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Foreword to the Financial Stability Review

The last three years have seen a series of new stress events hit the global economy, and thus too the financial system. Just when the world seemed to be getting over the pandemic, which since 2020 had dominated our lives and our commerce like few economic shocks before it, reality hit hard last year, particularly in Europe, with the Russian military aggression against Ukraine. In just over a year since its outbreak it has shown no significant signs of abating, while its consequences have grown wider and deeper.

The economic reality nevertheless shows that as individuals and businesses we were relatively quick and successful in adapting to these circumstances. This year thus began in a more stable environment. This also played its part in the general uncertainty triggered by developments in the US banking system (several US bank failures and a liquidity crisis at one of the larger Swiss banks) not being transmitted to banking systems in the EU. This is yet further evidence that the European banking system is sound and trustworthy, thanks in part to the more consistent implementation of the Basel standards, which in the EU apply to banks of all sizes.

To reiterate, businesses have adapted relatively well to the changed circumstances over the last three years. Not just in Slovenia, but across Europe and further afield, the economic recovery after the pandemic was strong. Even the war in Ukraine could not seriously dent the European economy. This winter there was considerable uncertainty surrounding energy supply and the risk of recession, but the current data suggests that the economic picture is more favourable than the expectations of last autumn. Economic growth did slow discernibly, but analysis no longer suggests any greater chances of recession in our wider environment this year. Economic growth is forecast to remain positive next year, albeit not particularly high. Moreover, the labour market is seeing record high employment and low unemployment, and is forecast to get even tighter in the future. The economic picture in Slovenia is similar.

For more than a year and a half we have been witness to yet another economic phenomenon, which arrived several months before the war in Ukraine, but deepened further with the beginning of the Russian military aggression. Since the second half of 2021, like many other places, the euro area has been hit by inflation that is significantly above its monetary policy target rate. Inflation in the euro area as measured by the HICP had reached 5% by the end of 2021, which marked the final turning point in our monetary policy. Had the war in Ukraine not broken out, and had we been spared its consequences, it would likely have been possible to return inflation to desirable territory through more gradual monetary policy action. Because various factors meant that euro area inflation exceeded 10% last summer (and even earlier in Slovenia), a decisive step in the direction of more restrictive monetary policy became unavoidable. The euro area's common monetary policy is thus responding with decisive hikes in interest rates (by May they had been raised at seven consecutive Governing Council meetings), and the discontinuation of the last remaining non-standard monetary policy measures. The next monetary policy steps will depend on the current situation, in particular on the economic and financial data, developments in core inflation, and the effectiveness of our measures.

It was in this situation that we again conducted an assessment of our financial system. While previous iterations of the assessment of financial stability in Slovenia recorded an increase in, or at least elevated levels of, risks to financial stability, on this occasion our finding is that the general level of risk to financial stability is gradually declining in Slovenia, and the outlook for the future is improving. In general terms, according to our latest assessment the financial system has reached a general level of systemic risk equal to that seen in the period before the outbreak of the Russian military aggression. As at the end of last year, our risk dashboard features the same number of elevated risks as moderate risks, while no risks are currently assessed as high. Looking over a longer time horizon, half of the systemic risks to financial stability addressed in the assessment promise an improvement in the future. Similar developments can be seen in other European countries and in the euro area overall, although certain differences remain.

In the last few quarters, particularly since the second half of last year, it is undoubtedly the rise in inflation and the resulting monetary policy response that have had the greatest impact on banking and on the systemic risks to financial stability. In the period when inflation was too low, and monetary policy was consequently highly accommodative, the banking system had to adapt to operating in an environment of low or even negative interest rates. The signalling of a reversal in monetary policy relieved banks of the pressure to cut interest rates on loans. The booming post-pandemic economic environment, the diminished uncertainty and the built-up savings encouraged individuals to seek alternative investments, which many found on the real estate market. In the desire to utilise the final opportunities for relatively favourable long-term financing, many individuals took out housing loans, which last year recorded one of the highest year-on-year growth rates in Europe. Conversely, the huge uncertainty in the business environment reduced the demand for investment financing from firms, who strongly increased their demand for loans for other purposes. The gradual rise in interest rates means that price effects have now joined the previously evident quantity effects from the increase in lending, which has resulted in relatively good performance by the banking sector, and also a good outlook going forward.

Last year the banks again recorded a pre-tax profit of more than EUR 0.5 billion, despite the increased uncertainty driving them to renew their creation of impairments and provisions, which had mostly been released for a number of preceding years. Comparing the Slovenian banking system side-by-side with those in other European countries, our system is one of the most profitable in terms of ROE. However, it is still the case that ROE would have been significantly lower than the actual pre-tax figure of just over 10%, had impairment and provisioning costs been at their long-term average. This puts the performance of the Slovenian banking system in a totally different light.

The Slovenian banking system is now comparable to the European countries with the lowest NPL ratios, and the largest declines in the figure since the global financial crisis. However there needs to be an awareness of the persistently high uncertainty with regard to the economic outlook and the expectations of further interest rate hikes. These might lead in the future to a deterioration in the banks' credit portfolios, and accordingly the credit risk assessment has been maintained as elevated. There are two reasons why we do not expect any future deterioration in credit risk in the given circumstances. First, Slovenian firms have considerably improved the structure of their financing over the last decade in favour of equity, for which reason in the absence of additional shocks even the gradual rise in interest rates presents no threat to them in general, although corporate loans in Slovenia typically carry a variable interest rate and are thus subject to current rises in the interest rate benchmark. Further evidence that Slovenian firms are robust comes not least from last year's profit figures, which again hit a new record level of just over EUR 7 billion. Conversely, the breakdown of household loans also means that a future rise in interest rates will not have a significant impact: fixed-rate loans are prevalent.

Irrespective of the improvement in the assessment of systemic risks for the Slovenian financial system, it remains a fact, one that we have been drawing attention to for some time now, that a debate is needed over the future direction of our banking system. It is true that the general rise in interest rates is improving the banks' performance, but it should not be overlooked that a rise in asset rates will sooner or later make it time for a significant adjustment in interest rates on the deposit side. Here Slovenian banks are still considerably behind the euro area average. An even longer-term perspective applies to the question of the structure of the Slovenian banking system, which has undergone significant change since the financial and economic crisis. While loans to NFCs were 2.5 times higher than household loans in 2009, now the latter are larger than the former. By contrast, with total assets virtually unchanged, the banks now hold EUR 9 billion more assets in the most liquid form. This is increasing the liquidity reserve, and keeping the assessment of liquidity resilience at a high level. However, questions arise with regard to the effectiveness of financial intermediation in Slovenia, the support for broader economic development, and the viability of the banks' business models in light of the rapid development of finance in the wider sense. There is undoubtedly opportunity for greater engagement in the economy on the part of Slovenian banks, in the sense of liquidity and in the sense of capital reserves. The capital adequacy of individual Slovenian banks still varies considerably, but for the banking system as a whole it is comparable to the euro area average, and given the good performance has the potential to strengthen in the future, should the owners keep to a restrained dividend policy.

As the guardians of financial stability, we respond to the described risks and issues through macroprudential policy, via which we attend to adequate credit standards on one hand, and to the capital robustness of the banking system on the other. At a time of rising cyclical risks, like the majority of European countries we took the decision at the end of last year to impose a positive countercyclical capital buffer rate, which was set at 0.5%. When it comes to this macroprudential instrument, European forums are increasingly open to the merits of putting in place a positive-neutral rate, which the competent authority tailors to the anticipated state of the cycle. The purpose of a positive-neutral rate is to build the banking system's resilience at a time when cyclical systemic risks are neither in abeyance nor elevated. While the buffer for other systemically important institutions is an established measure, there is debate over adjusting the methodology for setting this buffer to mitigate the risk of heterogeneity and to ensure greater consistency in the treatment of banks in euro area countries. Similarly to most other euro area countries, since May of last year Slovenia has enforced a modified measure to restrict household lending, which has been augmented by two sectoral systemic risk buffers. The expectation that banks would succeed in addressing the non-fulfilment of minimum standards for customers with low creditworthiness that are otherwise trustworthy within the framework of the allowed exemptions has sadly not been realised, and this year's increase in the minimum wage has further hindered the functioning of this measure, and significantly reduced the creditworthiness of borrowers with below-average income. Banka Slovenije has also drawn attention to this. At our proposal and the proposal of the Ministry of Finance, the National Assembly amended the Macroprudential Supervision of the Financial System Act, to ensure that creditworthiness is no longer tied to legislation relating to enforcement. The amendment made to the law allows Banka Slovenije to adjust the measures in the area of household lending. In formulating the changes in this area, our objective remains upholding the minimum credit standards for new loans, while ensuring adequate protection for consumers and banks.

Dr Primož Dolenc

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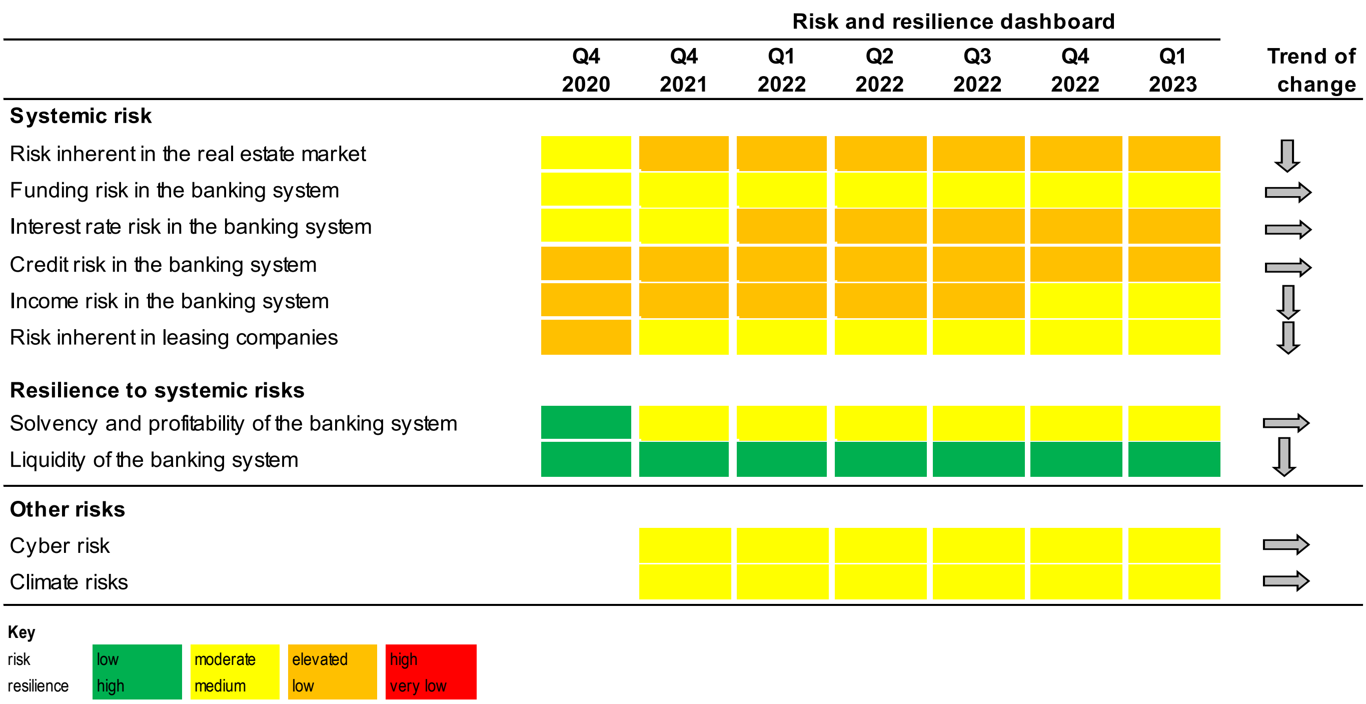
Executive Summary

Given the improvement in the economic outlook since autumn in Slovenia and further afield, the general level of systemic risks to financial stability in Slovenia has declined, and is rated moderate to elevated (see Table 1.1). Interest rate risk and credit risk in the banking system remain elevated with a stable outlook. While the risk inherent in the real estate market is assessed as elevated, there are signs of a slowdown in the residential real estate market, which could lead to the risk assessment being reduced to moderate. Income risk has been assessed as moderate since the final quarter of 2022. Given the rapid rise in interest income in the banking system seen in the second half of 2022 and the early part of this year, the assessment could improve further over the following quarters. Funding risk in the banking system and the risk inherent in leasing companies have been assessed as moderate for some time now. A further improvement can be expected in the latter, similarly to income risk in the banking system. Banking was hit by shocks to the banking systems in the US and Switzerland in March of this year. Like the euro area overall, the banking system in Slovenia has nevertheless functioned stably and has maintained high liquidity, as it did at the end of last year. However, the rapid pace of change seen recently is itself further strengthening uncertainty, keeping individual risks at an elevated level. The assessment of the resilience of the banking system remains unchanged, at medium in the segment of solvency and profitability, and high in the liquidity segment. The improvement in indicators in the area of solvency and profitability has brought an improvement since the autumn in the outlook for resilience in this segment to stable.

Table 1.1: **Banka Slovenije's risk and resilience dashboard for the Slovenian financial system**



Note: The colour code in the risk and resilience dashboard relates to the assessment for up to one quarter in advance. The arrow illustrates the expected change in risk or resilience in the scale (up or down) over a slightly longer horizon of around one year. For risks, an up arrow means an increase in risk, and vice versa, while for resilience it means strengthening, and vice versa. The risk and resilience dashboard is based on an analysis of key risks and resilience in the Slovenian banking system, and is defined as the set of quantitative and qualitative indicators for defining and measuring systemic risks and resilience.
Source: Banka Slovenije

The global economy recovered quickly after the pandemic, and the war in Ukraine has had a smaller negative impact on growth than expected. Lower economic growth means that the macroeconomic situation over the remainder of 2023 will remain uncertain, although the economic growth outlook for the economies of Slovenia and the euro area has improved since autumn. The broadly based high inflation points to weaker private consumption in the future, while the ongoing tightening of monetary policy entails additional pressure on private investment. The rise in interest rates has helped to drive an improvement in the performance of banks in Slovenia and other euro area countries, but they remain exposed to certain risks. The rise in interest rates has increased the financial burden in parts of the non-banking sector, and the likelihood of a future rise in non-performing exposures at banks is increasing. The situation is also becoming more challenging for the government sector: yields on Slovenian government bonds were significantly higher than they were a year earlier, which could further worsen the position of the public finances given this year's expected widening of the deficit.

The risk to financial stability inherent in the real estate market is assessed as elevated, but is declining as the residential real estate market begins to cool. Growth in residential real estate prices has slowed, but remained high in the final quarter of last year (at 11.3% in year-on-year terms), while the number of sales fell. Demand for housing loans is being reduced by high inflation and the rise in interest rates. Household resilience to rising debt servicing costs has increased in recent years, thanks in part to the macroprudential restrictions on household lending.

Funding risk in the banking system remains moderate. The relatively large maturity gap widened further in 2022 as a result of increases in long-term loans and sight deposits. Deposits by the non-banking sector have remained stable, and are still the most important source of funding for the banking system. Deposits by the non-banking sector account for 78.6% of total liabilities. The wide range of interest rates on deposits within the banking system, which for now remain below the euro area average, might in the future encourage savers to switch their savings between Slovenian banks. For the future stability of bank funding, it remains vital to diligently monitor competition in the sector, and the adjustments in pricing policy.

The banks' exposure to interest rate risk increased slightly in the second half of 2022, and while the risk assessment remained elevated, the outlook is no longer for a further increase. The repricing gap (i.e. the difference between the average repricing periods on the asset and liability sides) also widened slightly in the second half of the year. This slightly increased the banks' exposure to interest rate risk, which had already been recognised as elevated in the first half of last year.

Credit risk in the banking system remains at an elevated level. The indicators of asset quality mostly remained favourable in 2022, but a number of small segments of the portfolio have showed signs of deterioration in recent months. NPE ratios in the sectors that were hit hardest by the pandemic rose in the final months of the year. Credit risk also remains elevated on account of the adverse impact of inflation and interest rates on the debt sustainability of debtors, in the non-financial corporations and household portfolios alike. The uncertainty in the international environment is also a factor in credit risk remaining elevated.

The assessment of income risk in the banking system was lowered to moderate in the second half of 2022, with a trend of further decline in the future. This was attributable in part to the high growth in net interest income (20% in year-on-year terms), particularly in the second half of last year, when the quantity effects began to be joined by growing price effects driven by rising interest rates. The net interest margin also began to rise rapidly as a result, hitting 1.61% by the end of 2022. Amid the further tightening of monetary policy, this year can be expected to see further positive developments in income generation by the banks, which is being driven in particular by the asset side of the balance sheet, while the impact on the liability side remains smaller, given the high share of sight deposits and the likelihood of interest rates rising more slowly in Slovenia than in the euro area overall.

The resilience of the banking system from the perspective of solvency and profitability remained medium in 2022, with retained earnings and additional issuance of capital instruments helping to maintain resilience in connection with solvency. After a period of decline, the banking system's total capital ratio on a consolidated basis rose again to end 2022 at 18.5%. The increase in the final quarter of the year was attributable to growth in regulatory capital, while the negative impact on capital adequacy from risk-weighted assets was smaller. Our assessment is that the increase in income being driven by strengthening net interest income is currently increasing bank resilience. Future developments in the capital ratios will depend on the further developments in risk-weighted assets, and on retained earnings.

The banking system's resilience to systemic risks remained high in the liquidity segment. Because net liquidity outflows increased by more than the liquidity buffer, the LCR on an individual basis declined by 22 percentage points in 2022 to end the year at 290%, but remains well above the minimum regulatory requirement. There remain considerable variations from bank to bank in their liquidity surpluses, and with it their capacity to cover the consequences of any realisation of funding risk in the form of a sudden large withdrawal of deposits by the non-banking sector. In addition to large cash holdings, the banks also have significant holdings of free eligible collateral, and thus the ability to access additional liquidity in the Eurosystem should they so require. More predictable behaviour with regard to deposits by the non-banking sector might be prompted by a change in pricing policy, whereby banks would gradually raise interest rates on deposits at longer maturities to encourage savers to fix larger amounts.

The financial position of households and non-financial corporations remained relatively good in 2022, despite a significant decline in gross household saving and an increase in the indebtedness of non-financial corporations. Households earmarked a large part of their disposable income for final consumption in 2022, taking the gross saving rate to 4.0%, its lowest level to date. High inflation and rising interest rates are reducing household disposable income. The pace of borrowing by non-financial corporations began to slow over the final months of last year, in line with economic growth over this period. The main decline in demand for loans in the second half of last year and at the turn of the year came in loans for investment, while demand for loans for current operations and inventories remains high, in reflection of the persistent uncertainty in supply chains.

The performance of the non-banking financial sector remained stable, despite the uncertain macroeconomic situation in 2022. The risks inherent in the performance of leasing companies remain moderate, with an improvement in the expectations for the quarters ahead. Leasing companies approved more new business in 2022 than in the previous year, and the increase in new business was reflected in an increase in the balance sheet total. The insurance sector saw an increase in gross written premium last year relative to the previous year, most notably in the general insurance segment. The capital adequacy of insurers in Slovenia remained high in 2022. Increased volatility and the high level of uncertainty on the market meant that the domestic mutual funds saw a year-on-year decline in their assets under management, in which the revaluation of equity funds was the largest factor. Despite the large decline in contributions compared with the previous year, the domestic mutual funds did not have any liquidity difficulties, as net inflows remained positive. Only bond funds recorded net withdrawals in Slovenia, driven by the strong inflationary pressures and the resulting fall in values.

The macroeconomic and financial environment in Slovenia and across Europe is subject to huge uncertainty. Given the general strengthening of cyclical risks over the last year, particularly in light of the adverse dynamics on the real estate market and the increased growth in credit to the private non-financial sector, Banka Slovenije decided at the end of 2022 to raise the countercyclical capital buffer rate from zero to 0.5%, with a date of 31 December 2023 for meeting the requirement. This is part of our augmentation of the macroprudential toolkit with new instruments to increase the resilience of the Slovenian banking system.

There are four boxes addressing particular subjects in this issue of the publication. Two deal with cyber risk and climate risks, which from now on will be regularly assessed and included in Banka Slovenije's risk and resilience dashboard for the Slovenian financial system. Cyber risk in the banking system is assessed as moderate. Geopolitical threats (the war in Ukraine) meant that the number of cyber-attacks did not rise as expected, but cyber threats nevertheless remain at a high level. Climate risks are also assessed as moderate, with a stable outlook over the following quarters. The box also highlights the indicators of transition risks based on which we currently monitor climate risks. The third box provides analysis of the rise in interest rates and the pass-through of estimated costs into items in corporate financial statements, where the impact on firms from a rise in interest rates is simulated under various restrictions and assumptions. The final box examines regulatory changes in the measurement of interest rate risk in the banking book. Three regulatory products were published on the EBA website in October 2022 to build on the legislative changes brought by the CRD, namely the Guidelines on the management of IRRBB and two regulatory technical standards. The purpose of the aforementioned changes is to harmonise the calculation of IRRBB when internal systems for measuring it are not satisfactory, and to improve the identification of institutions that are excessively exposed to IRRBB.

1 Macroeconomic Environment

The global economy recovered quickly after the pandemic, and the war in Ukraine has had a smaller negative impact on growth than expected, but there is uncertainty surrounding the economic situation over the remainder of 2023. Given the persistence of elevated inflation, the fast tightening of monetary policy, and the uncertainty surrounding the course of the war in Ukraine, the balance of risks remained on the downside, and uncertainty has recently been further increased by a number of issues in the banking systems in the US and Switzerland. Survey indicators for the economies of Slovenia and the euro area in the early part of this year were up on the final quarter of last year, and suggest a more favourable economic situation and a better outlook than in the autumn, although certain risks remain present. Growth in private consumption is being curtailed by the broadly based inflation, while the further tightening of monetary policy is putting additional pressure on future private-sector investment alongside the uncertainty in the international environment. The rise in interest rates has helped to drive an improvement in the performance of banks in Slovenia and other euro area countries, but they remain exposed to certain risks. The rise in interest rates has increased the financial burden in large parts of the non-banking sector, and the likelihood of a future rise in non-performing exposures at banks is increasing. The situation is also becoming more challenging for the government sector, with yields on Slovenian government bonds now at higher levels than a year ago. Given the large deficit anticipated this year, this is putting further pressure on the fiscal position.

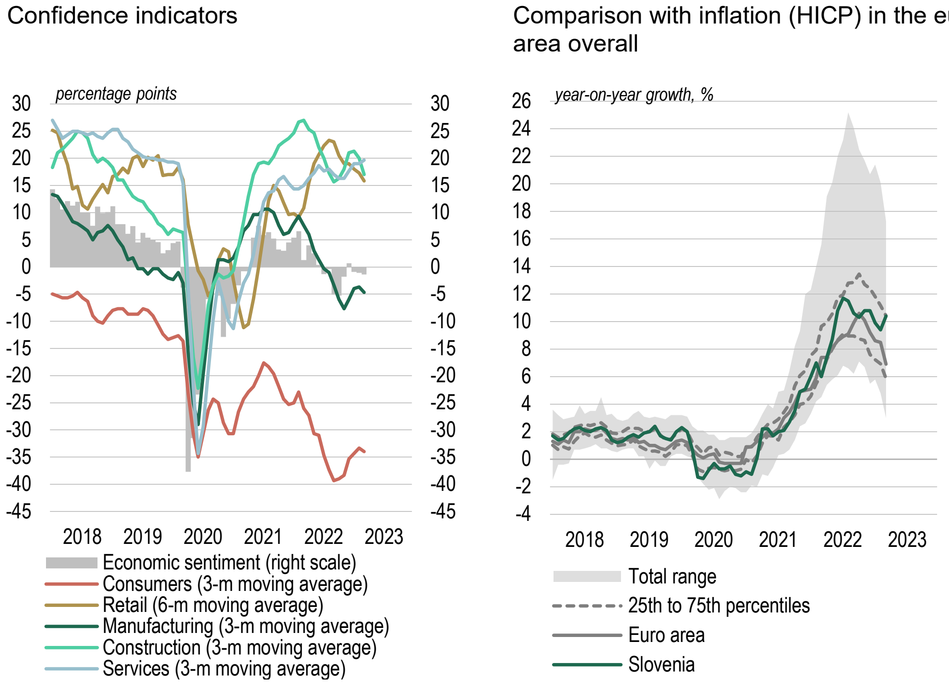
The global economy in 2023 is again being profoundly affected by high inflation, while the course of the war in Ukraine continues to pose major uncertainty. Amid higher private consumption, global economic growth in the second half of last year was above expectations, thanks in part to the savings built up during the Covid-19 pandemic and the normalisation of the situation in supply chains, but it had slowed by the end of the year. The balance of risks to future growth remained on the downside, where major factors were: the persistence of inflation at elevated levels and the continuing rapid rise in central bank interest rates, the debt repayment difficulties caused by tighter financing conditions, the escalation of the war in Ukraine, and a potential downturn on the financial markets. Conversely global economic growth might be encouraged by the additional recovery of pent-up demand from the pandemic, the opening of the Chinese economy after the lifting of the containment measures, and a faster-than-expected fall in inflation, while also benefitting from the sustained low unemployment. Growth stood at 3.4% in 2022, and according to the IMF[1] is forecast to slow to 2.8% this year, the latest figure having been revised downwards from the previous forecast.[2]

Economic growth in Slovenia and in the euro area overall remained positive in the final quarter of last year,[3] while the increase in this year's survey indicators relative to the final quarter of last year suggests a continuation of economic growth. The economic sentiment indicator (see Figure 1.1 left) had strengthened in both economies by the end of 2022, and held at similar levels in the first quarter of this

[1] IMF, World Economic Outlook, April 2023.
[2] 2.9% (IMF, World Economic Outlook, January 2023).
[3] According to seasonally and calendar-adjusted figures, GDP in the final quarter of 2022 was up 0.8% on the previous quarter in Slovenia, and up 0.1% in the euro area overall. GDP in the final quarter was up 1.3% in year-on-year terms in Slovenia, and 1.9% in the euro area overall. GDP grew by 5.4% in 2022 in Slovenia, and by 3.5% in the euro area overall.

year, although certain risks remain present. The labour market is recording a record low unemployment rate, while growth in the HICP remains high (see Figure 1.1 right).[4] The high inflation has seen a continuation of interest rate hikes, which entails a further tightening of financing conditions. Slovenia ran a current account deficit last year,[5] amid the rising prices of energy and commodities imports, and strong domestic demand. The environment for economic growth will remain challenging over the remainder of this year: given the broadly based inflation, growth in private consumption is expected to be low, and the further tightening of monetary policy could additionally curtail growth in private investment amid the uncertainty in the international environment. The outlook for this year nevertheless improved slightly, in reflection of the increase in economic growth forecasts compared with a few months ago.[6]

Figure 1.1: **Confidence indicators for Slovenia, and inflation**



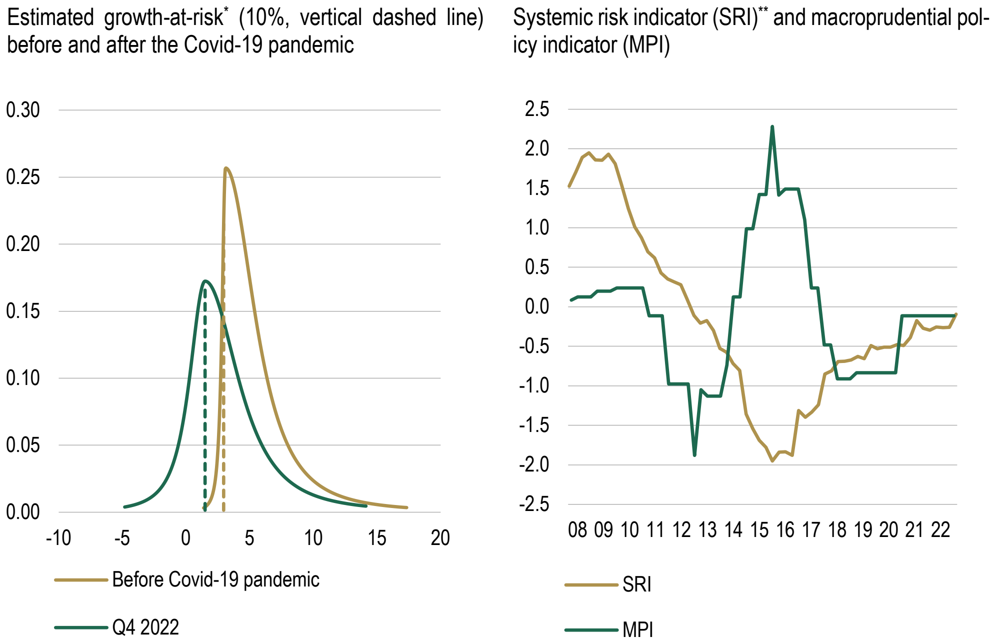
Note: The confidence indicators in the left chart are illustrated as three- or six-month moving averages (other than the economic sentiment indicator). The indicators are expressed in the form of an average balance, where the balance is the difference between the proportions of positive answers and negative answers. The figures for February in the right chart are Eurostat estimates.
Sources: SORS, Eurostat, Banka Slovenije calculations

The growth-at-risk for Slovenia's GDP has deteriorated relative to the pre-pandemic period. The macrofinancial environment, which has an impact on future GDP growth, has deteriorated via an increase in various risks. The estimated probability distribution of future GDP growth in the final quarter of last year was shifted left compared with before the Covid-19 pandemic, with a greater probability of a realisation of lower growth (see Figure 1.2 left). In the presence of macrofinancial vulnerabilities, economic growth responds to negative shocks in a non-linear fashion, which can cause a significant decline in financial stability and can have major adverse macroeconomic consequences. Alongside other polices, macroprudential policy can make a significant contribution to greater financial stability by limiting the build-up of systemic risks and, in particular, mitigating the adverse consequences to the economy in the event of their

[4] Year-on-year inflation in March stood at 10.4% in Slovenia and 6.9% in the euro area overall.
[5] For more information, see the March 2023 issue of the Review of macroeconomic developments.
[6] The European Commission (February 2023) is forecasting economic growth of 1.0% this year in Slovenia, and 0.9% in the euro area overall. The figure for Slovenia has been revised upwards by 0.2 percentage points from the autumn, while the euro area figure has been revised upwards by 0.6 percentage points.

realisation. Timely action by macroprudential policy is important in ensuring its countercyclicality, and mitigating the impact of systemic financial shocks on economic growth. The current macroprudential policy stance[7] for Slovenia is around its historical median, and in this sense is neutral and appropriate to the current situation.[8]

Figure 1.2: **Growth-at-risk for Slovenia, and systemic risk and macroprudential policy indicators**



Notes: * Density distribution of average annual GDP growth for four quarters in advance. The model includes the lag of GDP growth, the SRI, the financial conditions index (FCI) and the MPI. A growth-at-risk of 10% corresponds to the value of GDP growth below which the area under the curve has a probability density of 0.1. Growth-at-risk was estimated at -0.3% in the final quarter of 2022. A description of the basic methodology is given in Drenkovska and Volčjak (2022). ** The SRI is composed as the optimally weighted average of six indicators of systemic risk with good early warning properties. For more on the composite indicator, see the Banka Slovenije website.
Source: Banka Slovenije

The financial and banking sectors will face an uncertain economic situation over the remainder of the year. The financing conditions are deteriorating again this year, amid the rapid tightening of monetary policy by central banks via interest rate hikes. Stock markets have been strengthening since last October, but remain below their peak from the beginning of last year (see Figure 7.3 left in the appendix). The environment of rising interest rates had a favourable impact on the performance of banks in the euro area, which was reflected in a rise in their stock market valuations.[9] Slovenian banks also saw improved results, but like banks in other euro area countries they are exposed to certain risks, which could have an adverse impact on their performance in the event of a major cooling of the economy. The rising interest rates are increasing the burden on the non-banking sector from liabilities to banks, particularly for entities that finance themselves with variable-rate loans and entities that will raise loans in the future, thereby increasing the likelihood of a future rise in NPEs. Financing is also less favourable for the government sector. Yields on Slovenian government bonds in the first quarter of this year were higher than a year earlier (see Figure 7.3 right in the appendix), which is hurting the public finances given this year's anticipated large deficit driven by

[7] The macroprudential stance is measured as the distance between the conditional median and the conditional tail (10th percentile) of estimated GDP growth. For more information, see Report of the Expert Group on Macroprudential Stance – Phase II (implementation).
[8] For more on macroprudential policy, see the section entitled Macroprudential policy for the banking system and leasing companies.
[9] These had fallen again in early March in the wake of the difficulties at Credit Suisse.

the energy crisis measures. In the wake of the recent sovereign downgrades for a number of European countries applied by the rating agencies, Slovenia maintained its existing ratings with a stable outlook, which is helping to maintain high confidence among investors.

2 Key Risks to Financial Stability

2.1 Risk inherent in the real estate market

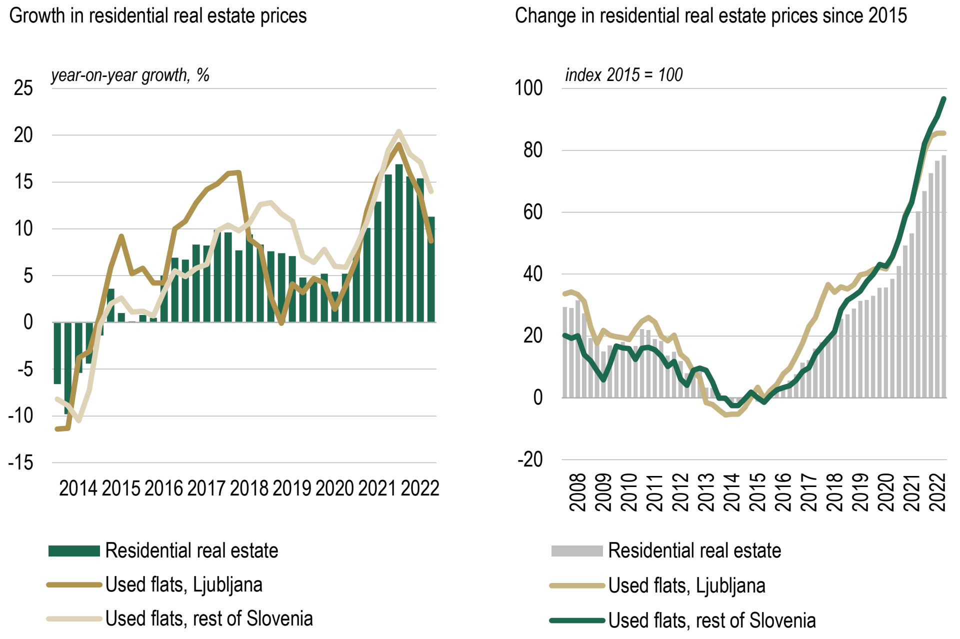
The risk to financial stability inherent in the real estate market is assessed as elevated, but is declining as the residential real estate market begins to cool. Growth in residential real estate prices had slowed by the end of 2022, but remained high, while the number of sales was down in year-on-year terms. Demand for housing loans is being reduced by high inflation and the rise in interest rates. More than 60% of housing loans carry a fixed interest rate, and thus the borrowers will not be hit by interest rate rises. There is still a shortage of supply on the residential real estate market, while the labour market is in good shape, and household indebtedness is low. Households' resilience to rising debt servicing costs has increased in recent years, partly as a result of the introduction of the macroprudential measure restricting household lending. The risks inherent in the commercial real estate market are also having a significant impact on the banking system's resilience.[10]

Residential real estate market

Growth in residential real estate prices remained high in the second half of 2022, but began to slow. The year-on-year rate of growth stood at 11.3% in the final quarter of the year, down from 16.9% in the first quarter (see Figure 2.1 left). The main slowdown between the first and final quarters was in growth in prices of used flats in Ljubljana, which was down 10.3 percentage points at 8.7%. Residential real estate prices have grown strongly over the last two years in Ljubljana and in the rest of Slovenia alike (see Figure 2.1 right). Nominal prices in the final quarter of 2022 were up more than a third on their pre-pandemic levels and the previous peak from 2008, while the recent high inflation meant that real prices were up 19.4%. The slowdown in price growth does not for now entail the realisation of risks on the real estate market, but merely a price correction to move closer to long-term fundamentals.

[10] Recommendation of the European Systemic Risk Board of 1 December 2022 on vulnerabilities in the commercial real estate sector in the European Economic Area (ESRB/2022/9).

Figure 2.1: **Growth in residential real estate prices**



Source: SORS

Residential real estate in the final quarter of 2022 was overvalued by an average of approximately 10% according to various indicators, which is still less than in 2008. According to the indicators of relative overvaluation,[11] residential real estate became overvalued in the autumn of 2021, and the deviation from long-term fundamentals increased in the first quarter of 2022, but had already narrowed slightly by the final quarter of 2022 (see Figure 2.2 left). The overvaluation of residential real estate was still less than its previous peak of 2008, when it averaged around 22%, the growth in nominal prices on this occasion having been accompanied by growth in disposable income, rents, consumer prices, etc.

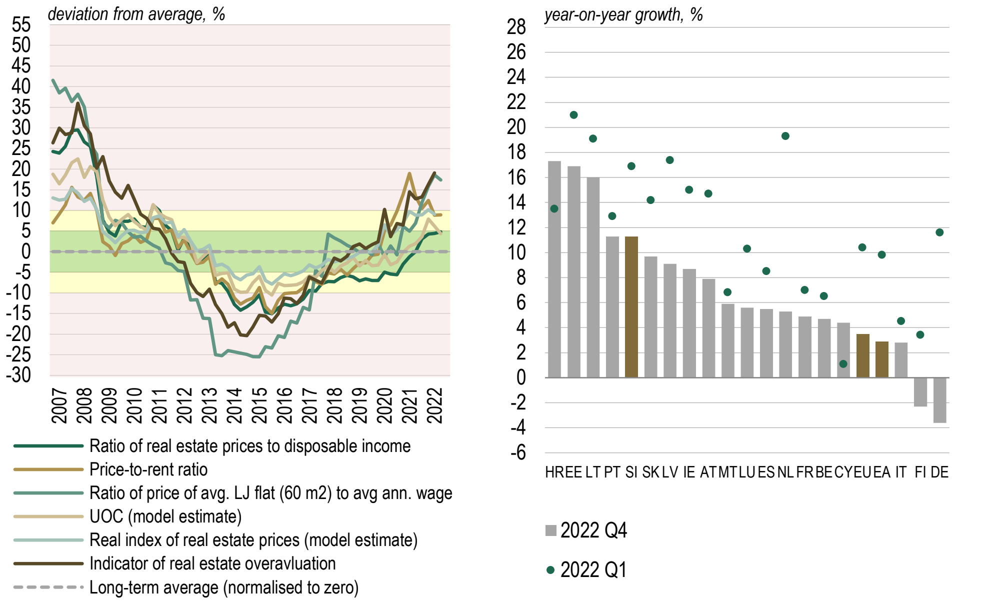
Growth in residential real estate prices slowed in the majority of EU Member States, and Slovenia's rate remained among the highest. Average growth in prices in the EU slowed by 7 percentage points between its peak in the first quarter and the final quarter of 2022 to reach 3.5% (see Figure 2.2 right). Growth in prices slowed over this period in Denmark, Sweden, Germany and Finland, while the main slowdowns were in Czechia and the Netherlands. In certain neighbouring countries growth was higher than in Slovenia: e.g. in Hungary (16.5%) and Croatia (17.3%), where the rate was still increasing. Real estate prices in the final quarter of 2022 fell relative to the previous quarter in the majority of EU for the first time in almost ten years, the decline averaging 1.5% (Slovenia recorded growth of 1%).

[11] The indicators are showing relative overvaluation, where the dynamics in residential real estate prices are compared with developments in other fundamentals such as income (e.g. GDP, disposable income), prices (e.g. general inflation, rents) or costs (e.g. construction costs, interest rates on housing loans).

Figure 2.2: **Indicators of overvaluation and growth in residential real estate prices in EU Member States**

Indicators of overvaluation of residential real estate

Growth in residential real estate prices in the euro area



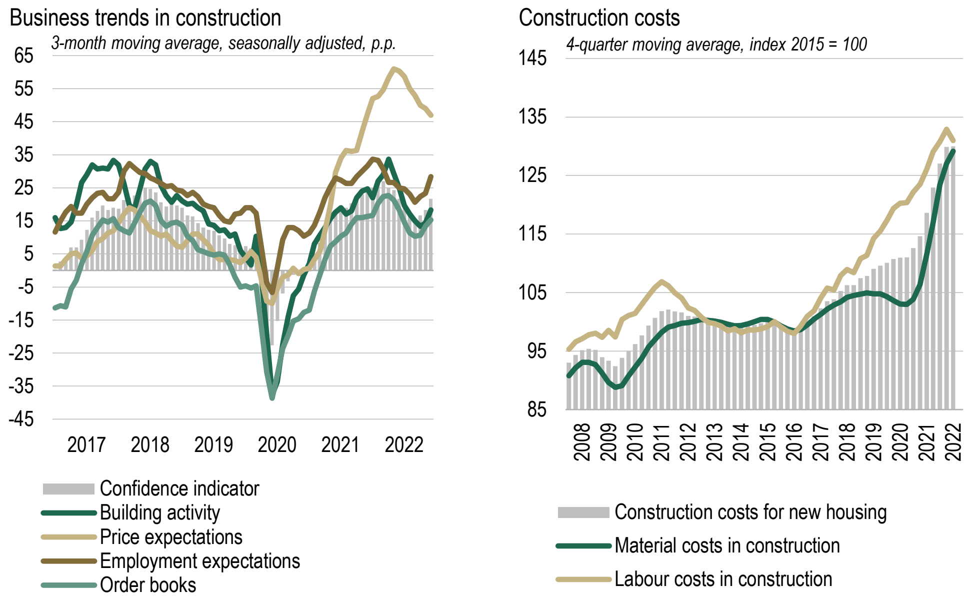
Note: In the left chart the indicators of housing price alignment with fundamentals are normalised around their own long-term averages, which are assigned a value of zero. Each indicator's deviation from the long-term average illustrates the overvaluation or undervaluation of residential real estate.
Sources: SORS, SMARS, Slonep, Eurostat

Growth in residential real estate prices could slow even more in the future, potentially under the influence of the continued tightening of monetary policy. A further slowdown in price growth is indicated by the fall in the number of sales of residential real estate between the second quarter and the final quarter of 2022 by around 20% in year-on-year terms. Conversely, the labour market is in good shape, and unemployment hit a record low at the end of 2022. In the survey of consumer opinion in the final quarter of 2022, households did not highlight any major changes with regard to planned purchases or to housebuilding or home improvements over the coming year.

The imbalance between supply of and demand for residential real estate has also been a factor in the rise in prices in recent years. The supply of new housing failed to keep up with demand, which increased. The number of dwellings per 1,000 people has remained unchanged at around 410 over the last ten years. The number of residential buildings for which building permits were issued has increased over the last two years. A total of 1,670 permits were issued in the second half of 2022, up 29% on the average between 2014 and 2020 (see Figure 7.4 left in the appendix), which suggests that this imbalance might diminish slightly over the medium term. The ratio of gross investment in housing to GDP nevertheless remained low, at 2.8% in the final quarter of 2022, compared with 6.1% in the euro area overall, which is a factor in the shortage of supply on the market. Banka Slovenije is unable to exert any influence over this segment through macroprudential measures.

The situation in construction remained stable in the second half of 2022, with high growth in the amount of construction of buildings put in place. After deteriorating over the summer, the construction confidence indicator improved in December 2022, leaving it 23 percentage points above its long-term average (see Figure 2.3 left). Firms assessed building activity, order books and employment expectations as high, but lowered their assessment of expectations of price growth, although it remained high. The amount of construction put in place in December was up 74.5% in year-on-year terms, with construction of buildings recording an increase of fully 131.9%. Costs of materials and labour were a major limiting factor in construction, having increased sharply over the last two years (see Figure 2.3 right). This is also a factor in the imbalance between supply and demand on the residential real estate market. Construction firms were still facing difficulties with a shortage of skilled labour in the second half of 2022 (half cited this as a significant limiting factor in the survey of business trends in construction).

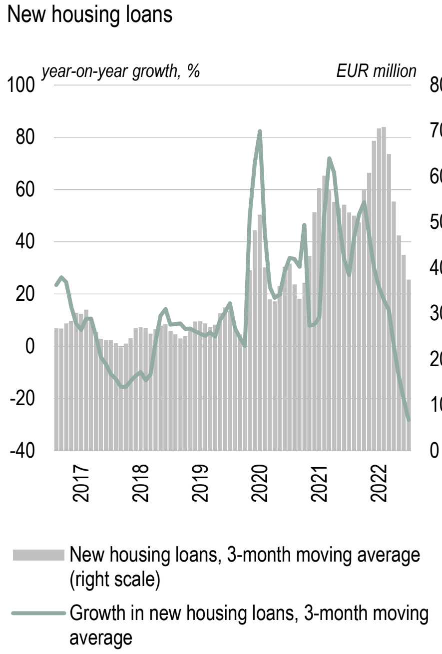
Figure 2.3: **Business trends in construction and construction costs**

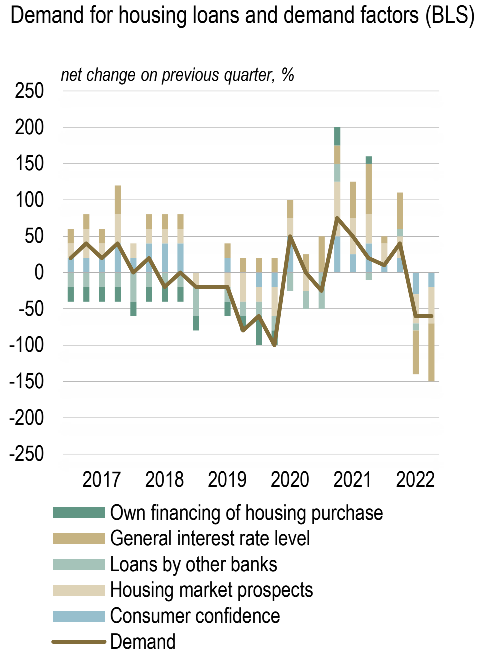


Source: SORS

Borrowers' ability to make debt repayments is declining as a result of high inflation and rising interest rates. NPE ratios are at record low levels: the NPE ratio in the housing loans portfolio stood at 1.2% at the end of 2022, while the share of Stage 2 exposures (increased credit risk) stood at 7.1%. Demand for housing loans declined in the second half of 2022: new housing loans declined in the final quarter, and were down 28.2% in year-on-year terms in December (see Figure 2.4 left). In the period before monetary policy tightening, loans had increased, given the expectation of interest rate hikes. 91% of new housing loans in 2022 carried a fixed interest rate. In the bank lending survey (BLS) in the second half of 2022 a majority of the banks cited the general interest rate level as the largest factor in the reduced demand for housing loans, while half of the banks also cited the housing market prospects (see Figure 2.4 right).

Figure 2.4: **New housing loans and demand for housing loans**



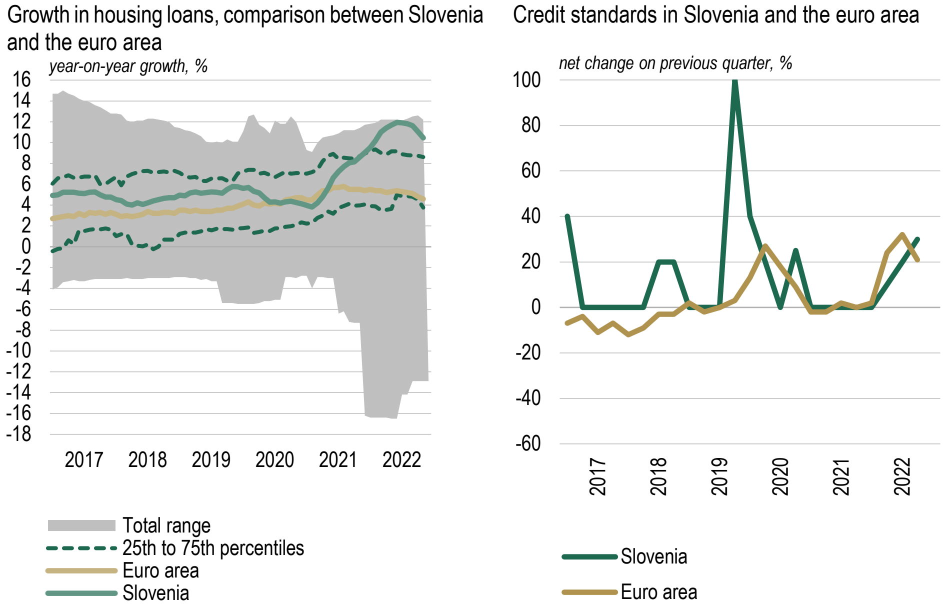


Source: Banka Slovenije

With the rise in interest rates demand for housing loans, is expected to further reduce. This was cited by the three-quarters of the banks in the BLS. Banks feel similarly in other EU Member States, although expectations of a decline in demand have slightly diminished here and there. In the second half of 2022 several banks reported in the BLS that they had tightened credit standards for housing loans, as in the euro area overall (see Figure 2.5 right).

Growth in housing loans slowed, but remained among the highest rates in the euro area. Year-on-year growth in housing loans peaked in June of last year before slowing by 2 percentage points to 9.9% in December, having remained moderate at around 5% between 2012 and mid-2021. The stock of housing loans amounted to EUR 8.2 billion in December 2022. Growth in housing loans averaged 4.6% across the euro area in December 2022 (see Figure 2.5 left). The ratio of housing loans to GDP in the second half of 2022 (14.2%) was still well below the euro area average (40.0%). The Slovenian banking system is thus less exposed to the risks inherent in the real estate market than those of many other euro area countries. In addition more than 60% of the stock of housing loans carry a fixed interest rate, and are not subject to interest rate rises. Household indebtedness also remains low.

Figure 2.5: **Comparison of growth in housing loans and credit standards between Slovenia and the euro area**



Sources: ECB SDW, Banka Slovenije

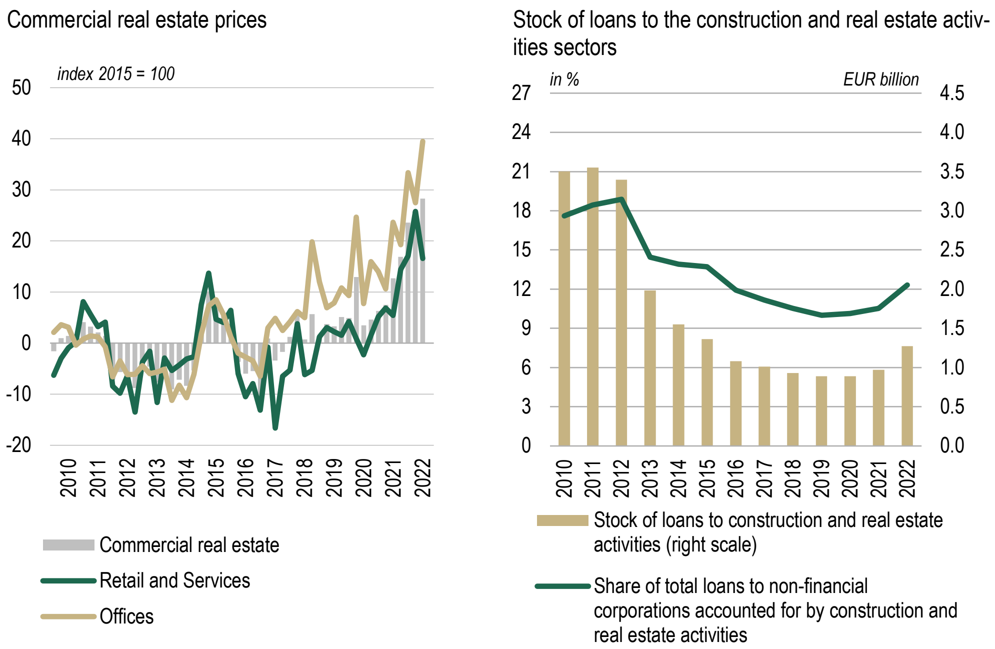
Commercial real estate market

Prices on the commercial real estate market have risen significantly over the last year and a half, but the number of sales has been down in year-on-year terms since the second quarter of last year. Commercial real estate prices in the final quarter of 2022 were up 32.9% on 2015 (see Figure 2.6 left), and the year-on-year rate of growth of around 16% was the highest figure since 2008. The commercial real estate market is small, for which reason volatility in prices and volume is common, but the price growth in 2022 was historically high. Growth in prices might slow in the future amid the monetary policy tightening and uncertainty in the international and domestic economic environments. The fall in the number of sales of office space and retail and catering establishments might already be an indication of this. The number of sales in the second half of 2022 was down 21.7% in year-on-year terms, while sales were down a third in year-on-year terms in terms of value.

The banking system's exposure to construction and real estate activities increased in 2022, but remains significantly lower than a decade ago. The stock of loans to NFCs in these two sectors amounted to EUR 1.3 billion at the end of 2022 (compared with EUR 3.5 billion in 2011), and the share of total loans to NFCsthat they account for had increased to 12.3% by the end of 2022 (compared with 18.9% in 2012) (see Figure 2.6 right). The ratio of loans to construction and real estate activities to common equity Tier 1 capital in Slovenia stood at 35.2% in the second quarter of 2022, well below the euro area average of 114.9%.

NFCs' debt financing costs are increasing as interest rates rise. In the survey of business trends in construction in December 2022, firms did not cite high financial costs or any difficulties in obtaining loans (only 6% of construction firms cited these as limiting factors). Firms have seen their debt repayment capacity improve strongly over the last decade, thereby increasing their resilience to a rise in interest rates and increased debt servicing costs. The ratio of net financial debt to EBITDA, which shows how many years of cashflow firms need to repay their debt and interest, declined from 5.2 years in 2009 to 2 years in 2021. Indebtedness also remains well down on a decade ago, but is highest in construction and real estate activities (the debt-to-equity ratios stood at 147.5% and 124.2% respectively in 2021, down from 435% and 260% in 2008). The share of firms that will be hit relatively hard by a rise in interest rates is nevertheless relatively large: variable-rate loans account for 76% of the stock of loans to NFC.

Figure 2.6: **Commercial real estate prices and stock of loans to the construction and real estate activities sectors**



Sources: SORS, Banka Slovenije

The majority of loans to NFCs for commercial real estate carry a variable interest rate, and a rise in interest rates will therefore burden these firms with higher debt financing costs than before. The stock of loans to NFCs for commercial real estate increased in 2022 to end the year at EUR 427.9 million, still down on the beginning of 2011 (EUR 1 billion). The share of total loans to NFCs accounted for by these loans is low andhad risen to 4.1% by December 2022 (see Figure 7.4 right in the appendix). A rise in interest rates will lead to a significant increase in debt financing costs, given that 94% of these loans carried a variable interest rate in December 2022. Some 62.3% of loans for commercial real estate had a maturity of less than five years in December 2022.

While the risk inherent in the commercial real estate market is elevated in the euro area overall, there is no such elevated risk in Slovenia, although around 40% of total loans to NFCs are secured by commercial real estate. A relatively large share of total loans to NFCs are secured by commercial real estate (defined as commercial or residential real estate, office space and commercial facilities). The mean LTV was around 50% in December 2022. Loans with an LTV of more than 80% nevertheless accounted for around 45% of the total loan value. The banks approve loans to NFCs based on their credit rating, and receive also other forms of collateral. Should commercial real estate prices fall, the value of collateral of this type would also fall, and the banks would take losses from the creation of additional impairments and possible write-offs. The banks’ resilience is good in terms of their solvency and liquidity position.

2.2 Funding risk

Funding risk remains moderate with a trend of no change in the future. The relatively large maturity gap widened further in 2022 as a result of increases in long-term loans and sight deposits. Deposits by the non-banking sector have remained stable for now, and are the Slovenian banking system's most important source of funding, despite the difficulties at one of the banks in Slovenia at the outbreak of the war in Ukraine, and the high inflation, which amid minimal interest rates is reducing the value of savings and could lead to the partial withdrawal of deposits from the banking system into higher-yielding assets. Larger differences in interest rates on deposits within the banking system, which for now remain below the euro area average, might in the future encourage savers to switch their savings between Slovenian banks. Diligently monitoring competition in the sector and adjustments to interest rate policy will therefore remain vital to the future stability of bank funding.

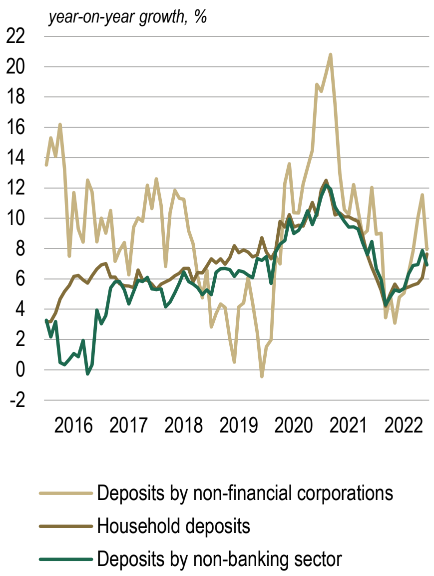
Bank funding

Deposits by the non-banking sector increased sharply in 2022 as a result of a pronounced inflow of household deposits in the spring and corporate deposits in the second half of the year. The stock of deposits by the non-banking sector increased by 6.9% (see Figure 2.7 right) or EUR 2.6 billion, taking their ratio to the balance sheet total to 78.6%. With the increase in deposits being outpaced by the increase in loans to the non-banking sector, after several years of decline the LTD ratio increased in 2022 to 69.3%, but nevertheless remains lower than the euro area average (90.0%).

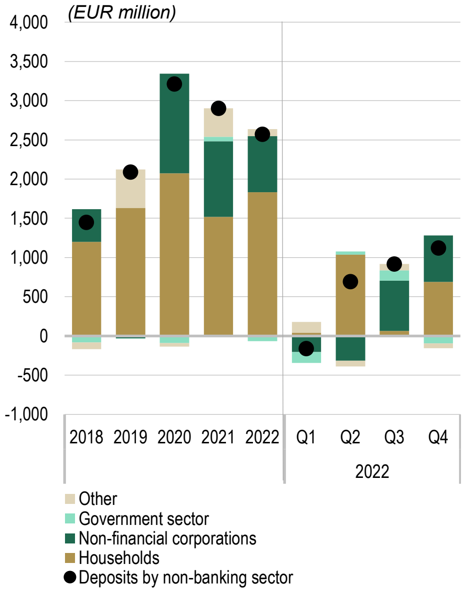
The banking system's dependence on other sources of funding remained low. Most likely on account of the change in remuneration terms, the majority of Slovenian banks made early repayments in part or in full of their liabilities to the Eurosystem, which amounted to just 1.5% of the balance sheet total at the end of 2022. Thanks to the high inflow of deposits by the non-banking sector and the large holdings of liquid assets that could be directed into lending, there was no major demand for borrowing on the wholesale markets from the banks. They thereby remained less exposed to potential contagion from foreign financial markets. Debt securities were issued by just two banks, for the purpose of meeting the minimum requirement for own funds and eligible liabilities (MREL), which might also drive additional issuance in the future.

Figure 2.7: **Deposits by institutional sector**

Growth in deposits by institutional sector



Change in stock of deposits by institutional sector



Source: Banka Slovenije

Household deposits strengthened sharply in 2022, similarly to the two previous years, primarily as a result of pronounced inflows in individual months. These were seen in the spring and, as is seasonally typical, at the end of the year, while the stock of household deposits actually declined slightly between August and October. A withdrawal of deposits also occurred as a result of the difficulties at one of the banks in Slovenia following the outbreak of the war in Ukraine, which did not cause any instability in the banking system, thanks to quick and effective resolution. Despite the aforementioned outflows, the stock of household deposits increased by EUR 1.8 billion overall in 2022 (see Figure 2.7 left) to EUR 25.8 billion, equivalent to 51% of the balance sheet total, which ranks Slovenia number one among all euro area countries in terms of the importance of this funding to the banking system. While year-on-year growth in household deposits slowed in the majority of countries, Slovenia's rate of 7.6% was higher than a year earlier and also outpaced the euro area average (3.3%).[12]

Moderate growth in household deposits can be expected in the future. The rise in inflation, which outpaced year-on-year growth in the average gross wage, also reduced household disposable income, and with it the ability to save. Although high inflation is reducing the value of savings, savers will likely remain less inclined to move larger amount of their savings into higher-yielding, higher-risk assets classes (e.g. securities, mutual funds).

After contracting in the first half of 2022, deposits by non-financial corporations (NFCs) strengthened continuously over the rest of the year. During the relatively fast economic recovery after the pandemic, NFCs directed their assets held in bank accounts into rising investment and a build-up of inventories of production raw materials, but in the wake of the renewed cooling of the economy and the rising operating costs in the second half of the last year they became more cautious in spending their savings. The withdrawal of custody fees for corporate accounts might also have been a factor in the increase in bank deposits in the second half of the year. Deposits by NFCs increased by EUR 712 million in 2022 to reach EUR 9.7 billion at year-end. After slowing for more than a year, the year-on-year rate of growth strengthened from June

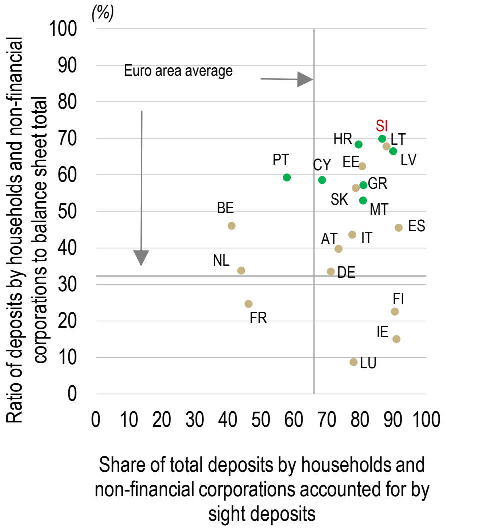
[12] The figure of the euro area average is on a consolidated basis.

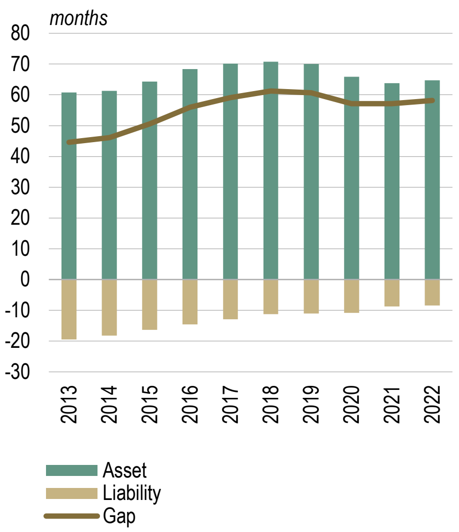
to reach 7.9% in December, but did not exceed the figure from a year earlier. It nevertheless remained higher than the euro area average, which slowed to 4.6% last year.

Deposit maturity and maturity gap between assets and liabilities

With deposit interest rates low, savers remained disinclined to fix deposits, and thus mainly increased their sight deposits, similarly to previous years. The share of total deposits by the non-banking sector accounted for by sight deposits increased to 83.7%, primarily as a result of an increase in the figure for household deposits (to 89.1%), while the figure for deposits by NFCs declined slightly but remained high (82.4%). In terms of the share of sight deposits in the household and NFCs segments, Slovenia ranks first among the euro area countries (see Figure 2.8 left). The high dependence on this source exposes Slovenia to a greater risk of funding instability in the event of large-scale withdrawals than those countries where the share of funding accounted for by sight deposits is lower.

Figure 2.8: **Deposit ratios in euro area countries, and maturity gap**





Note: The left chart features data on a consolidated basis. The green points denote countries where the share of total deposits by households and NFCs accounted for by sight deposits increased in 2022, while the brown points denote countries where the share declined.
Sources: Banka Slovenije, ECB SDW, own calculations

The risk of instability in the banking system originating in the relatively large maturity gap between assets and liabilities increased. In the wake of the increase in long-term loans and the decline in liquid assets held in accounts at the central bank, the weighted average maturity of assets increased in 2022 after three years of decline. At the same time the increase in sight deposits saw a decrease in the weighted average maturity of liabilities. This widened the maturity gap by 1 month to 4.6 years, up 15 months on 2013, when the sharp increase in sight deposits began. The risk inherent in the maturity mismatch could be realised in the event of large-scale switching of deposits between banks or a withdrawal of deposits from the banking system. It is nevertheless our assessment that savers' confidence in the functioning of the banking system remains high, and deposits by the non-banking sector are thus a stable source of funding;

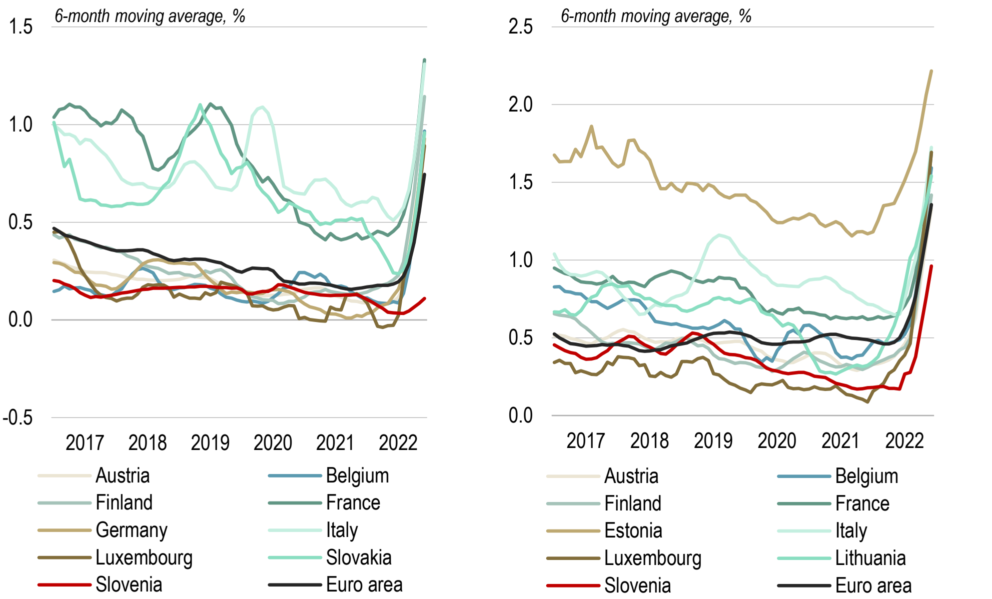
even during the pandemic, and during the temporary difficulties at one of the banks in Slovenia at the outbreak of the war in Ukraine, there was no funding instability. One driver of larger switching of deposits between banks, in particular banks in Slovenia, might be wider differences in deposit interest rates in the future, for which reason diligently monitoring competition in the sector and adjustments to interest rate policy will remain vital to funding stability at Slovenian banks.

Rising deposit interest rates could gradually slow the trend of increase in sight deposits, but for now the rise in interest rates in Slovenia is slower than in other euro area countries. Interest rates on short-term and long-term deposits by households and NFCs remained low in Slovenia at the end of 2022, and below the euro area averages (see Figure 2.9). The rise in interest rates made it more expensive to borrow on wholesale markets and within the Eurosystem, which encouraged banks to attract deposits by the non-banking sector by raising deposit interest rates, particularly in countries where the banking system is more highly dependent on the aforementioned costlier funding. As a result of their extremely low initial interest rates, deposits still constitute a very favourable source of funding in cost terms, despite the gradual rise. Given their large holdings of liquid assets and deposits by the non-banking sector, for now Slovenian banks have no need for additional funding, and are therefore keeping their interest expenses low by raising deposit interest rates relatively slowly.

Figure 2.9: **Interest rates in euro area countries**

Interest rates on new household deposits of up to 1 year in euro area countries

Interest rates on new household deposits of more than 1 year in euro area countries



Note: The countries illustrated alongside Slovenia in the charts are those that recorded the largest increases in interest rates on new household deposits in 2022. The data in the left chart does not include sight deposits.
Sources: ECB SDW, own calculations

2.3 Interest rate risk

The banks' exposure to interest rate risk increased slightly in the second half of 2022, and while the risk assessment remained elevated, the outlook is no longer for a further increase. Amid slowing credit growth, the banks increased their stock of loans to the non-banking sector, but the increase in holdings of the most liquid assets was even larger. The continuation of lending predominantly via

fixed-rate loans slightly lengthened the average repricing period for assets. On the funding side there was a significant increase in liabilities to the non-banking sector, but the structure of funding was broadly unchanged. The average repricing period for liabilities thus remained unchanged. The repricing gap thus widened slightly, thereby moderately increasing the banks' exposure to interest rate risk, which had already been identified as elevated in the first half of last year. Interest rates on new loans to the non-banking sector rose significantly in the second half of 2022, while the high liquidity in the system meant that interest rates on new fixed-term deposits rose only to a lesser extent, while interest rates on sight deposits mostly remained at zero.

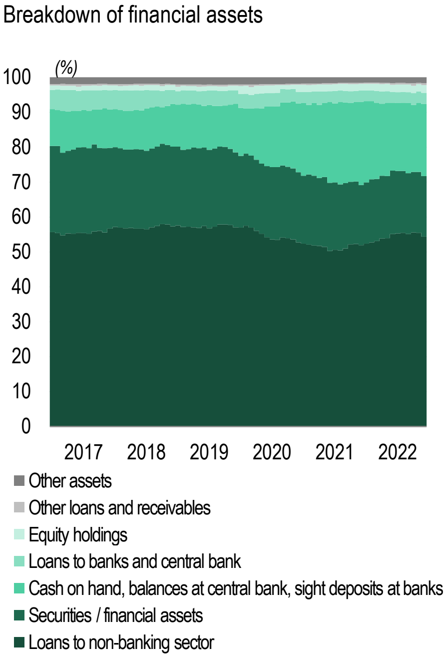
Interest sensitivity and fixed-rate loans

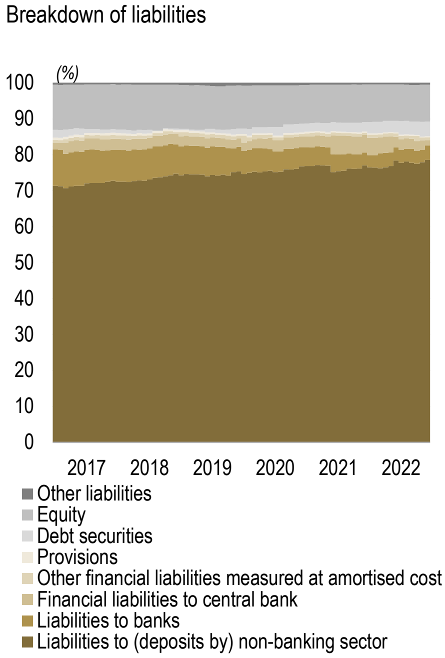
The banks' exposure to interest rate risk increased slightly in the second half of 2022 as the share of fixed-rate loans increased, and interest rate risk continues to be assessed as elevated. Even as their share of total assets declined slightly to 54% in the second half of last year, the stock of loans to the non-banking sector increased by EUR 1.0 billion (see Figure 2.10 left), driven by new fixed-rate loans, similarly to the first half of the year. Holdings of the most liquid assets[13] increased significantly by EUR 1.1 billion, pushing their share of total assets up to 21% at year-end. While the stock of securities holdings and their share of total assets were unchanged at the end of last year (the latter at 17%), the trend of change in their structure with regard to the type of accounting disclosure and reporting in accordance with the IFRS continued. The banks' exposure to securities measured at fair value through other comprehensive income further declined from the middle of last year, while their exposure to debt securities measured at amortised cost increased.[14] This reduced the share of securities for which the banks need to recognise revaluation effects in their financial statements, which are negative amid rising interest rates, and thus reduced any resulting negative effects on equity. The average repricing period for assets lengthened only slightly (see Figure 2.11 left), as the impact of the further lengthening of the average repricing period for loans was mostly neutralised by the increase in the holdings of the most liquid assets and the shortening of their average repricing period.

[13] Cash on hand, balances at the central bank and sight deposits at banks.

[14] The share of securities measured at fair value through other comprehensive income had declined to 42% by December 2022 (down from 50% in June 2022), while the share of debt securities measured at amortised cost had increased to 56% (up from 48% in June). The remainder consists of securities measured at fair value through profit or loss.

Figure 2.10: **Breakdown of banking system's balance sheet**



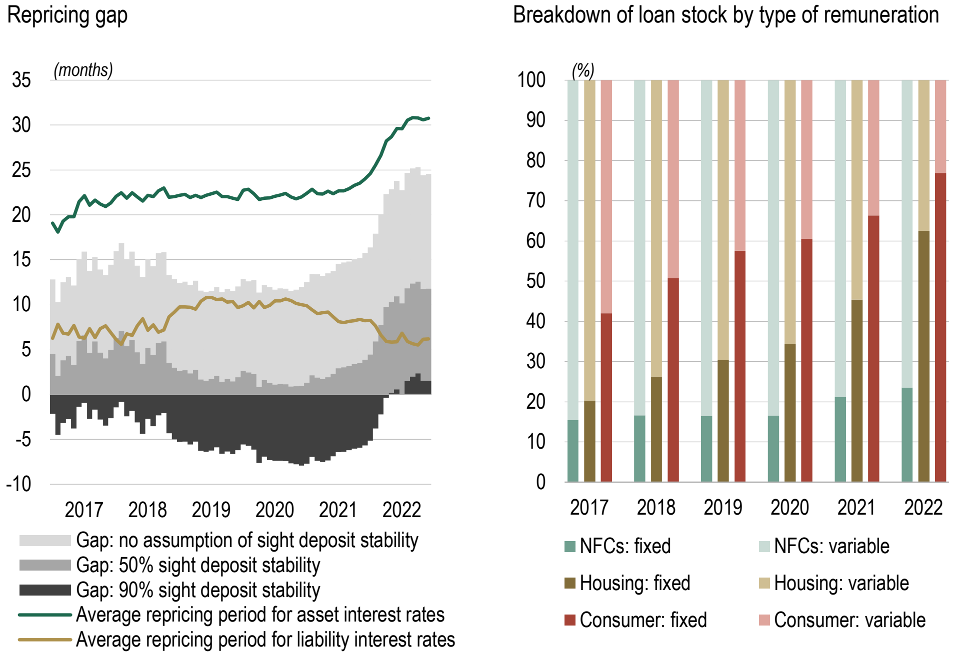


Note: CB: central bank
Source: Banka Slovenije

Liabilities to the non-banking sector increased significantly in the second half of 2022, as the share of sight deposits remained unchanged, and liabilities to the central bank declined further. Deposits by the non-banking sector increased by EUR 2.0 billion in the second half of the year, and in December 2022 accounted for 79% of the banking system's total liabilities (see Figure 2.10 right). The stock of sight deposits further increased, maintaining the share of total deposits by the non-banking sector that they account for at 84%. The share of short-term deposits increased slightly amid rising interest rates, while the share of long-term deposits further declined.[15] The banks reduced their liabilities to the central bank in the second half of the year, and increased their holdings of issued debt securities by a similar amount. There was no significant change in funding structure over the second half of 2022, and the average repricing period for liabilities remained unchanged (see Figure 2.11). The repricing gap widened slightly, thereby increasing the banks' exposure to interest rate risk to a small extent, and the risk remained elevated.

[15] Short-term deposits are deposits with a maturity of up to one year, while long-term deposits are those with a maturity of more than one year.

Figure 2.11: **Repricing gap and breakdown of loans by remuneration**



Note: The repricing gap in the left chart takes account of the stability of sight deposits through various assumptions about stability and by allocating the core component of sight deposits across maturity buckets, and hedging via derivatives.
Source: Banka Slovenije

Amid a slowdown in lending activity, the share of loan stock accounted for by fixed-rate loans increased in the second half of 2022. Fixed-rate loans continued to prevail in the household loans portfolio, where more than 90% of all new loans carried a fixed interest rate. The share of housing loan stock accounted for by fixed-rate loans had increased to 62% by December 2022 (up from 55% in June; see Figure 2.11 right), while the figure for consumer loan stock was 77% (up from 71% in June). While the share of new loans to NFCs accounted for by fixed-rate loans declined in the second half of the year, the trend of increase in their share of loan stock also reversed. The figure had declined to 24% by year-end (down from 26% in June).

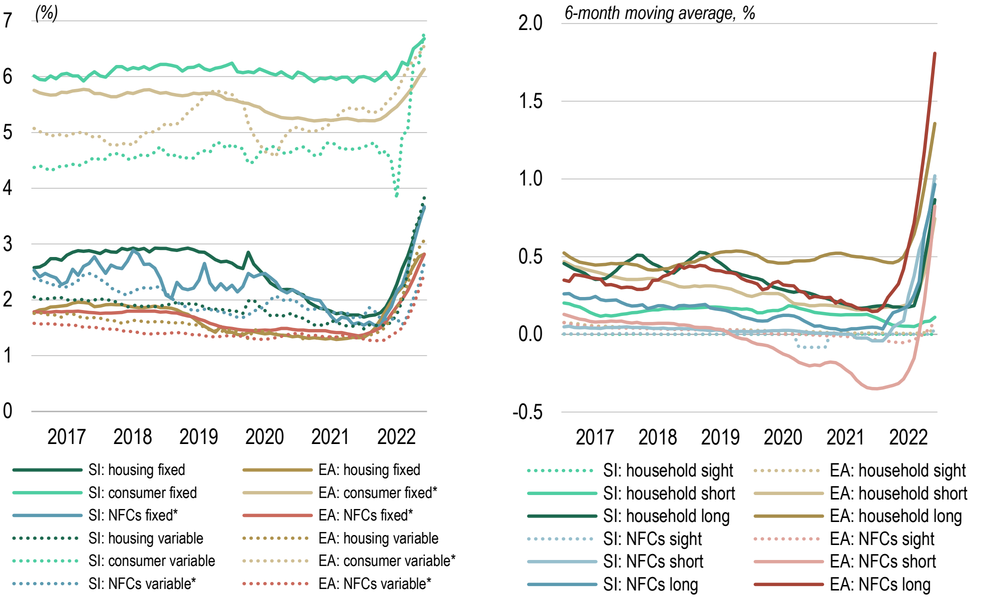
Interest rates

Interest rates on new loans to the non-banking sector rose significantly in the second half of 2022. They began to rise in the first half of the year from their record low levels, slightly later than in the euro area overall, and the trend of increase continued in the second half of the year (see Figure 2.12 left). The financing conditions for the non-banking sector had deteriorated significantly by the end of the year compared with the previous few years, but in the persistently high inflation real interest rates remain negative. Average interest rates on household loans rose significantly, and variable rates had surpassed fixed rates by December in the wake of a rapid rise. The average fixed and variable interest rates on new housing loans stood at 3.7% and 3.8% respectively in December (up from 2.1% and 1.6% in June), while the respective figures for consumer loans were 6.7% and 6.8% (up from 6.0% and 4.5% in June). Interest rates on new loans to NFCs also rose, with variable-rate loans prevailing. The average fixed and variable interest rates on new loans to NFCs stood at 4.2% and 3.7% respectively in December (up from 2.3% and 1.6% in June).

Figure 2.12: **Interest rates**

Average contractual interest rates on new loans to households and NFCs by type of remuneration, comparison with euro area

Average interest rates on new deposits by households and NFCs by maturity, comparison with euro area



Note: In the left chart variable-rate loans comprise loans concluded with a variable interest rate (tied to the EURIBOR) or with an interest rate fixed for less than one year (even if it is fixed for the entire term to maturity), while fixed-rate loans comprise loans with an interest rate fixed for a period of more than one year. The asterisk (*) in the key denotes series illustrated as six-month moving averages.
Sources: Banka Slovenije, ECB SDW

Interest rates on new deposits by the non-banking sector rose slightly in the second half of 2022, but interest rates on sight deposits mostly remained at zero. The most evident rises were in interest rates on long-term deposits, and with NFCs on short-term deposits as well (see Figure 2.12 right).[16] Interest rates on deposits are rising faster in countries with less surplus liquidity and greater dependence on more ex-

[16] The average interest rates on new long-term household deposits had reached 1.4% by December 2022 (up from 0.2% in June). Interest rates on short-term deposits had reached 0.2% by December (up from zero in June). Interest rates on sight deposits remained at zero. Interest rates on long-term deposits by NFCs had risen to 1.1% by year-end (up from 0.1% in June). Interest rates on short-term deposits had risen to 1.3% by December (up from zero in June), while interest rates on sight deposits stood at 0.2% (up from zero in June).

pensive wholesale funding. In the future this could potentially be reflected in the Slovenian banking system via higher interest rates at subsidiaries and branches of banks in the aforementioned countries.

Box 1**: Legislative changes in the area of interest rate risk in the banking book**

Three regulatory products were published on the EBA website in October 2022 to build on the legislative changes brought by the CRD in the part relating to interest rate risk in the banking book (IRRBB), namely the Guidelines on the management of IRRBB and two regulatory technical standards (RTS on supervisory outlier tests and RTS on standardised methodologies on IRRBB). The purpose of the aforementioned changes is to harmonise the calculation of IRRBB when internal systems for measuring it are not satisfactory, and to improve the identification of institutions that are excessively exposed to IRRBB.

All three products largely maintain continuity of content with the current guidelines from 2018. The general requirements with regard to the management body's responsibility for understanding the nature and level of the IRRBB exposure, the implications of the IRRBB appetite, and decisions with regard to hedging against interest rate risk are retained. The requirements for internal controls are also retained, whereby the purpose is to determine compliance with policies and the processes designed to manage IRRBB, as is the requirement for regular evaluation of the impact of behavioural and model assumptions in the assessment of IRRBB. The reporting requirements in connection with the results of supervisory outlier tests, which banks report to the competent authorities once a year or whenever the thresholds are exceeded, are also retained. The requirements in connection with the content and frequency of internal reporting intended for the management body are unchanged, as are the requirements with regard to the management of models for measuring IRRBB.

By introducing a standardised methodology as an alternative to internal systems, and an additional supervisory outlier test, which measures interest sensitivity via the impact on net interest income, the **EBA products add new elements that will harmonise the calculation of IRRBB**, and will enable the identification of excessive exposure to interest rate risk at banks whose performance is significantly sensitive to changes in net interest income and to changes in the fair value of interest-sensitive items. The option of using a simplified standardised methodology, which was formulated for small and non-complex banks, upholds the principle of proportionality, albeit at the discretion of the competent authority, which can require the use of the standardised methodology where it considers that the simplified standardised methodology is not adequate to capture IRRBB.

Banks can decide on the use of the standardised methodology themselves, or its use can be required by competent authorities on the basis of an assessment that the internal systems developed by the banks themselves are not satisfactory. For the purposes of standardisation, the Guidelines on the management of IRRBB include sample descriptions of unsatisfactory internal systems, whose deficiencies include incomplete capture of various sub-types of interest rate risk, a deficient toolkit of methods for measuring IRRBB, and the absence of testing of key model assumptions.

Another significant novelty is the aforementioned supervisory outlier test from the perspective of net interest income. The competent authority's attention is expected when the decline in net interest income is greater than 2.5% of the bank's Tier 1 capital. The rules for modelling deposits that have no contractually determined maturity are also set out in greater detail.

Box 2: **Simulation of the impact of rising interest rates in increasing firms' expenses from loan borrowings, and transmission into firms' financial statements**

This box examines the impact of a rise in interest rates from firms' perspective, and simulates the impact of the rise on corporate performance in 2022. The assumption is that the entire rise in interest rates in 2022 occurred at the beginning of the year, or on the day of the next change in interest rates, and not gradually, when the interest rates were actually raised. A weighted rise in the Euribor of 2.9 percentage points is assumed in 2022. The impact of the rise in interest rates was computed with regard to an interest-sensitive portfolio[17] of loans in the form of on-balance-sheet performing exposures according to the EBA definition as at the end of 2021 in the amount of EUR 7.3 billion.[18] The impact was computed at the level of individual contracts, taking account of the amortisation type, the repricing date, maturity, the frequency of repayments and the effect of interest rate swaps (IRSs[19]).

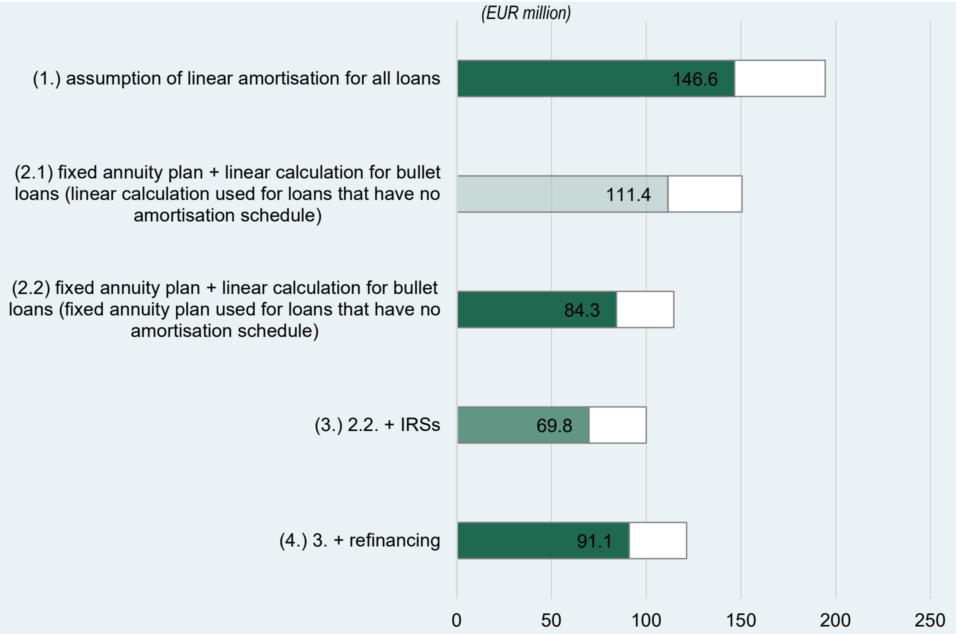
Under the above assumption of an immediate rise in interest rates, the overall impact on the existing portfolio in 2022 was estimated at approximately EUR 70 million. Adding in the refinancing of short-term loans maturing in 2022, the estimate needs to be raised by approximately EUR 21 million, making a total of EUR 91 million (see Figure 2.13). If the favourable impact of the repricing period is excluded from the basic calculation, approximately EUR 30 million would have to be added to the estimated impact, which is illustrated in the colourless section of the bars. Taking all of the aforementioned effects into account, firms' expenses from loan borrowings are estimated to increase by EUR 121 million on an annual basis. The actual impact in 2022 is considerably smaller, as interest rates only began to rise in the second half of the year. It should be noted that the mitigation effects of IRSs amount to approximately EUR 15 million.

[17] Interest-sensitive loans were defined as loans with a variable interest rate irrespective of their maturity, and short-term loans with a fixed interest rate maturing in 2022. Short-term maturing loans are included from the perspective of the refinancing of existing loans, as it is assumed that these are loans that are mostly being renewed. These are actually a large number of revolving loans and credit facilities.

[18] After the aforementioned restrictions are taken into account, the portfolio declines significantly relative to the initial portfolio of classified claims against NFCs in the amount of EUR 15.2 billion. After restricting it to on-balance-sheet credit exposures, it declines to EUR 9.2 billion. It then declines by approximately EUR 0.3 billion when the portfolio is restricted to performing exposures, and the remainder of the decline is a consequence of the restriction to the interest-sensitive portfolio.

[19] The analysis considers the perspective of firms hedging against rises in interest rates, while taking account of additional restrictions and assumptions that arise from data limitations and the fact that IRSs are not necessarily concluded to hedge a precisely determined loan under the same amortisation schedule and not necessarily at the same bank.

Figure 2.13:
Decomposition of the simulation of the impact of rising interest rates in increasing firms' expenses from loan borrowings



Note: The assumption in the calculation of all effects was that the interest rate rise occurs immediately at the beginning of the year, which means that the actual impact in 2022 is overstated. The repricing date is taken into account. The colourless section of the bars represents an estimate of the effects of excluding the favourable impact of interest rate reprice period. Approximately EUR 3.3 billion of portfolio has no type of amortisation schedule reported, or is classed as "other". The assumption for this part is that repayment is made according to a fixed annuity amortisation schedule. The light green illustrates the effect of applying a different assumption with regard to the calculation of the amortisation schedule (linear calculation instead of annuity). In this case the effect would be EUR 27 million larger.
Sources: Banka Slovenije, own calculations

The next step is to examine the transmission of the estimated additional expenses from loan borrowings caused by the rise in interest rates into firms' financial statements, where the analysis focuses on the portfolio of EUR 8.9 billion of on-balance-sheet exposures to non-defaulters that have filed financial statements as at 31 December 2021. The year-long impact of the rise in interest rates in the amount of EUR 121 million is taken into account. The focus is on segments where at-risk firms are identified as those whose cashflow or current assets become negative after the deduction of the additional expenses from loan borrowings caused by the rise in interest rates. This box examines cashflow according to the definition of EBITDA, to which financial and other income and expenses are added, but not write-downs and taxes.[20]

The banking system's exposure to the most at-risk firms and sectors as defined above amounts to EUR 58 million. This does not take into account loans for the purpose of investment in fixed assets.[21] These exposures accounted for approximately 0.6% of the total on-balance-sheet exposure to NFCs as at the end of 2021.

The impact on liquidity is our next point of interest.[22] Here the assumption is that firms are in difficulty when current assets do not suffice to cover the additional expenses caused by the rise in interest rates. On-balance-sheet exposure to firms identified as

[20] The analysed portfolio is further reduced fractionally, as firms that already had negative cashflow as at 31 December 2021 are excluded.

[21] These loans are excluded, as for example construction investors do not have actual operating revenues during the period of construction of the firm's real estate, and thus immediately cross the threshold of negative cashflow. The Slovenian Accounting Standards allow costs during the construction phase to be recognised under inventories. The effect is overstated, as banks do not only report the purpose of construction under this item. The effect also depends on how the firm applies the standards, and whether the real estate is still under construction, or whether it was already in use on the date that the analysis was drawn up and the loan is still being repaid. Figure 7.6 illustrates the at-risk exposures by sector from the perspective of cashflow analysis. Our focus is the dark green columns and the light gold dots, as these are restricted solely to loans not for the purpose of investment in fixed assets.

[22] Loans for the purpose of investment in fixed assets are taken into account in this case.

such amounts to EUR 102 million, which is equivalent to around 1.1% of total on-balance-sheet exposure to NFCs.

The analysis has focused on estimating the impact of the interest rate rise on the existing NFCs portfolio at Slovenian banks. The banks' realised interest income from exposure to NFCs is not merely the sum of interest income on existing loan exposures and refinanced loans, which are the subject of this analysis, but also needs to take account of new loans and of transfers of interest-sensitive off-balance-sheet to on-balance-sheet exposures. These two aspects are not taken into account in the analysis. The analysis also excludes firms' financial liabilities to foreign banks, undertakings in the group and other undertakings. On the basis of analysis of the accounting (AJPES) data, the total financial liabilities held by firms included in this analysis are approximately EUR 20 billion, which is greater than the analysed portfolio at Slovenian banks (it needs to be borne in mind that not all of these financial liabilities are interest-sensitive). In the interpretation of the effects, there can be an expectation that firms will respond to the additional expenses caused by the rise in interest rates, and will adjust their operations and their financial statements. The final net realisation of the impact also depends on the firms' ability to pass the additional expenses through to customers via final prices, while the rising interest rates might potentially bring an increase in the firms' interest-bearing financial assets. One adverse factor might be a deterioration in the firms' performance caused by other elevated risks (e.g. the energy crisis, inflation, slower economic growth), which might lead more firms to cross the threshold of negative cashflow or current assets.

2.4 Credit risk

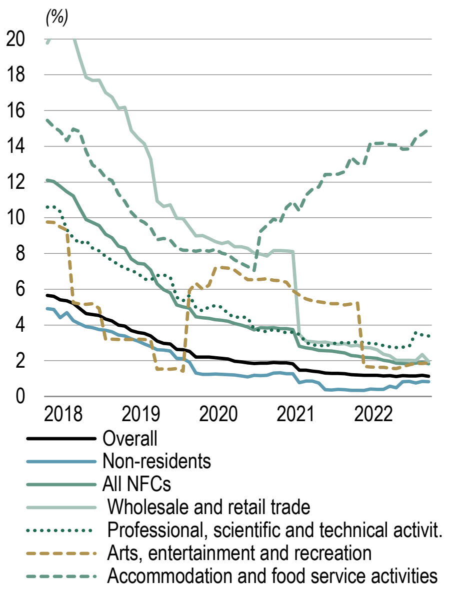
Amid the continuing uncertainty in the international environment, and the anticipated weaker economic growth in 2023, the credit risk assessment is being maintained at elevated, with a trend of no change in the future. One factor in the elevated assessment is the adverse impact of higher interest rates on debtors' debt sustainability, in the NFCs segment and the household segment alike. The indicators of asset quality remained favourable for most of 2022, but a number of small segments of the portfolio have showed signs of deterioration in recent months. NPE ratios in the sectors that were hit hardest by the pandemic rose in the final months of the year. The higher-risk portfolios include manufacturing, which is primarily dependent on slowing foreign demand, and is also more sensitive to a rise in energy prices and other costs.

NPEs at banks

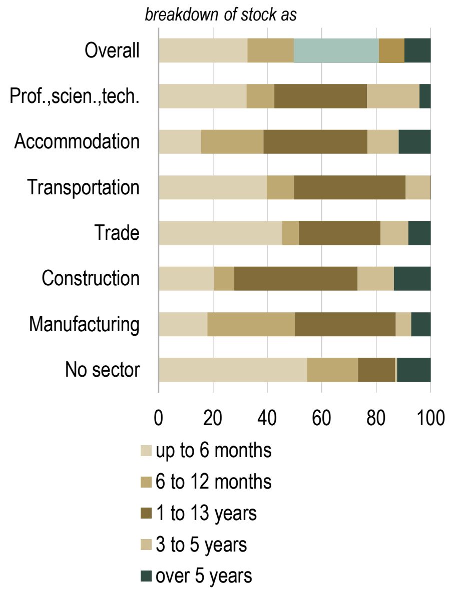
The overall NPE ratio remained at a record low of 1.1% throughout the second half of last year. The NPE ratios were low and stable in all major portfolio segments. They remained at 1.8% and 1.7% respectively in the largest customer portfolios of NFCs and households (see Figure 2.14 left).

Figure 2.14: **NPE ratios**

NPEs in selected portfolios



Breakdown of NPEs by duration of non-performing status

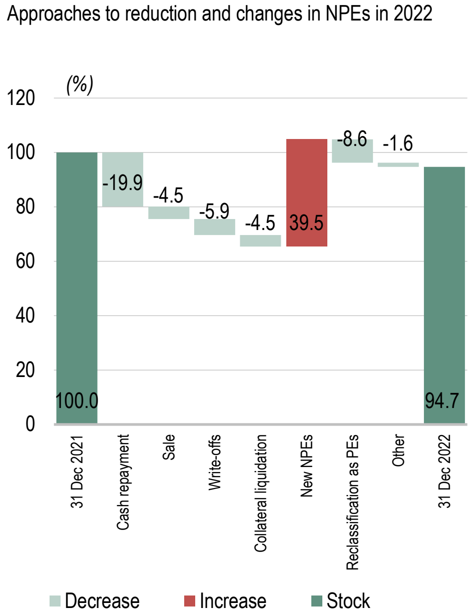


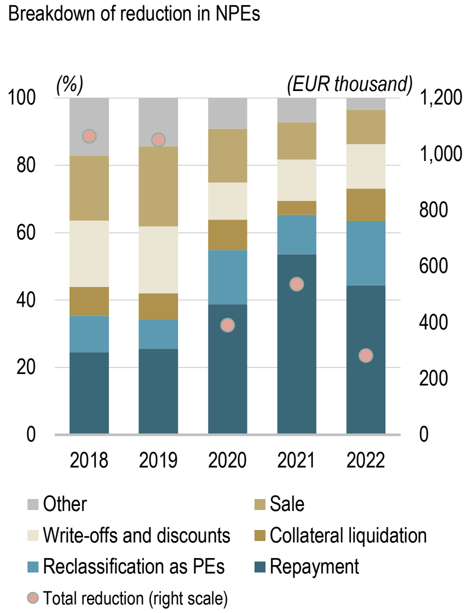
Note: The data in the right chart captures all customers for whom data is available at the contract level. Natural persons are not captured. Given these limitations, the breakdown by duration illustrates EUR 422 million of the total NPEs of EUR 628 million as at the end of 2022. The "no sector" bar denotes non-residents.
Sources: Banka Slovenije

The sectors that were hit hardest by the pandemic saw an additional deterioration in asset quality. The rise in NPEs that began during the pandemic continued in the accommodation and food service activities portfolio, where the NPE ratio had reached 14.9% by the end of 2022. The increase in 2022 was more attributable to a decline in the banks' exposure to accommodation and food service activities firms than to a change in the stock of NPEs. Two-thirds of the NPEs in the accommodation and food service activities portfolio were at firms for whom a debt repayment moratorium had been approved during the pandemic. The lack of change in the stock of NPEs indicates that accommodation and food service activities firms have not yet recovered from the two years of business restrictions during the pandemic. Asset quality also deteriorated in the final quarter of last year in the sectors of professional, scientific and technical activities and arts, entertainment and recreation, although the NPE ratios in both are significantly lower than in accommodation and food service activities. The aforementioned three sectors accounted for 41.1% of the total stock of NPEs in the NFCs portfolio at the end of 2022, compared with a figure of 17.8% before the pandemic. These sectors accounted for significantly smaller shares of the banks' total exposure to NFCs and total portfolio, at 11.7% and 3.5% respectively in December 2022.

NPEs originating during the pandemic or later are prevalent in the breakdown of NPEs by duration (see Figure 2.14 right). There has been an uninterrupted trend of decline in NPEs since 2014. NPEs originating up to and including 2014 have declined to EUR 15 million or 3.5% of the total (EUR 422 million where data on duration of non-performing status is available). Approximately a third of existing NPEs originated during the years of the largest restrictions on business during the pandemic (2020 and 2021), while half of the stock of NPEs originated in 2022, mostly in the second half of the year. According to the annual bank survey on NPEs, newly originated NPEs in 2022 amounted to almost 40% of the stock of NPEs from the end of 2021 (see Figure 2.15 left), but the stock of NPEs at the end of 2022 was smaller than at the beginning of the year as a result of the current reduction in new and old NPEs.

Figure 2.15: **Reduction in NPEs according to the bank survey**





Note: The numerals in the left chart are given relative to the initial stock of NPEs at the end of 2021. The right chart illustrates approaches to reducing NPEs excluding the increase in NPEs in the year in question (represented by the red column in the left chart).
Sources: Regular bank survey, Banka Slovenije

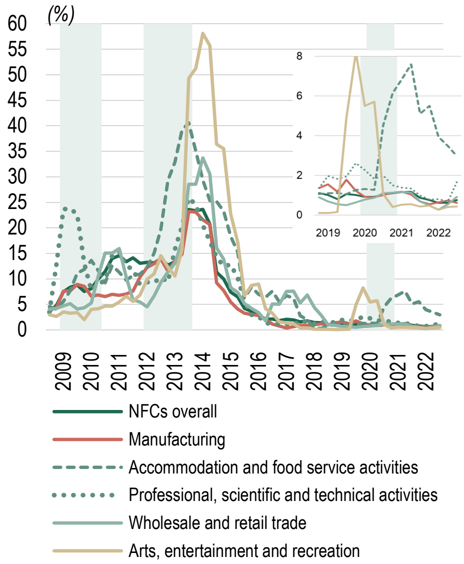
Last year's reduction in NPEs was attributable largely to the improvement in the financial position of debtors, and to a lesser extent to bank actions to reduce them. Debt repayments accounted for fully 44% of the reduction in NPEs in 2022 (see Figure 2.15 right), while reclassification as non-defaulter accounted for a further 19%. There was a sharp increase in the contribution by repayments in the NFCs portfolio in 2021 (see Figure 7.8 right in the appendix), which coincided with high economic growth during the year. The contribution by repayments also increased in the household portfolio in 2022. Reclassification as non-defaulter typically accounts for a large share of the reduction in NPEs in the household portfolio (see Figure 7.9 right in the appendix), which indicates that Slovenian households have largely overcome the period of reduced solvency. The banks nevertheless achieved a quarter of the reduction in NPEs in previous years through write-offs and sales. The year of 2020 is notable in this respect: they accounted for 36% of the total reduction in NPEs.

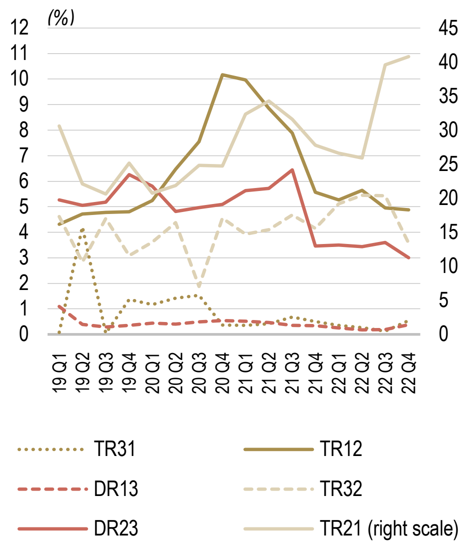
The default rates are holding at low levels, with the exception of the sectors that were most vulnerable during the pandemic. The one-year default rates in the final quarter of 2022 in the NFCs portfolio stood at 0.7%, even lower than in the pre-pandemic years (see Figure 2.16 left). The default rate remains highest in accommodation and food service activities, but it has slowed significantly since the pandemic years. Similarly to the NPE ratio, the default rate has begun to rise in recent months in professional, scientific and technical activities, and also in wholesale and retail trade. As in the majority of other sectors, the default rates in these two sectors are still low, at the level of the five-year average. There has been no discernible increase recently in the default rates in energy-intensive sectors.

Figure 2.16: **Credit parameters**

Default rate in the NFCs portfolio by sector

Transition rates between credit risk stages for NFCs





Note: The left chart illustrates the one-year exposure-weighted default rates according to Article 178 of the CRR. The green shaded areas represent periods of negative economic growth. In the right chart TR denotes transition rate between Stages 1 and 2 of credit risk in accordance with IFRS 9 or into these two stages from Stage 3, and DR denotes default rate. The unit of observation in the calculation of exposure transition rates is the commercial bank - contract - date. All exposures measured at amortised cost that existed at the beginning of the observation period and for which credit risk stages are reported are included under exposures. The last available data for the contract within the year is taken into account.
Source: Banka Slovenije

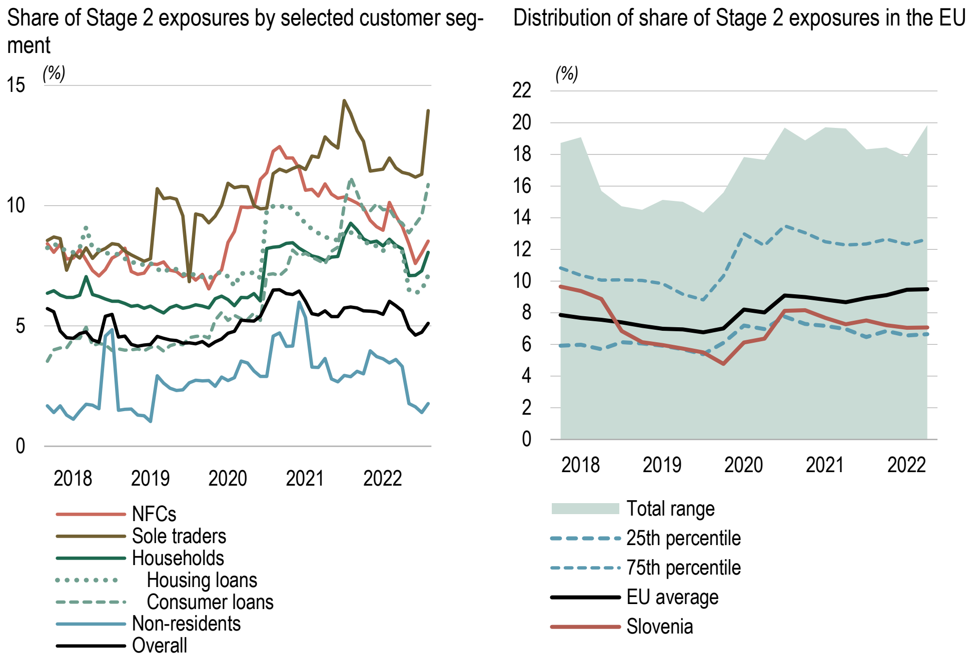
Credit risk stages

The other indicator of asset quality, the share of Stage 2 exposures, increased in all customer segments over the final two months of the year, but nevertheless remained below its level from the end of 2021 (see Figure 2.16 left). The share of Stage 2 exposures had previously fallen for most of 2022. The transition rate from Stage 1 (lowest credit risk) to Stage 2 declined significantly during the year (see Figure 2.17 right), while that in the opposite direction increased. Our assessment is that banks reclassified these exposures on account of the favourable economic environment, and were shown to have acted very conservatively in their reclassification to Stage 2 during the pandemic. In contrast to Slovenia, banks in the euro area overall began increasing the share of Stage 2 exposures in the final quarter of 2021, and had raised it by 0.7 percentage points to 9.4% by the end of 2022 (see Figure 2.17 right), while the figure for Slovenia declined by 0.3 percentage points over the same period to 5.1%.

The increased reclassification in the final months of the year is partly seasonal in nature, although it was likely also driven by the forecast cooling of economic activity amid the increased uncertainty in connection with the war in Ukraine, inflation, and the resulting increase in the debt servicing burden. Despite this increase, the share of Stage 2 exposures in all major customer segments at the end of 2022 was lower than a year earlier: it was down 1.7 percentage points at 8.5% in the NFCs portfolio, down 0.3 percentage points at 10.9% in the consumer loans portfolio, and down 1.8 percentage points at 7.1% in the housing loans portfolio.

Manufacturing is notable for the largest increase in the share of Stage 2 exposures in the final months of the year, and also for the above-average size of the figure. The share of Stage 2 exposures increased by 2.7 percentage points in the final quarter to 12.8% (see Figure 7.7 in the appendix). Multiple factors are indicative of increased credit risk in manufacturing. The confidence indicators have deteriorated recently, particularly in connection with insufficient current demand and the anticipated decline in foreign demand, which these sectors are more dependent on than other parts of the economy. These sectors saw a relatively large decline in value-added in the final quarter (6.3% in year-on-year terms), and many firms of above-average energy dependency are concentrated in the manufacturing sector. Sectors where the majority of turnover is generated on the domestic market are in a slightly better position, the outlook for demand being more favourable.

Figure 2.17: **Share of Stage 2 exposures according to IFRS 9**

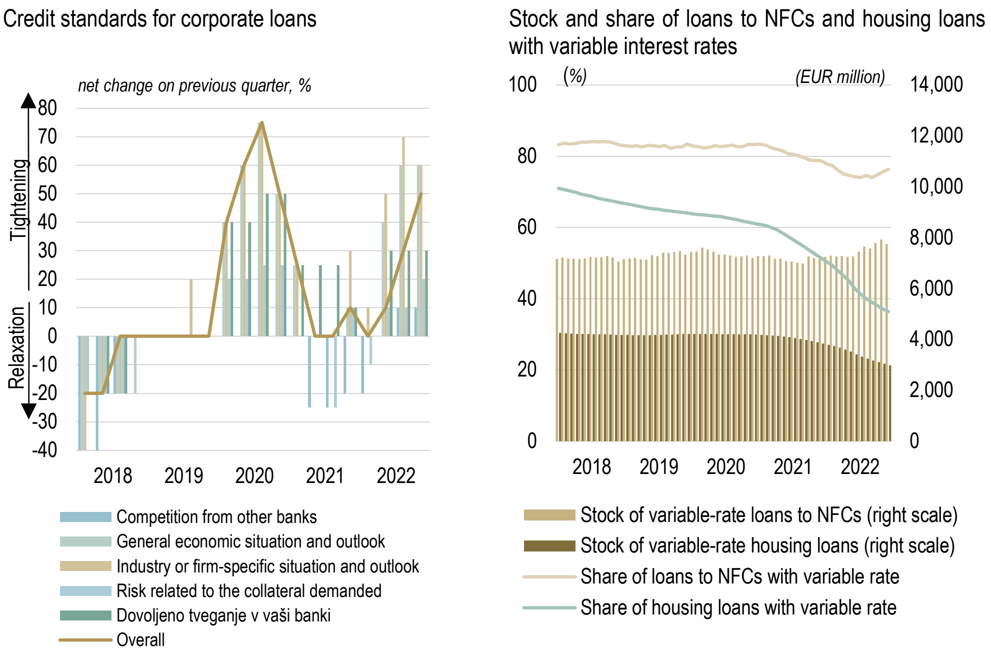


Sources: Banka Slovenije, ECB

Credit standards at banks

The banks tightened their credit standards for loans to customers in 2022. According to the BLS, the number of banks that tightened their credit standards rose over the course of the year (see Figure 2.18 left). The most important factors in the tightening of credit standards for corporate loans were the general economic situation, and also the situation and outlook in individual sectors. These factors are also cited by banks, albeit to a lesser extent, with regard to credit standards for the household portfolio, where competition from other banks is a more important factor. Loan terms are also tightening, most notably the increased margin on all types of loan, with other terms only cited to a lesser extent. A large share of banks (fully 60%) were expecting credit standards for NFCs to tighten further in the first quarter of this year, while a significantly smaller share (10%) has the same expectation for consumer loans.

Figure 2.18: **Credit standards and variable-rate loans**



Source: Banka Slovenije

The rising interest rates, together with growing costs, are a major factor in the elevated credit risk, particularly in the NFCs portfolio.[23] Three-quarters of the stock of NFCs' bank debt is tied to a variable interest rate. Interest rates on the stock of variable-rate loans to NFCs increased by 1.7 percentage points in the second half of the year, the stock having increased by 7.7% over the same period (see Figure 2.18 right). The situation is better for households: the majority of the residual debt is fixed-rate (62% in the housing loans portfolio at year-end and 77% in the consumer loans portfolio), and debt with a variable interest rate is declining rapidly. Debt servicing could nevertheless also entail a greater burden for borrowers in the household segment, not only where borrowing has been undertaken with a variable interest rate, but also in segments where earnings are not keeping pace with the rising cost of living.

Coverage by impairments and provisions

Coverage of NPEs by impairments and provisions deteriorated in the second half of the year, but remained high. From a peak of 60.2% in June, the coverage in the non-performing part of the portfolio declined over the following months to reach 56.0% at the end of 2022 (see Figure 2.19 left). The key factors in the decline in coverage over this period were the dynamics in NPEs and in the impairments in respect of exposures to Russia, Ukraine and Belarus.[24] Excluding the non-residents portfolio, coverage of the remaining portfolio stood at 59.1% in December, an increase of 3.0 percentage points on the end of 2021. Coverage of NPEs in other customer segments increased last year, and was up not only on the end of 2021, but also on the pre-pandemic level.

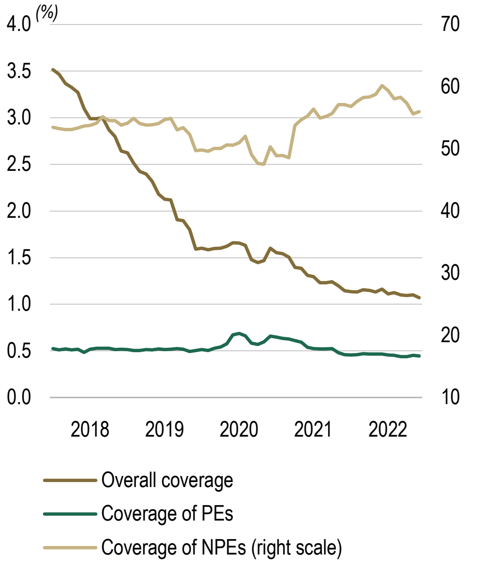
Coverage of performing exposures by impairments and provisions declined slightly further over the course of the year. The reclassification of exposures from Stage 2 to Stage 1 results in the release of the corresponding impairments, and a decline in the overall coverage ratio of performing exposures. This is particularly the case

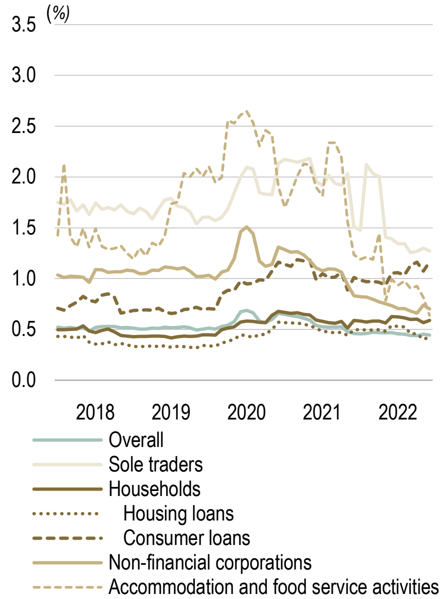
[23] The section on NFCs has more about debt sustainability, which also depends on other factors, not only the rise in interest rates.

[24] The majority of exposures to Russia, Ukraine and Belarus were reclassified as non-performing in 2022, including some with high coverage by collateral (government guarantee) and consequently lower coverage by impairments.

in accommodation and food service activities, where this year's decline in Stage 2 exposures has been most pronounced, and to a lesser extent in arts, entertainment and recreation, with similar dynamics of decline in the share of Stage 2 exposures (see Figure 2.19 right). Consumer loans are one of the rare portfolios where coverage of the performing part of the portfolio has increased since June. The coverage ratio reached 1.2% in December, thus returning to its peak of early 2021.[25] At the same time performing consumer loans have one of the highest coverage of any portfolio segment.

Figure 2.19: **Coverage by impairments and provisions**





Source: Banka Slovenije

2.5 Income risk

The assessment of income risk in the banking system was lowered to moderate in the second half of 2022, with a trend of further decline in the future. The banks generated more income last year, thanks to growth in net interest income. Developments in income categories improved considerably even in the first half of last year. Growth in net interest income began to rise rapidly in the second half of the year, and particularly in the final quarter, when the quantity effects began to be reinforced by increasing price effects from the rise in interest rates. The net interest margin also began rising fast in consequence. Amid the continuing monetary policy tightening, a strong positive impact can continue to be expected on bank income, whose increase is being driven primarily by the asset side of the balance sheet, while these effects on the liability side are small, given the high share of sight deposits and the very slow rise in interest rates on deposits of longer maturities.

[25] Data is available from Q4 2016.

Gross income and net income

The banks saw an increase in both gross income and net income in 2022. Income generation is improving as a result of the rise in net interest. After a temporary year-on-year deterioration in the second quarter (as a result of a base effect from high net non-interest income caused by one-off factors, i.e. revaluation effects from the spring of the previous year), growth in gross income improved over the following months. Last year's gross income was up 9.1% on the previous year, while net income was up 14.0%. Year-on-year growth in net income slowed last year as a result of a gradual decline in growth in net fees and commission, the impact of the large dividend income in the autumn of the previous year, and slightly higher growth in operating costs. Last year's increase in net income brought an increase in profit compared with the previous year.[26] Given the anticipated further increase in income from all forms of interest-bearing assets, even amid slightly lower growth in loans there is an expectation of an increase in income and a decline in income risk.

Net interest margin and net non-interest margin

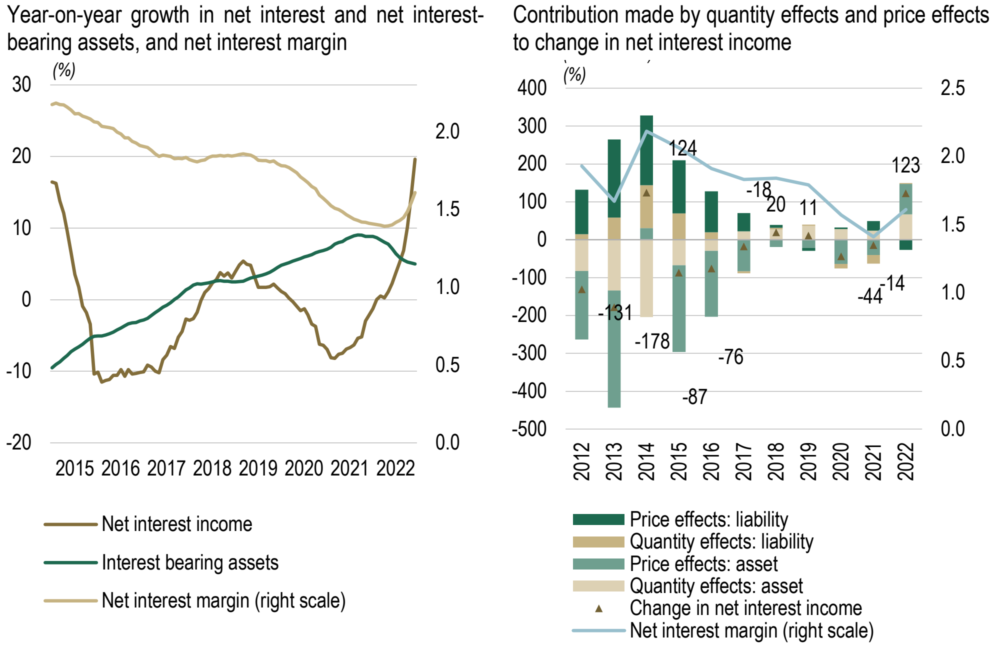
The net interest margin began to rise quickly in the second half of last year, while net interest income again became the main driver of developments in the banking system's income. Year-on-year growth in net interest income turned positive in the early part of the year, reaching 20% by the end of the year (see Figure 2.20 left). After the trend of decline in the margin had slowed in the previous year, it came to an end in the first half of last year, largely as a result of lending (quantity effects), but the increase in the margin in the second half of the year was also attributable to the rise in interest rates, i.e. increasing price effects. The net interest margin stood at 1.61% at the end of the year, with developments improving markedly in the final months of last year and the first months of this year, thanks to strongly positive price effects.[27] The increase in net interest income reflects changes on the asset side of the balance sheet: overall yield on assets rose again last year after several years of decline. On the asset side there was an increase in the share of higher-yielding loans and a decline in the share of highly liquid assets, while the share accounted for by securities holdings increased moderately but remained comparable to the previous year. The rise in interest rates also drove an increase in the rate of return on all forms of asset.

The increase in interest expenses remained small, on account of the large share of sight deposits, which are still subject to virtually zero remuneration, the very slow and restrained rise in interest rates on deposits of longer maturities, and the low share of costlier wholesale funding.

[26] See the section on profitability and solvency, which examines the differences in the amount of pre-tax profit in 2021 and 2022, which explain the changes in income and cost categories (net income) and in net impairments and provisions.

[27] The developments in the net interest margin underwent a pronounced reversal last year. For example, the net interest margin declined by 0.22 percentage points in 2020 to 1.57%, and then to 1.41% in 2021. The net interest margin calculated over the preceding 12 months hit its lowest value of recent years of 1.39% in April 2022, before it began its gradually increasing ascent, which is particularly evident as of the autumn. The net interest margin had reached 1.61% by December 2022. The quarterly developments in the annualised net interest margin show an even faster rise: the December figure exceeds 2%.

Figure 2.20: **Net interest margin and contribution made by quantity effects and price effects to increase in net interest income**



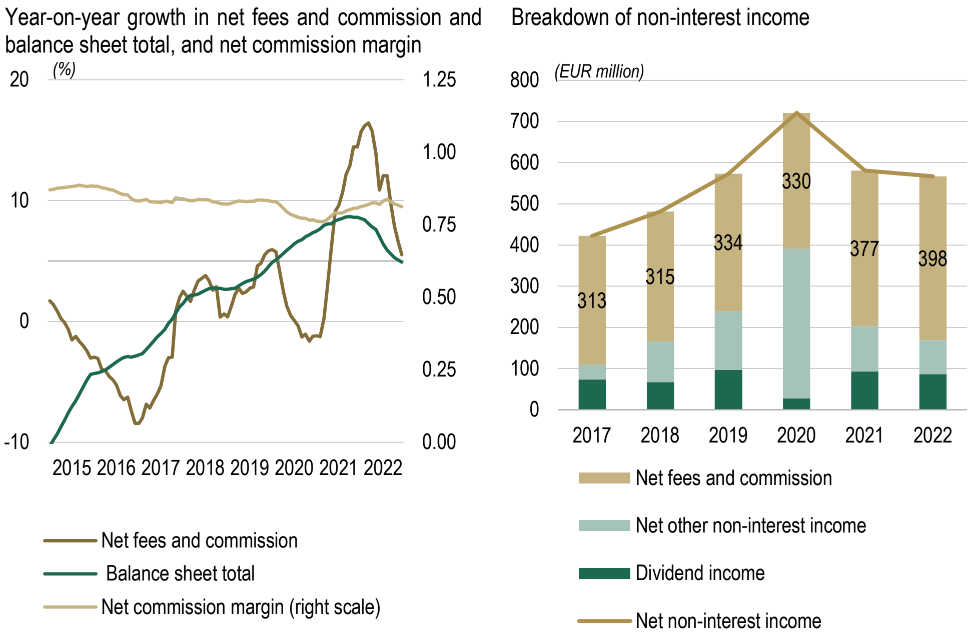
Note: In the above charts the net interest margin is calculated for a moving 12-month period.
Source: Banka Slovenije

The increase in net interest income in 2022 was almost equally attributable to quantity effects and price effects. After quantity effects had prevailed in the first half of the year, price effects gradually rose in importance over the second half of the year, where both were mainly driven by the asset side of the balance sheet (see Figure 2.20 right). The quantity effects from loans were significantly larger than in the previous year, while the price effects from loans made a significantly smaller contribution to the increase in net interest when viewed over the whole year. The largest increase in price effects that prevailed over the corresponding quantity effects on the asset side of the balance sheet was recorded by interest income from the most liquid assets, particularly the deposit facility at the ECB, and to a lesser extent assets at banks. Just over a third of the increase in interest income was driven by this source. The dominant factor on the liability side was negative price effects in all three main types of bank funding, which last year did not significantly drive up interest expenses and thus drive down net interest (wholesale funding, ECB funding, deposits by the non-banking sector).

The growth in net interest income in the final quarter of last year and in the early part of this year was attributable to extremely favourable price effects. The monetary policy tightening and the rise in the general level of interest rates are being reflected in extremely high growth in net interest income. While last year it was the increase in lending activity that first helped to stabilise net interest income, since the autumn in particular there have been strong price effects in all interest-bearing assets. Because banks in Slovenia have relatively large holdings of liquid assets available to them, e.g. claims against the central bank, after the withdrawal of negative interest rates on the ECB deposit facility in July 2022 and its move into positive territory over the following months the banks saw their interest income begin to rise rapidly on this account too. Last year interest income on the most liquid assets, primarily the deposit facility, thus accounted for just over a third of the increase in interest income. Interest income from loans and securities also increased rapidly. High growth is also typically seen in interest expenses, but the very low starting position of interest rates after the long years of the low interest rate environment needs to be taken into account. Over the following months the expectation is for a continued increase in net interest income, and a rise in the net interest margin.

Last year's net non-interest income was down slightly on the previous year. The banks had seen an increase in net non-interest income already in 2021, particularly in the segment of net fees and commission, which represents the most stable and largest component (see Figure 2.21 left). Having outpaced the previous year's rates in the autumn, growth in net non-interest income then slowed, and net non-interest income ended the year down 2.3% in year-on-year terms. The shortfall was attributable to several factors: losses on financial assets mandatorily at fair value (compared with a gain in the spring of the previous year as a result of positive revaluation effects on loans at several banks), a slight decline in dividend income, and a slowdown in year-on-year growth in net fees and commission to 5.5%.

Figure 2.21: **Net commission margin and types of non-interest income**

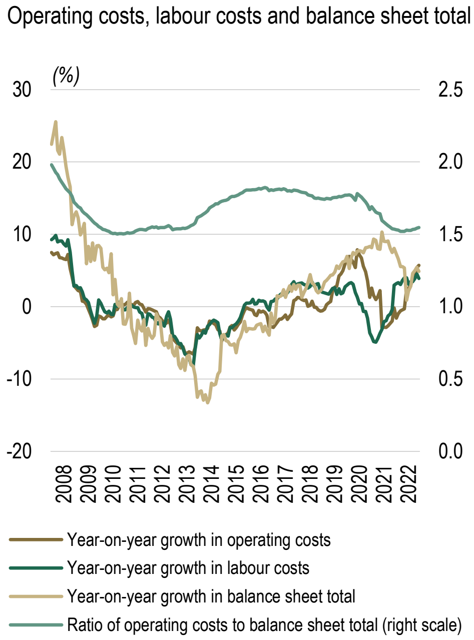


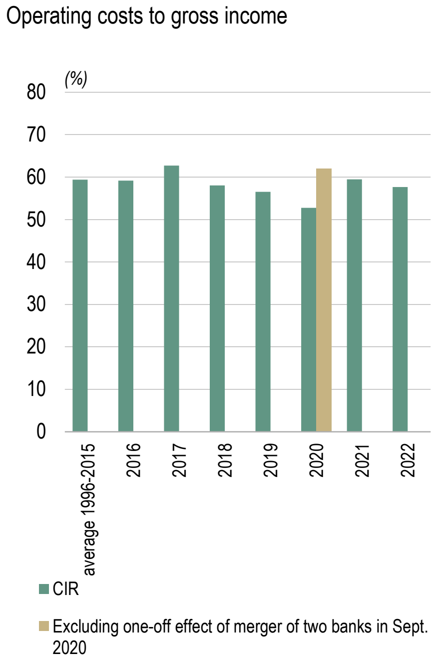
Note: Net commission margin in the chart is calculated for the preceding 12-month period.
Source: Banka Slovenije

Operating costs

Last year's increase in operating costs was smaller than that in gross income, and comparable to growth in the balance sheet total. Operating costs increased by 5.6% last year. Growth in labour costs was even more moderate, at 3.9%. The ratio of operating costs to the balance sheet total remained at a similar level to the previous year, at 1.5% (see Figure 2.22 left), while the share of operating costs in the gross income of banks (CIR) improved from 59.5% to 57.7% (see Figure 2.22 right).

Figure 2.22: **Operating costs and CIR**





Source: Banka Slovenije

2.6 Other risks

Box 3: **Cyber resilience of the banking system**

Cyber risk in the banking system remains moderate. The war in Ukraine was expected to bring an increase in the number of cyber-attacks, but this did not happen. Cyber threats nevertheless remain at a high level. The digitalisation of the banking system is increasing the importance of cyber security, for which reason Banka Slovenije is devoting increasing attention to cyber risk from the perspective of financial stability. From this perspective the key is that cyber incidents do not lead to a systemic event that could cause an interruption to business, financial loss and a loss of public confidence. Banka Slovenije has conducted several surveys in recent years of cyber security at Slovenian banks (in 2019 and 2021).[28] The surveys aimed to review the banking system's cyber resilience. Slovenian banks indicated in the surveys that they have allocated additional resources to ensuring the cyber security of banking IT systems in recent years. The banks nevertheless still face with problems in connection with the lack of supervision of outsourcing and suppliers, the obsolescence of information systems, and ensuring cyber hygiene,[29] albeit less than in 2019.[30]

[28] Financial Stability Review, October 2021. Available online at https://bankaslovenije.blob.core.windows.net/publication-files/fsr_oktober_2021_en.pdf.

[29] Cyber hygiene is a reference to the best practices that users of computers and other information devices take to maintain the health of the information system and to improve online security.

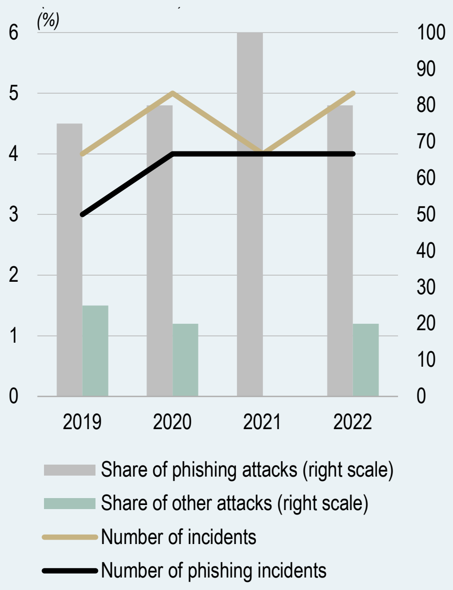
[30] Financial Stability Review, December 2019. Available online at https://bankaslovenije.blob.core.windows.net/publication-files/gdhbgexfdWYgeha_fsr-december-2019-en.pdf.

Review of current state of cyber security in the banking system

The finding based on Slovenian banks' reporting on cyber incidents is that the number of cyber incidents remains stable, and showed no increase either during the pandemic or as a result of geopolitical threats (the war in Ukraine). However the continuation of the war means that cyber threats remain at a high level, and cyber risk is therefore assessed as moderate. Other EU Member States also report no sign of any increase in the number of cyber incidents at the level of the financial system caused by the war in Ukraine. Our finding is that phishing attacks are prevalent in the banking system, where attackers obtain customers' login data and then execute undesirable transactions from their accounts and in their name (see Figure 2.23 left). Attacks of this type caused financial losses to the banking system in the amount of EUR 585 thousand in 2021 and 2022. In 2022 there was a rise in the number of cyber incidents related to phishing attacks that caused financial loss. The main increase was in the number of fake SMSs received by bank customers. In fake SMSs the sender typically poses as the bank and leads the recipient to a fake bank login page, before requesting the identification information for bank login from the recipient.

Our main concern from the perspective of cyber security is the impact on banking and specific lines of business. Online bank fraud that primarily hit bank customers (mobile and online banking) was prevalent in 2021 and 2022. Approximately half of the incidents caused a financial loss. Cyber-attacks hitting the operations of outsourcers and suppliers providing services to banks were also seen in 2022. The global trend is towards hiring information solutions and support for them from outsourcers and suppliers, which could increase exposure to cyber-attacks and cyber incidents (see Figure 2.23 right).

Figure 2.23: **Number of incidents and impact on operations**



The left chart illustrates the number of cyber incidents that banks were required to report insofar as they meet specific criteria.
Source: Banka Slovenije

The impact of the incidents was most evident in retail banking and in payment services. Cyber incidents are usually identified and reported by bank customers, who are either harmed or have noticed irregularities in their transactions. It is difficult for banks to identify who is behind cyber-attacks, and so they usually link them to various hacker groups active internationally. Banks report that the human factor (customers and staff) is still one of the main factors in exposure to the cyber risks.

Tools and impending regulations to increase the banking system's cyber security

As the supervisor of the banking system, Banka Slovenije strives to increase its analytical capacity in monitoring and identifying systemic cyber risk. To achieve this objective, we have several tools available that provide for more effective monitoring, analytical reviews and risk identification. The tools are as follows:

- Supervisory risk dashboards with cyber indicators that provide for risk monitoring at the level of the banking system.
- Cyber mapping captures the key links between financial sector entities, technology providers and technological solutions. This tool can be used to identify the key systemically important nodes, concentration risk, and contagion. Cyber mapping consists of two networks, namely financial and cyber, which are intertwined into a whole, forming a map.
- Cyber stress tests are an analytical tool for testing the financial system's ability to support the continuity of key economic functions by responding effectively and recovering after a serious but probable cyber scenario that causes significant disruption and might impact financial and operational stability.

Two upcoming regulations, the NIS2[31] and DORA,[32] will play a part in ensuring greater cyber resilience in the banking system. DORA aims to put in place a comprehensive framework for digital operational resilience on the part of EU financial entities. Meanwhile the NIS2 provides for a higher level of cyber security in the EU, and expands its area of application to new sectors. Credit institutions supervised by Banka Slovenije are now also classed as key service providers. The new directives are improving supervision of financial sector entities, technology providers and technological solutions, and are therefore helping to raise the banking sector's cyber resilience.

Box 4: **Climate risks**

The risk from exposure to climate-sensitive sectors, which could have a significant impact on financial stability, is currently assessed as moderate, with a stable outlook over the coming quarters. This box analyses selected transition risk indicators that are used to monitor climate risks.[33] Several approaches may be taken to analyse transition climate risks, based on a sectoral definition of climate-sensitive sectors or on emissions by firm or by sector.[34] The first is based on a predefined set of climate-sensitive sectors, while the second allows for a more comprehensive assessment of climate risks on the basis of estimated emissions for the entire portfolio. Given

[31] The NIS2 directive is EU-wide horizontal legislation on cyber security. It entered into force on 16 January 2023, while the deadline for its transposition into national legislation and notification of this legislation to the European Commission is 17 October 2024.

[32] DORA (Digital Operational Resilience Act) is expected to begin to be applied in January 2025. The key building blocks of DORA are: (i) ICT risk management, (ii) ICT-related incident reporting, (iii) testing of digital operational resilience, (iv) ICT third-party risk management, and (v) information sharing between supervisory authorities in the EU.

[33] When it comes to transition risk indicators, we can express emissions or carbon footprint indicators with regard to an economic aggregate, as in for e.g. in the emissions intensity indicator (defined in the analysis as emissions relative to revenue). In addition to emissions intensity, it is also important to account for portfolio structure. This is reflected in the weighted emissions intensity indicator, which weights emissions intensity by the share of exposure to the individual sector in the portfolio. The latter reflects the portfolio's tilt to polluting sectors.[33] The loan carbon intensity indicator can also be used to analyse transition risks, the indicator expresses the carbon footprint of the institution relative to the size of bank exposure. For further analysis on the decomposition of changes in the indicators, see the October 2022 issue of the Financial Stability Review.

[34] See the EBA pilot exercise on climate risk.

the gaps in the data, defining the granularity of the indicators is also an important dimension of the analysis.

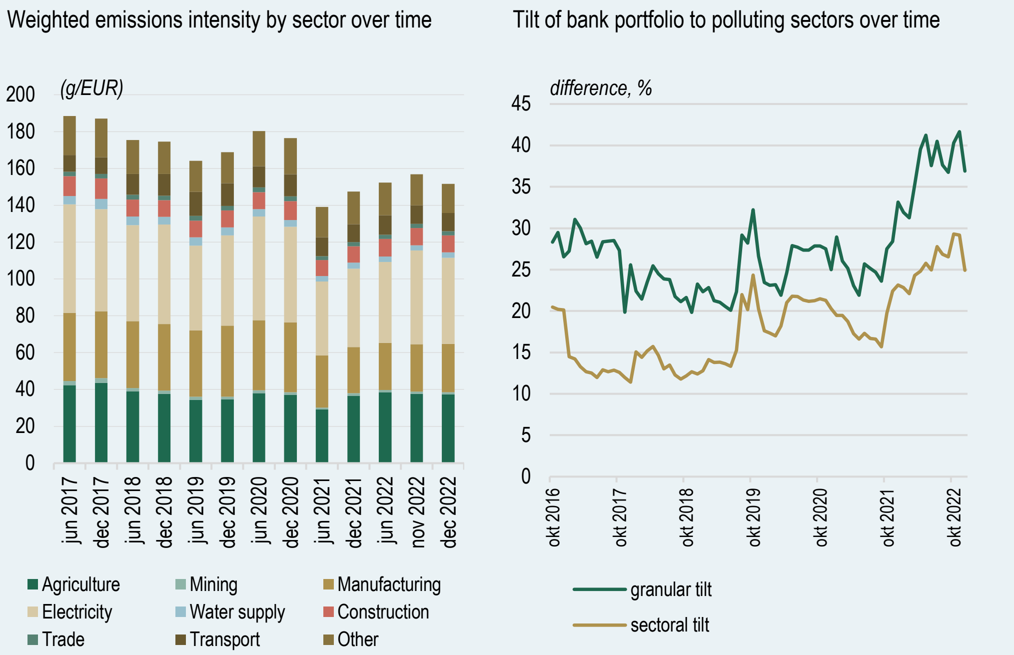
The exposure to firms in climate-sensitive sectors shows moderate climate risks in the banking system, with shares of the NFCs portfolio ranging from 37% to 42%. The share of exposure to climate policy relevant sectors (CPRSs) stood at 42% in December 2022, with the largest exposures to energy-intensive sectors (16.7%) and to the housing sector (14.1%).[35] According to a definition of climate-sensitive sectors that accounts for the structure of emissions in Slovenia, the share of exposures to climate-sensitive sectors is 37%, with the largest exposures to manufacturing, electricity, gas, steam and air conditioning supply, and construction. The exposures to CPRSs and the sectors defined as climate-sensitive on the basis of the structure of emissions in Slovenia were recording strong year-on-year growth of 20% on average in the second half of 2022. This reflects an increase in exposure over time, as a consequence of the energy crisis. Here it should be noted that the NPE ratio in climate-sensitive sectors remains low, and does not indicate any significant increase in credit risk in these sectors.

The weighted carbon intensity indicates a tilt in bank exposures to NFCs in polluting sectors (agriculture, some manufacturing segments and electricity production). The differences between the weighted and unweighted emissions intensity of banks are on average 45.6% or up to 98% in December 2022. The average difference is comparable regardless of using sectoral or granular emissions, although there are considerable differences across banks. The weighted emissions intensity has been decreasing over time, primarily as a result of a decline in emissions intensity across sectors. Decomposing the weighted emissions intensity across sectors indicates a sectoral concentration of risks. The largest contributions in the weighted emissions intensity come from exposures to agriculture, some manufacturing segments, and electricity, gas, steam and air conditioning supply (see Figure 2.24 left). Banks with a high emissions intensity also have a higher loan carbon intensity (see Figure 7.9 in the appendix), which reflects emissions per unit exposure. Loan carbon intensity in December decreased by 15% year-on-year, or by 24% over the three-year period of 2019 to 2022. Loan carbon intensity is decreasing over time as exposure to NFCs increases and sectoral emissions intensity declines. .The carbon footprint is larger at banks with a higher balance sheet total, and at other systemically important institutions in particular, regardless of the imputation of emissions (sectoral emissions by bank with regard to its market share of the financing of the individual sector, or granular emissions by firm).[36]

[35] Based on the definition of climate policy relevance in Battiston et al. (2017).

[36] The sectoral approach assigns emissions of each sector across banks relative to their market share in bank financing of a particular sector. Under the granular approach emissions are assigned across firms, using ETS emissions for ETS firms, and the imputation of non-ETS emissions to non-ETS firms in relation to the size of the firm and its headcount.

Figure 2.24: **Banking system's exposure to polluting sectors**



Note: The calculation of emissions intensity in the left chart is based on granular emissions by firm, by usingETS emissions for ETS firms, and assigning non-ETS emissions to non-ETS firms with regard to the headcount in the sector. In the right chart the tilt is defined as the difference between the weighted emissions intensity of banks or the banking system and the unweighted emissions intensity of the economy expressed in percent. The weighted emissions intensity is calculated based on sectoral assigning of emissions or the use of granular emissions, where the weight is the share of exposure to a particular sector in the total NFCs portfolio of the bank or the banking system..
Sources: Slovenian Environment Agency, Eurostat, Banka Slovenije

The weighted carbon intensity indicator at system level shows the banking system's tilt to polluting sectors, albeit with a relatively low exposure to the polluting sectors. The weighted carbon intensity at the systemic level accounts for banks' market shares of exposure to NFCs, in addition to the weighted emissions intensity of the individual institution, which can change the assessment of the tilt of the banking system's exposure to polluting sectors. The difference between the weighted emissions intensity of the banking system and the unweighted emissions intensity of the economy amounted to 25% (sectoral emissions) or 37% (granular emissions) in December 2022, and is increasing over time (see Figure 2.24 right). The tilt is a reflection of the larger weights of the banking system's exposure to individual sectors compared with the shares of revenue generated by the individual sectors in the revenue of the total economy (which is most pronounced in the case of construction), and the emissions intensity of the sector. The largest contributions to the tilt come from exposures to agriculture and to electricity, gas, steam and air conditioning supply (62%), with smaller contributions from construction and some manufacturing activities (31%). These sectors account for 23% of banks' exposures, where the exposure to the sectors with the largest contribution to tilt (the most polluting sector) is lower, which reduces transition risks. The breakdown of the tilt indicator across other systemically important institutions and other institutions reveals that a tilt to polluting sectors is present across both institutions (see Figure 7.13 in the appendix), which is indicative of the systemic nature of the risks and a tilt.

3 Resilience of the Banking System

3.1 Solvency and profitability

The banking system's resilience from the perspective of solvency and profitability remained medium at the end of 2022. Our assessment is that the increase in income being driven by strengthening net interest income is currently increasing bank resilience; an additional positive impact on profitability can be expected this year. The favourable developments in profitability in 2022 were also reflected in the total capital ratio, which rose towards the end of the year. In addition to retained earnings, the increase was also driven by additional issuance of capital instruments. A potential further slowdown in credit growth and simultaneous increase in bank profitability might in the future have a positive impact on the capital ratios.

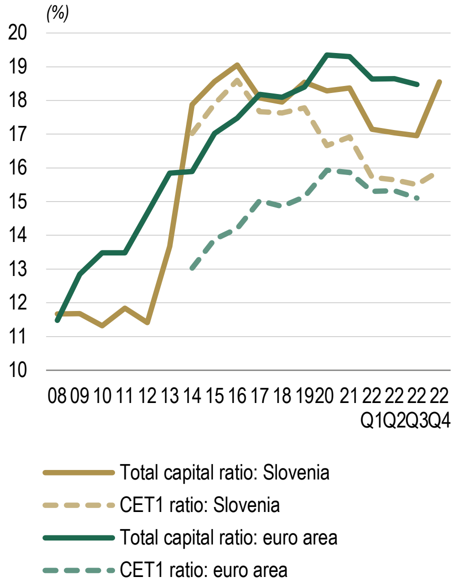
Solvency

After declining in year-on-year terms, the banking system's total capital ratio on a consolidated basis rose again in late 2022, and remains solid. The increase in the final quarter of the year was attributable to growth in regulatory capital, while the negative impact on capital adequacy from risk-weighted assets was smaller. Risk-weighted assets increased throughout the year, although the rate of growth slowed from quarter to quarter. Credit risk-weighted assets accounted for the majority (87%) of the year-on-year increase in risk-weighted assets. The increase in market risk accounted for almost 6% of last year's increase in risk-weighted assets, where the largest factor was exposure to currency risk. The final quarter was considerably more important to growth in regulatory capital, recording the highest quarterly growth (10.3%). While it was negative revaluations of securities measured at fair value through other comprehensive income that drove down regulatory capital over the course of the year, it was driven up by retained earnings and, in the final quarter, by the issuance of capital instruments (Tier 2 capital and additional Tier 1 capital). The aforementioned developments raised the total capital ratio on a consolidated basis by 0.2 percentage points in 2022 to end the year at 18.5% (see Figure 3.1 right), while the common equity Tier 1 capital (CET1) ratio declined by 1 percentage point to 15.9% (see Figure 3.1 left).The total capital ratio in the Slovenian banking system was 0.07 percentage points higher than in the euro area overall[37] in the final quarter, while the CET1 ratio was 0.8 percentage points higher. The Slovenian banking system's total capital ratio on an individual basis increased by 0.2 percentage points in 2022 to 20.3%, while the CET1 ratio declined by 1.2 percentage points to 17.1%.

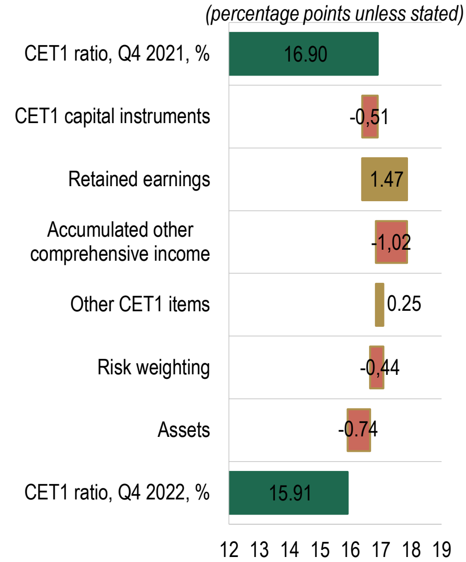
[37] The figures for the euro area relate to the third quarter of 2022, when the total capital ratio stood at 18.48% and the CET1 ratio at 15.3%.

Figure 3.1: **Capital ratios, comparison with the euro area, consolidated basis, and decomposition of change in CET1 ratio**

Capital ratios, comparison with the euro area, consolidated basis



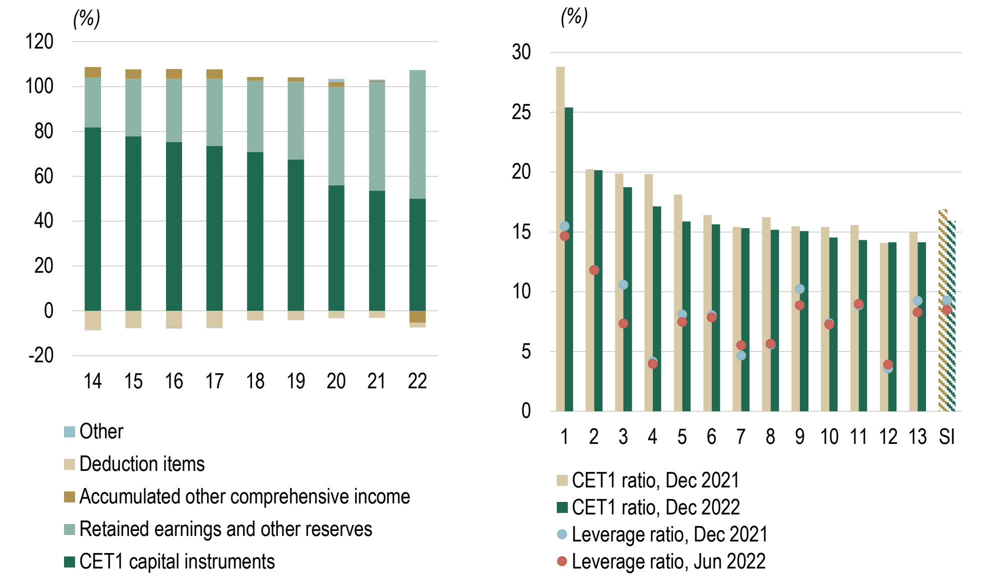
Decomposition of change in CET1 ratio, consolidated basis



Sources: ECB SDW, Banka Slovenije

The banking system's total capital ratio remains stable, despite a decline over the long term. The trend of decline came to an end in the final quarter of 2022. Slovenia saw regulatory capital increase by 45.9% between the end of 2014 and the end of 2022, while growth in risk-weighted assets over this period was high, at 39.8%. Alongside the strengthened lending in the last year, one of the main drivers of the increase in risk-weighted assets was a rise in the average risk weight, which was primarily attributable to the use of the standardised approach in the assessment of exposure to credit risk. Compared with when IRB approaches are used, as is more common in other euro area countries, this approach dictates the use of higher risk weights. The standardised approach was applied to 83.4% of risk-weighted assets in Slovenia in 2022, compared with 45.0% in the euro area overall. Consequently the average risk weight of the Slovenian banking system stood at 56%, 22 percentage points higher than the euro area average. Although the average risk weight in Slovenia is higher, this does not necessarily entail lower asset quality; rather, given the prevailing use of the standardised approach, it is indicative of the greater conservativeness of Slovenian banks and of their robustness in the event of the realisation of potential economic shocks.

Figure 3.2: **Breakdown of CET1 capital and leverage ratio**



Source: Banka Slovenije

More than two-thirds of the banks saw a decline in their total capital ratios on a consolidated basis in 2022, but all still exceed their overall capital requirements. The banks whose total capital ratio declined (see Figure 7.14 left) recorded a decline of between 3.4 and 0.4 percentage points, while the banks whose total capital ratio rose saw increases of 0.3 to 1.9 percentage points. The developments in risk-weighted assets and regulatory capital also had an impact on capital surpluses. The surplus by which the total capital ratio exceeds the overall capital requirement stood at 5.3 percentage points at the end of 2022, up 0.5 percentage points in year-on-year terms, equivalent to a surplus of EUR 1.7 billion, up EUR 254 million. Despite the increase in the capital surplus at system level, the median surplus actually declined. The capital surpluses vary from bank to bank, but the range of distribution narrowed relative to 2021 (see Figure 7.14 right). The differences between the capital surpluses at individual banks are indicative of the differences in their capacity to absorb potential shocks. The leverage ratio also declined in 2022, by 0.8 percentage points to end the year at 8.5%, and remains lowest at the small banks (see Figure 3.2 right).

Regulatory capital on a consolidated basis was up in year-on-year terms in the final quarter, despite its decline during the year. The increase of EUR 466 million (8.4%) in regulatory capital in the final quarter was driven by the issuance of Tier 2 capital instruments and additional Tier 1 capital instruments, and by retained earnings. The decline in regulatory capital during the year was the result of the negative revaluation of securities, although this effect was limited at certain banks as a result of their use of a prudential filter for government bonds. This temporarily neutralised the adverse impact on regulatory capital from volatility on the financial markets in the third and final quarters. At the same time the issuance of capital instruments slightly reduced capital quality, the share of CET1 capital declining from 92.0% to 85.8%. It still remains the main component of regulatory capital, while an increasing proportion of CET1 capital itself consists of retained earnings (see Figure 3.2 left), which last year succeeded in neutralising the negative effect of revaluations and the decline in CET1 capital instruments. In the last year they declined at the system level due to the purchase of Sberbank by NLB. Strengthening capital through earnings and by issuing capital instruments does not only strengthen a bank's resilience, it also allows it to meet the minimum requirement for own funds and eligible liabilities (MREL). The banks will have to fully meet the MREL requirements as of 1 January 2024. Not all banks have met the MREL target to date, but our assessment is that they will not have difficulty in meeting these requirements by the prescribed deadlines, all of them having met the intermediate MREL targets as at 1 January 2022.

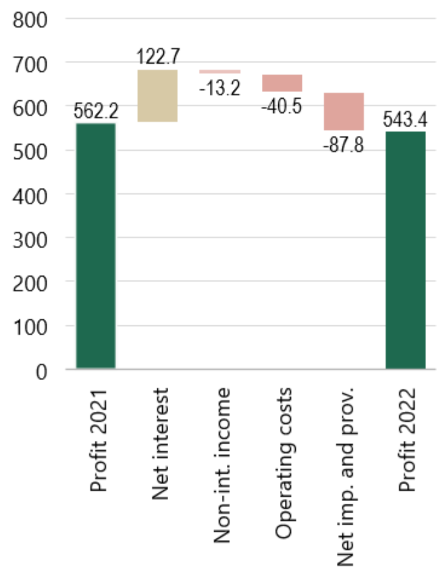
Last year the increase in risk-weighted assets continued to be primarily driven by an increase in lending to NFCs and households. The banking system's risk-weighted assets on a consolidated basis increased by 7.4% in 2022 to end the year at EUR 32.5 billion. The increase in risk-weighted assets was driven by exposures to corporates, exposures secured by real estate, and exposures in default and exposures associated with particularly high risk. Risk-weighted assets for exposures in default and exposures associated with particularly high risk could further deteriorate in the future in the NFCs and household portfolios as a result of the adverse systemic impact of the general macroeconomic environment in the EU, and the ongoing war in Ukraine. Risk-weighted assets could consequently increase through higher risk weights, which would have an adverse impact on capital adequacy.

Profitability

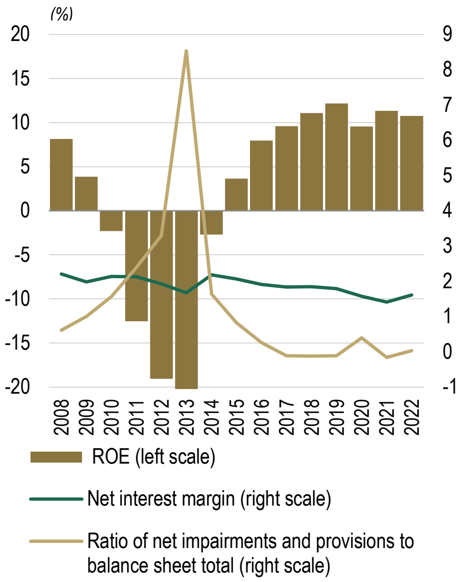
Pre-tax profit in 2022 amounted to EUR 543 million last year according to unaudited figures, down slightly (-3.3%) on the previous year, while pre-tax ROE was comparable to previous years. In the wake of an increase of EUR 69 million in net income[38] driven by an increase in net interest income, the decline in profit was attributable to the renewed net creation of impairments and provisions (EUR 14.1 million), the banks having recorded a net release (in the amount of EUR 73.7 million) in 2021. Pre-tax ROE was down 0.4 percentage points on 2021 at 10.8%, but remains comparable to its average over the five previous years (10.7%) (see Figure 3.3).

Figure 3.3: **Changes in generation and disposal of income, and selected bank performance indicators**

Pre-tax profit and impact of changes in components of generation and disposal of gross income, 2021 to 2022



Selected bank performance indicators



Source: Banka Slovenije

[38] For developments in income and costs, see the section on income risk.

The improved conditions for generating income from net interest are improving the banks' performance. At the same time it can be seen that the banks have recently given slightly less focus to net non-interest income, which they increased markedly during the period of low interest rates and falling margins. In the high inflation, there can also be expectations of a gradual increase in operating costs, and additional creation of net impairments and provisions. Over the short term the expectation is nevertheless that the positive effects from net interest will outstrip the negative effects of rising operating costs and additional impairments.

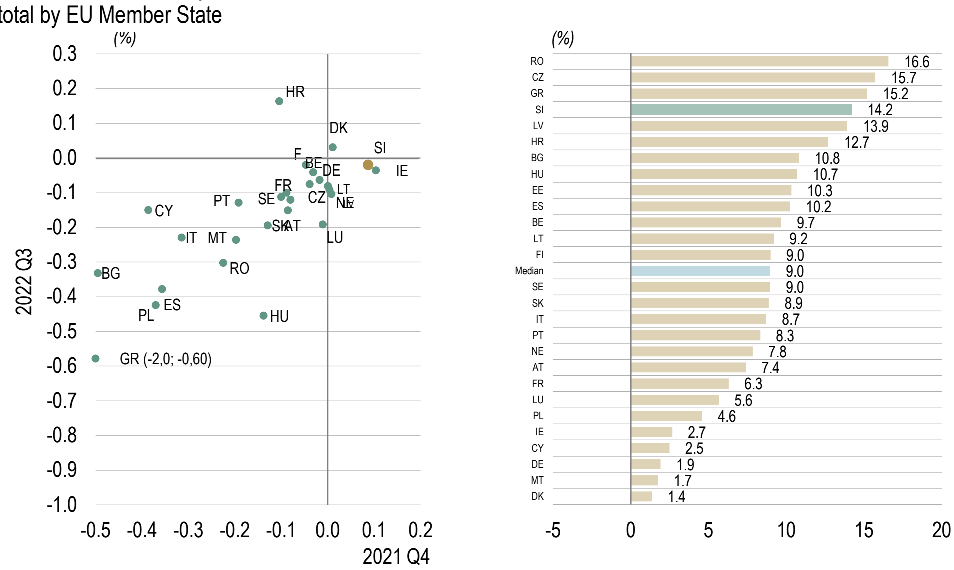
The banks resumed the creation of net impairments and provisions in 2022, albeit modestly. The net release of impairments and provisions in the Slovenian banking system moved into net creation in March, after the outbreak of the war in Ukraine and the worsening situation in the international environment. Net impairments and provisions accounted for just 1.1% of the disposal of gross income. Their share of the disposal of gross income peaked in June (at 3.7%). A comparison between Slovenia and other EU Member States (data for the first three quarters of the year) in terms of the ratio of impairments of financial assets to the balance sheet total[39] shows a similar trend. The ratio of impairments to the balance sheet total increased solely in the first quarter of last year, while the values up to the third quarter were comparable with the end of 2021.[40]

The figures for recent years show that the net release (or low creation) of impairments and provisions was a significant factor in the maintenance of bank profitability in the low interest rate environment. A longer time horizon of comparison with EU Member States shows that Slovenia's ratio of net impairments and provisions to the balance sheet total was above-average for several years after the last financial crisis.[41]

Figure 3.4: **Bank profitability in EU Member States and ratio of net impairments to balance sheet total**

Ratio of net impairments of financial assets not measured at fair value through profit or loss to balance sheet total by EU Member State

ROE in EU Member States in the first three quarters of 2022, consolidated basis, after tax



Sources: Banka Slovenije, ECB SDW, own calculations

[39] Impairments of financial assets not measured at fair value, which account for the largest component of impairments, where the available quarterly data (SDW, CBD, Finrep, to third quarter of 2022) has been annualised.

[40] The figure for the EU had declined to 0.14% by September, down from the first months of the year (compared with 0.14% in December of the previous year). Similarly, the EU median had declined to 0.12% (compared with 0.09% in December 2021), while the figure for Slovenia was significantly lower. It stood at just 0.02%, below the weighted EU average (0.14%) and also below the figure for EU banks of comparable size (0.31%).

[41] The year-end figures for 2022 are not yet available. The net release of impairments and provisions was the dominant factor at the level of the Slovenian banking system between 2017 and 2021, with the exception of 2020. Contrastingly, the long-term average (2007 to 2021) shows that banks in Slovenia recorded values for this indicator that were higher than the EU average, most notably between 2010 and 2015.

Last year the Slovenian banking system again outperformed the EU and euro area averages in terms of ROE. According to the data[42] up to the third quarter of 2022, last year's ROE at banks in the EU (6.2%) was comparable to the previous year (6.6%). The mean and the median for individual countries rose to 8.7% and 9.0%. As stated in the previous FSR, Slovenia is well above the average on account of the one-off effect of the takeover of one bank by the largest banking group in the first quarter of 2022. Here it should be noted that even excluding this effect, Slovenia's ROE of 10% would rank it at the top of the middle third of the countries with the highest values. Average ROE over the last five years in the Slovenian banking system has been double the figures seen in the EU and the euro area.[43]

3.2 Liquidity

The banking system's resilience to systemic risks remained high in the liquidity segment in 2022, but might deteriorate in the future. It should be reiterated that there remain considerable variations from bank to bank in their liquidity surpluses, and with it their capacity to cover the consequences of any realisation of funding risk in the form of a sudden large withdrawal of deposits by the non-banking sector. In addition to large cash holdings, the banks also have significant holdings of free eligible collateral on their balance sheets, and thus the ability to access additional liquidity in the Eurosystem should they so require. Careful liquidity management and diligent monitoring of the economic situation and the competition in the sector remain vital to bank stability. More predictable behaviour with regard to deposits by the non-banking sector might be prompted by a change in pricing policy, whereby banks would gradually raise interest rates on deposits at longer maturities to encourage savers to fix larger amounts.

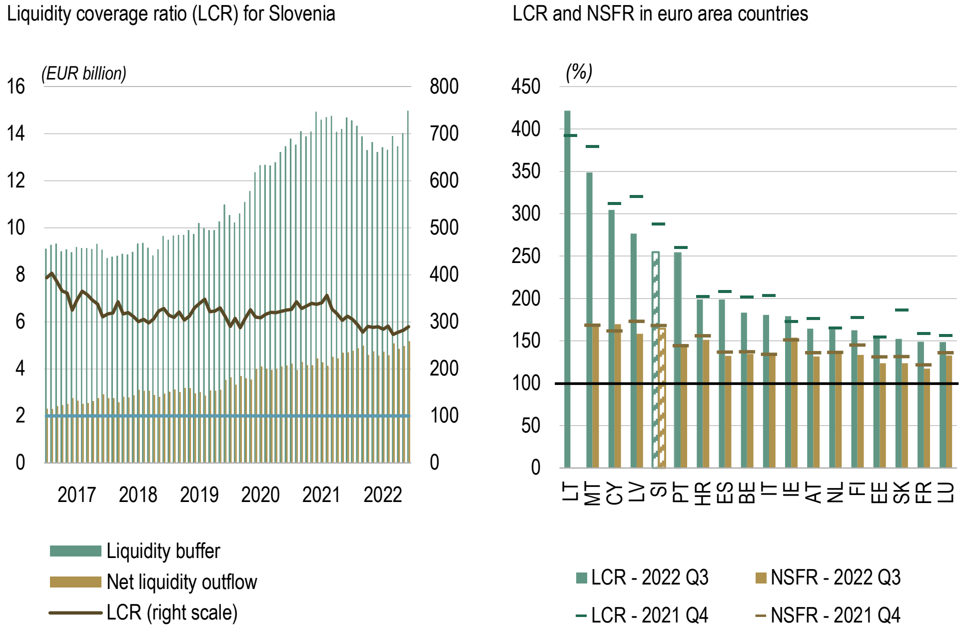
Despite a decline in the LCR, the capacity to cover net liquidity outflows over a short-term stress period remained high at system level. Because net liquidity outflows increased by more than the liquidity buffer, the LCR on an individual basis declined by 22 percentage points in 2022 to end the year at 290% (see Figure 3.5 left), but remains well above the minimum regulatory requirement (100%). The liquidity surplus declined to EUR 9.8 billion, but remained more than a third higher than before the increase in liquid assets on bank balance sheets after the outbreak of the pandemic. The repayments of liabilities under the TLTRO-III did not have a significant impact on the liquidity buffer and thus on the LCR, as the reduction in balances at the central bank simultaneously released investment-grade securities collateral. The LCR declined over the first three quarters of last year in the majority of euro area countries, and Slovenia is still in the top third in terms of coverage of net liquidity outflows (see Figure 3.5 right).[44]

[42] Consolidated bank data at national level. ROE after tax has been annualised.

[43] ROE averaged 10.2% in Slovenia between 2017 and 2021, 5.1% in the EU overall and 4.9% in the euro area overall (ECB SDW, CBD).

[44] The comparison includes the latest data on a consolidated basis (for the third quarter of 2022).

Figure 3.5: **Liquidity indicators for Slovenia and the euro area**



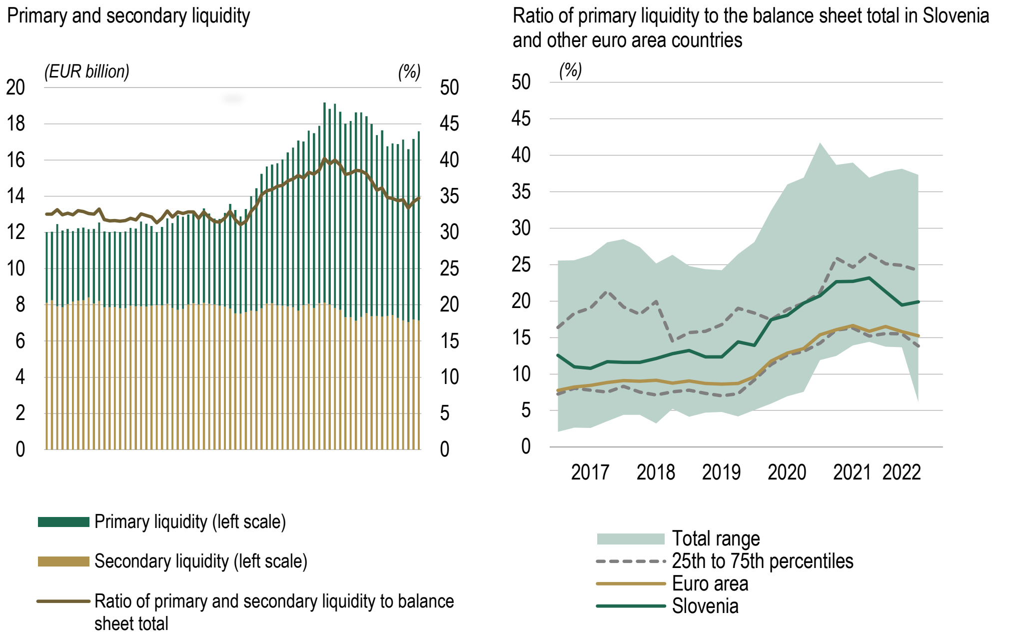
Note: The horizontal line in both charts denotes the minimum regulatory requirement (100%). Data in the right chart is on a consolidated basis. The data for NSFR for Lithuania is not available in the ECB SDW.
Sources: Banka Slovenije, ECB SDW

Although the banks reduced their primary liquidity,[45] its ratio to the balance sheet total remained high. The stock of primary liquidity declined by EUR 1.1 billion in 2022 (see Figure 3.6 left), but nevertheless amounted to a fifth of the balance sheet total, three times its long-term average (of 6.8%).[46] The banks used money held at the central bank not only to repay their liabilities under the TLTRO-III, but also to direct into increased lending to the non-banking sector. Similarly to Slovenia, the ratio of primary liquidity to the balance sheet total declined in most other euro area countries, and stood at 15.2% on average (see Figure 3.6 right).[47] Future developments in the most liquid assets in the Slovenian banking system will depend on the changes in deposits by the non-banking sector, the volume of new lending, and the repayment of liabilities under the TLTRO-III, to which only a small number of Slovenian banks are exposed.

The stock of secondary liquidity[48] remained virtually unchanged in 2022, although the concentration of Slovenian government securities diminished. Most likely in the quest for better returns, and with the aim of greater diversification of investments, the banks replaced their maturing Slovenian government securities by purchasing foreign securities rated BBB or higher. This reduced the share of secondary liquidity accounted for by domestic government securities to a record low of 33%. The stock of secondary liquidity amounted to EUR 7.1 billion at the end of 2022, or 14.1% of the balance sheet total.

[45] Primary liquidity comprises cash on hand, balances at the central bank and sight deposits at banks.
[46] The average ratio of primary liquidity to the balance sheet total is computed for the period of 2000 to 2022.
[47] Data up to the third quarter of 2022 inclusive was available for the euro area at the time of writing.
[48] Secondary liquidity is the sum of Slovenian government securities and foreign marketable securities rated BBB or higher.

Figure 3.6: **Primary and secondary liquidity**



Note: Primary liquidity comprises cash on hand, balances at the central bank and sight deposits at banks. Secondary liquidity comprises Slovenian government securities and foreign marketable securities rated BBB or higher.
Sources: Banka Slovenije, ECB SDW, own calculations

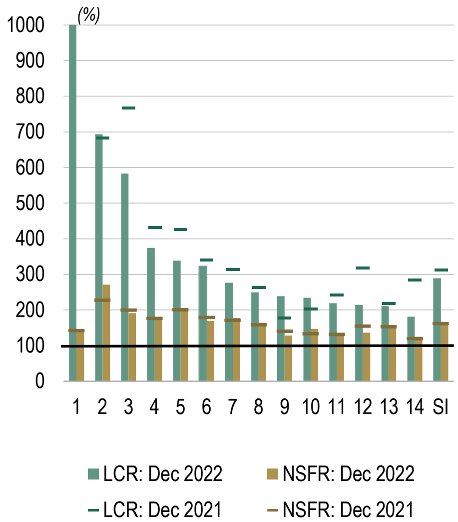
The capacity to fund liabilities over a one-year horizon improved further at the level of the banking system. In the wake of strengthening deposits by the non-banking sector, the stock of available stable funding increased by more in 2022 than required stable funding, which increased the net stable funding ratio (NSFR) by almost 3 percentage points to 164%. This means that the Slovenian banking system had EUR 15.9 billion of stable funding in surplus to its requirement over a one-year horizon. Slovenia's relatively high NSFR continues to rank it in third place among euro area countries in terms of this metric.[49]

The majority of the banks maintained relatively high resilience to systemic risks in the liquidity segment, although there remains considerable variation in their liquidity surpluses. The decline in liquid assets saw a deterioration in the LCR at most banks in 2022, but only at one bank is it less than double the regulatory requirement of 100% (see Figure 3.7 left). Conversely, the increase in available stable funding increased the NSFR at two-thirds of the banks, and the surplus over the minimum regulatory requirement was more than 50% at more than half of the banks. Lower liquidity surpluses were primarily maintained at the banks under foreign ownership, on account of their approach to liquidity management and the expectation of support from the parent bank in the event of liquidity difficulties. They are thus exposed to the risk of the parent bank being unable to provide this support should it face similar difficulties itself. It should be reiterated that careful monitoring of competition in the sector and diligent liquidity management remain vital, particularly at the banks with slightly lower liquidity surpluses.

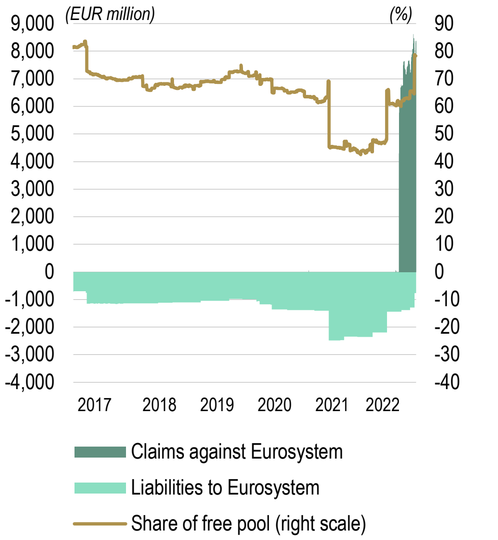
[49] The comparison is based on consolidated data, which was available up to the third quarter of 2022 at the time of writing.

Figure 3.7: **LCR and NSFR at individual banks, and stock of claims and liabilities vis-à-vis the Eurosystem**

LCR and NSFR at individual banks



Claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free



Note: The horizontal line in the left figure denotes the minimum requirement for the LCR and the NSFR in accordance with the CRR (100%). For the sake of clarity, one of the banks is not illustrated in the left chart: its LCR stood at 1814% in December 2022.

The repayment of liabilities under the TLTRO-III increased the proportion of the pool of eligible collateral for Eurosystem operations that is free, thereby increasing access to additional liquid assets should the banks so require. With the majority of Slovenian banks repaying the aforementioned liabilities in full or in part, the free proportion of the pool at system level increased by 35 percentage points in 2022 to end the year at 78% (see Figure 3.7 right), well above the euro area average (43%). The free pool of eligible collateral amounted to EUR 2.5 billion at the end of 2022, while the banks also held EUR 6.2 billion of eligible collateral on their balance sheets that could be registered in the pool, thereby increasing their access to liquid assets with the Eurosystem should they require them. Given the high stock of liquid assets, they had no such need for the moment. Conversely, the rise in interest rates on the deposit facility means that the banks have started to fix overnight deposits with the Eurosystem. The stock of fixed deposits averaged EUR 7.3 billion between mid-September and the end of the year.

4 Households and Non-Financial Corporations

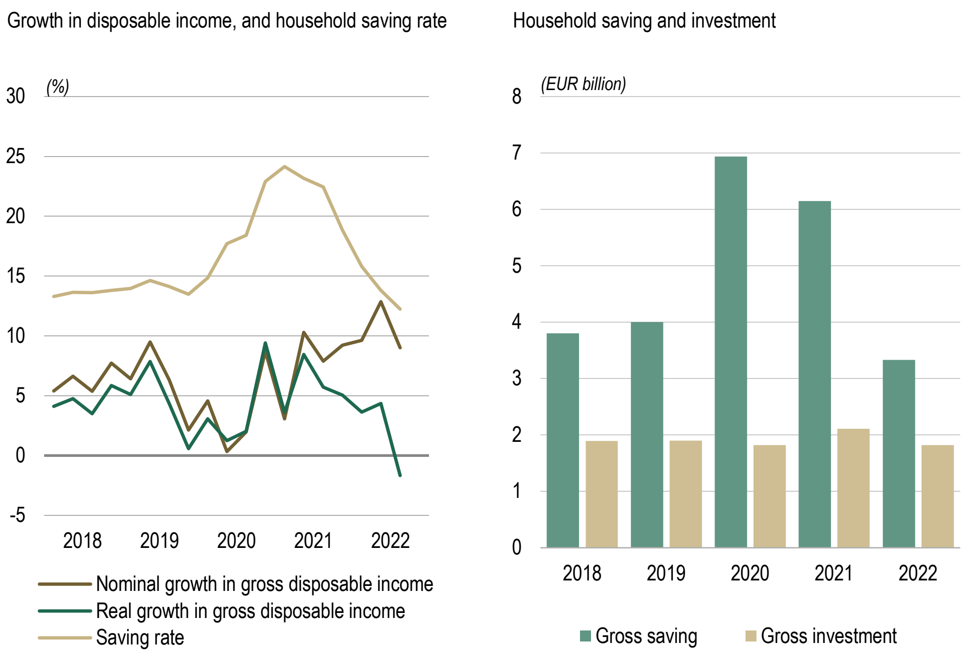
4.1 Households

The resilience of household to financial shocks decreased slightly in 2022 due to reduced saving rate, but remained relatively high. Households earmarked a large part of their disposable income for final consumption in 2022, reducing the gross saving rate to its lowest level to date. High inflation and rising interest rates are reducing household disposable income. Slovenian households are less indebted on average than households in the euro area overall. Household sentiment remains below its long-term average.

Consumption and saving by Slovenian households

Household final consumption expenditure increased significantly in 2022. Household consumption in 2022 was up 21.9% on the previous year in nominal terms. The increased expenditure brought a significant decline in household saving. The household saving rate slumped to 4.0%, its lowest figure to date. Gross disposable income continued to rise in nominal terms amid the buoyant labour market. Household disposable income was thus up 9% on the previous year. The increase in gross disposable income was driven by employee compensation, i.e. income from work. Due to high inflation, the gap between the nominal and real rates of growth in gross disposable income widened. Real growth in gross disposable income turned negative in the third quarter of 2022.

Figure 4.1: **Disposable income, saving rate and household investment**

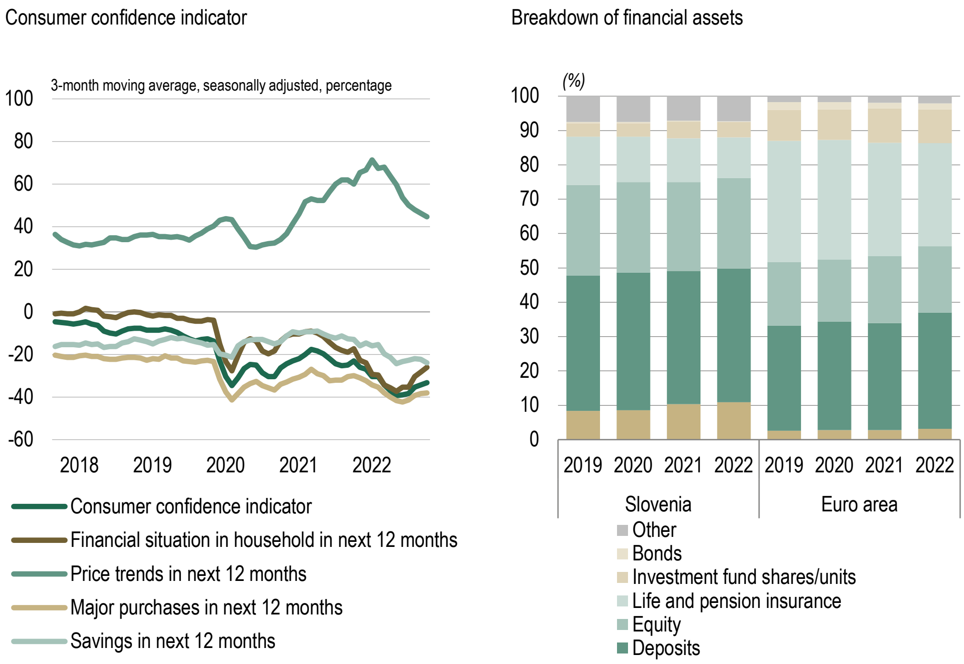


Source: SORS

Household sentiment and asset structure

The survey indicators of consumer opinion show the sentiment in the household sector remaining below its long-term average. Consumer confidence was down in year-on-year terms, as were all components of the confidence indicator. The structure of household financial assets in Slovenia differs considerably from the euro area overall. Currency and deposits prevail in Slovenia, and account for almost half of total household financial assets. They are also notable for a higher share of equity. Given the low interest rates on deposits and the high inflation, a large proportion of Slovenian household assets are losing value in real terms.

Figure 4.2: **Household indebtedness and asset structure**

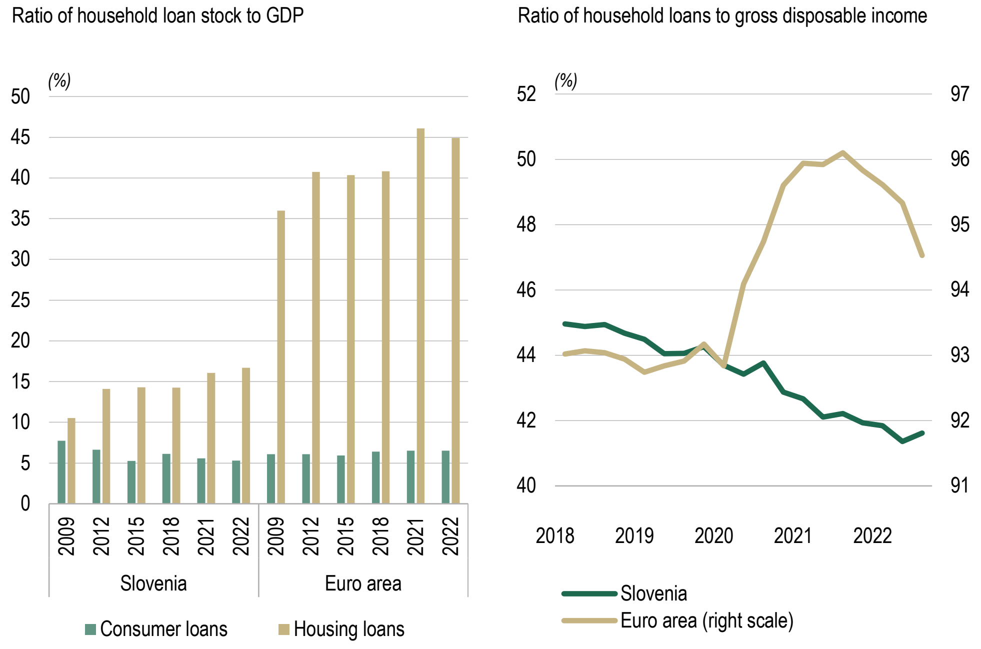


Note: Equity consists of listed shares, unlisted shares and other equity. Investment fund shares or units include shares in an investment fund when the fund has a corporate structure.
Source: SORS

Household indebtedness

Slovenian households are less indebted than those in the euro area overall. Compared with other euro area countries, Slovenian households have a lower ratio of consumer loans to GDP, although the gap is not as pronounced as for housing loans. The ratio of housing loans to GDP is significantly less than the euro area average, in part because of the existing high level of owner occupancy in Slovenia. Slovenian households also borrowed less during the pandemic than did households in the euro area overall.

Figure 4.3: **Household indebtedness and asset structure**



Source: ECB SDW

4.2 Non-financial corporations

Despite a further increase in borrowing in 2022, the financial position of NFCs remained stable. The pace of borrowing by NFCs began to slow over the final months of last year, in line with economic growth over this period. The main decline in demand for loans in the second half of last year and at the turn of the year came in loans for investment, while demand for loans for current operations and inventories remains high, in reflection of the persistent uncertainty in supply chains. Good performance in the previous year and the build-up of liquid assets increased NFCs' debt servicing capacity. The figures for current account freezes and bankruptcy proceedings initiated do not show any signs of a deterioration. The elevated risk of future defaults comes from the sharp increase in input costs, partly as a result of commodity prices, and particularly as a result of rising interest rates on loans, where variable remuneration is prevalent.

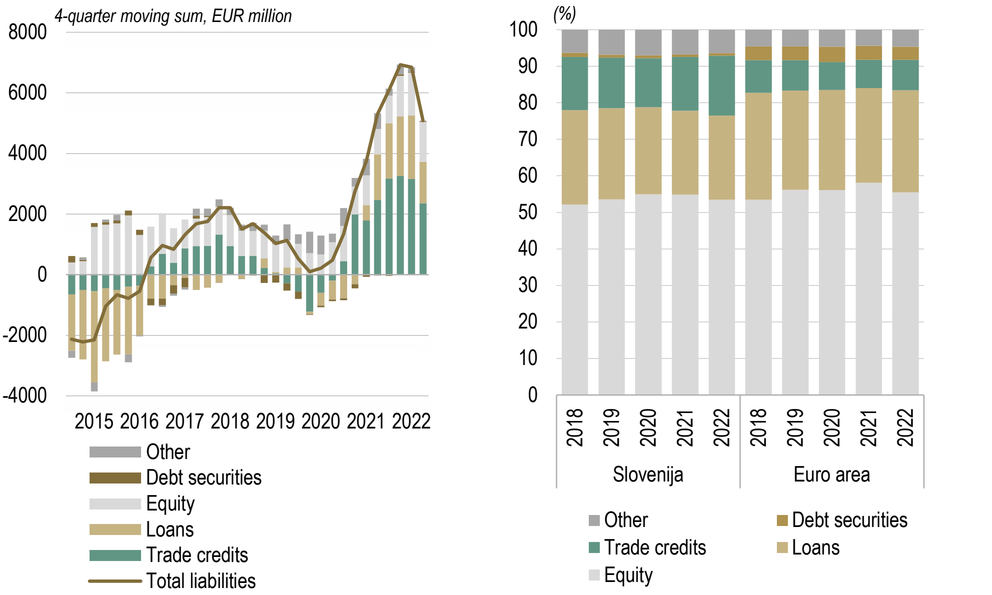
Financing and indebtedness of non-financial corporations

The heavier borrowing by NFCs seen in 2021 continued in 2022. During this period of higher growth, the main increase was in financing via trade credits, which generally track the dynamics of economic activity, but corporate financing via loans also increased, albeit at slightly lower yet still high rates. Fully 63% of the one-year flow of debt financing in the amount of EUR 3.8 billion originated in trade credits received (see Figure 4.4 left). Credits from the rest of the world accounted for the slight majority (54%), while the remaining 46% were received from domestic business partners, usually in the NFCs sector. The second largest source of the flow of financing at NFCs was loans, which accounted for 36% of the total, with loans by domestic banks accounting for 88% of this. In the breakdown of Slovenian NFCs' financial liabilities (see Figure 4.4 right), the share accounted for by trade credits has risen by 2 percentage points over the last year, double the rise in the euro area overall, where firms have financed themselves more by raising loans.

Figure 4.4: **Financing of NFCs**

Flows of NFCs' financial liabilities by instrument

Breakdown of NFCs' financial liabilities in Slovenia and the euro area



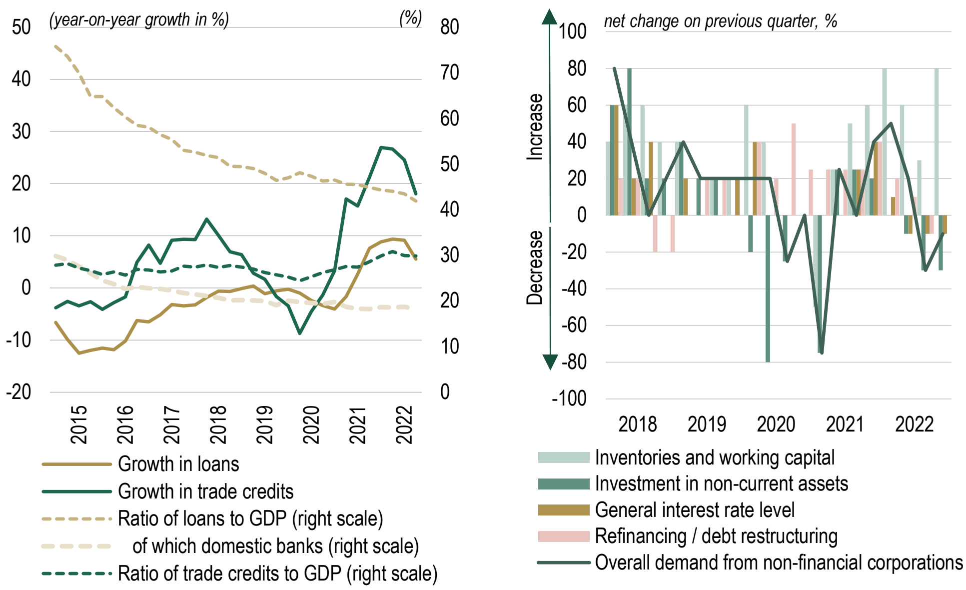
Note: All sources of financing for NFCs are captured, irrespective of the creditor sector.
Source: Banka Slovenije

Growth in borrowing by NFCs began to slow in the final months of the year, in line with the cooling economy. Trade credits tracked or even surpassed the dynamics in Slovenia's merchandise imports in 2022, first by increasing in pace, then by slowing. The ratio of trade credits to GDP in Slovenia increased by just under 4 percentage points over two years of growth to reach 30% (see Figure 4.5 left). By contrast, financing via loans at Slovenian banks and at all creditors actually declined slightly as a ratio to GDP, despite strong nominal growth in the second half of 2022.

Figure 4.5: **Debt financing of NFCs**

Financing of NFCs via trade credits and loans

Demand for bank loans

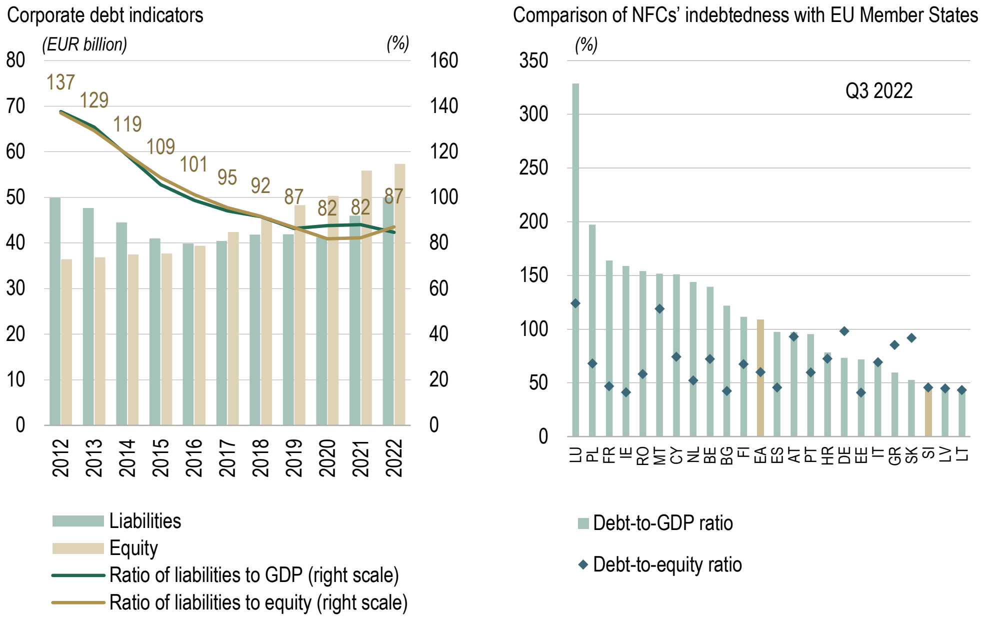


Sources: Banka Slovenije, BLS

Financing via bank loans increased at NFCs in numerous sectors, most notably driven by individual large enterprises in the months with the highest growth. Rising energy costs in 2022 meant that the largest increase in borrowing via loans was recorded by firms in the electricity, gas, steam and air conditioning supply sector, while firms in wholesale and retail trade also recorded strong growth. The growth in both sectors slowed in the final months of the year. Growth in loans to manufacturing and construction firms contrastingly picked up pace during this period. The borrowing in construction was driven primarily by good demand from the domestic market, where the outlook for the coming months remains favourable, while more uncertainties are present in manufacturing on account of cooling external demand.

The bank survey also points to reduced demand for loans in the second half of 2022 and a further slowdown in the early part of 2023. According to the BLS, the main decline in the second half of the year was in demand for loans for investment, while demand for loans for working capital increased (see Figure 4.5 right). There was consequently greater demand for short-term loans than for long-term loans. The trend is expected to have continued in the first months of 2023, according to assessments by the banks. The banks cite rising interest rates as a significant factor in the decline in demand from the second half of the year, but in so doing do not identify any increased demand for refinancing of existing loans.

Figure 4.6: **Indebtedness of NFCs in Slovenia and EU Member States**

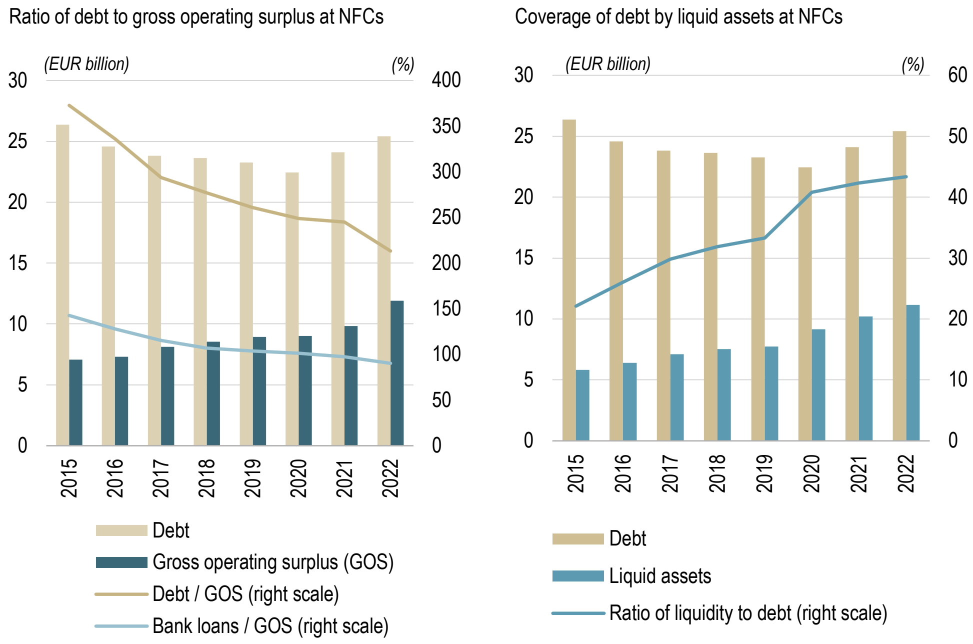


Note: The indicators in the left chart include all debt liabilities of NFCs. In the right chart comparing the indebtedness of NFCs in Slovenia with other EU Member States, debt includes only loans received and issued debt securities.
Sources: Banka Slovenije, ECB

Despite the increased borrowing, NFCs' other debt indicators remained favourable, both in relation to the pre-pandemic level, and in relation to the euro area average. Leverage ended the year at 87.0%, up 4.8 percentage points on 2021 (see Figure 4.6 left), which is nevertheless close to its level from 2019, before the major decline in borrowing in 2020. Alongside the growth in borrowing, another factor in the rise in leverage in 2022 was the lower growth in equity (see Figure 7.11 in the appendix). The inflow of equity into NFCs was actually larger than in the previous year (EUR 1.3 billion compared with EUR 0.8 billion). In terms of the debt-to-equity ratio and the ratio of debt to GDP, the Slovenian NFCs sector is still ranked among the least indebted in the euro area (see Figure 4.6 right).

NFCs' debt sustainability indicators improved further, but the risk in connection with debt servicing in the future is increasing as interest rates rise. Thanks to strong growth of 21.2% in the gross operating surplus in 2022, amid growth of 5.5% in debt, the ratio between them declined from 245% to 213% over the course of the year (see Figure 4.7 left). The debt servicing burden began to rise in the conditions of rising interest rates and the prevalence of variable remuneration. Sectors and firms whose operating costs are more sensitive to energy prices and prices of other input commodities are particularly exposed to default risk. The increased liquidity holdings built up at firms, partly thanks to support from government measures during the pandemic, constitute an important buffer against rising operating and finance costs, but only if they are at the disposal of those firms exposed to the risk of increased costs. Coverage of debt by liquid assets in the NFCs sector overall increased from 33% at the beginning of the pandemic to 43% at the end of 2022.

Figure 4.7: **NFCs' debt sustainability indicators**



Note: Debt includes all loans and debt securities.
Source: Banka Slovenije

Despite a small rise in certain sectors, the total number of bankruptcy proceedings initiated and current account freezes in 2022 was significantly below its level of 2019. There were slightly more bankruptcy procedures initiated in the sectors of transportation and storage, information and communication, arts, entertainment and recreation, and construction (see Figure 7.12 in the appendix), but in all these sectors the figures were well down on 2019, with the exception of transportation and storage, where the level from the year before the pandemic was surpassed. Last year the number initiated in the NFCs sector overall was down 26% on 2019. Similarly, the number of current account freezes suffered by NFCs in 2022 was down significantly (34%) on 2019, although it rose in numerous sectors compared with the previous year (see Figure 7.12 right).

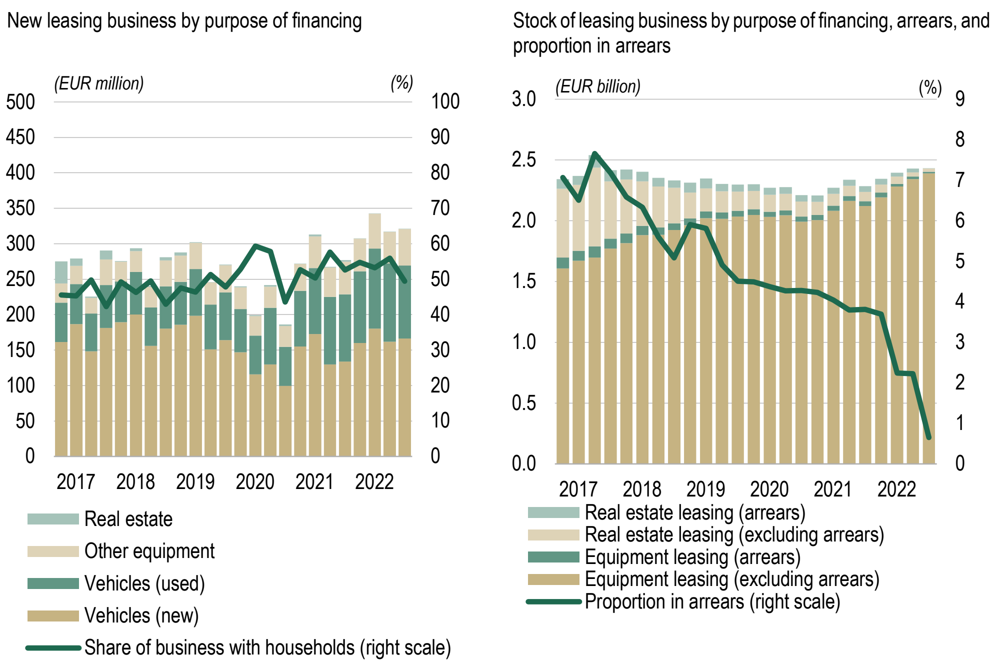
5 Non-Bank Financial Institutions

5.1 Leasing companies

The risks inherent in the performance of leasing companies remain moderate, with improving expectations for the coming quarters. Leasing companies approved more new business in 2022 than in the previous year, and the increase in new business was reflected in an increase into total assets. Total profit for leasing companies in 2022 were slightly lower than the previous year. Given the high inflation and rising interest rates, there was high growth in new fixed-rate loans. The banks' direct presence in finance leasing remains low, although they have strengthened their activity in this area.

Leasing companies strengthened their leasing activities in 2022, with finance leasing prevailing.[50] New business approved by leasing companies in 2022 was 6.3% higher than the previous year (see Figure 5.1 left). Equipment financing accounted for most of new business. In terms of the number of transactions cars (49.9%) and commercial vehicles and trucks (34.6%) accounted for the vast majority of the new business. The growth in new business was reflected in an increase in the leasing companies' total assets, which ended the year at EUR 2.9 billion, up 15.8% on the previous year. As a result of higher costs of labour, material and service costs, the total profit of the leasing companies in 2022 was down 3.9% on the previous year at EUR 48.1 million. The stock of leasing business increased by 6.5% in year-on-year terms to EUR 2.4 billion. The proportion of arrears of more than 90 days had declined to just 0.65% by the end of the year (see Figure 5.1 right).

Figure 5.1: **New leasing business and stock of leasing business**



Source: Banka Slovenije

The rise in interest rates led to a sharp increase in the number of new fixed-rate leases in 2022. While the number of new variable-rate loans remained at the same

[50] The leasing activities of leasing companies comprise finance leases, operating leases, and lending.

level as the previous year, the number of new fixed-rate loans increased by 53.9%. Fixed-rate loans were prevalent in new leasing business of shorter maturities (up to one year).

The banks also increased their financing of NFCS and households via finance leasing last year. New leasing business amounted to EUR 329.6 million in 2022, up 20.9% on the previous year. Households accounted for more than half of the new business, in which operations with an original maturity of five to seven years were prevalent. The growth in new business was also reflected in an increase in the stock of leasing business, which totalled EUR 572.2 million at the end of 2022, up 11.4% on the previous year. Stock of leasing business with households is the prevalent form. The banks' direct involvement in finance leasing business remains low: only three banks remain active in this area.

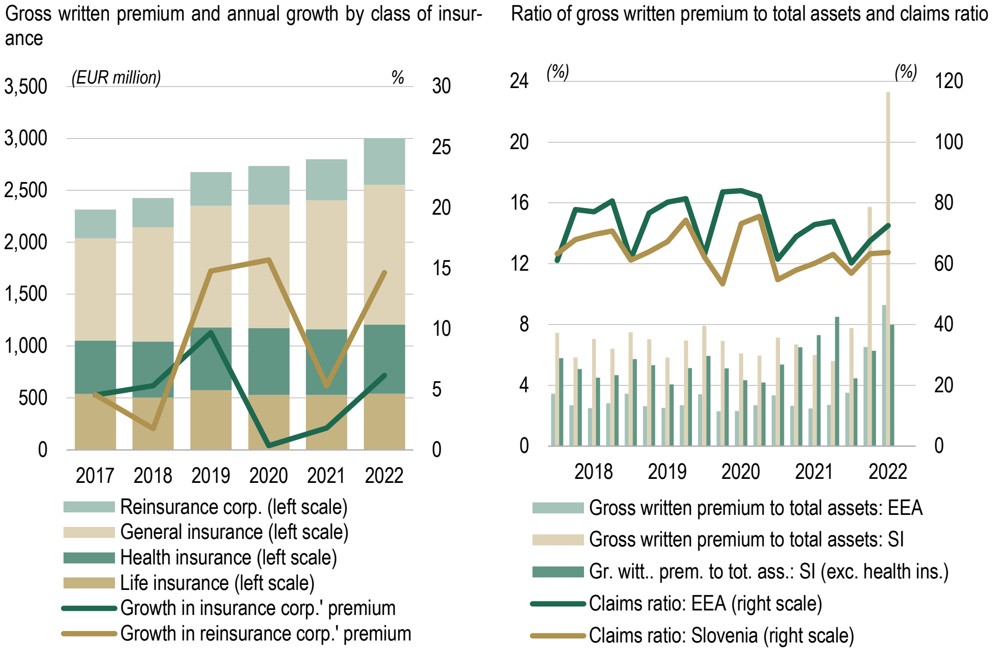
5.2 Insurers

Insurance corporations' gross written premium increased again in 2022, most notably in the general insurance segment. Insurance corporations saw a deterioration in their claims ratios in general insurance and health insurance, but an improvement in life insurance. Insurance corporations' profit in 2022 was down slightly on the previous year, but remained higher than in the past. The capital adequacy of insurance corporations in Slovenia remained high at the end of 2022.

Insurance corporations' gross written premium increased again in 2022, most notably in the general insurance segment. Gross written premium at insurance corporations in 2022 was up 6.2% on the previous year at EUR 2.6 billion (see Figure 5.2 left). The increase was driven by growth in gross written premium in general insurance (8.3%), but gross written premium in life insurance and health insurance also increased (by 2.5% and 5.0% respectively). Gross written premium at the reinsurance corporations in 2022 was up 14.6% on the previous year at EUR 452 million.

The ratio of gross written premium to total assets increased over the first three quarters of 2022 at insurance corporations in Slovenia and in the EEA overall. The ratio of gross written premium to total assets at Slovenian insurance corporations rose sharply in the second and third quarters of 2022 to reach 15.7%, or 23.3% excluding supplementary health insurance, while it stood at 9.3% at insurance corporations in the EEA overall (see Figure 5.2 right). The claims ratio at insurance corporations in Slovenia was also better than in the EEA overall. The claims ratio in the EEA deteriorated to 72.6% in the third quarter of 2022, while in Slovenia the figure was still around 63% (see Figure 5.2 right).

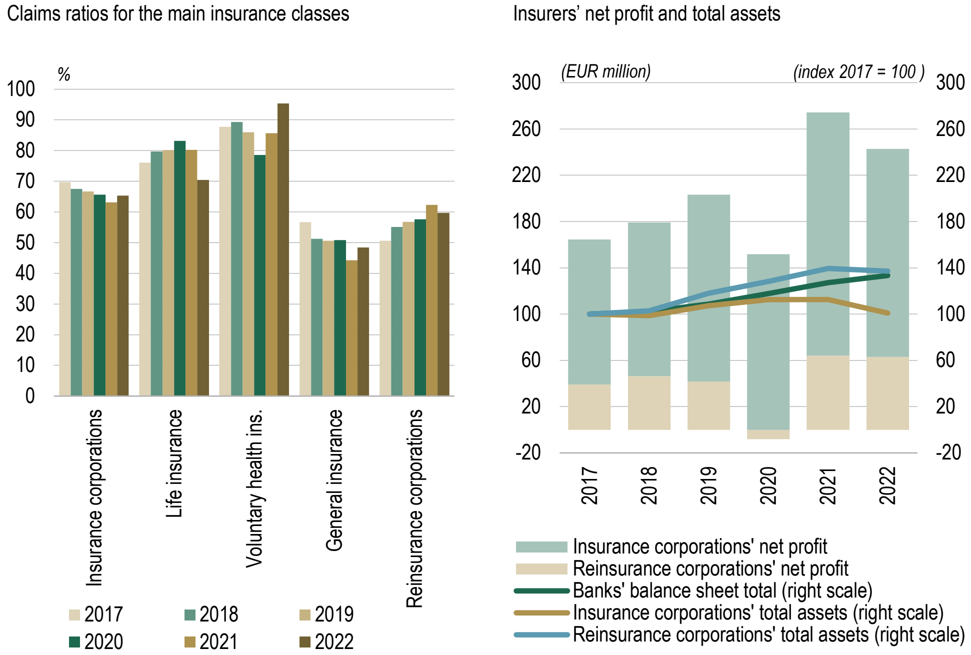
Figure 5.2: **Gross written premium and claims ratio**



Note: The data for gross written premium and the claims ratio is based on aggregate statistical reports until 2017 inclusive, and on Solvency II reporting after 2017. The calculation of the claims ratio takes account of the cumulative data for gross claims paid and gross written premium at the end of each quarter. Changes in prices of supplementary health insurance also had a significant impact on gross written premium in the health insurance segment in Slovenia, for which reason changes excluding this effect have also been shown. The data for the EEA is available to Q3 2022 inclusive.
Sources: ISA, EIOPA, Banka Slovenije, own calculations

The claims ratios at insurance corporations and reinsurance corporations deteriorated in 2022 compared with the previous year, as claims increased in value terms, in the general insurance segment largely as a result of high inflation. The claims ratio at insurance corporations stood at 65.3% in 2022, 2.2 percentage points worse than in the previous year, following a deterioration of 1.4 percentage points to 48.4% in the general insurance segment and an improvement of 9.8 percentage points to 70.4% in the life insurance segment (see Figure 5.3 left). The claims ratio in the health insurance segment deteriorated again, by 9.7 percentage points to 95.4%. The reinsurance corporations' gross claims ratio improved by 2.6 percentage points in 2022 to 59.6%.

Figure 5.3: **Claims ratio, net profit and total assets**



Note: Insurance data is based on Solvency II reporting. The exception is the data for profit, which is based on aggregated data.
Sources: ISA, Banka Slovenije

Insurance corporations' profit in 2022 was down on the previous year, but remained higher than in past years, while the reinsurance corporations' profit remained virtually unchanged from the previous year. Insurance corporations' profit declined by 14.4% to EUR 180 million (see Figure 5.3 right), following falls in profit in the general insurance and life insurance segments (of 26.5% and 28.1% respectively), while there were increases in income from assets in the form of dividend income and other profit distributions at undertakings in the group. The main factor in the decline in profit was an increase in claims, while the partial release of the claims reserve created in previous years acted to raise profit. The reinsurance corporations' profit in 2022 was virtually unchanged from the previous year at EUR 62.9 million. Insurance corporations' total assets at the end of 2022 were down 10.3% in year-on-year terms at EUR 7.2 billion, while the reinsurance corporations' total assets were down 1.6% in year-on-year terms at EUR 1.3 billion.

The capital adequacy of insurance corporations in Slovenia remained high at the end of 2022. The median capital adequacy with regard to solvency capital (SCR coverage ratio) at insurance corporations operating in Slovenia stood at 202.7% in the final quarter of 2022, down 3.2 percentage points in year-on-year terms. The median SCR coverage ratio in Slovenia remained higher than in the EEA overall in the third quarter of 2022 (231.6% in Slovenia, versus 221.7% in the EEA). The median capital adequacy with regard to minimum consolidated capital (MCR coverage ratio) in Slovenia stood at 642.3% in the final quarter of 2022, down 9.1 percentage points in year-on-year terms, but remained higher than the median MCR coverage ratio in the EEA overall of 594.1% (see Figure 7.17 in the appendix).

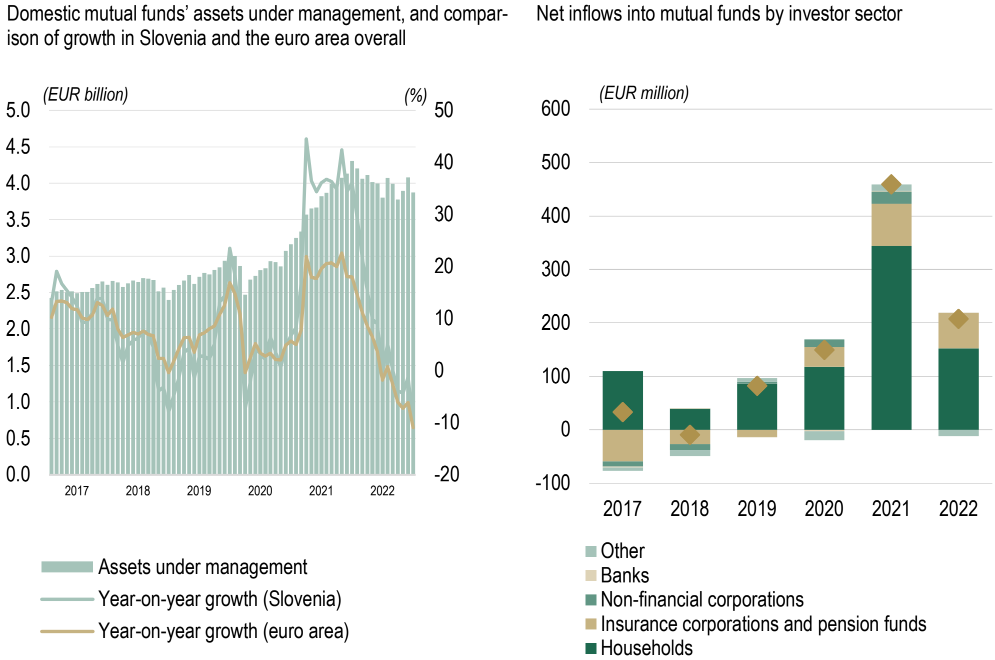
5.3 Mutual funds

As a result of inflationary pressures and market uncertainty, government bond yields in Europe and the US rose in 2022, while global stock markets fell. The domestic mutual funds saw a year-on-year decline in their assets under management, in which the revaluation of equity funds was the largest factor. Net inflows

remained positive, despite increased volatility and high market uncertainty. Meanwhile, investment funds in the euro area overall recorded net outflows. The net outflows were particularly notable in the case of bond funds, which were also the only fund class to record net outflows in Slovenia.

The domestic mutual funds' assets under management declined in 2022 as a result of a decline in share indices and an increase in bond yields in Europe and the US. Assets under management totaled EUR 3.9 billion at year-end, down 10.0% year-on-year (see Figure 5.4 left). The decline in assets under management was driven by the revaluation of equity funds, which accounted for 65.6% of the domestic mutual funds' total assets under management in 2022. Despite the increased volatility and high uncertainty in financial markets, net inflows into the domestic mutual funds remained positive (see Figure 5.4 right). This was not the case for investment funds in the euro area overall, which recorded net outflows in 2022. Compared to the domestic mutual funds, euro area investment funds have greater exposure to bond funds, which also recorded net outflows in Slovenia. The domestic mutual funds also recorded a significant decline in net inflows: in 2022 they were down 54.9% on the previous year. The net inflows of EUR 207.3 million came primarily from households (73.4% of the total), with equity funds accounting for the majority of the inflows (72.0%). The only fund class in Slovenia that recorded net outflows in 2022 was bond funds. The net outflows from bond funds were attributable to the strong inflationary pressure, which is driving faster monetary policy tightening, which in turn is causing bond yields to rise.

Figure 5.4: **Mutual funds' assets under management and net inflows**



Note: The left chart does not include money-market funds.
Sources: ECB SDW, Banka Slovenije

The domestic mutual funds hold most of their assets in equity and investment fund shares/units. Compared with the euro area overall, where a significantly higher proportion of assets is held in debt securities, the domestic mutual funds are more exposed to changes in share indices. The domestic mutual funds' equity holdings have their largest exposure to public limited companies in the US (46.6% of the total) and in euro area countries (21.3%). Holdings of debt securities account for 17.9% of the domestic mutual funds' assets under management, and mainly concentrated in euro area countries (71.9% of the total). Non-residents’ holdings in the domestic mutual funds decreased by almost 16.7% on the previous year.

6 Macroprudential policy for the banking system and leasing companies

The macroeconomic and financial environment in Slovenia and across Europe is subject to huge uncertainty, which is increasing the likelihood of the materialisation of various macrofinancial risks. EU Member States have a number of macroprudential instruments at their disposal that can be used and tailored with regard to the systemic risks identified. They are introduced and adjusted with the aim of protecting the financial system. Macroprudential instruments can broadly be divided into those that affect bank capital, those that affect borrowers, and those that relate to adequate liquidity in the banking system. The macroprudential instruments affecting bank capital are designed to build the banking system's resilience, while those affecting borrowers put minimum credit standards in place and can limit excessive credit growth. Certain macroprudential instruments are used in the same form across EU Member States, while other instruments might differ and are designed with regard to the specifics of the banking system in the country in question or with regard to the systemic risk assessment.

Banka Slovenije macroprudential policy

Macroprudential policy is used to identify, monitor and assess systemic risks to financial stability, with the aim of safeguarding the stability of the entire financial system. The ultimate objective of macroprudential policy is to ensure that the financial sector makes a lasting contribution to economic growth, and Banka Slovenije is therefore responsible for developing and implementing macroprudential measures for the banking sector and leasing companies. The legal basis for the implementation of macroprudential policy consists of the Capital Requirements Regulation (CRR), the Banking Act (ZBan-3) and the Macroprudential Supervision of the Financial System Act (ZMbNFS).

The process of formulating and implementing macroprudential policy can be divided into four interconnected phases:

1. the identification and assessment of systemic risks,
2. the selection and formulation (calibration) of the macroprudential instrument,
3. the implementation of the macroprudential instrument,
4. the evaluation of macroprudential policy and the macroprudential instrument.

Systemic risks are disruptions to the financial system that could have serious adverse consequences for the functioning of the financial system and the real economy. We use a set of indicators to monitor the evolution of systemic risks, and also to assess the attainment of the individual intermediate objectives of macroprudential policy, which are:

- to mitigate and prevent excessive credit growth and excessive leverage,
- to mitigate and prevent excessive maturity mismatch and market illiquidity,
- to limit direct and indirect exposure concentrations,
- to limit the systemic impact of misaligned incentives with a view to reducing moral hazard,
- to strengthen the resilience of financial infrastructures.

If the level of systemic risks is assessed as elevated or there is a risk of the intermediate macroprudential policy objectives not being attained, Banka Slovenije can opt to impose various macroprudential measures. The selection and calibration depend primarily on the level and source of the risk, and follow the principles described in the Strategic Framework for Macroprudential Policy. Once selected and calibrated, the instrument is implemented and subjected to assessments of its effectiveness. A macroprudential measure is successful if it contributes to the attainment of the intermediate macroprudential policy objectives, and indirectly helps to reduce systemic risks.

Implemented macroprudential measures may also have adverse cross-border effects, and can be the subject of avoidance. This makes cross-border cooperation extremely important. The European Systemic Risk Board is involved in the coordination of macroprudential policy at the European level. It is also responsible for issuing recommendations on the reciprocity of macroprudential measures. It can issue recommendations and warnings to national macroprudential authorities and other European bodies.

Banka Slovenije macroprudential instruments

Banka Slovenije currently has four macroprudential instruments in force. There are the other systemically important institutions buffer (O-SII buffer), the countercyclical capital buffer (CCyB) and the two sectoral systemic risk buffers (SyRB), which increase the resilience of the banking system by requiring banks to hold a higher level of capital. In addition to the macroprudential instruments based on capital requirements, macroprudential restrictions on household lending are also in force: they provide for minimum credit standards, and were introduced on account of the high growth in consumer loans and the relaxation of credit standards.

Table 6.1: **Banka Slovenije macroprudential measures**

Macroprudential measure	Year of introduction/change	Type	Intermediate objective	Assessment of achievement of objective
Macroprudential restrictions on household lending (LTV, DSTI, caps on maturity)	2016*/2018**/2019*** /2020****/2022*****	BINDING	To mitigate and prevent excessive credit growth and excessive leverage	Growth in consumer loans has slowed, and credit standards have improved in the approval of consumer loans and housing loans
O-SII buffer	2016	BINDING	To limit the systemic impact of misaligned incentives with a view to reducing moral hazard	Higher resilience as a result of higher requirements for common equity Tier 1 capital, which was not binding on the banks
Countercyclical capital buffer	2016/2022******	BINDING	To mitigate and prevent excessive credit growth and excessive leverage	Given the state of the credit/financial cycle, the buffer rate is set at 0.5% as of 31 December 2023
Sectoral systemic risk buffers	2022*******	BINDING	(a) to mitigate and prevent excessive credit growth and excessive leverage (b) to limit direct and indirect exposure concentrations	Assessment not yet available

Source: Banka Slovenije
* A recommendation with regard to LTV and DSTI was introduced in 2016 for housing loans.
** In 2018 the macroprudential recommendation was extended to consumer loans, to which a cap on maturity also applied alongside the cap on DSTI.
*** The caps on DSTI and maturity became a binding macroprudential instrument in 2019.
**** In response to the Covid-19 pandemic, adjustments were made to the cap on DSTI in 2020, allowing the banks under certain conditions to exclude the temporary loss of income during the pandemic when calculating DSTI.
***** Additional changes to the existing restrictions on household lending entered into force on 1 July 2022.
****** At the end of 2022 the Governing Board of Banka Slovenije approved an increase in the countercyclical capital buffer rate from zero to 0.5%, with the banks obliged to meet the requirement as of 31 December 2023.
******* The two sectoral systemic risk buffers were introduced in 2022, and entered into force on 1 January 2023.

Macroprudential policy was adjusted in late 2022 to address the risks relating to the increase in cyclical systemic risks. Given the high growth in residential real estate prices, the strengthened growth in credit to the private non-financial sector, and the huge uncertainty in the macroeconomic environment, the countercyclical capital buffer for exposures to Slovenia was raised in the third quarter from zero to 0.5% of the total risk exposure amount. Banks need to meet the countercyclical capital buffer requirement as of 31 December 2023.[51]

The Regulation on macroprudential restrictions on household lending was adjusted last year, the adjustments entering into force on 1 July 2022. The Regulation on macroprudential restrictions on consumer lending (Official Gazette of the Republic of Slovenia, No. 60/22) was adopted in the first half of the year, and adjusted and augmented the existing macroprudential restrictions introduced by the Regulation on macroprudential restrictions on household lending (Official Gazette of the Republic of Slovenia, Nos. 64/19 and 75/20). The conditions for approving allowable exemptions from the cap on DSTI were adjusted. Following the change, banks are also able to class loans where the consumer is left with less than 76% of the gross minimum wage plus the amount for (possible) dependent family members after paying the debt servicing costs as exemptions. The additional risks that might arise as a result of this adjustment were addressed by the introduction of two sectoral systemic risk buffers. The regulation also set out other changes. Bridge loans secured by financial instruments (also known as Lombard loans) are excluded from the cap on DSTI. These loans are still subject to a cap on maturity of three years, and a cap on LTC, which may not exceed 70% at origination. These restrictions do not apply to credit agreements for residential real

[51] For more information on the reasons for raising the countercyclical capital buffer, see the Banka Slovenije website.

estate backed by government guarantee. An alternative approach to calculating creditworthiness was introduced for those working as sole traders with standardised business expenses and who apply for loans as consumers, on the basis of actual revenues and expenses cited in financial statements (if available), minus taxes and contributions. The new regulation also changed the approach to calculating the quota of allowed exemptions. This is calculated with regard to loans that comply with the macroprudential restrictions and were approved in the previous quarter (not the current quarter any longer).

The macroprudential restrictions on consumer lending have helped to maintain stable credit standards in recent years. The average LTV has declined by 6.6 percentage points over the last two years to reach 58.5%. The share of loans where the recommended LTV is exceeded has also declined over the observation period. The recommended LTV was exceeded for 9.1% of all housing loans approved in the final quarter of 2022.[52] The DSTI for housing loans has increased slightly over the last two years, partly as a result of higher interest rates, particularly in the second half of 2022. The average maturity of housing loans remains stable at 18.5 years. The DSTI for consumer loans increased slightly, while the average maturity remains stable at 6.2 years. The banks made only limited use of their allowed exemptions in the past. The level of deviations from the cap on DSTI averaged 5.1% for housing loans in 2021, and 3.8% in 2022. The level of deviations from the cap on DSTI averaged 6.2% for consumer loans in 2021, and 4.8% in 2022. The banks are slightly more active in the use of exemptions with regard to the cap on maturity. An average of 10.2% of consumer loans in 2021 and 9.8% in 2022 had a maturity of more than seven years.

Table 6.2: **Average values of selected parameters for housing loans and consumer loans, and level of deviations from macroprudential instruments**

(level of deviations expressed as weighted average)*	2019***	2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
					Housing loans					
LTV	67.7%	67.6%	65.1%	63.5%	62.8%	63.4%	61.8%	60.0%	57.8%	58.5%
Level of deviations in LTV	20.0%	15.7%	10.8%	10.3%	10.1%	10.8%	10.3%	9.9%	13.4%	9.1%
DSTI	32.1%	29.9%	30.7%	30.8%	31.4%	31.3%	31.3%	31.5%	32.8%	33.2%
Level of deviations in DSTI	15.7%	4.9%	9.7%	3.1%	3.7%	4.0%	6.9%	2.8%	2.4%	3.2%
Average maturity**	19.1	19.3	19.2	18.6	18.7	18.6	18.6	18.3	18.6	18.6
					Consumer loans					
DSTI	26.4%	24.6%	25.8%	25.4%	26.0%	26.1%	25.8%	25.8%	26.2%	26.2%
Level of deviations in DSTI	21.8%	4.3%	11.7%	4.7%	4.0%	4.2%	6.0%	1.3%	3.1%	4.7%
Average maturity**	6.5	5.8	6.1	6.2	6.2	6.2	6.2	6.2	6.1	6.2
Level of deviations in maturity	2.3%	5.8%	10.2%	10.0%	10.3%	10.1%	10.3%	9.6%	9.5%	9.8%

* Calculated level of deviations based on data from regular reporting. As of Q2 2022 the level of deviations is calculated with regard to the total amount of loans approved in the previous quarter that complied with the macroprudential measures. Prior to this the level of deviations had been calculated with regard to the total amount of loans approved in the same quarter.
** Maturity in years.
*** The instruments capping DSTI and maturity (for consumer loans) only became binding on 1 November 2019. The maximum maturity was reduced at that time from ten years to seven years.

[52] The level of deviations from the LTV recommendation was calculated in the final quarter of 2022 as the ratio of the sum of all loans where the recommended LTV was exceeded to the sum of all loans secured by residential real estate.

Two sectoral systemic risk buffers entered into force on 1 January 2023, with the aim of addressing the risks inherent in the real estate market and the increase in household lending, and covering the exemptions deriving from the Regulation on macroprudential restrictions on consumer lending. Sectoral systemic risk buffers are thus being introduced for: (i) all retail exposures to natural persons secured by residential real estate, with a rate of 1.0%, and (ii) all other exposures to natural persons other than the aforementioned, with a rate of 0.5%.

Article 242 of the Banking Act (Official Gazette of the Republic of Slovenia, Nos. 92/21 and 123/21 [ZBNIP]) stipulates that at least once a year Banka Slovenije should verify the fulfilment of O-SII criteria and the appropriateness of O-SII buffer rates.[53] The scores achieved in the assessment of systemic importance were the main decision-making criterion in setting the O-SII buffer rate and classifying banks to categories that are assigned the same buffer. Banka Slovenije follows the EBA methodology in its identification of O-SIIs.

Review of macroeconomic policy across Europe

Many EU Member States opted for an increase in the countercyclical capital buffer in 2022 (see Table 6.3). A total of 12 euro area countries have a positive countercyclical capital buffer rate, with these becoming effective during 2023 or at the beginning of 2024. The countercyclical capital buffer was raised in Cyprus and Ireland in a positive-neutral manner, with the aim of increasing the banking system's resilience during a period when cyclical systemic risks are neither in subdued nor elevated.[54] Additionally a number of countries have raised their countercyclical capital buffer rate in recent months as a result of the uncertainty surrounding the economic and financial environment (e.g. Croatia, France). This is indicative of the latest trend in macroprudential policy in Europe, where uncertainty in the macrofinancial environment alone cannot be a factor that would primarily drive action (or inaction) on the part of the supervisory institutions and competent authorities. There is an evident trend of a growing number of European countries favouring expert judgment over mere mechanistic approaches to setting the countercyclical capital buffer rate. Consequently more and more countries are considering a positive countercyclical capital buffer rate in a neutral environment, which might lead to competent authorities building the banking system's resilience even when there is no excessive increase in cyclical systemic risk under their jurisdiction, or to cyclical systemic risks being addressed in the early phase of their increase.

Measures to restrict household lending or borrower-based measures (BBMs) have also become quite widespread now in various countries (see Table 6.3). The most common instruments to restrict household lending are the caps on LTV and DSTI. Countries also often opt for caps on the maturity of consumer loans or housing loans. Direct comparison of the DSTI measure between countries is difficult, as the definitions of income and total debt servicing costs for calculating the DSTI vary from country to country. Countries also use different definitions of the allowed exemptions from macroprudential measures, different exemption levels, and differences in their calculation.

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[53] For more on O-SII buffers, see: Capital buffer for other systemically important institutions on the Banka Slovenije website.

[54] A positive-neutral rate is understood as a countercyclical capital buffer rate that is in force irrespective of the intensity of cyclical systemic risks. A positive-neutral rate allows the banking system to have sufficient capital to release in the event of unforeseen external shocks, such as the Covid-19 pandemic. The countries that apply a positive-neutral rate are Austria, Cyprus, Czechia, Estonia, Ireland, Lithuania, the Netherlands, Sweden and the UK. The countercyclical capital buffer is being raised in Ireland, with a target rate of 1.5%, which the competent authorities consider a neutral rate.

Regulatory changes within the framework of the CRR2/CRD5 have allowed for greater flexibility in the use of sectoral systemic risk buffers (including exposures secured by residential real estate). The current regulatory framework is also less restrictive with regard to the scope of risks that can be addressed by a systemic risk buffer, as the reference to preventing and mitigating “long-term non-cyclical systemic risk” has been removed. In this context the macroprudential authorities in Belgium, Germany and Lithuania have opted to use a sectoral systemic risk buffer in addition to Banka Slovenije. According to the experience to date, the main purpose of introducing a new buffer is to increase resilience to the risks inherent in exposures to the residential real estate market, where existing macroprudential measures have been taken into account.

While Banka Slovenije’s two sectoral buffers largely address the risks inherent in changes in macroprudential restrictions on consumer lending that were introduced this year, and to a lesser extent the risks inherent in the real estate market, the main objective of the systemic risk buffers in Germany and Lithuania is to increase the financial sector’s resilience to elevated risks on the real estate market. By introducing a sectoral systemic risk buffer, national authorities avoid any double counting of broader systemic risks (including risks on the real estate market) addressed by the countercyclical capital buffer. In Belgium’s case the sectoral systemic risk buffer replaced a previous measure based on Article 458 of the CRR, which set out a premium and a multiplier for the risk weight for exposures secured by residential real estate.

Table 6.3: **Countercyclical capital buffer rates, systemic risk buffer rates and other macroprudential instruments by country**

	Countercyclical capital buffer		Sectoral systemic risk buffer associated with real estate risk		Other capital measures		Restrictions on lending
Country	Rate	Date of introduction	Rate	Date of introduction	Application of Article 124/164 of CRR to exposures secured by residential real estate	Application of Article 458 of CRR for risks inherent in real estate market	Type of measure****
Austria	0%	01.01.2016					Cap on maturity, DSTI, LTV
Belgium	0%	01.04.2020	9.0%*	01.05.2022		X***	LTV
Bulgaria	0.5%	01/04/2020					
	1.0%	01/10/2022					
	1.5%	01/01/2023					
	2.0%	01/10/2023					
Cyprus	0%	01/01/2016					DSTI, LTV
	0.5%	30/11/2023					
Czechia	0.5%	01/07/2020					Cap on maturity, DTI, DSTI, LTV, loan amortisation
	1.0%	01/07/2022					
	1.5%	01/10/2022					
	2.0%	01/01/2023					
	2.5%	01/04/2023					
Denmark	1.0%	30/09/2022					LTV, LTI
	2.0%	31/12/2022					
	2.5%	31/03/2023					
Estonia	1.0%	07/12/2022	2.0%	01.07.2022		X	Cap on maturity, DSTI, LTV
	1.5%	01/12/2023					
Finland	0%	16.03.2015					LTC
France	0.5%	07/04/2023					Cap on maturity, DSTI
	1%	02/01/2024					
Greece	0%	01.01.2016					
Croatia	0.5%	31/03/2022			X**		
	1.0%	31/12/2023					
Ireland	0.5%	15/06/2023					LTV, LTI
	1.0%	24/11/2023					
Iceland	2.0%	29.09.2022					DSTI, LTV
Italy	0%	01.01.2016					
Latvia	0%	01.02.2016					Cap on maturity, DSTI, LTV, LTI
Lichtenstein	0%	01.07.2019	1.0%	01.05.2022	X		LTV, loan amortisation
Lithuania	0%	01/04/2020	2.0%	01.07.2022			Cap on maturity, DSTI, LTV
	1.0%	01/10/2023					
Luxembourg	0.5%	01.01.2021					LTV
Hungary	0%	01.01.2016					DSTI, LTV
Malta	0%	01.01.2016			X		Cap on maturity, DSTI, LTV
Germany	0.75%	01.02.2023	2.0%	01.02.2023			
Netherlands	1.0%	25.05.2023					Cap on maturity, LTV
Norway	1.0%	13/05/2020				X**	LTV, DTI, loan amortisation, exemptions from caps
	1.5%	30/06/2022					
	2.0%	31/12/2022					
	2.5%	31/03/2023					
Poland	0%	01.01.2016			X**		Cap on maturity, DSTI, LTV
Portugal	0%	01.01.2016					Cap on maturity, DSTI, LTV
Romania	0.5%	17.10.2022					Cap on maturity, DSTI, LTV
Slovakia	1.0%	01/08/2020					Cap on maturity, DTI, loan amortisation
	1.5%	01/08/2023					
Slovenia	0.0%	01/01/2016	0.5% (consumer loans)	01.01.2023	X		Cap on maturity, DSTI, LTV
	0.5%	31/12/2023	1.0% (other loans)				
Spain	0%	01.01.2016					
Sweden	1.0%	29/09/2022				X	LTV, loan amortisation
	2.0%	22/06/2023					

* The buffer replaces the measure under Article 458 of the CRR that allows a rise in risk weight in the event of a real estate bubble.
** Higher risk weights are also applied to exposures to commercial real estate.
*** The measure was activated until 30 April 2022, and as of 1 May 2022 was replaced by the sectoral systemic risk buffers.
**** Includes binding measures and recommendations. The measures cited apply to consumer loans and to housing loans.

Figures

Tables

7 Appendices

Table 7.1: **Risk and resilience dashboard (description of risks, resilience and factors)**

Risk and resilience dashboard	Description	Indicators
Risk inherent in the real estate market	The risk inherent in the real estate market primarily relates to high rates of growth in real estate prices, which increase the banking sector's exposure, and also the possibility of a large negative revaluation of real estate collateral during a crisis.	Growth in prices, sales and loans for residential and commercial real estate, indicators of real estate overvaluation, construction sector indicators, LTV, LTC and DSTI.
Funding risk	Funding risk is the risk of the potential instability of funding or the sudden outflow of individual classes of funding from the banking system, and depends on the maturity of the funding.	Funding structure, developments in deposits by the non-banking sector, particularly household deposits and deposits by non-financial corporations, LTD, changes in the maturity breakdown of deposits by the non-banking sector, residual maturity gap between assets and liabilities.
Interest rate risk	Interest rate risk is the risk of investment losses as a result of changes in interest rates, and comes from the maturity mismatch between assets and liabilities that have a fixed interest rate, and from the repricing gap between assets and liabilities.	The main indicator for monitoring interest rate risk is the repricing gap between asset and liability interest rates, where the most important factor for liability interest rates is the assumption about the stable component of sight deposits. Other indicators are: the average repricing period for asset interest rates, the average repricing period for liability interest rates, the share of new loans and existing loans accounted for by fixed-rate loans, and the average maturity of new loans and existing loans.
Credit risk	Credit risk is the risk of loss resulting from the failure of a debtor to settle their liabilities to the creditor, and comes from the debtor's inability to meet their financial liabilities by the agreed deadline, which may be temporary (illiquidity) or permanent (insolvency).	The main indicators are NPE ratios, the breakdown of exposures into credit risk stages, credit parameters (default rates, probabilities of default, transition rates), and coverage of NPEs and performing exposures by impairments, provisions and collateral. Moratoria and arrears in settlement of past-due instalments previously subject to a moratorium are also significant indicators in the current pandemic.
Income risk	Income risk is the risk to the generation of adequate income by banks, and is based on developments in components of income generation and cost control.	The main indicators follow the generation and disposal of income, to the point of net income: net interest margin, net non-interest margin, net commission margin, gross income, developments in operating costs, CIR, developments in net income.
Risk inherent in leasing companies	The risk inherent in leasing companies is the risk of the generation of operating losses caused by a decline in turnover, the build-up of arrears of more than 90 days, and the potential spillover of adverse consequences into other sectors.	New business, stock of business, arrears of more than 90 days, other performance indicators of leasing companies (ROE, ROA, debt-to-equity ratio).
Solvency and profitability of the banking system	Resilience from the perspective of the capital position is the ability to absorb adverse effects or losses that would occur during a stress event, while from the perspective of profitability it is a sustainable source of capital adequacy.	Total capital ratio and CET1 ratio (both ratios on an individual and a consolidated basis), leverage ratio, capital surplus over the overall capital requirement (as a percentage of RWA), contribution of individual components to the change in the total capital ratio and CET1 ratio, ROE, ROA, ratio of impairment and provisioning costs to gross income and ratio of impairment and provisioning costs to net income.
Liquidity of the banking system	Resilience from the perspective of liquidity is the ability to repay all due liabilities, and the ability to absorb the adverse effects that would follow in the event of the realisation of funding risk.	LCR, developments in the ratio of primary and secondary liquidity to the balance sheet total, proportion of the pool of eligible collateral at the Eurosystem that is free.
Cyber risk	Cyber risk can be defined as a combination of the probability of cyber incidents and their potential impact on banking (which might be realised in the form of interruptions to business, financial losses, or the transmission of risk to other sectors). Cyber resilience is the capacity of a bank or any other financial institution to realise its mission statement through the anticipation and management of cyber risks, and fast recovery from cyber incidents.	Number of cyber incidents, direct and indirect financial losses, mean time to contain (minutes), market concentration of outsourced IT services (%), number of phishing and DDoS attacks, share of budget for IT security (bank self-assessment), number of devices with obsolete software, and number of outsourced IT service providers.
Climate risks	Climate risks can be defined as the physical risks inherent in the direct and indirect costs of loss events related to weather, and the transition risks inherent in the structural changes in the shift to sustainable economies, as a result of changes in consumer preferences, environmental policy or technology.	Weighted emissions intensity, loan carbon intensity, portfolio tilt to polluting sectors, share of portfolio exposure to climate-sensitive sectors, NPE ratio in climate-sensitive sectors, NPE concentration in climate-sensitive sectors.

Source: Banka Slovenije

Table 7.2: **Slovenian banking system balance sheet for selected time snapshots, 2004 to 2022**

	Stock, EUR million unless stated										Increase, EUR million				Year-on-year change, %	
	2004	Breakdown (%)	2008	Breakdown (%)	2013	2020	2021	Breakdown (%)	2022	Breakdown (%)	2019	2020	2021	2022	2021	2022
Assets																
Cash on hand, balance at central bank	592	2.5	1,250	2.6	2,452	8,825	11,495	23.8	10,445	20.7	1,070	3,042	2,671	-1,051	30.3	-9.1
Loans to banks	2,156	9.1	4,101	8.6	3,986	1,492	1,544	3.2	1,665	3.3	-5	-100	52	121	3.5	7.8
Loans to non-banking sector	**12,947**	**54.4**	**33,718**	**70.3**	**24,359**	**23,561**	**25,045**	**51.9**	**27,538**	**54.4**	**1,283**	**42**	**1,484**	**2,493**	**6.3**	**10.0**
of which to non-financial corporations	8,147	34.2	20,260	42.3	11,508	8,750	9,300	19.3	10,487	20.7	407	-127	550	1,187	6.3	12.8
of which to households	3,262	13.7	7,558	15.8	8,467	10,712	11,263	23.3	12,138	24.0	625	9	551	875	5.1	7.8
Financial assets / securities	7,013	29.4	7,307	15.2	8,318	8,958	8,355	17.3	8,759	17.3	-32	120	-603	404	-6.7	4.8
Other	1,112	4.7	1,572	3.3	1,229	1,815	1,811	3.8	2,168	4.3	120	335	-4	357	-0.2	19.7
Equity and liabilities																
Financial liabilities to Eurosystem	0	0.0	1,229	2.6	3,727	1,380	2,344	4.9	758	1.5	-109	397	964	-1,586	69.9	-67.6
Liabilities to banks	4,719	19.8	18,168	37.9	7,729	2,378	1,716	3.6	2,034	4.0	-372	-443	-663	318	-27.9	18.6
of which to domestic banks	435	1.8	2,065	4.3	2,381	799	649	1.3	600	1.2	-2	-57	-150	-49	-18.8	-7.6
of which to foreign banks	4,254	17.9	16,098	33.6	5,348	1,579	1,066	2.2	1,434	2.8	-370	-386	-513	368	-32.5	34.5
Liabilities to non-banking sector (deposit	**14,906**	**62.6**	**20,883**	**43.6**	**22,550**	**34,281**	**37,185**	**77.1**	**39,756**	**78.6**	**2,091**	**3,212**	**2,904**	**2,571**	**8.5**	**6.9**
of which to non-financial corporations	2,667	11.2	3,728	7.8	4,196	8,031	8,998	18.6	9,710	19.2	-31	1,273	967	712	12.0	7.9
of which to households	9,904	41.6	13,407	28.0	14,365	22,437	23,953	49.6	25,784	51.0	1,631	2,072	1,516	1,832	6.8	7.6
Debt securities	973	4.1	1,276	2.7	1,657	1,058	1,250	2.6	2,066	4.1	452	458	191	817	18.1	65.4
Provisions	0	0.0	176	0.4	306	186	151	0.3	142	0.3	-16	-2	-34	-10	-18.4	-6.5
Shareholder equity	1,896	8.0	4,010	8.4	3,670	4,805	5,061	10.5	5,153	10.2	237	-158	256	93	5.3	1.8
Other	1,326	5.6	2,206	4.6	704	564	545	1.1	665	1.3	154	-25	-19	120	-3.3	22.1
Balance sheet total	**23,820**		**47,947.9**	**100.0**	**40,343.6**	**44,651**	**48,252**	**100.0**	**50,575**	**100.0**	**2,437**	**3,438**	**3,600**	**2,323**	**8.1**	**4.8**

Source: Banka Slovenije

Table 7.3: **Slovenian banking system income statement, 2018 to 2022**

	Amount, EUR million					Year-on-year growth, %					Ratio to gross income, %					
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2014	2018	2019	2020	2021	2022
Net interest	672	683	639	625	748	3.0	1.6	-6.4	-2.2	19.6	60.7	58.2	54.4	47.0	51.9	56.9
Non-interest income	482	573	721	580	567	14.1	19.1	25.7	-19.5	-2.3	39.3	41.8	45.6	53.0	48.1	43.1
of which fees and commission	315	334	330	377	398	0.6	5.8	-1.2	14.4	5.5	29.2	27.3	26.6	24.2	31.3	30.3
of which net trading gain/losses	13	12	16	18	31	-56.0	-6.9	31.8	10.8	76.4 .	2.8	1.1	1.0	1.2	1.5	2.4
Gross income	1153	1256	1360	1206	1315	7.4	8.9	8.3	-11.4	9.1	100.0	100.0	100.0	100.0	100.0	100.0
Operating costs	-669	-709	-718	-717	-758	-0.6	5.9	1.3	-0.2	5.6	-62.7	-58.0	-56.5	-52.8	-59.5	-57.6
labour costs	-390	-401	-386	-398	-413	2.2	2.8	-3.6	3.0	3.7	-35.5	-33.8	-31.9	-28.4	-33.0	-31.4
Net income	484	547	642	489	558	20.8	13.0	17.3	-23.9	14.1	37.3	42.0	43.5	47.2	40.5	42.4
net impairments and provisions	47	46	-170	74	-14	10.1	-2.8	-470.8	-143.4	-119.2	4.0	4.1	3.6	-12.5	6.1	-1.1
of which at amortised cost	68	60	-133	72	-23		-12.9	-323.8	-153.8	-131.8	0.0	5.9	4.7	-9.8	6.0	-1.7
Pre-tax profit	**531**	**593**	**472**	**562**	**543**	**19.8**	**11.6**	**-20.3**	**19.1**	**-3.3**	**41.3**	**46.0**	**47.2**	**34.7**	**46.6**	**41.3**
corporate income tax	-36	-62	-22	-37	-42	93.4	73.9	-65.0	70.1	13.1	-1.7	-3.1	-4.9	-1.6	-3.1	-3.2
Net profit	495	531	450	525	502	16.6	7.1	-15.1	16.6	-4.5	39.5	42.9	42.2	33.1	43.6	38.1

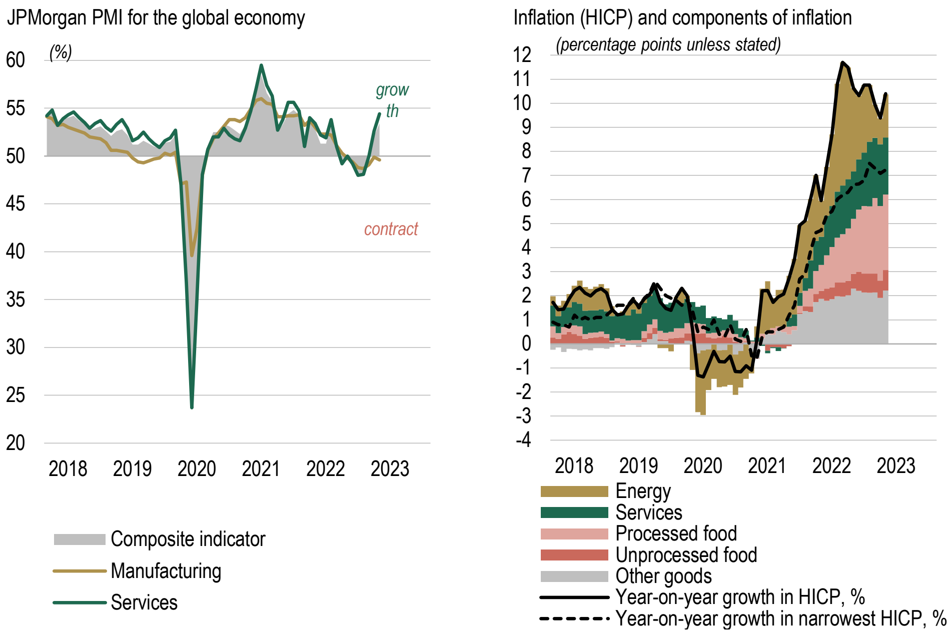
Source: Banka Slovenije

Table 7.4: **Selected bank performance indicators for the Slovenian banking system, 2011 to 2022**

(%)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ROA	-1.06	-1.60	-7.70	-0.27	0.42	0.99	1.19	1.38	1.48	1.10	1.20	1.11
ROE	-12.54	-19.04	-97.30	-2.69	3.63	7.96	9.60	11.07	12.16	9.57	11.33	10.82
CIR	53.68	47.43	66.04	55.80	59.26	59.19	62.68	58.05	56.47	52.82	59.48	57.60
Net interest margin on interest-bearing assets	2.13	1.93	1.68	2.18	2.06	1.91	1.83	1.84	1.79	1.57	1.41	1.61
Interest margin on total assets	2.02	1.83	1.59	2.09	1.96	1.82	1.75	1.75	1.70	1.49	1.34	1.53
Non-interest margin	0.85	1.40	0.85	1.01	1.09	1.23	1.13	1.26	1.43	1.67	1.24	1.15
Gross income / average assets (FIM)	2.87	3.23	2.44	3.10	3.05	3.05	2.88	3.01	3.13	3.16	2.58	2.68

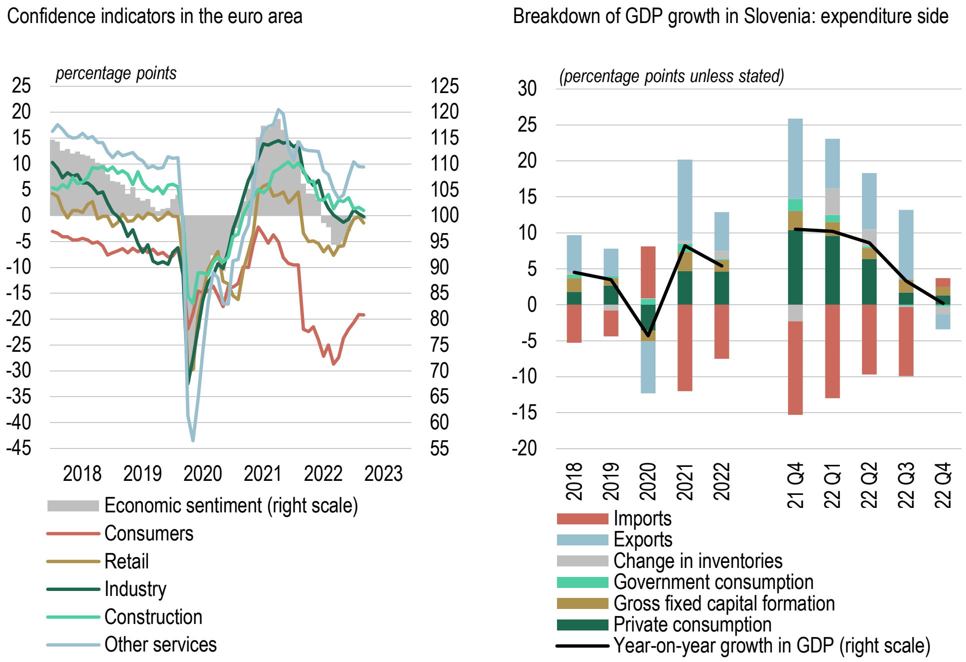
Note: FIM: financial intermediation margin.
Source: Banka Slovenije

Figure 7.1: **PMI and inflation**



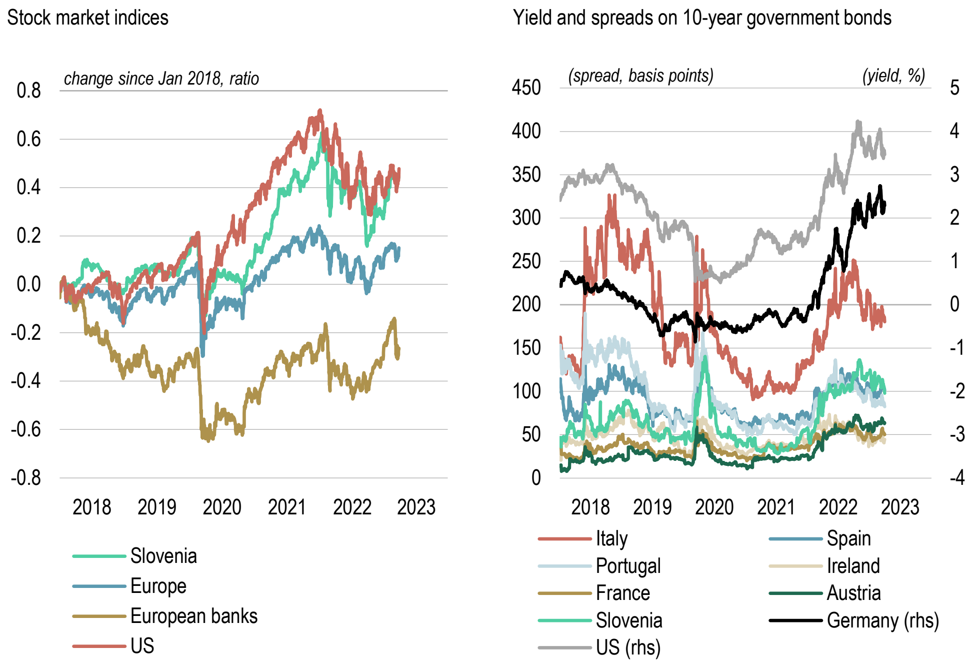
Note:In the left chart a PMI of more than 50 represents economic expansion with regard to the previous month, while a value of less than 50 represents contraction. In the right chart Narrowest HICP represents the HICP excluding energy, food, alcohol and tobacco.
Sources: Bloomberg, SORS, Eurostat, Banka Slovenije calculations

Figure 7.2: **Confidence indicators in the euro area and breakdown of GDP growth in Slovenia**



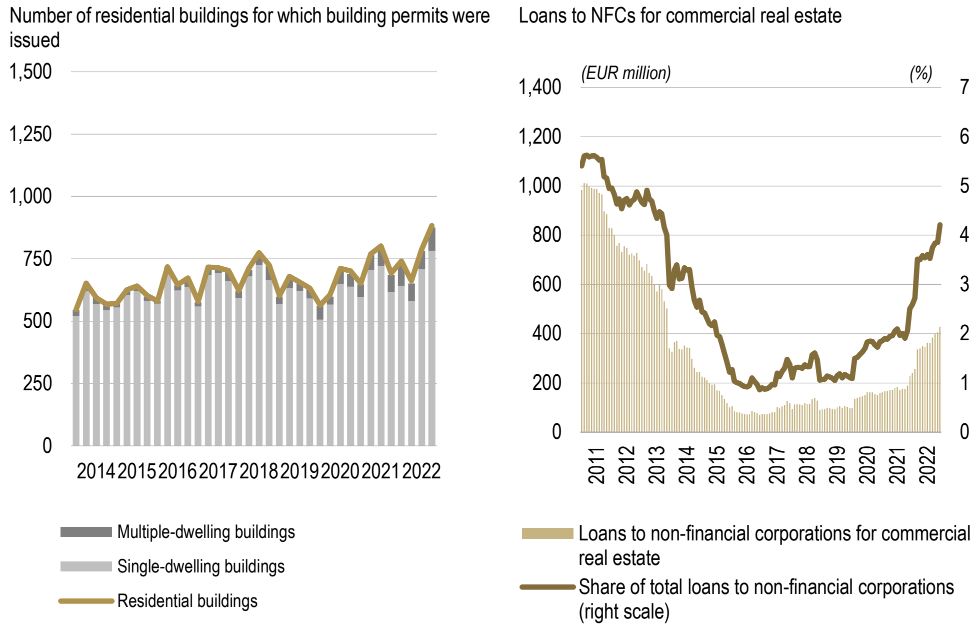
Note: The confidence indicators in the left chart are expressed in the form of the average balance, where the balance is the difference between the proportions of positive answers and negative answers.
Sources: Eurostat, SORS

Figure 7.3: **Financing costs and stock markets**



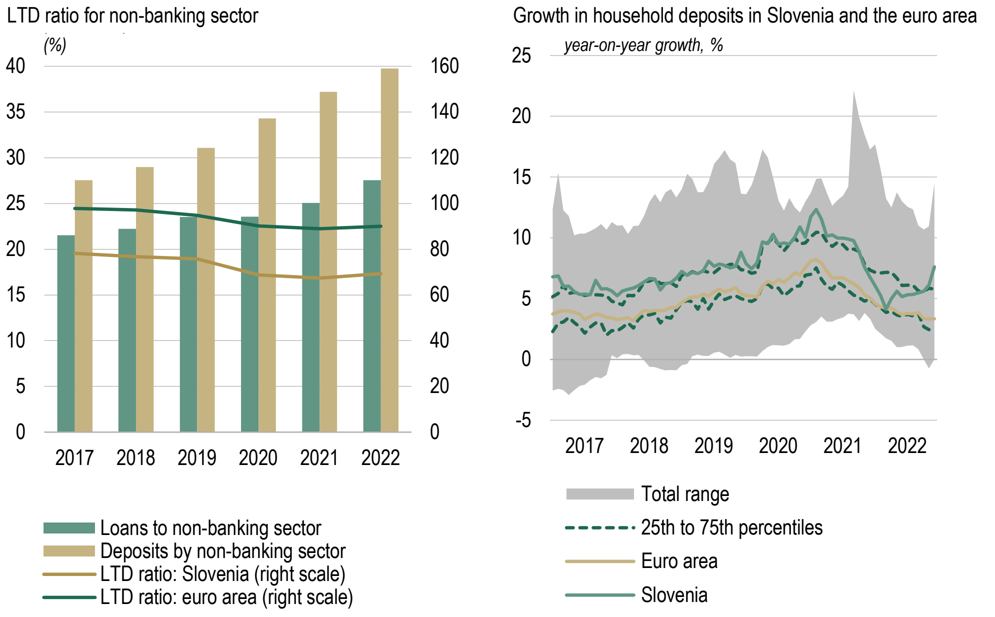
Note: The selected indices in the left chart are the SBITOP for Slovenia, the Stoxx Europe 600 for European equities, the Stoxx Europe 600 Banks for European banks, and the S&P 500 for US equities. The spread in the right chart is calculated as the difference between the yield on the 10-year government bond and the yield on the benchmark (German bond) on a daily basis, and reflects the additional risk that the markets ascribe to the country in question.
Sources: Bloomberg, Banka Slovenije calculations

Figure 7.4: **Building permits and loans to NFCs for commercial real estate**



Sources: SORS, Banka Slovenije

Figure 7.5: **LTD ratio and household deposits in the euro area**



Note: Data in the right chart is on a consolidated basis.
Sources: Banka Slovenije, ECB SDW, own calculations

Figure 7.6: **Identification of sectors hit hardest by an increase in expenses caused by rising interest rates**

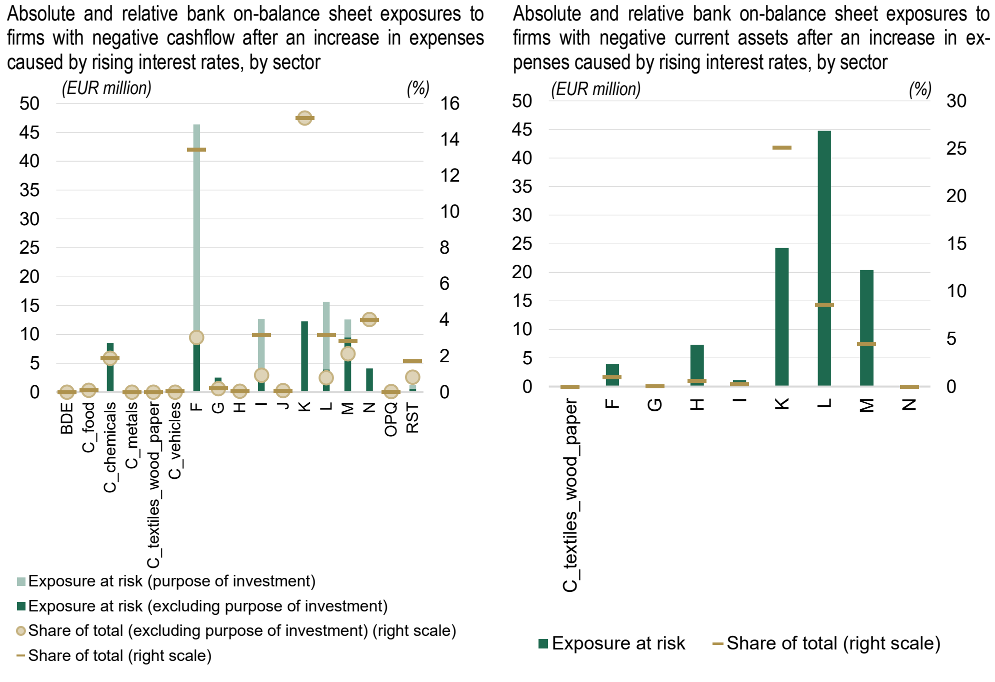
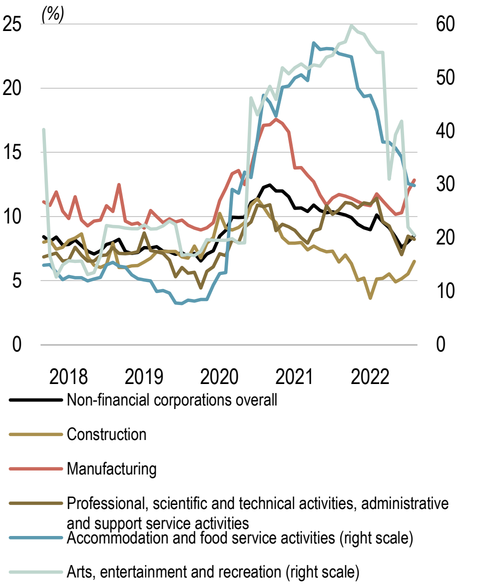


Figure 7.7: **Share of stage 2 exposures to NFCs by sector**

Share of Stage 2 exposures in various sectors of the NFCs portfolio

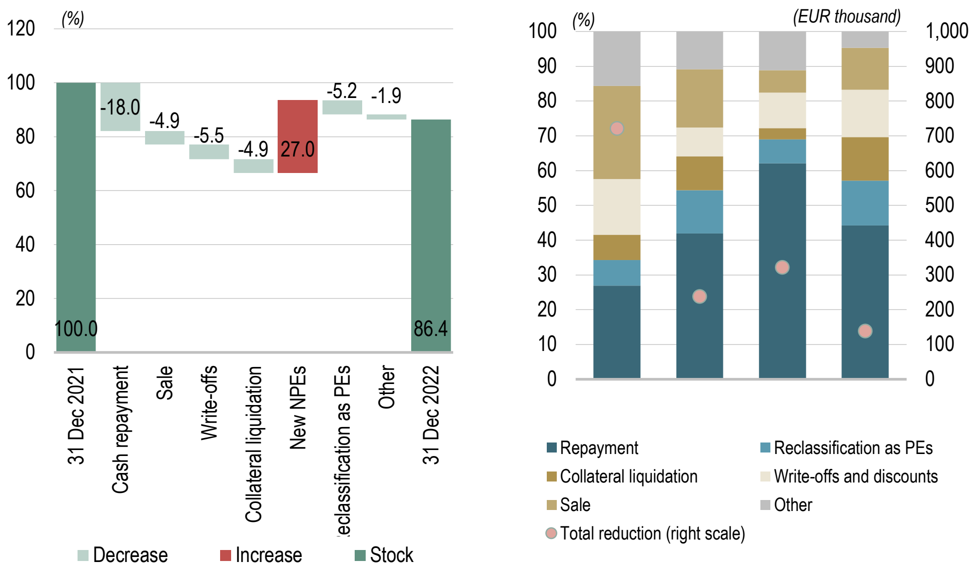


Source: Banka Slovenije

Figure 7.8: **Reduction in NPEs to NFCs according to bank survey**

Approaches to reduction and changes in NPEs to NFCs in 2022

Breakdown of reduction in NPEs to NFCs

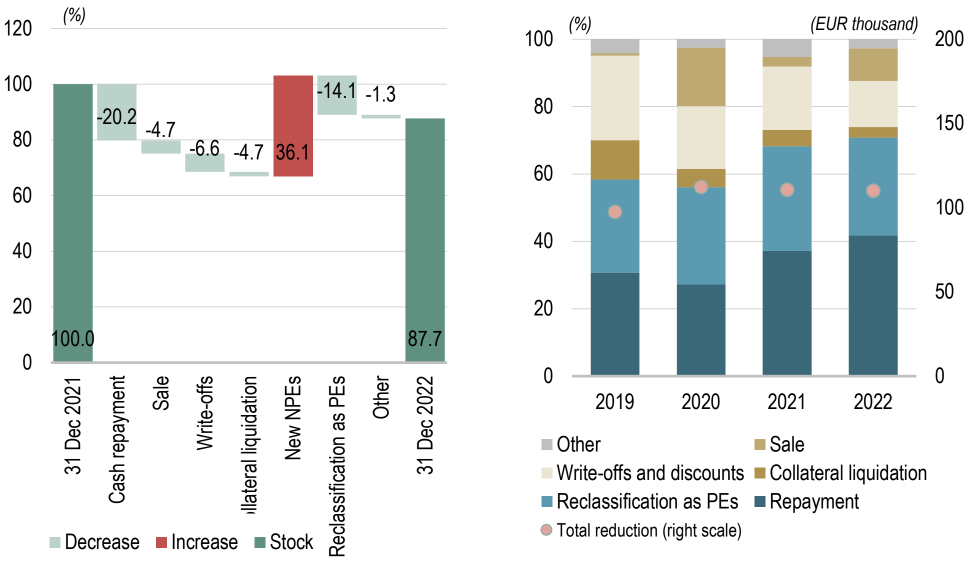


Note: The numerals in the left chart are given relative to the initial stock of NPEs at the end of 2021. The right chart illustrates approaches to reducing NPEs excluding the increase in NPEs in the individual year (the red column in the left chart).
Source: Regular bank survey, Banka Slovenije

Figure 7.9: **Reduction in NPEs to households according to bank survey**

Approaches to reduction and changes in NPEs to households in 2022

Breakdown of reduction in NPEs to households

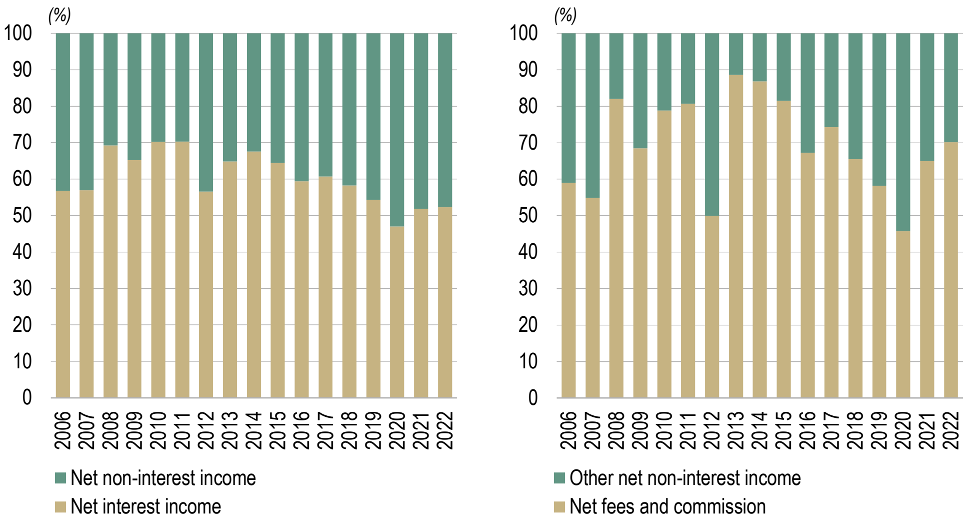


Note: The numerals in the left chart are given relative to the initial stock of NPEs at the end of 2021. The right chart illustrates approaches to reducing NPEs excluding the increase in NPEs in the individual year (the red column in the left chart).
Source: Regular bank survey, Banka Slovenije

Figure 7.10: **Breakdown of gross income and non-interest income**

Breakdown of gross income

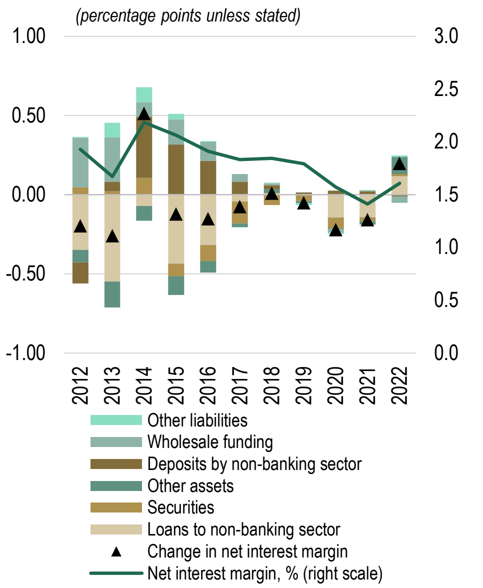
Breakdown of non-interest income



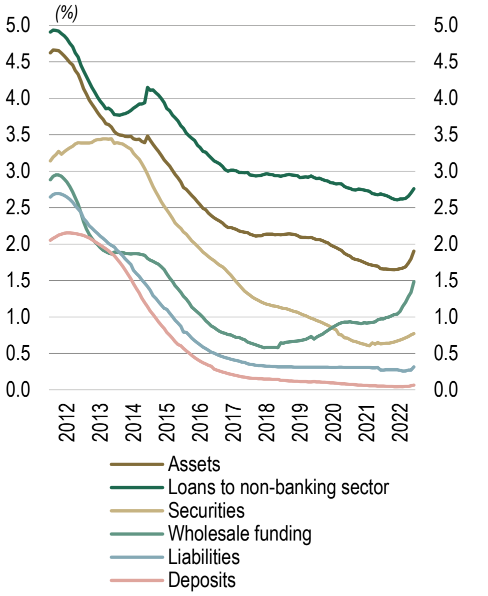
Source: Banka Slovenije

Figure 7.11: **Contributions of changes in net interest margin and effective interest rates**

Contributions of interest-bearing asset and liability instruments to change in net interest margin



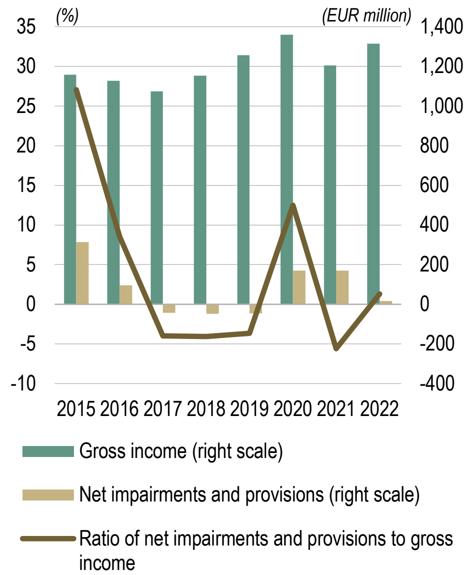
Effective interest rates by main instruments of interest-bearing assets and liabilities



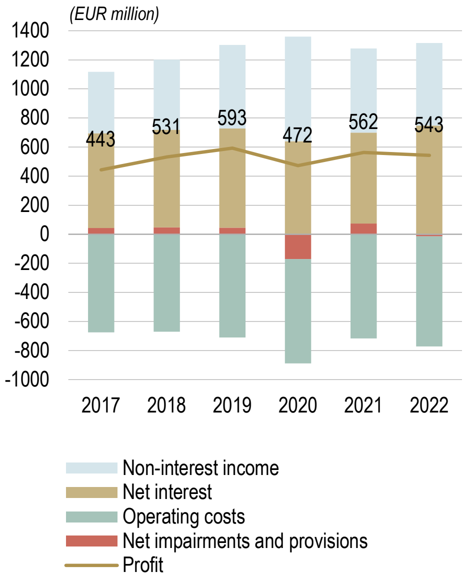
Note: In the left chart the change in asset items is the sum of the contributions made by loans, securities and other interest-bearing assets, while the change in liability items is the sum of the contributions made by deposits by the non-banking sector, wholesale funding and other interest-bearing liabilities. The change in the effect of liability items is multiplied by -1, as for example a rise in liability interest rates acts to reduce the net interest margin, while a fall acts to raise the net interest margin. Effective interest rates in the right chart are computed over the preceding 12 months.
Source: Banka Slovenije

Figure 7.12: **Net impairments and provisions, bank income, and other income statement categories**

Net impairments and provisions, gross income, and ratio of net impairments to gross income

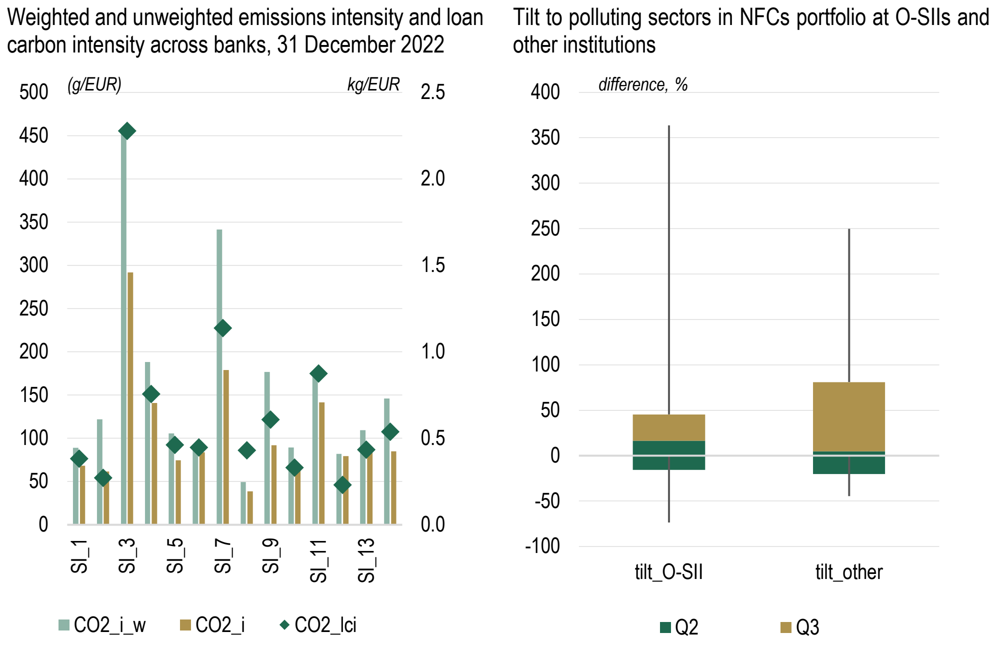


Generation and disposal of bank income, and pre-tax profit



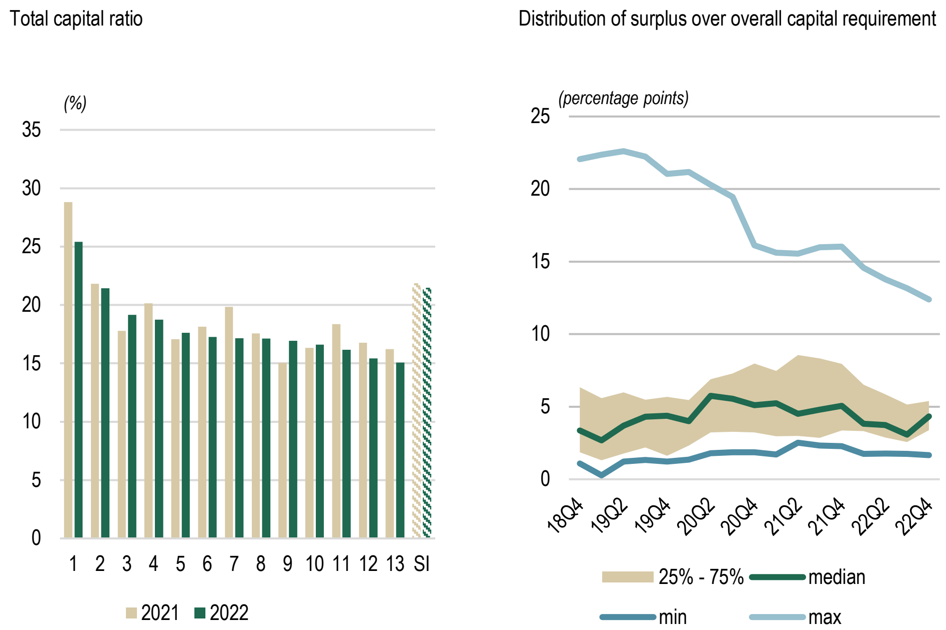
Note: Negative values for net impairments and provisions represent the net release of impairments and provisions in the left chart, and net creation in the right chart. The data for the Slovenian banking system comes from balance sheet figures on an individual basis.
Source: Banka Slovenije

Figure 7.13: **Bank exposure to polluting sectors**



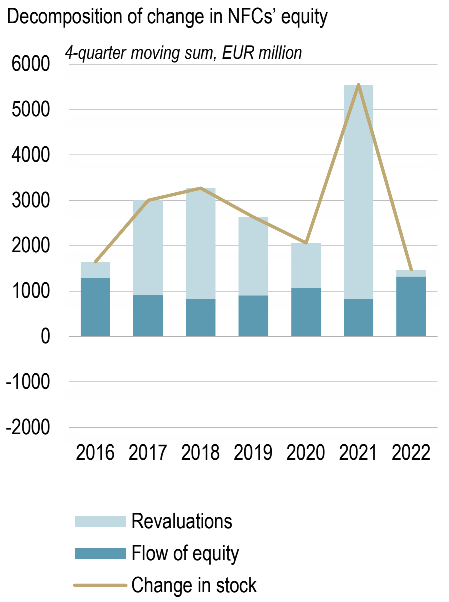
Note (left): The calculation of emissions intensity is based on granular emissions by firm, by using ETS emissions for ETS firms, and assigning non-ETS emissions to non-ETS firms with regard to the headcount in the sector.
Note (right): Tilt is defined as the difference between the weighted emissions intensity of banks or the banking system and the unweighted emissions intensity of the economy expressed as a percentage. The weighted emissions intensity is calculated on the basis of granular emissions, where the weight is the share of exposure to a particular sector in the total NFCs portfolio of the bank or the banking system . **Napaka! Zaznamek ni definiran.**Q2 and Q3 in the right chart denote the second and third quartiles of the distribution of the indicators across banks over time. The definition of other systemically important institutions is based on Banka Slovenije's latest classification from December 2022.
Sources: Slovenian Environment Agency, Eurostat, Banka Slovenije

Figure 7.14: **Total capital ratio and capital surplus**



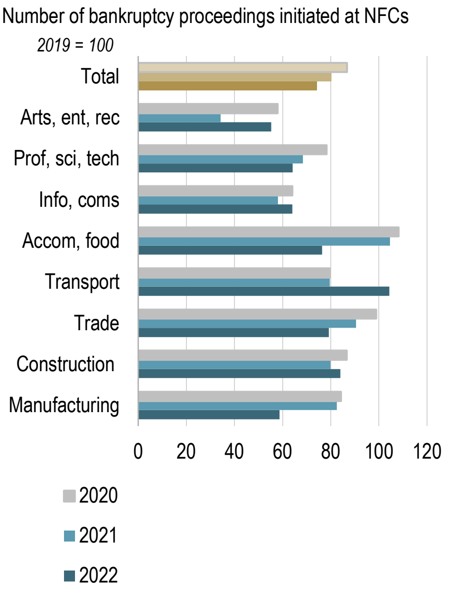
Source: Banka Slovenije

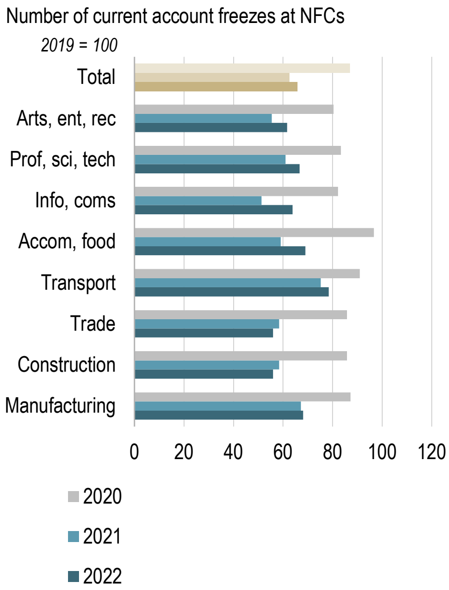
Figure 7.15: **Equity at NFCs**



Source: Banka Slovenije

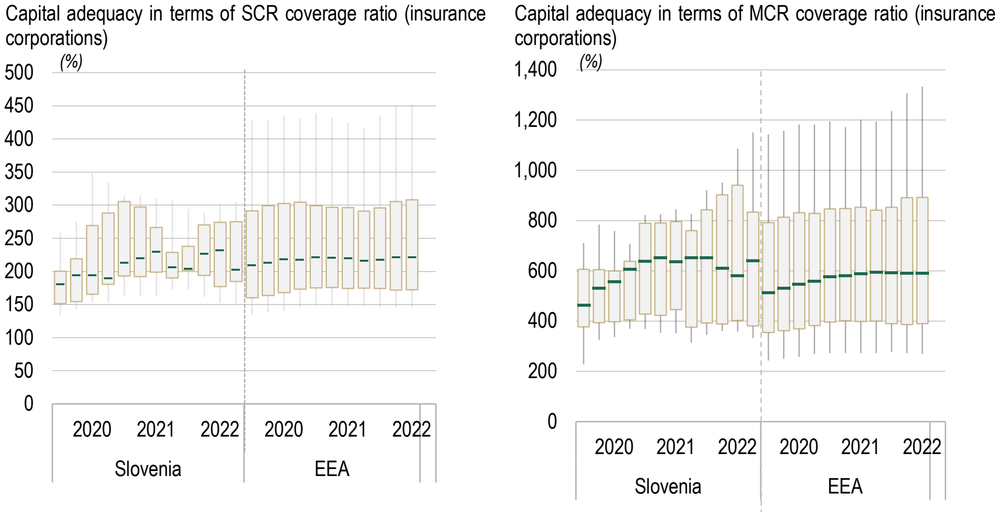
Figure 7.16: **Bankruptcies and current account freezes at NFCs**





Sources: Supreme Court, AJPES, Banka Slovenije

Figure 7.17: **Capital adequacy of insurance corporations**



Note: The 10th and 90th percentiles are taken as the upper and lower limits. The data for the EEA is available to the third quarter of 2022 inclusive.
Sources: EIOPA, ISA, Banka Slovenije

7.1 Key to abbreviations

Abbreviations

AJPES	Agency of the Republic of Slovenia for Public Legal Records and Related Services
APP	Asset Purchase Programme
SMA	Securities Market Agency
ISA	Insurance Supervision Agency
GDP	Gross domestic product
BLS	Bank Lending Survey
BoS	Banka Slovenije
CB	Central bank
CCyB	Countercyclical capital buffer
CET1	Common equity Tier 1 capital
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DORA	Digital Operational Resilience Act
O-SIIs:	Other systemically important institutions
DSTI	Debt-service-to-income ratio
BAMC	Bank Assets Management Company
EBA	European Banking Authority
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ECB	European Central Bank
EEA	European Economic Area
EMU	European Monetary Union (euro area)
ESRB	European Systemic Risk Board
EU	European Union
EURIBOR	Interbank interest rate at which representative banks in the euro area offer deposits to one another
Eurostat	Statistical Office of the European Communities
Fed	Board of Governors of the Federal Reserve System
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
HICP	Harmonised Index of Consumer Prices
IRS	Interest rate swap
IFs	Investment funds
KDD	Central Securities Clearing Corporation
TR	Turnover ratio
LCR	Liquidity coverage ratio
LIBOR	London Interbank Offered Rate
LTROs	Longer-term refinancing operations
LTV	Loan-to-value ratio
MCR	Minimum capital requirement
IMF	International Monetary Fund
IFRS	International Financial Reporting Standards
NFCs	Non-financial corporations
NIS2	Network and Information Security 2
NPEs	Non-performing exposures
NSFR	Net stable funding ratio
MROs	Main refinancing operations
OECD	Organisation for Economic Co-operation and Development
PEPP	Pandemic Emergency Purchase Programme
PMI	Purchasing Managers' Index
P2G	Pillar 2 guidance
ROE	Return on equity
RWAs	Risk-weighted assets
RTS	Regulatory technical standards
S&P	Standard and Poor's
SCR	Solvency capital requirement
SDW	Statistical Data Warehouse
OCR	Overall capital requirement
SyRB	Systemic risk buffer
SORS	Statistical Office of the Republic of Slovenia
Tier 1	Tier 1 capital
Tier 2	Tier 2 capital
TLTRO	Targeted longer-term refinancing operation
RWAs	Risk-weighted assets
ZBan-3	Banking Act
ZIUPOK	Emergency Deferral of Borrowers' Liabilities Act
ZOPVTKK	Act on the Mitigation and Allocation of Currency Risk Between Lenders and Borrowers in Swiss Francs
ESS	Employment Service of Slovenia