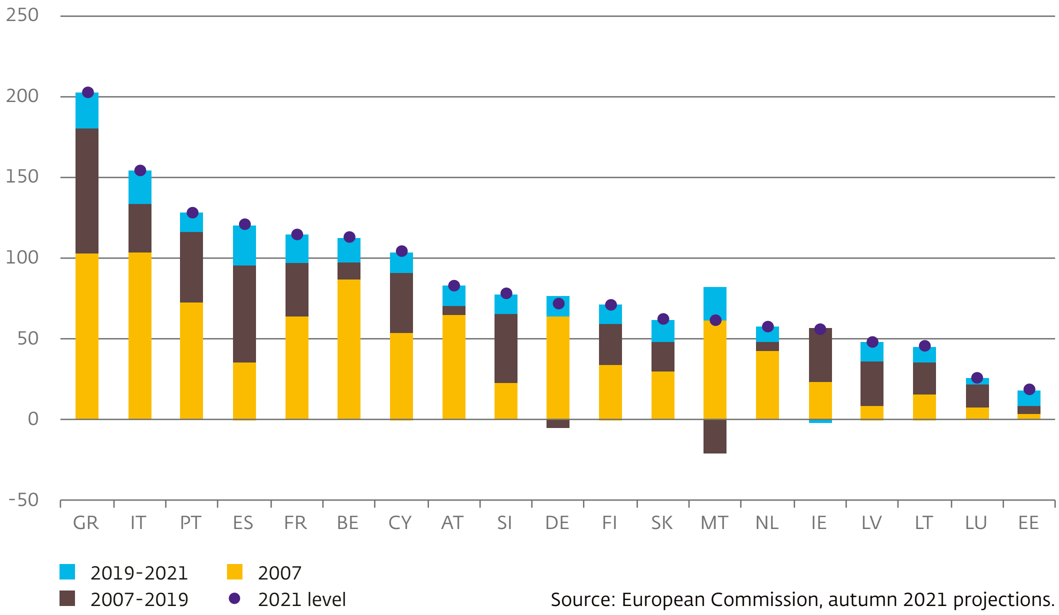


Source: Refinitiv.

A second imbalance that has become more pronounced has its origins in the macroeconomic policies pursued following the pandemic. Debt levels in the euro area, both private and public, were already high before the COVID-19 crisis and have continued to rise as a result of the fiscal policies pursued. In addition, countries that were already in a weaker economic and fiscal position were hit relatively hard by the pandemic, often because their economic structures were more sensitive to the containment measures (see Figure 8). This may lead to further divergence in the euro area.

Figure 8 Development of euro area debt levels

Percentage of GDP



Source: European Commission, autumn 2021 projections.

Reform of the European fiscal rules will have to provide a credible path for debt reduction and scope for macroeconomic stabilisation, as we argued in a recent position paper on the reform of these rules. At the same time, debt reduction will be a major fiscal challenge for some countries, particularly in the context of a potential increase in defence spending. The European Recovery Fund (NGEU) can help by financing investment and encouraging reforms that foster growth (also see Box 1). In doing so, it will promote a healthy balance between fiscal and monetary policy.

From this perspective, Dutch public finances are in good shape, thus providing scope – which the new government is in fact using – to promote the necessary economic and social transitions. Without intensifying public investment, it will indeed be difficult to address these fundamental challenges. At the same time, the government also has other tools at its disposal to meet these challenges such as tax measures, regulation and pricing. In this context, the new government has largely opted for additional expenditure, whereas this is not always the most effective approach. For example, it would be wise to make greater use of emissions pricing to address climate change, and fiscal adjustments are needed to meet the challenges posed by the housing market. Moreover, there is a risk that fiscal policy will have a procyclical effect. In view of the tight labour market and the robust economic recovery following the pandemic-induced recession, no further stimulus policies are needed. The tight labour market means that implementing the government's plans will be an extremely tall order in any case.

A second risk is that the government will shift fiscal burdens to future generations, putting pressure on the sustainability of Dutch public debt in the longer term. Without spending cuts or tax increases, for example, the debt-to-GDP ratio will be well above 60% of GDP by 2060, according to calculations performed by the CPB (Netherlands Bureau for Economic Policy Analysis) on the coalition agreement. These calculations do not take into account a possible rise in interest rates, which would increase the government's interest burden in the longer term. This would be offset to a degree by higher revenues, stemming for example from higher tax payments as the yield on second-pillar pensions increases. The envisaged fiscal policy would drain remaining buffers and may require a significant fiscal policy shift in subsequent legislative periods to restore buffers, thus providing renewed resilience to potential new shocks. It is therefore important for the government to ensure that expenditure is in line with the expenditure ceiling (even if an expenditure is labelled as a "fund"). This will enable a comprehensive assessment of expenditures in the event of setbacks while also maintaining fiscal discipline. If there is one important lesson to be learned from the pandemic, it is that buffers are indispensable. This applies not only to public finances, but also to the healthcare sector, defence, financial institutions, payment systems and the economy in general. Buffers come at a cost: they can impact efficiency and reduce economic growth in the short term. In the longer term, however, they help create a more resilient and stable economy and society.

Alongside fiscal policy, monetary policy can also lead to imbalances. The current, long-term unconventional monetary policy is giving rise to more and more risks and undesirable side-effects. There is no longer any need for this policy now that the crisis phase of the pandemic is behind us and a 2% inflation rate seems likely in the medium term (see Box 2). After years of low inflation, it is conceivable that the greatest challenge in the years ahead will lie precisely in avoiding excessive inflation, given the expected changes in the euro area economy, potentially including greater emphasis on building resilience to future pandemics, the expected expansionary fiscal policy and the climate transition. These trends may lead to upward pressure on inflation. Monetary policy will therefore have to normalise in the years ahead, not least to create sufficient policy scope for dealing with a future crisis.

It is also important to make progress on the banking union and the capital market union to bolster the monetary union's resilience, thus allowing the private sector to play a greater role in absorbing asymmetric shocks.

Box 2 A new ECB monetary policy strategy

During the year under review, the ECB's Governing Council reviewed the bank's monetary policy strategy. The last review took place in 2003 (also see our DNBulletin). The following elements of the strategy review are particularly noteworthy:

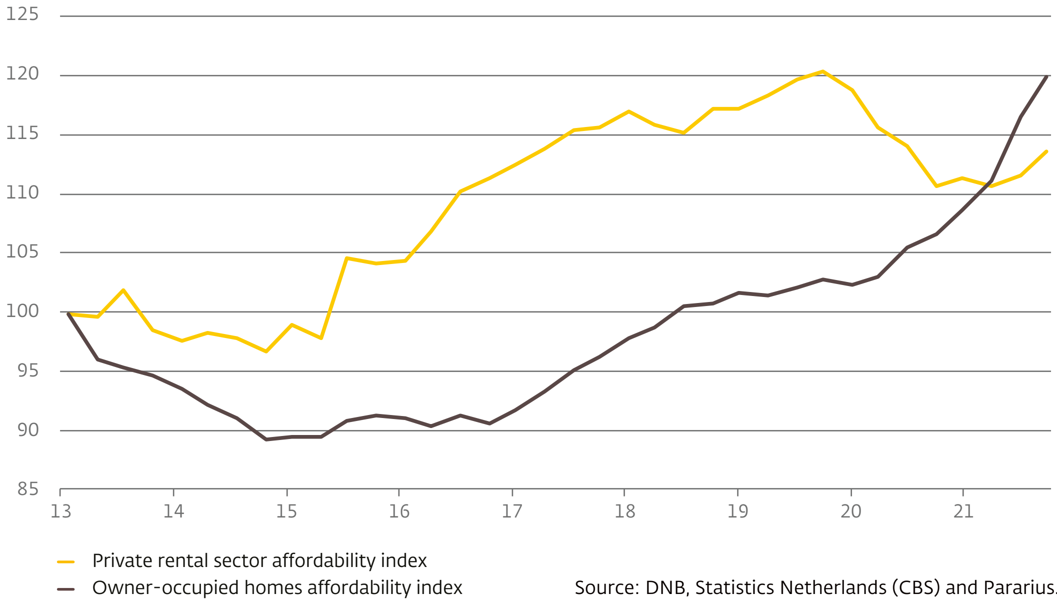
- The objective of monetary policy is now more clearly defined as inflation of 2% over the medium term, measured in terms of the harmonised index of consumer prices (HICP). The target is symmetrical: persistent and substantial upward and downward deviations of 2% will not be tolerated. "Compensation strategies" (temporarily permitting higher inflation as a counterweight for lower inflation in the past, as recently practised by the Federal Reserve) are thus not allowed.
- Greater and more explicit emphasis is now being placed on the interaction between monetary policy and financial stability and on whether monetary policy measures are proportionate in the light of that stability.
- The costs associated with home ownership will be taken into account when assessing trends in inflation. The ECB is working with Eurostat to include these costs in the HICP definition.
- The climate transition will play a role in monetary policy, both in the analysis of the impact of this transition on price developments and the economy, and in the implementation of monetary policy.

In the time-honoured Dutch tradition of moderate monetarism, it is wise to see fiscal policy and monetary policy in coherence, and to include wage formation in the equation. Or, as former DNB President Jelle Zijlstra once put it: monetary, fiscal and wage-pricing policies must correct each other's imperfections. The reasoning behind this is that good results cannot be achieved if one of the three components is applied excessively. An independent central bank should therefore do its part by promoting sound developments in the other policy components while conducting its own prudent monetary policy. This lesson applies equally to the European monetary union.

A fourth imbalance that became exacerbated during the pandemic pertains to the housing market. House prices have risen sharply, which has increased the divide on the housing market. The average price increase in the year under review was no less than 15%, making it even more difficult to set foot on the first rung of the owner-occupied housing ladder. At the same time, the supply of rental housing is limited and private-sector rents are relatively high. The affordability of housing for first-time buyers is therefore under pressure (see Figure 9). After a number of years in which housing costs for first-time buyers decreased in relation to disposable income, affordability has been deteriorating since 2016. Purchasing a home became relatively more expensive in terms of monthly expenses in 2021 in particular. First-time renters in the private rental market have also seen affordability deteriorate since 2013, while the monthly expenses for private-sector renters in the Netherlands are already relatively high compared to those of homeowners, even when homeowners' additional expenses such as maintenance costs are taken into account. The COVID-19 crisis initially led to an improvement in the affordability of initial rents, but more recently the affordability of private-sector rents has been deteriorating again.

Figure 9 Housing affordability index

Index 2013Q1=100



Source: DNB, Statistics Netherlands (CBS) and Pararius.

Notes: The owner-occupied homes affordability index is defined on the basis of an index of the monthly expenses for the average owner-occupied home and the average mortgage interest rate for a full annuity mortgage. The private rental sector affordability index is based on the initial rent per square meter (semi-furnished). Both indices were then adjusted for developments in disposable income.

Tax differences between buying and renting in the private sector are another factor that widens the divide on the housing market. It is therefore important to reduce these differences by gradually phasing out the tax benefits favouring home ownership. The new government has missed an opportunity to address this point in the coalition agreement as no material changes in the tax treatment of owner-occupied homes are foreseen.

Against the backdrop of sharply rising house prices, first-time buyers ran ever greater risks in the year under review when taking out a mortgage. More than three quarters of first-time buyers borrowed more than 90% of the maximum amount allowed under the loan-to-income (LTI) test or the loan-to-value (LTV) limit. The proportion of partially interest-only mortgages also increased.

With higher inflation and capital market interest rates, mortgage interest rates may also be set to rise further. This could potentially slow the rapid rise in house prices and even cause prices to fall at some point, with some mortgages going under water. This is a particular risk for people who must sell their homes (whether compelled to do so or not). Even if this is not the case, however, such circumstances can have a profound impact on the Dutch economy as we have seen in the past: "debt on paper" can cause these homeowners to become overly cautious.

Finally, although the rise in unemployment has been limited in the Netherlands, the onset of the pandemic revealed the vulnerable position of people in flexible employment. They were the first to lose their jobs. Fortunately, the new government intends to put an end to this division in the labour market and reduce the differences between permanent and flexible employment, although the primary emphasis in the government's plans is on making flexible contracts more secure.

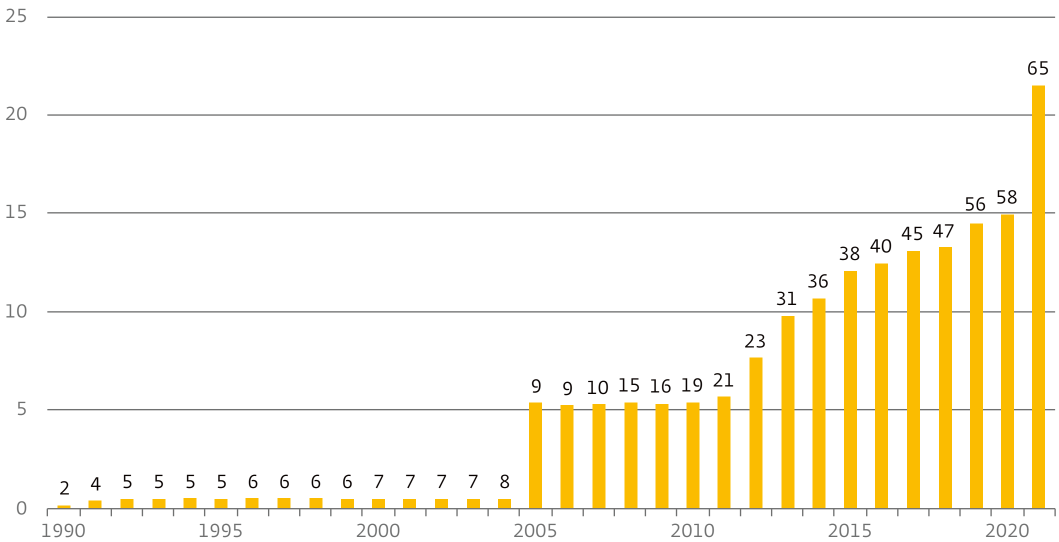
Transformation to a sustainable economy

The biggest transformation our economy will face in the coming years is definitely the shift towards a more sustainable economy. Climate change is no longer a risk on a far-away horizon. Last summer's floods in the South of the Netherlands and elsewhere in Europe show that we are already experiencing the effects of climate change. Not only was the damage to those directly affected great, but insurers, for example, also saw additional claims coming in. Moreover, although some key new agreements were made at the COP26 climate summit in Glasgow last autumn, international efforts are still falling short of what is needed to meet the goals of the 2015 Paris Climate Agreement.

The most effective way to facilitate the transition to a sustainable economy is through effective carbon pricing. However, international efforts are lagging here, too: the coverage of explicit carbon pricing mechanisms expanded in the year under review (see Figure 10), but prices are still often too low. Only 4% of global emissions are priced at over $40 per tonne. According to the World Bank, this amount currently represents a lower limit for the carbon price needed to stay on track with the Paris targets.

Figure 10 Development in explicit carbon pricing coverage worldwide

Share of global CO_2 emissions



Source: World Bank, Carbon Pricing Dashboard.

Note: The numbers on top of the columns denote the number of pricing mechanisms.

In July 2021, the European Commission (EC) presented the 'Fit for 55' package of proposals to achieve the climate target of a 55% emissions reduction by 2030. This includes proposals for improved emissions pricing in the current European Emissions Trading System (ETS), which contributed to the increase in the ETS price in 2021 (see Figure 11), the introduction of a new ETS for road transport and the built environment, and higher minimum energy taxes. The package also includes a proposal for a carbon tax at the European border known as the Carbon Border Adjustment Mechanism (CBAM).

Figure 11 ETS price

Euro

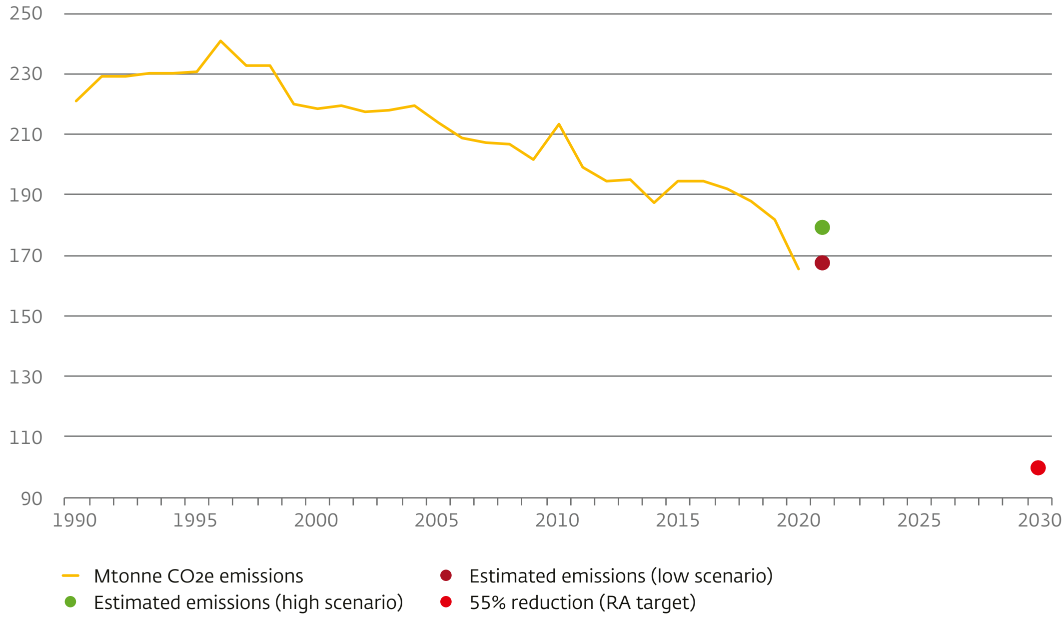
Source: Refinitiv.

A DNB analysis shows that carbon pricing at the European level will not significantly erode competitiveness in the majority of countries. Moreover, the introduction of a CBAM for a number of emission-intensive products could eliminate the limited negative effects on the internal market in most countries.

Ambitious national policies will be needed in addition to implementation of the 'Fit for 55' proposals to achieve the new reduction target as set in the coalition agreement (55% in 2030 compared to 1990). This is because the climate challenge for the Netherlands is considerable (see Figure 12). The government is responding by earmarking €35 billion for the climate transition. In addition, a number of measures are being implemented that will result in more balanced carbon pricing. For instance, the degressive nature of energy taxes (as a result of which large-volume consumers pay relatively less) will be reduced, natural gas will be taxed more heavily than electricity and the government will abolish the reduced tax rates on gas consumption in agriculture. The national carbon levy for industry will also go up. The latter measure will lead to emission reductions in the Netherlands, but it may also mean that emissions will be "exported" to other countries, which may limit the overall effect on the climate. The ultimate effects of the climate plans in the coalition agreement will depend on the exact details. It is in any case clear that the government has an ambitious package in mind.

Figure 12 Greenhouse gas emissions in the Netherlands

Mtonne CO_2 equivalents



Source: Climate and Energy Outlook 2021, PBL Netherlands Environmental Assessment Agency.

A considerable sum of €25 billion through 2035 has been earmarked for addressing nitrogen emissions. These funds will be used to purchase livestock farms, write-downs of agricultural land by returning it to nature, extensification and innovation. These measures should also result in a 20% reduction in greenhouse gas emissions from agriculture. Nitrogen or greenhouse gas emissions pricing for livestock farms does not appear to be on the table.

In the transformation to a sustainable economy, an important role is reserved for the financial sector in general and of course for us as a supervisory authority. The best approach for financial institutions is to adequately assess the risks, financial and otherwise, involved in climate change. If they are able to properly assess these risks, then they will be more likely to finance projects that will boost the sustainability of the economy. The government also has a key role to play in this regard (also see the DNB report on the sustainability of the financial sector). The state of the sector and the actions required are detailed in Box 3.

Box 3 Balancing sustainability

Climate change and the transition to a sustainable economy involve risks for financial institutions. The institutions must manage these risks adequately from the perspective of sound and ethical operational management. While financial institutions are aware of sustainability risks, they still only incorporate them into their core processes (e.g. strategy, governance, risk management and reporting) to a limited extent. Financial institutions also find it difficult to measure sustainability risks due to data constraints, as revealed in a survey of 127 financial institutions in the Netherlands.

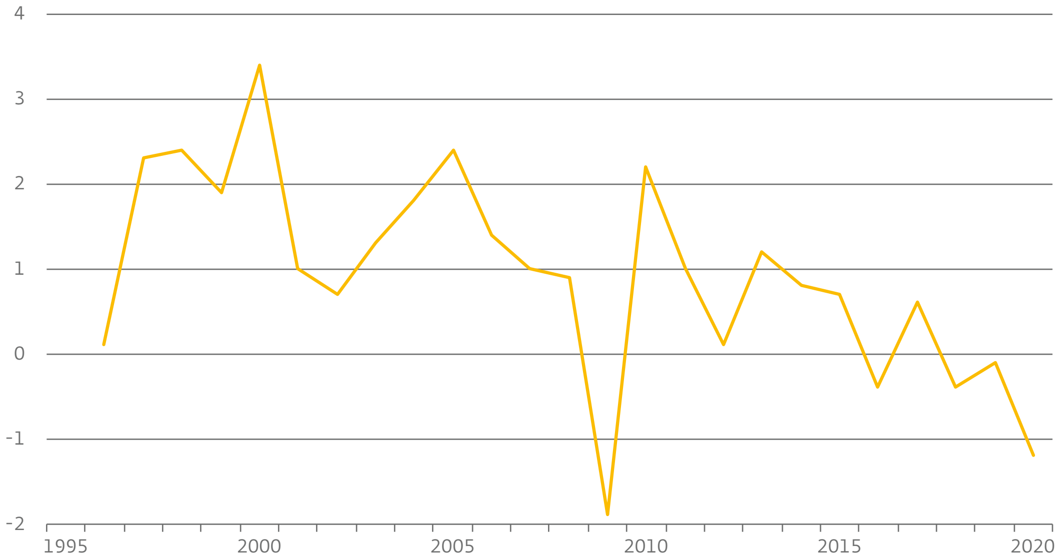
We urge financial institutions not to wait to measure sustainability risks until 'perfect data' is available. It is essential that financial institutions include sustainability risks in their core processes, as our calculations show that these risks are material and will only become more acute going forward. For example, Dutch financial institutions are responsible for the financing of at least 82 megatonnes of carbon emissions worldwide. In addition, carbon-intensive companies in the equity portfolios of pension funds and insurers are not making the transition rapidly enough to meet the targets of the UN Climate Agreement. In 2022 we will further define how we expect financial institutions to manage sustainability risks. We will also invite the financial sector to provide input in a consultation round.

Transformation to a digital and inclusive economy

The pandemic has given a further boost to the process of digitisation, a development that has a major impact on the real economy and the financial sector. Digital innovations can provide consumers with greater convenience and lead to lower prices for goods and services. Even before the pandemic, strengthening the growth capacity of economies in countries with rapidly ageing populations was a key focus area. For years now, there has been a trend towards a decline in labour productivity, and the Netherlands is no exception (see Figure 13). Digitisation provides a basis for systematically stronger economic growth thanks to higher productivity growth.

Figure 13 Labour productivity per hour worked

Percentage changes



Source: Statistics Netherlands and DNB calculations.

Structural growth capacity will not necessarily increase as we work on the unavoidable task of making the economy more sustainable. Digitisation will give a boost to growth capacity, however. The emphasis in the coalition agreement on digitisation and relevant investment is therefore praiseworthy.

The COVID-19 crisis has also accelerated digitisation in payment systems. People are using cash less and less often, instead opting for electronic payment methods (in particular contactless, with smartphone payments on the upswing). Cash is currently used in only two out of ten point-of-sale payments. In addition, consumers did more and more of their shopping online during the COVID-19 crisis, resulting in a significant increase in the number of online payments (one in ten payments is an e-commerce payment). Tech companies, both fintechs and tech giants, are making their presence felt in more and more areas of the financial value chain. Digital 'currencies', which certainly do not always deserve this designation, are also on the rise (see Box 4). These developments also require DNB to move with the times, for example regarding the supervision of financial institutions; this is discussed in more detail in the Accountability section of this Annual Report.

Box 4 Ongoing innovation in monetary systems

A crypto is a digital representation of value on a blockchain, a decentralised register, that is not issued or guaranteed by a central bank or public authority. This means that a crypto does not have the legal status of currencies or money. Cryptos can be transferred, stored and traded electronically. The crypto market has grown considerably and many different types are currently being traded. The market capitalisation of all cryptos combined (although fluctuating wildly) has currently reached a value of around €1,500 billion.

The volatility of cryptos makes them unsuitable as a generally accepted means of payment, and they are therefore used particularly for speculative purposes. Stablecoins are also emerging. Whereas the value of conventional cryptos is determined by supply and demand, the value of stablecoins is determined by underlying assets which the issuer uses in an attempt to provide stability. It is impossible to say in advance whether the issuer will succeed, because the stability of the stablecoin depends on the resilience of the companies issuing it.[2] In a favourable scenario, stablecoins could mainly contribute to a faster, cheaper and more inclusive global payment system.

2 Well-known examples are Tether and the USD Coin, both linked to the US dollar.

The rapid growth of cryptos and stablecoins has given rise to increasing calls for effective regulation, partly because cryptos lend themselves particularly well to illicit use due to their accessibility and anonymity. The extent of regulation of cryptos and stablecoins must be commensurate with the risks, which depend partly on their adoption as a means of payment. As long as cryptos and stablecoins play a limited role, a limited regulatory regime will be sufficient. However, as soon as these new digital assets become more significant in economic and financial transactions, broader and more intensive requirements will be needed. Since May 2020, providers of crypto services have had to comply with rules to prevent money laundering and terrorist financing, but further international regulation and harmonisation are needed, as the Financial Action Task Force (FATF) also stresses. At the European level, legislation is being finalised in the Markets in Crypto-Assets Regulation (MiCAR). MiCAR provides a harmonised European regulatory framework for the issuance of crypto-assets and crypto-asset services, which is expected to come into effect in 2024. Among other things, MiCAR will make new conduct of business and prudential rules applicable to crypto service providers and will expand the range of services that are subject to supervision. We welcome regulation of market integrity and prudential supervision of the crypto market, so we see MiCAR as a positive development. Stablecoins and cryptos are borderless. It is therefore very important that regulations are drawn up and potential risks are identified on the basis of international coordination. The Financial Stability Board (FSB) has a key role to play in this regard.

Alongside the points mentioned above regarding financial and conduct of business supervision, additional emphasis in the European and international context is needed on the potential impact of cryptos and stablecoins on financial stability and the effectiveness of monetary policy. This is another area where measures may be needed to mitigate the risks associated with these digital assets.

Despite the major advantages associated with digitisation, there are also drawbacks. The economy is becoming more dependent on digital processes, which also increases the associated risks. The number of cyberincidents actually increased during the pandemic: for example, the number of cyberattacks recorded by banks doubled in the period from 2018 to 2020 (see the Financial Stability Report). At the same time, the sector-wide Threat Intelligence-Based Ethical Red-Teaming (TIBER) programme proved its worth once again, as these attacks resulted in no major disruptions. The larger Dutch financial institutions, pension funds and insurers participate voluntarily in this programme, which we established. The TIBER programme provides for periodic testing of individual institutions' cyber resilience and it is a platform for sharing relevant knowledge. The successful programme has not only been extended to 2026, but it has now also been adopted in thirteen other European countries. Buffers are essential here, too: dependence on a single type of payment infrastructure is risky for the stability of the payment system as a whole.

As previously noted, another consequence of digitisation is that people are making fewer and fewer payments with public money issued by a central bank, i.e. banknotes and coins. We believe it is important that public money remains accessible because the exchangeability of private money and public money is essential for maintaining trust in the monetary system. In the years to come, we will be working under the aegis of the ECB to ascertain whether introducing a digital euro alongside cash would be desirable. A digital euro could moreover potentially facilitate cross-border payments, including payments outside the euro area. It could also address the ambitions of companies (not necessarily financial institutions) who see potential in developing their own private, digital currencies.

Another concern is that digitisation may result in the exclusion of certain groups from the economic process, not only limiting access to the labour market, but also to payment systems. Supporting policies must therefore be in place to ensure that everyone can continue to participate in society and in the economy. For example, we are working with the member organisations of the National Forum on the Payment System (*Maatschappelijk Overleg Betalingsverkeer - MOB*) on preparing agreements on the availability and acceptance of cash. In the short term this should result in a Cash Covenant. The aim of these agreements is to ensure that people who still wish to pay with cash can continue to do so despite the rise in electronic retail payments. There may be tension between accessibility and the equally important requirement of integrity of the payment system, which is essential for maintaining trust in the financial system (also see Box 5). This tension requires the ongoing attention, effort and cooperation of all parties involved.

Box 5 Accessibility and integrity of the payment system

The payment system must be more than just accessible. Trust in the payment system and the underlying financial structure also depends on their integrity. The payment system is not meant to be used for tax evasion, money laundering, terrorist financing or other illicit purposes. At the same time, there are signs that certain commercial parties and consumers occasionally encounter difficulties in using payment services. This may involve, for example, opening, using and maintaining access to a bank account, or bank-imposed limits on cash deposits or withdrawals. Banks and other payment service providers may limit their payment services in order to manage integrity risks or protect their reputation, or they may do so for commercial reasons or to meet ESG targets.

We have two roles to play in this context, and this can sometimes give rise to tension. On the one hand, we must ensure that payment service providers prevent the financial system from being used for financial criminal activity such as money laundering, the financing of terrorism and other integrity violations such as fraud and corruption. On the other hand, we must work to ensure a properly functioning and accessible payment system. Payment service providers must comply with all relevant legislation and regulations, while ensuring the accessibility of payment systems.

Compliance with the law, while ensuring the accessibility of payment systems

As gatekeepers, payment service providers must make appropriate choices that they deem necessary to conduct their business in a healthy and ethical manner within the limits of the law and while being mindful of their position in society. The following points are pertinent in this regard:

- Payment service providers must assess the risks involved for each customer prior to accepting the customer or before executing a payment or other transaction on the customer's behalf. The higher the risk, the more a payment service provider must do to fulfil its gatekeeper role.
- Current and new customers are obliged to provide their payment service provider with the required information to enable it to fulfil its duties.
- The risk assessment may give a payment service provider reason to exclude a customer following an individual assessment or even to exclude any similar customers. However, this cannot justify excluding entire groups of customers.
- Payment service providers must generally provide a more detailed substantiation for terminating a customer relationship than when refusing a new customer, partly in connection with the duty of care.

DNB as the steward of a properly functioning payment system

Another of our statutory tasks is to promote the smooth functioning of the payment system and to ensure accessibility to the system. We ensure that the entire payment system (non-cash, debit card and cash payments) remains secure, efficient, reliable and accessible, and we oversee the most vital parts of the Dutch payment infrastructure and the underlying organisations. Accessibility is high on the agenda of the National Forum on the Payment System. The affiliated parties make mutual agreements to ensure payment system accessibility. As a minimum, consumers have a statutory right to a basic bank account provided they meet specific conditions; companies do not have this right.

Final remarks

Compared to the early days of the pandemic, the initial weeks and months of 2022 have been a bit reminiscent of the film *Groundhog Day* (1994), in which a TV meteorologist experiences a day in his life over and over and over. On closer inspection, however, there are differences compared to March 2020. Firstly, the rapid development of coronavirus vaccines has changed the playing field significantly since the spring of 2020. This can be likely be ascribed to international cooperation and agreements on pandemic control. Yet, the omicron variant of virus, which has become dominant very rapidly, is less of a threat to public health and has enabled us to reopen the economy quicker and more completely. Secondly, businesses and households have learned lessons from previous lockdowns, which has helped to limit the impact on the economy. We are now much more aware of the impact of a pandemic on the economy and we now know which policies are appropriate in such circumstances. Finally, with both inflation and interest rates on the rise, the economy also seems to be making a fundamental shift to another quadrant.

Despite the wounds the pandemic has inflicted, both economically and socially, a degree of optimism is in order. The economic outlook is good, partly thanks to the lessons learned, the economic policies pursued and the rapid reopening of the economy. Nevertheless, uncertainty is being fuelled by various factors, including the recent geopolitical tensions, which will undeniably have an impact on economic developments. Whereas the challenges facing the global economy, Europe and the Netherlands are indeed great, the prospects for achieving the necessary transformation are not bad.

The challenges ahead, especially in terms of sustainability and digitisation, but also in the fight against the pandemic, are similar for the global community and the European Union in particular. This is why it is so important to face up to these challenges collectively. The COVID-19 pandemic placed limitations on physical contacts, including across national borders. Now, the agenda for change can only be pursued successfully through joint, international and European efforts.

2021 in brief

January

Reducing the cost differential between purchased and rented homes will increase prosperity.

February

New website goes live.

As part of the renovation of our head office, we are dismantling the round tower. It will be repurposed elsewhere with a community function.

March

Recovery of Dutch economy in sight after historic contraction during COVID-19 crisis.

Steven Maijoor joins our Executive Board on 1 April.

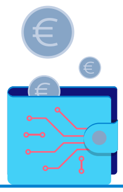
April

We publish an interim projection due to the COVID-19 crisis.

Young people take the hardest blows on the labour market.

New website goes live to make the general public more aware of the deposit guarantee: www.depositogarantie.nl

The digital euro appeals to half the Dutch population.



May

While prospects for the Dutch economy are favourable, vulnerabilities in the financial system are increasing, thereby heightening risks to financial stability.

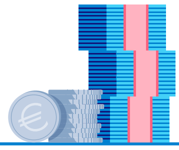
June

We take part in a roundtable discussion in the Dutch House of Representatives on the Conservatrix bankruptcy.

The rising importance of BigTechs in the financial sector may lead to radical changes in the financial landscape, requiring adjustments in supervision and regulation.

DNB President Klaas Knot talks to Mariëtte Hamer, the mediator in the formation of a new cabinet. During the meeting, he clarifies our memorandum on priorities for the new cabinet.

We publish our Sustainable Finance Strategy, explaining how we will integrate sustainability into all our tasks in the coming years.



July/August

Dutch households expect to retain the vast majority of savings accumulated during the COVID-19 pandemic.

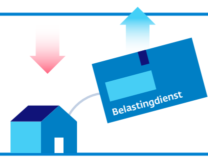
September

We have reached the highest point in the construction of the new DNB Cash Centre.

October

In addition to the SER advisory report on the labour market, we advocate an improved balance between permanent and flexible employment.

We advocate a comprehensive approach to the problems in the housing market, including gradually phasing out tax benefits for home-owners.



November

We demonstrate that climate change can impact financial stability.

In a roundtable discussion, we explain a number of suggestions for potential adjustments to the European fiscal rules.

Klaas Knot is appointed Chair of the Financial Stability Board and will have an important role in tackling global financial stability risks.

December

We publish our supervision plans for 2022.

A survey among 127 Dutch financial institutions reveals that the majority have not yet adequately embedded sustainability risks in their risk management.

We call on Dutch pension funds that have not yet started preparations for the transition to a new pension system to do so now.

The impact of the 2021 EIOPA stress test scenario on Dutch insurers is limited, in terms of both their solvency and liquidity.

The Dutch economic recovers strongly, despite a resurgence of the pandemic.

Accountability

Introduction

If the first COVID-19 year was dominated by crisis management, the vaccination programme in 2021 allowed the Netherlands to gradually reopen its economy. The unexpectedly strong recovery subsequently made it possible to start phasing out the large generic relief packages and put the necessary reforms on the agenda (see also the section "Transformation towards a more balanced economy" in the President's Report). However, as the virus flared up again in the autumn of 2021, the government reintroduced social distancing measures to relieve the Dutch healthcare system along with relief measures to shore up the economy.

The COVID-19 crisis did not lead to a financial crisis, which allowed us to partially unwind the relaxations of supervisory measures taken at the start of the crisis. From 1 January 2022, we apply a floor to the risk weights that banks can use to calculate the capital requirements for mortgage loans on their balance sheets. In the year under review we started consultations on the formation of a countercyclical capital buffer to ensure sufficient shock resistance in the event of another crisis.

We have had to take enforcement action on a number of occasions in the fight against financial crime. Although the financial sector is working to improve its gatekeeper function, there are still too many shortcomings in managing risks related to money laundering and terrorist financing. With regard to crypto service providers, we registered new market entrants and conducted fit and proper assessments during the year under review. We were involved in the preparation of the new pension agreement in the year under review by providing analyses and calculations.

On the monetary front, higher inflation moved more firmly into the spotlight. The impact of the low interest rate environment on financial stability is a cause for concern for monetary and prudential authorities. Thanks to the robust cyclical recovery and the end of the crisis phase of the pandemic, the ECB will be able to terminate its pandemic emergency purchase programme (PEPP) in March 2022 as announced. In consultation with the other euro area central banks, we also endorsed a new monetary strategy which contains elements we have advocated, including in the areas of financial stability and proportionality, as well as the inclusion of the cost of home ownership in calculating inflation.

In response to the declining use and acceptance of cash, which threatens to deny some groups adequate access to payment services, we are investigating, under the aegis of the ECB, whether introducing a digital euro could be an alternative. As an economic adviser, we made a case in 2021 for accelerating both the transition to a climate-neutral economy and reforms in the housing and labour markets.

The foregoing shows that our mission to safeguard financial stability and sustainable prosperity requires efforts from multiple parties. In an environment in which financial institutions, the government and other central banks and supervisors operate, we play several different roles. Each of these offer us varying degrees of direct influence on factors relevant to financial stability and sustainable prosperity. For example, we can autonomously decide to prescribe the formation of the countercyclical buffer for banks and thus promote shock-resistance and a resilient financial system. By contrast, measures can be taken to tackle the overheated and unbalanced housing market. In the area of taxation, these measures are a matter for national politicians. This means that in such issues, which are related to balanced economic conditions, we must primarily leverage our ability to convince the parties concerned of our analysis and policy proposals.

Our value creation model (see Figure 1) shows how progress on our core tasks and the DNB2025 change strategy in 2021 relate to the social impact we hope to achieve. This also shows that there is not always a direct causal relationship: in the end, there are more parties than just DNB who make their influence felt. The right-hand side of the value creation model shows our impact on society in 2021. Under our statutory mandate, our tasks are in the areas of price stability, balanced economic conditions, sound, future-proof, ethical and resolvable financial institutions and clearing and settlement systems, and safe, reliable, efficient and accessible payment systems. In the first three sections (More balanced economic conditions, Trust and CSR) we primarily discuss this right-hand side of the value creation model. We discuss the means we employ to achieve this impact (shown on the left-hand side of the value creation model), in particular in the last three sections (Digital proficiency, Staff members and Cost-conscious). They take the form of social, intellectual and human capital, as well as financial resources. We combine these in our organisation, which is defined by its statutory instruments, its strategy and governance, and its operational management. Together, inputs and organisation achieve specific results, aimed at the social impact we aspire to. The final section discusses the development of our financial position. The annexes to this chapter contain additional relevant information for our accountability.

Figure 1 Value creation model

Input

Financial capital

- Financial buffers and gold
- Contributions from own investments, monetary operations, other payment transactions and contribution from supervised institutions

Intellectual capital

- Expertise and knowledge development in monetary policy, macroeconomics, supervision, payments, financial stability, resolution and statistics
- Research and statistics
- Methodologies (including ATM), work programmes and procedures

Social capital

- Collaboration with national stakeholders (representation in over 40 bodies, including SER, CEC, REA, Financial Stability Committee, FEC, NGFS)
- Collaboration with international stakeholders, including Eurosystem, ECB, SSM, EBA, SRB, EIOPA, BIS, IMF and FSB
- Stakeholder consultations, e.g. with those involved in the Pension Agreement, users of statistics, Dutch households, within the iForum and the Sustainable Finance Platform
- Reputation among the general public and public confidence in DNB

Human capital

- Labour market position, e.g. ranking for Top Employer certification
- Vitality and commitment among employees, including absenteeism and employee satisfaction
- Diversity and inclusion, including gender and cultural diversity
- Compliance and integrity

Organisation

The toolset belonging to the statutory tasks:

- central bank task (monetary affairs, payments, macro-economic advisory function, statistics)
- macroprudential policy task
- microprudential and integrity supervision task
- resolution task

Realisation of DNB2025 change strategy with ambitions:

- CSR
- More balanced economic conditions
- Digital proficiency
- Trust
- Employees
- Cost-conscious

Operational management:

- Accommodation
- (Digital) work environment
- Employee talent development
- Monitoring and control

Results

- Our principles in new monetary strategy: taking account of climate aspects/house prices and proportionality
- Shared analyses and provided input in monetary policy debate: e.g. argued for sticking to PEPP phase-out schedule
- Shared analyses and provided input in debate on inflation scenarios and low interest rate dilemmas
- Profit under permanent pressure due to monetary operations

- Shared analyses and provided input in debates on e.g. housing market, labour market, budget rules, pension agreement, Big techs, Basel 3, cash / availability of payment services, climate investment and carbon pricing, (climate) stress tests
- Developed financial and economic statistics, including for sustainability risks; statistics rated highly by users

- Announced reversal of support measures for banks and accumulation of countercyclical buffer
- Published updated supervisory approach to deal with long-term low interest rate and UFR
- Performed analyses and calculations for transition to new pension system
- Continued resolution planning for banks and relevant insurers; took further steps for infrastructure for faster DGS pay-out
- External ZBO evaluation considers DNB a sound and professional supervisor: support for risk-based supervision does require attention.
- Started intensifying integrity examinations and ongoing supervision of crypto service providers
- Further integrated climate-related risks into supervision, started integrating other sustainability risks, policy needed for social risks
- Held cyberdrills for core financial infrastructure

- Covenant to secure cash availability still under development
- Digital euro in design phase under ECB' aegis
- Strengthened risk management for TARGET2
- Published DNB Payments Strategy 2022-2025

Impact

Price stability

- Euro area inflation exceeded 2% at 2.6%; market expects inflation rate to ease in 2022
- Key policy rates unchanged

Balanced economic conditions in Europe and the Netherlands

- Economic crisis has not turned into a financial crisis
- Robust economic recovery in the Netherlands: 4.8% growth versus -3.8% in 2020
- Overheated housing market, wealth imbalance between tenants and homeowners; our views only partially reflected in government plans
- Labour market imbalances; government plans are reasonably in line with our views.
- Progress on climate transition going in the right direction according to PBL Netherlands Environmental Assessment Agency

Sound, future-proof, ethical and resolvable financial institutions and a resilient financial system

- Consumer confidence in financial sector has remained undented during COVID-19 crisis
- Dutch banks' capital buffers already comply with Basel 4
- Solvency of life and non-life insurers up, health care slightly down
- Pension funds' funding ratio increased from 100.3% to 114.3%; 15% of pension funds have not yet started preparing for the new system
- Banks are working to improve their gatekeeper function, but several still show too many shortcomings
- Financial institutions devote greater attention to climate-related risks, but their control of sustainability risks is still limited
- Cyber and IT risks increased due to digitalisation

Secure, reliable, efficient and accessible payment systems

- Public confidence in payment systems remained stable at high level
- Vulnerable groups less satisfied with banking and payment services
- Use of cash fell from 32% in 2019 to 20% in 2021
- Number of Target2 disruptions down from 3 in 2020 to 0 in 2021

Social capital

More balanced economic conditions

We have been able to play a role in preventing the economic crisis from turning into a financial crisis – sometimes taking our cue from the ECB and sometimes acting of our own accord.
The usefulness and necessity of adequate buffers has been demonstrated once again. We have argued for reforms in the housing market and the labour market, including during the exploratory stages in the formation of the new government. The coalition agreement shows that the government's plans regarding the labour market are reasonably in line with our views, whereas only some of our views on the housing market have been adopted. We welcome the ECB's monetary strategy review, also given the proposals we put forward during the review process. We will continue to devote attention to both cash and the digital euro, because public money must remain sufficiently available.

Ambition: More balanced economic conditions	Progress in 2021	Priorities in 2022
By 2025, economic conditions in the Netherlands and internationally will be more balanced, partly thanks to our efforts. Balanced economic conditions are prerequisites for price and financial stability, and they contribute to sustainable prosperity. Rebalancing is necessary following the financial crisis of 2008, the European sovereign debt crisis and the COVID-19 pandemic.	■ The coalition agreement shows that labour market imbalances will be addressed reasonably in line with our views. This is only partly true for housing market imbalances. ■ A new monetary strategy for the Eurosystem was adopted. ■ Working with others, we prevented the economic crisis from becoming a financial crisis by pursuing balanced crisis policies. ■ We contributed to laws and regulations governing the new pension system and the transition to it by providing analyses and calculations. ■ A covenant aimed at keeping cash available is under consideration. ■ We started the research phase for a central bank digital currency (CBDC) under the ECB's aegis.	■ Ensuring our policy input is more effective, including by raising the quality of our analyses, working in a stakeholder-oriented manner and influencing policy processes. ■ Unwinding pandemic-related supervisory and monetary policy measures. ■ Identifying implications of the new pension system in terms of supervision and translating them into a roadmap for DNB. ■ Providing insight, through the DNB Payments Strategy 2022-2025, into market trends and conditions in domestic and international payment systems and our role in these systems.

After several years of low inflation, euro area inflation rose significantly in 2021, exceeding the ECB's 2% medium-term target. Annual inflation in the euro area in the year under review was 2.6%, with a particularly steep rise in the second half of the year. The increase is due to a combination of several factors, such as the temporary adjustment in German VAT rates, rising energy prices and a combination of previously postponed consumer purchases and supply constraints due to the pandemic. In the Netherlands, too, inflation rose in line with that in the euro area to reach 2.8% in 2021, but the inflation outlook is uncertain. Most market participants believe the increase to be transient, set to level off over the course of 2022, and we share this view. However, DNB President Klaas Knot has repeatedly qualified this expectation, warning about the risk of a more persistent phenomenon if temporary price increases become anchored in the underlying inflation dynamics, for example through wages.

The ECB's accommodative monetary policy in pursuit of price stability has unwanted side effects. Monetary decision-making includes an important process of weighing up the necessity and effectiveness of monetary policy measures against possible side effects. To get inflation to the desired level, the ECB has consistently pursued an accommodative monetary policy in recent years. It has weighed its policy against potential, unintended side-effects such as the risk of imbalances that may arise when monetary and financial conditions remain accommodative for extended periods. The prolonged low interest rate environment has encouraged risky behaviour by investors, causing vulnerabilities in the sector to accumulate. As interest rates go up, the high price/earnings ratios in equity markets and the narrowing of risk premiums on risky bonds that has occurred will no longer be sustainable. Abrupt price declines cannot be excluded, with potentially adverse consequences for financial stability. In a further ramification of the low interest rate environment, as President Knot noted during his Witteveen lecture in June 2021, monetary policy is less effective in influencing the business cycle. This means that fiscal policy has a greater role to play.

We contributed to the ECB's new monetary strategy as part of the Eurosystem (see also Box 2 in the President's Report). The strategy incorporates the elements we have been pushing for, in particular a symmetric 2% inflation target over the medium term, the inclusion of climate issues in monetary policy, the inclusion of the costs of home ownership in inflation calculations and a broader analytical framework. We have been able to substantiate our positions, for example, by contributing position papers to the Eurosystem working groups and co-chairing two working groups on financial stability and climate change. The views of various Dutch civil society groups that we consulted during the review process informed our positions.

We announced in 2021 the cessation of a number of relief measures for banks which we had taken to prevent contraction in lending (see also Box 1 in the President's Report). For example, as of 1 January 2022, we apply a minimum floor for risk weights for residential mortgage loans on bank balance sheets, which is a measure we had initially postponed at the onset of the COVID-19 crisis. Also, from September 2021 onwards, banks no longer had to comply with the restriction we had imposed on capital distributions. In addition, we announced the formation of a countercyclical capital buffer.

Thanks in part to the rapid economic recovery – with GDP in the third quarter of 2021 already 5.2% higher than a year earlier – Dutch banks have held up well, allowing our supervisory support measures to be phased out. An important measure of how banks' resilience is developing is the trend in capital buffers, i.e. core capital as a percentage of risk-weighted assets (see also Figure 6.2 in the President's Report).

Banks' capital buffers were hit at the beginning of the COVID-19 crisis, mainly due to growing provisions related to exposures to pandemic-affected sectors, while capital did not show corresponding increases. After the first quarter of 2020, however, capital buffers recovered amid releases of large parts of these provisions, ending up above pre-pandemic levels. Another factor in the restoration of bank buffers was the imposition of dividend restrictions on banks until September 2021 by the Single Supervisory Mechanism (SSM), something we had advocated. These restrictions made banks more resilient at the height of the COVID-19 crisis. With Dutch banks now having larger buffers than before the crisis, we supported the ECB's decision not to extend this far-reaching measure.

Only some of our housing market proposals aimed at reducing economic imbalances found their way into the new coalition agreement. While the new government did announce it would do away with the extended gift tax exemption for house purchases as we suggested, it decided not to amend tax relief favouring home ownership. Our proposal of gradually transferring home equity from Box 1 to Box 3 for income tax purposes to achieve equal taxation of home owners and tenants once again proved to be a sensitive subject in the public debate and a bridge too far politically for now. That said, the government advocates the adoption of a nationwide housing market programme, in line with our recommendations, and is seeking a significant acceleration in the construction of new homes. Likewise, it will abolish the landlord's levy on housing corporations, something we had also argued for.

The coalition agreement also shows that the government's plans for labour market reform are reasonably in line with our recommendations aimed at achieving a more balanced and accessible labour market. We believe permanent employment contracts should become less "permanent", while flexible contracts should become less "flexible". The social partners found our plans too far-reaching. Both employers and employees responded critically, referring to the draft agreement they had reached in the Social and Economic Council of the Netherlands (SER), leaving permanent employment contracts largely untouched. According to the coalition agreement, the government intends to act largely in line with the SER agreement. While this will provide more certainty to workers in flexible jobs, permanent employment contracts will be left mostly intact. It will be made slightly more attractive for employers to offer new hires a permanent contract, due to the introduction of budget neutral part-time unemployment benefits and SME compensation for extended sick pay, but the cost will be passed on to the taxpayer. By contrast, we had argued, in line with the Commission on the Regulation of Work (the Borstlap Committee), for a comprehensive reform of labour relations, further reducing the difference between permanent and flexible employment contracts.

We contributed to ensuring that the details of the pension agreement would be reflected in the draft legislative proposal for the future pension system by providing analyses and calculations aimed at achieving a future-proof pension system and a careful transition process. We are a member of the steering committee of the government and social partners that was set up to work out the details of the pension agreement. In that capacity we performed various analyses and quantitative calculations to inform the decision-making process, including on how to incorporate accrued pension entitlements and rights into the new pension system. Likewise, we hosted a pension seminar in which we discussed the new pension contracts and the transition to the new pension system. An evaluation of the pension agreement's conclusion and elaboration which we undertook shows that stakeholders valued our commitment and expertise. They did note, however, that our role during the discussions was at times ambiguous, as it was sometimes unclear whether we were expressing our views as an adviser, a supervisory authority or a policymaker. Similarly, it is sometimes unclear to stakeholders why we refrain from taking a position on certain political issues, whereas they perceive us as being adamant on other political issues. Several stakeholders said we had become more open and less self-justifying over time.

The statistics we generate are used to produce well-founded analyses and research in the financial and economic field. Users rate them highly and have put forward suggestions for improvement. Their high ratings were evident from a survey conducted among internal and external partners and users of our statistics to find out how they perceive our statistical products and services and what they consider to be the most important topics. Rating most of our main products at around 7 out of 10, users value the know-how and expertise of our staff members. At the same time, some users express concerns about the underlying quality of the products we provide, also perceiving the range of statistical products as lacking clarity. We will expand staff numbers for our statistics task from 2022 onwards to boost the quality of the products, in addition to pushing ahead with the upgrade of our statistics website and underlying applications in 2022 to improve the clarity and accessibility of our statistics.

We made arrangements with stakeholders to keep cash readily accessible and available in the Netherlands amid the declining use of cash. Due to be set out in a covenant, these arrangements will respond to findings from an external study we commissioned, in part at the request of the National Forum on the Payment System (NFPS). This has been prompted by the steady decline in the use of cash: 20% of all point-of-sale payments in the Netherlands are made in cash, compared to 32% prior to the COVID-19 crisis. At the same time, around 1.5 million residents of the Netherlands are highly dependent on cash. Work was under way at the time of writing to finalise the covenant. We will also monitor compliance with the covenant.

A digital euro issued by the central bank could become a useful addition to cash. The investigation phase for the digital euro was launched in 2021, during which design options will be explored, among other things. Several technical experiments and a broad-based European consultation took place in preparation. In the summer of 2021, the ECB gave the go-ahead for the current two-year phase, which will address the question of how the digital currency should be designed. A decision on the digital euro's actual introduction will be made at a later stage. About half of the Dutch population would be willing to open a payment account for digital euros at the central bank, according to our 2021 survey.

There are pros and cons to digital currencies such as cryptos and stablecoins issued by private parties. **We believe further regulation is needed, given that risks are predominant** (see also Box 4 and Box 5 in the President's Report). On the one hand, these new currencies can contribute to a faster, cheaper and more inclusive global payment system. On the other, their accessibility and anonymity make them vulnerable to illicit activities. We support further regulation in the field of market integrity and prudential supervision of the crypto market, which is why we welcome the legislation being developed at the European level – the Markets in Crypto-Assets Regulation (MiCAR). MiCAR provides a harmonised European regulatory framework for the issuance of crypto-assets and crypto-asset services which is expected to come into effect in 2024.

Trust

Working on trust in the financial sector is the common thread running through our core tasks. Public trust in financial institutions depends on various factors, including the institutions' soundness, their integrity and the reliability of their services. This section discusses the impact our tasks have in the areas of supervision, resolution planning and payment systems. Trust in the financial sector remained stable in the year under review, despite the COVID-19 crisis. At year-end 2021, the Dutch financial sector was in good shape overall from a prudential point of view. That said, the sector continues to have shortcomings in managing risks related to money laundering and terrorist financing.

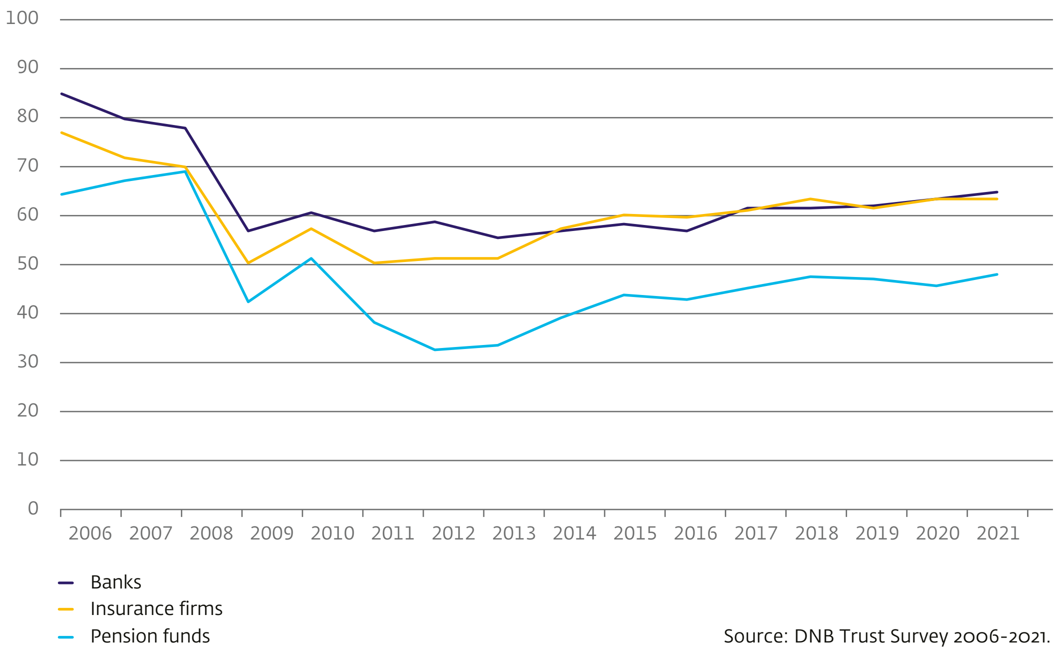
Ambition: Trust	Progress in 2021	Priorities in 2022
Our efforts have made a recognised contribution to public trust in financial institutions in the Netherlands. Public trust in financial institutions is an essential precondition for the functioning of the financial system, which in turn is essential for the development of the real economy.	▪ We conducted various initial and follow-up studies that shed light on factors driving trust in financial institutions among Dutch citizens. ▪ Trust in financial institutions held up well despite the COVID-19 crisis. ▪ We charted throughout our organisation how all our core activities contribute to trust. ▪ Although banks are working to improve their gatekeeper function, several still show too many shortcomings. ▪ The European Commission in 2021 put forward proposals for setting up a European anti-money laundering authority.	▪ Implementing the Open Government Act (Wet open overheid) in a timely manner and communicating openly about a) how we perform our tasks (including with regard to our new risk appetite), b) our expectations from the sector, c) the extent to which we believe the sector is managing its risks, and d) the Dutch Deposit Guarantee. ▪ Implementing, together with relevant parties, the forthcoming Cash Covenant so that payment systems in general and cash in particular are adequately accessible and available (see also the section on More balanced economic conditions). ▪ Further strengthening our supervision by refining our automatic, data-based risk score models and signals. ▪ Performing data-driven integrity examinations, specifically to assess compliance with Wwft requirements in the area of customer due diligence and transaction monitoring.

The results of our annual DNB Trust Survey show that trust in the financial sector among Dutch households remained intact in 2021, despite the COVID-19 crisis. Nearly 70% of respondents were mostly or fully confident that Dutch banks would always be able to repay their funds held on deposit. A similar percentage applies to confidence that insurance firms would meet their contractual obligations. Dutch households were slightly less confident that pension funds would be able to meet their commitments to pensioners, although this confidence category showed a slight uptick. The slight increase in confidence in pension funds in general can possibly be attributed to the new pension agreement, but also to the increased funding ratios among pension funds. We shared these results with the sector in a roundtable meeting, in which we also discussed the factors that drive trust.

One of our recent economic studies shows that trust in financial institutions is driven not only by their conduct, services and financial health, but also by factors outside their own or a supervisory authority's control. Other factors at play include personal characteristics of consumers, such as household income, financial literacy and trust in others.

Figure 2 Public trust in the financial health of own bank, insurance firm and pension fund has held up well

Share of respondents that are mostly or fully confident

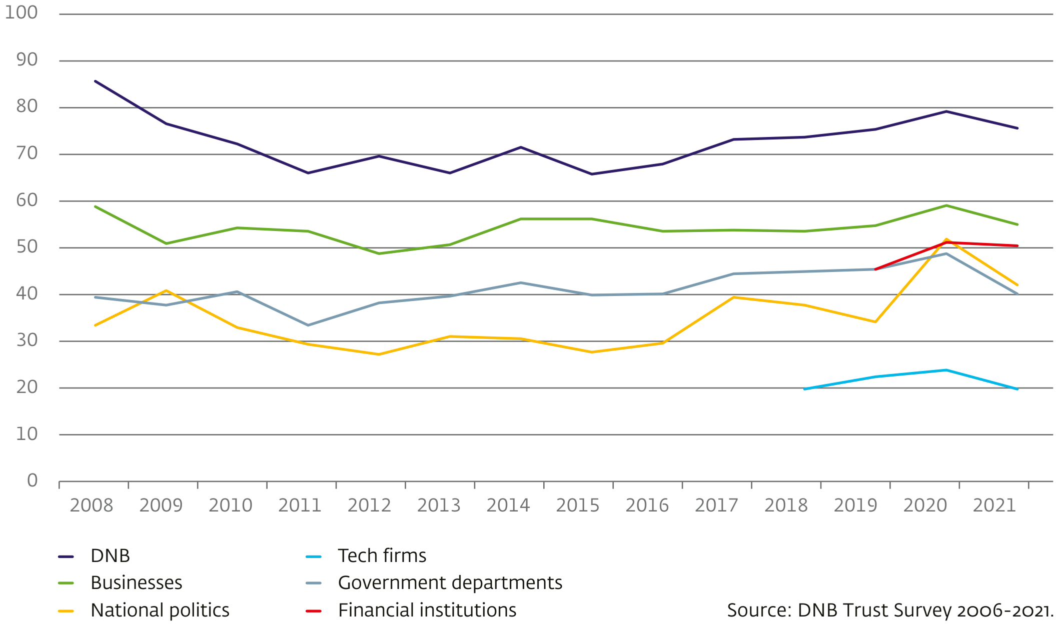


Source: DNB Trust Survey 2006-2021.

While public trust in DNB declined slightly in 2021, it is still at a high level compared to financial institutions, politics or businesses (see Figure 3). A 57% majority believe our supervision contributes to healthier financial institutions, against 60% in 2020 and 59% in 2017. The quarterly measurements performed by the Kantar research agency also show that our reputation among the general public came to 59.25 in 2021, down from a score of 63.5 in 2020. This decline is mainly due to a sharp fall in the fourth quarter of 2021, which we intend to study in more detail. A score between 50 and 60 reflects a "good" reputation, while 60 or higher is classified as "very good".

Figure 3 Confidence in financial sector holds up well

Share of respondents with fairly high to very high confidence



Source: DNB Trust Survey 2006-2021.

Prudential supervision

Our prudential supervision seeks to ensure the soundness of financial institutions and the stability of the financial system. At year-end 2021, the Dutch financial sector was in good shape overall from a prudential point of view (see also Figures 6.1, 6.2 and 6.3 in the President's Report). During the year under review, it became clear that the impact of the COVID-19 crisis on the Dutch financial sector was less severe than it could have been. Banks generally comply well with the applicable capital and liquidity requirements. The economic upswing is also reflected on bank balance sheets: non-performing loans decreased from 1.9% of the loan book at year-end 2019 to 1.5% in the third quarter of 2021. The low interest rates continue to weigh on bank interest margins, however. Solvency ratios among insurers differ on a sector-by-sector basis. In the non-life insurance sector, solvency ratios edged up to 180% on 31 December 2021 from 175% on 31 December 2020. The life insurance sector showed a slightly stronger increase, to 199% on 31 December 2021 from 190% on 31 December 2020. The health insurance sector showed a minor decrease, to 154% on 31 December 2021 from 156% on 31 December 2020. The impact of the 2021 stress test conducted by European pensions authority EIOPA on Dutch insurers is relatively limited, in terms of both their solvency and liquidity. The economic recovery and increased stock market prices contributed greatly to the increased funding ratios of the Dutch pension sector: from 100.3% at the end of 2020 to 114.3% at the end of 2021. However, further recovery to above the required own funds will be needed to allow for indexation. Higher funding ratios also promote the balanced transfer of pension assets to the new pension system. For more information on supervision in 2021, see our Dutch-language ZBO accountability report.

In 2020 we had been forced to restrict our banking supervision activities, and we had introduced relief measures enabling banks to mitigate the blow dealt by the COVID-19 crisis. In 2021 we gradually unwound these measures. For example, the Supervisory Review and Evaluation Process (SREP) took place again in full. As part of this process, DNB and the ECB communicated the supervisory requirements and expectations for 2022 to all banks.

The impact of the persistently low interest rate environment remains a major concern in our supervision of the Dutch insurance sector. This risk weighs particularly on the business models and profitability of life and prepaid funeral services insurers. In 2021 we updated our supervisory approach to dealing with persistent low interest rates and the Ultimate Forward Rate (UFR), which is the actuarial interest rate used under Solvency II. Based on this, we continued our dialogue with individual insurers in the fourth quarter to mitigate the potential risks associated with low interest rates. These talks will continue in 2022. Internationally, we made a strong case within EIOPA for reducing the difference between the UFR and the actual market interest rate. EIOPA and the European Commission subsequently adopted our suggestion. In our insurance supervision during the year under review, we also more closely examined the effectiveness of risk management at health and non-life insurers during the COVID-19 crisis. Based on this, we plan to issue a good practices document that discusses risk management in times of stress. Likewise, we examined how insurers address climate-related risks as part of their risk assessment, the own risk and solvency assessment (ORSA), and we provided feedback through a news release and individual consultations. Lastly, we devoted additional supervisory attention to heightened operational risks during the pandemic, such as IT risks and risks of cyberattacks.

On 14 December 2021, the Minister of Finance submitted the final report of the evaluation committee that investigated the bankruptcy of life insurer Conservatrix to the Dutch House of Representatives. On that occasion, our Supervisory Board responded to some of the conclusions from the report, pledging it would inform the Minister in February 2022 how the recommendations presented in the report are being implemented. The recommendations that deal with our actions are varied in nature and are related to, among other things, taking into account special ownership structures of financial institutions, exchanging information with foreign supervisory authorities, and dealing with external advice and recommendations. We recently sent the Minister our response to the recommendations. She is expected to submit it to the House of Representatives in the second half of March, whereby it will become available to the public. In our response, we confirm that we are implementing the report’s recommendations and we describe our methods. We are grateful to the evaluation committee for its thorough and comprehensive evaluation.

We urged the pension funds that have not yet started preparing for the transition to the new pension system to take action. The timelines are too tight to wait until all laws and regulations are in place. We sent out this message in response to a survey of 161 pension funds, which showed that 15% had not yet made any preparations. According to the draft legislation, it is possible to start the transition to the new system from 2023. It must be completed by 1 January 2027. Because final legislation is still some time away, we expect that pension funds will not make the switch before 2024. We are also using the survey to assess whether we have sufficient capacity in the coming years to monitor the transition. Pension fund board members find the preparatory phase difficult as there is still a lot of uncertainty about laws and regulations. This is what they told us during "DNB Listens", a session we held during the pension seminar in which participants could share their concerns with us.

Financial institutions are facing increasing cyber and IT risks in the face of growing digitisation. The financial sector has confirmed its intention to extend its participation in the Threat Intelligence Based Ethical Red teaming (TIBER-NL) programme by another five years. This programme, which we support, is aimed at increasing the sector's cyber resilience. We participated in the government's cyber resilience exercise (ISIDOOR 2021) together with the Ministry of Finance and the Dutch Authority for the Financial Markets (AFM). We will focus closely on financial institutions' cyber resilience in 2022, assessing, among other things, whether institutions pay sufficient and permanent attention to effective risk controls and looking closely at the level of relevant knowledge of board members.

Integrity supervision

Although banks are working to improve and maintain their gatekeeper function, our regular integrity supervision still finds too many shortcomings among banks in managing risks related to money laundering and terrorist financing (see our Dutch-language ZBO accountability report). At some of the banks the problems are extensive and persistent, which is why we had to take several enforcement measures during the year under review. That said, we believe the sector has become more aware of its gatekeeper function in recent years. We also see that board members are increasingly taking ownership of compliance with the Anti-Money Laundering and Anti-Terrorist Financing Act (*Wet ter voorkoming van witwassen en financiering van terrorisme – Wwft*). We welcome the efforts of banks to cooperate more closely among themselves. A case in point is Transaction Monitoring Nederland, which is an initiative taken by a number of banks that have joined forces in the fight against financial crime. Even so, we often see that financial institutions take action only after we have held an examination. As we intensify our data-driven integrity examinations, we expect to get a better idea of how institutions fulfil their gatekeeper function. Where needed, we may need to intervene in individual cases.

In 2022, the Financial Action Task Force (FATF) will issue its assessment of the Netherlands' effectiveness in combating money laundering and terrorist financing. We will also receive the Council of Europe›s evaluation of the Netherlands' implementation of the Fourth Anti-Money Laundering Directive and the report of the European Banking Authority (EBA) on the effectiveness of our AML/CFT supervision of banks. Over the course of 2022, we will use the findings and recommendations from these evaluations to strengthen our supervision. Close supervision to prevent the Dutch financial sector from becoming involved in financial crime remains a key focus. We participate in the Financial Expertise Centre, together with, among others, the Fiscal Intelligence and Investigation Service (FIOD), the Public Prosecution Service, the Tax and Customs Administration, the National Police and the AFM, working to improve integrity in the financial sector and thereby increase trust.

We believe a European supervisory authority and further harmonisation of anti-money laundering rules are needed if cross-border financial crime is to be tackled effectively. The European Commission made concrete proposals to this end in 2021, to which we contributed by submitting non-papers and participating in international consultations in the run-up to the proposals. We have been cooperating closely and sharing information on risks and controls of internationally operating institutions with European peer AML/CFT supervisors for some time. Even so, establishing a European supervisor and including relevant rules in a European regulation will make European supervision of the prevention of financial institutions' involvement in financial crime more effective. Together with the Ministry of Finance, we advocated further harmonisation of legislation and information exchange between supervisory authorities in the area of money laundering and other financial crime.

The risks of illegal use of cryptos are high due to their wide availability and their anonymity (see also Box 5 in the President's Report). Our supervision of crypto service providers therefore focuses on preventing money laundering and terrorist financing. 2021 marked the launch of our regular supervision of crypto service providers. We mainly registered new market entrants and conducted fit and proper assessments. We expect registration and assessments to remain key themes in 2022, but the main focus of our supervision of crypto service providers will shift further towards regular supervision. In 2022, as in the past year, we plan to carry out thematic examinations to assess the extent to which service providers comply with the requirements in practice.

The Dutch trust sector faces high integrity risks relating to tax evasion, money laundering and other activities. Due to strict legislation and supervision, the number of trust offices is decreasing and, to a lesser extent, the volume of services provided. Various indications and external studies, however, suggest that the provision of illegal trust services is on the uptick. We will therefore expand our enforcement resources. A report on conduit companies issued by a committee comprising representatives of CPB Netherlands Bureau for Economic Policy Analysis, the Tax and Customs Administration and DNB and commissioned by the Dutch House of Representatives recommends, among other things, tightening the approach to illegal trust services in terms of both supervision and detection.

Compliance and integrity at DNB

Within our own organisation, the independent Compliance, Integrity and Administrative Sanctions Department handled integrity reports filed by both internal and external parties, and initiated integrity investigations in seven cases. Among other things, these investigations related to internal reports of company property going missing, failure to follow internal procedures and alleged misuse of potentially confidential information. We received two external reports pursuant to the Regulation on actual or suspected wrongdoing and integrity-related and other incidents, and other regulations on integrity and other matters. Our investigations revealed no malpractices or breaches of integrity. For detailed explanatory notes, see Annex 1 Additional information.

We provide various banking services to central banks and international organisations outside the Eurosystem and apply a framework for accepting and monitoring such customers. The Financial Markets and Payments & Market Infrastructure divisions apply procedures and measures to mitigate and effectively manage the risks of money laundering and terrorist financing. These include customer due diligence (CDD), ongoing sanctions screening, news monitoring and transaction monitoring. These divisions also periodically plot risks and controls by means of a systematic integrity risk analysis (SIRA).

Resolution

We continued our resolution planning in 2021 and further operationalised various resolution tools to be ready to resolve distressed financial institutions should the need arise. In part through our efforts, the Single Resolution Board (SRB) decided in the year under review that large banks must meet the maximum subordination requirement of 8% of their balance sheet volume in terms of loss absorption and recapitalisation capacity (MREL), which facilitates the application of bail-in when necessary. In addition, we set binding MREL requirements for the first time for small and medium-sized banks that are ineligible for resolution. We postponed the imposition of the binding MREL requirement on small and medium-sized banks eligible for resolution to 2022. All banks now have a resolution plan, and all eligible insurers have a first version. For insurers, in the context of the EIOPA advice on the Solvency II review, we advocated closer European harmonisation of recovery and resolution regimes. A recent European Commission proposal for a directive has brought this one step closer.

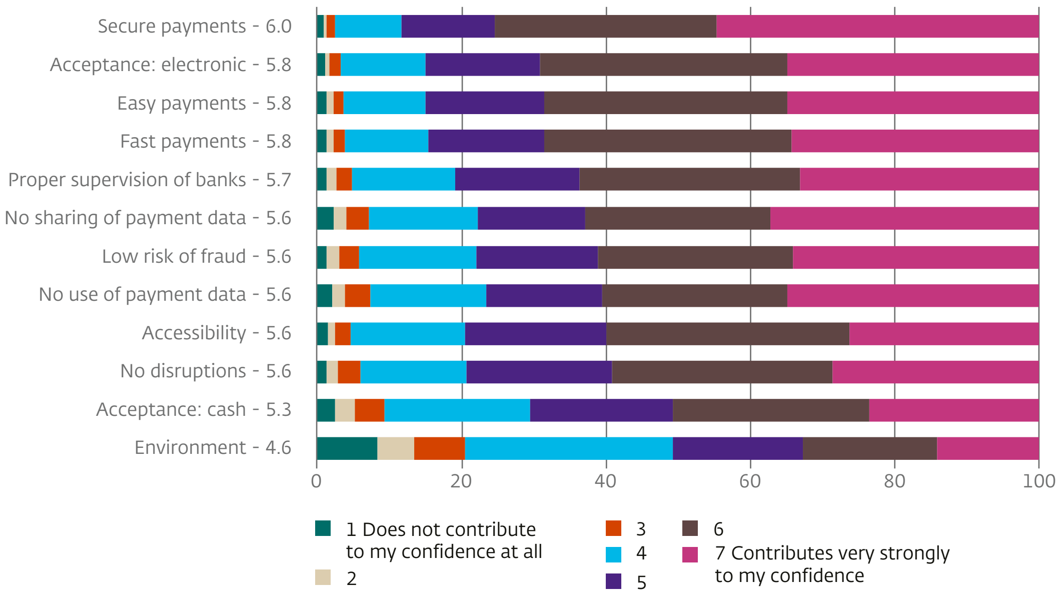
In 2021, banks were in a better operational position than in 2020 to provide the data needed in the event of payouts from the Dutch Deposit Guarantee (DGS) at short notice. This helps us to make DGS payouts to account holders within seven business days in the event of a failure. Among other things, we clarified the requirements for banks to provide information aimed at an orderly and smooth payout process. We will hold drills over the coming years to find out whether it is feasible to complete the payout process within seven business days.

In addition to the DGS information campaign, our communication with the general public during the 'Pensioen3daagse' pension event and our participation in the Money Wise Platform reflected our commitment to financial education. We believe education can increase consumers' resilience. Similarly, we participated in a study into the gender gap in financial literacy, which shows that women know more than they think they know.

Cash and payment systems

Confidence in the payment system remained high in 2021. In a survey held in August 2021, 74% of respondents had a high or very high level of confidence in the payment system. Only 1% has little or very little confidence. We studied the drivers of confidence in the payment system for the first time in 2021 (see Figure 4). Being able to pay safely is the primary driver of confidence in the payment system, but wide acceptance of electronic means of payment, easy payments and fast payments are also important considerations.

Figure 4 Factors driving confidence in the payment system



Source: DNB/Dutch Payments Association.

Note: first quarter of 2021, unweighted data, 6,115 respondents, average answer behind each factor.

Within the Eurosystem context, we strengthened the risk management framework for the TARGET2 payment system by initiating the implementation of 18 recommendations. In 2020, there had been three major incidents affecting the availability of TARGET2. This figure dropped to nil in 2021. The recommendations focus on improved risk management of key processes, more effective external communication, the introduction of overarching documentation and strengthened internal governance (second line). They were part of an external audit report published in response to failures that had occurred in 2020. Due to these incidents, the availability of TARGET2 had dropped to 99.46% in 2020, its lowest level ever. This figure rebounded to 100% in the year under review.

Box 1 Our history is closely intertwined with slavery

Between 1814 and 1863, DNB and its former directors were involved in slavery, as revealed in an independent scholarly study conducted by researchers at Leiden University.
We commissioned this study, and we deeply regrets its findings. To us, the study marks the start of a process of reflection and dialogue.

DNB was involved in slavery in three ways. First, part of our start-up capital came from business owners with direct interests in plantation slavery in the Atlantic region, for example in Suriname. Of the 16 initial major capital providers, 11 have now been linked to slavery. Second, as an institution, DNB was indirectly involved in Dutch colonial slavery and slavery in non-Dutch areas, such as British Guiana. Having no branches in the colonies, it did not play a role in the day-to-day slavery-related financial transactions there. However, DNB did support the Ministry of Colonies in its day-to-day transfers of payments and provided services to trading houses involved in slavery. Lastly, it has emerged that several prominent DNB officials were, to a greater extent than their contemporaries, personally involved in colonial slavery. Several of them had direct links with slavery-related businesses and some were also involved in the management of plantations.
A number of prominent DNB officials organised themselves to represent the interests of slave owners in the political arena. Only one or two were involved in efforts to abolish slavery.

While we cannot undo the suffering that has been caused, we can do everything in our power to make this history visible by acknowledging the facts and the suffering. We will be talking to our staff and representatives of civil society organisations, in particular with those who are especially affected by this history and the impact it has to this day. To this end a focus group will be set up, which will help us decide on our next steps.

CSR

Sustainability risks can materialise as financial risks and are therefore a major concern for the financial sector. One of our studies has shown that, while financial institutions are aware of sustainability risks, they have still incorporated them into their core processes only to a limited extent. For this and other reasons, we have started to further integrate sustainability risks into our supervision in a process to be refined in the year ahead. Sustainability is a relevant factor in our various roles, including our supervisory and monetary roles, our agenda-setting role, and our role of providing insight through research, as well as in our own investments and operational management.

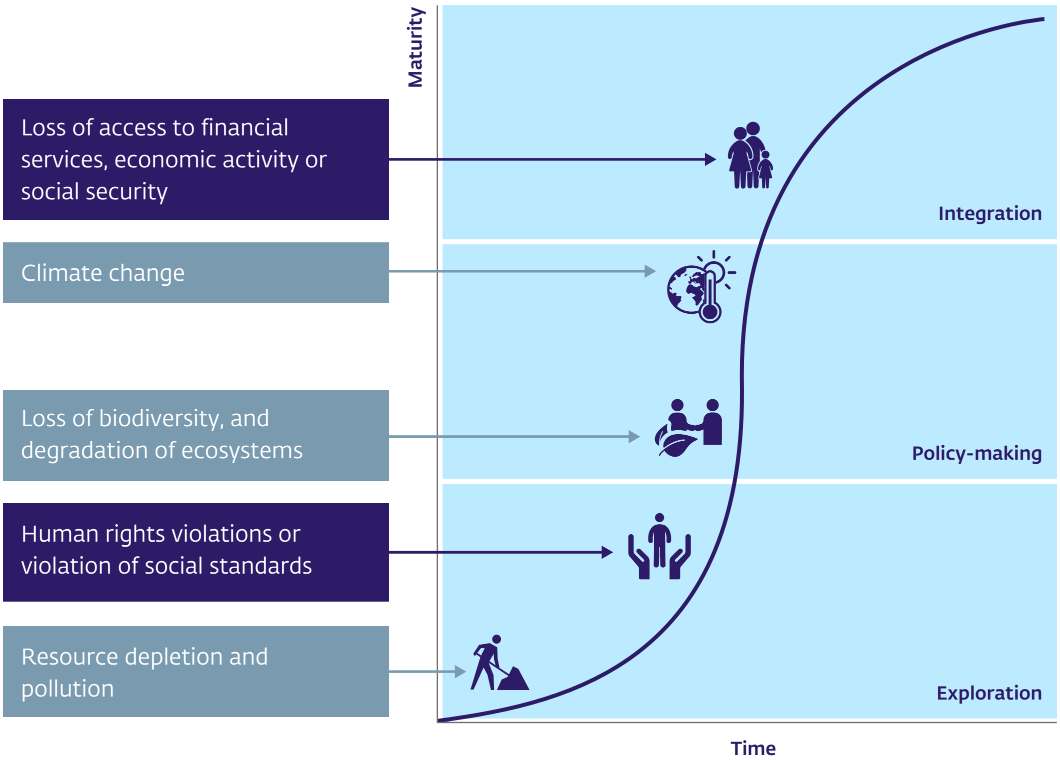
Ambition: CSR	Progress in 2021	Priorities in 2022
We strive for sustainable economic growth that has no harmful effects on the environment. We strive for an inclusive financial and economic system.	■ Our research into the management of sustainability risks in the financial sector shows that financial institutions still insufficiently identify, manage and mitigate these risks. ■ We called for a focus on green recovery from the COVID-19 crisis. ■ We developed national sustainability statistics. ■ We expanded our investment objective, adding social and ecological value creation to financial returns (see also Financial overview). ■ We charted the carbon footprint of own reserves and launched a study into physical climate-related risks. ■ We devoted attention to the social and environmental impact of our operational management, the payment chain and financial education, e.g. we calculated the carbon footprint of cash transactions, prepared an action plan further to the Accessibility Monitor and conducted the DGS information campaign (see Ambition: Trust).	■ Enabling staff members to quantify climate-related risks so we can better assess and target these risks and take enforcement action where appropriate. ■ Mapping the impact of payment and securities transactions on climate change and putting these on the international agenda. ■ Studying the impact of biodiversity loss on the financial system level. ■ Establishing a sustainability network for both internal and external stakeholders to foster mutual cooperation and debate on sustainability issues.

We set up the Strategic Sustainability Programme to accelerate the integration of sustainability into our core business and leverage synergies between different organisational units. Directed by the Sustainability Steering Committee, whose members are the division directors for each domain, our Sustainable Finance Office is in charge of achieving our strategic objectives. The Executive Board Member of Monetary Affairs acts as the sponsor of the sustainability theme. The Executive Board retains ultimate responsibility, and the governance for assessing and managing sustainability risks within our various core tasks is similar to last year, as are our partnerships in the Netherlands and internationally.

Our new Sustainable Finance Strategy describes our objectives in the short and medium term aimed at fully integrating CSR into our core tasks. We have opted to execute our strategy in accordance with a learning curve model, in which our activities focus on either exploration, policymaking or integration. For each stage, we determine based on the Strategic Sustainability Programme to what extent a subject or trend is mature enough to move towards further integration (see Figure 5). We are working on integrating climate-related risks into our core tasks.

We have yet to develop our policy on environmental risks, including the risk of biodiversity loss, however. In 2022, we will investigate, from a macroprudential supervision perspective, how biodiversity loss could pose a risk to the stability of the financial system. Other sustainability risks are in the exploration phase, and we will address them in our various roles. For example, we primarily take social risks, such as those related to human rights, into consideration in developing the CSR policy for our own reserves.

Figure 5 CSR integration DNB



We plan to build a sustainability network for external and internal stakeholders in 2022 that will enable participants to join forces in addressing key sustainability risks and opportunities. Where possible, we will do this through existing networks and bodies, such as the Sustainable Finance Platform. This will help us better align our strategy with developments in our stakeholder base. We chair the Platform, in which financial sector participants contribute and exchange know-how in the area of sustainability and join forces where needed. Following an evaluation in 2021, it was concluded that this forum could devote more attention to strategic issues.

We took further steps in terms of integrating climate-related risks into our supervision in 2021 (see budget and accountability). We conducted a thematic examination on climate-related risks among Dutch small and medium-sized banks (22 less significant institutions or LSIs), and the results show a mixed picture. While some banks have made great strides in terms of measuring and managing climate-related risks, others have significant room for improvement. Similarly, we examined how insurers address climate-related risks as part of their own risk and solvency assessment (ORSA). The number of insurers describing the impact of climate-related risks on their risk profile went up to around 80% in 2020 from around 50% in 2019. However, their disclosures and substantiations require improvement, especially those of smaller and medium-sized insurers. In 2021 we started examining how pension funds have integrated ESG risks into their own risk assessments. We also developed a dashboard to identify a number of ESG risks facing pension funds, such as climate-related risk. Furthermore, in 2021 we made sustainability risks a permanent feature of fit and proper assessments for banks, insurers and pension funds. Likewise, we expect banks and insurers applying for a licence to provide insight into how they identify and address climate-related risks.

Dutch financial institutions have incorporated sustainability risks into their core processes only to a limited extent, as shown by our study Balancing sustainability and by their own periodic risk assessments (see also Box 3 in the President's Report). A survey of 127 Dutch financial institutions shows that, while they are aware of this type of risk, only a minority explicitly include it in their risk management and strategy: 30% of pension funds, 22% of insurers and 10% of banks. They find sustainability risks difficult to measure, and reporting on these risks can be improved. Based on this baseline measurement, we are formulating principles for material sustainability risks that financial institutions must take into account in their strategy, governance, risk management and reporting. We will submit our supervisory expectations to the financial sector for consultation in 2022, and subsequently integrate them into our supervision methodology.

The carbon footprint financed by Dutch financial institutions is significant: it was estimated to amount to at least 82 Mtonnes in 2019, or 45% of the Dutch economy. This implies that the transition to a carbon-neutral economy involves material risks. In particular, the equity portfolios of pension funds and insurers are increasingly deviating from the transition path to the Paris climate agreement, increasing the risk of stranded assets. In addition, the climate stress test we conducted as part of our macroprudential supervision shows that Dutch real estate – which represents 25% of the assets of banks, insurers and pension funds – is increasingly exposed to the physical effects of more extreme weather conditions. Flood damage, which in very exceptional cases can amount up to €200 billion, could affect the positions of financial institutions in the form of credit and market risks.

We developed various indicators of the financial sector's exposure to sustainability risks in 2021, including carbon footprints of the main asset classes, biodiversity footprints, and transition and flood risks of real estate portfolios. We use these indicators in our supervision, analytical studies and stress tests. We are aware that quality of the underlying data and the comparability of such indicators still need considerable improvement. In 2021, we contributed to the development of international standards, data and indicators, proactively participating in relevant international workstreams in the ECB, the IMF and the NGFS. One of the deliverables will be the ECB's publication of the first official experimental statistics on carbon footprints, physical risks and green bonds in late 2022. In addition, we studied new experimental indicators for transition risks, physical risks and green instruments.

Climate change also affects the ECB's objectives of price stability and financial system stability (see also Box 2 in the President's Report). The ECB will accordingly take a number of practical steps in the coming years aimed at incorporating climate-related risks into its monetary policy. This is an outcome of the monetary strategy review that was completed in 2021 (see also the section on More balanced economic conditions). We act as a co-lead of the ECB's workstream that is exploring and implementing these measures, for example with respect to the models and statistics used, which will give the ECB a better understanding of how climate change affects the economy and the financial sector. Moreover, the ECB will explore whether it can directly take account of the climate-related risks inherent in its financial market operations such as corporate bond purchases. The ECB will also disclose the climate change risks to which it is exposed.

In the SSM context, we contributed to the preparations for the ECB climate stress test, which will be held for the first time in 2022. The Dutch banks under direct SSM supervision will participate in the test.

Acting in our role as an economic adviser, during the COVID-19 pandemic we continued to stress the importance of a timely transition to a climate-neutral economy, in particular during the exploratory stages in the formation of the new government. In line with our plea for improved emissions pricing, the coalition agreement includes several important steps aimed at improving taxation of greenhouse gas emissions. Likewise, our recommendations on encouraging investment in new technologies and energy infrastructure have found their way into the coalition agreement. The new government did not, however, adopt our suggestion that climate-related public expenditure should be financed mainly through improved emissions pricing and from existing funds, as the growing climate-related expenses will largely be financed through the Climate Fund.
Our study into the financing of the transition shows that the required investment is getting off the ground too slowly. In it, we call upon the government to take a stronger lead in more effectively bringing together supply and demand for finance in the transition to a climate-neutral economy.

Introducing more effective carbon emissions pricing is the number-one measure that can be taken to promote a more sustainable economy. This will reduce the profitability of carbon-intensive investment and boost that of green loans and investments. Another analysis we prepared shows that a European emissions tax will not significantly deteriorate the competitive positions of most EU Member States, while the limited negative impact on the single market could be largely offset by introducing a carbon tax at the European border (CBAM).

Table 1 Overview of climate targets for the Netherlands and 2021 status

Indicator	Objective	2020 status	2021 status
CO_2 emissions in the Netherlands	Drop in CO_2 emissions in the Netherlands in accordance with nationally agreed climate targets (50-55% reduction by 2030 and climate neutrality by 2050)	Achieved	Not achieved
CO_2 emissions in Europe	Drop in CO_2 emissions in Europe in accordance with targets set in the EU Green Deal (annual)	Achieved	Not achieved
Climate plans	Netherlands Environmental Assessment Agency calculates that the climate plans effectively meet the reduction targets	Not achieved	Not achieved, progress made (improved compared to 2020)
European effective CO_2 price	European effective CO_2 price in accordance with the price required to meet the targets of the Paris climate agreement (annual, set by the World Bank)	Progress made	Progress made (EC Fit For 55 proposal takes big step forward in terms of emissions pricing, but is yet to be adopted)

We have calculated the carbon footprint of cash payments, so that we can explore potential reduction measures. Since 1990, carbon emissions have fallen from around 19,300 tonnes to around 7,500 tonnes in 2019. The two main sources of emissions are (i) fuel consumption by cash-in-transit companies and (ii) energy consumption by ATMs. Carbon emissions from card payments fell from around 2,900 tonnes in 2015 to around 2,100 tonnes in 2019. We have set an emissions target of less than 4,000 tonnes of CO_2 from cash payments and less than 1,000 tonnes for debit card payments by 2030. For the most part, we depend on chain partners and other central banks to help us meet this target.

As for our own investments, we expanded our investment objective, adding social and ecological value creation to financial returns. We adopted a new investment policy to bring our own investments in line with the Paris climate agreement from 2025 onwards as far as possible. Total CO_2 emissions from own investments in 2021 fell compared to 2020 by 247,807 tonnes to 1,427,143 tonnes. Turnover-weighted CO_2 emissions decreased by 15%. For detailed information on sustainable and responsible investments, see the Financial overview.

The carbon footprint of our operational management is 4,603 tonnes, which we have fully offset. We operate in a climate-neutral way by offsetting carbon emission where we cannot avoid them. In absolute terms, our carbon emissions before offsets were significantly lower in 2021 compared to 2020. This reduction was mainly caused by the decrease in business travel resulting from travel restrictions, our purchase of green electricity for the temporary facilities in Haarlem, the reduction in natural gas consumption due to the change-over to district heating in our temporary building in Amsterdam, and the disconnection of our head office on Frederiksplein from the gas network. For more information see Annex 1 Additional information.

Construction of the new DNB Cash Centre in Zeist, a sustainable facility, is progressing well. During demolition work on the head office building at Frederiksplein, asbestos was found in a large part of the building's structure, which means the renovation will experience some delay. The move back to our head office will therefore take place in 2024, which is later than we had anticipated. In 2021 the round Satellite tower was dismantled, and it will be given a new purpose elsewhere. Some of its concrete is being reused as part of a circular chain in the building and elsewhere in Amsterdam. The structural construction phase of the DNB Cash Centre has been completed, and the finishing phase has started. Ecological integration is a major consideration in the design and construction phases. See also Annex 1 Additional information.

Our CSR ambition also focuses on ensuring an inclusive financial and economic system. **The fact that some people, including the elderly and people with disabilities, are significantly less satisfied with banking and payment services they were a few years ago is at odds with this aim.** This outcome of our Accessibility Monitor prompted the National Forum on the Payment System (NFPS) to draw up a targeted action plan. Suggested actions include better identifying the needs of these customer groups and increasing awareness of existing bank initiatives that are specifically available to these target groups, such as mobile care coaches, service points or customer service centres. People from these groups are less satisfied with banking and payment services, with overall satisfaction ranging between 6.5 and 7.4. By contrast, the average Dutch consumer has started to appreciate these services slightly more, rating them at 7.7 in 2021 compared to 7.6 in 2016. Overall satisfaction among specific groups has fallen below 7.0 for the first time since the Monitor was launched in 2007.

A follow-up survey held among SME entrepreneurs in the context of the Accessibility Monitor shows they rate cash-related services, such as cash withdrawal, cash deposits and cash exchange low to very low. In particular, restrictions on cash deposit facilities imposed due to explosive attacks, bank branch closures, staff shortages in cash-in-transit services and the Geldmaat transition seem to be major causes of these low ratings. The situation regarding cash deposit facilities improved in the second half of the year under review. For example, fewer deposit facilities were closed due to measures to combat explosive attacks, and the Geldmaat transition was completed. Moreover, stakeholders – including banks, Geldmaat, cash-in-transit companies and businesses – are currently making arrangements on the availability and accessibility of cash-related services to businesses in the forthcoming Cash Covenant.

Digital proficiency

We aspire to perform our core tasks more effectively and efficiently by leveraging data, technology and digital processes. This is why we took further steps to digitise our tasks in 2021, but we are still at the beginning of this digital transition. Furthermore, we worked with our stakeholders to initiate projects to respond to future changes in the financial sector. Internally, disruptions in our digital working environment were a major challenge in 2021.

Ambition: Digital proficiency	Progress in 2021	Priorities in 2022
Our work is data-driven, and based on digital technologies in all our areas of activity. We are recognised as a digitally-engaged participant in the financial sector. With the use of data, technology and digital processes, we can perform our tasks as effectively and efficiently as possible. We are also a respected peer in the sector in terms of digital know-how.	▪ We intensified digital and data-driven work in 60% of our supervisory processes. ▪ Our staff members can use scalable cloud data storage and data science, analysis and visualisation tools. ▪ We fleshed out our data strategy: a measurement model has made our ambitions more specific and enables progress monitoring. ▪ We rolled out an initial, more stable working environment based on Windows 365. ▪ We transferred some of the applications to the cloud. ▪ We exchanged experiences with data analysis, indirect cost trends and AI with the financial sector (iForum). ▪ We provided guidance to major European initiatives in the areas of data, digitisation, innovation and the cloud.	▪ Drawing up a DNB-wide plan to digitise/automate processes and achieve these objectives: – Finalising the digitisation of the supervision chain process – Adding existing and new services to the MyDNB portal for communication between DNB and financial institutions ▪ Shaping the role of data owner and improving data management. ▪ Making our digital environment more robust so that we can perform our core tasks more efficiently, more securely and with fewer incidents. ▪ Identifying digital trends and developments and incorporating them into our supervisory and other activities.

In early 2021, we set up a new governance structure to manage the Digital Agenda, which encompasses the entire ICT project portfolio – both the Digital proficiency ambition and regular ICT upgrading and maintenance. The structure is divided into seven portfolios, i.e. three DNB-wide programmes, which are Digital Processes & Innovation, Data, and Technology & Foundation, and four domains, which are Central Bank, Statistics, Supervision & Resolution, and Services. The Digital Agenda Board comprises representatives of these portfolios and manages the implementation of the Digital Agenda as a whole and its interdependencies.

In 2021 the main focus of the Digital Processes & Innovation programme was on digitising DNB-wide processes and introducing the MyDNB portal. Expanding the customer relationship management system (CRM) has laid the basis for digitising our core processes. In addition, we created MyDNB, which is a portal that should simplify communication with financial institutions. The portal went live in 2021, and the first services for institutions will be incorporated in 2022. We scaled back or efforts aimed at achieving DNB-wide innovation in 2021 to lend priority to the necessary steps related to the ICT and data foundation.

We used the opportunities provided by the review of our supervisory methodology to further digitise our supervision. This marks the first step in our digital transition to becoming a Smart Supervisor. We harmonised and digitised key parts of the supervision cycle in 2021, including over 60% (in terms of volume) of all applications and notifications from institutions, e.g. for assessments, licences and exemptions. As a consequence, in some cases we spend less time assessing them and can respond more quickly. In 2021 we carried out some 19 pilot projects to experiment with new technologies in supervision. Most of these involve the use of text analysis, for example to perform automated searches for key persons in an institution's documents or to conduct automated analyses of annual reports for legal and regulatory issues. The software for automatic risk scoring did not function as well as hoped in 2021, which resulted in more manual work than anticipated for our supervisors. The technical solution found for the risk score models will be implemented in 2022. We were unable to find suitable software for qualitative surveys of financial institutions in 2021. This means collecting and processing data remains time-consuming for the institutions and for us. In 2022, we will start a pilot project to build a user-friendly and robust solution.

In the Central Bank and Statistics domains, we made sufficient progress to launch the new trading system (MAPS) according to plan in 2022. The upgrading of the macroeconomic statistics backbone (MoMaS) is scheduled for completion in 2022. MAPS will extensively automate investment processes and make them more robust, bringing savings to the back office. We will also bring the processes in line with international best practices. Due to re-prioritisation, we have postponed the launch of the exchange requests portal (for the fully digital exchange of guilders) to 2022. The MoMaS programme for the production of macroeconomic statistics is progressing on schedule and within budget. In 2021 we migrated the production of bank interest rate statistics and the receipt of information from the ECB and the BIS to the new MoMaS infrastructure. The migration allows statisticians to use the improved functionality to comply with our statutory statistical obligations. The programme is scheduled for completion in 2022.

We implemented upgrades to increase data maturity and data quality for the performance of our core tasks. Milestones in 2021 included central cloud-based data storage, accelerated and more user-friendly data submission through the Digital Reporting Portal (DLR) and the introduction of new data science and analytics software to prepare analyses, risk scores and reports, which we now use throughout the organisation. Furthermore, we reflected our data strategy in an industry standard-compliant measurement model to make our ambitions for data-driving working more specific and to monitor progress. Efforts to increase data ownership are behind schedule due to a lack of resources. We have therefore made this a priority for 2022.

We had to contend with disruptions to our digital working environment over the past two years, which resulted in inconvenience to staff working remotely. We commissioned an independent external party to investigate these issues in 2021. As it turned out, the disruptions were caused by overly complex technology not designed for large-scale remote working and start-up problems in managing outsourcing. Acting on the recommendations, we have started rolling out a new working environment based on Windows 365 (smart workspace), which will be completed in early 2022. We also strengthened our grip on outsourcing and formulated a new vision for ICT. We are also developing a new (co-)sourcing strategy, which will enable us to choose new partners in 2023. Further improvements to the workplace remain a priority for 2022.

We conducted further research together with our stakeholders to gain more insight into possible changes in the sector, including those related to artificial intelligence (AI) and BigTechs. For example, we completed the 'Perspectives on Explainable AI in the Financial Sector' project in 2021 and issued a report on the impact of BigTechs on the revenue models of financial institutions. In the iForum, we conducted a survey with stakeholders, exploring the balance between financial supervision and offering financial institutions sufficient scope for innovation. As a follow-up, we are considering, with the AFM, whether there is a need to update our joint Innovation Hub and Regulatory Sandbox, which is a safe space in which institutions can discuss with us how they could innovate within the existing regulatory framework.

Staff members

In terms of value creation (see Figure 1: Value creation model), our staff members are our most important 'input capital'. Despite the complications of the COVID-19 pandemic, job satisfaction among our staff remained high. We made progress on our objective of having a diverse workforce that promotes a broader perspective and careful decision-making. We just missed our target of 37% women in management positions in the year under review, however.

Ambition: Staff members	Progress in 2021	Priorities in 2022
We are committed to greater diversity, open dialogue and enhancing the digital skills of our staff members.	■ We embedded diversity and inclusion more solidly throughout the organisation and conducted an additional study into cultural diversity. ■ We adopted a new vision of leadership. ■ We applied the updated performance management system effectively throughout our organisation. ■ We introduced a new job classification system and rotation policy. ■ We promoted social cohesion, taking remote and hybrid working into account. ■ We offered staff members the Data & Tech curriculum. 26% took the Wijzer in Data ('data savvy') course, which is well below our 80% target.	■ Making progress on inclusion and diversity targets on a division-by-division basis. ■ On a division-by-division basis, shaping the transition to alternate home and office working, with a focus on social cohesion and a healthy work-life balance. ■ Remaining an attractive employer for talented candidates in a changing labour market, conducting a labour market campaign that responds to changes, with talent management as a distinctive element.

According to results from the 2021 staff survey (71% response rate), staff members are happy working at DNB. Overall satisfaction (rated 7.4) even increased slightly compared to the previous survey of 2018 (7.3) and is above the benchmark[1]. Although strengthening a psychologically safe environment is rated slightly above the benchmark DNB-wide, this is an area of attention in several divisions and departments. This is also one of the three priority areas in our organisation-wide corporate culture change project. Work-life balance is rated below the benchmark average. Management in particular perceives the workload as too heavy. We score reasonably well on the question of whether we have an inclusive climate, an environment where everyone feels they belong and can be themselves. We spoke out clearly, both internally and externally, on the importance of diversity and inclusion. For example, we issued our Out & Proud Statement in which we speak out for LGBTQ+ inclusion. Also, as of 1 July 2020 and with retroactive effect, we offer staff members the opportunity to take two days of special leave annually for a holiday that is relevant for their philosophy of life or religious beliefs.

1 This benchmark consists of 30,000 employees from various sectors such as manufacturing, construction, business services and government & public administration. They score 6.9 on average.

In general, our staff proved resilient during the COVID-19 crisis. According to management, the productivity of many staff members remained high while working from home, although it seemed to drop slightly the longer the social distancing measures remained in place. More than half of our staff members are positive about working from home. Their appreciation of cooperation between teams and within departments is above average, despite the challenges of hybrid or remote working. With regard to absence due to illness, in 2021 short-term absenteeism decreased during the COVID-19 crisis and was roughly the same as in 2020 (see Annex 1 for additional information). Staff members were less likely to report sick during the pandemic. In 2021 we drew up a vision of work in which 'connection' is the common thread: connection with our work, our colleagues and society. In the interests of social cohesion, cooperation, development and well-being, we encouraged staff members to work in the office for about half of the time during the less strict lockdowns and to keep a healthy work-life balance in mind.

We did not reach our 2021 target of 37% women in management positions in the final month of the year under review, as the percentage dropped from above 37% in the previous six months to 36.1% as at 31 December. We are nevertheless sticking to our decision of mid-2021 to raise the bar yet again: 40% of managers should be women by 2023. We developed coaching and mentoring programmes to enable women to progress to management positions. We received an award from "Talent to the Top" in recognition of the growing proportion of women in management positions and our efforts in the area of diversity over the past years.

The percentage of staff members with a non-Western migration background is comparable to the overall working population in the Netherlands (11%), but in our higher job scales it is below average (5%). This has emerged from further research for Statistics Netherlands' Cultural Diversity Barometer. To increase the percentage at senior and management levels, we are devoting extra attention to the progress of our internal talent through the various job scales.

We are on track for meeting our target regarding permanent employment of staff members with occupational disabilities by the end of 2025. In 2021 they filled 23 participation FTEs (25.5 hours per week). By 2025, this should grow to 45 participation FTEs. Retaining the relevant staff members and further developing tailor-made opportunities are currently the main challenges.

We achieved a higher ranking for certification as a Top Employer in 2021 than in the previous year. This is partly due to the greater emphasis in our HR policy on staff member development and well-being as part of our "Blue Zone" programme. Even though ICT experts are in short supply, we managed to recruit enough people to fulfil our ambitions in the field of digitisation and data. Attracting talented staff members in a tighter labour market will be a priority in 2022.

Staff members once again rated their development opportunities highly in the staff survey. The DNB Academy offers a broad curriculum of training sessions and courses. We have been offering a Data & Tech curriculum since 2021 to help our staff members develop their digital skills. One of the 84 training courses in this curriculum is the Wijzer in Data ('data savvy') course. Only 26% of staff members took the course in 2021, which is considerably below our 80% target. This low rate was due to the course being launched during the lockdown period. Our Digital Skills Framework, developed in 2021, explicitly identifies the digital skills that are expected of staff members in our Supervision and Resolution domains. We will roll out the framework across other parts of our organisation in 2022.

Cost-conscious

We aspire to perform our core tasks as effectively and efficiently as possible while being transparent about these efforts. With this aim in mind, we launched an efficiency analysis in the Central Bank domain during the year under review, as we had done in Supervision and Resolution in 2020. Likewise, we started to organise various internal processes more effectively and efficiently.

Ambition: Cost-conscious	Progress in 2021	Priorities in 2022
Greater cost consciousness and emphasis on operational management will boost effectiveness and improve insight into the results achieved.	■ We brought our headcount more into line with our tasks following an efficiency analysis. ■ We set up our process architecture to link with our digital proficiency ambition. ■ We improved our management information in several respects. ■ We drew up a new vision of work, incorporating lessons learned from the COVID-19 crisis.	■ Embedding a focused performance of our tasks and efficiency in our annual planning cycle. ■ In addition to (i) line management, ensuring (ii) programme-based and project-based control over objectives and (iii) embedding process management into overall management. ■ Achieving demonstrable effectiveness and efficiency by (re)designing and maintaining processes.

We started working with our updated supervision methodology during the year under review. We wish to deploy our scarce resources and expertise in a more risk-based manner, making deliberate and cost-conscious choices in their allocation. We developed digital tools that help supervisors assess and record an institution's risks in a uniform manner. As a result, we deliberately select the risks on which we take supervisory action and we do so in a transparent and accountable way (see also the section on Digital proficiency).

We launched an efficiency analysis in the Central Bank domain to assess how we should deploy the available resources most effectively and efficiently going forward. To do so, we adopted a central bank strategy, followed by a "health check" based on, among other things, a benchmark with other central banks to examine where we can perform our tasks more efficiently in the long run. In 2022, this should result in an indicative multi-annual framework 2023-2025 for this domain. The 2021 benchmark study for our statistics task already showed that our resources for this task are substantially less generous than at other European central banks (see also the section on More balanced economic conditions). We will expand the headcount for our statistics task from 2022 onwards to ensure a better alignment of our resources with our tasks.

We achieved our planned savings for 2021 for the ZBO tasks as incorporated in the cost framework. To prepare the cost framework for the ZBO (independent public body) tasks for the period 2021-2024, we performed an in-depth efficiency analysis for Supervision and Resolution in 2020, including a benchmark for internal operations. The efficiency analysis revealed that the new cost framework was is in line with an international benchmark. We also identified multi-year savings opportunities and incorporated these into the cost framework for 2021-2024. The costs incurred for the ZBO tasks in 2021 were below budget, which means we achieved the agreed savings for this year (see the Financial overview for more details).

Box 2 External assessment of our ZBO tasks

The five-yearly ZBO (independent public body) assessment held in 2021 found that DNB is "a professional and solid supervisor" that "supervises the financial sector on the basis of detailed and well thought-out strategies. Through its supervisory activities, DNB contributes to a stable financial system". It also concluded that "in the period under review (2016-2020), DNB has undergone a development that has resulted in improvements, in terms of both the performance of its supervisory tasks and the professionalisation of its organisation".

Nevertheless, points of concern and areas for improvement remain. For example, financial institutions are unhappy about rising compliance costs. Their perception is that they are being burdened with an increasing number of statutory requirements. The assessment also notes that support for the implementation of our risk-based supervision warrants attention. One of the recommendations is that we could build support by being transparent about the reasons for focusing on specific risks, or by actively consulting stakeholders. Taking this recommendation to heart, we decided to draw up an action plan to increase support for risk-based supervision among our stakeholders. There is also dissatisfaction, particularly among institutions in the smaller sectors such as payment institutions and crypto service providers, about the way in which the costs are distributed under the current laws and regulations. The Ministry of Finance has set up a working group to study this.

Stakeholders also tell DNB to "remain open to critical comments from outside its organisation and use them as opportunities to improve the effectiveness of its supervision and the functioning of its organisation". A further recommendation is to structure cooperation with the AFM more along strategic lines.

We took the first step in establishing a DNB-wide process architecture. A process architecture is needed to be verifiably in control, accountable and adaptive to change. It also makes it easier to use scarce resources in the right places. With the project's completion scheduled for spring 2022, process owners will be responsible for (re)designing, consistently documenting and managing our processes.

The COVID-19 pandemic and our accommodation programme prompted us to formulate a new vision of work, with hybrid working now being the standard. Hybrid working permanently reduces our domestic and international business travel and brings down commuting costs.
We plan to elaborate our remote working policy in greater detail in 2022.

Operational risk management

Various risks have the potential to impede the performance of our tasks and the achievement of our strategic ambitions. Identifying risks in time allows us to implement appropriate controls. We distinguish between strategic, financial and operational risks. We encounter strategic risks when performing our core tasks and pursuing our strategy. The associated annual divisional plans describe these risks and the potential risk mitigation controls. The Financial overview section discusses financial risks. Below, we explain how we manage our operational risks.

The governance structure of our operational risk management is based on the three lines of defence (3LOD) model, in line with Basel guidelines and the Dutch Corporate Governance Code. This model details three lines of defence for managing risks which together, but independently, aim to manage our operational risks as effectively as possible.

1st line	An Operational Risk Officer in each division coordinates the identification, assessment and documented management of operational risks
2nd line	The Operational Risk Management department and the risk-category coordinators establish policy frameworks, advise and challenge the first line and monitor and report on the organisation-wide risks
3rd line	The Internal Audit department conducts audits into the effectiveness of the governance framework and the consistent application of policies and processes

The Executive Board announced the ambition in 2019 to have a sustainable operational risk management structure in place by the end of 2021. In a DNB-wide programme, the divisions worked to reach the desired maturity (the "sustainable phase") in the 3LOD model. By the end of the year under review, almost all divisions had reported meeting the criteria for this sustainable phase. In early 2022, our Operational Risk Management (ORM) department and Internal Audit Department (IAD) will check whether this is indeed the case. Subsequently, they will also periodically assess whether the desired level is being maintained in a sustainable manner. In addition, in 2021 we implemented a central governance, risk and compliance tool that will provide a more integrated overview of risks, controls and incidents in our organisation.

In early 2021, the Executive Board adopted the risk appetite. This risk appetite indicates how much risk we are prepared to run in performing our activities in 11 operational risk categories. We applied it across all organisational levels, using it as control information. We also defined roles and responsibilities throughout the divisions and streamlined the reporting lines between the first line, the second line, the Operational Risk Board and the Executive Board. In addition, we established a monitoring structure to ensure that all divisions continue to pay sufficient attention to operational risk management.

Our risk profile remained relatively stable for many operational risk categories in the year under review. The most significant developments were seen for HR risk and information security risk. The prolonged period of working from home, having to strike a new balance between office and remote work along with increased workloads, combined with the tightness of the labour market, created a heightened HR risk in the year under review. We attempted to respond to this as adequately as we could by maintaining an open dialogue and taking appropriate actions in the area of performance and awareness. This included ensuring a healthy workplace and communicating the importance of maintaining a good balance between work and rest. Despite labour market shortages, especially in the ICT field, we managed to recruit a sufficient number of new staff members (see also the section on Staff members). We again devoted ample attention to business continuity risks in the year under review. As a result, failure of critical and non-critical business processes did not result in major continuity risks.

In addition, a high level of information security still features prominently on our agenda. We are aware of how essential it is to be able to respond adequately in an environment of increasing cyber threats. In 2021 we established a steering committee to implement our DNB-wide Cyber programme, with the aim of bolstering DNB-wide cooperation in this area. The second line regularly challenges measures that are in place to ensure that the confidentiality, integrity and availability of data or information are not compromised. We are also working to strengthen what are known as soft controls, such as risk culture and awareness.

Financial overview

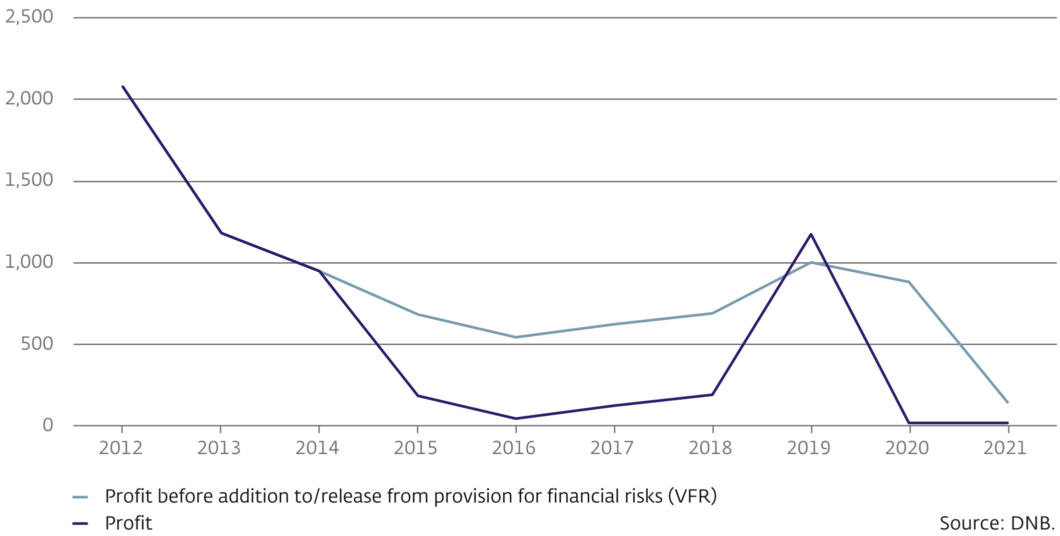
The monetary measures taken by the ECB to ensure price stability and limit the harmful effects of the COVID-19 pandemic on the economy again depressed our profitability, increased our exposures and resulted in high risks in 2021. Our exposures and risks stem from the Eurosystem's joint monetary policy, our own investments and other activities. When the COVID-19 pandemic broke out, the Governing Council of the ECB introduced a range of monetary measures to ensure price stability and limit spill-over effects on financial markets, banks and the economy. These came on top of the unconventional monetary measures already in place. This section details the impact these measures had on our profit, costs, exposures and buffers.[2] It also discusses our sustainable and responsible investment policy.

Profit

Our profitability is under sustained pressure due to the monetary measures. Our profit before allocation to the provision for financial risks (VFR) fell to €144 million in the year under review from €883 million in 2020 (see Figure 6). From this profit, we added €128 million to the VFR in 2021 to further bolster our buffers. Net profit amounted to €15 million, which is to be distributed as dividend to the shareholder.[3] Future profits are highly dependent on interest rate developments and the monetary policy measures taken by the ECB's Governing Council. Due to the purchase programmes, our monetary exposures will remain considerable for the foreseeable future and profit will remain highly sensitive to interest rates. Based on current insights, our profit will also be low in the coming years, and losses cannot be ruled out.

Figure 6 Long-term profit development

EUR million



Source: DNB.

2 The rubrics 'exposures' and 'risks and buffers' are part of the risk paragraph in the Financial overview section and are therefore included in the scope of the independent auditor's report (see page 169). Totals may not add up due to rounding.
3 The addition to the VFR and the dividend distribution are in line with our capital policy and the agreements made with the shareholder regarding ESM compensation.

Our profit on monetary operations was historically low in the year under review as a result of the ECB's pandemic-related measures. In 2021, monetary operations contributed negatively to our financial result for the first time, causing a €9 million loss compared to a €391 million profit in 2020. The Eurosystem conducts monetary operations jointly. Details are provided in Box 3. The new purchases and reinvestments under the purchase programmes depress our result because we purchase these bonds at an interest rate that is, on average, negative. The negative interest rate on the three-year refinancing operations (TLTRO-III) causes interest charges that also affect our result, although these interest charges are lower than we had previously anticipated. On the other hand, the increase in purchases and lending to banks have resulted in higher monetary deposits, which are subject to negative interest rates. Despite these monetary deposits being partially exempt from negative deposit rates, their higher volume generated higher interest income compared to a year earlier.

Box 3 Monetary operations

The active purchasing programmes are the asset purchase programme (APP) launched in 2014 and the pandemic emergency purchase programme (PEPP) launched in March 2020. With these purchases, the Eurosystem creates additional liquidity to maintain favourable financing conditions and contribute to the ECB's objective of price stability. Purchases under the PEPP will take place until March 2022, and reinvestments will be made at least until the end of 2024. The inactive securities markets programme (SMP) and the covered bond purchase programmes (CBPP1&2) are gradually expiring.

Most of the purchases under the APP and the PEPP are debt securities issued by the public sector. The programmes do not involve an arrangement for sharing income and risks on these government bonds or on the covered bonds under the CBPP1&2 in the Eurosystem. By contrast, the income and risks under the other purchase programmes are shared among the central banks on the basis of their Eurosystem capital keys. The asset-backed securities purchase programme (ABSPP) is on the ECB's balance sheet and is primarily at the ECB's risk. More details on the securities purchased under the various programmes are provided on page 132 of the financial statements. The purchase programmes are part of the unconventional monetary policy.

Liquidity provision to banks takes place through open market operations (OMOs). In addition to regular liquidity provision these also include the targeted long-term refinancing operations (TLTROs) aimed at credit growth and the pandemic emergency long-term refinancing operations (PELTROs), which are part of the unconventional policy. Since June 2020, the interest rate at which banks can borrow from the ECB via TLTRO-III has been reduced. A reduced interest rate stimulates bank lending but affects our financial results. Until June 2022, the interest rate can be as low as -1% (0.5% below the deposit facility rate), provided the banks lend the money to businesses and households, other than through mortgage loans. This liquidity provision is for the shared account and risk of Eurosystem central banks.

Own investments performed well in the year under review with a reported result of €254 million (see Table 2). This was mainly due to the solid returns on the externally managed equity funds. Price gains caused the size of the equity portfolio to reach our strategic upper limit during 2021, and we sold equity fund units to bring the portfolio back to within strategic ranges. In the process, we realised part of the revaluation reserve for equity funds. Even after we had sold the units, the equity portfolio performed well, thereby increasing the size of the revaluation reserves. At year-end 2021, the equity portfolio again reached the strategic upper limit, after which we again sold fund units in January 2022. This will release part of the revaluation reserve to the profit and loss account for 2022.[4]

Table 2 Breakdown of our profit

EUR million	31/12/2021	31/12/2020	Difference
OMO	(1,196)	(602)	-594
CBPP1 & 2	1	2	-1
CBPP3	70	79	-9
SMP	50	109	-59
CSPP	149	120	29
PSPP	247	252	-5
PEPP	(286)	(66)	-220
Money market liabilities for monetary deposits	956	496	460
Release(+)/addition(/-) provision for monetary policy operations	0	1	-1
Total monetary operations	**(9)**	**391**	**-400**
Euro portfolio fixed-income securities	1	8	-7
Foreign currency denominated fixed-income securities	(41)	(30)	-11
Equity funds	290	397	-107
High-yield bond funds	1	12	-11
Investment-grade bond funds	1	1	0
IMF receivables	2	(20)	22
Total own investments and IMF receivables	**254**	**368**	**-114**
Money market liabilities for non-monetary deposits	144	254	-110
Total sundry (including expenses)*	(246)	(130)	-116
Total release from (+)/addition to (-) for provision for financial risks (VFR)	(128)	(868)	740
Profit	**15**	**15**	**0**

* Sundry includes operating expenses, fees and charges paid by supervised institutions and income from participating interests.

4 See page 115 for the accounting policies.

Non-monetary deposits contributed €144 million to the 2021 result. These are deposits we hold for other central banks, central clearing institutions and public institutions at a rate of interest equal or just below the deposit facility rate. As the total volume of non-monetary deposits fell in 2021 and deposit rates were negative, this interest income decreased by €110 million compared to 2020.

Costs

Total costs incurred for 2021 exceed the budget by €7.7 million (2%). If we adjust the costs incurred for the costs of banknote production, which depend on the production volume the ECB assigns to us and are therefore determined by external factors, there was a €6.1 million budget underrun (-1%). The costs for each core task are shown in Table 3.

Table 3 Costs per core task

EUR million

Task	Actual 2021	Budget 2021	Difference	Actual 2020	Actual 2019
Supervision	188.2	194.3	-6.1	176.4	164.8
Resolution	15.7	16.7	-1.0	10.7	9.2
DGS	7.2	7.8	-0.5	10.8	9.1
ZBO subtotal	**211.1**	**218.7**	**-7.7**	**197.9**	**183.1**
Financial stability	16.9	17.8	-0.9	12.7	12.7
Cash and payment systems	114.0	113.9	0.2	105.5	105.5
Monetary policy and reserve management	73.2	69.9	3.3	64.3	63.6
Statistics	46.5	47.7	-1.1	47.7	51.5
Monetary affairs subtotal	**250.7**	**249.3**	**1.5**	**230.2**	**233.3**
FEC	3.5	3.3	0.1	3.3	2.9
Total excluding banknote production costs	**465.3**	**471.4**	**-6.1**	**431.4**	**419.3**
Banknote production costs	42.1	28.3	13.7	23.0	11.0
DNB total	**507.3**	**499.7**	**7.7**	**454.4**	**430.3**

The €6.1 million underrun in our regular budget is the net result of various costs that were higher or lower than anticipated. Among other things, staff costs were lower than budgeted, as pay scales for new recruits were lower on average and certain organisational units were understaffed. In addition, the COVID-19 pandemic had an impact on costs such as travel and accommodation expenses, training costs, commuting costs, insourced staff for on-site examinations and events. These underruns allowed us to absorb some additional expenses in 2021, such as support for achieving a sustainable level of operational risk management, expenses for future-proofing the organisation and additional functional management resources. In addition, costs for the accommodation programme were moved forward, resulting in higher than budgeted costs for this programme in 2021. We also incurred additional costs in 2021 to strengthen the IT foundation, part of which was charged to resources budgeted for the Digital proficiency ambition. A more detailed explanation of the costs of our ZBO tasks can be found in the Dutch-language 2021 independent public body (ZBO) report (see budget and accountability).

Exposures

Total exposures at risk in 2021 increased further to €369.1 billion due to the measures taken in response to the COVID-19 pandemic. The €78.5 billion increase in our exposures compared to 2020 is almost entirely due to purchases under the pandemic emergency purchase programme (PEPP) and increased lending to banks through open market operations (OMOs). Table 4 shows our share of the Eurosystem's total exposure for each purchase programme.

Table 4 Our monetary exposures by purchase programme and country

EUR billion

	OMO	SMP	CBPP 1-3	PSPP	CSPP	PEPP	Total
Netherlands	10.2	0.0	1.3	104.7	5.4	75.1	196.7
France	28.5	0.0	4.7	0.0	5.7	0.8	39.8
Germany	24.7	0.0	3.7	0.0	2.2	0.4	31.1
Italy	26.6	0.2	1.6	0.0	1.3	0.1	29.9
Spain	17.0	0.0	2.7	0.0	1.2	0.4	21.3
Other	22.1	0.1	2.1	15.6	2.3	8.2	50.4
Total	**129.1**	**0.3**	**16.1**	**120.3**	**18.3**	**85.0**	**369.1**
Difference relative to December 2020	23.8	-1.2	0.6	6.9	3.5	45.0	78.5

The exposures on which we incur a risk are reported. The total may differ from the sum of the exposures for each country and each programme due to rounding differences.

The size of our own investment portfolio increased slightly last year due to additional investments in government bonds and equity funds. These additional investments improve the diversification of risks within our own investments. Table 5 shows the composition of our own investments and the size of our IMF receivables. The foreign currency portfolio consists of high-grade government and semi-government bonds. We deliberately maintain a low risk profile for this portfolio. For example, we use forward exchange contracts to hedge most of the currency risk in the foreign currency portfolio. The foreign exchange risk on the IMF receivables, which are expressed in a basket of international currencies (special drawing rights – SDRs), is also hedged. The increase in the IMF receivable is broken down in the notes to the balance sheet under '2.1 Receivables from the International Monetary Fund (IMF)' In addition to self-managed foreign currency portfolios, we also have participations in externally managed investment funds with equities and corporate bonds.

Our holdings in external equity funds grew in the year under review due to new investments and price gains. Sustainability is a key focus in our own investments, as explained in more detail in the section on sustainable and responsible investment.

Table 5 Composition of own investments and IMF receivables

EUR billion

	31/12/2021	31/12/2020	Difference
Foreign currency denominated fixed-income securities	4.6	4.3	0.3
Equity funds	2.7	1.9	0.8
High-yield bond funds	0.6	0.6	0.0
Investment-grade bond funds	0.6	0.6	0.0
IMF receivables	4.2	3.2	1.0
Total	**12.7**	**10.7**	**2.0**

Risks and buffers

Total calculated risk decreased by €2.2 billion to €13.7 billion in the year under review. Total risk largely consists of interest rate risk and credit risk arising from monetary operations. Modelled risks arising from monetary operations fell by €2.0 billion to €12.7 billion in 2021. The calculated credit risk on monetary operations remained virtually unchanged. The risk on our own investment portfolio decreased by €0.1 billion to €0.8 billion, despite the portfolio's larger size, amid lower volatility in the financial markets. We use proprietary risk models to calculate our risks, and we apply strict guidelines for their governance. In line with these guidelines, the models were validated in the year under review by experts from our supervisory divisions who were not involved in their development.

Monetary operations in particular created a significant interest rate risk. At year-end 2021, the modelled interest rate risk amounted to €9.4 billion. The interest rate risk arises from the large maturity differences between our assets and liabilities. On the one hand, we purchase long-term bonds at low or even negative interest rates, thereby fixing low interest income for a long period of time. On the other, banks largely hold their surplus liquidity as short-term deposits with us, on which we pay variable interest rates. We determine the extent of interest rate risk by projecting an extreme but plausible scenario with rising key policy rates. Whereas rising key policy interest rates have limited impact on our interest income from purchases, they do lead to higher interest charges on deposits. In addition to interest rate risk, the monetary operations also give rise to credit risk. Most of the credit risk stems from the purchase programmes. Lending to banks through OMOs contributes to a limited extent to our overall risks because the interest rate on this type of lending will be variable after the temporary pandemic measures expire, and collateral limits the credit risk on the loans.

The risks from the unconventional monetary policy will remain on our balance sheet for many years. This is due to the long maturity of the bonds purchased under the various programmes. The level of our risks is also highly dependent on the impact of prevailing monetary policy measures on our balance sheet developments and market conditions.

We will use nearly all of our 2021 profit to bolster our buffers. As the total calculated risks at year-end 2021 were higher than our total buffers, we added €128 million to the VFR in accordance with the capital policy agreed with the shareholder. Our buffers are in place to absorb potential losses. Our capital policy distinguishes between buffers to cover temporary risks (VFR) and buffers to cover long-term risks and latent uncertainties (our capital). Table 6 summarises the key figures.

Gold occupies a special position in our risk framework. Our gold reserves (€31.7 billion) are intended to cover ultimate systemic risks that can materialise in extreme scenarios beyond the limits of the risk calculations. We therefore manage our gold reserves passively.

Table 6 Our exposures, risks and buffers

EUR billion

	31/12/2021	31/12/2020	Difference
Total exposures	**381.9**	**301.4**	**80.5**
Monetary exposures	369.1	290.7	78.5
Own investments and other portfolios	12.7	10.7	2.0
Total risk*	**13.7**	**15.9**	**-2.2**
Risk under provision for financial risks (VFR)	11.1	13.0	-1.9
Other risks	2.6	2.9	-0.3
Risk buffer	**11.3**	**11.2**	**0.1**
VFR	2.8	2.7	0.1
Capital and reserves	8.5	8.5	0.0

Exposures involving risks for DNB, excluding gold and intra-system exposures.

* The risk under the VFR consists of the interest rate risk and the credit risk on purchases in the active asset purchase programmes APP and PEPP, excluding exposures to the Dutch government. All other risks, including the risks from other purchase programmes, own investments and liquidity provision to banks (OMOs), are covered by capital and reserves.

Climate-related risks, monetary policy and balance sheet management

Following its recent strategy review, the ECB's Governing Council will incorporate climate-related risks into its monetary policy in the coming years. For instance, the Eurosystem is expanding its analytical resources in the area of macroeconomic modelling and statistics in order to better include climate-related risks in the formulation of its monetary policy. The Eurosystem will also disclose the climate-related risks to which it is exposed and explore the possibilities of incorporating climate-related risks into the CSPP and the collateral framework. Furthermore, the Eurosystem will integrate climate-related risks into its own risk management framework, in particular by conducting climate stress tests.

We are also developing our own climate risk management framework to better protect our balance sheet from the financial ramifications of climate change. This framework focuses on identifying, analysing and managing climate-related risks. These are physical risks due to climate shocks such as floods and extreme droughts, and transition risks due to governments' climate policies such as an unexpectedly large increase in the price of greenhouse gas emissions. For now, this framework focuses on the impact that climate-related risks have on our balance sheet (the inward impact). We manage the contribution of our balance sheet to climate-related risks through the greenhouse gas emissions of the entities in our investment portfolios (the outward impact) through the investment policy for our own investments.

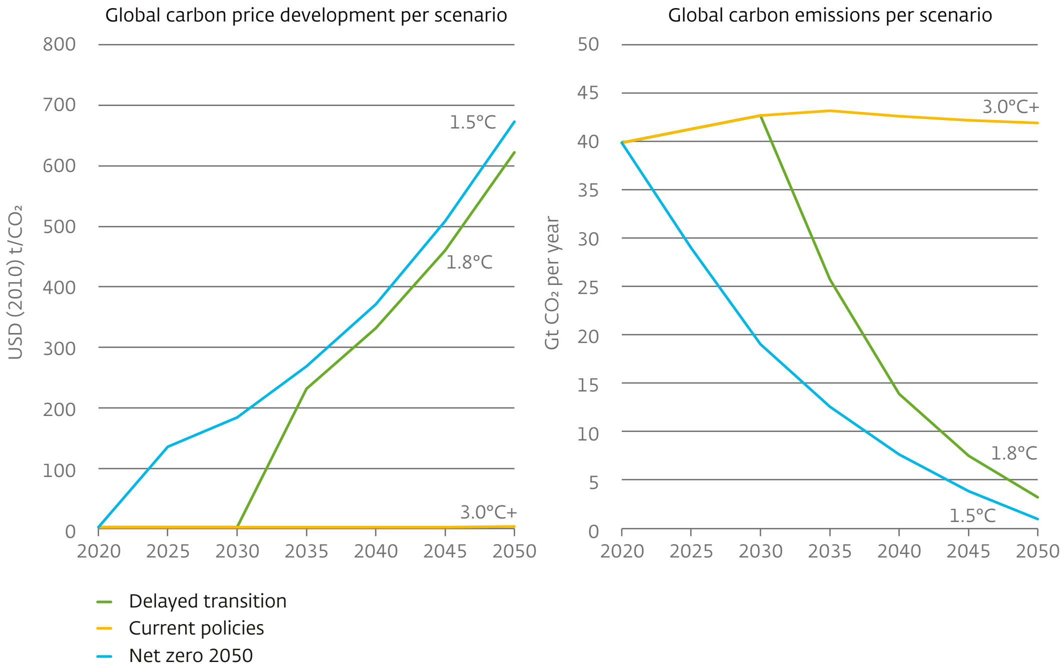
Managing climate-related risks is challenging because the consequences of climate change are surrounded by fundamental uncertainty. Future greenhouse gas emissions and the impact of climate change on the economy and financial markets are largely unknown. Ultimately, climate-related risks translate into regular financial risks such as credit risk and market risk. Unlike regular risks, however, climate risks are difficult to quantify. This is why we are developing the climate risk management framework alongside our regular risk management framework. We apply the precautionary principle in our climate risk management framework, which means that we exercise additional caution in our risk management process to reduce the impact of climate shocks. A climate stress test is a key component of the framework.

Climate stress test

We subjected our balance sheet to a comprehensive climate stress test in the year under review. Unlike in 2020, we looked not only at transition risks, but also at physical risks using three scenarios from the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). These scenarios are 'net-zero 2050', 'delayed transition' and 'current policies'. A key feature of these scenarios is global carbon pricing and its impact on carbon emissions (Figure 7). In the 'net-zero 2050' scenario, the carbon price is raised immediately and emissions are reduced to such an extent that the target of keeping global warming below 1.5ºC by 2050 is met. In the 'delayed transition' scenario, the carbon price increase comes later, and global warming reaches 1.8ºC. In the 'current policies' scenario, adequate carbon pricing is not achieved, and global warming exceeds 3.0ºC. In addition to the scenarios themselves, the NGFS also publishes their potential impact on long-term trends in macroeconomic variables, such as interest rates and equity returns.

We need these to assess the sensitivity of our profit and risks to the scenarios. To do so we use, among other things, the sensitivity of the governments and enterprises in which we invest to transition risks and physical risks. We measure sensitivity to transition risks based on normalised carbon emissions (based on Scope 1 and 2 emissions, see Box 4). We measure sensitivity to physical risks on the basis of geographical location.

Figure 7 Global carbon prices and emissions under NGFS scenarios in our climate stress test



The stress test shows that our profit and interest rate risk are highly sensitive to the 'net-zero 2050' scenario (Figure 7). The increase in carbon prices leads to inflation, which also causes interest rates to rise sharply in this scenario. Given the current size and structure of our balance sheet, this will have an adverse impact on our profit. The sensitivity of our profit and interest rate risk to the other two scenarios is medium to low because the transition to a zero-carbon economy is not initiated at all or only after 2030. Although these scenarios have a strong impact on interest rates and the economy in the long run, we estimate that the monetary portfolios on our balance sheet will be substantially smaller by then. Figure 9 shows the impact of the three climate scenarios on the market risk of our own investments, both in the short and long term. The 'delayed transition' and 'current policies' scenarios have a relatively large impact on market risks in the long term, because many enterprises are vulnerable to long-term climate risks. As the NGFS scenarios cover several decades, we need to make many assumptions about how our balance sheet will develop. The results of the stress test are therefore not a forecast but a sensitivity analysis surrounded by uncertainty. In the years ahead we will use the results of the climate stress test, among other things, to explore risk controls.

Figure 8 Climate scenario impact on our profit and risks

Scenario	Our profit	Our total risks
Net-zero 2050	high	high
Delayed transition	medium	low
Current policies	low	low

Climate scenario impact on our profit and risks (interest rate risk and credit risk) for 2021-2030, in absolute terms.

Figure 9 Climate scenario impact on our market risks

Scenario	Corporate bonds		Equities	
	Short term	Long term	Short term	Long term
Net-zero 2050	medium	medium	medium	medium
Delayed transition	low	high	low	high
Current policies	low	high	low	high

Climate scenario impact on the market risks of corporate bonds and equities in our portfolios, relative to the NGFS baseline scenario.

Sustainable and responsible investment

By 2025, we want our own investments to be in line with the targets set in the Paris climate agreement as far as possible. This will help us better manage climate-related risks and do our part in transitioning to a sustainable economy. We included this ambition in the Sustainable Finance Strategy, which we published in 2021.

Our investment objectives and beliefs

We introduced a dual investment objective in 2021, adding social and ecological value creation to financial returns. In so doing, we upgraded sustainable and responsible investment (SRI) from a precondition to an explicit investment objective. We did so because we want to contribute to real world outcomes by bringing our investments in line with the objectives set out in the Paris climate agreement as far as possible.

Our investment beliefs lend further substance to our new dual investment objective. We formulated seven SRI beliefs in addition to our pre-existing 'regular' investment beliefs in 2021. These beliefs describe our convictions underlying the dual investment objective, including investing in line with the Paris climate agreement, integrating ESG criteria (environmental, social and governance) into the investment process, stewardship – which includes engaging in dialogue with the enterprises in which we invest – and exclusions from our investment universe.

Investment policy and stewardship

We reviewed the SRI policy for our developed markets equity portfolios. The new equity guidelines describe our dual investment objective and SRI beliefs in further detail. For example, we have established a carbon emissions reduction path based on the targets set in the Paris climate agreement. In addition, we expect our external managers, which implement the guidelines on our behalf, to assess each enterprise's progress in meeting the climate targets and to engage in dialogue with those enterprises that lag behind. This is part of our stewardship activities.

Implementation and monitoring

We have taken steps to further improve the level of implementation of our SRI policy. During the year under review, we prioritised the development of the new policy (see Investment policy and stewardship) and made preparations to implement this policy through mandates. In addition, the implementation level of screening against the UN Global Compact increased to 100%, from 98% in 2020, thanks to a constructive dialogue with one of our external managers. We also appointed two new external emerging markets equity managers which integrate ESG into the investment process. ESG integration also plays a more prominent role within our internally managed (semi-)government bonds portfolio, as we assess issuers not only in terms of their financial health but also in terms of ESG . For example, we consider whether they pursue a CSR policy or issue green bonds. Furthermore, we started identifying the most material risks from an ESG perspective for each issuer in 2021. Despite these steps, the ESG integration level for our own investments fell by 5 percentage points to 72% in the year under review, mainly due to a new passively managed government bond portfolio, which we had created for diversification purposes.

Furthermore, our internally managed green bond portfolio reached its target allocation of €400 million in the year under review. Standing at €427 million, it currently accounts for approximately 10% of our internally managed reserves. The green bonds that we invest in are used to finance projects in the infrastructure, renewable energy and sustainable transport sectors, among others. We saw no need in 2021 to start an engagement process with any of these green bond issuers. We will evaluate our policy in 2022, together with the size of our green bond portfolio.

Total carbon emissions from our own investments increased in 2021, in line with the total size of our investment portfolios. For example, our allocation to (semi-)government bonds increased by €300 million, causing total carbon emissions from this portfolio to be higher than in 2020. In addition, carbon emissions from our equity portfolio increased after we had appointed two new external managers which invest in emerging-market enterprises. These enterprises tend to have relatively high levels of carbon emissions. Furthermore, compared to 2020, the carbon footprint of our own investments increased, measured in carbon emissions per million euro invested. However, this increase is distorted by limited data coverage for (semi-)government bonds for this indicator (57%).

Revenue weighted carbon emissions from our own investments were lower than in 2020, however. The decrease was driven by the (semi-)government bonds, which tend to have a lower carbon intensity due to the sustainable nature of the activities they finance. In addition, data coverage for the carbon intensity of semi-governmental organisations is almost complete at 95%. Under our new policy, we will actively pursue carbon emission reduction in line with the targets set out in the Paris climate agreement . We expect to issue a first equity mandate specifying this objective in 2022.

Table 7 Trends in climate indicators for own investments

	Total (difference from 2020)	(Semi-)government bonds (difference from 2020)	Corporate bond (difference from 2020)	Equities (difference from 2020)
Portfolio size (EUR billion)*	8.2 (1.0)	4.3 (0.3)	1.2 (0)	2.7 (0.8)
Data availability**	73% (-7%)	57% (-15%)	74% (-5%)	99% (0%)
Total CO_2 emissions (tCO_2e)***	1,427,143 (247,807)	1,179,198 (275,305)	127,077 (-44,766)	120,868 (17,267)
CO_2 emissions per million euro invested (tCO_2e/portfolio size)****	209 (40)	425 (168)	124 (-30)	40 (-5)
Data availability*****	94% (-1%)	95% (0%)	78% (-8%)	99% (0%)
Revenue weighted CO_2 emissions (tCO_2e/revenue)	171 (-31)	184 (-39)	271 (-8)	116 (1)

* Portfolio size is calculated based on market value as of 31 December 2021, excluding cash and derivatives positions. Portfolio sizes can vary considerably from year to year.
** Data availability for total CO_2 emissions per million euro invested.
*** Total CO_2 emissions from (semi-)government bonds are based solely on emissions from government bonds in the portfolio. Necessary data such as enterprise value is lacking for semi-government bonds due to complex organisational structures.
**** The name of this indicator has changed from last year, but its methodology has remained unchanged. For this indicator, emissions are divided by the proportion of the portfolio size in USD for which emissions data is available.
***** Data availability for turnover weighted CO_2 emissions.

Box 4 Notes on CO_2 emissions and climate indicators

All greenhouse gas (GHG) emissions are measured and expressed as tonnes of CO_2.
Our calculations currently only involve scope 1 and scope 2 emissions. Scope 1 includes direct emissions (e.g. from heating systems, vehicles and generators). Scope 2 includes indirect emissions caused by purchases of products for further use and production (e.g. electricity generated elsewhere). We plan to add scope 3 emissions in a few years once the data availability of enterprises has improved. Scope 3 emissions include all other indirect emissions produced as a result of activities that take place after the production phase (e.g. during the consumption phase or waste processing phase), over which enterprises have little direct influence.

The total CO_2 emissions indicator is the sum of all scope 1 and 2 GHG emissions of enterprises in the portfolio, weighted by the proportion of our investment in each enterprise, based on enterprise value. CO_2 emissions per million euro invested (carbon footprint) corrects for our portfolio size, making it easier to compare emissions from different portfolios. Turnover-weighted CO_2 emissions (weighted average carbon intensity) denotes a portfolio' exposure to enterprises with relatively high emissions. For government bonds, CO_2 emissions are weighted by total public debt (rather than by enterprise value) or GDP (rather than by turnover).

Reporting and evaluation

As a signatory to the Principles for Responsible Investment (PRI), we reported on our progress in the area of SRI in the year under review. Since PRI will not be assessing the reports we submitted in 2021, we identified points for improvement based on our own assessment and took actions to address them. For example, we adapted our ESG integration framework for the (semi-) government bonds by adding a materiality analysis. We are now gaining initial experience with this. We are also looking at how we can integrate our SRI ambitions into our strategic asset allocation, for which PRI has shared its insights with us during an information session. Lastly, we use PRI's best practices to lend further substance to our stewardship policy.

Annex 1 Additional information

This annex explains the underlying information and data in more detail. To begin with, we will take a closer look at compliance and integrity at DNB as discussed in the section on our Trust ambition. After that, we present the key figures for HR to elaborate on the section about our Staff members ambition. Lastly, to complement the section on our CSR ambition, we provide additional information on our operational management, including donations, our facilities, chain management, and our environmental care and carbon footprint.

Compliance and integrity

In 2021, the independent Compliance, Integrity and Administrative Sanctions (CIBS) Department and the independent Complaints Committee handled integrity incidents and reports of complaints. We also fostered integrity awareness among staff through orientation workshops for new staff members and online training courses. Furthermore, we published the policy rules on the application of the Public Administration (Integrity Assessment) Act in the Government Gazette, and we are working on its implementation. This act allows us to protect our organisation, to the greatest extent possible, against the risk of facilitating criminal activities when awarding contracts.
The Compliance & Integrity (C&I) Department's policy, as part of CIBS, aims to ensure that employees know what is expected of them and that they seek support when faced with dilemmas. C&I explicitly promotes appropriate conduct by providing workshops and dilemma training sessions, using the e-learning module on handling information with due care, publishing intranet messages, releasing instructional videos and organising events during the Integrity Week. It also provides solicited and unsolicited advice to our various organisational units on desirable risk controls or on compliance dilemmas (including fraud risk), integrity and privacy. C&I is also responsible for screening employees who perform work for DNB.

The number of integrity incidents reported in 2021 fell slightly compared to 2020. We suspect that the additional attention devoted to the subject of 'handling information with due care' at DNB has had a positive effect in this regard. In 2021, we added 'handling company property without due care' as a category for monitoring incidents.

The number of external complaints received by the Complaints Committee increased to 20 in 2021. Some of these were about cash exchange requests and our supervision of institutions from which the complainants purchase financial services, over which the committee has no jurisdiction. Three complaints were accepted for processing and then closed.

Table 8 Integrity incidents and complaints (see also the notes on this subject)

	2021	2020
Integrity incidents (total), of which:	64	82
Handling information without due care	47	62
Of which: data leaks	43	55
Notifiable to the Dutch Data Protection Authority	7	4
Regulation on private investment transactions	9	11
Handling company property without due care	3	*
Other*	5	9
Complaints		
internal complaints	2	2
external complaints	20	14

* In 2020, reports on 'Handling company property without due care' were in the 'Other' category. Other incidents include mail items gone missing, failure to follow internal procedures in processing internal goods and failure to meet screening requirements.

Key HR figures

We employ 2,142 internal and 971 external staff members. The external staff work mainly in the area of ICT support. The increase in the average number of FTEs in 2021 is partly due to our Digital proficiency ambition and the accommodation programme. In 2021, the proportion of permanent to temporary employment contracts was higher than in 2020, for both women and men. Also, an increase in full-time employment and a decrease in part-time employment can be observed compared to 2020, for both women and men.

Table 9 Key HR figures

Key figures	2021	2020
Workforce (staff members and Executive Board)*	2,142	2,088
Average number of FTEs	1,987	1,882
DNB-wide % women (staff members and Executive Board)	40.4%	40.5%
Staff members % women	40.4%	40.5%
Executive Board % women	40.0%	40.0%
Directors % women	31.6%	35.3%
Heads of department % women	35.2%	31.9%
Heads of section % women	42.9%	52.4%
Actual training costs (EUR)	4,426,674	3,891,609
Budgeted training costs (EUR)	6,802,244	6,410,229

* Does not include trainees, insourced staff or Supervisory Board members.

F/M/X inflow and outflow*	2021	2020
Inflow	105 (F)	128 (F)
	144 (M)	163 (M)
	1 (X)	
	250	**291**
Outflow	85 (F)	72 (F)
	111 (M)	87 (M)
	0 (X)	
	196	**159**

* F = female, M = male, X = gender neutral

Reason for outflow	2021	2020
Own request	98	87
Termination of contract	15	13
End of temporary employment contract	33	22
Retirement and early retirement	35	28
Restructuring	4	1
Occupational disability	8	5
Death	3	3
Total	**196**	**159**

Employees on permanent and temporary contracts F/M/X*	2021	2020
Permanent	741 (F)	704 (F)
	1,126 (M)	1,076 (M)
	0 (X)	
	1.867	**1.780**
Temporary	125 (F)	142 (F)
	149 (M)	166 (M)
	1 (X)	
	275	**308**

* F = female, M = male, X = gender neutral

Employees on full-time and part-time contracts F/M/X*	2021	2020
Full-time (36 hours p/w or more)	667 (F)	638 (F)
	1,214 (M)	1,165 (M)
	1 (X)	
	1.882	**1.803**
Part-time (less than 36 hours p/w)	199 (V)	208 (V)
	61 (M)	77 (M)
	0 (X)	
	260	**285**

* F = female, M = male, X = gender neutral

Employees on contracts and insourced	2021	2020
On contract	2,142	2,088
Insourced	981	958
Total	**3,113**	**3,046**

Absence due to illness

Short-term absence fell during the COVID-19 crisis from pre-pandemic levels, as it did in 2020 (see Table 10). On average, half of our staff members were ill once in 2021. This notification frequency is roughly unchanged from 2020. A possible explanation for this is that staff were less likely to call in sick when experiencing mild symptoms during the COVID-19 crisis, because they were already at home or had greater leeway to set their own working hours. In addition, reduced physical contact may have helped limit the spread of common cold viruses. In general, staff members proved resilient during the COVID-19 crisis. While working from home, most of them remained very productive, although others found it difficult to work mostly from home. The transition to a more permanent situation involving both working remotely and in the office requires that we jointly strike a new balance.

Table 10 Absence due to illness

	2021	2020
Total illness absence rate	3.50%	3.52%
Short-term absence (<7 days)	0.37%	0.35%
Medium-term absence (1-6 weeks)	0.43%	0.45%
Long-term absence (6-52 weeks)	1.99%	1.77%
1 to 2 years	0.70%	0.94%
Notification frequency	0.57	0.55

Donations

We express our social commitment through financial contributions and donations. We give financial support to organisations and activities that are related to our core tasks such as the 'Wiser in money matters' platform for financial education. We also donate to charitable organisations that are active in the areas of culture, health and society. In 2021, the Executive Board established that our donations policy should put a slightly stronger emphasis on initiatives fostering sustainability and diversity. Our financial support and donations totalled €375,000 in the year under review.

Accommodation

In 2021, the majority of the demolition and asbestos removal work took place for the renovation of our head office at Frederiksplein in Amsterdam. The large quantity of asbestos found means the renovation will experience some delay. The move back to our head office will therefore take place in 2024, which is later than we had anticipated. The Satellite (the round tower added to Marius Duintjer's original building in the early 1990s) was carefully dismantled for reuse in a recognisable form for a social purpose elsewhere in Amsterdam. The concrete removed from the building will be made suitable for reuse as circular concrete with 70% less CO_2 emissions. Any unused concrete will be processed in a circular manner to form prefab concrete floors for social housing in Amsterdam. Part of the concrete will be reused in the Frederiksplein building during the renovation. This reuse involves a world first: injecting CO_2 into concrete, which makes the reused concrete carbon-neutral. For the renovated head office, we are aiming for BREAAM Outstanding and WELL Platinum certification. In 2021, we obtained BREEAM Outstanding design certificate.

The structural construction phase of DNB's Cash Centre in Zeist has been completed, and the finishing phase has started. We expect to obtain an average Municipal Practice Guideline (GPR) score of 8.2 (we aspired to obtain an average of 8.0 or higher). Ecological integration and user experience are major considerations in the design and construction phases. For example, a patio was added to provide daylight to the high-security building sections and to allow staff members to go outside from the office area.

Chain management

We carried out 26 European and multiple private tenders in the year under review, 11 of which included sustainability (RVO) criteria. We applied circularity criteria in our tenders for the supply of green gas, warehousing, company clothing and electricity.

Environmental care and carbon footprint of operational management

The Facilities Management, Cash Operations and Security departments operate in accordance with an Environmental Management System certified according to the ISO14001 standard, which is valid until 2022. We operate in a climate-neutral way by offsetting carbon emissions where we cannot prevent them. In absolute terms, our carbon emissions before offsets were significantly lower in 2021 compared to 2020. This reduction was mainly caused by the decrease in business travel resulting from travel restrictions, our purchase of green electricity for the temporary facility in Haarlem, the reduction in natural gas consumption due to the change-over to district heating in our temporary building in Amsterdam, and the disconnection of our head office on Frederiksplein from the gas network. The 2021 reporting period, which does not coincide with the calendar year, was the first full year in which the COVID-19 containment measures applied. In 2021 we also housed part of our ICT services in an energy-efficient external data centre, which has greatly reduced energy consumption. The data centre uses foreign renewable electricity which we account for in our footprint as grey electricity.

Table 11 Carbon footprint of our operational management

In tonnes

	2021[1]	2020[2]
Measured data[3]	CO_2 (tonnes)	CO_2 (tonnes)
Energy	**1,304**	**2,818**[6]
Electricity	401	903
Natural gas	869	1,867
District heating and cooling	27	33
Diesel	8	15
Refrigerants[4]	**19**	-
Commuting	**457**	**1,010**
Public transport	13	301
Passenger vehicles	444	709[7]
Business travel	**165**	**763**
Passenger vehicles	124	240
Air travel	41	504
International rail travel	0	19
Goods[5] and passenger transport	**970**	**13**
CO_2 emissions	**2,916**	**4,603**
Natural gas already offset	706	311
Offset through purchase of carbon credits	2,210	4,737
Total CO_2 emissions	**0**	**0**

1 The reporting period runs from 1 October 2020 to 30 September 2021.
2 The reporting period runs from 1 October 2019 to 30 September 2020.
3 We report emissions in scope 1 and 2, and commuting in scope 3. Air traffic is included in scope 2. We use the emission conversion factors published online at www.co2emissiefactoren.nl (in Dutch) and the Milieubarometer calculation method to determine our CO_2 emissions. Where applicable, the conversion factors are expressed in CO_2 equivalents.
4 We include refrigerants in our reports from 2021.
5 From 2021, the Dutch share of air transport of banknotes undertaken on the instruction of the ECB is included in goods transport.
6 We have adjusted reported CO_2 emissions from energy for the 2020 reporting year upwards by 1,048 tonnes due to uncertainties caused by moving into new premises and improved transparency with respect to the natural gas already offset by the supplier.

Annex 2 About this report

The President' Report describes the main developments and outlook relating to our core tasks. In the Accountability chapter we look back on 2021, reporting on our intended results and impact in 2021 for the six ambitions in the DNB2025 strategy. It also includes the financial overview.

We continually strive towards more transparency. The dialogue with our stakeholders helps us to do our work as effectively as possible and enables us to increase our impact on society. If you would like to respond to this Annual Report or if you have other comments, please email us at info@dnb.nl.

Reporting guidelines

This report has been prepared in accordance with the reporting guidelines of the Global Reporting Initiative (GRI) standards 2016. We apply GRI reporting principles and we use GRI- and DNB-specific indicators (see GRI content index 2021). We report on material financial and economic climate-related risks and opportunities in accordance with the reporting framework of the Taskforce on Climate-related Financial Disclosures (see the section on CSR for 'Governance' and 'Strategy' and the Financial overview *Climate-related risks, monetary policy and balance sheet management* and *Sustainable and responsible investment* for 'Risk management' and 'Indicators and targets'). We use the measurement methodology of the Partnership for Carbon Accounting Financials (PCAF).

Materiality analysis

In our Accountability chapter, we focus on the areas in which our positive and negative impact are relevant. In 2020, more than 200 stakeholders (mainly financial institutions and other relevant parties) responded via our intranet, our website and sectoral newsletters, telling us in which of these areas they considered our societal impact to be of the greatest relevance. 40% of respondents also suggested other areas. Additionally, 40 internal stakeholders (department heads, divisional directors and Executive Board members) offered their input on the themes where we have the largest societal impact.
We updated this analysis in late 2021 based on stakeholder surveys and sessions, media, peer and trend analyses, and internal documentation. The Executive Board was also involved in this update. We also modified our definitions of price stability (given the ECB's new monetary strategy) and balanced conditions (given the 2021 update of the DNB2025 strategy). We now consider the side effects of low interest rates under price stability.

Table 12 shows the results of the materiality analysis. It also provides an overview of the places in this Accountability chapter where our role in these themes in 2021 is discussed. The value creation model provides an overview of the results we achieved with respect to our objectives for material themes (see Figure 1 in the Introduction).

Table 12 Material themes

	Material theme	Definition	Section	SDG
1	Solidity and future resilience of Dutch financial institutions	The solidity and liquidity of Dutch banks, insurers, pension funds and other financial institutions and the extent to which their business models are future-proof	More balanced economic conditions, Trust, CSR	
2	Public trust in the Dutch financial sector	Dutch society's trust in financial institutions	Trust	
3	Operation of payment systems	Payments systems that are efficient, secure, reliable and accessible to all	Balanced conditions, Trust, CSR	(8.10 Access to financial services)
4	Integrity of the Dutch financial sector	Compliance with laws, regulations and corporate governance codes by financial institutions, including prevention of involvement in financial crime	Trust	
5	Balanced economic conditions in the Netherlands and the euro area	1. A financial system and economic sectors capable of absorbing shocks, reflected in adequate buffers and the ability to provide services to the economy on a sustainable basis. 2. Markets that operate efficiently and government policies that remove any distortions from these markets. 3. Economic growth that is inclusive and sustainable.	More balanced economic conditions	(incl. 8.1 Sustainable economic growth, 8.5 Income and employment, 17.13 Enhance global macroeconomic stability)
6	Economic and financial sustainability issues and risks	The economic and financial consequences of ecological and societal challenges such as climate change, biodiversity loss, human rights controversies	CSR	(incl. 12.6 Encourage Corporate Social Responsibility, 13.2 Climate policy and reduction of greenhouse gas emissions, 17.16 Enhance global partnership for sustainable development)
7	Price stability in the euro area and low interest rate environment	Prices that do not rise or fall too quickly, i.e. an annual inflation target of 2% over the medium term in the euro area. The impact of the lower interest rate environment on investor behaviour, financial institutions and monetary and fiscal policy	More balanced economic conditions	(incl. 17.13 Enhance global macroeconomic stability)
8	Recovery of the Dutch economy from the COVID-19 crisis	Economic resilience of households, businesses, financial institutions and the government during the COVID-19 crisis	More balanced economic conditions	(incl. SDG 8.1 Sustainable economic growth)
9	Compliance and integrity (DNB)	Our compliance with laws and regulations; our sound and ethical conduct	Trust, Annex 1	

Sustainable Development Goals

We endorse the UN's Sustainable Development Goals (SDGs). Through these 17 global goals, organisations, businesses and governments pledge to make substantial contributions to the state of our planet by 2030. In consultation with stakeholders, we have decided to commit ourselves to the following goals: 8. Decent work and economic growth, 12. Responsible consumption and production, 13. Action on climate change and 17. Partnerships to achieve the goals. Table 12 shows how our efforts on material themes contribute to the (sub-)goals (definitions according to Statistics Netherlands).

Organisational structure

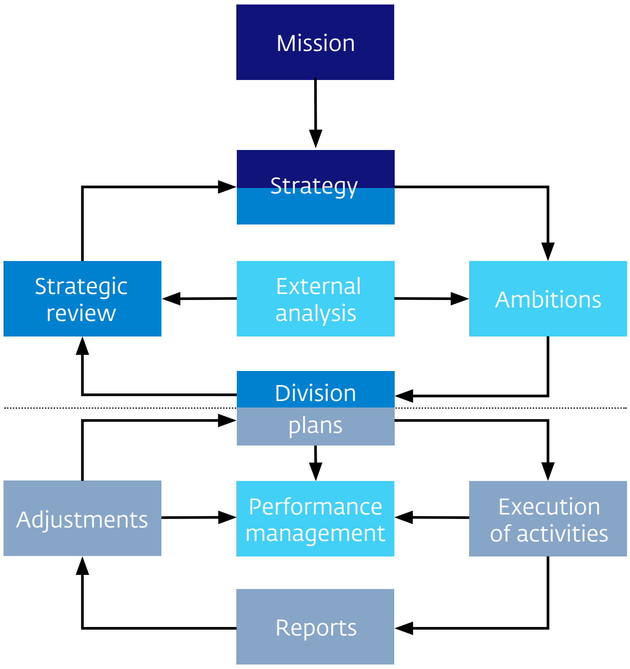
DNB is a public limited company whose sole shareholder is the State of the Netherlands. The Executive Board is responsible for its management. Alongside an Internal Audit Department and an Executive Secretariat, there are divisions and certain departments that report directly to an Executive Board member (see the organisation chart). In addition, we manage some activities in the form of programmes, such as accommodation, sustainability and the Digital proficiency ambition. In these cases a steering group coordinates activities and reports to one or several Executive Board members. The Supervisory Board supervises the general course of business at DNB and the Executive Board's policy regarding the implementation of our national tasks (see the Report of the Supervisory Board). Our temporary head office is located at Spaklerweg 4 in Amsterdam.

Management approach and evaluation

The Executive Board is responsible for managing and evaluating our work and strategy. Implementation is safeguarded in an integrated planning and control (P&C) cycle, in which we translate our long-term aspirations into annual priorities. We set objectives in division-specific plans and performance targets for staff members. Progress is monitored using planning and control software, using data provided by the departments responsible for achieving the objectives. The business controllers of the Finance & Consulting (F&A) and Risk Management & Strategy (RMS) departments assess the reported progress. Based on this input, the Executive Board receives quarterly reports. Additionally, our RMS department is responsible for monitoring quality in the organisation's overall performance of its tasks. RMS performs this role for all parts of DNB in terms of both content and process. Our Internal Audit department (IAD) has an independent position in the organisation and conducts audits into the effectiveness of the overall risk framework and the consistent application of policies and processes. The IAD submits periodic reports on its findings to the Executive and Supervisory Boards.

This Annual Report was produced under the direction of an editorial committee and a central team from the Economic Policy & Research division, the Financial Stability division and the Finance & Consulting and Communication departments, with input from directors and other relevant staff. The texts in the Annual Report were discussed and approved by the Executive Board.

Figure 10



Scope and aspect boundaries of this chapter

The information in this chapter relates to the 2021 calendar year, with the exception of the environmental data, for which the reporting period is the fourth quarter of 2020 to the third quarter of 2021.No changes have been made to definitions or methods of measurement. All data are based on calculations (not estimates), unless stated otherwise.

Explanatory notes on carbon footprint of own investments

The calculations were performed based on data supplied by MSCI ESG Research. The indicators depend on the reliability of emissions reports submitted by the enterprises. Where data was lacking, we use MSCI estimates. Approximately 65% of the data was reported by enterprises for equities and corporate bonds; approximately 26% of the data was reported for semi-government bodies, supranational institutions and agencies. MSCI ESG Research collected data on government bonds based on the Emissions Database for Global Atmospheric Research. The coverage ratio of reported and estimated data for the total CO_2 emissions indicator (per million euro invested) is as follows: government bonds (100%), semi-government bodies, supranational institutions and agencies (0%), corporate bonds (74%) and equities (99%). The coverage ratio of reported and estimated data for the turnover weighted CO_2 emissions indicator is as follows: government bonds (100%), semi-government bodies, supranational institutions and agencies (89%), corporate bonds (78%) and equities (99%).

External assurance

The independent auditor reviewed the non-financial information in the Accountability chapter of this Annual Report. Its assurance report is included in Annex 3.

Benchmarks

Our reporting on corporate social responsibility is assessed every two years in the Transparency Benchmark of the Ministry of Economic Affairs and Climate Policy. In 2021 we achieved a score of 78.1.

Table 13 DNB's score and ranking in the Transparency Benchmark

Year	Score	Ranking (total number of organisations)
2021 (Annual Report 2020)	78,1	21 (685)
2019 (Annual Report 2018)*	63,5	42 (487)
2017 (Annual Report 2016)	186	26 (477)
2016 (Annual Report 2015)	170	53 (483)
2015 (Annual Report 2014)	174	22 (461)
2014 (Annual Report 2013)	150	57 (242)

* Frequency changed to biennial and scale was adjusted in 2018.

We were the first central bank in the world to sign the UN's Principles for Responsible Investment (PRI) in 2019. In 2021 we produced a Transparency Report, but PRI's assessment will appear in 2022.

Glossary

Terms	Definitions
Asset purchase programme	ECB programme for purchasing assets, including public-sector securities (PSPP), covered bonds (CBPP3), investment grade corporate bonds (CSPP) and asset-backed securities (ABSPP).
Bank for International Settlements (BIS)	Organisation pursuing international monetary and financial cooperation and acting as a bank for the national central banks.
Banking Union	Collaborative agreements in the EU aimed at resolving the interconnectedness between governments and banks. The Banking Union is built on three pillars: joint European banking supervision by the ECB within the framework of the Single Supervisory Mechanism (SSM), the European Single Resolution Mechanism (SRM) and a future European deposit guarantee scheme.
Borstlap Committee (Commission on the Regulation of Work)	Committee convened by the government to advise on the functioning of the labour market.
Capital Markets Union	EU aim to improve the functioning of cross-border capital markets in the euro area.
Capital policy	The capital policy sets out the rules for the buffers DNB holds, how large they must be and how they are to be used.
Carbon neutrality	Full offset of carbon emissions by investing in a reduction elsewhere.
Cash and payment systems	We actively promote accessible, secure and reliable cash and payment systems. As a member of the Eurosystem we issue banknotes and are responsible for the circulation of coins and banknotes in the Netherlands. We also manage payment systems and we are responsible for oversight (payment supervision) of institutions and systems that process payment transactions.
Crypto	A digital asset managed by cryptographic algorithms, usually using blockchain technology. A crypto does not have a physical manifestation like a euro coin. Rather, it is an encrypted code, like a password, that can be transferred and stored electronically.

Terms	Definitions
DNB Academy	Provider and coordinator of training courses (both internal and external) for DNB staff members.
Dutch Deposit Guarantee	Statutory protection of savings in a Dutch bank account of up to €100,000 per person per bank.
ESG issues	Environmental, social and governance (ESG) issues.
European Stability Mechanism (ESM)	Permanent European fund that can lend to euro area countries facing financial difficulties, subject to certain conditions.
Eurosystem	The European Central Bank and the national central banks of the EU Member States that use the euro as their single currency.
Financial Action Task Force (FATF)	Inter-governmental body that combats money laundering and terrorist financing. It has 39 members, including the Netherlands, and two regional organisations (the European Commission and the Gulf Cooperation Council).
Financial stability	We are committed to a stable financial system that ensures an efficient allocation of resources and that is capable of absorbing shocks so that these do not have a disruptive effect on the real economy.
Financial Stability Board (FSB)	Global network that promotes international financial stability by coordinating and monitoring the work of supervisory authorities and international regulators in the area of financial supervision and regulation.
Governing Council	The main decision-making body of the ECB. It consists of the six members of the Executive Board, plus the governors of the national central banks of the 19 euro area countries.
iForum	DNB works with the sector in the iForum to create more opportunities for technological innovation in the financial system. The iPanel provides strategic advice to the iForum. It is made up of representatives from DNB, the AFM, the Ministry of Finance and various branches within the financial sector.
ISO 14001:2015	An international standard that specifies requirements for an environmental management system that an organisation can use to gain insight into its environmental impact.

Terms	Definitions
Monetary tasks	As a member of the Eurosystem, we contribute to decision-making on monetary policy and its implementation. Monetary policy is aimed at price stability, which is defined as an inflation rate of 2% over the medium term.
National Forum on the Payment System (NFPS)	A group of 15 civil society organisations, chaired by DNB, which focuses on improving the efficiency of the retail payment system.
Network of Central Banks and Supervisors for Greening the Financial System (NGFS)	Network of central banks, supervisory authorities and international organisations that aims to green the financial system and strengthen the efforts being put forth by the financial sector to achieve the Paris climate agreement targets.
Open Market Operations (OMOs)	These are transactions through which the ECB provides financing to banks in order to satisfy their liquidity needs or to absorb excess liquidity from the system. Lending to banks is collateralised.
Pandemic Emergency Purchase Programme (PEPP)	The ECB's emergency purchase programme was launched in March 2020 with the aim of mitigating the impact of the COVID-19 pandemic by promoting the transmission of monetary policy and by making financing conditions more accommodative. Both public and private debt certificates are purchased under the programme.
Provision for financial risks (VFR)	Buffer in our balance sheet to cover temporary risks.
Resolution	As the Dutch resolution authority, we seek to ensure that the critical functions of banks are safeguarded to the greatest extent possible, while non-viable institutions or parts of institutions are wound up in an orderly manner. We perform this task as part of the European Single Resolution Mechanism. See also Banking Union.
RVO criteria	Criteria established by the Netherlands Enterprise Agency (RVO) and the Dutch public authorities for sustainable procurement

Terms	Definitions
Stablecoin	A crypto whose value is kept as stable as possible in relation to fiat currencies such as the euro and the US dollar thanks to specific mechanisms. Examples of stablecoins are Tether and Diem (previously Libra), the stablecoin that Facebook has launched. Some stablecoins are backed by gold or another commodity rather than by fiat money. The aim of stablecoins is to make cryptos suitable as a day-to-day means of payment.
Statistics	DNB collects statistical information and compiles statistics in close cooperation with partners such as Statistics Netherlands (CBS), the European System of Central Banks (ESCB) and the International Monetary Fund (IMF).
Statistics Netherlands (CBS)	National institute engaged in collecting data and compiling statistics on Dutch society. It produces statistical information on a wide range of social and economic themes.
Supervision	We exercise prudential supervision of banks, pension funds, insurers and other financial institutions by checking whether they are financially sound and are able to meet their obligations and by conducting fit and proper assessments of board members, issuing licenses and combating financial and economic crime Whereas prudential supervision focuses on the soundness of individual institutions, macroprudential supervision focuses on the interaction between financial institutions, financial markets and the macroeconomic environment.
Sustainable and responsible investment	The policy through which we consider environmental, social and governance (ESG) aspects, in addition to financial and economic aspects, when making investment decisions.
Sustainable Finance Platform	A group consisting of supervisory authorities, sector associations, ministries and the Sustainable Finance Lab that seeks to promote and increase awareness of sustainable finance in the financial sector by coming together to consider ways to avoid or overcome obstacles to sustainable finance.
Target 2	A payment system for banks in the EU. It is managed by the Eurosystem and more than 1,700 banks use it.

Terms	Definitions
Targeted Longer-Term Refinancing Operations (TLTRO)	Refinancing operations offered by the Eurosystem aimed at stimulating lending to enterprises and consumers in the euro area
Task Force on Climate-related Financial Disclosures (TCFD)	The FSB established the TCFD to develop effective disclosures on climate-related risks.
TIBER	Threat intelligence-based ethical red teaming, which is a framework and programme for cybersecurity tests. TIBER involves carrying out controlled attacks on participating institutions, including DNB itself, based on current threat data. The aim is to jointly learn from the results of the cybersecurity tests in order to boost resilience to advanced cyberattacks.
UN Global Compact	The United Nations Global Compact encourages enterprises all over the world to implement sustainable and responsible policies. It encapsulates principles in the areas of human rights, labour, the environment and the fight against corruption.
Wiser in money matters	Initiative of the Ministry of Finance. Partners from the financial sector, academia, government, education and consumer organisations join forces in this platform to promote financial soundness in the Netherlands.
Wwft	Anti-Money Laundering and Anti-Terrorist Financing Act (Wet ter voorkoming van witwassen en financiering van terrorisme)

Annex 3 Assurance report of the independent auditor

To: the Shareholder and the Supervisory Board of De Nederlandsche Bank

Our conclusion

We have reviewed the non-financial information as specified in 'External assurance' paragraph inthe Accountability chapter of the Annual Report 2021 of De Nederlandsche Bank N.V. (hereafter:DNB) at Amsterdam for the year ended 31 December 2021 (hereafter: non-financial information).A review is aimed at obtaining a limited level of assurance.

Based on the procedures performed nothing has come to our attention that causes us to believethat the non-financial information has not been prepared, in all material respects, in accordance with the standards as disclosed in the 'Reporting guidelines' paragraph in the Accountability chapter of this Annual Report.

Basis for our conclusion

We performed our review of the non-financial information in accordance with Dutch law, including Dutch Standard 3000A 'Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie' (attest-opdrachten) (assurance engagements other than audits or reviews of historical financial information (attestation engagements)).

Our responsibilities in this regard are further described in the 'Our responsibilities for the reviewof the non-financial information' section of our report.

We are independent of DNB 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). Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe the assurance evidence we have obtained is sufficient and appropriate to provide abasis for our conclusion.

Reporting criteria

The non-financial information should be read and understood in conjunction with the reporting criteria. DNB is responsible for selecting and applying of these reporting criteria, keeping in mindthe relevant laws and regulations with respect to reporting.

The applied reporting criteria for the preparation of the non-financial information are the Sustainability Reporting Standards of the Global Reporting initiative (GRI) in combination with DNB's own reporting criteria. The reporting criteria are further detailed in 'Reporting guidelines'paragraph in the Accountability chapter.

Limitations to the scope of our review

References to external sources or websites in the non-financial information are not part of the non-financial information itself as reviewed by us. Therefore, we do not provide assurance on this information.

The non-financial information includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherently the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the non- financial information.

Responsibilities of the Executive Board for the non-financial Information

The Executive Board of DNB is responsible for the preparation of the non-financial information in accordance with the applicable reporting criteria, including the identification of stakeholders and the definition of material matters. The choices made by the Executive Board regarding the scopeof the non-financial information and the reporting policy are summarized in Annex 2 'About this report' in the Accountability chapter of the Annual Report.

Furthermore, the Executive Board is responsible for such internal control as it determines is necessary to enable the preparation of the non-financial information that is free from material misstatement, whether due to fraud or error.

Our responsibilities for the review of the non-financial information

Our responsibility is to plan and perform our review in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

Procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing, and are less in extent, compared to areasonable assurance engagement. The level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users taken on the basis of the information in the non-financial information. The materiality affects the nature, timingand extent of our review procedures and the evaluation of the effect of identified misstatements on our conclusion.

We apply the 'Nadere Voorschriften Kwaliteitssystemen' (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have exercised professional judgement and have maintained professional skepticism throughout the review, in accordance with the Dutch Standard 3000A, ethical requirements andindependence requirements.

Our review included among others:

- Performing an analysis of the external environment and obtaining an understanding ofrelevant societal themes and issues, and the characteristics of the entity.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the non-financial information. This includes the evaluation of the resultsof stakeholder dialogue and the reasonableness of estimates made by the Executive Board.
- Obtaining an understanding of the reporting processes for the non-financial information, including obtaining a general understanding of internal control relevant to our review.
- Identifying areas of the non-financial information where a material misstatement, whether dueto fraud or error, are most likely to occur, designing and performing assurance procedures responsive to these areas, and obtaining assurance information that is sufficient and appropriate to provide a basis for our conclusion. These procedures included, amongst others:
  - interviewing management and relevant staff at corporate level responsible for the strategy, policy and results;
  - interviewing relevant staff responsible for providing the information for, carrying outinternal control procedures over, and consolidating the data in the non-financial information;
  - obtaining assurance information that the non-financial information reconciles withunderlying records of the entity; and
  - reviewing, on a limited test basis, relevant internal and external documentation.
- Evaluating the presentation, structure and content of the non-financial information.
- Considering whether the non-financial information as a whole, including the disclosures,reflects the purpose of the reporting criteria used.

We have communicated with the Executive Board regarding, among other matters, the planned scope and timing of the review and significant findings that we identify during our review.

Amstelveen, 16 March 2022

KPMG Accountants N.V.
M.A. Huiskers RA

Executive Board, Supervisory Board, Bank Council, Employees Council and governance

Left to right: Klaas Knot (president), Steven Maijoor, Else Bos, Nicole Stolk and Olaf Sleijpen.

As of the date of adoption of the 2021 financial statements, the Executive Board, Supervisory Board, Bank Council and Employees Council were composed as follows:

Executive Board

President:

Klaas Knot (1967, Dutch, economics, end of second term: 2025)

Executive Board Member and Chair of Prudential Supervision:

Else Bos (1959, Dutch, econometrics, end of first term: 2025)

Executive Board Member of Banking Supervision:

Steven Maijoor (1964, Dutch, business economics, end of first term: 2028)

Executive Board Member of Monetary Affairs:

Olaf Sleijpen (1970, Dutch, economics, end of first term: 2027)

Executive Board Member of Resolution and Internal Operations:

Nicole Stolk (1969, Dutch, history and Dutch law, end of first term: 2025)

Company Secretary:

Ingrid Ernst (1969, Dutch, Dutch law)

The allocation of responsibilities among the members of the Executive Board is represented in the organisation chart on our website.

As of 1 April 2021, Steven Maijoor was appointed as Executive Board Member of Banking Supervision by Royal Decree. He succeeded Frank Elderson (1970, Dutch, Dutch law), who joined the European Central Bank (ECB) as a member of the ECB' s Executive Board effective 15 December 2020.

Supervisory Board

Chair:
Wim Kuijken (1952, Dutch, economics, end of second term: 2023)
Member of the Remuneration and Appointments Committee

Vice-chair:
Margot Scheltema (1954, Dutch, international law, end of second term: 2023)
Chair of the Supervision Committee
Member of the Audit Committee

Government-appointed member:
Annemieke Nijhof (1966, Dutch, chemical technology, end of second term: 2023)
Member of the Audit Committee
Member of the Bank Council since 2015

Other members:
Peter Blom (1956, Dutch, economics, end of first term: 2025)
Member of the Supervision Committee

Roger Dassen (1965, Dutch, business economics and accountancy, end of first term: 2022)
Chair of the Audit Committee.

Marry de Gaay Fortman (1965, Dutch, Dutch law, end of second term: 2024)
Member of the Remuneration and Appointments Committee
Member of the Supervision Committee

Mirjam van Praag (1967, Dutch, econometrics, end of first term: 2024)
Member of the Supervision Committee
Member of the Bank Council on behalf of the Supervisory Board since 2020

Feike Sijbesma (1959, Dutch, medical biology and business administration, end of third term: 2024)
Chair of the Remuneration and Appointments Committee

Remuneration and Appointments Committee
Feike Sijbesma, Chair
Wim Kuijken
Marry de Gaay Fortman

Audit Committee
Roger Dassen, Chair
Annemieke Nijhof
Margot Scheltema

Supervision Committee
Margot Scheltema, Chair
Marry de Gaay Fortman
Mirjam van Praag
Peter Blom (from 1 September 2021)

The other positions held by the Executive Board and Supervisory Board members are posted on our website.

Bank Council

Chair:
Barbara Baarsma
Chair of Rabobank Amsterdam and Professor of Corporate Finance and Financial Markets at the University of Amsterdam

Other members:
Tjeerd Bosklopper
Chair of the Dutch Association of Insurers

Tuur Elzinga
Chair of FNV

Piet Fortuin
Chair of CNV

Harry Garretsen
Professor of Economics at the University of Groningen

Nic van Holstein
Chair of the Trade Union Federation for Professionals

Ger Jaarsma
Chair of the Federation of the Dutch Pension Funds

Medy van der Laan
Chair of the Dutch Banking Association

Annemieke Nijhof
Member on behalf of the Supervisory Board as a government-appointed member

Mirjam van Praag
Member on behalf of the Supervisory Board

Sjaak van der Tak
Chair of LTO Nederland

Ingrid Thijssen
Chair of VNO-NCW

Jacco Vonhof
Chair of Royal Association MKB-Nederland

Representative of the Ministry of Finance:
Christiaan Rebergen, Treasurer-General

Employees Council

Jos Westerweele (Chair)
Carel van den Berg
Jacqueline van Breugel
Annemarie van Dijk
Bernard de Groes
Saideh Hashemi
Robin Hoogesteger
Elina Kogan
Marjon Linger-Reingoud
Anja Peerenboom
Mikey Staats
Paul Suilen
Aaldert van Verseveld
Ingrid Voorn

Sandra Koentjes (Professional Secretary)

Governance

De Nederlandsche Bank (DNB) is a public limited company incorporated under Dutch law. In its capacity as the central bank of the Netherlands, DNB forms part of the European System of Central Banks (ESCB). In addition, DNB is a supervisory authority. In that capacity it is part of the Single Supervisory Mechanism (SSM). DNB is also the national resolution authority. In this role it participates in the Single Resolution Mechanism (SRM). As the financial sector supervisor and national resolution authority, DNB is an independent public body.

DNB is led by an Executive Board consisting of a President and at least three and at most five members.

The President of DNB is also a member of the Governing Council and the General Council of the European Central Bank (ECB).

The Executive Board Member of Monetary Affairs is responsible for financial stability, financial markets, economic policy and research, payment systems and DNB's statistics function. He is also a Crown-appointed member of the Social and Economic Council of the Netherlands (SER).

Responsibility for supervision of financial institutions is divided between two Executive Board Members of Supervision: the Chair of Prudential Supervision and the Executive Board Member of Banking Supervision. The Chair of Prudential Supervision is responsible for supervision policy and supervision of insurers and pension funds. She represents DNB on the Board of Supervisors of EIOPA, the European Insurance and Occupational Pensions Authority. DNB has a Prudential Supervision Council for Financial Institutions, chaired by the Chair of Prudential Supervision, to support the internal deliberations and decision-making by the Executive Board Members of Supervision concerning supervisory matters.

The Executive Board Member of Banking Supervision is responsible for supervision of banks, horizontal expertise functions within supervision, integrity and legal affairs. He is also a member of the ECB's Supervisory Board, which is responsible for decision-making on the supervision of significant banks in the euro area within the framework of the SSM.

The Executive Board Member of Resolution and Internal Operations is responsible for resolution tasks concerning specific financial enterprises, such as Dutch banks, investment firms and insurers. She also represents DNB on the Single Resolution Board (SRB). DNB has a Resolution Council, chaired by the Executive Board Member of Resolution and Internal Operations, to support the Executive Board's internal deliberations and decision-making concerning resolution matters.
The Executive Board Member of Resolution and Internal Operations is also responsible for managing our internal operations. This includes operational management, data & information technology, and departments dealing with HR, security, communications, risk management & strategy, and finance.

The Supervisory Board supervises the general course of business at DNB and the Executive Board's policy regarding the implementation of Section 4 of the Bank Act 1998. It is also responsible for adopting the financial statements. The Supervisory Board has several other significant powers, including approval of the budget and of certain Executive Board decisions. It consists of at least seven and at most ten members, one of whom is the government-appointed member, appointed by the Minister of Finance.

DNB has a single shareholder: the Dutch State, which is represented by the Minister of Finance, also in the General Meeting. The Executive Board renders account to the General Meeting by presenting its annual report and financial statements over the past financial year. The General Meeting has significant powers, including approving the financial statements, discharging Executive Board and Supervisory Board members, appointing Supervisory Board members and appointing the external auditor.

The Bank Council functions as a sounding board for the Executive Board. It consists of at least eleven and at most thirteen members. Two members of the Supervisory Board, including the government-appointed member, sit on the Bank Council. With regard to the other members, we aim to ensure that the various sectors of society are represented.

Our website provides more information on the governance structure, as also laid down in the Bank Act 1998 and in our Articles of Association and Rules of Procedure. Although the Dutch Corporate Governance Code only applies to listed companies, we strive to implement the principles and best practices from the code as much as possible. We explain our implementation of the code in more detail on our website.

Report of the Supervisory Board

Introduction

The year 2021 was another unusual year for the Supervisory Board and its supervision of DNB's governance as the COVID-19 pandemic continued. In 2021, the Supervisory Board focused on DNB's implementation of its policies related to its core tasks and internal operational management, devoting particular attention to the impact of the COVID-19 pandemic on both the performance of core tasks and the internal organisation. It also considered the report of the Conservatrix Evaluation Committee, commissioned by the Supervisory Board and the Minister of Finance. While we are aware of the fact that the bankruptcy of Conservatrix is an unsatisfactory outcome, especially for its policyholders, the Supervisory Board is grateful to the Committee for its thorough and comprehensive evaluation. DNB's Executive Board has started to implement the Committee's recommendations and will report back to the Supervisory Board in great detail. In addition, the Supervisory Board learned with great interest of the findings of the DNB-commissioned study into slavery, and discussed them with the Executive Board. The study revealed that DNB's history is intertwined with transatlantic slavery. Although DNB had no role in day-to-day slavery-related financial transactions, it did contribute to the perpetuation of slavery because it was an integral part of the financial system and because of the role it played in the Dutch economy. The Supervisory Board and Executive Board deeply regret this involvement. The Executive Board will involve the Supervisory Board in its follow-up on the findings, and the Supervisory Board welcomes the fact that DNB will also take external views into account.

These and other subjects compelled the Supervisory Board to remain closely involved with DNB throughout 2021.

Composition and appointments

The Executive and Supervisory Board compositions changed in 2021. Steven Maijoor was appointed Executive Board Member of Banking Supervision on 1 April. Steven took over the responsibilities of Frank Elderson, who was appointed as a member of the Executive Board of the European Central Bank (ECB) as of 15 December 2020. Job Swank stepped down as Executive Board member on 1 July due to long-term illness. The Supervisory Board is extremely grateful to Job for his dedication to DNB's tasks. His efforts have greatly benefited DNB's mission, organisation and staff. The Supervisory Board is pleased that he has been appointed Officer in the Order of Orange-Nassau for his extraordinary commitment as a DNB Executive Board Member, as a Professor, and in numerous other capacities.

As of the date of adoption of the 2021 financial statements, the Supervisory Board consisted of eight members: Wim Kuijken (Chair), Margot Scheltema (Vice-Chair), Annemieke Nijhof (government-appointed member), Feike Sijbesma, Marry de Gaay Fortman, Roger Dassen, Mirjam van Praag and Peter Blom.

The shareholder appointed Peter Blom member of the Supervisory Board as of 1 September 2021. Peter became the eighth member of the Supervisory Board and has financial sector expertise. The Board is pleased that the vacancy for a member with this profile has been filled with Peter's accession and looks forward to good and effective cooperation.

The gender balance on the Executive Board is now 40% women and 60% men. The gender balance on the Supervisory Board is now 50% women and 50% men. DNB thus meets statutory targets for gender balance on both boards. In the event of appointment or reappointment, the Board applies the adopted profiles, which include the aim of diversity. It should be noted that the aim of diversity extends beyond gender balance and also takes account of expertise, background, age and competencies. For further details, see the expertise matrix and gender diversity matrix below.

Area of expertise	Kuijken	Scheltema	Nijhof	De Gaay Fortman	Van Praag	Sijbesma	Dassen	Blom
Management								
Management and organisation	■	■	■	■	■	■	■	■
Accounting, administrative organisation and internal control structure		■					■	■
Stakeholder management	■		■	■	■	■	■	■
Risk management		■		■	■	■	■	■
Outsourcing	■					■	■	
Legal affairs and corporate governance		■		■				■
Core tasks								
Macroeconomic issues	■				■	■	■	■
Financial stability and institutions		■		■	■			■
Cash and payment systems								■
Statistics					■			
Strategic issues								
Sustainability			■	■		■	■	■
Digital IT	■					■	■	
Public interest	■	■	■	■	■			

Age brackets

45 – 55

Nijhof

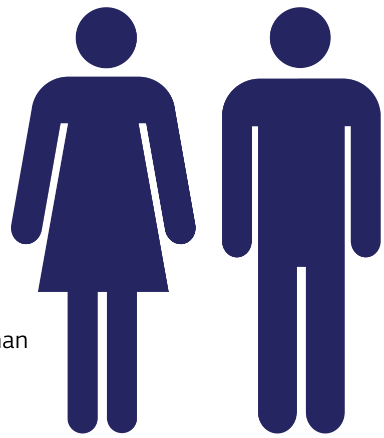
Van Praag

56 – 65

De Gaay Fortman

66 – 75

Scheltema



Age brackets

56 – 65

Sijbesma

Dassen

Blom

66 – 75

Kuijken

The participation of Supervisory Board members in the Bank Council remained unchanged in 2021. Annemieke Nijhof continued her membership as a government-appointed Supervisory Board member throughout 2021. Mirjam van Praag stayed on as Bank Council member appointed by the Supervisory Board throughout 2021.

The composition of the Supervisory Board, its committees and the Executive Board is provided from page 97 of this Annual Report. The profiles of the Executive and Supervisory Board members and the other positions they hold can be found on DNB's website.

Duties

The average attendance rate at Supervisory Board meetings was very high (approximately 96%), as shown in the table below. None of the members was regularly absent. Prior to each plenary meeting, there was always a discussion without the Executive Board being present. The table below specifies the attendance rates of each of the members in the plenary Supervisory Board (SB), Remuneration and Appointments Committee (RAC), Audit Committee (AC), and the Supervision Committee (SC) meetings.

Member	SB	RAC	AC	SC
Wim Kuijken	8/8	3/3		
Margot Scheltema	8/8		8/8	5/5
Feike Sijbesma	7/8	3/3		
Marry de Gaay Fortman	8/8	3/3		5/5
Annemieke Nijhof	7/8		8/8	5/5
Roger Dassen	8/8		8/8	
Mirjam van Praag	8/8			3/4
Peter Blom	3/3			2/2

The Chair of the Supervisory Board and the President of DNB were in frequent contact about issues concerning the Supervisory Board's work and developments concerning DNB. The activities of the three Supervisory Board committees are described below on pages 108 and 109. As part of its supervision of the general course of business at DNB, the Supervisory Board discussed the DNB-wide financial results and accountability for 2021 in the Audit Committee. The Supervisory Board discussed the results and accountability for 2021 with regard to independent public body (ZBO) activities in the Audit Committee, Supervision Committee and plenary meetings. These discussions were based on quarterly financial reports, the management letter and audit report from the external auditor and the internal audit department's (IAD) quarterly reports.

In 2021, the size of the balance sheet items arising from monetary operations and the associated risks were again a key focus for the Board. The risks to DNB's balance sheet arising from the Eurosystem's monetary policy led the Executive Board, with the support of the Supervisory Board, to add EUR 128 million to the provision for financial risks. The result for 2021 thus amounts to EUR 15 million (2020: EUR 15 million). There was no addition to the general reserve in accordance with DNB's capital policy. The distribution to the Dutch State thus amounted to EUR 15 million. No gold sales took place in 2021.

The Supervisory Board discussed the 2021 financial statements with the Executive Board at length, in the presence of the external auditor. It then adopted the financial statements and submitted them to the shareholder for approval. The Supervisory Board discussed the budget for 2022, including the independent public body (ZBO) budget, and approved it on 12 November 2021. The Supervisory Board established that the internal operational and control instruments, such as the planning and control cycle and the risk management and control system, operated effectively.

Following deliberation by the Supervisory Board, the Executive Board and several members of the Supervisory Board reviewed the independent public body budget in the annual budget meeting with the Ministry of Finance. The Supervisory Board is pleased to see that the Executive Board practises transparency in the budgeting process and engages in dialogue about it with its main stakeholders. It believes DNB exercises its supervision decisively and intrusively, formulating unambiguous priorities. The five-yearly external evaluation of the ZBO tasks commissioned by the Minister of Finance confirms this view and describes DNB as a "professional and solid supervisor". Based on available resources, the Executive Board and Supervisory Board jointly look for effective and efficient solutions to execute DNB's core tasks and to further strengthen its internal operational management.

The Supervisory Board continued to devote particular attention to DNB's internal organisation in 2021. On various occasions, the Supervisory Board and Executive Board discussed control over DNB's digital agenda and the accommodation programme in considerable depth. The structural construction phase of the DNB Cash Centre in Zeist has been completed, and the finishing phase has started. During demolition work on the head office building at Frederiksplein, a large quantity of asbestos was found in the building's structure, which means the façades of the low-rise elements cannot be preserved. As a result, the relocation back to Frederiksplein will take place later than anticipated. The Supervisory Board stresses the importance of the constraints in terms of money and time in this regard. The Supervisory Board also discussed internal operational management, stressing the importance of a balanced weighing of cost efficiency, sustainability, security and transparency. The Board also engaged all division directors in dialogue to enhance the interaction between the Supervisory Board and the broader organisation. Finally, the Supervisory Board and Executive Board discussed progress on the DNB2025 strategy, with a focus on digitisation and sustainability. With regard to sustainability, the Supervisory Board and Executive Board discussed DNB's sustainable finance strategy. This strategy describes the short-term and medium-term objectives for fully integrating sustainability into DNB's core tasks as well as into its operational management. By regularly engaging the Executive Board in dialogue on themes such as diversity and inclusiveness, process and programme management, and DNB's risk management, the Supervisory Board seeks to contribute to strengthening DNB's corporate culture and improving the quality of its performance.

At each of its meetings, the Supervisory Board addressed the most important trends in DNB's areas of responsibility, derived from the periodic update on current affairs, with the Executive Board members, who informed the Supervisory Board about the international forum meetings they attended.

During a retreat the Supervisory Board and Executive Board discussed the developments and challenges in the field of cybersecurity.

Members of the Supervisory Board attended consultation meetings between the Executive Board and the Employees Council. The Chair of the Supervisory Board and the Chair of the Audit Committee met periodically with the head of the department responsible for compliance and integrity, and the Chair of the Audit Committee regularly met with the Head of the IAD and the external auditor. The Supervisory Board assessed its own performance in 2021 and discussed the results at a plenary meeting without the Executive Board being present. Among other things, the Supervisory Board looked at the balance between the functioning of the committees and the plenary meetings. The Supervisory Board sees room for improvement when it comes to discussing strategic questions more frequently and in more depth in plenary meetings. At this meeting, the Supervisory Board also discussed its cooperation with the Executive Board and the latter's performance.

Audit Committee

In the year under review, the Audit Committee consisted of Roger Dassen (Chair), Margot Scheltema and Annemieke Nijhof. Meetings were held in the presence of the Executive Board Member of Resolution and Internal Operations, the external auditor, the heads of the IAD and Finance & Consulting departments, several officers from the relevant areas and in some cases the Executive Board Member of Prudential Supervision and the Executive Board Member of Monetary Affairs.

The Audit Committee extensively discussed the financial statements, the audit plan and the external auditor's findings, and advised the Supervisory Board to adopt the 2021 financial statements and to approve the independent public body report for 2021. Furthermore, the Audit Committee discussed the 2022 budget and the 2022 independent public body budget at length with the Executive Board. The Committee advised the Supervisory Board to approve both budgets. In 2021, as in previous years, the Audit Committee examined the external auditor's report and management letter, establishing that the Executive Board acted adequately on the findings and recommendations set out in the management letter.

The Committee discusses current affairs relating to DNB's internal operations with the Executive Board Member of Resolution and Internal Operations at each meeting, with the themes of accommodation, information security, risk management and control over DNB's digital agenda being key priorities for the Audit Committee. In 2021, the Audit Committee's focus was on the disruptions in the digital working environment, which resulted in inconvenience to staff working from home. In addition, it discusses the quarterly reports on compliance and integrity and the quarterly financial reports. Throughout 2021 the Audit Committee regularly discussed and advised on progress made on DNB's accommodation programme, specifically emphasising the business case update. The Committee regularly meets with relevant representatives of the lines of defence within DNB and with the external auditor.

Remuneration and Appointments Committee

Throughout the year under review, the Remuneration and Appointments Committee consisted of Feike Sijbesma (Chair), Wim Kuijken and Marry de Gaay Fortman.

The Remuneration and Appointments Committee focused on the preparations for the nomination of Steven Maijoor as the new Executive Board Member of Banking Supervision. The Committee sought someone with a financial sector profile to join the Supervisory Board, which resulted in the appointment of Peter Blom as of 1 September 2021.

The Remuneration and Appointments Committee spoke with the President and the other Executive Board members about their performance, following the Supervisory Board's annual evaluation. A periodic meeting between the Chair of the Supervisory Board and the shareholder is part of the Supervisory Board's role in compliance matters, for instance when assessing the compatibility of secondary positions.

Supervision Committee

The Supervision Committee consisted of Margot Scheltema (Chair), Marry de Gaay Fortman, Mirjam van Praag and Peter Blom (from 1 September 2021). Annemieke Nijhof also participated in the meetings, which were held in the presence of DNB's two Executive Board Members of Supervision and several officers from the relevant areas. The Supervision Committee's agenda is based in part on an annual agenda and in part on current events. The meetings focused on a number of practical cases, current policy issues and gaining a deeper understanding of various supervisory topics. Among other things, the Supervision Committee looked at the progress of the digital supervision strategy, the situation in the life insurance sector, the role of supervisors with respect to open standards in the law, the supervision of compliance with the Anti-Money Laundering and Anti-Terrorist Financing Act, the sustainable finance strategy in relation to supervision, and criteria for ad hoc data requests. As part of the Supervisory Board's monitoring of DNB's policy in respect of its prudential supervision, the Supervision Committee exchanged views with the Executive Board in all meetings about institution-specific supervision cases to which the latter devoted particular attention in that period, to the extent relevant to safeguarding the quality and effectiveness of DNB's supervision policy.
The Supervision Committee also discussed with the Executive Board Members of Supervision the side effects of increasing regulation for society, the sector and DNB, and how they interact.
The Supervision Committee, like the Audit Committee, advised the Supervisory Board to approve the independent public body report for 2021 and the independent public body budget for 2022. Finally, with a view to safeguarding the quality and effectiveness of DNB's supervision policy, the Supervision Committee discussed the evaluation of specific supervision cases with the Executive Board Members of Supervision.

Statement on independence

The Regulation on Incompatible Offices and the Regulation on Conflicts of Interest apply to Supervisory Board members without restriction. Supervisory Board members are not employed by DNB and were not a DNB employee at any time in the five years preceding their appointment, nor do they have any relationship with DNB from which they could obtain personal gain. Supervisory Board members receive a fixed annual fee that is not related to DNB's results in any given year. All Supervisory Board members are independent within the meaning of the Dutch Corporate Governance Code. Any potential secondary position is assessed on the basis of the Regulation on Incompatible Offices and submitted to DNB's department responsible for compliance and integrity for advice. This procedure was also followed in 2021, for both Supervisory Board members and Executive Board members.

Concluding words

The Supervisory Board reflects on an eventful year in which the COVID-19 pandemic took a heavy toll on Dutch society and the economy. After society and the economy could be gradually reopened following the lifting of the curfew, infections resurged in the autumn, again leading to lockdown measures. The Board notes that over the past year, despite the exceptional circumstances that forced much of the organisation to work from home, DNB maintained its commitment to the performance of its core functions and internal operational management. The Supervisory Board would like to thank DNB's staff and its Executive Board for their contribution to sustainable prosperity in the Netherlands and looks forward to its continued cooperation with the Executive Board in 2022.

Amsterdam, 16 March 2022

Supervisory Board
De Nederlandsche Bank N.V.

Wim Kuijken, Chair
Margot Scheltema, Vice-Chair
Annemieke Nijhof, government-appointed member
Feike Sijbesma
Marry de Gaay Fortman
Roger Dassen
Mirjam van Praag
Peter Blom

2021 Financial statements

Balance sheet as at 31 December 2021

(before appropriation of profit)

Millions

		31 December 2021	31 December 2020
	Assets	EUR	EUR
1	Gold and gold receivables	31,693	30,401
2	Claims on non-euro area residents denominated in foreign currency	25,516	13,550
2.1	Receivables from the International Monetary Fund (IMF)	20,607	8,852
2.2	Balances held with banks and investments in securities, external loans and other external assets	4,909	4,698
3	Claims on euro area residents denominated in foreign currency	640	583
4	Claims on non-euro area residents denominated in euro	154	27
5	Lending to euro area credit institutions related to monetary policy operations denominated in euro	173,282	141,538
5.1	Main refinancing operations	0	0
5.2	Longer-term refinancing operations	173,282	141,538
5.3	Fine-tuning reverse operations	0	0
5.4	Structural reverse operations	0	0
5.5	Marginal lending facility	0	0
5.6	Credits related to margin calls	0	0
6	Other claims on euro area credit institutions denominated in euro	0	0
7	Securities of euro area residents denominated in euro	204,405	156,272
7.1	Securities held for monetary policy purposes	201,457	154,109
7.2	Other securities	2,948	2,163
8	Intra-Eurosystem claims	71,790	107,495
8.1	Participating interest in the ECB	586	551
8.2	Claims equivalent to the transfer of foreign reserves to the ECB	2,364	2,364
8.3	Claims related to the issuance of ECB debt certificates	0	0
8.4	Net claims related to the allocation of euro banknotes within the Eurosystem	68,840	66,097
8.5	Other intra-Eurosystem claims (net)	0	38,483
9	Other assets	2,412	2,189
9.1	Euro area coins	0	0
9.2	Tangible and intangible fixed assets	211	152
9.3	Other financial assets	168	181
9.4	Off-balance sheet instruments revaluation differences	0	195
9.5	Accruals and prepaid expenses	1,952	1,630
9.6	Other investments	81	31
	Total assets	**509,892**	**452,055**

Amsterdam, 16 March 2022

Executive Board of De Nederlandsche Bank N.V.

Klaas Knot, *President*

Olaf Sleijpen

Else Bos

Steven Maijoor

Nicole Stolk

	Liabilities	31 December 2021 EUR	31 December 2020 EUR
1	Banknotes in circulation	83,266	77,342
2	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro	301,789	258,291
2.1	Current accounts (covering the minimum reserve system)	295,689	252,691
2.2	Deposit facility	6,100	5,600
2.3	Fixed-term deposits	0	0
2.4	Fine-tuning reverse operations	0	0
2.5	Deposits related to margin calls	0	0
3	Other liabilities to euro area credit institutions denominated in euro	51	245
4	Liabilities to other euro area residents denominated in euro	12,610	16,981
4.1	General government	9,986	14,232
4.2	Other liabilities	2,624	2,749
5	Liabilities to non-euro area residents denominated in euro	27,668	51,154
6	Liabilities to euro area residents denominated in foreign currency	0	0
7	Liabilities to non-euro area residents denominated in foreign currency	0	0
8	Counterpart of special drawing rights allocated by the IMF	16,326	5,700
9	Intra-Eurosystem liabilities	22,443	0
9.1	Liabilities related to the issuance of ECB debt certificates	0	0
9.2	Other intra-Eurosystem liabilities (net)	22,443	0
10	Other liabilities	2,661	964
10.1	Off-balance sheet instruments revaluation differences	278	0
10.2	Accruals and deferred income	2,182	770
10.3	Other investments	201	194
11	Provisions	2,839	2,707
12	Revaluation accounts	31,741	30,173
13	Capital and reserves	8,483	8,483
13.1	Issued capital	500	500
13.2	General reserve	7,970	7,971
13.3	Statutory reserve	13	12
14	Profit for the year	15	15
	Total liabilities	**509,892**	**452,055**

Amsterdam, 16 March 2022

Adopted by the Supervisory Board of De Nederlandsche Bank N.V.

Wim Kuijken, *Chair*

Margot Scheltema, *Vice-Chair*

Feike Sijbesma

Annemieke Nijhof

Marry de Gaay Fortman

Roger Dassen

Mirjam van Praag

Peter Blom

Profit and loss account for the year ended 31 December 2021

Millions

		2021	2020
		EUR	EUR
1	Interest income	1,598	1,494
2	Interest expenses	(1,556)	(921)
	Net interest income	**42**	**573**
3	Realised gains/(losses) from financial operations	302	422
4	Write-downs on financial assets and positions	(25)	(2)
5	Transfer to/(from) provision for financial risks	(128)	(868)
	Net result from financial operations and write-downs	**149**	**(448)**
6	Fees and commissions income	17	16
7	Fees and commissions expense	(15)	(11)
	Net fees and commissions income/(expense)	**2**	**5**
8	Income from equity shares and participating interests	47	132
9	Net result of monetary income pooling	65	17
10	Other income	217	248
	Total net income	**522**	**527**
11	Staff costs	(256)	(246)
12	Other administrative costs	(182)	(174)
13	Depreciation and amortisation of tangible and intangible fixed assets	(28)	(70)
14	Banknote production costs	(42)	(23)
15	Other expenses	0	0
16	Capitalised software costs	1	1
17	Corporate income tax	0	0
	Profit for the year	**15**	**15**

Amsterdam, 16 March 2022

Executive Board of De Nederlandsche Bank N.V.

Klaas Knot, *President*

Else Bos

Nicole Stolk

Olaf Sleijpen

Steven Maijoor

Amsterdam, 16 March 2022

Adopted by the Supervisory Board of De Nederlandsche Bank N.V.

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Margot Scheltema, *Vice-Chair*

Feike Sijbesma

Annemieke Nijhof

Marry de Gaay Fortman

Roger Dassen

Mirjam van Praag

Peter Blom

Notes to the balance sheet as at 31 December 2021 and the profit and loss account for the year 2021

1. Accounting policies

The financial statements are drawn up in accordance with the models and accounting policies applying to the European Central Bank (ECB) and the European System of Central Banks (ESCB) (hereafter: ESCB accounting policies[1]) and the harmonised disclosures to the balance sheet and the profit and loss account. This is possible under the exemption provisions of Section 17 of the Bank Act 1998. Where Section 17 does not provide any exemption or where the ESCB accounting policies or harmonised disclosures do not cover the subject, the financial statements are compiled in accordance with the provisions of Part 9 of Book 2 of the Dutch Civil Code, which have been elaborated in the Dutch Accounting Standards (Richtlijnen voor de Jaarverslaggeving – RJ).
In addition, remuneration is disclosed in accordance with the provisions of the Public and Semi-public Sector Executives Remuneration (Standards) Act (Wet bezoldiging topfunctionarissen publieke en semipublieke sector – WNT).

The ESCB accounting policies are broadly in line with the Dutch Generally Accepted Accounting Principles (GAAP). In deviation from Part 9 of Book 2 of the Dutch Civil Code:
a. unrealised gains from assets and liabilities measured at revalued amounts are recognised as set out under 'Revaluation' below;
b. the balance sheet format differs from that set out in the Financial Statements Formats Decree;
c. no cash flow statement is included;
d. a provision for financial risks may be established; and
e. tangible and intangible fixed assets are depreciated and amortised, respectively, over their standard estimated useful lives.

With the exception of accelerated depreciation of tangible fixed assets and the provision for employee benefits all individual items in the balance sheet and the profit and loss account are recognised in accordance with the ESCB accounting policies. The provisions of Part 9 of Book 2 of the Dutch Civil Code are reflected mainly in the general accounting policies and the disclosures relating to the following balance sheet and profit and loss account items:

1 ECB/2016/34 as amended by ECB/2019/34 and ECB/2021/51.

a. capital and reserves
b. participating interests
c. events after the balance sheet date
d. off-balance sheet rights and liabilities
e. revaluation accounts
f. realised gains/(losses) from financial operations
g. number of employees
h. fees paid to the external auditor
i. remuneration (also in accordance with the WNT)

Comparison with preceding year

The accounting policies have not changed compared with the preceding year.

Securities held for monetary policy purposes

Securities held for monetary policy purposes are valued at amortised cost, subject to impairment. See the breakdown in the note to asset item 7.1 'Securities held for monetary policy purposes' on page 132 for further details.

Securities not held for monetary policy purposes and investment funds

Marketable securities held for other than monetary policy purposes are valued at the mid-market prices[2] prevailing on the next-to-last trading day of the year. Options embedded in securities are not separated for valuation purposes.

Marketable investment funds and portfolios that are externally managed and strictly replicate the performance of an index-linked fund are valued at market prices (net asset value). Valuation is on a net – fund – basis and not on the basis of the underlying assets, provided that the investments meet certain predetermined criteria, broadly speaking in relation to the level of influence of DNB on the day-to-day operations of the fund, the legal status of the fund and the way in which returns are evaluated.

Revaluation

Revaluation differences arising from price differences in respect of securities not held for monetary policy purposes are determined on a code-by-code[3] basis. Revaluation arising from exchange rate differences is determined on a currency portfolio basis and subsequently on a currency basis. Unrealised revaluation gains are added to the item 'Revaluation accounts'. Unrealised revaluation losses are charged to the 'Revaluation accounts' item to the extent that the balance of the relevant revaluation account is positive. Any shortfall is taken to the profit and loss account at year-end. Price revaluation losses on a security are not netted against price revaluation gains on another security or exchange rate revaluation gains. There is no netting between the revaluation results

2 The ESCB accounting policies define the mid-market price as the mid-point between the bid price and the offer price for a security.
3 The ESCB accounting policies define code as international securities identification number/type.

of different marketable investment funds. Exchange rate revaluation losses on any one currency are not netted against exchange rate revaluation gains on any other currency or against price revaluation gains. For gold and gold receivables, no distinction is made between price revaluation and exchange rate revaluation.

Gold and gold receivables

Gold and gold receivables are valued at the year-end ECB market price and revalued as set out under 'Revaluation'.

Conversion of foreign currencies

The financial statements are presented in euro (EUR), which is DNB's functional and presentation currency. On- and off-balance sheet rights and liabilities denominated in foreign currency are converted into euro at the year-end ECB market exchange rate and revalued as set out under 'Revaluation'. Income and expense denominated in foreign currency are converted at the ECB market exchange rates prevailing at the transaction dates.

Repurchase and reverse repurchase transactions

A repurchase transaction (repo) is a spot sale of securities hedged by a forward purchase of the same securities. The receipts from the spot sale are presented in the balance sheet as a deposit. In the light of the forward purchase, the securities continue to be recognised as assets. Hence, the amount involved in the forward purchase is disclosed in the balance sheet under liabilities. A reverse repurchase transaction (reverse repo) is regarded as lending. The securities received as collateral are not recognised in the balance sheet and do not, therefore, affect the balance sheet position of the portfolios concerned.

Other financial instruments

Other financial instruments include foreign exchange forwards and foreign exchange swaps, as well as interest rate swaps and futures. On initial recognition, foreign exchange forwards and foreign exchange swaps are valued at their spot rates. Subsequent differences between spot and forward rates are amortised and taken to the profit and loss account. This allows their value to evolve towards the forward rate over time. Interest rate swaps are valued at market rates. Futures are settled on a day-to-day basis. Currency positions are included in the revaluation accounts and revalued as set out under 'Revaluation'.

Intra-ESCB and intra-Eurosystem claims and liabilities

Intra-ESCB balances are the result of cross-border payments within the European Union (EU) settled in euro by the central banks. Such transactions are for the most part initiated by private institutions. Most are settled within TARGET2[4] and give rise to bilateral balances in the TARGET2 accounts held by the EU central banks. Such bilateral balances are netted on a daily basis and assigned to the ECB,

4 TARGET2 stands for Trans-European Automated Real-Time Gross Settlement Express Transfer system 2.

leaving every national central bank (NCB) with a single bilateral net position vis-à-vis the ECB. DNB's position vis-à-vis the ECB arising from TARGET2 transactions is presented, together with other euro-denominated positions within the ESCB (such as claims relating to interim income distributions to the NCBs and monetary income), as a net asset or liability item under 'Other intra-Eurosystem claims/liabilities (net)' on DNB's balance sheet. Positions held within the ESCB vis-à-vis NCBs outside the euro area arising from TARGET2 transactions are reported in 'Claims on/liabilities to non-euro area residents denominated in euro'.

Intra-Eurosystem positions arising from DNB's participating interest in the ECB are reported under 'Participating interest in the ECB'. This item comprises (i) DNB's paid-up share in the ECB's subscribed capital and (ii) net amounts paid due to an increase in DNB's share in the ECB's accumulated equity value[5] resulting from previous capital key adjustments.

Intra-Eurosystem positions arising from the transfer of foreign reserve assets to the ECB by NCBs which joined the Eurosystem are reported in 'Claims equivalent to the transfer of foreign reserves to the ECB'.

Positions arising from the allocation of euro banknotes within the Eurosystem are included as a single net asset or liability item under 'Net claims/liabilities related to the allocation of euro banknotes within the Eurosystem'. See 'Banknotes in circulation' for further details.

Participating interests

Participating interests are valued at cost, subject to impairment. Income from participating interests is included in the profit and loss account under 'Income from equity shares and participating interests'.

The participating interest in the ECB is accounted for in accordance with the principles set out under 'Intra-ESCB and intra-Eurosystem claims and liabilities'.

Tangible and intangible fixed assets

Tangible and intangible fixed assets are valued at cost less depreciation or amortisation, subject to impairment. For intangible assets, in addition to the primary acquisition cost and the costs of external advisers relating to these assets, the in-house hours spent on these assets are also capitalised. For software developed in-house under 'Intangible fixed assets', a statutory reserve has been formed. Depreciation and amortisation are calculated on a straight-line basis from the moment the asset is put into use. The standard useful life of buildings and renovations is 25 years, that of equipment, plant and furniture 10 years and that of computer hardware, software, motor vehicles and intangible assets 4 years. Accelerated depreciation or amortisation is applied if a

5 Equity value means the total of the ECB's reserves, revaluation accounts and provisions equivalent to reserves, minus any loss carried forward from previous periods. In the event of capital key adjustments taking place during the financial year, the equity value also includes the ECB's accumulated net profit or net loss until the date of the adjustment.

shorter useful life is likely. Land is not depreciated. Retired tangible fixed assets are valued at the lower of book value and expected realisable value.

Other assets (excluding tangible and intangible fixed assets) and accruals and income collected in advance

'Other assets' (excluding tangible and intangible fixed assets) and 'Accruals and income collected in advance' are valued at cost or nominal value, subject to impairment. Transactions in 'Other assets' and 'Accruals and income collected in advance' are recognised in the financial statements as at the settlement date, with the exception of foreign exchange transactions and related accruals, which are reported as at the trade date, in accordance with the economic approach.

Banknotes in circulation

The ECB and the euro area NCBs, which together comprise the Eurosystem, issue euro banknotes[6]. The total value of the euro banknote circulation is allocated to the Eurosystem central banks on the last working day of each month, in accordance with the banknote allocation key[7].

The ECB has been allocated a share of 8% of the total value of euro banknotes in circulation, whereas the remaining 92% has been allocated to NCBs in proportion to their weightings in the Eurosystem capital key. The value of the share of banknotes in circulation allocated to each NCB is accounted for on the liabilities side of the balance sheet under 'Banknotes in circulation'. The difference between the value of the euro banknotes allocated to each NCB in accordance with the banknote allocation key and the value of the euro banknotes actually circulated by the relevant NCB gives rise to interest-bearing[8] intra-Eurosystem positions. These claims or liabilities are presented under 'Net claims/ liabilities related to the allocation of euro banknotes within the Eurosystem'.

From the cash changeover year[9] until five years following the cash changeover year the intra-Eurosystem balances arising from the allocation of euro banknotes are adjusted in order to avoid significant changes in NCBs' relative income positions as compared to previous years. The adjustments are effected by taking into account the differences between the average value of banknotes put into circulation by each NCB in the reference period[10] and the average value of banknotes that would have been allocated to them during that period under the Eurosystem capital allocation key. The adjustments will be reduced in annual stages until the first day of the sixth year after the cash changeover year, when income on banknotes will be allocated fully in proportion to the NCBs' paid-up shares in the ECB's capital. No adjustments were made in 2021.

6 Decision (EU) of the European Central Bank of 13 December 2010 on the issue of euro banknotes (recast) (ECB/2010/29 and ECB 2011/67/EU), OJ L 35 of 9.2.2011, pp. 26-29.
7 Banknote allocation key means the percentages that result from taking into account the ECB's share in the total euro banknote issue and applying the subscribed capital key to the NCBs' share in such total.
8 Decision (EU) 2016/2248 of the European Central Bank of 3 November 2016 on the allocation of monetary income of the national central banks of Member States whose currency is the euro (recast) (ECB/2016/36, OJ L 347 of 20 December 2016, pp. 26-36.
9 Cash changeover year refers to the year in which the euro banknotes are introduced as legal tender in the respective Member State.
10 The reference period refers to the 24 months which start 30 months before the day on which euro banknotes become legal tender in the respective Member State.

The interest income and expense on these balances are settled by the ECB and are disclosed under 'Net interest income' in the profit and loss account[11].

Provision for financial risks

A provision for financial risks may be established pursuant to Article 8 of the accounting policies that apply to the ECB and the ESCB. DNB has established a provision for financial risks to cover its exposure to transitory and volatile risks whose magnitude it has established on the basis of a reasoned estimate[12]. It has formed the current provision for financial risks with an eye to risks pertaining to the asset purchase programme (APP[13]) and the pandemic emergency purchase programme (PEPP13). It is comprised of interest rate risk and credit risk on the monetary asset purchases under the programmes (excluding exposures to the Dutch government).

Pension and other retirement schemes

The pension entitlements of staff as well as of others having comparable entitlements have been transferred to Stichting Pensioenfonds van De Nederlandsche Bank N.V. (DNB Pension Fund). Through an agreement, DNB has undertaken to pay to the DNB Pension Fund, subject to conditions agreed for the purpose, such amounts as to ensure the pensions under the Pension Fund's pension schemes. In the agreement, the financial methodology is set out in a premium, supplement and risk policy ladder; in the target assets, allowance is made for the indexation ambition. The level of the amounts payable by DNB and the liabilities reported in the financial statements in respect of other retirement schemes are calculated on an actuarial basis.

Other balance sheet items

Other balance sheet items are valued at nominal value, subject to impairment.

ECB profit distribution

After adoption by the ECB's Governing Council, the ECB's profit is distributed to the NCBs of the Eurosystem in proportion to their weightings in the Eurosystem capital key. The amount distributed to DNB is disclosed in the profit and loss account under 'Income from equity shares and participating interests'.

An amount equal to the ECB's income arising from the 8% share of euro banknotes in circulation allocated to the ECB, as well as the income arising from securities purchased through a) the securities markets programme (SMP), b) the third covered bond purchase programme (CBPP3), c) the asset-backed securities purchase programme (ABSPP), d) the public sector purchase programme (PSPP) and e) the pandemic emergency purchase programme (PEPP), is distributed in January of the following year by means of an interim profit distribution, unless otherwise decided by the ECB's

11 Decision (EU) 2016/2248 of the European Central Bank of 3 November 2016 on the allocation of monetary income of the national central banks of Member States whose currency is the euro (recast) (ECB/2016/36, OJ L 347 of 20 December 2016, pp. 26-36.
12 See the Dutch-language website of the central government on DNB's capital policy.
13 See the tables in asset item 7.1 for further details of the purchase programmes.

Governing Council.[14] It is distributed in full unless it is higher than the ECB's profit for the financial year, and subject to any decisions by the Governing Council to make transfers to the provision for financial risks. The income arising from the 8% share of the income on euro banknotes in circulation can also be reduced by the amount of the costs incurred by the ECB in connection with the issue and handling of euro banknotes. The final distribution takes place in the month following the interim profit distribution and accrues to the next financial year in accordance with the prescribed accounting policy.

Recognition of income and expense

Income and expense are allocated to the financial year to which they relate. Realised gains and losses on investments are determined according to the average cost method and recognised in the profit and loss account. Unrealised gains are not recognised as income, but recorded directly in the revaluation accounts. Unrealised losses are taken to the profit and loss account if they exceed previous revaluation gains registered in the corresponding revaluation account. They are not reversed in subsequent years against new unrealised gains. Unrealised revaluation losses are taken to the profit and loss account.

Significant accounting estimates and judgements

The preparation of the financial statements requires management to make significant estimates and judgements that affect the reported amounts. These include estimates of useful lives of tangible fixed assets not depreciated in accordance with ESCB accounting policies, and assessments as to whether provisions must be established, with the exception of the provision for financial risks. The estimate of the risk to which DNB is exposed is relevant to determining the amount added to or released from the provision for financial risks.

14 Decision (EU) 2015/298 of the European Central Bank of 15 December 2014 on the interim allocation of the income of the European Central Bank (recast), (ECB/2014/57), OJ L35 of 25 February 2015, p. 24.

2. Notes to the balance sheet

Assets

1. Gold and gold receivables

In the year under review, the volume of the gold holdings did not change. As at 31 December 2021, the gold holdings consisted of 19.7 million fine troy ounces (or 612 tonnes) of gold. Their market value stood at EUR 1,609.48 million (31 December 2020: EUR 1,543.88) per fine troy ounce. The euro value of this item was higher at year-end 2021 compared with year-end 2020 due to an increase in the market price of gold. The increase was added to the revaluation accounts.

Millions

	EUR
Balance as at 31 December 2019	26,664
Revaluation 2020	3,737
Balance as at 31 December 2020	30,401
Revaluation 2021	1,292
Balance as at 31 December 2021	**31,693**

2. Claims on non-euro area residents denominated in foreign currency

As at 31 December 2021, this item stood at EUR 25,516 million (31 December 2020: EUR 13,550 million). It can be broken down as follows:

- 2.1 Receivables from the International Monetary Fund (IMF)

Receivables from the IMF totalled EUR 20,607 million (31 December 2020: EUR 8,852 million). The SDR[15]/EUR exchange rate as at 31 December 2021 stood at EUR 1.2359 (31 December 2020: SDR/EUR 1.1786).

The receivables from the IMF are funded and held by DNB for the IMF membership of the Dutch State. The Dutch State has extended a credit guarantee up to the sum of the commitments. From 2021 onwards, the special drawing rights are exempted from the guarantee.

15 The value of the SDR is based on a basket of international currencies: the euro, the US dollar, the Chinese yuan, the Japanese yen and the pound sterling.

Millions

	31 December 2021		31 December 2020	
	SDR	EUR	SDR	EUR
Reserve tranche position	2,166	2,677	1,836	2,163
Loans	834	1,030	768	905
Special drawing rights	13,674	16,900	4,907	5,784
Total	**16,674**	**20,607**	**7,511**	**8,852**

Reserve tranche position

The reserve tranche position stood at EUR 2,677 million as at 31 December 2021 (31 December 2020: EUR 2,163 million), and it is part of the national quota. All IMF member states have made quotas available to the IMF. Their amounts are related to the member states' relative positions in the global economy. The Dutch quota amounts to SDR 8,737 million. The reserve tranche position (SDR 2,166 million) is the share in this quota effectively drawn by the IMF. The remaining amount – the IMF's euro holdings (SDR 6,571 million) – is kept by DNB.

Loans

Loans stood at EUR 1,030 million as at 31 December 2021 (31 December 2020: EUR 905 million).

Millions

	Total facility		End of drawing period*	31 December 2021		31 December 2020	
	SDR	EUR		SDR	EUR	SDR	EUR
PRGT	1,496	1,849	31-12-2029	725	896	548	646
NAB	9,190	11,358	31-12-2025	109	134	219	259
2020 credit line		5,863	31-12-2023	-	-	-	-
Total				**834**	**1,030**	**767**	**905**

* The drawing period is the period during which loans can be taken out.

They can be broken down as follows:

Millions

	Residual maturity* 31 December 2021				Residual maturity* 31 December 2020			
	Total	< 1 year	1 - 2 year	> 2 year	Total	< 1 year	1 - 2 year	> 2 year
	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
PRGT	**896**	2	4	890	**646**	4	2	640
NAB**	**134**	-	-	134	**259**	-	-	259
2020 credit line	**-**	-	-	-	**-**	-	-	-
	1,030	**2**	**4**	**1,024**	**905**	**4**	**2**	**899**

* The residual maturity is the period between the balance sheet date and the expiration date.
** NAB loans have 10-year terms from the time of granting.

The Poverty Reduction and Growth Trust (PRGT) is a fund set up to supply the principal amounts of subsidised low-interest loans to the poorest developing countries. Lending under this fund was increased in response to the COVID-19 pandemic.

The New Arrangement to Borrow (NAB) is a credit line which DNB has made available to the IMF. The IMF can use this credit line for its regular operations in addition to the quota. In 2021, early repayments were made on part of the NAB loans. The NAB facility was doubled under an international agreement to SDR 9,190 million and its drawing period extended to 31 December 2025 effective 1 January 2021.

In addition, a new bilateral credit line with the IMF (2020 credit line) of a maximum of EUR 5,863 million took effect on 1 January 2021. The drawing period ends on 31 December 2023. The IMF can draw on this credit line if resources from the quota and the NAB are insufficient.

Special drawing rights

As at 31 December 2021, DNB's special drawing rights amounted to EUR 16,900 million (2020: EUR 5,784 million). They represent the right to exchange SDR holdings to obtain other currencies.

On 23 August 2021, the IMF created additional SDR 456 billion in special drawing rights. This amount was allocated in proportion to the quotas of the IMF member states at that date. With this allocation, the IMF seeks to meet global liquidity needs, build trust and promote resilience and stability in the world economy. The additional allocation made to DNB amounts to SDR 8,374 million. This is the main cause of the increase in the holdings of special drawing rights, which amount to SDR 13,674 million (31 December 2020: SDR 4,907 million).

The special drawing rights were created against the liability item 'Counterpart of special drawing rights allocated by the IMF'. At 31 December 2021, these stood at EUR 16,326 million (31 December 2020: EUR 5,700 million). This concerns the total allocation to the Dutch State.

– 2.2 Balances with banks and security investments, external loans and other external assets

As at 31 December 2021, this item stood at EUR 4,909 million (31 December 2020: EUR 4,698 million).

The breakdown of this item by currency is as follows.

Millions

	31 December 2021			31 December 2020		
	Foreign currency	EUR	Exchange rate	Foreign currency	EUR	Exchange rate
USD	4,118	3,636	1.1326	4,251	3,464	1.2271
JPY	112,797	865	130.3800	156,032	1,234	126.4900
AUD	108	69	1.5615	0	0	1.5896
CAD	100	69	1.4393	0	0	1.5633
NOK	686	69	9.9888	-	-	10.4703
CZK	1,690	68	24.8580	-	-	26.2420
GBP	56	67	0.8403	0	0	0.8990
CNY	478	66	7.1947	-	-	8.0225
DKK	0	0	7.4364	0	0	7.4409
Other currencies		0			0	
Total		**4,909**			**4,698**	

The table below provides a breakdown of these foreign currency balances by investment category.

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Fixed-income securities	3,695	3,577
Equity funds	822	970
Reverse repos	371	149
Nostro accounts	21	2
Total	**4,909**	**4,698**

The Financial overview section of the Accountability chapter provides a more detailed discussion of the developments in own investments at a portfolio level.

The table below provides a breakdown of investment categories by residual maturity.

Millions

	Residual maturity* 31 December 2021					Residual maturity* 31 December 2020				
	Total	No maturity	< 1 year	1 - 2 year	> 2 year	Total	No maturity	< 1 year	1 - 2 year	> 2 year
	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Fixed-income securities	**3,695**	-	2,342	389	964	**3,577**	-	2,537	504	536
Equity funds	**822**	822	-	-	-	**970**	970	-	-	-
Reverse repos	**371**	-	371	-	-	**149**	-	149	-	-
Nostro accounts	**21**	21	-	-	-	**2**	2	-	-	-
Total	**4,909**	**843**	**2,713**	**389**	**964**	**4,698**	**972**	**2,686**	**504**	**536**

* The residual maturity is the period between the balance sheet date and the expiration date.

3. Claims on euro area residents denominated in foreign currency

As at 31 December 2021, this item stood at EUR 640 million (31 December 2020: EUR 583 million).

The table below provides a breakdown of this item by currency.

Millions

	31 December 2021			31 December 2020		
	Foreign currency	EUR	Exchange rate	Foreign currency	EUR	Exchange rate
USD	725	640	1.1326	716	583	1.2271
Other currencies		0			0	
Total		**640**			**583**	

The table below specifies these foreign currency balances by investment category.

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Fixed-income securities	638	420
USD tender	-	162
Nostro accounts	2	1
Total	**640**	**583**

The Financial overview section of the Accountability chapter provides a more detailed discussion of the movements in own investments at a portfolio level.

The table below provides a breakdown of investment categories by residual maturity.

Millions

	Residual maturity* 31 December 2021					Residual maturity* 31 December 2020				
	Total	No maturity	< 1 year	1 - 2 years	> 2 years	Total	No maturity	< 1 year	1 - 2 years	> 2 years
	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Fixed-income securities	**638**	-	445	95	98	**420**	-	237	59	124
USD tender	**-**	-	-	-	-	**162**	-	162	-	-
Nostro accounts	**2**	2	-	-	-	**1**	1	-	-	-
Total	**640**	**2**	**445**	**95**	**98**	**583**	**1**	**399**	**59**	**124**

* The residual maturity is the period between the balance sheet date and the expiration date.

The USD tender comprises claims arising from reverse operations on Eurosystem counterparties. As at 31 December 2021, this item stood at nil (2020: EUR 162 million). They are related to the short-term liquidity-providing operation in US dollars, under which the Federal Reserve makes US dollars available to the ECB, aiming to provide short-term liquidity in US dollars to Eurosystem counterparties. At the same time, the ECB enters into swap operations with euro area NCBs, including DNB, which use the available funds to enter into liquidity-providing repo and swap operations with Eurosystem counterparties. The swap operations between the ECB and NCBs give rise to claims and liabilities within the Eurosystem, which are recognised under asset item 8.5 'Other intra-Eurosystem claims (net)'.

4. Claims on non-euro area residents denominated in euro

As at 31 December 2021, this item stood at EUR 154 million (31 December 2020: EUR 27 million). These claims can be broken down as follows:

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Fixed-income securities	148	-
Nostro accounts	6	27
Total	**154**	**27**

The Financial overview section of the Accountability chapter provides a more detailed discussion of the movements in own investments at a portfolio level.

As the equity funds and nostro accounts have no fixed maturity, they are not broken down by maturity.

5. Lending to euro area credit institutions related to monetary policy operations denominated in euro

As at 31 December 2021, the Eurosystem's claim arising from the item 'Lending to euro area credit institutions related to monetary policy operations denominated in euro' totalled EUR 2,201,882 million (31 December 2020: EUR 1,793,194 million). Of this total, lending by DNB to Dutch-based credit institutions amounted to EUR 173,282 million (31 December 2020: EUR 141,538 million). In accordance with Article 32.4 of the ESCB and ECB Statute, all risks relating to such lending will, if materialised, following a decision by the ECB's Governing Council, be borne in full by the Eurosystem NCBs in proportion to the Eurosystem capital key in force at the time when the loss is suffered. To have access to this facility, a financial institution must meet the requirements laid down by the ECB, including the collateral eligibility criteria. Losses occur only if the counterparty defaults on the repayment and, in addition, the sale of the collateral fails to cover the debt.

The main refinancing rate stood at 0.00% throughout 2021 (unchanged from 2020). The deposit rate stood at -0.50% throughout 2021 (unchanged from 2020).

This item can be broken down as follows:

Millions

	31 December 2021 EUR	31 December 2020 EUR
Main refinancing operations	-	-
Longer-term refinancing operations	173,282	141,538
Fine-tuning reverse operations	-	-
Structural reverse operations	-	-
Marginal lending facility	-	-
Credits related to margin calls	-	-
Total	**173,282**	**141,538**

- 5.1 Main refinancing operations

No credit is outstanding under main refinancing operations as at 31 December 2021 (31 December 2020: nil). They are conducted as standard tenders on a weekly basis, usually with a maturity of one week. The main refinancing operations are conducted as fixed-rate tenders. They play a key role in steering interest rates, regulating market liquidity and signalling the monetary policy stance.

- 5.2 Longer-term refinancing operations

Longer-term refinancing operations, amounting to EUR 173,282 million as at 31 December 2021 (31 December 2020: EUR 141,538 million), provide longer-term liquidity. These operations have maturities equal to the minimum reserve maintenance period[16] or maturities between 3 and 48 months. At 31 December 2021, the longer-term refinancing operations under the third programme (TLTRO III loans) amount to EUR 173,282 million (31 December 2020: EUR 140,535 million).
At 31 December 2021, no operations are outstanding under the longer-term refinancing operations of the second programme (TLTRO II loans, 31 December 2020: EUR 448 million), the longer-term refinancing operations related to the pandemic (PELTRO loans, 31 December 2020: EUR 450 million) and the longer-term refinancing operations (LTRO loans, 31 December 2020: EUR 105 million).

Four targeted longer-term refinancing operations under the second programme (TLTRO II) with a four-year maturity started from 2016 onwards. In 2021, the last TLTRO II loan amounting to EUR 448 million was repaid.

16 An indicative calendar of reserve maintenance periods can be found on the ECB website.

Additionally, in 2019 the ECB's Governing Council introduced the first of an initial series of seven targeted longer-term refinancing operations under the third programme (TLTRO III loans). On 10 December 2020 the Governing Council decided to add three more longer-term refinancing operations, which were conducted between June and December 2021. They have a maturity of three years. For the first seven TLTRO III transactions, credit institutions have a full or partial early repayment option on a quarterly basis, starting from September 2021, if at least one year of the maturity has elapsed[17]. Starting with the eighth TLTRO III transaction, credit institutions have this option starting from June 2022. The Governing Council of the ECB had initially decided that the final interest rate applicable to each TLTRO III operation could be as low as the average interest rate on the deposit facility prevailing over the life of the respective operation. In response to the COVID-19 shock, the Governing Council decided in 2020[18] that the interest rate applied from 24 June 2020 to 23 June 2021 and from 24 June 2021 to 23 June 2022 (the special interest rate period and the additional special interest rate period) would be up to 50 basis points below the average interest rate on the deposit facility prevailing over the same period, and in any case not higher than -1%. The actual interest rate depends on whether the credit institutions meet certain conditions. This will not be known until the maturity date of each loan. Until then a realistic estimate can only be made for the special interest period and the additional special interest period to the extent that these interest rates have been communicated to the counterparties. Consequently, it was deemed a prudent approach to use the deposit facility rate minus 50 basis points, but in any case not higher than -1%, for calculating the TLTRO III interest over the two special interest rate periods, and the deposit facility rate for calculating the TLTRO III interest over the rest of the life of an operation until more reliable data is available. This means the following interest rates were used for the 2021 figures: the actual interest rates for the special interest rate period up to 23 June 2021 that were communicated to the counterparties on 10 September 2021 and -1% for the additional special interest rate period.

On 30 April 2020, the Governing Council of the ECB also decided to conduct a new series of seven additional longer-term refinancing operations referred to as PELTRO loans. The PELTRO loans provide liquidity support to the euro area financial system and contribute to preserving the smooth functioning of money markets during the pandemic. They expired in the third quarter of 2021. In addition, the Governing Council decided on 10 December 2020 to issue a series of four additional PELTRO loans on a quarterly basis in 2021, with a one-year maturity. These loans are conducted as fixed rate tender procedures with full allotment. The interest rate is 25 basis points below the average rate applied in the Eurosystem's main refinancing operations over the life of the respective PELTRO loan. In 2021, the last PELTRO loans amounting to EUR 450 million were repaid and the issue of a new series in 2021 was not subscribed to.

17 Decision (EU) 2020/407 of the European Central Bank of 16 March 2020 amending Decision (EU) 2019/1311 on a third series of targeted longer-term refinancing operations (ECB/2020/13)
18 Decisions of the Governing Council of the ECB of 30 April 2020 and 10 December 2020.

- 5.3 Fine-tuning reverse operations

Fine-tuning reverse operations aim to regulate the market liquidity situation and steer interest rates, particularly to smooth the effects on interest rates caused by unexpected market fluctuations. Owing to their nature, they are conducted on an ad-hoc basis. In 2021, as in 2020, they were not conducted.

- 5.4 Structural reverse operations

These are reverse open-market transactions through standard tenders to enable the Eurosystem to adjust its structural liquidity position vis-à-vis the financial sector. In 2021, as in 2020, they were not conducted.

- 5.5 Marginal lending facility

Marginal lending facilities may be used by counterparties to obtain deposits from NCBs at a pre-specified deposit interest rate against eligible assets until the morning of the next business day. In 2021, as in 2020, this facility was not used.

- 5.6 Credits related to margin calls

These are credits to counterparties in case the collateral provided exceeds a predetermined limit, resulting in excess collateral relative to the outstanding monetary policy operations. In 2021, as in 2020, no credits related to margin calls were extended.

7. Securities of euro area residents denominated in euro

As at 31 December 2021, this item stood at EUR 204,405 million (31 December 2020: EUR 156,272 million), consisting of 'Securities held for monetary policy purposes' and 'Other securities'.

- 7.1 Securities held for monetary policy purposes

This item consists of securities acquired by DNB within the scope of the second and third covered bond purchase programmes (CBPP2 and CBPP3), the securities markets programme (SMP), the public sector purchase programme (PSPP) and the pandemic emergency purchase programme (PEPP).

	Start date	Active/inactive	Decision	Eligible securities*
Terminated programmes				
CBPP1	July 2009	inactive since June 2010	ECB/2009/16	Covered bonds issued by euro area residents
CBPP2	November 2011	inactive since October 2012	ECB/2011/17	Covered bonds issued by euro area residents
SMP	May 2010	inactive since September 2012	ECB/2010/5	Private-sector and public-sector securities issued in the euro area**
APP				
CBPP3	October 2014	active	ECB/2020/8 (amended)	Covered bonds issued by euro area residents
ABSPP	November 2014	active	ECB/2014/45 (amended)	Senior and guaranteed mezzanine tranches of asset-backed securities issued by euro area residents
PSPP	March 2015	active	ECB/2020/9	Bonds issued by euro area central, regional or local governments and recognised agencies, international organisations and multilateral development banks
CSPP	June 2016	active	ECB/2016/16	Bonds issued by non-bank institutions located in the euro area
PEPP				
PEPP	March 2020	active	ECB/2020/17 (amended)	All asset categories eligible under the APP***

* Further eligibility criteria for specific programmes are set out in the Governing Council's decisions.
** Only public debt securities issued by five euro area treasuries were purchased under the SMP.
*** Including securities issued by the Greek government.

In 2021 the Eurosystem continued its net purchases of securities under the extended asset purchase programme (APP)[19] at a monthly pace of EUR 20 billion on average. In December 2021, the Governing Council of the ECB decided to effect net purchases of EUR 40 billion and EUR 30 billion per month in the second and third quarters of 2022 respectively. As from October 2022, the Governing Council expects net purchases at a monthly pace of EUR 20 billion to run for as long as necessary to reinforce the accommodative impact of its policy rates, and to end shortly before it starts raising the key ECB interest rates. Furthermore, the Governing Council intends to reinvest the principal payments from maturing securities for an extended period of time past the date on which the it begins to raise the key ECB interest rates, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.

In addition, the Eurosystem increased the pandemic emergency purchase programme (PEPP) in 2021 to a new total of EUR 1,850 billion.[20] Purchases will be conducted in a flexible manner on the basis of market conditions and the inflation outlook. In December 2021 the Governing Council decided to discontinue net asset purchases under the PEPP at the end of March 2022. They can be resumed where needed to absorb negative shocks from the COVID-19 pandemic. Furthermore, the Governing Council decided to extend the reinvestment period of the principal amounts of securities purchased under the pandemic emergency purchase programme (PEPP) until at least the end of 2024. The reinvestments are flexible and can be adjusted over time, across asset classes and among jurisdictions at any time. The future roll-off of the PEPP portfolio will be managed to avoid interference with the appropriate monetary policy stance.

19 See the ECB's website for further details.
20 The total amount available will not be fully utilised if favourable financing conditions can be maintained with asset purchases for a lower amount.

The amortised cost of the fixed-income securities held by DNB and the other Eurosystem central banks is as follows:

Millions

	31 December 2021			31 December 2020		
Amortised cost	DNB	Other Eurosystem	Total Eurosystem	DNB	Other Eurosystem	Total Eurosystem
	EUR	EUR	EUR	EUR	EUR	EUR
Terminated programmes						
CBPP1	-	429	**429**	-	452	**452**
CBPP2	40	2,366	**2,406**	40	2,724	**2,764**
SMP	454	6,068	**6,522**	1,436	27,227	**28,663**
Total terminated programmes	**494**	**8,863**	**9,357**	**1,476**	**30,403**	**31,879**
APP						
CBPP3	22,855	275,312	**298,167**	20,451	267,094	**287,545**
ABSPP	-	28,403	**28,403**	-	29,352	**29,352**
PSPP - government	103,659	2,118,940	**2,222,599**	97,640	1,994,651	**2,092,291**
PSPP - supranational	-	264,537	**264,537**	-	249,317	**249,317**
CSPP	-	309,676	**309,676**	-	250,403	**250,403**
Total APP	**126,514**	**2,996,868**	**3,123,382**	**118,091**	**2,790,817**	**2,908,908**
PEPP						
PEPP - covered bonds	414	5,659	**6,073**	114	3,004	**3,118**
PEPP - government	74,035	1,326,185	**1,400,220**	34,428	625,215	**659,643**
PEPP - supranational	-	130,590	**130,590**	-	47,796	**47,796**
PEPP - corporate bonds	-	43,782	**43,782**	-	43,154	**43,154**
Total PEPP	**74,449**	**1,506,216**	**1,580,665**	**34,542**	**719,169**	**753,710**
Total	**201,457**	**4,511,947**	**4,713,403**	**154,109**	**3,540,389**	**3,694,496**

The Governing Council of the ECB and the Executive Board of DNB regularly assess the financial risks associated with the securities held under these programmes. The annual impairment test is conducted by the Eurosystem for each programme on the basis of the information available at the balance sheet date. DNB's policy is in accordance with the decision by the ECB's Governing Council. The annual impairment test conducted as at 31 December 2021 has led the ECB's Governing Council to expect that all future cash flows from the securities held under these programmes will be received.

In accordance with the decision of the Governing Council taken under Article 32.4 of the ESCB and ECB Statute, losses from these programmes[21], if they were to materialise, are shared in full by the Eurosystem NCBs, in proportion to the prevailing ECB capital key shares. Excluding financial losses from PSPP-government and PEPP-government securities, which are not shared by all Eurosystem NCBs.

The amortised cost and market values[22] of the fixed-income securities held by DNB are as follows:

Millions

	31 December 2021		31 December 2020	
	Amortised cost	Market value	Amortised cost	Market value
	EUR	EUR	EUR	EUR
Terminated programmes				
CBPP2	40	40	40	42
SMP	454	499	1,436	1,534
APP				
CBPP3	22,855	23,263	20,451	21,873
PSPP - government	103,659	107,616	97,640	105,034
PEPP				
PEPP - covered bonds	414	406	114	117
PEPP - government	74,035	73,587	34,428	34,599
Total	**201,457**	**205,411**	**154,109**	**163,199**

21 The ABSPP is on the ECB's balance sheet and is primarily at the ECB's risk. Any losses are charged to the NCBs through the ECB's interim profit distribution.
22 Market values are indicative and are derived on the basis of market quotes. Where market quotations are unavailable, estimates based on internal Eurosystem models are used. Market values are not presented in the balance sheet or in the profit and loss account, but are provided here for comparative purposes only.

The table below provides a breakdown of the maturities of the fixed-income securities.

Millions

	Residual maturity* 31 December 2021						Residual maturity* 31 December 2020					
	Total	< 1 year	1 - 2 years	2 - 5 years	5 - 10 years	> 10 years	Total	< 1 year	1 - 2 years	2 - 5 years	5 - 10 years	> 10 years
	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Terminated programmes												
CBPP2	**40**	40	-	-	-	-	**40**	-	40	-	-	-
SMP	**454**	249	-	205	-	-	**1,436**	988	246	198	4	-
APP												
CBPP3	**22,855**	1,961	1,449	3,441	6,982	9,022	**20,451**	1,184	1,911	3,453	6,064	7,839
PSPP - government	**103,659**	10,522	11,001	21,160	30,389	30,587	**97,640**	5,670	10,645	26,147	27,635	27,543
PEPP												
PEPP - covered bonds	**414**	30	-	1	89	294	**114**	-	31	-	41	42
PEPP - government	**74,035**	14,260	4,968	12,530	20,372	21,905	**34,428**	14,939	1,247	4,920	10,789	2,533
Total	**201,457**	**27,062**	**17,418**	**37,337**	**57,832**	**61,808**	**154,109**	**22,781**	**14,120**	**34,718**	**44,533**	**37,957**

* The residual maturity is the period between the balance sheet date and the expiration date.

The Financial overview section of the Accountability chapter provides a more detailed discussion of the various risks to which the monetary programmes are exposed.

- 7.2 Other securities

As at 31 December 2021, this item stood at EUR 2,948 million (31 December 2020: EUR 2,163 million). It consists of positions in equity funds and bond funds valued at market value.

The table below specifies other securities by investment category.

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Equity funds	1,728	957
High-yield bond funds	640	619
Investment-grade bond funds	580	587
Total	**2,948**	**2,163**

As these funds have no fixed maturity, they are not broken down by maturity.

The Financial overview section of the Accountability chapter provides a more detailed discussion of the movements in own investments at a portfolio level.

8 Intra-Eurosystem claims

As at 31 December 2021, this item stood at EUR 71,790 million (31 December 2020: EUR 107,495 million).

- 8.1 Participating interest in the ECB

Pursuant to Article 28 of the ESCB and ECB Statute, the NCBs of the ESCB are the sole subscribers to the capital of the ECB. Subscriptions depend on shares which are fixed in accordance with Article 29 of the ESCB and ECB Statute and are subject to adjustment every five years or whenever there is a change in composition of the ESCB national central banks.

As at 31 December 2021, this item stood at EUR 586 million (31 December 2020: EUR 551 million). This is comprised of EUR 480 million in capital contribution (31 December 2020: EUR 444 million) and EUR 106 million in contributions resulting from the changes in DNB's share in the ECB's accumulated net equity (31 December 2020: EUR 106 million).

The table below sets out the NCBs' shares in the authorised, subscribed and paid-up capital of the ECB.

Percentages and millions

	31 December 2021			
	Eurosystem capital key	Capital key	Authorised and subscribed capital	Paid-up capital
	%	%	EUR	EUR
National Bank of Belgium	3.6432	2.9630	321	299
Deutsche Bundesbank	26.3615	21.4394	2,321	2,160
Eesti Pank	0.2817	0.2291	25	23
Central Bank of Ireland	1.6934	1.3772	149	139
Bank of Greece	2.4735	2.0117	218	203
Banco de España	11.9246	9.6981	1,050	977
Banque de France	20.4243	16.6108	1,798	1,674
Banca d'Italia	16.9885	13.8165	1,496	1,392
Central Bank of Cyprus	0.2152	0.1750	19	18
Latvijas Banka	0.3897	0.3169	34	32
Lietuvos bankas	0.5788	0.4707	51	47
Banque centrale du Luxembourg	0.3294	0.2679	29	27
Central Bank of Malta	0.1049	0.0853	9	9
De Nederlandsche Bank	**5.8604**	**4.7662**	**516**	**480**
Oesterreichische Nationalbank	2.9269	2.3804	258	240
Banco de Portugal	2.3405	1.9035	206	192
Banka Slovenije	0.4815	0.3916	42	39
Národná banka Slovenska	1.1452	0.9314	101	94
Suomen Pankki-Finlands Bank	1.8369	1.4939	162	151
Subtotal for euro area NCBs*	*100.0000*	*81.3286*	*8,804*	*8,194*
Bulgarian National Bank	-	0.9832	106	4
Česká národní banka	-	1.8794	203	8
Danmarks Nationalbank	-	1.7591	190	7
Hrvatska narodna banka	-	0.6595	71	3
Magyar Nemzeti Bank	-	1.5488	168	6
Narodowy Bank Polski	-	6.0335	653	25
Banca Natională a României	-	2.8289	306	11
Sveriges Riksbank	-	2.9790	322	12
Subtotal for non-euro area NCBs*	-	*18.6714*	*2,021*	*76*
Total for euro area and non-euro area NCBs	**-**	**100.0000**	**10,825**	**8,270**

* Totals may not add up owing to rounding.

The ECB's authorised and subscribed capital remained unchanged at EUR 10,825 million after the Bank of England's withdrawal from the ESCB on 31 January 2020. The ECB's paid-up capital also remained unchanged at EUR 7,659 million in 2020 as the remaining NCBs assumed the Bank of England's paid-up share of EUR 58 million. In addition, the ECB's Governing Council decided that the euro area NCBs must subsequently pay up their increased share in the ECB's authorised and subscribed capital in full in two annual instalments in 2021 and 2022[23]. To this end, DNB paid up the first instalment of EUR 36 million on 29 December 2021, increasing its share in the ECB's authorised and subscribed capital from EUR 444 million in 2020 to EUR 480 million at 31 December 2021. At 31 December 2021, the ECB's paid-up capital amounted to EUR 8,270 million. DNB will pay up the second instalment of EUR 36 million in 2022.

- 8.2 Claims equivalent to the transfer of foreign reserves to the ECB

As at 31 December 2021, these claims – arising from the transfer of foreign reserve assets to the ECB – totalled EUR 2,364 million (31 December 2020: EUR 2,364 million). Pursuant to Article 30.2 of the ESCB and ECB Statute, the transfer is in proportion to DNB's share in the ECB's subscribed capital. The interest paid on these claims is calculated daily at the latest established rate used in the main refinancing operations of the Eurosystem, with a zero return on the gold component.

- 8.4 Net claims related to the allocation of euro banknotes within the Eurosystem

This item, amounting to EUR 68,840 million as at 31 December 2021 (31 December 2020: EUR 66,097 million), consists of a net claim of DNB on the Eurosystem relating to the reallocation of euro banknotes. See 'Intra-ESCB and intra-Eurosystem claims and liabilities' and 'Banknotes in circulation' in the 'Accounting policies' section for further details. The interest paid on these claims is calculated daily at the latest established rate used in the main refinancing operations of the Eurosystem.

- 8.5 Other intra-Eurosystem claims (net)

This item has been reclassified to a liability and is disclosed under the liability item 'Other intra-Eurosystem liabilities (net)'. At 31 December 2020, it stood at EUR 38,483 million.

9. Other assets

As at 31 December 2021, this item totalled EUR 2,412 million (31 December 2020: EUR 2,189 million).

23 In particular, Decision (EU) 2020/138 of the European Central Bank of 22 January 2020 on the paying-up of the European Central Bank's capital by the national central banks of Member States whose currency is the euro and repealing Decision (EU) 2019/44 (ECB/2020/4), Decision (EU) 2020/136 of the European Central Bank of 22 January 2020 on the paying-up of the European Central Bank's capital by the non-euro area national central banks and repealing Decision (EU) 2019/48 (ECB/2020/2) and Decision (EU) 2020/139 of the European Central Bank of 22 January 2020 laying down the terms and conditions for transfers of the European Central Bank's capital shares between the national central banks and for the adjustment of the paid-up capital and repealing Decision (EU) 2019/45 (ECB/2020/5).

– 9.2 Tangible and intangible fixed assets

The table below sets out the components of and movements in 'Tangible and intangible fixed assets'.

Millions

	Total tangible and intangible fixed assets	Total tangible fixed assets	Land and buildings*	Fittings	Fixed assets under construction	Total intangible fixed assets	Development costs (software)
	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Book value as at 31 December 2019	**151**	**137**	83	14	40	**14**	14
Movements:							
Reclassification	**-**	**-**	41	5	(46)	**-**	-
Additions	**86**	**82**	-	6	76	**4**	4
Disposals	**(15)**	**(15)**	(14)	(1)	-	**-**	-
Depreciation and amortisation	**(70)**	**(64)**	(55)	(9)	-	**(6)**	(6)
Impairment losses	**-**	**-**	-	-	-	**-**	-
Book value as at 31 December 2020	**152**	**140**	55	15	70	**12**	12
Movements:							
Reclassification	**-**	**-**	3	-	(3)	**-**	-
Additions	**87**	**82**	-	2	80	**5**	5
Disposals	**-**	**-**	-	-	-	**-**	-
Depreciation and amortisation	**(28)**	**(24)**	(19)	(5)	-	**(4)**	(4)
Impairment losses	**-**	**-**	-	-	-	**-**	-
Book value as at 31 December 2021	**211**	**198**	39	12	147	**13**	13
Cost	**424**	**332**	91	94	147	**92**	92
Accumulated depreciation and amortisation	**(213)**	**(134)**	(52)	(82)	-	**(79)**	(79)
Book value as at 31 December 2021	**211**	**198**	39	12	147	**13**	13

* Land and buildings includes land in the amount of EUR 7 million. Land is not depreciated.

In 2020 DNB started sustainable renovations of its property at Frederiksplein. As a consequence, the large majority of its workforce are now based in the Toorop building at Spaklerweg in Amsterdam.

The banknote operations and gold stocks were moved to Haarlem in 2020, pending their ultimate transfer to Camp New Amsterdam in Zeist.

DNB assumed future contractual financial commitments for the renovation of the property at Frederiksplein and the construction of the new facility in Zeist. These amount to EUR 131 million and EUR 29 million, respectively.

- 9.3 Other financial assets

The table below sets out the subcategories of 'Other financial assets'.

Millions	31 December 2021	31 December 2020
	EUR	EUR
Participating interests	61	61
Equities and equity funds	3	3
Other receivables	104	117
Total	**168**	**181**

Participating interests

The participating interests concern shares in the Bank for International Settlements (BIS), the Society for Worldwide Interbank Financial Telecommunication scrl (SWIFT), and N.V. Settlement Bank of the Netherlands (SBN). The shareholding percentages for the BIS, SWIFT and SBN are unchanged from 2020. The BIS shares are 25% paid-up. As in 2020, the contingent liability for the uncalled part of the shares stood at SDR 64.9 million as at 31 December 2021. Although DNB holds 100% of the shares in SBN, this entity is not within DNB's scope of consolidation. The reason is that DNB cannot exercise any policy-making influence over SBN, which is entirely controlled by external parties.

Percentages and millions

Participating interests	Participation share	Location	Shareholders' equity*	31 December 2021	31 December 2020
			EUR	EUR	EUR
BIS	3.10	Basel (Switzerland)	28,207	52	52
SWIFT	0.03	La Hulpe (Belgium)	487	0	0
SBN	100.00	Amsterdam	9	9	9
Total				**61**	**61**

* Shareholders' equity of SWIFT and SBN is based on the 2020 annual financial statements.
Shareholders' equity of the BIS is based on the 2021 annual financial statements (financial year from 1 April to 31 March).

Other receivables

Other receivables mainly include a receivable from a Dutch financial institution arising from staff mortgage loans. The mortgage loan portfolio is periodically assigned to DNB under a concession agreement.

- 9.5 Accruals and prepaid expenses

As at 31 December 2021, this item stood at EUR 1,952 million (31 December 2020: EUR 1,630 million) consisting predominantly of accrued interest. It also comprises unamortised results, which can be broken down as follows:

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Foreign exchange swaps	52	60
Foreign exchange forwards	1	2
Interest rate swaps	-	(3)
Total	**53**	**59**

Liabilities

1. Banknotes in circulation

This item consists of DNB's share in the total euro banknotes circulated by the Eurosystem.

The table below sets out the composition of banknotes put into circulation by DNB less banknotes returned to DNB, by denomination.

Millions

	31 December 2021		31 December 2020	
	Number	EUR	Number	EUR
EUR 5	(196)	(981)	(194)	(970)
EUR 10	(225)	(2,249)	(217)	(2,166)
EUR 20	(602)	(12,048)	(607)	(12,130)
EUR 50	806	40,287	710	35,519
EUR 100	(75)	(7,540)	(66)	(6,636)
EUR 200	27	5,416	29	5,799
EUR 500	(17)	(8,459)	(16)	(8,171)
Total euro banknotes circulated by DNB		14,426		11,245
Reallocation of euro banknotes in circulation	76,080		72,823	
Euro banknotes allocated to the ECB (8% of the sum of 14,426 + 76,080)*	(7,240)		(6,726)	
		68,840		66,097
Total		**83,266**		**77,342**

* Totals may not add up owing to rounding.

During 2021, the total value of banknotes in circulation within the Eurosystem increased by 8%. As a result of the reallocation of euro banknotes, DNB's share in the euro banknotes in circulation was EUR 83,266 million at 31 December 2021 (31 December 2020: EUR 77,342 million). The value of the euro banknotes DNB actually issued increased by 28% from EUR 11,245 million to EUR 14,426 million. The difference of EUR 68,840 million between the reallocated amount and the total amount of euro banknotes put into circulation through DNB is shown under 'Net claims related to the allocation of euro banknotes within the Eurosystem'. The negative numbers of banknotes for certain denominations are accounted for by the fact that, on a net basis, DNB issued fewer of these banknotes than it received from circulation.

2. Liabilities to euro area credit institutions related to monetary policy operations denominated in euro

This item relates to liabilities to credit institutions arising from DNB's money market policy conducted on behalf of the Eurosystem. As at 31 December 2021, this item stood at EUR 301,789 million (31 December 2020: EUR 258,291 million).

- 2.1 Current accounts (covering the minimum reserve system)

These liabilities, amounting to EUR 295,689 million as at 31 December 2021 (2020: EUR 252,691 million) contain the credit balances on the transaction accounts of credit institutions that are required to hold minimum reserves, excluding, as of 2021, funds of credit institutions that are not freely disposable and accounts of credit institutions exempt from minimum reserve requirements. This exclusion has no impact on DNB for 2021.

The main refinancing rate of interest is paid on these mandatory reserve holdings. Starting on 30 October 2019, the Governing Council of the ECB introduced a two-tier system for reserve remuneration, which exempts part of credit institutions' reserve holdings in excess of minimum reserve requirements from negative remuneration at the rate applicable on the deposit facility. This part is remunerated at the annual rate of 0%. The volume that was exempt from the deposit facility rate was determined as six[24] times a credit institution's minimum reserve requirements. The non-exempt part of excess liquidity holdings continues to be remunerated at the lower of either 0% or the deposit facility rate.

- 2.2 Deposit facility

This permanent facility, amounting to EUR 6,100 million as at 31 December 2021 (31 December 2020: EUR 5,600 million), may be used by credit institutions to place overnight deposits at DNB at the deposit facility rate.

- 2.3 Fixed-term deposits

Fixed-term deposits are fine-tuning liquidity absorbing operations that take the form of deposits. As in 2020, no bids were made in 2021.

- 2.4 Fine-tuning reverse operations

These are monetary policy operations intended to tighten liquidity. As in 2020, no such operations were conducted in 2021.

24 The multiplier of six may be adjusted by the Governing Council over time in line with changing levels of excess liquidity holdings.

- 2.5 Deposits related to margin calls

This item refers to deposits made by counterparties in those instances where the market value of the collateral pledged falls short of a pre-established trigger point, implying a deficit of collateral with respect to outstanding monetary policy operations. In 2021, as in 2020, no deposits related to margin calls were held.

3. Other liabilities to euro area credit institutions denominated in euro

This item, amounting to EUR 51 million as at 31 December 2021 (31 December 2020: EUR 245 million) consists of liabilities from repo transactions.

4. Liabilities to other euro area residents denominated in euro

As at 31 December 2021, this item totalled EUR 12,610 million (31 December 2020: EUR 16,981 million).

- 4.1 General government

This item, amounting to EUR 9,986 million as at 31 December 2021 (31 December 2020: EUR 14,232 million) comprises non-monetary deposits as part of DNB's services to governments and supranational institutions. It consists mainly of EUR 6,815 million in liabilities to the general government (31 December 2020: EUR 11,243 million) and EUR 3,171 million in liabilities to the European Stability Mechanism (ESM) (31 December 2020: EUR 2,986 million).

- 4.2 Other liabilities

This item, amounting to EUR 2,624 million as at 31 December 2021 (31 December 2020: EUR 2,749 million) consists predominantly of non-monetary deposits held by financial institutions not required to maintain a minimum reserve as part of DNB's services to other euro area residents.

5. Liabilities to non-euro area residents denominated in euro

This item, amounting to EUR 27,668 million as at 31 December 2021 (31 December 2020: EUR 51,154 million) consists of EUR 24,943 million in non-monetary deposits as part of DNB's services to non-euro area central banks and governments (31 December 2020: EUR 49,382 million), EUR 2,389 million in liabilities to the European Single Resolution Fund (31 December 2020: EUR 1,751 million), EUR 310 million in liabilities from repo transactions (31 December 2020: nil) and EUR 26 million in liabilities related to margin calls (31 December 2020: EUR 21 million).

8. Counterpart of special drawing rights allocated by the IMF

This item is disclosed under the asset item 'Receivables from the International Monetary Fund (IMF)'.

9. Intra-Eurosystem liabilities

As at 31 December 2021, this net liability amounted to EUR 22,443 million (31 December 2020: a claim of EUR 38,483 million).

- 9.2 Other intra-Eurosystem liabilities (net)

As at 31 December 2021, this net liability stood at EUR 22,443 million (31 December 2020: a claim of EUR 38,483 million), comprising three components.

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Claims on the ECB in respect of TARGET2	22,517	(38,397)
Claims on the ECB in respect of monetary income	(65)	(12)
Claims on the ECB in respect of the ECB's interim profit distribution	(9)	(74)
Total	**22,443**	**(38,483)**

The first component is the TARGET2 liability to the ECB of EUR 22,517 million (31 December 2020: a claim of EUR 38,397). This liability is related to receipts and payments of credit institutions and NCBs via TARGET2 which result in balances held in Eurosystem NCB correspondent accounts. The interest paid on this position is calculated daily at the latest established rate used in the main refinancing operations of the Eurosystem. In 2021 there was a liability in respect of TARGET2, whereas in previous years DNB held a claim.

The second component is DNB's position vis-à-vis the ECB due to the annual pooling and distribution of monetary income by the Eurosystem NCBs. This shows a net balance of EUR 65 million at 31 December 2021 (31 December 2020: EUR 12 million). DNB held a claim in respect of monetary income from the ECB in 2021. The main drivers behind the net claim were the relative increase in interest expenses on TLTRO III loans[25] and lower interest income due to the introduction of tiering for current account balances[26].

The third component is DNB's claim on the ECB in connection with the interim profit distribution by the ECB. For 2021, the Governing Council of the ECB decided to distribute interim profits of EUR 150 million (31 December 2020: EUR 1,260 million) to the Eurosystem NCBs. As at 31 December 2021, the amount allocated to DNB totalled EUR 9 million (31 December 2020: EUR 74 million).

25 See the note to asset item 5.2 on page 144 for further details.
26 See the note to liability item 2.1 on page 129 and 130 for further details.

10. Other liabilities

As at 31 December 2021, this item stood at EUR 2,661 million (31 December 2020: EUR 964 million), consisting predominantly of accrued interest related to TLTRO III operations of EUR 2,084 million (31 December 2020: EUR 662 million) and cash collateral of EUR 192 million (31 December 2020: EUR 184 million).

The breakdown of the revaluation differences of EUR 278 million can be found in the table of off-balance sheet positions related to currency swaps, currency forwards and interest rate swaps on page 153.

11. Provisions

Provisions can be broken down as follows:

Millions

	Total	Provision for financial risks	Provision for monetary policy operations	Provision for employee benefits	Other provisions
	EUR	EUR	EUR	EUR	EUR
Balance as at 31 December 2019	**1,834**	1,810	5	13	6
Withdrawal	**(7)**	-	(4)	(1)	(2)
Release	**(2)**	-	(1)	(1)	-
Addition	**882**	868	-	11	3
Balance as at 31 December 2020	**2,707**	2,678	-	22	7
Withdrawal	**(6)**	-	-	(1)	(5)
Release	**(1)**	-	-	(1)	-
Addition	**139**	128	-	7	4
Balance as at 31 December 2021	**2,839**	**2,806**	**-**	**27**	**6**

Provision for financial risks

In 2021, EUR 128 million was added to the provision for financial risks (2020: EUR 868 million). As at 31 December 2021, the provision totalled EUR 2,806 million (31 December 2020: EUR 2,678 million).

The Financial overview section of the Accountability chapter provides a more detailed discussion on the addition to the provision and the risks to which DNB is exposed.

Provision for monetary policy operations

In accordance with Article 32.4 of the ESCB and ECB Statute, the provision for monetary policy operations can be formed by all participating Eurosystem NCBs in proportion to their ECB capital keys. No provision was made as at 31 December 2021, based on the outcome of the annual impairment test.

Provision for employee benefits

The provision for employee benefits increased by EUR 5 million to EUR 27 million (31 December 2020: EUR 22 million). The addition relates to the surviving dependants' benefit scheme and the state pension bridging arrangement (see table on page 163).

DNB operates the following arrangements:

- a defined benefit pension scheme;
- a contribution to the health care insurance premiums of a group of pensioners and former employees
- a service anniversary and retirement bonus arrangement
- a surviving dependents' benefit scheme in the event of death
- a state pension bridging arrangement

DNB operates an average-pay staff pension scheme, which features provisional indexation based on the consumer price index. Annual indexation takes place only if DNB Pension Fund's financial position allows this. DNB Pension Fund's policy funding ratio stood at 127.7% at 31 December 2021. As in 2020, this means it was not underfunded in 2021. Partial indexation was applied in the year under review. The pension contribution paid is charged to the profit and loss account, rather than set against a provision.

The contribution towards the health insurance premiums payable by pensioners and former employees is an allowance towards the costs concerned.

The service anniversary and retirement bonus arrangements provide for bonuses payable to staff upon 20, 30, 40 and 50 years' service and retirement, and payments made in the event of incapacity for work and to surviving dependants.

The surviving dependents' benefit scheme in the event of death includes a lump-sum payment of 2, 3 or 6 months of pension benefits to surviving dependents of a former employee that was previously recognised as an expense at the time of payment. Owing to reinterpretation a provision must be made. For this purpose, a one-off addition of EUR 4 million to the provision was made in 2021.

The liabilities and annual costs are actuarially determined. The assumptions used were:

	31 December 2021	31 December 2020
Discount rate for other employee benefits	Scheme-dependent (anniversaries: 0.85% other: 1.15%)	Scheme-dependent (anniversaries: 0.40% other: 0.75%)
Price inflation	2.0%	2.0%
General salary increase	2.0%	2.0%
Individual salary increase (average)	2.0%	2.0%
Expected average retirement age	Assumption for all members: 67	Assumption for all members: 67
Mortality outlook	Mortality table AG 2020 + mortality experience	Mortality table AG 2020 + mortality experience

The state pension bridging arrangement was agreed under the collective labour agreement. It comprises a lump sum payment equal to the prevailing monthly state pension (AOW) for unmarried persons multiplied by the number of months the DNB employee retires before the statutory state pension date, subject to a maximum of 36 months.

Other provisions

Other provisions primarily consist of provisions for staff-related expenses with respect to restructuring (31 December 2021: EUR 6 million, 31 December 2020: EUR 7 million).

12. Revaluation accounts

As at 31 December 2021, this item totalled EUR 31,741 million (31 December 2020: EUR 30,173 million).

The table below sets out the components of and net movements in the revaluation accounts.

Millions

	Total	Gold	Foreign currency	Fixed-income securities	Equity funds	High-yield bond funds	Investment-grade bond funds
	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Balance as at 31 December 2019	**26,636**	25,538	88	25	867	73	45
Net revaluation movements	**3,537**	3,737	(67)	5	(182)	4	40
Balance as at 31 December 2020	**30,173**	29,275	21	30	685	77	85
Net revaluation movements	**1,568**	1,292	4	(21)	281	20	(8)
Balance as at 31 December 2021	**31,741**	**30,567**	**25**	**9**	**966**	**97**	**77**

The increase in the aggregate amount for the revaluation accounts of EUR 1,568 million can be largely ascribed to the higher market value of gold.

13. Capital and reserves

DNB's authorised capital, which is fully issued and paid up, amounts to EUR 500 million and is divided into 500 shares of EUR 1 million each. All shares are held by the Dutch State. The statutory reserve has been formed for the book value of the intangible fixed assets.

The table below sets out the movements in capital and reserves before appropriation of profit:

Millions

	Total**	Issued capital	General reserve	Statutory reserve
	EUR	EUR	EUR	EUR
Balance as at 31 December 2019	7,944	500	7,430	14
Profit for the year 2019	1,176			
Dividend	(637)			
Addition of 2019 net profit*	539		539	
Movement in statutory reserve	-		2	(2)
Balance as at 31 December 2020	**8,483**	**500**	**7,971**	**12**
Profit for the year 2020	15			
Dividend	(15)			
Addition of 2020 net profit*	-		-	
Movement in statutory reserve	-		(1)	1
Balance as at 31 December 2021	**8,483**	**500**	**7,970**	**13**

* Addition of net profit concerns profit after dividend payment.

** Totals may not add up owing to rounding.

14. Profit for the year and appropriation of profit

The profit for the 2021 financial year was EUR 15 million (31 December 2020: EUR 15 million).

With due observance of the relevant provision of the Articles of Association and the shareholder's mandate, the proposed appropriation of profit is set out below.

Millions

	2021	2020
	EUR	EUR
Addition to the general reserve	-	-
Distribution to the State	15	15
Profit for the year	**15**	**15**

Other notes to the balance sheet

Off-balance sheet positions revaluation differences

The off-balance sheet positions are shown below. Their conversion to euro results in net revaluation differences.

Millions

	31 December 2021								31 December 2020							
	Total	EUR	USD	JPY	GBP	CNH	DKK	SDR	Total	EUR	USD	JPY	GBP	CNH	DKK	SDR
Foreign exchange swaps																
Receivables	**8,181**	7,289	892	-	-	-	-	-	**7,599**	6,388	1,211	-	-	-	-	-
Payables	**(8,449)**	-	(5,143)	(1,000)	(151)	(208)	-	(1,947)	**(7,415)**	-	(4,775)	(1,327)	(96)	(127)	-	(1,090)
	(268	7,289	(4,251)	(1,000)	(151)	(208)	-	(1,947)	**184**	6,388	(3,564)	(1,327)	(96)	(127)	-	(1,090)
Foreign exchange forwards																
Receivables	**4,075**	2,202	1,873	-	-	-	-	-	**5,661**	3,165	2,496	-	-	-	-	-
Payables	**(4,085)**	(1,657)	(1,872)	-	-	-	-	(556)	**(5,650)**	(2,454)	(2,721)	(45)	(45)	(61)	-	(324)
	(10)	545	1	-	-	-	-	(556)	**11**	711	(225)	(45)	(45)	(61)	-	(324)
Interest rate swaps	**0**	-	0	-	-	-	-	-	**0**	-	0	-	-	-	-	-
Total*	**(278)**	**7,834**	**(4,250)**	**(1,000)**	**(151)**	**(208)**	**-**	**(2,503)**	**196**	**7,099**	**(3,788)**	**(1,372)**	**(141)**	**(188)**	**-**	**(1,414)**

* DNB has fully hedged the exchange rate risk of the exposures listed, except for working stocks.

The foreign exchange swaps and forwards are used to hedge currency risks. The purpose of interest rate swaps is to hedge interest rate risk. Futures are used to control the maturity profile of the investment portfolio.

A foreign exchange swap is a transaction in which parties agree to directly buy or sell one currency in exchange for another currency at the spot rate and later to sell or buy back the currency at the forward rate. A currency forward contract is a transaction in which parties agree to buy or sell a currency in return for another currency at a specific rate and for delivery at a date in the future. Upon initial recognition, positions are valued at the spot rate, split into off-balance sheet presentation at the forward rate and a forward profit or loss recognised under 'Accruals and prepaid expenses', which is amortised. The amortised profit or loss represents the difference between the forward rate and the spot rate. This allows the value to evolve towards the forward rate over time.

An interest rate swap is a contract under which two parties exchange flows of interest payments in a single currency over a set period of time without exchanging the principal amount. There are no interest rate swaps outstanding as at 31 December 2021 (31 December 2020: EUR 41 million).

A future is a negotiable contract under which a predetermined volume of specific underlying assets is purchased or sold on a specific date and time. As at 31 December 2021, DNB's outstanding futures position was EUR 524 million in US dollars (31 December 2020: EUR 545 million). Gains and losses on futures are settled on a daily basis.

Securities lending programme

In accordance with the ECB's Governing Council's decisions, DNB has made available for lending its holdings of securities purchased under the covered bond purchase programme (CBPP3), the public sector purchase programme (PSPP) and the pandemic emergency purchase programme (PEPP). Unless these securities lending operations are conducted against cash collateral, they are recorded in off-balance-sheet accounts. Such securities lending operations with a nominal value of EUR 873 million (31 December 2020: EUR 198 million) were outstanding as at 31 December 2021.

USD tender

The off-balance sheet positions include forwards related to the ECB in connection with the short-term US dollar liquidity providing programme. Related claims resulting from swap transactions with Eurosystem counterparties for providing US dollar liquidity in exchange for euro liquidity are also included under off-balance sheet positions.

Foreign currency position

As at 31 December 2021, the euro equivalent of the total sum of assets denominated in foreign currency (included in asset items 2 and 3) amounted to EUR 26,156 million (31 December 2020: EUR 14,133 million). As at 31 December 2021, the euro equivalent of the total sum of liabilities denominated in foreign currency (included in liability items 6, 7 and 8) amounted to EUR 16,326 million (31 December 2020: EUR 5,700 million). These positions are included in the revaluation accounts and revalued as set out under 'Revaluation'. DNB has fully hedged its currency exposures, except for those on working stocks and investment funds.

Management and custody

DNB manages and holds securities and other documents of value in custody as part of its Eurosystem Reserve Management Services (ERMS) to central banks outside the euro area and governments. Such management and custody is for the account and risk of the depositors. Income is recognised in the profit and loss account under commission income.

Buffers for balance sheet-wide risks

In 2021 the financial risks for DNB were still elevated as a result of the measures taken by the Eurosystem to stabilise the operation of the euro area and mitigate the impact of the COVID-19 pandemic. The financial risk as at 31 December 2021 was determined at EUR 13.7 billion (31 December 2020: EUR 15.9 billion). Of the total balance sheet-wide risk, EUR 11.1 billion (31 December 2020: EUR 13.0 billion) relates to specific risks under the asset purchase programme (APP) and the pandemic emergency purchase programme (PEPP)[27]. As at 31 December 2021, the provision for financial risks stood at EUR 2.8 billion (31 December 2020: EUR 2.7 billion).

The table below provides a breakdown of the buffers for balance sheet-wide risks.

Millions

	31 December 2021	31 December 2020
	EUR	EUR
Capital and reserves (excluding statutory reserve)*	8,470	8,471
Provision for financial risks	2,806	2,678
Total	**11,276**	**11,149**

* Capital and reserves does not include profit for the financial year.

27 The APP and PEPP risks are comprised of interest rate risk and credit risk on the purchases (excluding exposures to the Dutch government). The Financial overview section of the Accountability chapter provides a more detailed discussion on the risks to which DNB is exposed. The Accountability chapter forms part of the risks paragraph in the financial statements, which means that it is included in the scope of the audit report of the independent auditor.

Events after the balance sheet date

No events after the balance sheet date had a material impact on the 2021 financial data.

Off-balance sheet rights and liabilities

Liability claims and proceedings

By reason of its supervisory task or otherwise, DNB may receive liability notices or pre-announcements of such notices. In some cases liability proceedings have been brought against DNB. Where the liability amounts cannot reasonably be estimated or where a liability is unlikely to be settled, DNB suffices by disclosing such cases in this section. No liability proceedings against DNB are currently pending.

IMF

Within the context of the Netherlands' IMF membership, DNB has made various credit lines available to the IMF. More details are provided on pages 122 to 125.

Outsourcing

DNB has outsourced part of its ICT function to an external party – the end user services, the data centre and related services. The initial term of the outsourcing contract is four years, ending in March 2023. Under the contract, DNB's financial liability largely depends on its future scalable service purchase volume. During the term of the contract, the annual expense is currently expected to amount to EUR 16 million.

Rental and lease agreements

DNB has rented part of the Toorop building and the neighbouring premises at Omval in Amsterdam since 1 July 2018. The term of the rental agreements is until 31 August 2025. DNB relocated in 2020 as its office building at Frederiksplein is undergoing major renovation. Annual rental charges are taken to the profit and loss account. The rental liability is presented in the table below.

In 2019 DNB entered into a ground lease agreement with the Dutch State for the benefit of a newly built location that will house DNB's banknote operations and its gold vaults. The term of the agreement is 60 years. Annual ground rent payments are taken to the profit and loss account. The liability assumed is presented in the table below.

DNB has rented part of the building formerly in use by the Joh. Enschedé printing company in Haarlem since 1 October 2019 to house its banknote operations and gold vaults on a temporary basis. The term of the agreement is until 1 October 2023. Annual rental charges are taken to the profit and loss account. The liability assumed is presented in the table below.

Several DNB staff members are entitled to a lease car on the basis of their positions. By default, the duration of car lease contracts is 4 or 5 years, with the option of renewal. The liability under the present car lease contracts is presented in the table below. Renewal at the current prices is assumed for staff members whose lease contracts expired in 2021.

Millions

	Total	2022	2023 to 2026	2027 and beyond
	EUR	EUR	EUR	EUR
Rental agreements	**43**	12	31	-
Ground lease agreements	**15**	0	1	14
Lease contracts	**3**	1	2	-
Total	**61**	**13**	**34**	**14**

Accommodation programme

DNB assumed financial liabilities amounting to EUR 1 million concerning other expenses related to the property at Frederiksplein (2020: EUR 6 million).

Tangible fixed assets

The contractual investment liabilities for tangible fixed assets are disclosed under asset item 9.2 'Tangible and intangible fixed assets' on page 140.

3. Notes to the profit and loss account

Operating income

1 and 2 Net interest income

This item includes interest income and interest expense in respect of the assets and liabilities denominated in euro.

The table below provides a breakdown of interest income.

Millions

	2021	2020
	EUR	EUR
Liabilities to euro area credit institutions	1,270	730
Non-monetary deposits	144	254
Investments	105	68
Monetary portfolios	79	442
Total	**1,598**	**1,494**

Interest income is generated primarily from the balances which credit institutions hold on average on the deposit facility and current accounts with DNB. These credit institutions pay interest at the negative deposit facility rate on any balances held in excess of the exempt amount. See the note to liability item 2.1 for further details.

The table below sets out the components of interest expense.

Millions

	2021	2020
	EUR	EUR
Monetary lending	(1,423)	(715)
Other	(133)	(206)
Total	**(1,556)**	**(921)**

The increase in interest expense related to monetary lending concerns the charges incurred on the TLTRO III loans. See the note to asset item 5.2 for further details. 'Other' predominantly relates to the costs of hedging foreign exchange risks.

3. Realised gains/(losses) from financial operations

Net realised gains from financial operations of EUR 302 million (2020: EUR 422 million) primarily arose from the sale of positions held in an equity fund. As a result, an amount of EUR 293 million in revaluation was realised. The Financial overview section of the Accountability chapter provides a more detailed discussion of the developments in own investments at a portfolio level.

Millions

	2021	2020
	EUR	EUR
Net realised result on currency exchange rates	34	24
Net realised price result on fixed-income securities	5	15
Net realised price result on equity funds	263	373
Net realised price result on high-yield bond funds	-	10
Total	**302**	**422**

4. Write-downs on financial assets and positions

The write-downs of EUR 25 million (2020: EUR 2 million) consist predominantly of price revaluation losses on fixed-income securities and positions in equity funds.

5. Transfer to/from provision for financial risks

In 2021, EUR 128 million was added to the provision for financial risks (2020: EUR 868 million). As a result, the amount of the provision rose to EUR 2,806 million as at 31 December 2021 (31 December 2020: EUR 2,678 million).

The Financial overview section of the Accountability chapter provides a more detailed discussion on the addition to the provision and the risks to which DNB is exposed.

8. Income from equity shares and participating interests

For 2021, this item amounts to EUR 47 million (2020: EUR 132 million). This includes the amount allocated to DNB in respect of the ECB's profit distributions of a total of EUR 31 million. See 'ECB profit distribution' under 'Accounting policies' on pages 120 and 121 for further details.

Income from DNB's participating interest in the ECB can be broken down as follows:

Millions	2021	2020
	EUR	EUR
Interim profit distribution in the financial year	9	74
Final profit distribution for the preceding financial year	22	54
Total	**31**	**128**

9. Net result of monetary income pooling

The net result of monetary income pooling can be broken down as follows:

Millions	2021	2020
	EUR	EUR
Monetary income accruing to DNB	69	253
Monetary income earned by DNB	98	(238)
Result of monetary income pooling	167	15
Adjustment of monetary income pooling from preceding years	(102)	(3)
Provision for monetary policy operations	-	5
Net result from monetary income pooling	**65**	**17**

The amount of each Eurosystem NCB's monetary income is determined by measuring the actual annual income that derives from the earmarkable assets held against its liability base. The earmarkable assets consist of the following items: lending to euro area credit institutions related to monetary policy operations denominated in euro, securities held for monetary policy purposes, claims equivalent to the transfer of foreign reserve assets to the ECB, net claims related to the allocation of euro banknotes within the Eurosystem, other intra-Eurosystem claims (net), and a limited amount of gold holdings in proportion to DNB's Eurosystem capital key share.

Gold is considered to generate no income. Securities held for monetary policy purposes[28], which include securities issued by central governments and agencies[29], are considered to generate income at the refinancing rate. Where the value of DNB's earmarked asset exceeds or falls short of the value of its liability base, the difference is offset by applying the refinancing rate to the value of the difference. The income on the earmarkable assets is included under 'Interest income'. The liability base consists of the following items: banknotes in circulation, liabilities to euro area credit institutions related to monetary policy operations denominated in euro, and other intra-Eurosystem liabilities (net). Any interest paid on liabilities included within the liability base is deducted from the monetary income to be pooled.

The monetary income pooled by the Eurosystem NCBs is to be allocated among the NCBs according to the subscribed ECB capital key. The pooling and reallocation of monetary income to NCBs leads to certain net reallocation effects. One reason is that the yields earned on certain earmarkable assets and the interest expense paid on certain liability base items may differ to a varying degree among the Eurosystem NCBs. In addition, usually each Eurosystem NCB's share of earmarkable assets and in the liability base deviates from its share in the subscribed capital of the ECB. For DNB, the result from monetary income pooling of EUR 167 million (2020: EUR 15 million) arises from the difference between the monetary income pooled by DNB, amounting to EUR (98) million, and the monetary income reallocated to DNB based on the capital key, amounting to EUR 69 million. The prior-year adjustment of EUR (102) million is due to the calculation of the TLTRO III interest charges at the actual interest rates communicated to the counterparties, which for prudence reasons had been calculated in the previous year at -0.5% until 23 June 2020 and at -1% for the period from 24 June to 31 December 2020 (see also asset item 5.2).

10. Other income

In its capacity as an independent public body (ZBO), DNB exercises prudential supervision over financial institutions and is the national resolution authority. This item includes the fees raised from the supervised institutions to cover the costs of its activities as an independent public body, as well as the government contributions to the performance of these activities. In 2020, it also included the EUR 46 million gain on the sale of the visitor centre at Sarphatistraat 1-5 in Amsterdam.

28 Decision (EU) of the European Central Bank ECB/2009/16 of 2 July 2009 on the implementation of the covered bond purchase programme and Decision (EU) of the European Central Bank ECB/2011/17 of 3 November 2011 on the implementation of the second covered bond purchase programme.

29 Decision (EU) of the European Central Bank ECB/2020/9 of 3 February 2020 on a programme for the purchase of debt securities issued by the public sector in the secondary markets and Decision (EU) of the European Central Bank ECB/2020/17 of 24 March 2020 on a temporary pandemic emergency purchase programme.

Other income can be broken down as follows:

Millions	2021	2020
	EUR	EUR
Fees from supervised institutions	209	198
Government contribution	5	4
Other	3	46
Total	**217**	**248**

In accordance with supervision and resolution legislation, a more detailed account is given in a separate report.

Operating costs

11. Staff costs

The average number of employees, expressed as full-time equivalents, amounted to 1,987 in 2021, versus 1,882 on average in 2020.

The table below provides a breakdown of 'Staff costs'.

Millions

	2021	2020
	EUR	EUR
Wages and salaries	(175)	(163)
Social insurance contributions	(21)	(31)
Pension costs	(37)	(35)
Other staff costs	(23)	(17)
Total	**(256)**	**(246)**

The pension scheme costs of EUR 37 million for the year (2020: EUR 35 million) are included under 'Pension costs'. They equal total pension contributions paid (2021: EUR 44 million; 2020: EUR 42 million), less employee-paid contributions (2021: EUR 7 million; 2020: EUR 7 million).

The annual costs on account of the contribution to the health care insurance premiums of pensioners are included under 'Social insurance contributions'. The annual costs on account of other employee benefits are included under 'Wages and salaries' and 'Social insurance contributions'. Other personnel costs include the expense associated with the creation of the provision for surviving dependants' benefits in the event of death and the state pension bridging arrangement (see liability item 11 on page 147).

Remuneration

General

Under the Public and Semi-public Sector Executives Remuneration (Standards) Act (Wet normering bezoldiging topfunctionarissen publieke en semipublieke sector – WNT), DNB is required to disclose the remuneration of its senior executives and of officials other than senior executives exceeding the remuneration ceiling referred to in the WNT. The Minister of Finance and the Minister of the Interior and Kingdom Relations have decided that DNB is allowed to agree with Executive Board members on individual remuneration in excess of the ceiling referred to in the WNT.

The remuneration ceiling under the WNT for the financial year 2021 amounts to EUR 209,000 (2020: EUR 201,000), Unless stated otherwise, all officials mentioned worked in full-time employment throughout the year.

Executive Board

The individual maximum remuneration of the Executive Board members in 2021, includes holiday allowance and other terms and conditions of employment, but has no performance-related component. The pension scheme for the members of the Executive Board is in accordance with the agreements made with the Minister of Finance in 2005, and has been aligned with the statutory provisions that have applied since 1 January 2015. Like other staff, the members of the Executive Board contribute to their pension premiums.

The table below specifies the remuneration, taxable expense allowances and deferred remuneration (employer's pension contributions) for each member of the Executive Board.

		Remuneration and taxable expense allowances		Deferred remuneration		Total remuneration		Individual maximum remuneration	
		2021	2020	2021	2020	2021	2020	2021	2020
Name	Position	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Klaas Knot	President	424,854	407,444	26,145	26,555	450,999	433,999	451,000	434,000
Else Bos	Executive Board Member	414,014	397,594	25,286	25,605	439,300	423,199	439,300	423,200
Nicole Stolk	Executive Board Member	218,713	200,394	25,286	25,605	243,999	225,999	244,000	226,000
Olaf Sleijpen	Executive Board Member	246,651	214,869	25,286	24,299	271,937	239,168	272,000	261,300
Steven Maijoor[1]	Executive Board Member	259,694	-	19,072	-	278,766	-	278,767	-
Job Swank[2]	Executive Board Member	156,886	313,685	12,943	26,555	169,829	340,240	177,529	349,000
Frank Elderson	Executive Board Member	-	330,273	-	25,325	-	355,598	-	343,279
	Total	**1,720,812**	**1,864,259**	**134,018**	**153,944**	**1,854,830**	**2,018,203**		

1 Steven Maijoor was appointed Executive Board Member with effect from 1 April 2021. His individual maximum remuneration covers the period from 1 April to 31 December 2021.

2 Job Swank stepped down with effect from 1 July 2021. His individual maximum remuneration covers the period from 1 January to 30 June 2021.

Remuneration paid to the members of the Supervisory Board

Members of the Supervisory Board are paid fees in line with the WNT, which stipulates maximum fees of 10% and 15% of the generally applicable remuneration ceiling for members and the Chair, respectively.

In 2021 and 2020, the members of the Supervisory Board were paid the following fees:

	2021	2020
	EUR	EUR
Wim Kuijken (Chair)	31,350	30,150
Margot Scheltema (Vice-Chair)	20,900	20,100
Feike Sijbesma	20,900	20,100
Annemieke Nijhof [1]	20,900	20,100
Marry de Gaay Fortman	20,900	20,100
Roger Dassen	20,900	20,100
Mirjam van Praag [1]	20,900	5,052
Peter Blom [2]	6,986	-
Kees Goudswaard [1]	-	15,048
Total	**163,736**	**150,750**

1 Annemieke Nijhof, Mirjam van Praag and Kees Goudswaard also members of the Bank Council throughout the year, for which they were each paid EUR 3,299 on an annual basis (2020: EUR 3,299), which is not included here.
2 Peter Blom was appointed on 1 September 2021.

Officials with remuneration that exceeds the WNT ceiling

In compliance with the WNT, DNB also reports remuneration of officials other than executives that exceeds the ceiling, which in 2021 was EUR 209,000 (2020: EUR 201,000). In respect of these officials the WNT does not impose a ceiling, but prescribes disclosure. The remuneration of these officials exceeds the threshold as a result of DNB's package of employment conditions. The number of officials whose remuneration details we publish fell from 23 to 16 compared with the previous year.

Remuneration overview

The table below shows the non-senior executives, listed by position, whose remuneration exceeds the threshold.

Position	Average number of hours a week 2021	Average number of hours a week 2020	Remuneration and taxable expense allowances 2021 EUR	Remuneration and taxable expense allowances 2020 EUR	Deferred remuneration 2021 EUR	Deferred remuneration 2020 EUR	Total remuneration 2021 EUR	Total remuneration 2020 EUR
Division Director	36	36	278,425	277,081	26,145	26,555	304,570	303,636
Division Director	36	36	241,778	241,365	26,145	26,555	267,923	267,920
Division Director	36	36	235,524	235,117	26,145	26,555	261,669	261,672
Division Director	36	36	229,976	230,894	26,145	26,555	256,121	257,449
Division Director	36	36	223,589	232,806	26,145	26,555	249,734	259,361
Division Director	36	36	217,414	231,960	26,145	26,555	243,559	258,515
Division Director	36	36	215,157	215,615	26,145	26,555	241,302	242,170
Division Director	36	36	209,848	202,785	26,145	26,555	235,993	229,340
Division Director	36	36	209,337	207,797	25,286	25,605	234,623	233,402
Division Director	36	36	208,585	192,870	25,286	25,605	233,871	218,475
Division Director	36	36	207,197	199,273	25,286	25,605	232,483	224,878
Division Director	36	36	205,805	199,032	26,145	26,555	231,950	225,587
Division Director	36	36	205,396	202,997	25,286	25,605	230,682	228,602
Division Director	36	36	199,800	185,826	25,286	25,605	225,086	211,431
Division Director	36	36	199,199	88,164	25,286	7,318	224,485	95,482
Head of Department	36	36	187,323	181,959	26,145	26,555	213,468	208,514

12. Other administrative costs

The table below specifies 'Other administrative costs'.

Millions	2021 EUR	2020 EUR
Temporary staff and outsourcing	(108)	(110)
Travel and accommodation expenses	(1)	(1)
Accommodation	(30)	(20)
Office equipment, software and office expenses	(34)	(34)
General expenses	(9)	(9)
Total	**(182)**	**(174)**

General expenses include the fees paid to the external auditor. The table below provides a breakdown of the fees into categories.

Whole amounts	KPMG Accountants N.V. 2021 EUR	KPMG Accountants N.V. 2020 EUR
Audit of the financial statements	(637,290)	(633,530)
Other audit services	(154,285)	(151,855)
Tax advisory services	-	-
Other non-audit services	(76,710)	(88,810)
Total	**(868,285)**	**(874,195)**

The total fees for the audit of the financial statements include VAT and are based on the fees paid during the financial year to which the audit relates.

17. Corporate income tax

DNB's corporate income tax liability is limited to duties not assigned to it by law. The corporate income tax payable for 2021 amounted to EUR 0 million (2020: EUR 0 million). No significant results were posted that are related to duties not assigned to it by law.

Amsterdam, 16 March 2022
Executive Board of
De Nederlandsche Bank N.V.

Klaas Knot, *President*
Else Bos
Nicole Stolk
Olaf Sleijpen
Steven Maijoor

Amsterdam, 16 March 2022
Adopted by the Supervisory Board of
De Nederlandsche Bank N.V.

Wim Kuijken, *Chair*
Margot Scheltema, *Vice-Chair*
Feike Sijbesma
Annemieke Nijhof
Marry de Gaay Fortman
Roger Dassen
Mirjam van Praag
Peter Blom

4. Other information

Independent auditor's report

To: the General Meeting and the Supervisory Board of De Nederlandsche Bank N.V.

Report on the audit of the accompanying financial statements

Our opinion

In our opinion the financial statements of De Nederlandsche Bank N.V. have been compiled, in all material respects, in accordance with the models and accounting policies applying to the European Central Bank (ECB/2016/34) and the amendments thereto as included in ECB/2019/34 and ECB/2021/51, complemented by the applicable provisions of Part 9 of Book 2 of the Dutch Civil Code, as well as the provisions of the Public and Semi-public Sector Executives Remuneration (Standards) Act Wet bezoldiging topfunctionarissen publieke en semipublieke sector (WNT).

We have audited the 2021 financial statements of De Nederlandsche Bank N.V., based in Amsterdam.

The financial statements comprise:

1 the balance sheet as at 31 December 2021;

2 the profit and loss account for the year 2021; and

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

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing and the Audit Protocol 2021 under the Public and Semi-public Sector Executives Remuneration (Standards) Act. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of De Nederlandsche Bank N.V. in accordance with the Audit firms supervision act (Wet toezicht accountantsorganisaties), 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 determined our audit procedures in the context of the financial statements audit as a whole. Our findings on fraud and non-compliance with laws and regulations and the key audit matters should be viewed in that context and not as separate judgments or conclusions.

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

Audit approach

Summary

Materiality

- Materiality of EUR 80 million
- 1% of Capital and reserves
- Lower materiality for WNT

Going concern and fraud and non-compliance with laws and regulations

- Going concern: no going concern risks identified.
- Fraud and non-compliance with laws and regulations (Noclar): management override of internal controls and allocation of costs to ZBO activities.

Key matters

- Disclosure of the provision for financial risks (VFR) and balance sheet-wide risks.

Opinion

Unqualified opinion: in all material respects in accordance with the accounting policies.

Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 80 million (2020: EUR 80 million). The materiality is determined with reference to the relevant benchmark Capital and Reserves in the amount of EUR 8,483 million as at 31 December 2021. The materiality as a percentage amounts to 1% (2020: 1%). We consider Capital and Reserves as the most appropriate benchmark due to the fact that it is a stable benchmark and because its size provides insight into the ability of DNB to ensure on an ongoing basis the stability of the financial sector in the Netherlands. We have also considered alternative benchmarks, such as total profit for the financial year and the balance sheet total.

The profit for the financial year and the balance sheet total are more subject to fluctuation and depending on the economic circumstances in the Netherlands and the euro area. As a result, we consider the profit for the financial year and the balance sheet total to be less appropriate as a benchmark for materiality.

With respect to the audit of the remuneration disclosure, we apply a lower materiality as prescribed in the 'Controleprotocol WNT 2020' as defined by the Ministry of Interior and Kingdom Relations. The materiality used to audit the accuracy of the disclosure is set at a range between EUR 5,000 and EUR 10,000 and for the audit of the completeness of the top executives remuneration disclosure at zero and for the audit of the completeness of other executives at 1%.

In addition, we take deviations and/or possible deviations into account that in our opinion can be considered material to the users of the financial statements due to qualitative reasons.

We agreed with the Supervisory Board that misstatements in excess of EUR 3.2 million, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Audit response going concern - no going concern risks identified

Given DNB's role in the creation of money, based on the Banking Act, the Executive Board and we have considered that there are no going concern risks for the activities of DNB.

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

In the performance of its duties, the Executive Board pays close attention to the risks of fraud and non-compliance with laws and regulations and the Financial Committee of the Supervisory Board reflects on this. The Executive Board of DNB is aware that non-compliance with laws and regulations could result in a reputational risk.

As part of our audit, we have gained insights regarding the company and its business environment, and assessed the design and implementation and, where considered appropriate, tested the operating effectiveness 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 Counsel and Compliance and Integrity. As part of our audit procedures, we:

- evaluated investigation reports on indications of possible fraud and non-compliance by the Internal Audit Department, Operational Risk Management and Compliance and Integrity;
- evaluated legal confirmation letters as requested by us.

In addition, we performed procedures to obtain an understanding of the legal and regulatory frameworks as applicable to the entity. Besides law and regulations which have a direct impact on the financial statements, such as the Banking Act, reporting regulations, tax legislation, the WNT, the Financial Supervision Act and the regulations governing a ZBO, we identified the following areas as those most likely to have a material effect on the financial statements:

- General Data Protection Regulation (GDPR);
- European public tendering rules; and
- International sanctions legislation.

In addition, there is legislation in the Netherlands, which is not applicable to DNB, but which from a reputational point of view will be applied when possible, such as the Money Laundering and Terrorist Financing (Prevention) Act (Wwft).

We evaluated the fraud and non-compliance risk factors to consider whether those factors indicate a risk of material misstatement in the financial statements.

We identified a fraud risk related to the allocation of costs to the ZBO activities, as management has an interest in keeping these costs within the ZBO budget.

Within DNB, physical values (gold, banknotes and coins) are present and large financial transactions are conducted that require internal control measures. The associated fraud risk factors were incorporated in our audit. This also applies to the fraud risk factor that we have identified with respect to the WNT disclosure.

Since the Executive Board of DNB does not receive any profit-related remuneration and the profit of the entity is not a goal in itself, we have not evaluated the assumed fraud risk related to revenue recognition. In addition, estimates in the financial statements are limited (refer to the section on accounting policies).

Based on the above and on the auditing standards, we identified the following fraud and non-compliance risks that are relevant to our audit, including the relevant presumed risks 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 financial statements by overriding controls that otherwise appear to be operating effectively. For our audit approach with respect to the disclosure of the Provision for Financial Risks (VFR) and balance sheet-wide risks, please refer to the key audit matter related to this item.

Responses:

- We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness of internal controls (including the design of the three lines of defence model) that mitigate fraud and non-compliance risks.

- We performed a data analysis of high-risk journal entries related to transactions concerning financial markets and monetary operations, personnel and operating expenses, property, plant and equipment, and gold. 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 inquiring about the nature of the journal entry and testing of transactions back to source information.
- We incorporated elements of unpredictability in our audit, including paying additional attention to the accounting of the costs related to the refurbishment of the head office at Frederiksplein in Amsterdam, both amounts expensed as well as the amounts capitalized under property, plant and equipment. We have also recalculated interest rate risk as disclosed in the notes to the VFR and balance sheet risks.
- **Allocation of costs to ZBO activities.**

Risk:

- The (indirect) expenses of DNB are allocated to ZBO activities based on allocation keys, mainly the number of FTE's, which results in the risk that too many or too few costs are allocated to the ZBO activities.

Responses:

- In auditing the ZBO reporting, we performed substantive audit procedures with regard to the allocation of the costs to the ZBO activities and the allocation keys applied. We have audited the (personnel and other management) costs on the basis of samples using the underlying invoices and salary information.
- We have established that the cost allocation keys have not changed from those used in the preparation of the ZBO budget approved by the Ministry of Finance.
- We have established that the cost allocation was mathematically accurate.

Our procedures to respond to fraud and non-compliance with laws and regulations have not resulted in a key audit matter.

We communicated our risk assessment, audit approach and results to the Executive Board and the Finance Committee of the Supervisory Board.

Our audit procedures did not reveal indications and/or other reasonable suspicions of fraud and non-compliance with laws and regulations that are material to the financial statements.

Our key audit matters

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

Compared to our Auditors opinion 2020, WNT is not reported as a separate key audit matter, as based on our experience in previous years, we have not noted any audit differences.

Disclosure of the provision for financial risks (VFR) and balance sheet-wide risks

Description

DNB has the possibility to recognise a provision for financial risks (known in Dutch as the “VFR”), based on ESCB principles and guidelines. The provision for financial risks is established on a discretionary basis by the Executive Board based on the results of internal models for interest and credit risk. The respective results are largely determined by the design of the model, the parameters and the extent to which DNB is exposed to certain risks regarding monetary operations. Amongst others, DNB uses data on portfolios that are acquired by other central banks as part of monetary operations that entail risks for the entire euro area.

As concluded in the capital agreement with the Ministry of Finance, the addition to the provision for financial risks is maximum the profit for the financial year (before the addition to the provision is deducted) and depends on the quantifiable balance sheet-wide risks, including the interest and credit risk. Additions to the provision for financial risks have an impact on the financial year profit of DNB and therefore impact the dividend distribution and capital development. Due to the inherently present subjective judgement and estimation uncertainty underlying the provision for financial risks, this is a key audit matter.

Our approach

We have taken notice of the relevant controls that are implemented to ensure the operating effectiveness of the models and the completeness and accuracy of the input of parameters and data.

We have reviewed the validation of the models performed by DNB with the assistance of our own specialists based on the validation process and the validation reports.

We determined that the DNB expert judgment process to establish the interest rate scenario used was conducted in accordance with internal guidelines.

To ensure the accuracy and completeness of the data used in the models, we reconciled these with data received from the ECB or other external data suppliers.

We have, assisted by the KPMG specialists, assessed the most important assumptions and premisses for the interest risk in the VFR and reperformed the interest risk.

We performed procedures and took notice of monetary developments and decisions as taken by the Governing Council of the ECB. Based on the aforementioned and the analysis performed by DNB's Risk Management Department, we verified whether the developments in the provision for financial risks in relation to the risks are sufficiently substantiated.

We verified whether the results of the models are presented accurately in the disclosure of the financial statements and whether the addition to the VFR is determined by the Executive Board in agreement with the internal procedures and based on the agreements with the Ministry of Finance.

We verified the completeness of the disclosure of the VFR in the financial statements (including the buffers for balance sheet-wide risks and the risk section as included in the Accountability chapter in the Annual Report.

Our observation

As described in the Accountability chapter in the Annual Report, almost the entire result of 2021 is added to the VFR and the balance sheet-wide risks as of December 31, 2021 exceeded the available buffers.

We determined that the VFR is recognised in accordance with the ESCB guidelines and that the VFR and the balance sheet-wide risks are adequately disclosed in the financial statements 2021.

Paragraph to emphasize the applied accounting principles for valuation and determination of results

We draw attention to paragraph 1 ‘Accounting Policies’ as included in the notes to the financial statements. The financial statements of DNB are, in accordance with the Bank Act 1998, prepared in accordance with the accounting guidelines of the European Central Bank (ECB/2016/34) and the amendments contained in ECB/2019/34 and ECB/2021/51, on accounting and financial reporting in the ESCB and its harmonised disclosures to the balance sheet and profit and loss account.

In addition, the Executive Board of DNB has decided on a number of specific deviations from these principles in order to improve reporting, as well as to comply with the additional specific requirements as included in Part 9 of Book 2 of the Dutch Civil Code and the WNT and or the Guidelines of the Dutch Council for Annual Reporting (RJ), where the ESCB accounting policies do not cover the subject. This is consistent with the unique character of a central bank. For a proper understanding of the financial statements, users should become familiar with the accounting policies as these differ from the more widely known accounting standards, such as IFRS and Part 9 of Book 2 of the Dutch Civil Code.

Our opinion is not modified in respect of this matter.

Unaudited compliance with the anti-cumulation clause in the WNT

In accordance with the ‘Controleprotocol WNT 2021’, we did not audit the anti-cumulation clause referred to in Section 1.6a of the WNT and Section 5 subsection 1j of the ‘Uitvoeringsregeling WNT’.

Consequently, we did not verify whether or not the maximum salary norm has been exceeded by a 'leidinggevende topfunctionaris' (managing senior official) due to possible employment at other institutions subject to the WNT, and whether the WNT-disclosure as required in relation to this clause is accurate and complete.

Report on the other information included in the annual report

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

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

— is consistent with the financial statements and does not contain material misstatements;

— contains the information as required by Part 9 of Book 2 of the Dutch Civil Code regarding the management report and the other information.

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

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

The Executive Board is responsible for the preparation of the other information, including the management report, in accordance with Part 9 of Book 2 of the Dutch Civil Code, and other information pursuant to Part 9 of Book 2 of the Dutch Civil Code.

Description of the responsibilities for the financial statements

Responsibilities of the Executive Board and the Supervisory Board for the financial statements

The Executive Board is responsible for the preparation and fair presentation of the financial statements in accordance with the accounting principles of guidance ECB/2016/34 and the amendments as included in ECB/2019/34 and ECB/2021/51, supplemented with the applicable standards of Part 9 of Book 2 of the Dutch Civil Code pursuant to Section 17 of the Banking Act (Bankwet) 1998 and also the Standard Remuneration Act (Wet normering topinkomens). In this respect, the Executive Board is responsible for such internal control as the Executive Board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to errors or fraud.

As part of the preparation of the financial statements, the Executive Board is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting framework mentioned, the Executive Board must prepare the financial statements using the going concern basis of accounting.

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

Our responsibilities for the audit of the financial statements

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

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

Misstatements can arise from fraud or errors 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 the financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional scepticism throughout the audit, in accordance with Dutch Standards on Auditing, the 'Controleprotocol WNT 2021', the 'Controleprotocol financiële verantwoording Autoriteit Financiële Markten en de Nederlandsche Bank' and the ethical requirements and independence requirements.

Our audit included among others:

— identifying and assessing the risks of material misstatement of the financial statements, whether due to errors or fraud, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from errors, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

— obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control;

— evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Executive Board;

— concluding on the appropriateness of the Executive Board's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company ceasing to continue as a going concern;

— evaluating the overall presentation, structure and content of the financial statements, including the disclosures; and

— evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit.

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

Amstelveen, 16 March 2022

KPMG Accountants N.V.

M.A. Huiskers RA

Provisions governing the appropriation of profit

These provisions are set out in Article 22(2) of the Articles of Association of De Nederlandsche Bank N.V. and read as follows:

The profit, as shown in the adopted financial statements, is at the disposal of the general meeting.