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Foreword to the Financial Stability Review

The global economy has proven to be significantly more resilient in the face of the various shocks and challenges of recent years. Although weaker last year, global economic growth was nevertheless relatively favourable bearing in mind all of the risk factors to which it was exposed. Economic policymakers have been kept very busy with inflation for some time now. It peaked in late 2022 and early 2023, but is gradually normalising as a result of the reversal in monetary policy, amid the simultaneous reduction in pressures along supply chains. After a difficult period, the economic situation in EU countries is gradually improving, although there remains divergence between individual countries, both in economic growth and in inflation. The macroeconomic situation in Slovenia is slightly better than in the EU overall. There remain risks at global level, most notably geopolitical tensions.

After a long period of being accommodative, our monetary policy stance was reversed in mid-2022. Since then we have gradually raised the key interest rates, by 4.5 percentage points in total. The interest rate levels attained are making a significant contribution to returning inflation towards its 2% target rate, and our next steps will remain dependent on the situation at the time: future decisions will therefore depend on the inflation outlook, developments in core inflation, and the effectiveness of our measures. Since its latest monetary policy meeting, the Governing Council of the ECB has signalled the possibility of easing the restrictive stance of monetary policy, insofar as analysis confirms the assessment that inflation is converging sustainably on its target. This issue of the Financial Stability Review again finds that monetary policy is being profoundly reflected in the performance of the banks.

Conversely it seems that the worsening economic situation has not been reflected in the financial sector: notwithstanding the slowdown in economic growth, the financial sector has performed well, in Slovenia and in the wider region. The banking sector in Slovenia saw record performance highs last year, similarly to the majority of European countries. Profit in the Slovenian banking system last year was more than double that recorded in 2022. Our assessment is that the general level of risks to financial stability has declined, similarly to the findings from the last few issues of this report. However, the risks inherent in the banking sector's external environment are strengthening.

Last year Slovenia saw a significant number of events that could be linked to climate risks. These risks did not increase or materialise in the banking sector, but nevertheless highlight factors that banks will need to be increasingly aware of in the future. In light of the worsening geopolitical risks, cyber risk is increasing, and supervisors are therefore devoting increasing attention to this issue. One highlight of this year is the cyber stress tests, and as supervisors we are upgrading our methodologies for monitoring this area. One of these methodologies is illustrated in a box below.

Conversely, a host of risks to financial stability have declined over the last few quarters. The outlook for the performance of the banking sector in Slovenia has improved significantly over the last three years, which has been reflected in our assessment of income risk as low (it was assessed as elevated as recently as the end of 2021). The banks took advantage of the reversal in monetary policy to adjust interest rates on loans, while at the same time there was no significant monetary policy transmission on the deposit

side. The average interest rates on new loans to non-financial corporations thus rose from their previous lows to 5.5%. Interest rates on household loans meanwhile rose to 4.0% (housing loans) and 6.8% (consumer loans). During this period the banks made virtually undiscernible adjustments to interest rates on fixed-term deposits, which means that sight deposits (at almost zero remuneration) continue to account for the majority of deposits. Short-term and long-term household deposits carry average rates of 1.3% and 2.5% respectively, significantly less than the euro area averages, particularly in the short-term deposits segment. In less than two years the banks succeeded in raising their net interest margin from a record low of 1.4% to almost 3%. The monetary policy stance and the banks' pricing policies have driven up profitability in the banking sector, which last year surpassed 20%.

The assessment of interest rate risk was reduced in the early part of this year to moderate with a stable outlook. The repricing gap narrowed, primarily as a result of changes on the funding side, while the rise in interest rates on loans and deposits had stalled by the turn of the year.

The higher interest rates on existing (and new) loans and the higher debt servicing costs might already have been reflected in increased credit risk. But we are finding the exact opposite: NPL ratios remained extremely low at the end of last year, despite increasing slightly in individual segments of the credit portfolio. Neither was there any realisation of credit risk following the floods in August of last year. The loan moratoria approved for flood victims account for an insignificant share of the credit portfolio, and there has also been little new lending approved for this customer segment.

The real estate market in the euro area is cooling (and prices have actually taken a downturn in certain segments and in certain markets). This is not the case in Slovenia. Residential real estate prices, which ever since the pandemic we have assessed as slightly high relative to fundamentals, are continuing to rise, despite a decline in the number of sales and a slowdown in lending. The essence of the market remains that prices are rising as a result of high demand amid limited supply. Our assessment is nevertheless that the relative overvaluation of residential real estate is less than in 2008. Conversely, the segment of the real estate market that has recently been hit hard in certain countries (the commercial real estate market) plays a less significant role in our banking sector.

As stated earlier, the banks have proven to be resilient to shocks and materialising risks in recent years. In light of the structure of bank funding, which despite the still-high share of sight deposits remains considerably better than in the period before the financial crisis, and the large liquidity reserves, which in Slovenia are some of the largest in the euro area, our assessment is that funding risk is low, while the banking sector's liquidity resilience is high. The assessment of profitability and solvency was upgraded on this occasion: resilience in this area is now assessed as high. The improvement in the resilience assessment was attributable to the aforementioned high profitability, and the fact that the banks have also strengthened their capital position in recent times, partly as a result of good current performance.

This extremely good period for the banks will not last for ever. Growth in their income and profits can be expected to normalise as early as this year. As stated earlier, this year might even see – if the conditions are met – a reversal in monetary policy, and gradual changes in the general level of interest rates. Given the banks' response during the period of rising interest rates, the expectation is that monetary policy transmission in Slovenia – in light of the relatively limited possibilities for placing funds – will again

be concentrated on the loan side, while the room for reductions on the deposit side is rather limited.

Our macroprudential policy response is also based on the assessment of financial stability and the future challenges to the financial system. In Slovenia it is pitched on one hand to strengthen the resilience and consequently the stability of the financial system, and on the other to ensure appropriate credit standards. Our macroprudential measures to restrict household lending, which were recalibrated last year, mainly aim to reduce the risks, and we are planning to make an assessment of the impact of this recalibration in the coming months. Assessments of this kind always form the basis for our future decisions with regard to macroprudential measures. Another set of our macroprudential measures is aimed at strengthening the banking system's resilience to various risks. The recent introduction of a 1% positive neutral countercyclical capital buffer rate addresses unpredictable economic shocks and uncertainties related to cyclical systemic risks. This change allows us to both tighten and release the buffer according to the situation in the banking system and further afield. Our macroprudential policy in the future will remain focused on ensuring the banking system's resilience to various risks, and on maintaining appropriate credit standards.

Dr Primož Dolenc

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Executive Summary

The level of systemic risks to financial stability in Slovenia has declined, and remains at a low to moderate level. Resilience to the risks is high. Amid weak economic activity in the euro area, external uncertainties, geopolitical in particular, still pose a significant risk. These have also been associated recently with more frequent DDoS attacks, for which reason we have raised the level of cyber risk in 2024. We have lowered the assessment of interest rate risk since the last Financial Stability Review, while the other risks have been left unchanged at moderate or low (see Table 1). The trend of evolution in the repricing gap is gradually improving, and interest rate risk has consequently been assessed as moderate. The assessment of resilience in the area of solvency and profitability has been upgraded to high, with a stable outlook for future quarters. In the wake of interest rate rises, the banking system is recording pronounced growth in net interest income despite a decline in lending, which has also been reflected in record high profits. The macroprudential instruments currently in force also focus on strengthening the resilience of the banking system.

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

	Q4 2021	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Trend of change
Systemic risks								
Risk inherent in the real estate market	elevated	elevated	elevated	moderate	moderate	moderate	moderate	⇨
Funding risk in the banking system	moderate	moderate	moderate	moderate	moderate	moderate	moderate	⇨
Interest rate risk in the banking system	moderate	elevated	elevated	elevated	elevated	elevated	moderate	⇨
Credit risk in the banking system	elevated	elevated	elevated	elevated	moderate	moderate	moderate	⇨
Income risk in the banking system	elevated	moderate	moderate	moderate	low	low	low	⇨
Risk inherent in leasing companies	moderate	moderate	moderate	moderate	low	low	low	⇨
Resilience to systemic risks								
Solvency and profitability of the banking system	medium	medium	medium	medium	medium	medium	high	⇨
Liquidity of the banking system	high	high	high	high	high	high	high	⇨
Other risks								
Cyber risk	moderate	moderate	moderate	moderate	moderate	moderate	elevated	⇨
Climate risks*	moderate	moderate	moderate	moderate	moderate	moderate	moderate	⇨

Colour code:

Risk	low	moderate	elevated	high
Resilience	high	medium	low	very low

Note: 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. 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.
* Transition risks are taken into account under climate risks
Source: Banka Slovenije

Despite the numerous shocks that have overshadowed events of recent years, the global economy has proven to be resilient. While the euro area almost slipped into technical recession in the second half of 2023, economic activity in Slovenia in-

creased slightly. The fall in domestic inflation has lost momentum, while the higher interest rates have not for now had a major negative impact on economic activity. The uncertain situation in European industry is being reflected domestically in the weakness of foreign trade, but with decline in imports outpacing the decline in exports the current account remains in surplus.

The assessment of the risk to financial stability inherent in the real estate market remains moderate. Amid an ongoing decline in the number of sales, growth in residential real estate prices again strengthened slightly in the final quarter of 2023. A major fall in residential real estate prices is not anticipated for now. The fall in prices in EU Member States is slowing. Commercial real estate prices in Slovenia were up in year-on-year terms in the second half of the year, but the commercial real estate market in the EU overall has been cooling for some time now. The banking system's exposure to the real estate market was broadly unchanged over the last year. Last year new housing loans returned to their level seen before 2021, and the stock of loans is stagnating.

The assessment of funding risk remains moderate. The increase in deposits by the non-banking sector in 2023 was smaller than in the previous years, but they remain a stable source of funding for Slovenian banks. Dependence on other funding remained low. The banks raised their interest rates on deposits, albeit more slowly and to a lesser extent than in other euro area countries, but this was enough to encourage savers to fix some of their savings. Sight deposits nevertheless continue to account for the majority of total deposits by the non-banking sector, which is keeping the maturity gap relatively large.

The assessment of interest rate risk was lowered to moderate for the first quarter of 2024, with a stable outlook. The risk level declined in the second half of last year, amid a tangible slowdown in lending, a moderate increase in the share of fixed-rate loans, a significant increase in holdings of the most liquid assets, and a gradual increase in the share of funding accounted for by fixed-term deposits. The repricing gap narrowed, primarily as a result of changes on the funding side. The rise in interest rates on loans and deposits had come to an end by the end of the year.

The assessment of credit risk remains moderate. The asset quality indicators at the level of the total portfolio remain favourable and stable, although higher NPE ratios are evident in manufacturing. The weak demand and the uncertainty in the economic environment have already been reflected in recent months in the quality of the portfolio of export-oriented sectors. The rise in Stage 2 exposures was particularly evident in the segments of small enterprises and sole traders, and consumer loans. A risk of a deterioration in asset quality continues to be posed by the rise in debt servicing costs, particularly at non-financial corporations, almost 80% of whose financing carries a variable interest rate.

The assessment of income risk remains low, with the situation remaining favourable to income generation at banks. The near-doubling of net interest income in 2023 was reflected in a sharp increase in gross income and net income alike. This was attributable to higher interest rates on the asset side of the banking system's balance sheet, and the slower and relatively modest rise in interest rates on the liability side. When interest rates begin to fall, the banks will find it hard to maintain this level of income. The low credit activity in the non-financial corporations segment is also a cause for long-term concern. The banks' operating costs will be driven up in the years ahead by the introduction of a tax on total assets.

The rising number of cyberattacks meant that the assessment of cyber risk was raised to elevated with a stable outlook, while the assessment of climate risks remains moderate. The banks are not reporting any rise in the number of critical cyber incidents in 2023 relative to the previous year as a result of geopolitical risks, but the cyber threats associated with geopolitical tensions remain at an elevated level. Accordingly our expectation is that the number of cyberattacks on the banking system could increase in the future as a result of the activities of hacker groups. With regard to climate transition risks, growth in exposure to climate-sensitive sectors has declined in line with the credit cycle in the non-financial corporations segment. There has also been a discernible improvement in carbon-related indicators, which take account of the dynamics of changes in emissions over time.

The assessment of the banking system's resilience from the perspective of solvency and profitability was raised to high in the first quarter of 2024. This was driven by the ongoing favourable developments in net interest income, which were reflected in high profitability. Certain banks have already allocated some of their profits to their reserves, which has also been reflected in a rise in capital ratios.

The banking system's resilience in connection with liquidity remains high. The liquidity indicators have improved further, and the trend is expected to remain relatively stable in the future. There nevertheless remain considerable differences in the liquidity surpluses at individual banks, and thus in their ability to deal with the consequences of any realisation of funding risk.

The financial position of households remains stable, while non-financial corporations have seen an additional improvement in their indebtedness indicators. Households continued to see real growth in gross disposable income, which over the last two years has been significantly lower than nominal growth, on account of high inflation. While growth in housing loans was slowing, growth in consumer loans strengthened, but Slovenian households remain less indebted compared with those in the euro area overall. Non-financial corporations manly improved their indebtedness indicators by reducing their financing via trade credits, and also by reducing their financing at domestic banks. The rise in the number of frozen current accounts in the final quarter of last year is indicative of the potential for a downturn in the situation in the majority of sectors.

The performance of the non-bank financial sector remained stable in 2023, although the insurance sector's earnings were hit significantly by the year's weather events. The assessment of the risk inherent in the performance of leasing companies remains low. Leasing companies continued to strengthen their activities last year, which was reflected in an increase in new business and in growth in their total assets. Insurance corporations saw a renewed increase in their gross written premium last year, most evidently in general insurance. In addition to high inflation, insurance corporations and reinsurance corporations faced major claims as a result of July's storms and August's floods, and also had to deal with the regulated price of supplemental health insurance premiums. Their earnings declined sharply last year, but none of the institutions suffered a loss. Savers favoured domestic mutual funds in 2023. The latter recorded a rise in their assets under management last year, largely on account of the prevalence of equities, which made gains on the markets.

Macroprudential policy is pitched primarily at maintaining the resilience of the financial system. Given the high profitability of the banks, we have decided to make further improvements to their resilience to various systemic risks. A change was made to the countercyclical capital buffer framework to introduce the concept of the positive

neutral rate, which the banks will be required to meet in 2025. This aims to address unpredictable economic shocks and the uncertainties related to cyclical systemic risks. The macroprudential restrictions on lending modified in July 2023 also remain in effect, and are helping to reduce credit risk in household lending.

Four current themes are examined in special boxes in the publication on this occasion. The first box highlights the Purchasers and Servicers of Banks' Non-Performing Loans Act, which implements the EU directive that aims to put in place a legal basis for the development of secondary markets for non-performing loans. The second box examines cyber mapping as a tool for monitoring systemic risk. This tool allows for the identification of systemic nodes in the system by monitoring and analysing key technologies, services, and links between financial sector institutions and technological service providers. The third box gives a detailed examination of the performance of non-financial corporations in light of climate risks. There is analysis of climate transition risks, which pose a major challenge in particular to those firms operating in sectors with a high carbon footprint. The fourth box presents results of the evaluation of an integrated micro-macro model for evaluating macroprudential policy measures, with a focus on housing loans.

1 Macroeconomic Environment

Following all the shocks of recent years, the global economy has proven to be relatively resilient, with encouraging growth, but the numerous geopolitical tensions continue to pose significant risk. In the euro area, which narrowly avoided a technical recession in the second half of last year, the indicators of economic activity were still reflecting relatively weak developments in the early part of this year. Meanwhile Slovenia saw a slight increase in economic activity towards the end of last year and developments remained favourable in the early part of this year as well. The slowdown in domestic inflation came to a temporary halt. The uncertain situation in European industry is being reflected in the weakness of foreign trade, but with the decline in imports outpacing the decline in exports the current account surplus is strengthening further. The European financial and banking sector saw above-average performance last year, while the diminishing expectations with regard to future interest rate levels drove a rise in the equities markets and in other risky asset classes. Global financing conditions also eased.

Global economy

The global economic recovery following the pandemic, Russia's invasion of Ukraine and high inflation has proven to be relatively robust. Inflation is gradually slowing, while the labour market remains tight, and economic activity is encouraging. The global economic growth forecasts of 3.1% for this year and 3.2% for next year nevertheless remain below the average of last two decades (3.8%).[1] Inflation is showing discernible signs of easing as the disruptions to supply chains are resolved and monetary policy measures take effect. At the global level it is forecast to slow from 6.8% last year to 5.8% this year, and then to 4.4% in 2025. In light of all of the above, the probability of a global crisis or a major decline in activity is small, and the risks are balanced. Credit growth slowed in 2023, as higher interest rates reduced demand for loans, while banks' risk tolerance continued to decline. Meanwhile defaults in certain borrower segments continued to increase. The reduced liquidity in the financial system began to affect the market, particularly certain short-term financing markets.[2] The exposure of certain banking systems to commercial real estate remains a cause for concern, as the weak demand in some economies and rising financing costs are increasing default risk in this borrower segment.

Euro area and Slovenia

Economic activity remains relatively weak in the euro area, but picked up slightly in Slovenia towards the end of last year, and the relatively favourable developments have continued this year. The euro area narrowly avoided a technical recession in the second half of last year, and the high-frequency indicators (PMIs, confidence indicators) are not yet showing any signs of a rebound in early 2024: despite improving, they remained in the zone of contraction and below their long-term averages (see Figure 8.1 in the appendix).[3] Meanwhile the monthly indicators of economic activity in Slovenia present a more favourable picture, albeit with variation from sector to sector. Consumer confidence is gradually improving, and the mood remains positive in services, retail and construction. Conversely the situation for manufacturing firms remains

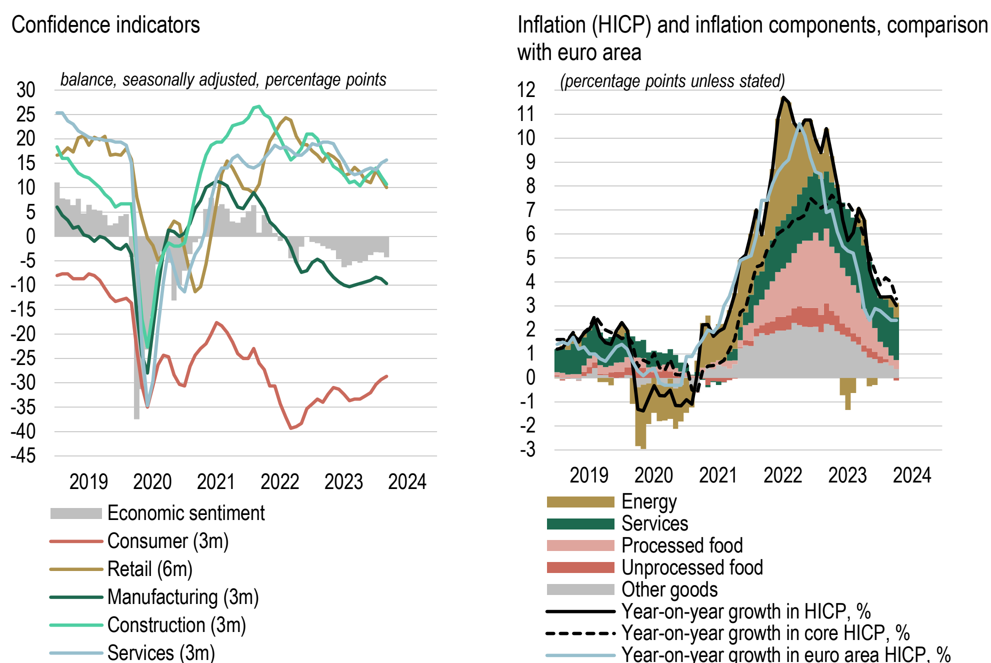
[1] IMF, World Economic Outlook, January 2024.

[2] Repo rates in the US have spiked occasionally in the last few months.

[3] According to the ECB's latest projections (March 2024), economic growth in the euro area is forecast to strengthen from 0.5% last year to 0.6% this year, and then to 1.5% in 2025 and 1.6% in 2026.

challenging, mainly on account of weak demand and the uncertain economic environment (see Figure 1.1, left).[4] The labour market remains tight, and inflation remains above the monetary policy target, despite falling last year. Domestic inflation remained unchanged for the third consecutive month at 3.4% in March. Its lack of change was attributable to an unchanged contribution from service price inflation, current rises in energy prices, and a slowdown in growth in food prices and prices of non-energy industrial goods (see Figure 1.1, right).[5] The geopolitical tensions and the uncertainty in European industry are being reflected in the weakness of Slovenia's foreign trade. Goods exports declined towards the end of last year amid falling demand from the euro area, although the year-on-year decline in imports was even larger, and the terms of trade improved. Similar developments were seen in the early part of this year, which further strengthened the current account surplus.

Figure 1.1: **Confidence indicators and inflation (Slovenia)**



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.
Sources: SORS, Eurostat, Banka Slovenije calculations

Financial and banking sector

Last year and in the early part of this year the financial and banking sector outperformed its level of the previous years, while credit activity declined significantly. Inflationary pressures declined, thus raising expectations of the relaxation of monetary policy in advanced economies. The major downturn in expectations with regard to the level of interest rates drove broad-based growth in the equities markets and in other higher-risk asset classes. The global financing conditions eased amid a rise in share prices, diminishing volatility and a decline in risk premiums on government and corporate bonds alike. Meanwhile the Eurosystem has left its key interest rates unchanged since September of last year with the goal of returning inflation to its target level.[6]

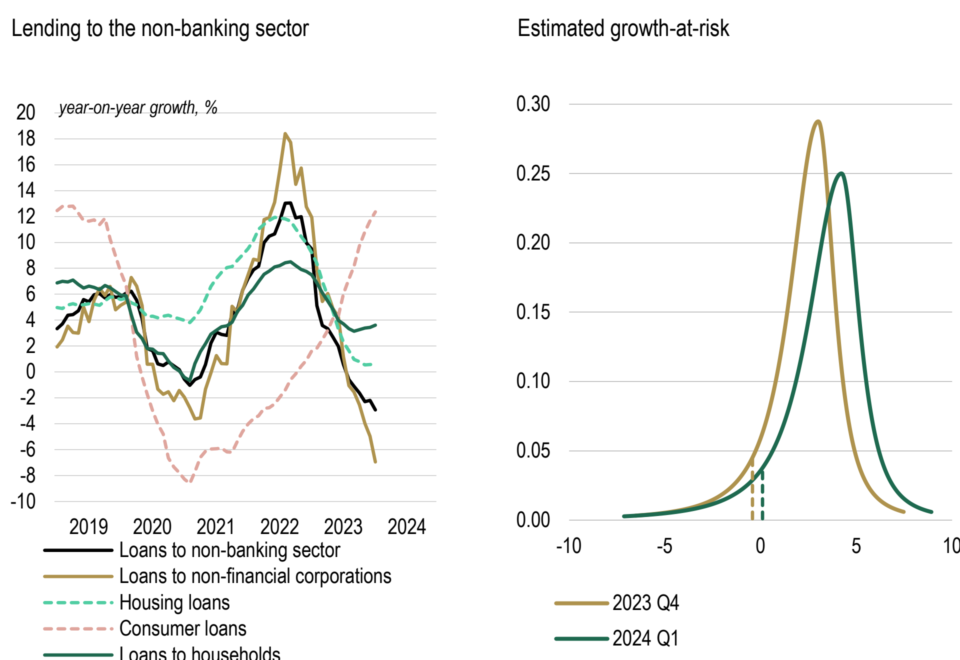
[4] The final quarter of 2023 saw encouraging quarterly GDP growth of 1.1%, while the current nowcast for the first quarter of 2024 based on a limited set of available indicators points to quarterly GDP growth of 0.9%. According to the European Commission's latest projections (February 2024), economic growth in Slovenia is forecast to strengthen from 1.6% last year (SORS) to 1.9% this year, and then to 2.7% in 2025.

[5] It continued to outpace the euro area average (of 2.4%). Core inflation fell to 4.0% in March (it fell to 2.9% in the euro area overall).

[6] The interest rates on main refinancing operations, the marginal lending facility and the deposit facility remain unchanged at 4.50%, 4.75% and 4.00% respectively (ECB, March 2024).

Higher interest rates have continued to have a favourable impact on banks' net interest income, but lending to the non-banking sector has been slowing. Banks in the euro area reported a further decline in demand for loans for the final quarter of last year, with higher interest rates remaining the main driver of the decline for all types of loan. At non-financial corporations another factor was lower capital expenditure, while other notable factors at households were persistently low consumer confidence and the weak prospects for the real estate market. There were also continuing reports of tighter lending terms for non-financial corporations and households,[7] while banks' risk perception remained the largest factor in the tightening. Lending to the non-banking sector remained modest in the euro area at the end of 2023, and the stock of loans to non-financial corporations and to households was at similar levels to a year earlier. Meanwhile domestic lending to the non-banking sector, non-financial corporations in particular, slowed discernibly, although changes to the macroprudential restrictions on consumer lending brought an increase in household lending, particularly in the consumer loans segment[8] (see Figure 1.2, left). Loans to non-financial corporations accounted for less than a fifth (18.8%) of the banking system's total assets in December 2023, one of the lowest figures to date, while the figure of 23.7% for household loans was close to its record high.[9]

Figure 1.2: **Lending and growth-at-risk in Slovenia**



Note: The right chart illustrates the density distribution of average annual GDP growth for one quarter ahead. The model includes an autoregressive term, the financial conditions index (FCI), the systemic risk index (SRI) and the macroprudential policy index (MPI). A description of the basic methodology is given in Drenkovska and Volčjak (2022). Once the quantile regressions were estimated, the conditional distribution of future GDP growth over the next quarter was calculated by fitting a parametric t-skew distribution to the growth forecasts. A growth-at-risk of 10% corresponds to the value of GDP growth which the left area under the curve has a probability density of 0.1.
Source: Banka Slovenije

[7] Bank Lending Survey.

[8] Year-on-year changes in the stock of loans as at December 2023: non-banking sector: -2.2%; NFCs: -4.9%; households: 3.4%.

[9] The share accounted for by loans to NFCs peaked in November 2008 (42.8%), while the share accounted for by household loans peaked in October 2019 (26.3%). The share of total assets accounted for by loans to NFCs and households on aggregate has declined by 16 percentage points over the last 15 years.

Risks to domestic economic growth posed by the financial sector

The downside risks to domestic economic growth posed by the macrofinancial sector diminished slightly. The estimated growth-at-risk in Slovenia's GDP improved slightly in the final quarter of 2023.[10] It stood at -0.4% in the final quarter of 2023 and 0.1% in the first quarter of this year at a 10% distribution (see Figure 1.2, right). The term structure of the financial conditions index (FCI) and the systemic risk index (SRI) were estimated based on the estimated growth-at-risk. As expected, the negative impact of the FCI on growth-at-risk is evident even in the period of one year, while the SRI and the long-term build-up of vulnerabilities in the financial system have a negative impact on growth-at-risk over the medium term (see Figure 8.2 in the appendix).

[10] The estimates reflect the effects that developments in the macrofinancial environment have on the distribution of future growth in real GDP.

2 Key Risks to Financial Stability

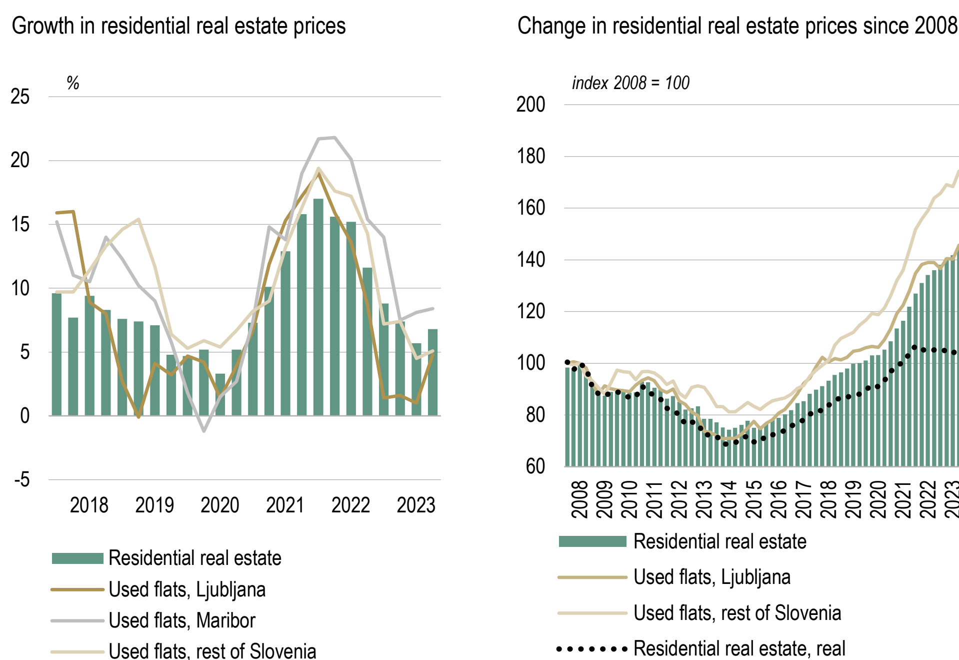
2.1 Risk inherent in the real estate market

Our assessment of the risk to financial stability inherent in the real estate market is moderate, with a stable outlook. The cooling of the real estate market slowed in the second half of 2023, and the overvaluation of residential real estate at the end of the year was less than a year earlier. A substantial fall in prices is not anticipated for now. Interest rate rises led to a sharp slowdown in growth in housing loans in the second half of 2023, pushing the rate close to the euro area average. The share of housing loans carrying a fixed interest rate rose from 34% in December 2020 to 62% in December 2022. This protected borrowers from the increase in debt financing costs driven by tightening monetary policy. Growth in commercial real estate prices in the final quarter of 2023 was again down in year-on-year terms, and the stock of bank loans for commercial real estate remains small.

Residential real estate market

The cooling of the real estate market slowed in pace in the second half of last year. Nominal year-on-year growth in residential real estate prices had slowed to 5.7% by the third quarter, before rising again to 6.8% in the final quarter. Year-on-year growth in prices of used flats in Ljubljana, which averaged around 1.5% over the first three quarters of 2023, rose again in the final quarter to hit 4.8% (see Figure 2.1, left). Year-on-year growth in prices of new-build residential real estate stood at 8.4% in the final quarter of last year. Compared with the previous price peak in 2008, nominal residential real estate prices were 45.2% higher in the final quarter of 2023, but the recent high inflation meant that real prices were just 6.6% higher (see Figure 2.1, right). The rise in residential real estate prices has also driven a rise in rents in recent years (according to the consumer price index). Year-on-year growth in rents averaged 12.4% in 2023 (18.9% in 2022, 3.6% in 2021).

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

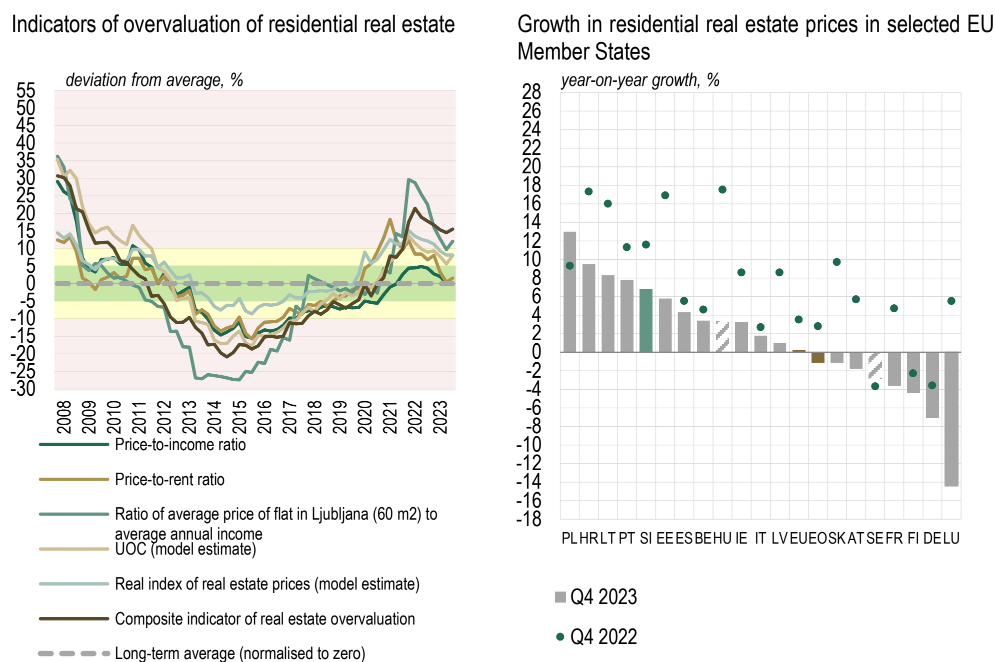


Source: SORS

The overvaluation of residential real estate at the end of 2023 was less than at the end of the previous year. The overvaluation of residential real estate increased again in the final quarter of last year with an increase in the deviation from long-term fundamentals, with growth in residential real estate prices rising more than growth in nominal wages and rents for example. The real price index in the final quarter remained the same as in the previous quarter. The composite indicator of real estate overvaluation showed overvaluation of 15.5% in the final quarter of 2023, while the ratio of real estate prices to disposable income showed overvaluation of 0.2% in the third quarter (see Figure 2.2, left).

After falling in the second and third quarters of last year, residential real estate prices in EU Member States were up 0.2% in year-on-year terms in the final quarter. The year-on-year rate of growth had stood at 3.5% in the final quarter of 2022 (see Figure 2.2, right). Prices in the euro area were continuing to fall in year-on-year terms in the final quarter of last year (by 1.1%). The pace of the fall in prices had slowed slightly. After two consecutive quarters of falling prices, quarterly growth in prices in the EU turned positive again in the second and third quarters of last year at 0.5% and 0.7% respectively, before the rate turned negative again in the final quarter (in the amount of 0.3%). Growth in residential real estate prices in Slovenia was still among the highest in the euro area, but also took place amid higher inflation in Slovenia.

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

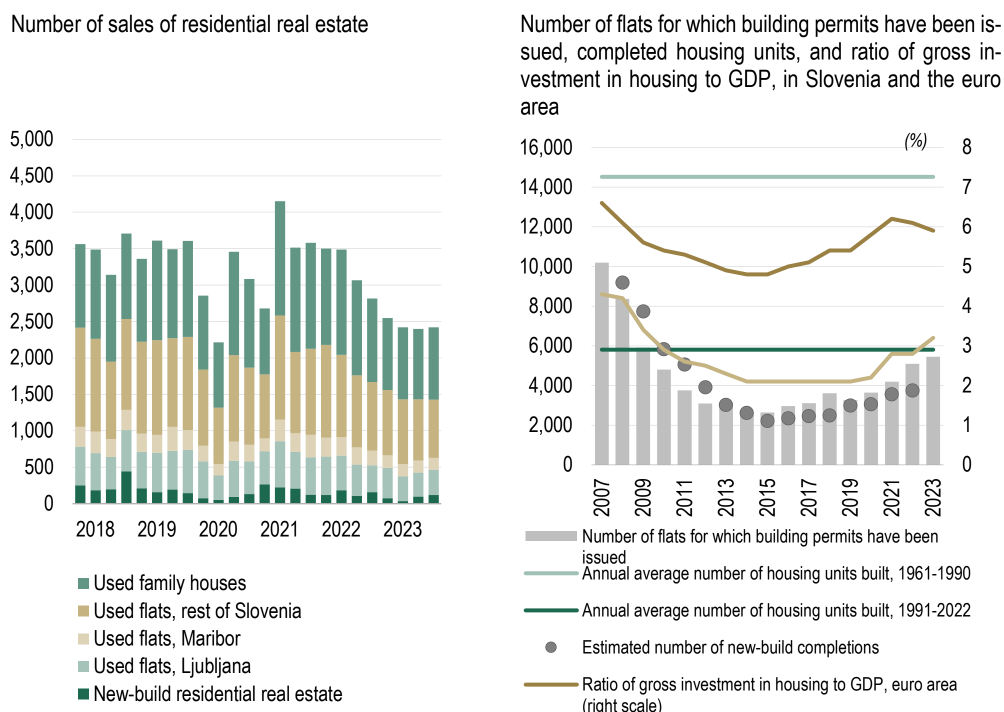


Note: In the left chart the indicators of housing price alignment with fundamentals are normalised around their own long-term averages, which are assigned a value of zero. Each indicator's deviation from the long-term average illustrates the overvaluation or undervaluation of residential real estate. The indicators are illustrated up to the final quarter of 2023, with the exception of the ratio of real estate prices to disposable income, which is illustrated to the third quarter of 2023. Countries outside the euro area are indicated by hatched bars in the right chart.
Sources: SORS, SMARS, Slonep, Eurostat

Sales of residential real estate are slowing for the second consecutive year. This was also evidenced in a slowdown in growth in residential real estate prices in 2023, although no major fall in prices is anticipated for now. Sales of real estate in 2023 were down almost a quarter on the previous year (see Figure 2.3, left). According to consumer surveys, there was a slight improvement in the readiness to make major purchases in the year ahead in the second half of 2023, but it is still well below its long-

term average (-35%). Demand for real estate is nevertheless being driven by low unemployment, rising wages, and low household indebtedness. Growth in residential real estate prices is still being driven by factors on the supply side. Supply is not keeping up with demand. The ratio of gross investment in housing to GDP has risen slightly in recent years, but remained low. It stood at 3.2% in the final quarter of 2023, significantly less than the euro area average (5.9%). The number of flats for which building permits have been issued has increased in recent years: the figure of 5,441 in 2023 was up 6.7% on the previous year, although housebuilding remains well below the level seen in the period before 1991 (see Figure 2.3, right). The level of vacant flats also remains large (around 17%).[11] Proper taxation of residential real estate might drive up the supply of used flats for let and sale.

Figure 2.3: **Number of sales of residential real estate and building permits, completed flats and ratio of gross investment in housing to GDP**



Source: SORS

Labour shortages, and higher construction costs and financing costs could make the construction of buildings more difficult in the future. Almost half of all construction firms have issues with a shortage of skilled workers, while more than a third are facing higher costs of material and labour (see Figure 8.3, right, in the appendix). Only 10% of construction firms were exposed to issues with high financing costs in December 2023. Construction firms make more use of fixed-rate loans than non-financial corporations on average. Construction confidence remained in positive territory at the end of 2023, and in December was up 8 percentage points on a year earlier. The declines in the amount of construction put in place and in total order books deepened, but the expectations of price rises eased slightly (see Figure 8.3, left, in the appendix).

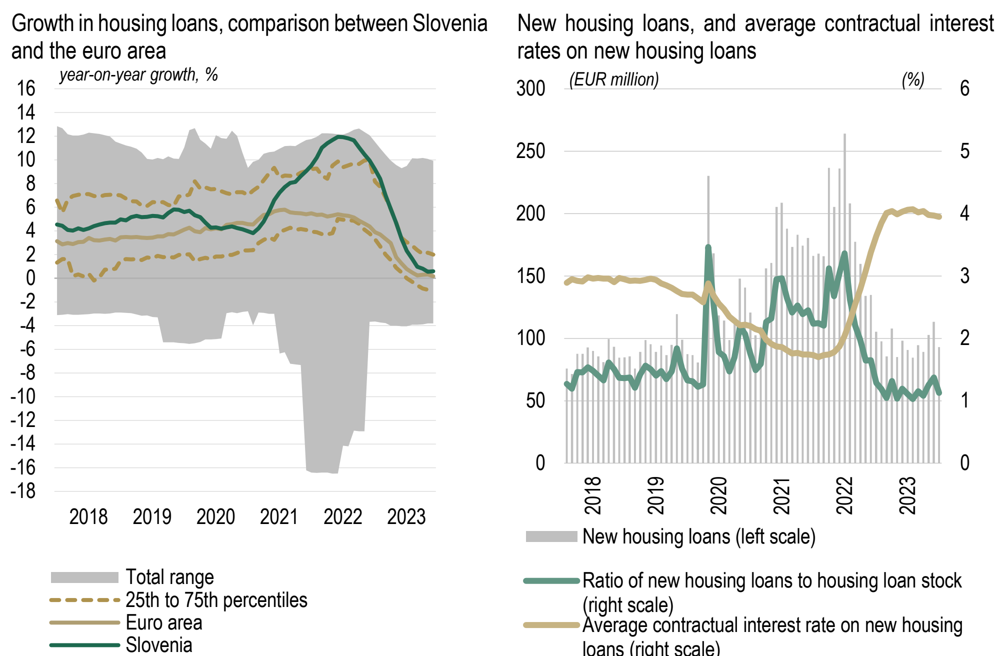
Amid declining demand driven by rising interest rates[12] and the rising cost of living, the stock of housing loans at the end of 2023 remained almost unchanged

[11] This figure might be slightly lower on account of unregistered letting, but some of this housing might at the same time be unsuitable for occupation.

[12] See Section 2.3 Interest rate risk.

from a year earlier. Year-on-year growth in housing loans had stood at 9.9% in December 2022, but had slowed to 0.6% by December 2023. Growth in housing loans thereby converged on the euro area average rate of 0.2% (see Figure 2.4, left). The share of housing loans carrying a fixed interest rate rose from 34% in December 2020 to 70% in December 2023. This protected borrowers from the increase in debt financing costs driven by tightening monetary policy. The ratio of housing loans to GDP stood at around 13% in Slovenia, significantly less than the euro area average of around 36%.

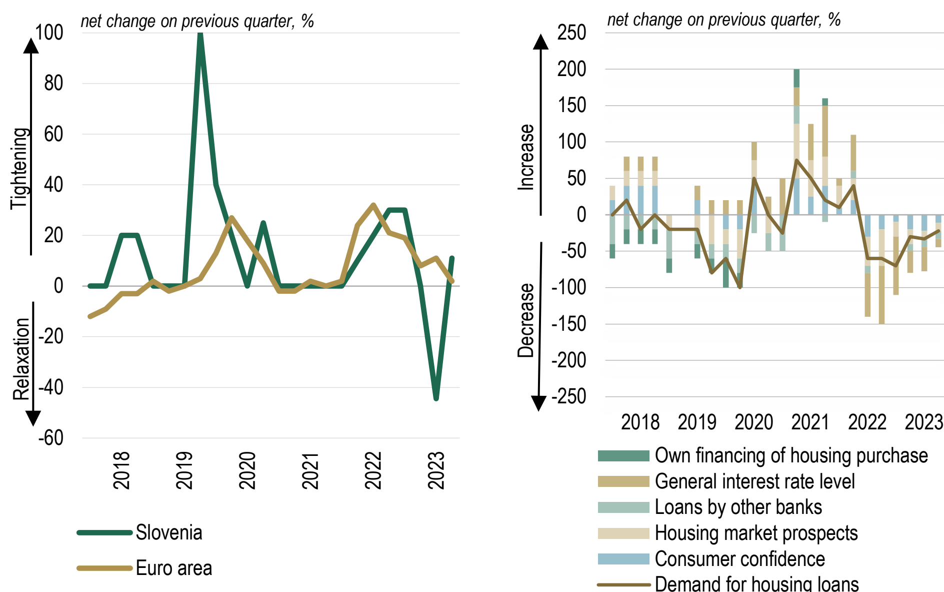
Figure 2.4: **Comparison of growth in housing loans between Slovenia and the euro area, and new housing loans and interest rates**



Note: The ratio of new housing loans to the total stock of housing loans was high in 2020 on account of the above-average refinancing caused by loan moratoria.
Sources: ECB Data Portal, Banka Slovenije

New housing loans rose sharply in 2021 and 2022 in expectation of interest rate rises, but by the end of 2023 had slowed to a level similar to the period of 2018 to 2020. The decline in new housing loans slowed in the second half of 2023 (see Figure 2.4, right). Credit standards on new housing loans were relaxed in the third quarter of 2023 according to the BLS. According to the banks, this was primarily attributable to changes in Banka Slovenije's macroprudential measures. The tightening of credit standards in the euro area overall slowed in the second half of 2023 (see Figure 2.4, left). Demand for housing loans in Slovenia declined in the second half of 2023 according to the BLS, albeit less intensively than in the first half of the year. The banks mainly attributed the decline in demand to falling consumer confidence and poorer prospects for the real estate market, while also assessing that the impact of higher interest rates had diminished in Slovenia (see Figure 8.3, right, in the appendix).

Figure 2.5: **Credit standards for new housing loans and demand for housing loans**



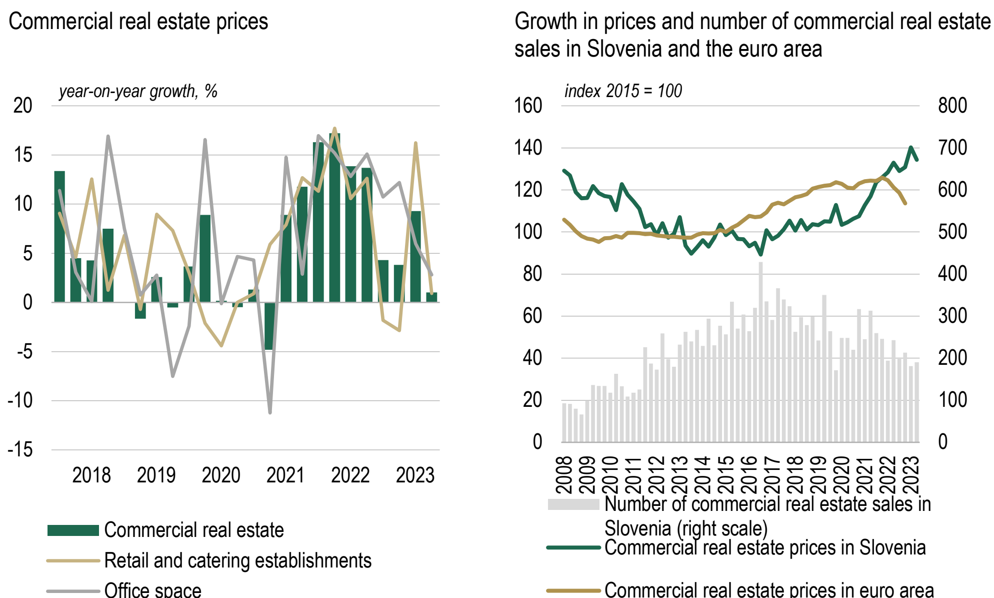
Sources: ECB Data Portal, Banka Slovenije

Commercial real estate market

Prices of commercial real estate were up in year-on-year terms in the second half of 2023, by 9.3% in the third quarter and by 1.8% in the final quarter. Year-on-year growth in prices of office space slowed to 2.8% in the final quarter, while growth in prices of catering/retail establishments turned positive again in the amount of 0.9% after price falls in the first half of the year (see Figure 2.6, left). Prices were up around 15% on average in 2022, the highest rate of the last decade, compared with growth of 4.8% in 2023. The number of sales of commercial real estate has been falling since mid-2022. Sales were down 21.8% in year-on-year terms in the final quarter of 2023. Commercial real estate prices in the final quarter of 2023 were up 34.3% on 2015, compared with the rise of 13.6% relative to 2015 in the euro area overall measured in the second quarter of 2023 (the figure was fully 25.9% in the second quarter of 2022, since which prices have fallen by 9.7%) (see Figure 2.6, right).

The commercial real estate market in the EU has been cooling for some time now, largely owing to high inflation and rising interest rates. In addition, the demand for purchasing commercial real estate declined during the post-pandemic period in certain EU Member States on account of the increased popularity of working from home, and at the same time there was an increase in requirements relating to construction standards driven by policies to address climate change. While the risk inherent in the commercial real estate market is generally elevated in the euro area, there is no such risk in Slovenia for now, although around 40% of total loans to non-financial corporations are secured by commercial real estate.

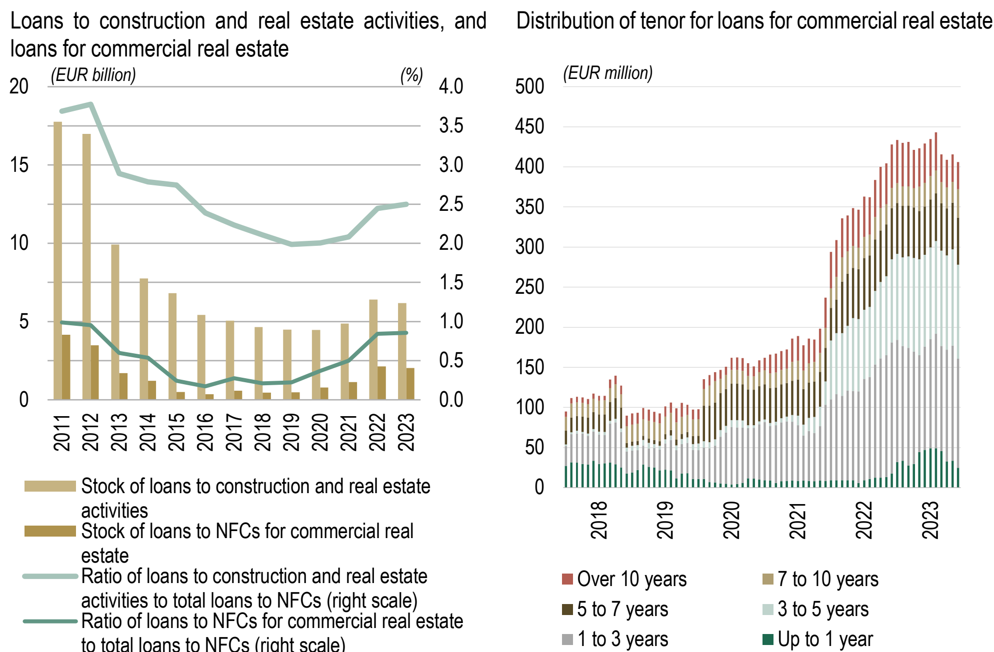
Figure 2.6: **Commercial real estate prices, and growth in prices and number of commercial real estate sales**



Sources: SORS, Banka Slovenije

The stock of loans for commercial real estate declined by 5.1% in 2023, but they nevertheless continued to account for 4.3% of total loans to non-financial corporations (see Figure 2.7, left). Almost a third of all loans for commercial real estate have a tenor of more than five years, compared with a figure of more than a half at the end of 2020 (see Figure 2.7, right). This slightly mitigated the risk, as loans with longer tenors pose a higher risk to banks because the probability of default is larger, while higher interest rates mean that the debt servicing burden is also larger. The banking system's exposure to construction and real estate activities increased slightly over the last three years, but remains significantly lower than a decade ago. The stock of loans to these two sectors amounted to EUR 1.2 billion at the end of 2023 (compared with a peak of EUR 3.5 billion in 2011), and the share of total loans to non-financial corporations that they account for had increased to 12.5% by the end of 2023 (compared with a peak of 18.9% in 2012) (see Figure 2.7, left).

Figure 2.7: **Loans to construction and real estate activities, and loans for commercial real estate and distribution of tenor**



Source: Banka Slovenije

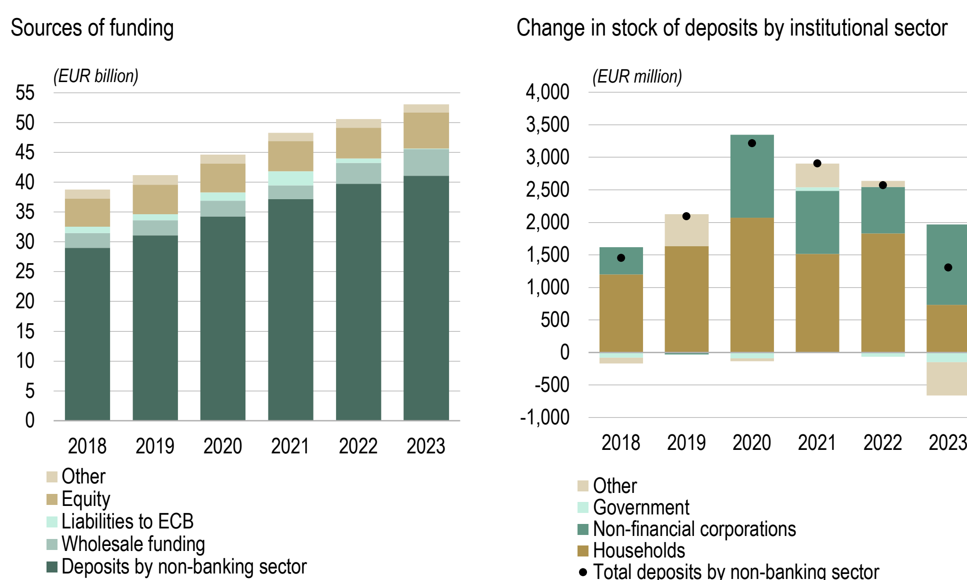
2.2 Funding risk

The assessment of funding risk remains at moderate, with a stable outlook. The increase in deposits by the non-banking sector in 2023 was smaller than in the previous years, but they nevertheless remained a stable source of funding for Slovenian banks, while reliance on other funding remained low. The banks were slow in slightly raising interest rates on deposits, which nevertheless remain negative in real terms, and encouraged savers to fix some of their savings, thereby ending the trend of increase in sight deposits seen over several years. The latter nevertheless continue to account for the majority of total deposits by the non-banking sector, which is keeping the maturity gap relatively large. The banks remain exposed to funding instability risk, which could be realised through the sudden large-scale switching of deposits between banks (or withdrawals from the banking system). Carefully monitoring the economic situation, and adjusting operations and pricing policy in a timely fashion remain vital to maintaining funding stability.

Bank funding

Amid a more modest inflow of household deposits, the total increase in deposits by the non-banking sector in 2023 was smaller than in previous years. Deposits nevertheless remain the most important source of funding for Slovenian banks. The stock of deposits by the non-banking sector increased by EUR 1.3 billion or 3.3% to end the year at EUR 41.1 billion (see Figure 2.8, left), which is equivalent to 77.4% of the banking system's balance sheet total. In the wake of an increase in deposits by the non-banking sector and a simultaneous decline in loans to the non-banking sector, the LTD ratio declined to 65.6%, and remains much lower than the euro area average (89.3%). The low LTD ratio means that the banks have no need of additional wholesale funding[13] to fund their lending activity, and at the same time indicates that the banks are not directing the full inflow of deposits into credit activity, one of their primary lines of business.

Figure 2.8: **Funding structure and evolution**



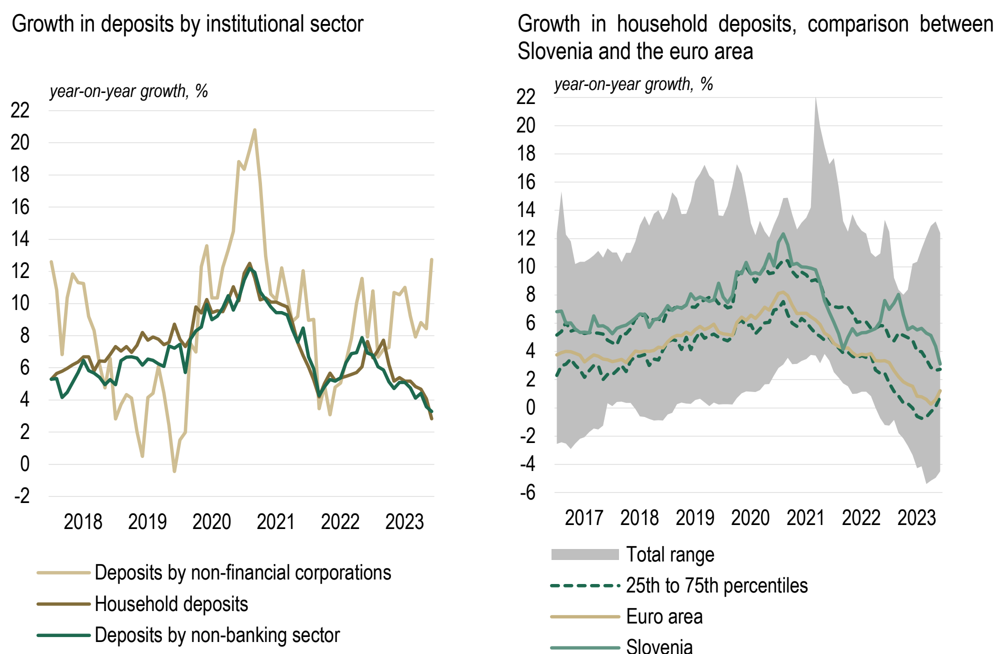
Note: The category of "other" in the right chart includes deposits by other financial institutions and deposits by non-residents.
Source: Banka Slovenije

[13] Wholesale funding consists of liabilities to foreign banks and issued debt securities.

The banking system's reliance on other sources of funding remained low. The majority of banks fully repaid all liabilities to the Eurosystem (TLTRO-III) last year, with two completing repayments in March of this year. Amid high liquidity, there was no need for additional borrowing or the replacement of this funding. Despite the ongoing repayments of debt to foreign banks, the stock of wholesale funding increased last year, as certain banks issued debt securities, mainly with the aim of meeting their minimum requirements for own funds and eligible liabilities (MREL requirements). This might also be a driver of future issuance. The total stock of wholesale funding increased by EUR 996 million to EUR 4.5 billion or 8.5% of the balance sheet total, less than a quarter of the share in 2008, when the banking system's dependence on this source of funding was at its peak.[14]

Household deposits remained a stable source of funding for the banking system, although the annual inflow was significantly less than in the previous years (see Figure 2.8, right). Household deposits increased by 2.8% or EUR 730 million in 2023 (see Figure 2.9, left) the lowest figure since 2015. Annual growth in household deposits nevertheless remains higher than the euro area average of 1.2% (see Figure 2.9, right). Despite the smaller annual inflow of household deposits, at EUR 26.5 billion they account for half of the balance sheet total, and remain the most important source of funding for Slovenian banks. The monthly changes in household deposits were relatively volatile in the first half of last year, before deposits declined between August and November inclusive, which coincided with work to address the impact of the severe weather, where the affected savers used their bank savings on repairs and reconstruction.

Figure 2.9: **Growth in deposits in Slovenia and the euro area**



Sources: Banka Slovenije, ECB Data Portal, own calculations

Despite the fall in inflation and the relatively high wage growth, growth in household deposits is likely to remain moderate in the future. Slovenia's issuance of a people's bond in the amount of EUR 258 million in February 2024 offered households the opportunity to move some of their savings into a relatively safe alternative asset with a slightly higher return than the long-term fixed deposits being offered by banks. Although the outflow of deposits for the purpose of bond purchases amounts to less

[14] Wholesale funding accounted for 38.6% of the balance sheet total on the funding side in June 2008, the majority of which consisted of liabilities to foreign banks, which were short-term funding.

than 1% of the stock of household deposits at banks, monitoring any changes in household saving habits that could drive an additional outflow of deposits from the banking system remains important in the future. Given the traditional behaviour of savers, and their low appetite to take up the increased risks posed by higher-yielding assets (securities, investment funds, cryptoassets, etc.), there is no expectation in the near future of any more pronounced withdrawals of household deposits that could reduce the funding stability of the banking system.

Deposits by non-financial corporations increased sharply in 2023, driven in part by the switching of deposits between sectors. The stock increased by EUR 1.2 billion or 12.7% (see Figure 2.9, left) to EUR 10.9 billion. The annual growth in deposits by non-financial corporations was among the highest rates in the euro area, and was well above the euro area average (-0.5%). Amid the cooling economy and the geopolitical uncertainties, firms were more reluctant to make major new investments, which might be a factor in the larger increase in their savings held in bank accounts.[15] Another factor in the large increase in deposits by non-financial corporations was a change in the status of one firm, which resulted in its deposits being reclassified from the OFIs sector[16] to the NFCs sector. Excluding the effect of the sectoral reclassification of deposits, deposits by non-financial corporations would have increased by 8.7% last year, a third less than the actual increase.

Deposit maturity and maturity gap between assets and liabilities

The rise in interest rates on deposits encouraged some savers to fix their savings, which brought an end to the trend of increase in sight deposits seen over several years. Households mainly fixed their savings for periods of one to three years, owing to the notably better interest rates offered by the banks on long-term deposits compared with short-term deposits (see Figure 2.10, right).[17] The gap by which rates on short-term fixes trail long-term fixes in deposits by non-financial corporations is not as evident as for household deposits, for which reason firms mainly opted to fix their deposits for up to one year, which also grants them faster access to their funds in the event of need. In the wake of the increase in fixed-term deposits, the share of total deposits accounted for by sight deposits declined slightly, but it remains high at 84.0% in the household segment and 77.2% in the non-financial corporations segment (see Figure 2.10, left), well above its long-term average.[18]

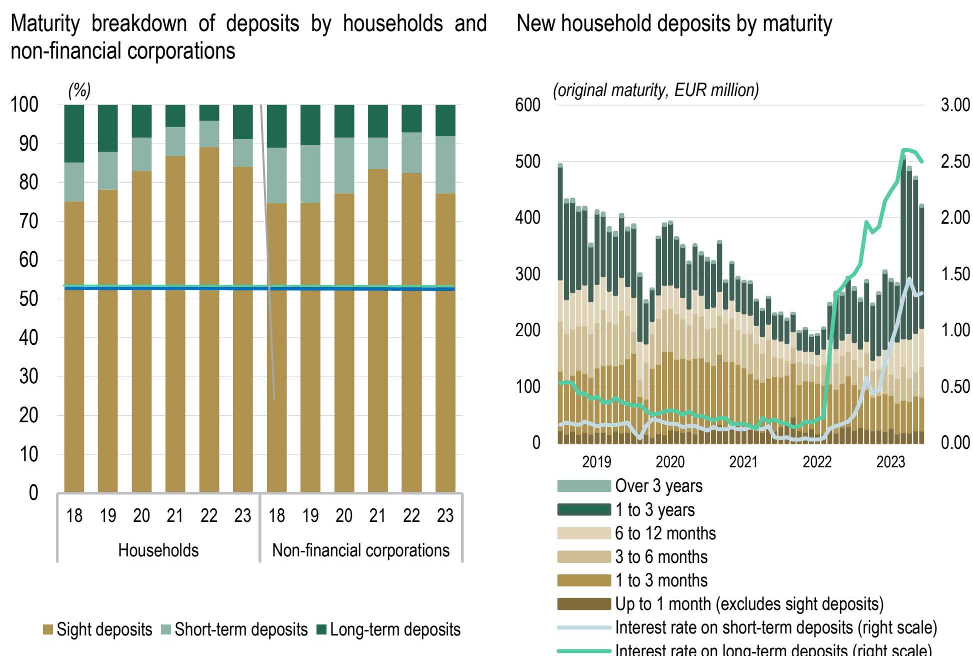
[15] Lending to non-financial corporations also slowed; for more, see Section 5.2 Non-financial corporations.

[16] Deposits by OFIs are included in the item “other” in the right chart in Figure 2.9.

[17] For more on developments in interest rates, see the section on interest rate risk.

[18] Sight deposits accounted for an average of 53.7% of total household deposits and 52.8% of total deposits by non-financial corporations between 2000 and 2023.

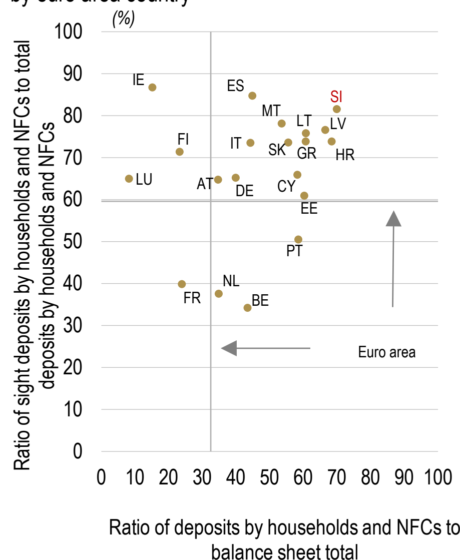
Figure 2.10: **Maturity breakdown of deposits by households and non-financial corporations**

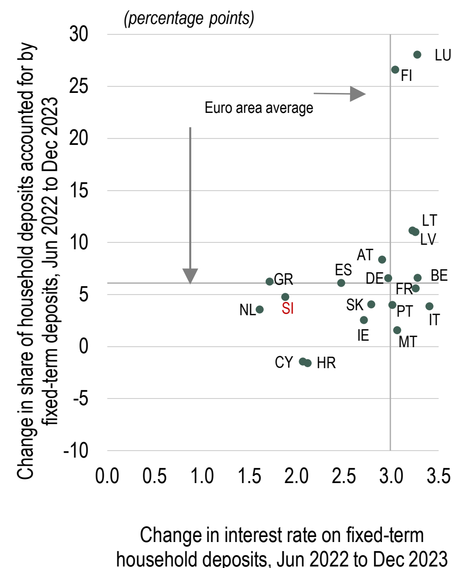


Note: The horizontal lines in the left chart denote the average share of sight deposits between 2000 and 2023, which stood at 53.7% in the household segment (green line) and 52.8% in the non-financial corporations segment (blue line).
Source: Banka Slovenije

As in other euro area countries, in Slovenia the rise in interest rates on deposits has driven a change in their maturity breakdown more than any major increase in stock. Despite the rise in interest rates on deposits, growth in deposits by households and non-financial corporations slowed in the majority of euro area countries, where Slovenia is still notable for the highest ratio of these deposits to the balance sheet total (see Figure 2.11, left). At the same time sight deposits declined in all euro area countries, most notably in those where the banks first tracked the changes in ECB interest rate policy and raised deposit rates (see Figure 2.11, right). Slovenia is not among them, as the large stock of deposits and surplus liquidity meant that Slovenian banks raised interest rates on deposits very gradually and with some delay, for which reason the share of sight deposits declined less than in most other countries. Short-term and long-term interest rates remained below the euro area averages at the end of 2023. Given the high ratio of household deposits and deposits by non-financial corporations to the balance sheet total, and the prevalence of sight deposits, Slovenia remains more exposed to increased risk of funding instability than countries where this source of funding is less important.

Figure 2.11: **Deposits and interest rates in euro area countries**

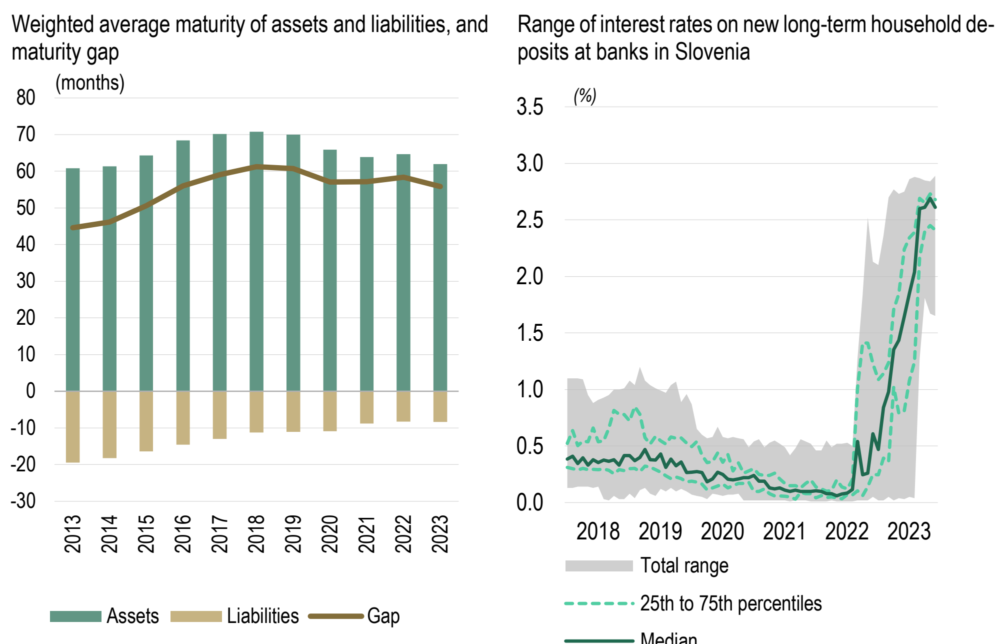




Sources: ECB Data Portal, own calculations

The maturity gap declined last year, but remained relatively large, and with it the risk of funding instability inherent in the gap. Owing to the increase in the banks' liquid (demand) assets held in accounts at the central bank, and the decline in long-term loans to the non-banking sector, the weighted average maturity of assets declined. With the weighted average maturity of liabilities remaining unchanged, the maturity gap narrowed by three months to 4.5 years (see Figure 2.12, left). This was one year more than the gap seen in 2013, i.e. in the period before the beginning of the rapid rise in sight deposits, which are a major factor in the persistence of a large gap. The risk inherent in the maturity mismatch could be realised in the event of a sudden large-scale switching of deposits by the non-banking sector between banks, or by deposit withdrawals from the banking system. Our assessment is nevertheless that savers retain confidence in Slovenian banks, despite several unforeseeable events in the last few years. The majority of the banks have also adjusted their pricing policy to the competition in the sector (see Figure 2.12, right), which means that there has not been any major switching of deposits between banks that might otherwise have been driven by large differences between banks in their interest rates on deposits. We should reiterate that diligently monitoring the economic situation and adjusting business to handle competition in a timely fashion remain vital to maintaining funding stability.

Figure 2.12: **Maturity gap and interest rates on fixed-term household deposits**



Source: Banka Slovenije

2.3 Interest rate risk

Interest rate risk declined in the second half of last year, which led to us lowering the risk assessment in the first quarter of this year to moderate with a stable outlook. Amid a discernible slowdown in credit activity, the share of fixed-rate loans continued to increase, whereas the ongoing significant increase in the most liquid assets acted to reduce the risk. The funding side of the balance sheet has seen a further gradual increase in the share of fixed-term deposits as interest rates on deposits have risen. The repricing gap narrowed in the second half of last year, primarily as a result of changes on the funding side. The rise in interest rates on loans and deposits had halted by the end of the year, but the interest spread has increased sharply since the onset of the rises in key interest rates.

Interest sensitivity

The banks' exposure to interest rate risk gradually declined over the final months of last year, and in response we lowered the risk assessment to moderate, with a stable outlook for this year. Credit activity is slowing discernibly, most notably in loans to non-financial corporations, which are seeing a sharp year-on-year decline, while loans to households are up in year-on-year terms. The increase is mainly being driven by consumer loans, which are recording double-digit growth. Similarly to the first half of last year, the trend of increase in the share of the stock of loans to households and non-financial corporations accounted for by fixed-rate loans continued in the second half of the year (see Figure 2.13, right). The share was continuing to increase in the household segment, but declined slightly in the non-financial corporations segment (see Figure 8.4 in the appendix). Almost all new consumer loans (more than 99%) were concluded with a fixed interest rate (see Table 2.1 below), and the share was also extremely high in the housing loans segment (96%). This continued the trend of lengthening in the average repricing period for loans. The slowdown in credit activity saw the share of the balance sheet total accounted for by loans to the non-banking sector continue to decline, reaching 50% in December, while there were increases in the shares accounted for by the most liquid assets[19] (24.0%) and by securities (18.5%). The increase in the former of

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

EUR 1,094 million in the second half of the year was the largest change in the structure of assets, and acted to reduce interest rate risk. In the wake of the continuing increase in the most liquid assets with very short maturities, the average repricing period for assets shortened in the late part of the year, but was still similar to June (see Figure 2.13, left).

Table 2.1: **Share of fixed-rate loans**

	Stock, Dec 2023	New loans, average H2 2023	Stock, Dec 2013	New loans, average 2013
Housing	71%	96%	4%	2%
Consumer	87%	99%	29%	44%
Households	75%	98%	11%	26%
NFCs	19%	22%	6%	41%
Overall	50%	57%	13%	38%

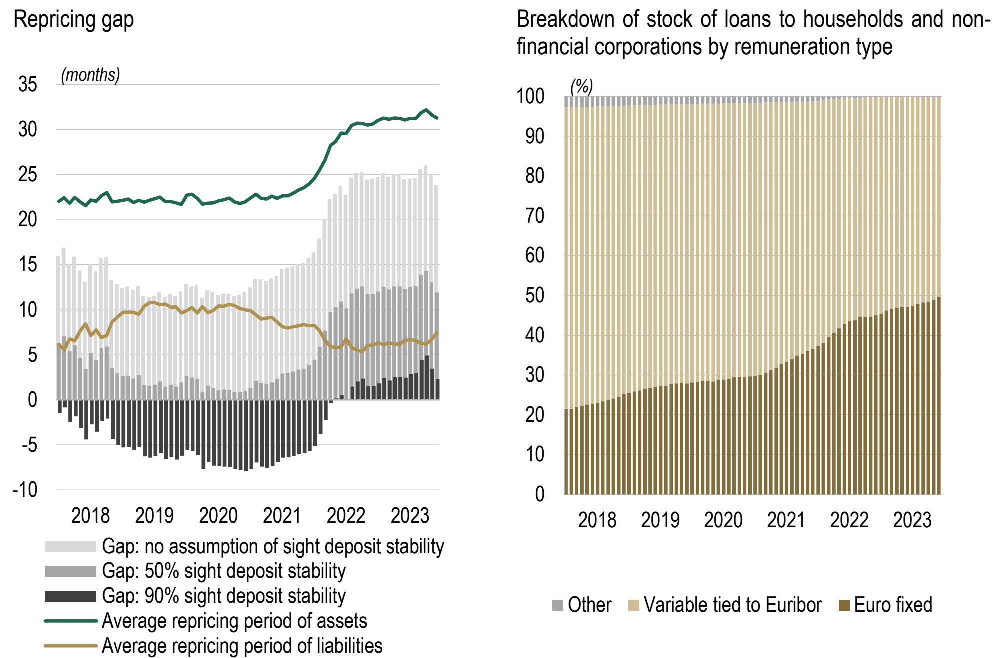
Note: Households include housing loans and consumer loans, but not other loans to households. Total includes household loans and loans to non-financial corporations.
Source: Banka Slovenije

The trend of decline in interest rate risk was mostly linked to changes on the funding side. Amid the ongoing increase in deposits by the non-banking sector, the changes in their structure also continued. Despite the increase in deposits in the second half of last year, the share of the banking system's total liabilities that they account for increased only slightly, while the decline in the share of sight deposits and increase in the share of fixed-term deposits continued and strengthened[20] (see Figure 2.10, left). This continued the gradual lengthening of the average repricing period for deposits. Elsewhere on the funding side there was a notable increase in equity, driven by retained earnings, while the largest decline was in liabilities to banks. Liabilities to the central bank also declined, and account for an insignificant share of total funding, while the stock of issued debt securities remained similar to June (see Figure 2.8, left).[21] With the aforementioned changes, recent months have seen a slightly more evident trend of lengthening in the average repricing period for liabilities (see Figure 2.13, left). The lengthening outpaced that on the asset side in the second half of the year, thereby reducing the repricing gap, which had a favourable impact in reducing interest rate risk.

[20] The higher interest rates on fixed-term deposits meant that the changes in the shares in the second half of the year were double the size of those in the first half of the year.

[21] For more about the changes in deposits of the non-banking sector and other funding, see the section of funding risk.

Figure 2.13: **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 stable component of sight deposits across maturity buckets,[22] and hedging via derivatives and amortisation. In the right chart short-term deposits are deposits fixed for a term of up to one year, while long-term deposits are those fixed for a term of more than one year. Households in the right chart includes housing loans and consumer loans, but excludes other household loans.
Source: Banka Slovenije

Interest rates

Interest rates on new loans to the non-banking sector stagnated overall in the second half of last year, and the rise in interest rates on new fixed-term deposits by the non-banking sector also came to an end before the end of the year. Fixed interest rates on new household loans were stable last year, and in December stood at close to their level of the end of 2022, while variable interest rates rose less intensively in the second half of the year than in the first half (see Figure 8.5, left, in the appendix).[23] Fixed interest rates on loans to non-financial corporations reached their peak in this cycle of interest rate rises in January of last year,[24] before falling moderately, while variable interest rates continued to rise in the second half of the year, albeit less intensively than in the first half (see Figure 8.5, right, in the appendix).[25] Towards the end of the year the stagnation in interest rates on loans was increasingly reflected in the interest rates of the stock of loans to households and non-financial corporations, which during this cycle of interest rate rises increased significantly more than in the euro area overall, thereby considerably widening the gap with the euro area (see Figure 2.14, left).

Interest rates on new fixed-term deposits had begun to fall even before the end of 2023, in both the household and NFCs segments. In the household segment interest rates on long-term deposits reached their highest peak in this cycle of interest

[22] The stability of sight deposits is estimated by means of a model, which provides an estimate of the core component of sight deposits. The core component is that part of sight deposits whose interest rates are highly unlikely to change even in the event of a change in market interest rates.

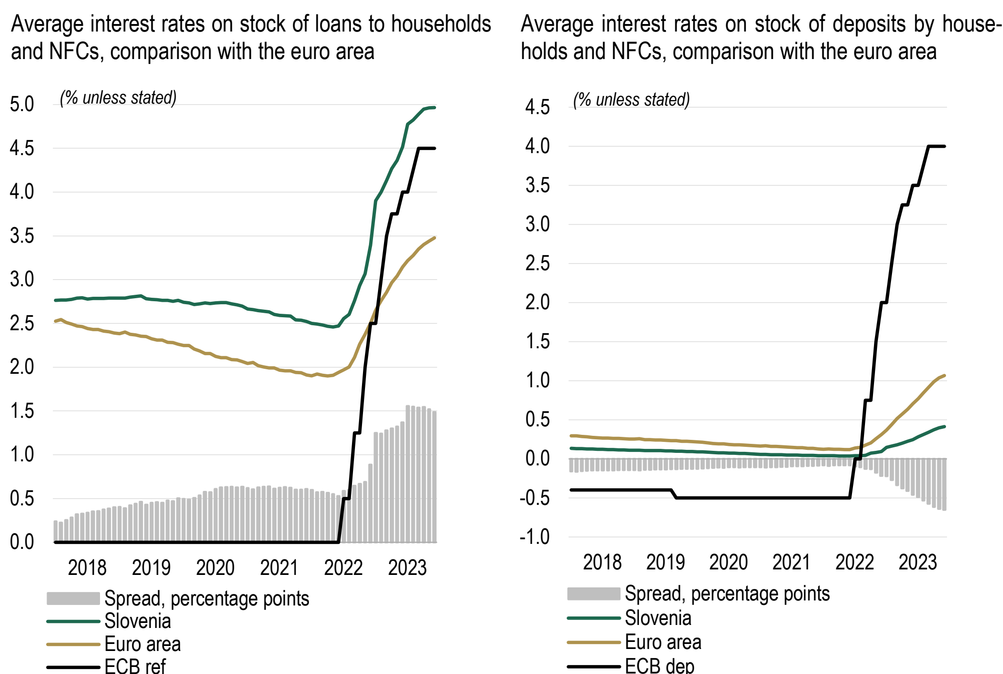
[23] Fixed interest rates on new housing loans averaged 4.0% in the second half of 2023, while rates on consumer loans averaged 6.7%. Variable interest rates on new housing loans averaged 5.5% in the second half of 2023, while rates on consumer loans averaged 7.6%.

[24] The cycle of rises in key interest rates is defined in this instance as the period from the first interest rate hike in May 2022 to the final hike in July 2023.

[25] Fixed interest rates on new loans to non-financial corporations averaged 5.2% in the second half of 2023, while variable rates averaged 5.3%.

rate rises in September, while the rise in those on short-term deposits trailed significantly and peaked in October (see Figure 8.6, left, in the appendix).[26] Interest rates on sight deposits, which accounted for 84% of total household deposits at the end of the year, remained at 0.1%. Interest rates on long-term and short-term deposits by non-financial corporations alike peaked in August, while interest rates on sight deposits by non-financial corporations remained at zero in December (see Figure 8.6, right, in the appendix).[27] Interest rates on the stock of deposits to households and non-financial corporations rose significantly less in Slovenia than in the euro area overall, widening the gap with the euro area considerably (see Figure 2.14, right).

Figure 2.14: **Interest rates**



Note: ECB ref is the interest rate on main refinancing operations. ECB dep is the interest rate on the deposit facility.
Sources: ECB Data Portal, Banka Slovenije calculations

The interest spread relative to the euro area overall has increased significantly since the beginning of the rise in key interest rates.[28] In the household segment (see Figure 2.15, left) it was larger even in the years before the first rise in key interest rates, and reflected the higher interest rates on household loans relative to the euro area, the lower interest rates on household deposits, and the breakdown of deposits, with sight deposits accounting for a larger share of total household deposits in Slovenia. Alongside these factors, another significant factor at work in Slovenia in the faster widening of the spread since the rise in key interest rates began has been the faster rise in interest rates on loans coupled with the slower rise in interest rates on fixed-term deposits, where the rise has been very gradual. The interest spread for households stood at around 4.5 percentage points in the second half of 2023, while in the NFCs segment the spread stood at similar levels with a similar gap with the euro area, although it had been closer to the euro area average in the previous years (see Figure 2.15, right). The aforementioned changes are also being reflected in a significantly larger rise in asset interest rates compared with liability interest rates (see Figure 8.13b in the appendix). Given the existing structure of bank funding, these dynamics in the

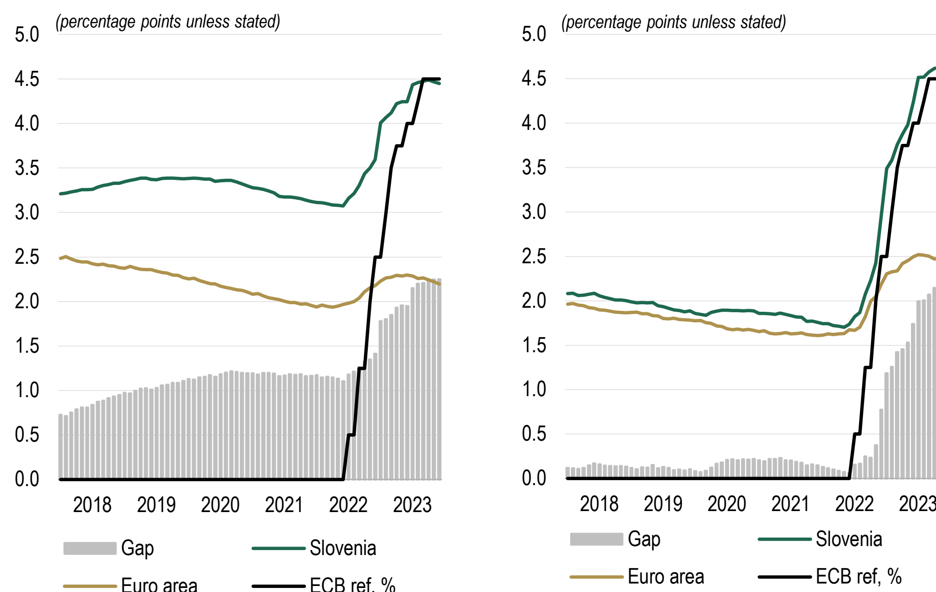
[26] Long-term interest rates stood at 2.6% in September and 2.5% in December, while short-term interest rates stood at 1.5% in October and 1.3% in December.

[27] Long-term interest rates stood at 4.1% in September and 2.4% in December, while short-term interest rates stood at 2.7% in October and 2.1% in December.

[28] The interest spread is defined as the difference between average interest rates on loans and average interest rates on deposits.

recent changes in interest rates were reflected very favourably last year in income developments at banks.[29]

Figure 2.15: **Interest spread**



Sources: ECB Data Portal, Banka Slovenije calculations
Note: ECB ref is the interest rate on main refinancing operations. The interest spread is defined as the difference between average interest rates on loan stocks and average interest rates on deposit stocks.

2.4 Credit risk

The assessment of credit risk at banks was held at moderate. Weak demand and uncertainty in the economic environment have already had an impact on quality in the portfolio of export-oriented sectors in recent months. A risk of a deterioration in asset quality is still being posed by increased debt servicing costs, which in light of the lower economic growth forecasts and the diminished expectations of growth in income under these conditions is further increasing the debt repayment burden at banks. The asset quality indicators at the level of the total portfolio nevertheless remain favourable and stable, although higher NPE ratios are evident in manufacturing. An increase in Stage 2 exposures and a rise in default rates are evident in certain other sectors, with the smallest firms and sole traders to the fore. The increase in arrears at intervals of less than 90 days is also indicative of the potential for a future deterioration in asset quality.

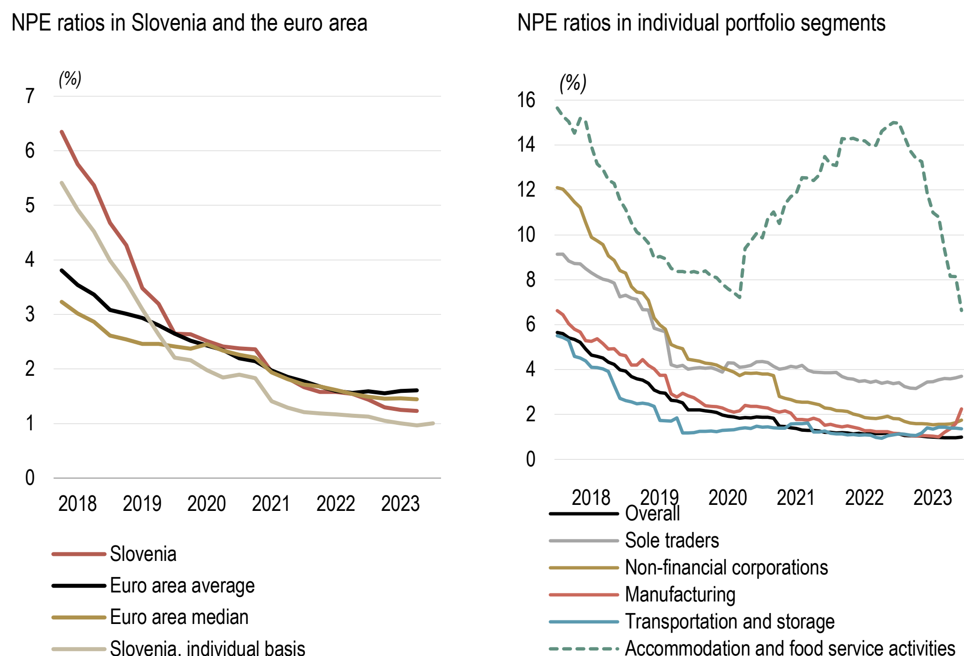
NPEs and credit risk stages

NPE ratios reached record lows in 2023, in Slovenia and in the euro area overall. The NPE ratio in the euro area had stabilised at 1.6% by the second quarter of 2022 (the same figure was also reached in the EU overall), while the NPE ratio in Slovenia continued to fall, reaching 1.2% by the third quarter of 2023 (see Figure 2.16, left). The figure refers to a narrower NPEs aggregate consisting solely of bank holdings of debt instruments, while Slovenia's NPE ratio for total exposures is even lower at 1.0%. The EU median NPE ratio has undergone an increase since the second quarter of 2023, but no such increase was evident in euro area countries. The main factors in the increased credit risk at euro area banks are the increased debt servicing burden faced

[29] For more, see the section on income risk.

by customers amid high indebtedness in the household and NFCs segments, and the reduced expectations for economic growth, which will further increase the debt burden as corporate profitability is hit. Similar credit risk factors are present in Slovenia, albeit with a significantly lower level of indebtedness and a more favourable financial position for customers.[30]

Figure 2.16: **NPE ratios**



Note: In the left chart the data for the euro area is on a consolidated basis, while the capture of NPEs in these comparisons is narrower than in the figures for the Slovenian banking system in this section: only exposures from debt instruments are captured, which primarily reduces the denominator and consequently increases the NPE ratio. An additional series using the standard Banka Slovenije definition (individual basis, capturing total exposures) is also illustrated for Slovenia.
Sources: Banka Slovenije, ECB Data Portal

The NPE ratio in the total portfolio has remained at 1.0% since April of last year, but the stock of NPEs began increasing again in October. The majority of the increase in NPEs in the final quarter of last year was driven by the NFCs segment, where the NPE ratio increased by 0.2 percentage points to 1.8% (see Figure 2.16, right). The stock of NPEs also increased in the consumer loans portfolio, where the NPE ratio nevertheless remained unchanged at 3.1% at the end of the year on account of growth in lending in the segment. The sole traders portfolio was notable for the duration of the rise in the NPE ratio and its level, which had reached 3.7% by the end of 2023.

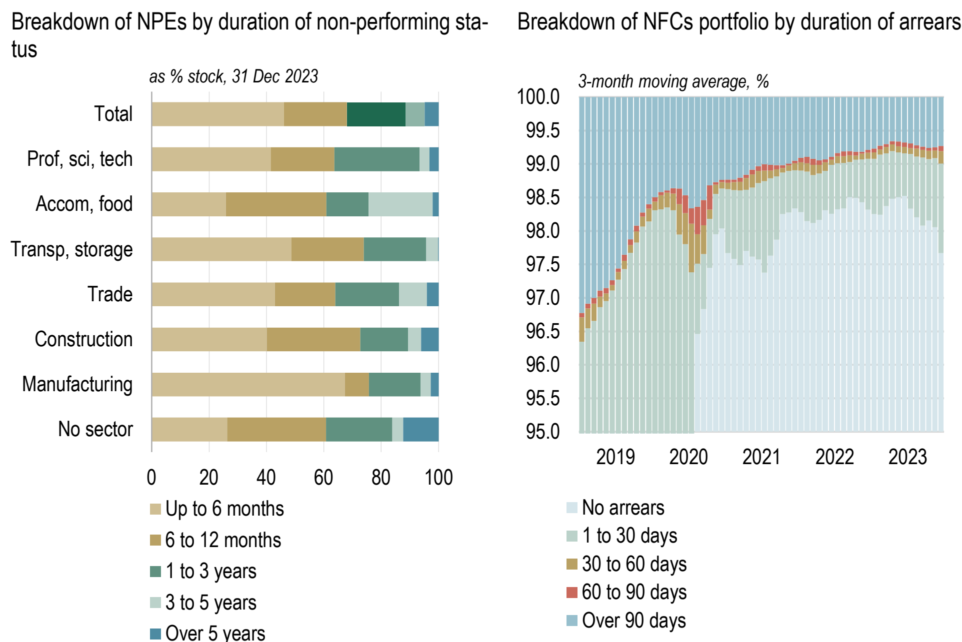
Asset quality improved significantly in accommodation and food service activities in 2023, but there was a significant deterioration in manufacturing in the final quarter of the year.[31] By the end of the year the NPE ratio in accommodation and food service activities had fallen below its level from before the pandemic (and the extremely large rise in NPEs in this sector), reaching 6.6% (see Figure 2.16, right). Firms in accommodation and food service activities still remain among those with the highest NPE ratios, and with the largest share of older NPEs (see Figure 2.17, left). A trend of increase in NPEs has been evident since September 2023 in manufacturing, which is facing a slowdown and reduced foreign demand. The stock of NPEs in manufacturing more than doubled in the final four months of the year, while the NPE ratio increased

[30] An assessment given in the October 2023 issue of the Financial Stability Review was that credit risk might be driven up by the impact of the August 2023 floods. By the end of the year this risk had not been reflected in a deterioration in asset quality, with bank customers only making minor use of their option of a moratorium on credit obligations or new loans to address the impact of the severe weather. The data is given in Table 8.5 in the appendix.

[31] Credit risk in individual sectors in the NFCs portfolio is additionally analysed from the perspective of climate risks in Section 3.2.

from 1.0% to 2.2%. It is only a few large enterprises in the manufacturing sector that have been classified as NPEs, but their exposures are large. This drove up the NPE ratio in the large enterprises portfolio by 0.6 percentage points to 1.0%, while the NPE ratio for SMEs was still declining over the remainder of the year, reaching 2.5% in December.[32]

Figure 2.17: **Breakdown of portfolio according to arrears and duration of NPEs**



Note: The data in the left 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 382 million of the total NPEs of EUR 585 million as at the end of 2023. The "no sector" bar denotes non-residents.
Sources: Banka Slovenije, EBA

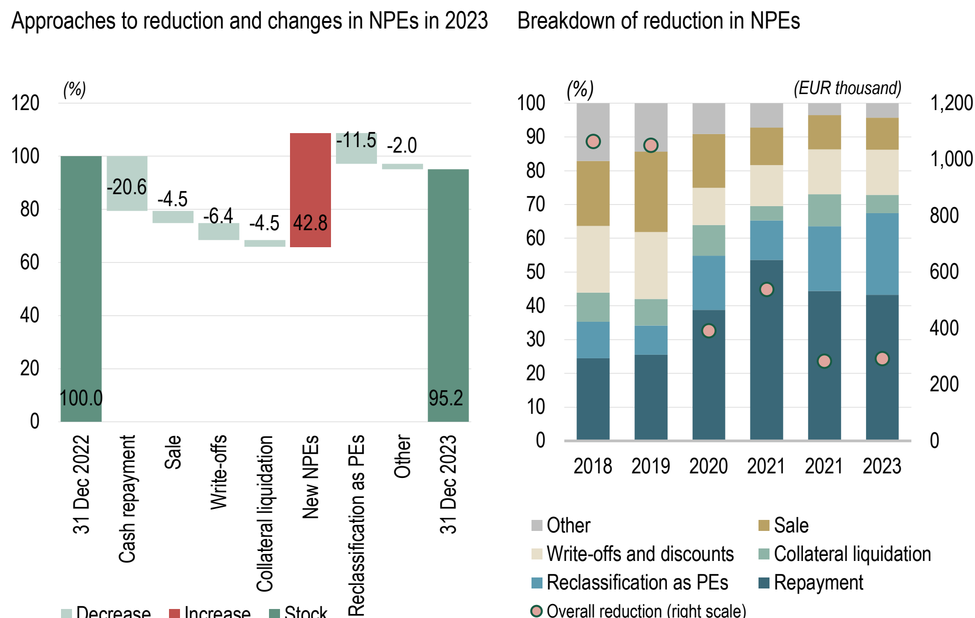
The increase in NFCs' arrears at intervals of less than 90 days is indicative of the possibility of a future rise in NPEs. Since the second half of last year the increase in arrears has been most evident at the shortest intervals of up to 30 days (see Figure 2.17, right). Arrears at slightly longer intervals of between 30 and 90 days are more indicative of the likelihood of longer arrears accruing.[33] Firms in the sectors of manufacturing and transportation and storage are notable for the rise in the share of longer arrears (see Figure 8.9 in the appendix). The otherwise low NPE ratios in transportation and storage began increasing in the first half of the year (from 1.1% to 1.4%), and then persisted at the elevated level until the end of the year. The lengthening of arrears in the second half of the year was greater in transportation and storage than in manufacturing, and might be an indicator of additional deterioration in the portfolio.

The trend of decline in the NPE ratios in the housing loans and consumer loans portfolios continued. The NPE ratio had declined to 1.1% in the housing loans portfolio by April of last year, and to 3.1% in the consumer loans portfolio by September of last year (see Figure 8.7, left, in the appendix), and remained at those levels until the end of the year. The consumer loans portfolio did see an increase in NPEs in the final quarter, but the simultaneous high growth in new consumer loans meant that the NPE ratio in this segment remained unchanged.

[32] The changes in these two sectors drove a considerable change in the breakdown of NPEs in the NFCs portfolio: manufacturing firms accounted for fully 38% of total NPEs to NFCs in December (compared with 18% a year earlier), while accommodation and food service activities accounted for 11% (down from 26%). Over a longer time horizon (2017 to 2022), manufacturing firms did not account for more than 20% of total NPEs in the NFCs portfolio.

[33] Some exposures with arrears of less than 90 days have already been reclassified as NPEs, on the basis of assessment by banks that there is an increased probability of default even before the 90 day threshold is reached.

Figure 2.18: **Reduction in NPEs according to the bank survey**



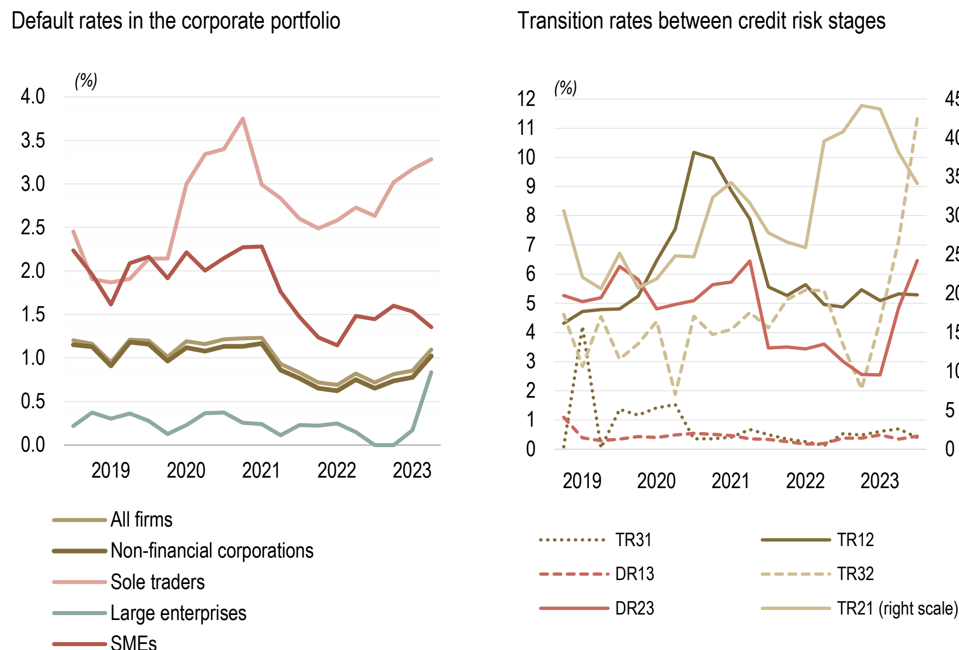
Source: Banka Slovenije

In the breakdown of the reduction of NPEs, the share of active interventions by banks declined further last year. The inflow of new NPEs was larger than in the previous year, but the share of reclassifications from NPEs to performing exposures increased from 19% to 24% (see Figure 2.18, right). The share of repayments of NPEs also remained high, at 44%. Reclassifications to non-defaulter status increased in the NFCs portfolio in particular, while the trend of increase in repayments in the household portfolio continued (see Figures 8.10 and 8.11 in the appendix). Sales accounted for 10% of the reduction in NPEs in 2023, and are displaying a trend of decline, particularly in the NFCs portfolio.[34] In 2019 when the banks had succeeded in reducing the NPE ratio from 8.4% to 4.5%, this was mainly achieved through sales (27%) and write-offs (16%), while over the last four years the role of these measures has declined to 13% and 11% respectively. One feature of the reduction in NPEs in the household portfolio is the prevalent role, growing over the years, of repayments of NPEs and reclassifications to non-defaulter status, which is indicative of the ability of households to resolve their temporary problems with debt repayment themselves. These two approaches accounted for 75% of the reduction in NPEs in the household portfolio, compared with 58% in 2019.

Default rates increased in 2023, particularly at small businesses. In the smallest corporate portfolio, sole traders, the default rate had by the end of the year approached its highest level of the last four years (more than 4%) (see Figure 2.19, left). The default rate in the SMEs portfolio increased in the first half of the year, before slowing over the remainder of the year to below its pre-pandemic level. The default rate in the large enterprises portfolio increased markedly in the late part of the year, driven primarily by a sharp increase in defaults in manufacturing (the default rate had reached 1.9% by the end of the year), which was reflected in the aforementioned rise in the NPE ratio in this sector. The sectors of wholesale and retail trade, transportation and storage, and professional, scientific and technical activities also saw an increase in defaults in 2023.

[34] Box 1 examines the legal basis put in place for the development of secondary markets for non-performing loans.

Figure 2.19: **Credit parameters**



Note: The left chart illustrates the one-year exposure-weighted default rates according to Article 178 of the CRR. 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

At the same time as the increase in transitions to default status, the NFCs portfolio has also seen an increase in transitions in the opposite direction over the last year, which has mitigated the rise in the NPE ratio. The transition rate from Stage 3 to Stage 2 (from non-performing to performing exposures) increased from 3.6% in 2022 to 11.3% in 2023 (see Figure 2.19, right), which reflects the banks' increased activity in reducing NPEs and also the increased repayment rate. The decline in reclassifications from Stage 2 to Stage 1 is also notable, following the marked increase in 2022.

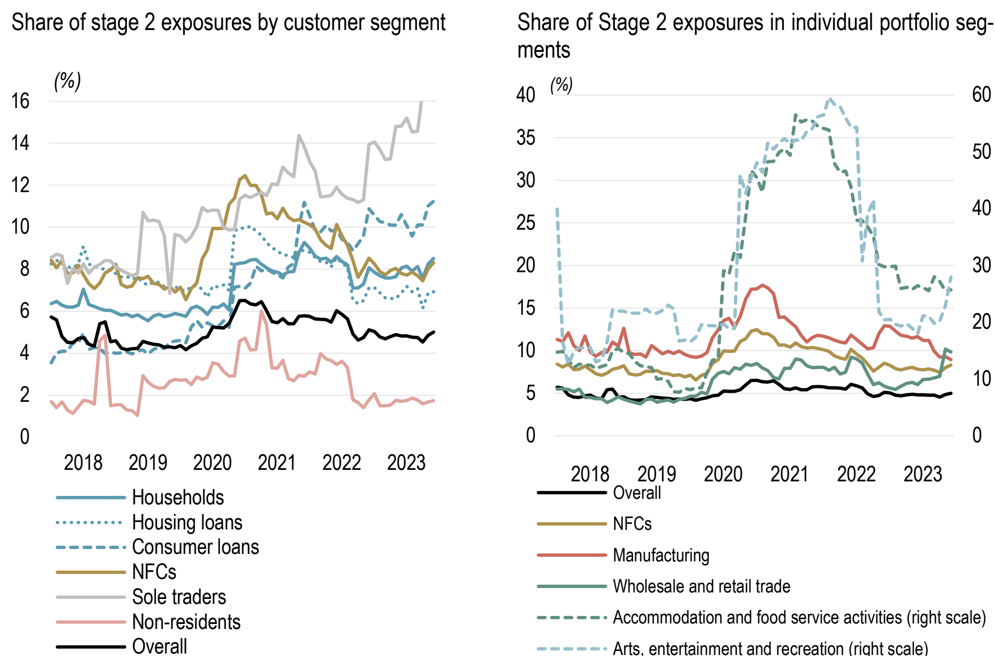
Credit risk stages

The share of exposures in the stage with increased credit risk was broadly unchanged at the level of the total portfolio in 2023, but increased in individual segments. The share stood at 5.0% at the end of the year, similar to its level at the end of 2022 (see Figure 2.20, left). After two years of rapid decline, the share of Stage 2 exposures was also relatively stable in the NFCs portfolio in 2023, and stood at 8.3% in December. Within the NFCs portfolio, accommodation and food service activities was still notable for its high share (25%), while arts, entertainment and recreation recorded a similar share, albeit following a renewed rise in 2023 (see Figure 2.20, right). Reclassifications to Stage 2 were evident last year in wholesale and retail trade, particularly in the final months of the year. A trend of increase has also been evident in the sole traders portfolio since the outbreak of the pandemic, with the exception of 2022. This is also the only sector that saw a simultaneous increase in the share of Stage 2 exposures and in the NPE ratio in 2023, each indicator recording their highest value of any customer segment.[35] The consumer loans portfolio also saw an increase in the share of Stage 2 exposures over the final months of the year, the figure hitting 11.0% by December, thereby reattaining its previous record high from 2021. The banks that saw

[35] The sole traders portfolio otherwise accounted for a small proportion of the banking system's total exposure in December 2023 (1.3%).

the largest increases in the share of Stage 2 exposures were those that were notable for their exceptional growth in consumer loans, which might be indicative of a perception of greater credit risk in this increased exposure.

Figure 2.20: **Share of Stage 2 exposures**

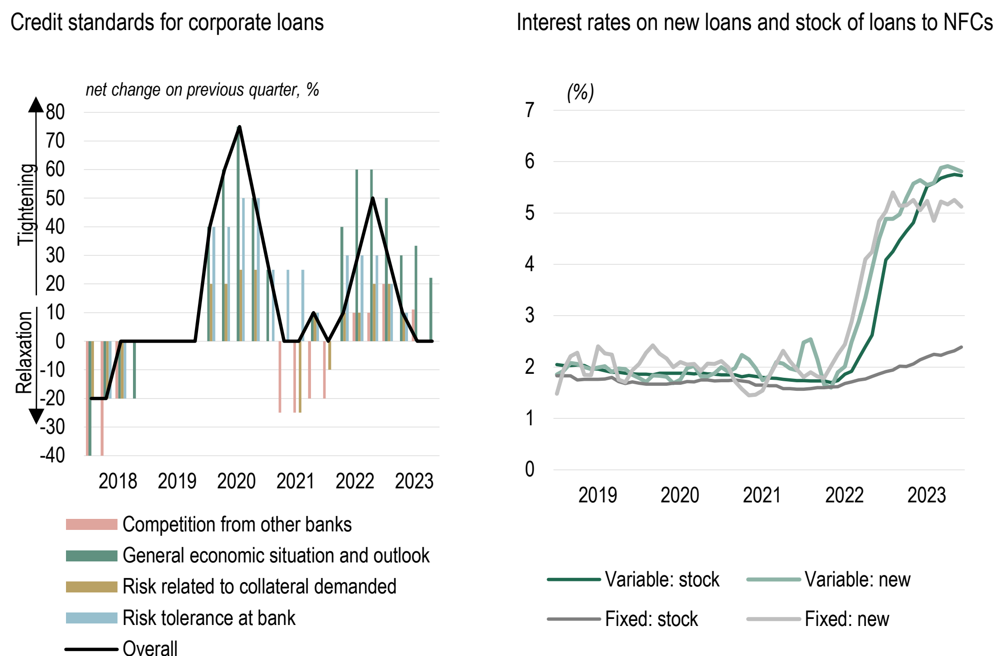


Note: PEs denotes performing exposures.
Source: Banka Slovenije

Bank credit standards and interest rates

The banks were still tightening their credit standards for corporate loans in the first half of 2023, but stopped in the second half of the year. The largest factors in the tighter credit standards in 2023 were the general economic situation and outlook, and the industry-specific situation and outlook (see Figure 2.19, left). The banks slightly tightened credit standards for household loans in the final quarter. They state that their risk perception is having an impact on their margins, in the housing loans and consumer loans portfolios alike. The decline in margin in the housing loans portfolio in the final quarter was attributable to competitive pressures, which had previously driven up margins. According to the final survey of 2023, the banks were not expecting any tightening of credit standards for corporate loans in the first quarter of 2024, but were forecasting slightly tighter credit standards for household loans, particularly in the consumer loans portfolio.

Figure 2.21: **Credit standards and interest rates**



Note: Only long-term loans, which account for 88% of the loan stock, are captured under new loans in the right chart. Short-term loans were approved by banks with a slightly lower interest rate on average.
Sources: BLS, Banka Slovenije

Debt servicing costs at banks increased sharply over the course of the year for debt concluded with a variable interest rate, while the increase was significantly less for fixed-rate debt. The rise in variable interest rates slowed towards the end of 2023, while the rise in fixed interest rates had already slowed in the early months of the year. The pass-through of the rise in interest rates on new loans into the average interest rates for loan stock was significantly smaller for fixed interest rates: the average variable interest rate on the stock of debt in the NFCs portfolio at the end of 2023 was 2.4 times higher than the average fixed rate (see Figure 2.21, right). There is a similar ratio in the housing loan stock (see Figure 8.7, right, in the appendix). The average interest rate on the stock of fixed-rate housing loans stood at a low 2.6% at the end of 2023, and they accounted for 70% of the stock of housing loans.[36] Given the long maturities of housing loans, the pass-through can be expected to continue this year, while the effect will be smaller in consumer loans and loans to NFCs.[37] Despite the prevalence of fixed-rate loans in their debt holdings, the decline in purchasing power driven by inflation could cause certain households to face an increased repayment burden, although for the majority the impact will be mitigated by the real average growth in wages in 2023. The favourable impact of slower growth in the debt servicing burden on fixed-rate loans is significantly smaller in the NFCs segment than in the household segment, given that they account for just 21% of the total loan stock.

Coverage by impairments and provisions

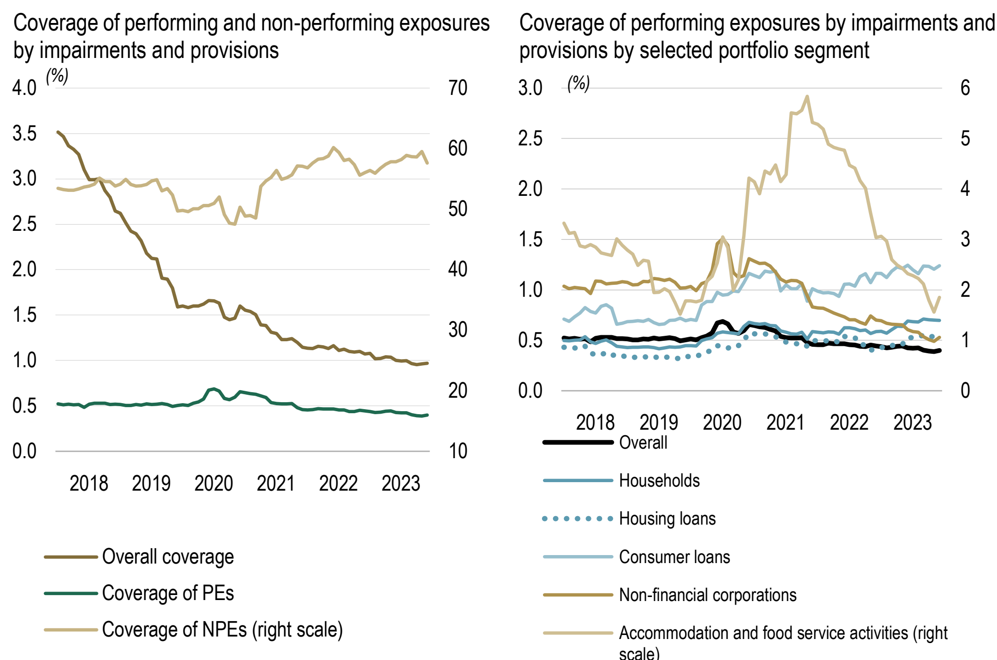
Coverage of NPEs by impairments and provisions improved again in 2023, but coverage of performing exposures declined further. Coverage of NPEs had reached 59.5% by November, but fell by 2 percentage points in December (see Figure 2.22, left), primarily on account of low coverage of new NPEs in the manufacturing portfolio. Coverage of performing exposures has been declining since the end of 2020.

[36] For more on interest rates, see Sections 2.1 and 2.3.

[37] The average residual maturities of fixed-rate loans at the end of 2023 were 15.6 years in the housing loan portfolio, 5.5 years in the consumer loan portfolio, and 5.2 years in the NFCs portfolio.

The decline in coverage by impairments in the NFCs portfolio over the last two years is primarily attributable to the release of impairments in the accommodation and food service activities portfolio (see Figure 2.22, right).[38] Coverage of performing exposures in the household portfolio is above-average, and has been higher than in the NFCs portfolio since the middle of last year (0.70% versus 0.53%), on account of the rising coverage of consumer loans by impairments.

Figure 2.22: **Coverage by impairments and provisions**



Note: PEs denotes performing exposures.
Source: Banka Slovenije

Box 1: Purchasers and Servicers of Banks' Non-Performing Loans Act

February 2024 saw the entry into force of the Purchasers and Servicers of Banks' Non-Performing Loans Act (the ZKSNKB), which transposes Directive (EU) 2021/2167 of the European Parliament and of the Council of 24 November 2021 on credit servicers and credit purchasers and amending Directives 2008/48/EC and 2014/17/EU into Slovenian law.

The new legislation aims to put in place a legal basis in the EU for the development of secondary markets for non-performing loans granted by credit institutions, by eliminating barriers to the transfer of non-performing loans from credit institutions to credit purchasers, and by regulating the cross-border provision of credit servicing activities[39] while simultaneously protecting the rights of borrowers (consumers in particular). In conjunction with other regulations, this aims to create the right environment for credit institutions to be able to address the issue of non-performing loans, and to reduce the risk of their future build-up on their balance sheets. In this way credit institutions will be able to continue financing the real sector.

[38] The share of Stage 2 allowances in the NFCs portfolio accounted for by accommodation and food service activities peaked at 40% in November 2021, following which it had declined to 15% by the end of 2023.

[39] This includes the collection or recovery of past-due payments from borrowers, negotiations with borrowers on credit repayment terms, the treatment of complaints, and notification of borrowers with regard to changes in interest rates, fees or past-due payments.

The new legislation also puts in place a legal framework for credit purchasers and credit servicers, whereby harmonised requirements in connection with granting authorisations and conducting supervision apply to credit servicers. To pursue credit servicing activities in Slovenia, credit servicers who act on behalf of a credit purchaser are required to first obtain a Banka Slovenije authorisation, or an authorisation from the competent authority of the home Member State of a credit servicer from the EU based on which they are entitled to provide cross-border services in Slovenia. The reverse applies in the case of a credit servicer who has obtained a Banka Slovenije authorisation being able to provide cross-border credit servicing in other EU Member States.

Credit servicing activities on behalf of a purchaser may also be pursued by other entities, as part of their normal business in accordance with their home country regulations and on the basis of obtaining an authorisation. These are credit institutions established in the EU and non-bank creditors who hold an authorisation to provide consumer credit services or real estate finance leasing services in accordance with the Consumer Credit Act. Credit servicing can also be outsourced, but the credit servicer remains liable for meeting all obligations under the law. However the ZKSNKB does not regulate the contractual relationship between the credit institution and an external service provider who assumes credit servicing activities within the framework of outsourcing on the basis of the Banking Act.

Because credit purchasers purchase existing non-performing loans and do not originate new credit, they play no part in any increase in credit risk. The ZKSNKB does not envisage a special authorisation for purchases by credit purchasers, but in their relationship to the borrower they do need to take account of consumer protection regulations with the aim of upholding borrowers' rights deriving from the original credit agreements. This puts the principle of consumer protection to the fore, in accordance with which a credit purchaser, to pursue credit servicing activities in Slovenia in connection with non-performing consumer loans, is required to nominate a credit servicer established in the EU or another entity that in accordance with the ZKSNKB may pursue credit servicing activities.

Credit institutions must report information about the non-performing loans to the prospective credit purchaser before concluding a contract of transfer of non-performing loans. They are required to report about non-performing loans transferred to credit purchasers to the competent authorities (i.e. to Banka Slovenije and the competent authority of the host Member State). The reporting obligations are prescribed in detail by a European Commission implementing regulation and by Banka Slovenije's secondary legislation.

Reporting allows for the harmonised and effective monitoring of transfers of non-performing loans inside the EU, and thus for the development of secondary markets for non-performing loans. In the event of the onward transfer of non-performing loans to a new credit purchaser, credit purchasers therefore have to report accordingly to Banka Slovenije, which is also prescribed in greater detail by the secondary legislation.

Banka Slovenije is responsible for supervising the implementation of the ZKSNKB and the functioning of the aforementioned entities in accordance with the ZKSNKB, while the Information Commissioner is responsible for supervising the fulfilment of obligations in the area of personal data protection. A special framework for Banka Slovenije to collaborate with the competent authorities of other EU Member States has been put in place for supervision in the case of cross-border

pursuit of credit servicing activities. The fees in connection with decision-making procedures and the annual fees for supervision by Banka Slovenije are regulated by secondary legislation in accordance with the ZKSNKB.

2.5 Income risk

The assessment of income risk in the banking system was reduced to low in the third quarter of last year, on account of the improvement in the conditions for generating income. The near-doubling of net interest income compared with the previous year was reflected in a sharp increase in gross income and net income alike. The increase was driven by the rise in interest rates on bank assets, and the slower and relatively modest rise in liability interest rates with virtually unremunerated sight deposits still accounting for a high share of the total. Should interest rates stay at their current levels, the banking system's income might remain comparable to last year at least for the first half of this year. The pressure on income generation will gradually increase only when interest rates begin to fall. The introduction of the tax on total assets can be expected to bring a rise in the banks' (operating) costs.

Gross income and net income

The banking system's gross income increased by a half in 2023, while net income doubled. The increase was driven by a large increase in net interest income, while net non-interest income declined in year-on-year terms, largely on account of a one-off event at one of the large banks. Gross income thus increased by 50.4% last year, while operating costs were up 9.6% and net income was up 105.8%, which was reflected almost entirely in an increase in profit given the lack of any significant change in net impairments and provisions.[40] Conditions for generating income have remained well above average in the early months of this year, with interest rates holding at their current levels.

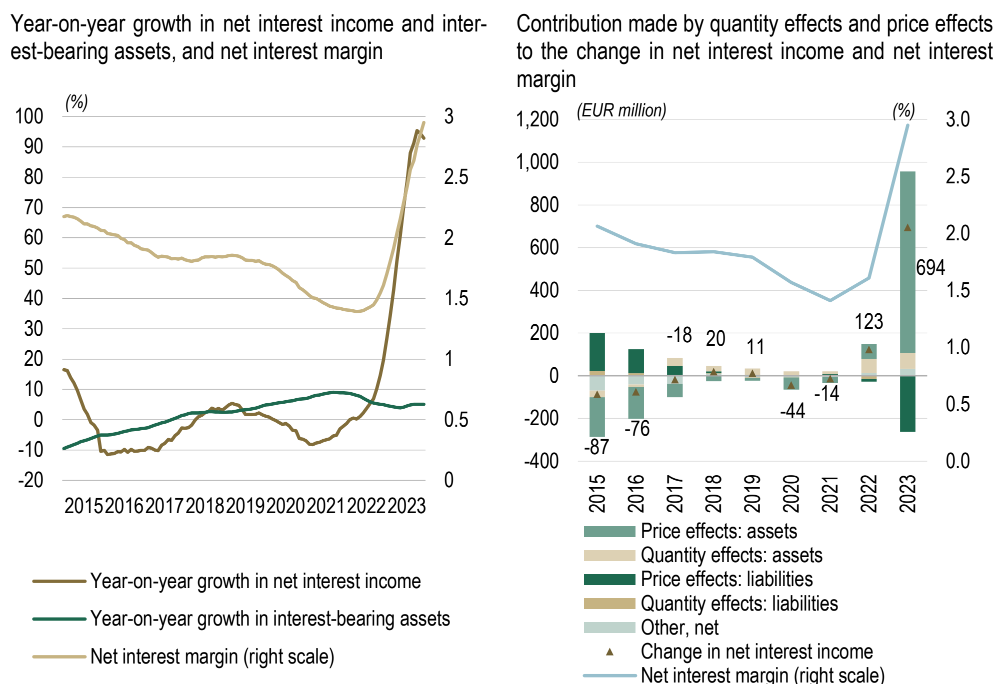
Net interest margin and net non-interest margin

Net interest income last year was almost double that in the previous year, and the net interest margin had approached 3% by the end of the year. The increase in net interest income over the recent period (2022 and 2023) has strongly coincided with a period of rising interest rates, which strengthened the positive price effects on the asset side of the balance sheet. Interest rates and returns on bank assets rose sharply, which was reflected in an increase in interest income, particularly from loans and claims against the central bank. Conversely last year's increase in interest expenses was just a quarter of the increase in interest income (for more on developments in interest rates and the interest spread, see Section 2.3). The net interest margin (see Figure 2.23, left) had increased to 2.95% by the end of the year, up from 1.61% in December 2022, after reaching its low of 1.39% in April of that year at the end of the long period of low interest rates. The annualised quarterly figures indicate that the net interest margin has exceeded 3% since the beginning of the second half of last year, and had reached a high 3.3% in January and February of this year.[41]

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

[41] The net interest margin over the 12 months to February of this year stood at 3.07%, comparable to the figure of 3.10% achieved in August 2004.

Figure 2.23: **Net interest margin, and contribution made by quantity effects and price effects to change in net interest income**



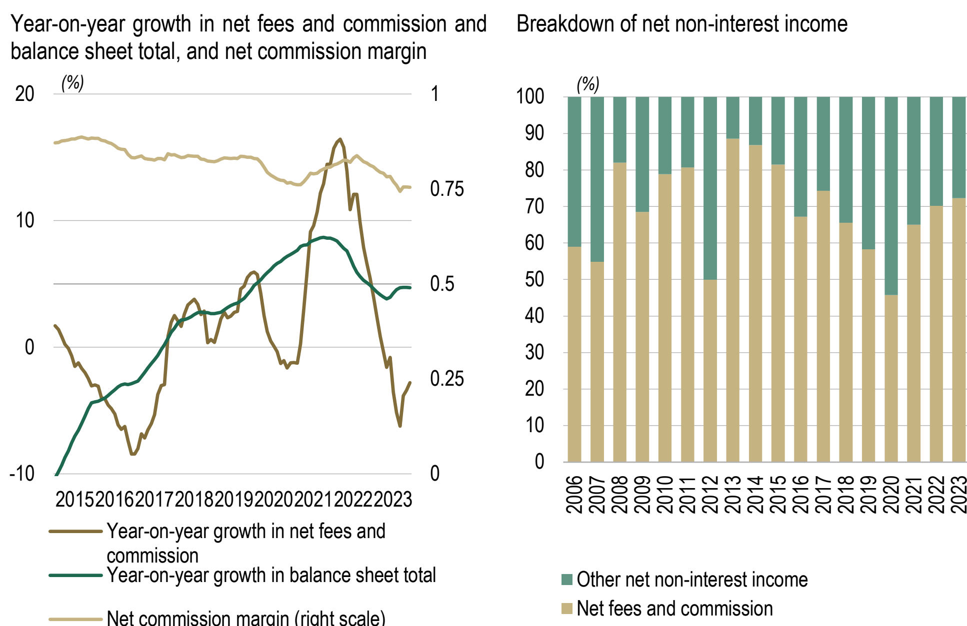
Note: In the above charts the net interest margin is calculated for a moving 12-month period.
Source: Banka Slovenije

Last year's increase in net interest income was driven by positive price effects on the asset side of the balance sheet, which strongly prevailed over the negative effects on the liability side. The main factors in the high growth in net interest income were price effects, which derived primarily from loans and highly liquid assets at the ECB, and the slow adjustment in liability interest rates (see Figure 2.23, right). The size of the stock of liquid assets that the banks hold in the form of the deposit facility at the ECB meant that the interest on these assets was a significant factor in the increase in net interest income.[42] As a result of the pronounced slowdown in year-on-year growth in loans in the final months of the year, which eventually moved into negative territory, the quantity effects from loans were minimal, and accounted for less than 3% of the total effects (price and quantity) on the asset side. The price effects on the liability side gradually increased last year, and by the end of the year amounted to just under one third of the price effects on the asset side. The price effects on the liability side were negative for all forms of funding, where deposits accounted for a relatively small share of the total price effects on the liability side despite their large stock.[43] Last year's moderate negative quantity effects were due to the increase in deposits and wholesale sources, while positive quantity effects were due to the decline in banks' liabilities to the ECB.

[42] The year-on-year change in net interest income from this source at the level of the banking system accounted for almost half of the increase in total net interest income. It should be noted that the ECB interest rates and the Euribor were still negative in the first half of the previous year, and interest rates were still rising for the vast majority of last year. Interest income from the ECB deposit facility accounted for slightly less than a fifth of the banks' total interest income last year.

[43] Deposits accounted close to half, wholesale funding for around 35%, and liabilities to the ECB almost a fifth.

Figure 2.24: **Net commission margin and breakdown of non-interest income**



Note: In the left chart the net commission margin is calculated as the ratio of net fees and commission to the balance sheet total over the preceding 12 months.
Source: Banka Slovenije

Last year net non-interest income in the banking system was down on the previous year, primarily on account of a one-off event in the first quarter of the year. Last year's net non-interest income was down 5.6% or EUR 32 million on the previous year, while net fees and commission recorded a similar decline of 2.8%, or EUR 11 million. The main reason that total net non-interest income was down on the previous year was the sale of a leasing company owned by one of the banks; otherwise it would have recorded positive growth. There was notable growth in dividend income last year. Last year's year-on-year decline in net non-interest income and net fees and commission was significantly smaller than the large increase in net interest, which amounted to EUR 694 million. The data for the early months of 2024 shows solid growth in both total net non-interest income and net fees and commission.

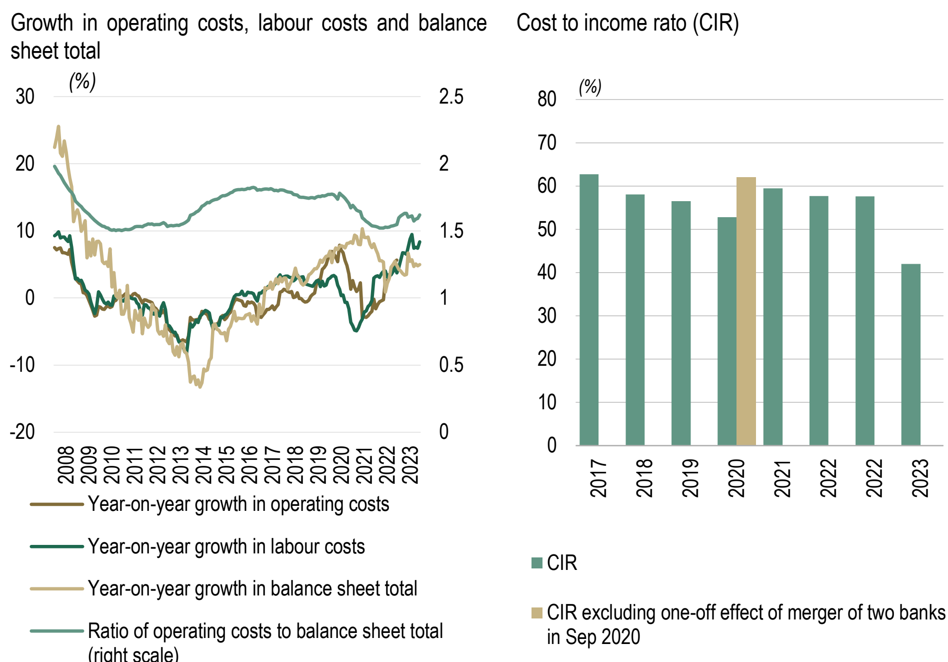
Operating costs

Growth in operating costs in the banking system was moderate last year compared with growth in gross income. Operating costs increased by 9.6%, as labour costs rose by 8.4%. The slower growth in the balance sheet total meant that the ratio of operating costs to the balance sheet total increased (see Figure 2.25 left). Amid high growth in gross income, there was a pronounced decline in the CIR (see Figure 2.25 right): at 42%, it stood well below its long-term average.[44] The introduction of the tax on total assets is expected to bring a rise in operating costs during 2024,[45] with banks classifying the tax payments as general administrative expenses (operating costs).

[44] This stood at 57.3% between 2000 and 2023, and at 55.7% since Slovenia joined the euro in 2007.

[45] Initial estimates are that these costs will account for slightly more than 12% of last year's total operating costs, or just under a tenth of last year's pre-tax profit.

Figure 2.25: **Operating costs and CIR**



Source: Banka Slovenije

Expectations of generated income in 2024

Net income is expected to remain at its current high levels in 2024, particularly in the first half of the year. With interest rates remaining unchanged, the outlook for income generation at the banks remains good over the months ahead. The large spread between asset and liability interest rates allowed banks to continue generating high and relatively stable net interest income over the early part of this year. The rise in interest rates on deposits came to an end last year, and so the increase in interest expenses is primarily attributable to shifts in maturity, which have been moderate to date. Sight deposits account for the vast majority of deposits by the non-banking sector, and their financing costs are virtually zero. This meant that last year the Slovenian banking system saw one of the highest rates of growth in net interest income in the euro area and in the whole of the EU.[46] The contraction in loan stock might gradually act to reduce income and net interest income, but for now this effect is still small. Net interest income could begin declining when interest rate cuts begin to be made (the adjustment will mainly be felt on the asset side of the balance sheet, given that the period of rising interest rates was much more evident on the asset side than on the liability side, i.e. on deposits). Net non-interest income did not have a significant impact on gross income last year or in the early months of this year, but has been recording positive growth this year. The aforementioned introduction of the tax on total assets will have a negative impact this year, as it drives an increase in operating costs.

[46] The ratio of interest income to the balance sheet total at banks in Slovenia was comparable to that in the euro area overall, but the ratio of interest expenses to the balance sheet total ranked Slovenia at the lower end of the euro area countries. See for example the December 2023 issue of the Report on bank performance with commentary (pages 20 and 21).

3 Other Risks

3.1 Cyber risk

The assessment of cyber risk was raised to elevated with a stable outlook. Banks do not report an increase in the number of critical cyber incidents in 2023 compared to the previous year duo to geopolitical risks, but in light of the rising number of cyberattacks on critical government infrastructure the cyber risk to the banking system is increasing. Our finding is that in the area of information security banks are still facing deficient oversight of outsourcing, outmoded information systems, and inadequate cyber hygiene. To defend against cyberattacks, banks need to continuously educate their staff on information security, and to invest in adequate technological equipment for their information systems, keeping pace with contemporary trends in technological advances and with regard to new approaches to cyberattack.

Our assessment is that the number of critical cyber incidents in the banking sector is stable. This is evident from the results of a bank survey[47] conducted last year by Banka Slovenije on the subject of cyber security, and also from regular reports of incidents. For now there is no sign of a rise in the number driven by geopolitical threats (war in Ukraine, conflicts in the Middle East), but the continuation of the war in Ukraine means that cyber threats and hacker attacks remain at a high level, for which is why we have raised the cyber risk to elevated with a stable outlook. The most common types of cyberattacks on banks and their customers remain phishing and online fraud.

DDoS attacks and attacks on outsourcers providing information and communication technology (ICT) services were also prevalent at EU level in 2023. These account for just over a third of all reported cyber incidents. There is also an increase in successful attacks on third-party service providers, which can also affect the provision of banking services, for example through the theft of confidential data. These are followed by phishing, ransomware, and malware attacks. The number of incidents reported in the SSM has increased by over 60% compared to 2022 (there were an average of 30 to 40 incidents per quarter in 2023). There is also an increasing number of cyberattacks where attackers use AI to create fake accounts through online registration. The cyber threats to the EU remain at a high level duo to geopolitical tensions (the war in Ukraine). Our assessment is that the Slovenian banking sector was not a target of major cyberattacks in 2023 of the type seen at EU level.

According to the SI-CERT figures, in the second half of 2023 there was a significant decrease in the number of reported cyber incidents compared to the same period of 2022.[48] The number of cyber incidents in the banking sector was down just over 32.5% in year-on-year terms according to the SI-CERT figures. In terms of the number of cyber incidents, the banking sector is ranked third (with 96), and remains major target for cyberattacks (see Figure 3.1, left). In 2022 and 2023 cyberattacks began to hit smartphones in the form of text messages where hacker groups aim to glean authentication data for accessing electronic banking under the pretext of checking data and confirming transactions (smishing attacks). The banking sector is attractive to hacker groups mainly for the theft of confidential data and the financial benefits. Among the groups of entities covered by the Directive on measures for a high common level of

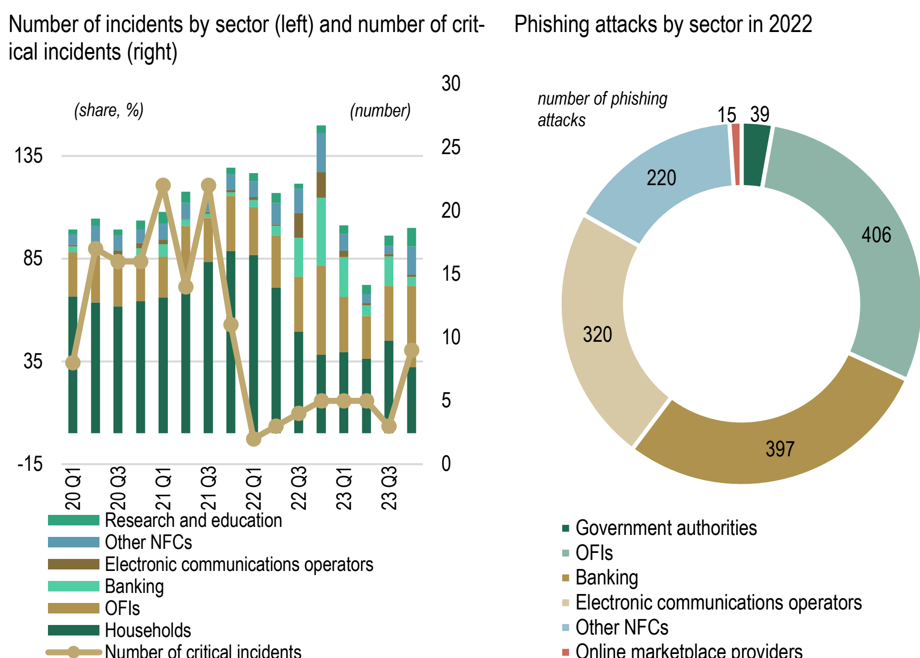
[47] Financial Stability Review, October 2023. Available online at https://bankaslovenije.blob.core.windows.net/publication-files/fsr_oktober-2023_en_f.pdf.

[48] The SI-CERT reporting captures a broader set of cyber incidents (including less significant) than those reported to Banka Slovenije by banks. They only report to Banka Slovenije critical cyber incidents that meet the criteria for reporting under the EBA guidelines.

cybersecurity across the Union (NIS), banking remains the most affected sector in terms of the number of cyber incidents.

There was a very large wave of phishing attacks on customers of various Slovenian banks in the second half of 2022. The aim of the attackers was to obtain authentication data for activating mobile wallets. The attacks were made via email and text messages using the name of government authorities (for example the FARS). The number of these attacks in 2023 was lower than in 2022, but phishing attacks remained the dominant type of attack against banks and their customers (see Figure 3.1, right). In 2024 we are witnessing a rise in hacker DDoS attacks on government authority websites, and so banks must also be prepared for attacks of this type.

Figure 3.1: **Cyber incidents by sector**



Sources: Banka Slovenije, SI-CERT

As supervisors of the banking system we regularly use tools for monitoring and identifying systemic cyber risks. To monitor systemic cyber risk, we use a cyber risk dashboard whose indicators enable risk monitoring at the level of the banking system, and cyber mapping. The risk dashboard includes cyber indicators that measure the impact of malicious activity undertaken by internal or external actors. The cyber indicators are divided into two groups: operational and financial. Indicators of both types provide relevant information on the financial and cyber vulnerabilities of the banking system. Cyber mapping is an analytical and supervisory tool that illustrates the main financial and technological links between financial institutions, and technology and service providers who are independent of them (for more information about this tool, see Box 2).

Box 2: Cyber mapping as a tool for monitoring systemic risk

Cyber mapping is an analytical and supervisory tool that illustrates the key financial and technological connections between financial institutions and firms providing high-tech services. Cyber mapping helps supervisory authorities in identifying the main nodes of systemic importance, and in gaining insight into concentration and contagion risk. Cyber mapping provides an overview of the connections between financial institutions and other key entities in the banking market. This information can be used for the purpose of monitoring financial stability, and also in supervisory activities in the area of cyber security. When using cyber mapping it is vital to find a balance between the granularity of the tool and its applicability in monitoring systemic cyber risk. Only a limited number of central banks currently have such a tool of this type at their disposal to allow for the identification and monitoring of cyber risk at the level of the banking system.

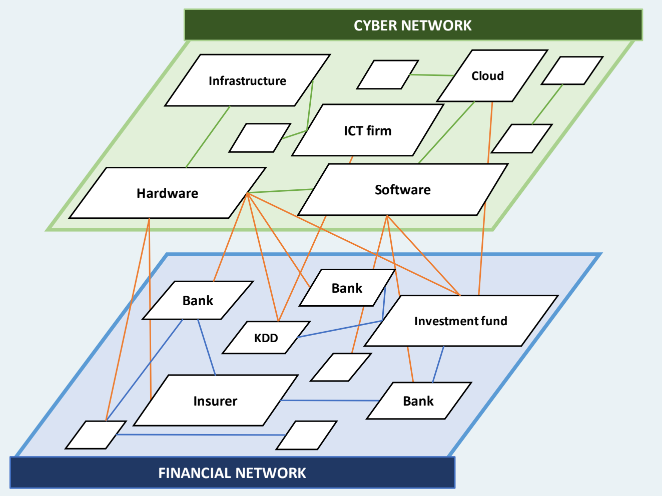
Cyber mapping enables the identification of systemic nodes in the system by monitoring and analysing key technologies, services, and connections between financial sector institutions and high-tech service providers. Cyber mapping brings added value to the following supervisory activities:

- identifying key points in the financial system and the cyber system,
- overseeing interactions between financial and cyber networks,
- protecting critical infrastructure at the national level, and
- managing systemic cyber risks.

The tool's output is a schematic of two networks, financial and cyber, that are interconnected. The cyber network can be treated as a virtual layer of the financial network composed of all ICT components that financial institutions use in their operations. By mapping the financial network (i.e. the financial system) onto the cyber network, we can find the connections between third-party (external) providers of ICT services used by financial institutions. This approach allows for the disclosure of ICT service providers that are shared by several banks (e.g. cloud service providers). This information provides supervisors of the financial sector an overview of the concentration of risk in the cyber network, and also pathways for the transmission of cyber risk to the financial system (see Figure 3.2).

The first step in developing the tool is to define the nodes. Nodes are usually central banks, commercial banks, insurance companies, investment firms and ICT service providers. In defining the key nodes it is important to also define the map layers, which consists of data flow and organisational and technological dependencies that together form the network of nodes and connections between the financial sector and the technology sector. The data flow between financial institutions consists of transactions or liabilities between banks, while at ICT service providers it is the individual provider's share of all services of external ICT service providers for a particular bank in the market. Nodes are additionally evaluated in terms of systemic importance by means of indicators such as market share, number of customers, and total assets. The network of connections between the financial sector and the technology sector is appropriately weighted by market share providing a more realistic picture of risk in the banking sector. Cyber mapping also includes data on cyber incidents that have occurred in the banking system, and their potential impact on the operations of other entities in the network.

Figure 3.2: **Schematic cyber map**



Source: Banka Slovenije

The cyber mapping tool also include a forecast of the network's outlook for the coming year. The cyber mapping forecast uses a machine learning technique based on forecasting time series with multiple seasonal periods, which allow for the illustration of future financial and cyber networks. Based on past events, we create a new cyber database and network that allows us to identify key connections in the system that may emerge between entities in the banking sector and ICT service providers. It also allows for a forecast of the occurrence of cyber incidents, and potential risks in the banking system (including the central bank). All this information is useful for further analysis of cyber risk at the banking system level.

With the help of the cyber mapping tool we have also identified that risks in the banking market are being concentrated by the banks' direct exposure to key ICT service providers. We recognise that cyber incidents have an impact on direct exposure (business relationships between different financial institutions) and also on indirect exposure (interconnectedness of different information systems or common service providers and operating systems). A successful cyberattack on a key ICT service provider could affect banking sector. Banks who order their IT solutions and support from external providers and suppliers might be more exposed to cyberattacks and cyber incidents. The main issue of technological interconnectedness is the providers of high-tech services (e.g. cloud services), who during cyber attacks can speed up the transmission of contagion within the banking system. Based on the identified critical cyber incidents, we observe that the banking system is mainly facing cases relating to operational contagion, where cyberattacks could lead to the disruption of several key economic functions that are important for the functioning of financial institutions in the market.

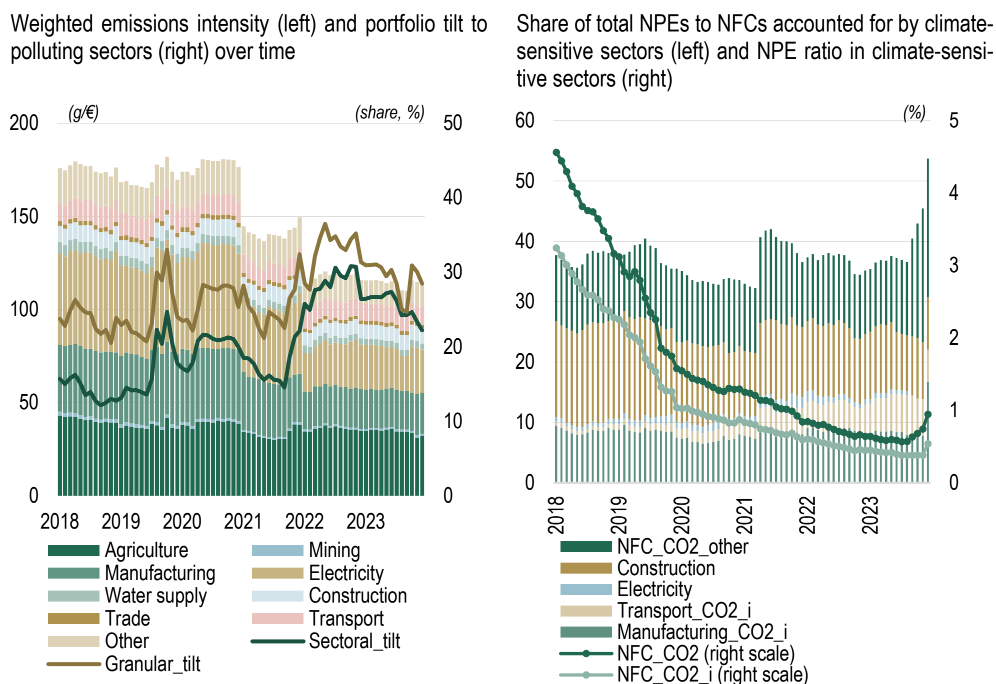
3.2 Climate risks

Transition climate risks remain moderate, with a stable outlook over the coming quarters. The growth rates of exposures to climate-sensitive sectors reflect the general developments in the NFCs portfolio, such as the reversal in the credit cycle, while the carbon indicators that account for the evolution of emissions over time have improved. . Credit risk in climate-sensitive sectors has increased slightly, but remains relatively low.

The slowdown and reversal in the credit cycle in the NFCs portfolio led to a significant year-on-year reduction in growth of exposure to climate-sensitive sectors. The average decline amounted to 21 percentage points, based on the emissions definition in Slovenia, and on the emissions definition in the EU (CPRS). Year-on-year growth of exposures turned negative in the final quarter of last year, with exposure to climate-sensitive sectors declining by 2.6% according to the emissions definition in Slovenia, or 2.1% according to the emissions definition in the EU (CPRS). The largest factor according to the first definition was the decline in the electricity and gas sector (4.8 percentage points), while other highly climate-sensitive sectors made a positive contribution to growth (0.75 percentage points on average). The decline according to the second definition was similarly driven by exposure to the electricity and gas sector, and to a lesser extent by the fossil fuel sector and transportation, while a positive contribution to growth was evident in the other CPRS, most notably from energy-intensive sectors (2.2 percentage points). The share of the total portfolio that these sectors account for remains stable, at 36.2% by the first definition and 41% by the second definition.

The weighted emissions intensity and the portfolio tilt to polluting sectors have further declined over recent quarters, while carbon credit intensity remains relatively stable. The year-on-year decline in the banking system's weighted emissions intensity averaged 2.7% (sectoral and granular emissions), while the tilt also declined, by 3.5 percentage points (see Figure 3.3, left). The largest factor in the changes in weighted emissions intensity and portfolio tilt was the change in exposure to agriculture. Following a significant increase in exposure to climate-sensitive sectors driven by the energy crisis in 2022, the tilt has been consistently declining, and is converging to its median level. This is indicative of a stabilisation in transition climate risks, even as uncertainty remains elevated. Carbon credit intensity remains relatively stable. The decline in exposure to NFCs implies an average year-on-year increase of 1% in December, reaching 0.68 kg CO_2/€. In historical terms, carbon credit intensity remains at low levels, and the decline over a three-year period is a reflection in particular of the decline in the emissions intensity of the economy (in the amount of 51.4 percentage points). The contribution by the change in portfolio structure (weights) was smaller (13.6 percentage points), while the decline in leverage contributed to an increase in carbon credit intensity (by 46.4 percentage points). The medium-term improvement in the indicators thus shows faster changes in the economy than in the structure of bank portfolios.

Figure 3.3: **Portfolio tilt to polluting sectors in NFCs portfolio, and NPE ratios in climate-sensitive sectors over time**



Note: The left chart illustrates the calculated weighted emissions intensity on the basis of sectoral emissions, where the labels Sectoral_tilt and Granular_tilt refer to the tilt of the NFCs portfolio to polluting sectors calculated on the basis of sectoral or granular emissions. In the right chart the label NFC_CO2 captures a broader definition of climate sensitivity, while NFC_CO2_i solely captures sectors within manufacturing, transportation, construction and electricity.
Sources: Banka Slovenije, Eurostat

The weakness oin manufacturing and declining economic growth forecasts reflect in a slight deterioration in credit risk in highly climate-sensitive sectors. The NPE ratio in highly climate-sensitive sectors in the NFCs portfolio increased by approximately 0.1 percentage points at the quarterly level to reach 0.5% in December. The increase was driven primarily by a change in the NPE ratio in manufacturing. The concentration of highly climate-sensitive sectors (defined on the basis of emissions in Slovenia) also increased at the same time (see Figure 3.3, right). The share of total NPEs to NFCs of highly climate-sensitive sectors stood at 30.9% in December, up 6.7 percentage points on the previous quarter. Based on a broader definition[49] of climate-sensitive sectors, the quarterly change in the NPE ratio of climate-sensitive sectors to total exposures stood at approximately 0.3 percentage points, while the share ofl NPEs of these sectors to total NFC NPEs increased even more markedly to just over a half. This may indicate potential interactions between macroeconomic and transition climate risks over the medium term. The restrictive monetary policy is increasing costs of (sustainable) financing, while persistent inflation and additional shocks in commodity and energy prices in the context of geopolitical risks hinder the transition to a low-carbon economy. The outlook for transition climate risks nevertheless remains stable over the quarters ahead, given the low NPE ratio in the NFCs portfolio. The impact of physical risks (last year's floods) on the banking system remains very limited.

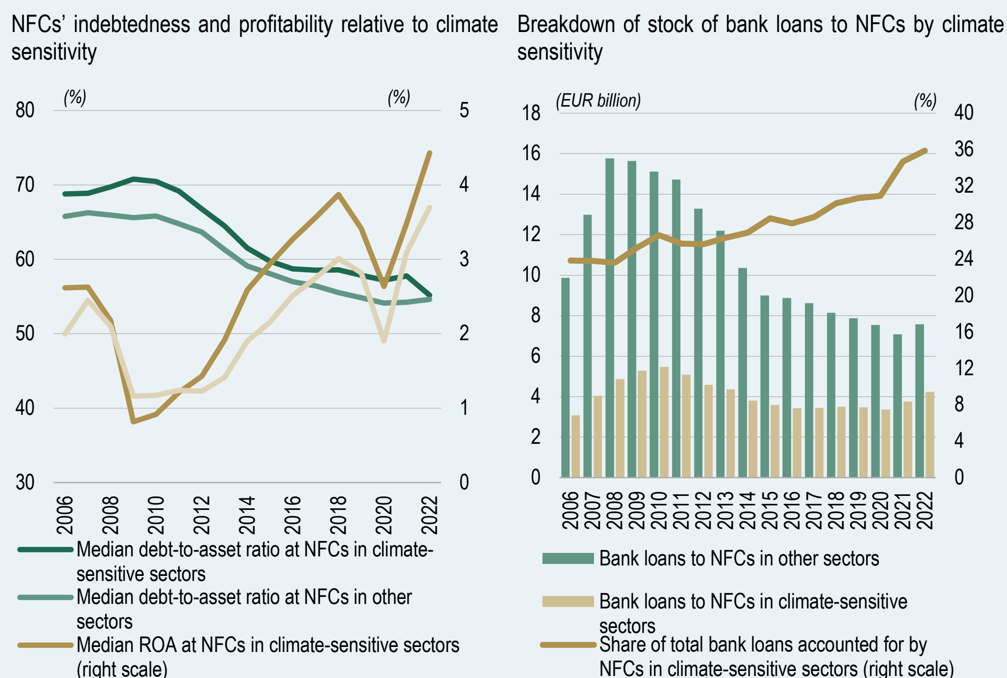
[49] Climate-sensitive sectors (broader definition) are defined on the basis of each sector's contribution to emissions at the NACE 1 level, and include manufacturing, electricity and gas, construction and transportation, while subsectors within those sectors (NACE 2 level) that contribute the most to emissions are captured under the label highly climate-sensitive sectors.

Box 3: Performance of NFCs in light of climate change

This box analyses transition climate risks, which pose a major challenge to NFCs, particularly those doing business in sectors with a large carbon footprint. Climate risks can affect the performance of NFCs, which in turn affects financial risks in the banking system (e.g. credit risk). This box examines the impact of transition climate risks on the performance of NFCs in Slovenia. The results show that NFCs in climate-sensitive sectors are more indebted and more profitable than NFCs in other sectors. The results also show that emissions are already having a negative but relatively small impact on corporate performance indicators. The assessments might alter significantly in the event of major changes in environmental policy in the future. This shows the urgency of a timely transition to a net zero economy.

Climate-sensitive sectors, i.e. those sectors that contribute most to total carbon emissions, accounted for a third of GDP in Slovenia in 2022. According to data from the ETS register, Slovenian NFCs' emissions have declined significantly in recent years, and amounted to 4.9 million tonnes of CO_2 in 2022.

Figure 3.4: **Indebtedness and profitability, and breakdown of stock of bank loans to NFCs by climate sensitivity**



Note: Climate-sensitive sectors are those sectors that account for the largest share of total emissions (certain segments of manufacturing and transportation, construction, and electricity and gas). Bank loans include loans from banks in Slovenia and banks in the rest of the world.
Sources: AJPES, ETS

NFCs in climate-sensitive sectors were more indebted over the period of 2006 to 2022 than NFCs in other sectors (see Figure 3.4, left). The median debt-to-assets ratio at NFCs in climate-sensitive sectors stood at 55.2% in 2022, compared with 54.6% at NFCs in other sectors. However, NFCs in climate-sensitive sectors were more profitable than NFCs in other sectors over the period of 2006 to 2022 (except for 2009 and 2010). Similar trends in indebtedness and profitability are seen when comparing NFCs in sectors with high emissions intensity, i.e. sectors where emissions intensity is above the 75th percentile of the emissions intensity distribution, with NFCs in other sectors.

The share of total bank loans accounted for by NFCs in climate-sensitive sectors has increased slightly over the last decade (see Figure 3.4, right). It stood at 23.8% in 2006, and 35.9% in 2022. Indebtedness at banks as measured by the ratio of bank debt to assets declined over this period, at NFCs in climate-sensitive sectors and at NFCs in other sectors.

The link between transition climate risks and good corporate performance has been studied in various analyses, with differing results. A decline in emissions can improve performance, which shows as an improvement in accounting indicators such as ROA, ROE and ROS (Van Emous et al., 2021).[50] The effect can differ over the short term and the long term, as larger emissions can be associated with better accounting indicators in the short term (Delmas et al., 2015).[51] Climate risks are expected to materialise in the long term, which can be associated with poorer corporate performance.[52] It should be noted that the effect can be non-linear, or that the impact on corporate performance depends on the initial emissions or emissions intensity (Lewandowski, 2017).[53] The impact of climate risks on equities markets can be observed via an increase in the risk premiums for firms in brown sectors (firms with high emissions or emissions intensity, and poorer environmental indicators), and a reduced risk premium (the greenium) in the opposite case (Alessi et al., 2020).[54] Climate risks can have an impact on financing conditions (Kleimeier & Viehs, 2018), and on the probability of default (Capasso et al., 2020).[55]

Transition risks have a negative but small impact on corporate performance indicators in Slovenia. Analysis of the impact of emissions on corporate performance suggests that higher emissions are already correlated with lower ROA and ROE.[56] According to the analysis, an increase in emissions of 1% is correlated with a decline of 0.04 percentage points in ROA and a decline of 0.02 percentage points in ROE *ceteris paribus*. The average annual decline in emissions required over the period to 2035 to hit net zero by 2050 under the NGFS scenarios in Slovenia is 5.6%.[57] This would entail an annual increase of approximately 0.22 percentage points in ROA to meet the targets of the Paris Agreement and net zero in Slovenia by 2050. The indicator would improve further in the case of more-indebted firms. The estimated impact is relatively small. It should otherwise be noted that the estimates are based on historical data, and the further tightening of environment policy could change the estimates significantly, depending on the size and pace of the changes.

[50] Van Emous, R., Krušinskas, R., and Westerman, W. (2021). Carbon Emissions Reduction and Corporate Financial Performance: The Influence of Country-Level Characteristics. Energies 2021, 14, 6029.

[51] Delmas, M., Nairn-Birch, N. and Lim, J. (2015). Dynamics of environmental and financial performance: the case of greenhouse gas emissions, Organisation & Environment, 28(4), pp. 374-393.

[52] For example via increased costs of physical risks, or the realisation of the climate targets of the Paris Agreement in the case of transition risks.

[53] Lewandowski, S. (2017). Corporate carbon and financial performance: the role of emission reductions, Business Strategy and the Environment, 26, pp. 1196-1211.

[54] Alessi, L., Ossola, E. and Panzica, R. (2020). The greenium matters: greenhouse gas emissions, environmental disclosures and stock prices, Publications Office of the European Union, JRC120506

[55] Kleimeier, S. and Viehs, M. (2018). Carbon disclosure, emission levels and the cost of debt, SSRN, Capasso, G., Gianfrate, G. and Spinelli, M. (2020). Climate change and credit risk, Journal of Cleaner Production, 266, 121634

[56] A panel regression model with emissions among the explanatory variables was used to estimate the impact of emissions on corporate performance. The other explanatory variables include liquidity, revenues, ratio of debt to total assets (leverage) and productivity.

[57] The estimates are based on calculations from the fourth phase of the NGFS scenarios published in November 2023.

4 Resilience of the Banking System

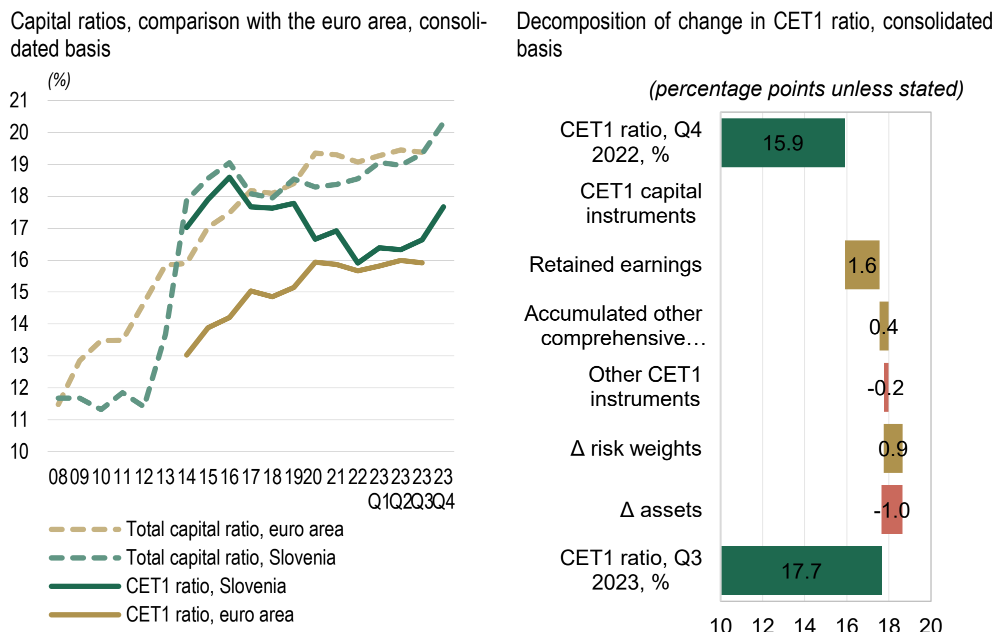
4.1 Solvency and profitability

The resilience of the banking system from the perspective of solvency and profitability remains high. Our assessment is that the good profitability of the banks deriving from the rise in net interest income could persist in 2024, thereby at least maintaining their relatively high resilience. The favourable developments in profitability in 2023 were also reflected in the total capital ratio, the banks having already allocated some of their profits to reserves. Risks to the good solvency position of the banks might be posed in the future by the additional tax burden on banks, and a rise in credit risk.

Solvency

The capital ratios of the Slovenian banking system increased throughout 2023. The banking system was disclosing high solvency at the end of the year. The total capital ratio and the common equity Tier 1 capital (CET1) ratio at system level on a consolidated basis increased by 1 percentage point in the final quarter alone, and by 1.8 percentage points in total last year (see Figure 4.1, right). The first stood at 20.3%, and the second at 17.7% (see Figure 4.1, left). The rise in the capital ratios in the final quarter was exclusively attributable to an increase in regulatory capital, while risk-weighted assets continued to have a slightly negative impact on the ratios, owing to a rise in risk-weighted assets from operational risk, despite the decline in credit activity. The main factor in the decline in risk-weighted assets for credit risk seen over the year remained the effects of the sale of a leasing company owned by one of the banks, while the decline in credit exposure to the corporate sector had a smaller impact. The banks succeeded in increasing exposures secured by mortgages on immovable property and exposures to institutions, thereby mitigating the decline in total risk-weighted assets for credit risk. The total capital ratio on an individual basis at system level increased by 1.8 percentage points in 2023 to 22.0%, of which 0.5 percentage points came in the final quarter alone. The CET1 ratio increased by 1.7 percentage points to 18.8%, of which 0.6 percentage points came in the final quarter alone. The figures for the euro area also show an increase in the capital ratios on a consolidated basis. The total capital ratio in the euro area overall reached 19.4% in the third quarter of 2023, while the CET1 ratio reached 15.9%. Both rose by 0.3 percentage points during this period (see Figure 4.1, left), but they currently trail the average ratios in the Slovenian banking system.

Figure 4.1: **Capital ratios and decomposition of change in CET1 ratio**



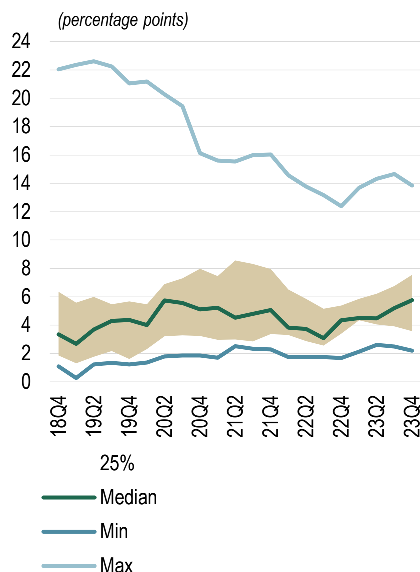
Sources: ECB Data Portal, Banka Slovenije

In 2023 the banking system achieved its highest total capital ratio on a consolidated basis since 2016. At that time it stood at 19.1%, while the CET1 ratio stood at 18.6%. The total capital ratio on a consolidated basis increased at just over two-thirds of the banks in 2023, while just over three-quarters of them saw an increase in the CET1 ratio. The rise in capital ratios is evidence of the prudent behaviour on the part of the banks, who also responded to the promptings of the supervisor and changes in the macroprudential buffers, and made use of their good performance to strengthen their resilience. The rise in the banks' capital ratios was also reflected in growth in their capital surpluses over the defined overall capital requirements.[58] The average capital surplus amounted to 6.4 percentage points at the end of the year, up 1.2 percentage points on the end of 2022 at system level, equivalent to an increase of EUR 393 million to EUR 2.1 billion. The range between the 25th and 75th percentiles of the surplus widened over the course of 2023 (see Figure 4.2, left). The widening of the distribution shows that not all banks have the same capacity to increase their capital surpluses, although the banks with the smallest surpluses did increase them, thereby strengthening their resilience. Further evidence of this comes from the median surplus, which increased to 5.8 percentage points. The differences in the banks' capital surpluses mean that there remain differences in their ability to absorb the negative effects of the realisation of systemic risks. The leverage ratio at system level also improved in 2023, rising by 0.6 percentage points to 9.1%, and remains lowest at the small banks (see Figure 4.2, right). Thanks to the favourable developments in profitability, the capital ratios are expected to remain relatively stable this year despite the identified risks, which should nevertheless not be allowed to deter banks from further strengthening and prudently managing their solvency.

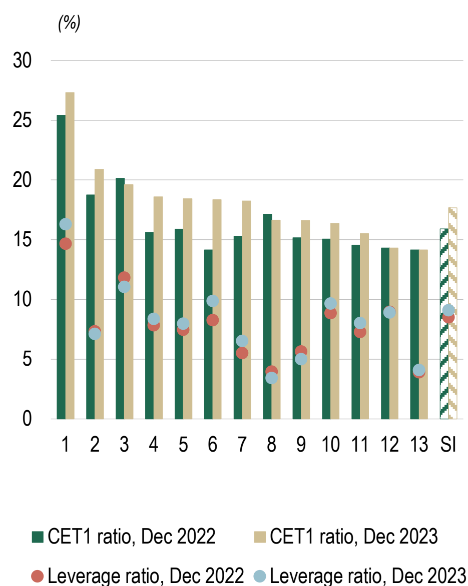
[58] The overall capital requirement encompasses the Pillar 1 and Pillar 2 capital requirements and the capital buffers, but not the Pillar 2 guidance.

Figure 4.2: **Capital surplus and leverage ratio**

Distribution of capital surplus across banks over time



CET1 ratio and leverage ratio at individual banks, consolidated basis



Source: Banka Slovenije

Regulatory capital had strengthened by the end of 2023, primarily on account of retained earnings. This drove a rise in common equity Tier 1 capital, while growth in additional Tier 1 capital and Tier 2 capital was less pronounced. Another factor raising common equity Tier 1 capital was the decline in the negative result from accumulated comprehensive income driven by the favourable developments on the capital markets. Regulatory capital increased by EUR 612 million or 10.2% over the course of the year, as common equity Tier 1 capital increased by EUR 607 million or 11.7%. The share of regulatory capital accounted for by common equity Tier 1 capital thus increased to 87%, with retained earnings and reserves now accounting for more than 60% of common equity Tier 1 capital, and CET1 capital instruments for the remainder. The capital strengthening means that the banks are also meeting their MREL targets. The deadline for meeting the MREL targets passed on 1 January 2024, with all banks in Slovenia meeting their targets. The expectation is that the additional taxation of banks and the slowdown in growth in net income will have an adverse impact on the ability to generate regulatory capital.

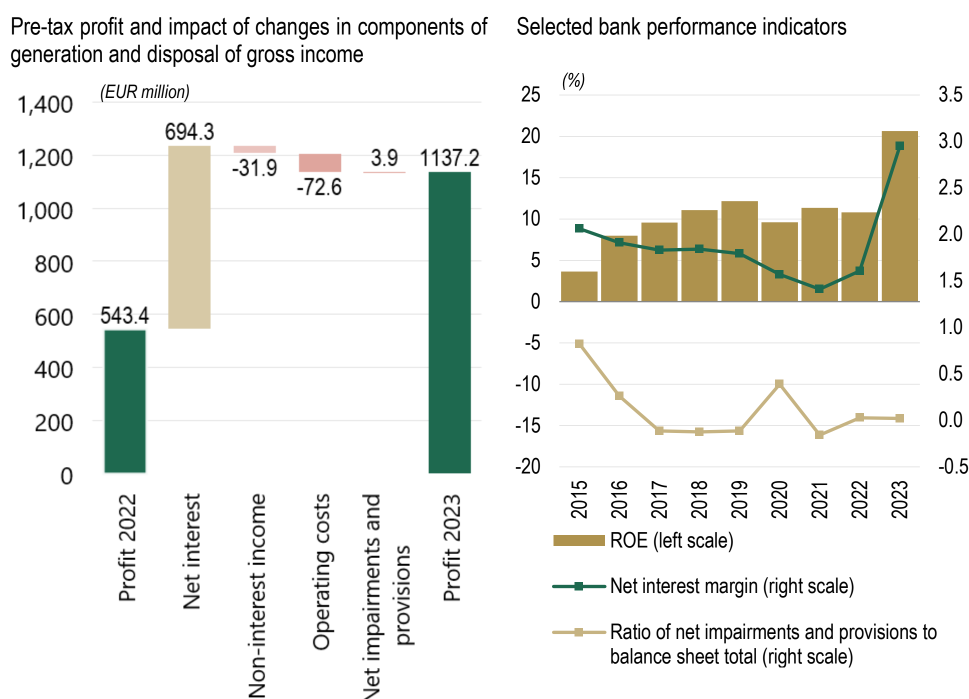
Total RWAs on a consolidated basis increased by 0.6% or EUR 190 million in 2023 to end the year at EUR 32.7 billion. This was significantly less than the increase of 7.4% in 2022. The main driver of the increase in total RWAs was RWAs for operational risk, which had increased by EUR 613 million (22.7%) by December, primarily on account of a rise in the income on which the calculation of the capital requirements for operational risk are based. RWAs for credit risk, which had previously been the main driver of the increase in total RWAs, declined by EUR 445 million or 1.6% last year. The majority of the decline was attributable to the sale of a leasing company, but there was also a decline in credit activity. Exposures secured by mortgages on immovable property continued to record positive growth, which acted to raise RWAs for credit risk over the course of the year. Irrespective of the slowdown in growth in lending, RWAs can be expected to increase in the second half of this year as a result of the realisation of risks from the macroeconomic environment, driven by a rise in exposure to items associated with particular high risk and exposures in default. In addition credit exposure will also be increased by the anticipated realisation of the aforementioned purchase of

a leasing company. The restoration of this portfolio to the banking system is forecast to reduce the total capital ratio by 0.4 percentage points *ceteris paribus*.

Profitability

The banking system enjoyed a record pre-tax profit of EUR 1,137 million in 2023. It was up 109.3% on 2022. The banks saw increasing profits throughout the year amid rising interest rates, the figure surpassing last year's total (EUR 543 million) by July. Alongside the sharp increase (EUR 590 million) in net income, which doubled in year-on-year terms last year, another factor was the modest level of net impairments and provisions. They amounted to just EUR 10.2 million, or EUR 3.9 million less than in 2022 (see Figure 4.3, left), which accounted for just 0.5% of the disposal of gross income. Pre-tax ROE in the Slovenian banking system strengthened sharply to 20.6% in 2023, well above its levels of the last decade (see Figure 4.3, right). The positive trend continued in early 2024.

Figure 4.3: **Changes in generation and disposal of income and profit, and selected bank performance indicators**



Note: The net interest margin and net impairments and provisions are measured over the preceding 12 months.
Source: Banka Slovenije

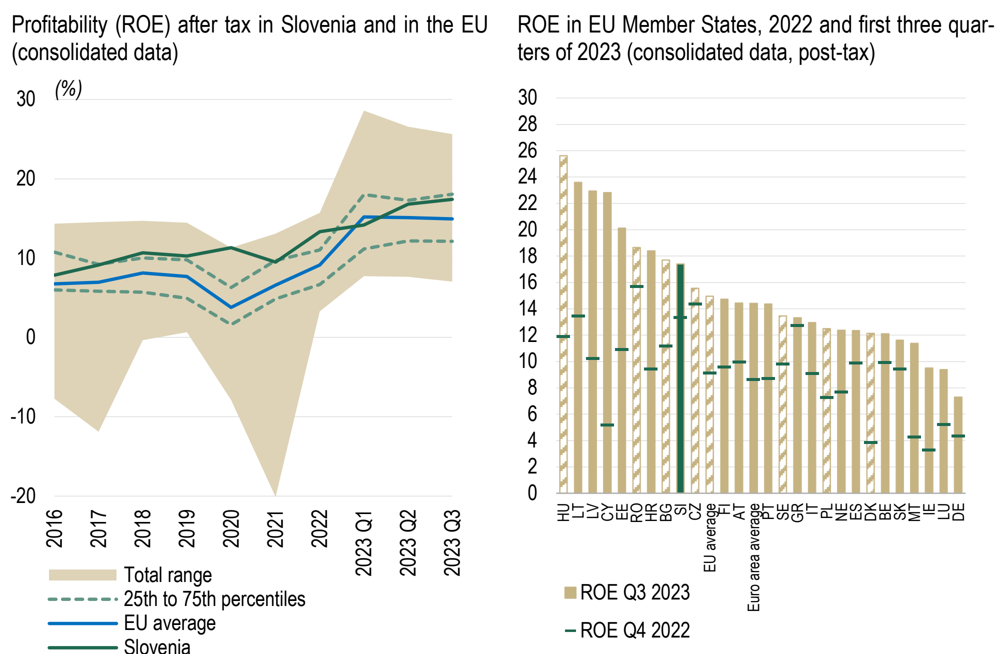
The banks created impairments and provisions in a very small net amount in 2023. The majority of credit institutions (12 of the 15) recorded the net creation of impairments and provisions last year. However, similarly to last year, these accounted for just a tiny share of the disposal of gross income (0.5%), and were an additional factor in the banking system's above-average profitability. Last year's natural disasters (the floods in August) did not lead to any materialisation of credit risk, and consequently did not drive any increase in net impairments and provisions.

The expectation for this year is that the banks will generate a similar profit to last year, at least in the first half of the year. No significant deterioration in the performance of the banks is therefore anticipated over the short term. Bank profitability this year will gradually decline relative to last year, but performance can still be expected to be better than in previous years. As previously noted with regard to income risk, the tax

on banks' total assets will be a factor reducing profit over the coming years. Given the maintenance of the same levels of growth in net non-interest income and operating costs, low net impairments and provisions, and the current levels of interest rates, in the early months of this year the banks were still facing very favourable conditions for generating profits, but the second half of the year is expected to bring less favourable conditions for generating profit from net interest, amid potential cuts in interest rates.

In recent years Slovenia has been among the EU Member States and euro area countries with the lowest ratio of net impairments of financial assets to the balance sheet total,[59] and even among the countries recording a net release. The Slovenian banking system recorded a net release of impairments over the first three quarters of 2023, similarly to Denmark and Croatia. The indicators for the EU and the euro area overall improved last year relative to the end of 2022.

Figure 4.4: **Profitability in Slovenia and EU**



Note: The hatched bars in the right chart denote countries outside the euro area.
Source: Banka Slovenije

Bank profitability increased last year in the EU and in the euro area. ROE[60] in the Slovenian banking system increased to 17.4% by the third quarter of last year (up from 13.3% (see Figure 4.4, right) in December 2022). It also increased in the EU overall, the average reaching 15% (up from 9.1% in December 2022). The gaps between Slovenia and the weighted EU and euro area averages were even larger: the first stood at 10.9% in the third quarter of last year (up from 4.5% in 2022), while the second stood at 10.0% (up from 3.7% in 2022). The profitability gap in Slovenia's favour relative to the EU and the euro area narrowed slightly last year, with profitability increasing overall by even more than in Slovenia (see Figure 4.4, left). The average post-tax ROE in Slovenia also stood at slightly more than double the figures in the EU and the euro area overall over the previous five years.

4.2 Liquidity

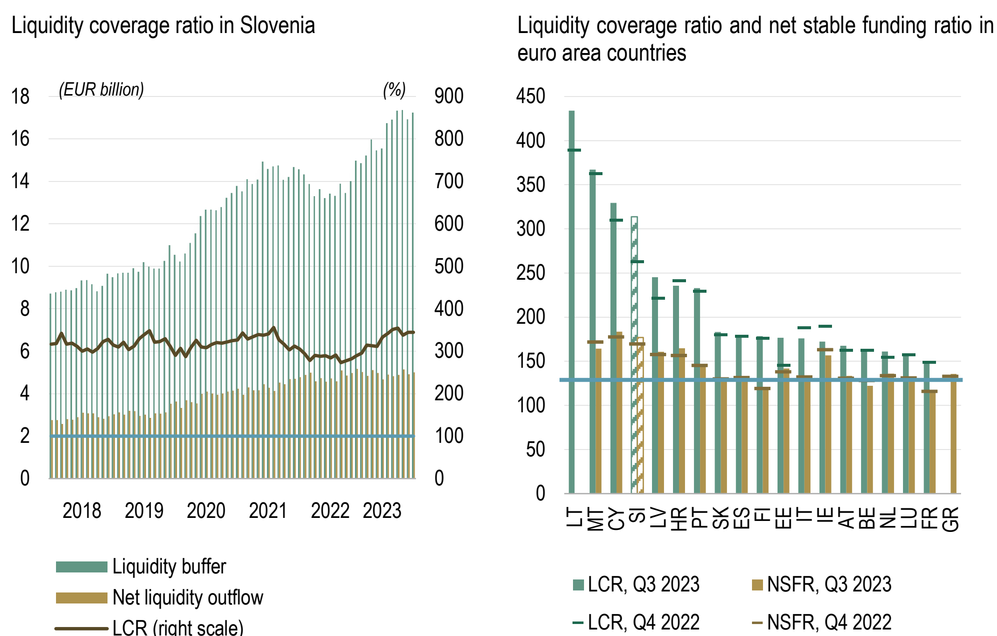
The improvement in the liquidity indicators shows that the banking system strengthened its already high resilience in the liquidity segment even further in

[59] Impairments of financial assets not measured at fair value, which account for the largest component of impairments, where the available quarterly data (ECB Data Portal, CBD, Finrep, to third quarter of 2023) has been annualised.
[60] Consolidated bank data at national level (ECB, ECB Data Portal, CBD), annualised post-tax ROE.

2023, while the future outlook is relatively stable. Although the majority of banks improved their liquidity positions, there is still considerable variation in the size of their liquidity surpluses, and thus in their ability to deal with the consequences of any realisation of funding risk. We should therefore reiterate that careful liquidity management remains vital to maintaining the banking system's high resilience.

The high capacity to cover net liquidity outflows over a short-term stress period improved even further in 2023. The liquidity coverage ratio (LCR) on an individual basis increased by 45 percentage points to 335%, and remains well above the regulatory requirement of 100% (see Figure 4.5, left). The significant increase in balances at the central bank increased the liquidity buffer by more than the increase in net liquidity outflow, which was a major factor in the improvement in the LCR. The liquidity surplus over the regulatory requirement thus increased by 30% to a record EUR 12.8 billion. Although more than two-thirds of euro area countries saw an improvement in the LCR last year, Slovenia is still ranked high according to this indicator[61] (see Figure 4.5, right).

Figure 4.5: **Liquidity indicators for Slovenia and the euro area**



Note: The horizontal line in both charts denotes the minimum regulatory requirement (100%). The right chart includes public data on a consolidated basis; the ECB Data Portal has no data for the NSFR in Lithuania, or the LCR in Greece.
Sources: Banka Slovenije, ECB Data Portal

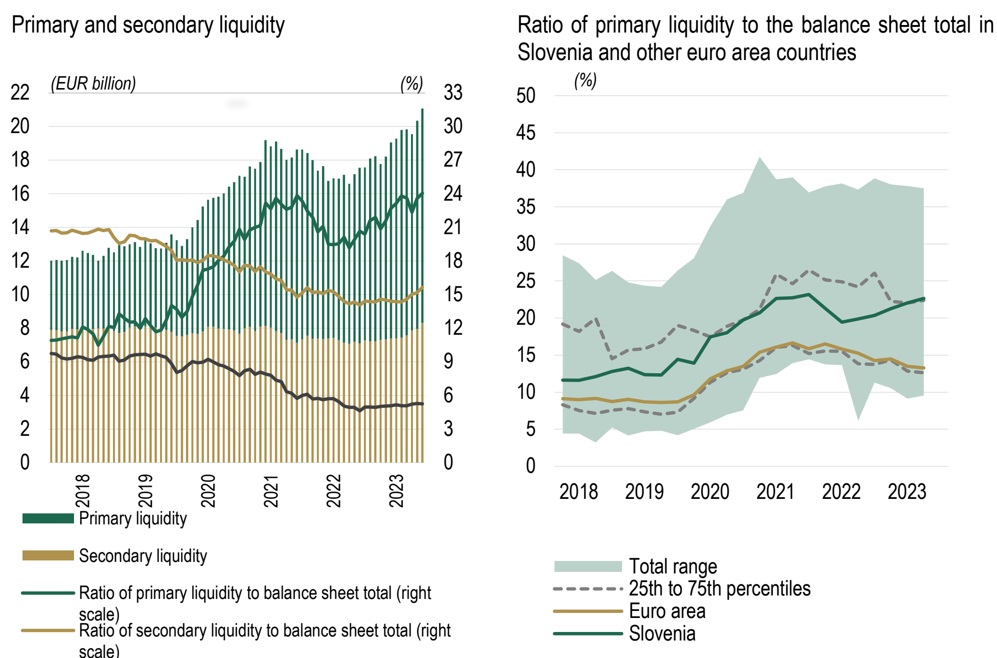
The increase in primary liquidity is a major factor in the strengthening of the resilience to systemic risks. It increased by EUR 2.3 billion last year to a record high of EUR 12.8 billion (see Figure 4.6, left). The banks did not fully direct the funds that they obtained from the issuance of debt securities or from deposits by the non-banking sector into credit activity or other assets, which led to a build-up of funds held in accounts at the central bank. The ratio of primary liquidity to the balance sheet total thus increased to 24%, further widening the gap with the euro area average (13.3%),[62] which has been gradually decreasing since the pandemic (see Figure 4.6, right). Primary liquidity declined over the first nine months of last year in the majority of euro area countries, with the smaller countries maintaining the highest ratio of primary liquidity to the balance sheet total, Slovenia among them. Should deposits by the non-banking sector

[61] Data on a consolidated basis for the end of 2022 and the third quarter of 2023 is included in the comparison.
[62] Data for the end of 2023 was not available at the time of writing.

continue to grow and credit activity remain modest, primary liquidity could be expected to further increase in the future. The potential maturing and new issuance of debt securities will also be a factor in its future evolution.

The banks increased their holdings of securities, thereby strengthening secondary liquidity in 2023, following two years of decline. It increased by 17% or EUR 1.2 billion to EUR 8.3 billion. In addition to foreign marketable securities rated BBB or higher, the banks also increased their holdings of Slovenian government securities, which had declined significantly over the previous years, most likely with the aim of reducing concentration. Domestic government securities thus accounted for a third of the stock of secondary liquidity in the banking system at the end of 2023.

Figure 4.6: **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 Data Portal, own calculations

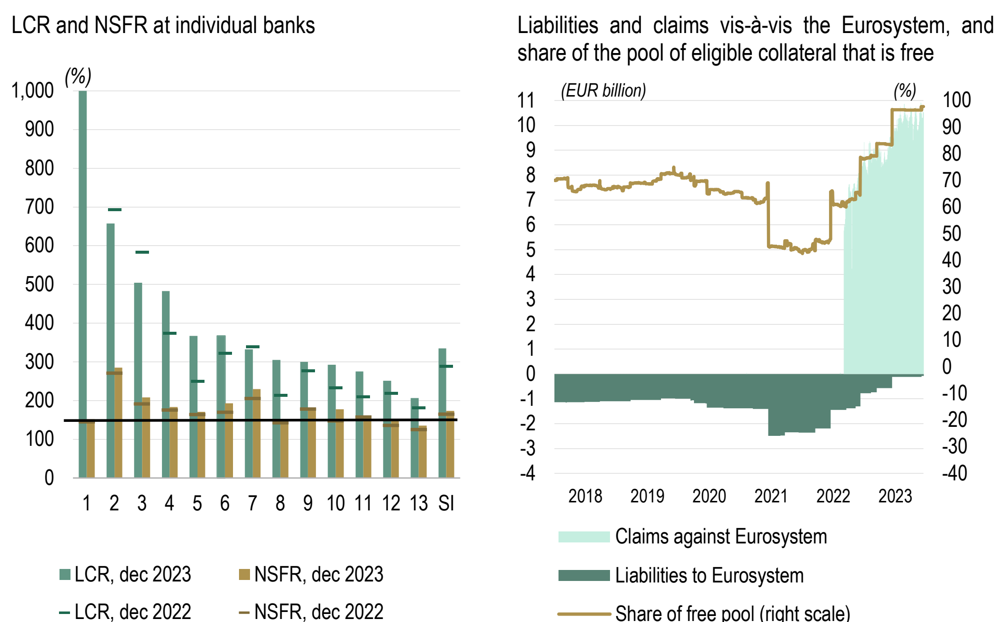
The capacity to fund liabilities over a one-year period also improved at the level of the banking system. Available stable funding increased amid an inflow of deposits by the non-banking sector. With the decline in loans to the non-banking sector reducing required stable funding, the net stable funding ratio (NSFR) improved by 9 percentage points in 2023 to 174%. This means that the Slovenian banking system has a surplus of available funding over required funding in the amount of 74%, equivalent to EUR 18.1 billion. Slovenia ranks a high second place among euro area countries in terms of the NSFR.[63]

The majority of the banks saw improvements in their LCR and NSFR last year, but there is still considerable variation between the banks in their resilience to systemic risks in the liquidity segment (see Figure 4.7, left). Driven by the increase in liquid assets at the central bank, the LCR increased at more than two-thirds of the banks, while all the banks had an LCR of more than double the regulatory requirement of 100%. Two banks saw a decline in the NSFR last year, while the surplus over the regulatory requirement was more than 50 percentage points at the majority of the banks. As usual the subsidiaries of Member State banks have slightly lower liquidity

[63] The comparison is made on the basis of the latest available data for the third quarter of 2023.

surpluses, owing to their approach to liquidity management and the expectation of assistance from the parent bank in the event of liquidity difficulties.

Figure 4.7: **LCR and NSFR at individual banks, and stock of claims and liabilities vis-à-vis the Eurosystem**



Note: The horizontal line in the left chart denotes the minimum requirement for the LCR and the NSFR under the CRR (100%). For the sake of transparency, one of the banks is not illustrated in the left chart: its LCR stood at 1,069% in December 2023, and 1,814% in December 2022.

The free share of the pool of eligible collateral at the Eurosystem increased. This also brought an improvement in the ability to obtain additional liquidity should the banks need it. All but two of the banks repaid all of their liabilities under the TLTRO-III last year, which increased the free share of the pool of eligible collateral for Eurosystem operations by 19 percentage points to 98% (see Figure 4.7, right). Given their large stock of liquid assets, for the moment the banks have no need for additional borrowing at the Eurosystem, and accordingly they reduced the pool of eligible collateral by 7.0% to EUR 3.3 billion. Should any need for additional liquidity arise, the banks hold EUR 7.4 billion of eligible collateral on their balance sheets that could be mobilised to the pool. Given the favourable interest rates on the deposit facility, the banks placed their surplus liquidity overnight with the Eurosystem. The stock of the placement averaged EUR 9.5 billion last year.

5 Households and Non-Financial Corporations

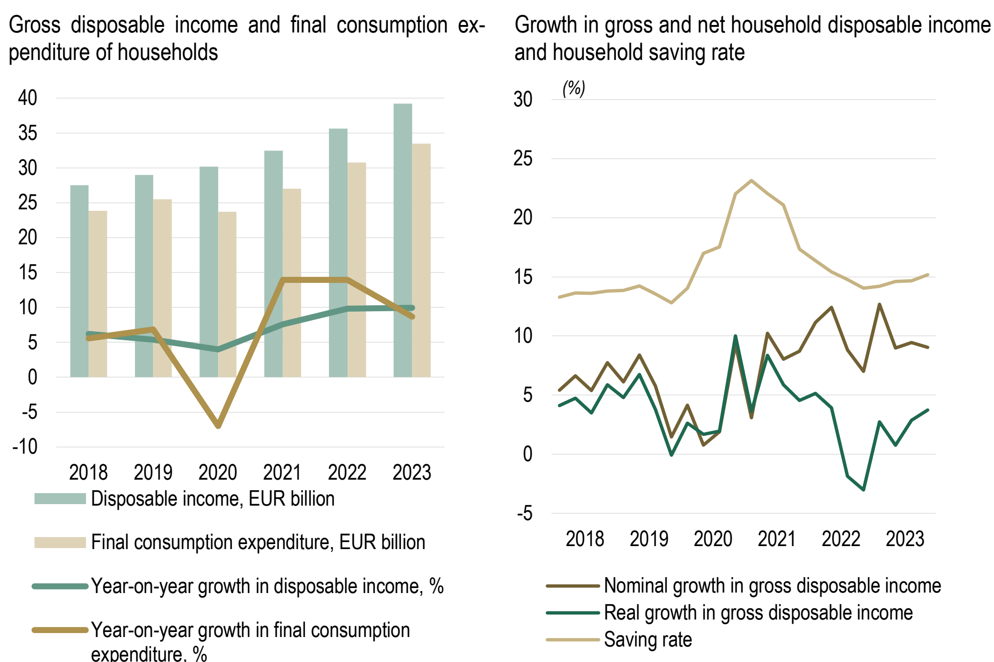
5.1 Households

The financial position of households remained stable in the second half of 2023. Households continued to see real growth in gross disposable income, which over the last two years has been significantly lower than nominal growth in gross disposable income, on account of high inflation. The easing of inflation could bring an increase in household disposable income and real wages in the future. The annual household saving rate again rose slightly in the second half of last year. Consumer confidence remained below its long-term average. While growth in housing loans was slowing, growth in consumer loans strengthened, but Slovenian households remain less indebted compared with those in the euro area overall.

Household consumption, saving and financial assets

High inflation meant that real growth in gross disposable income has been significantly lower than the nominal growth over the last two years. Nominal year-on-year growth stood at 9.0% in the final quarter of 2023, compared with real growth of 3.7%. The annual household saving rate again rose slightly in the second half of last year, reaching 15.2% in the final quarter (see Figure 5.1, right). Year-on-year growth in household final consumption expenditure also slowed in 2023, and stood at 6.2% in the final quarter, still higher than its pre-pandemic level (see Figure 5.1, left).

Figure 5.1: **Gross disposable income, final consumption expenditure and household saving rate**

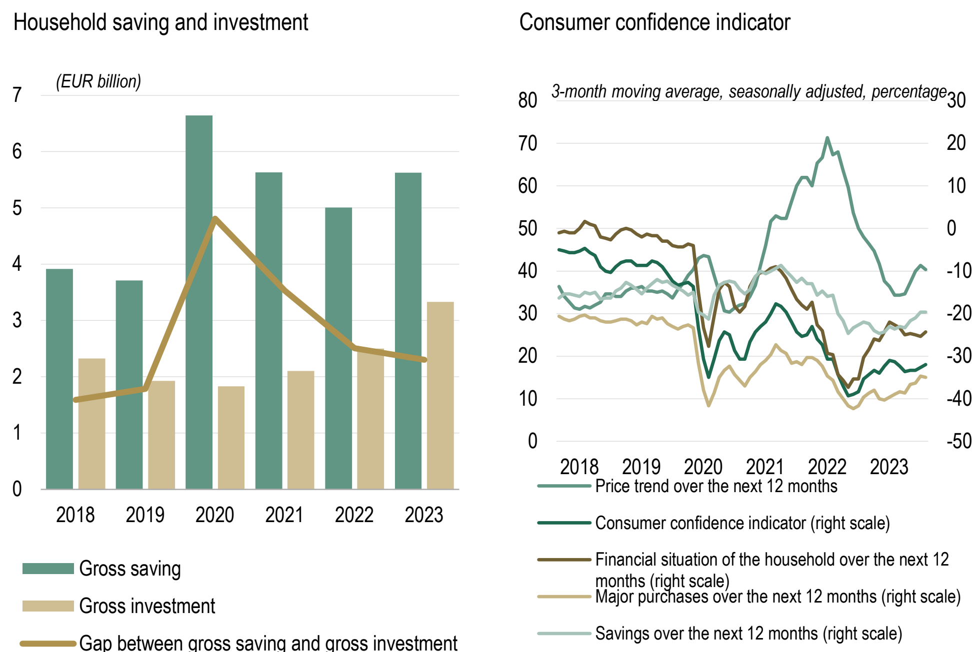


Source: SORS

Amid an increase in gross household investment, the surplus in gross saving over gross investment in the household sector declined again, and amounted to EUR 2.3 billion (see Figure 5.2, left). Consumer confidence remained below its long-term average in the second half of 2023, but in December was up 3.3 percentage points in year-on-year terms. Expectations of future price rises, which had eased since the middle of 2022, increased again in the second half of 2023, but were expressed by a

smaller share of consumers than in 2021 and 2022. Expectations regarding the financial position of households deteriorated slightly in the second half of 2023, but in December were still higher than a year earlier (see Figure 5.2, right).

Figure 5.2: **Saving and investment, and consumer confidence**

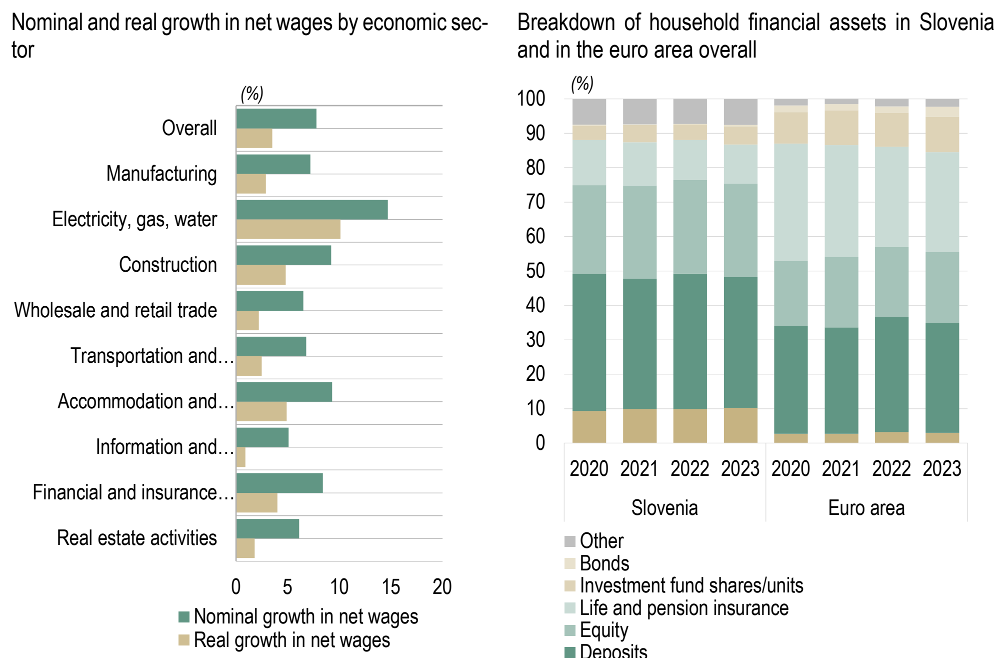


Source: SORS

The easing of inflation could drive an increase in household disposable income and real wages. Nominal net wages were up 7.8% in year-on-year terms in December of last year, while real net wages were up 3.5%. The rise was evident in all sectors other than agriculture, forestry and fishing. The largest rises in wages came in the sectors of electricity, gas, steam and air conditioning supply, construction, and accommodation and food service activities, where average net wages were otherwise lowest.

The ratio of household financial assets to GDP in Slovenia has declined in recent years, and at 125.6% in the third quarter it remained significantly below the figure for households in the euro area overall (203.4%). Slovenian households' financial assets amounted to EUR 77.8 billion at the end of the final quarter of 2023, a nominal year-on-year increase of 6.8%. Compared with the euro area overall, in the breakdown of their financial assets households in Slovenia have a higher share of currency and deposits, which account for almost half, and a higher share of equity. In the euro area overall higher shares of financial assets are held in the form of life and pension insurance, and investment fund shares/units (see Figure 5.3, right).

Figure 5.3: **Growth in net wages by economic sector, and breakdown of household financial assets**



Note: In the right chart equity consists of listed shares, unlisted shares and other equity. Investment fund shares/units include shares in an investment fund when the fund has a corporate structure.
Sources: SORS, Eurostat

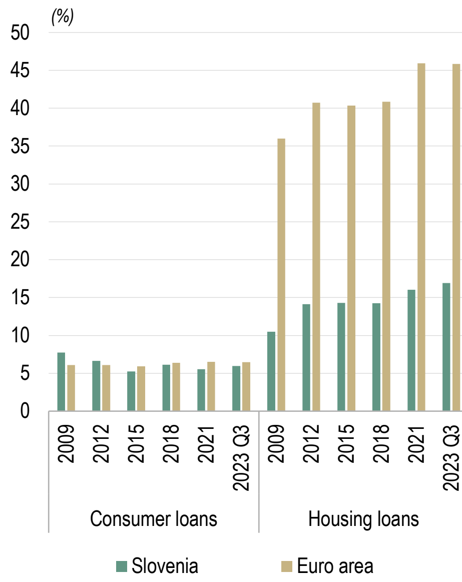
Household indebtedness

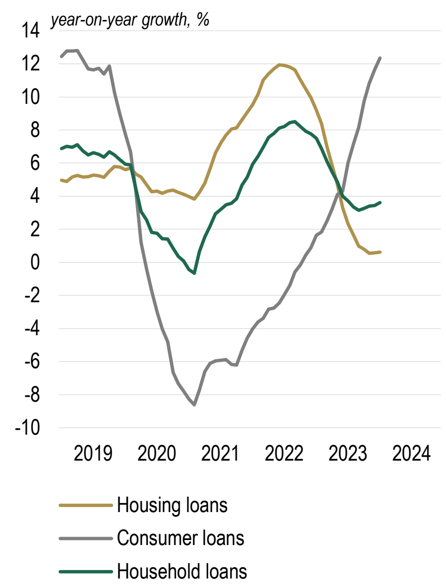
The ratio of household financial liabilities to GDP was significantly lower in Slovenia (28.0%) than in the euro area overall (61.5%). Loans account for the majority (88.2%) of Slovenian households' financial liabilities. Households held EUR 15,266 million of liabilities in the form of loans in the final quarter of 2023, the majority of which (95.2%) were at financial corporations in Slovenia. Of these, EUR 1,556 million was at other financial intermediaries, while they held EUR 334.7 million in loans at non-financial corporations in Slovenia. Households held EUR 241.0 million of loans from non-residents. The majority of their borrowing (EUR 12,891 million, or 84.4% of the total) is thus held at banks in Slovenia. The ratio of housing loans to GDP in Slovenia is significantly less than the euro area average, in part because of the existing high level of owner occupancy in the country. Compared with other euro area countries, households in Slovenia also have a slightly lower ratio of consumer loans to GDP (5.9% compared with 6.5%) (see Figure 5.4, left).

Growth in consumer loans strengthened while growth in housing loans slowed. Year-on-year growth in housing loans declined sharply in the second half of last year amid a decline in current lending.[64] While the stock of housing loans at the end of 2023 in the amount of EUR 8,153 million was up just 0.6% on the figure from the end of 2022 (EUR 8,106 million), the increase in consumer loans in 2023 was significantly larger. The stock of consumer loans had increased to EUR 2,784 million by the end of 2023, up from EUR 2,494 million at the end of 2022. Household lending via consumer loans strengthened in particular following the change in the macroprudential restrictions on household lending in July of last year. The year-on-year rate of growth had increased to 11.7% by December (see Figure 5.4, right). The share of fixed-rate loans has increased over the last two years, and in December 2023 stood at 70% in the housing loans segment (up from 34% in December 2020), and 87% in the consumer loans segment (up from 61% in December 2020).

[64] See the section on risk inherent in the real estate market.

Figure 5.4: **Ratio of household loans to GDP and growth in household loans, housing loans and consumer loans**





Sources: ECB Data Portal, Banka Slovenije

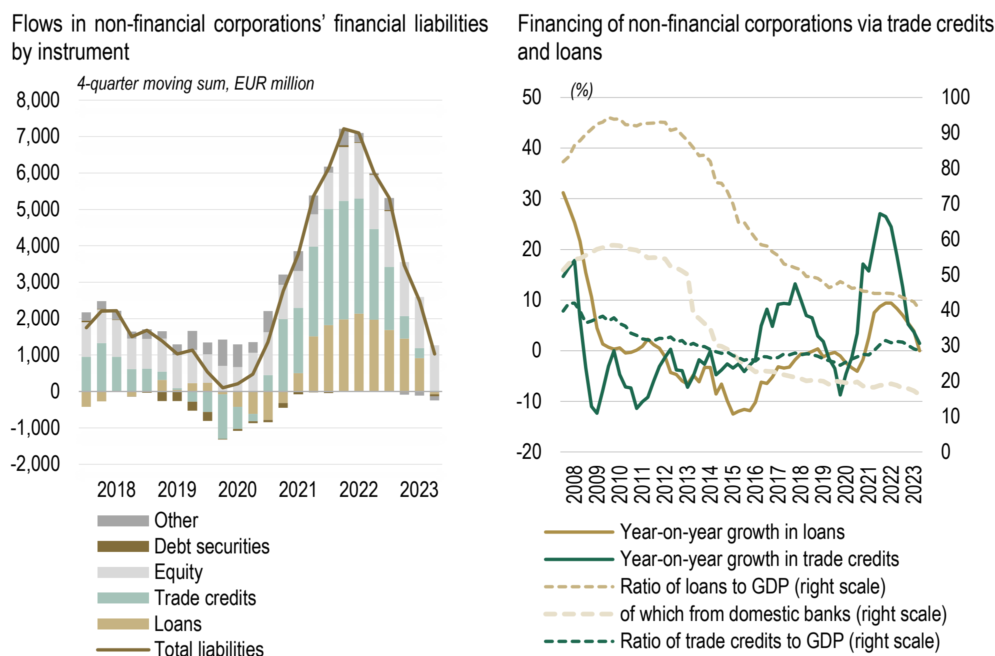
5.2 Non-financial corporations

Non-financial corporations further improved their indebtedness indicators in 2023, and are ranked among the least indebted of all euro area countries. Financing via trade credits and loans declined in particular, although the decline was solely with domestic banks. Loans from parent companies abroad and from non-financial corporations in Slovenia continued to grow. The key factors in the reduced demand for bank loans were high interest rates, and the availability of internal resources, which mainly consisted of the increased holdings of liquid assets (deposits) at banks. There was no sign of any rise in the number of bankruptcy proceedings initiated, except in manufacturing, which is facing greater uncertainty than the rest of the economy, and, in part, in accommodation and food service activities. The rise in the number of current account freezes in the final quarter of last year is indicative of the possibility of a deterioration in the majority of sectors.

Financing and indebtedness of non-financial corporations

Non-financial corporations borrowed significantly less in 2023 than in the previous year. The intensified borrowing during the period of high economic growth was followed by a slowdown, particularly in financing via trade credits and loans (see Figure 5.5, left). After two years of rapid increase, the ratio of the stock of trade credits to GDP had reached at 31% by the end of 2022. The ratio then fell slightly in 2023 (see Figure 5.5, right). Financing via loans was also outpaced by economic growth. This is particularly true of bank loans, which were down in year-on-year terms during the final months of last year.

Figure 5.5: **Financing of non-financial corporations**

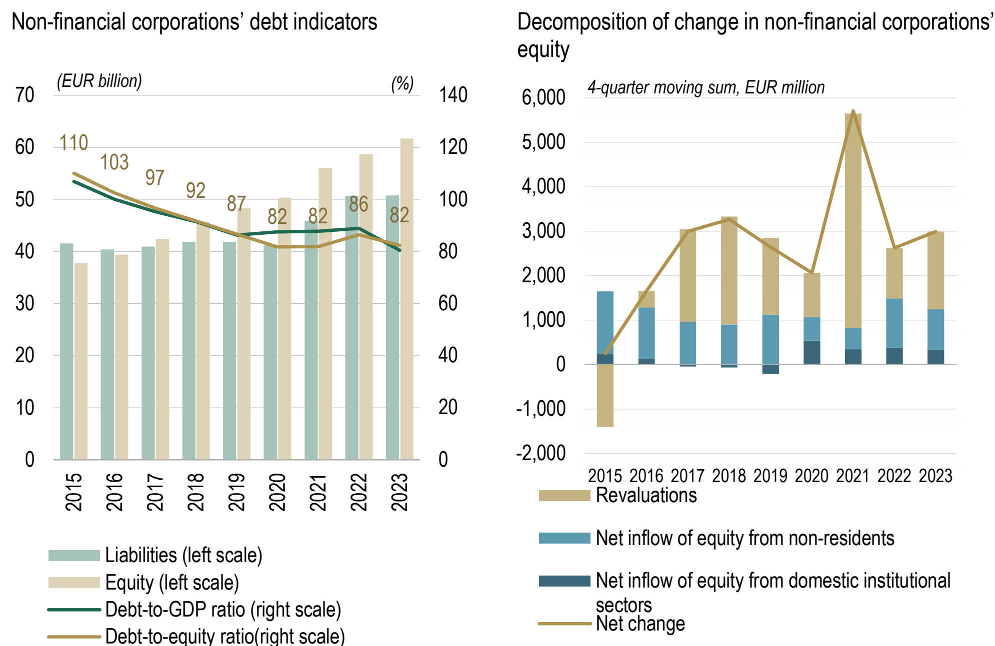


Note: All sources of financing for NFCs are captured, irrespective of the creditor sector.
Source: Banka Slovenije

The slower growth in borrowing was reflected in an additional improvement in NFCs' debt indicators. The ratio of their debt liabilities to GDP stood at 80.5% at the end of 2023, down 8.4 percentage points on the end of 2022 (see Figure 5.6, left), the

lowest figure of the last 20 years.[65] Leverage also declined, to 82.3%. Slovenia ranks among the least indebted euro area countries according to both indicators (see Figure 8.16 in the appendix, right). A major factor in the decline in leverage since 2016 has been growth in NFCs' holdings of equity, which has averaged 6.4% annually. The annual inflow of equity averaged EUR 1.1 billion over this period, but positive revaluations of equity over this period were also a factor in the decline in leverage (see Figure 5.6, right).

Figure 5.6: **Debt and equity financing of non-financial corporations**



Note: The indicators in the left chart include all debt liabilities of NFCs.
Sources: Banka Slovenije, ECB Data Portal

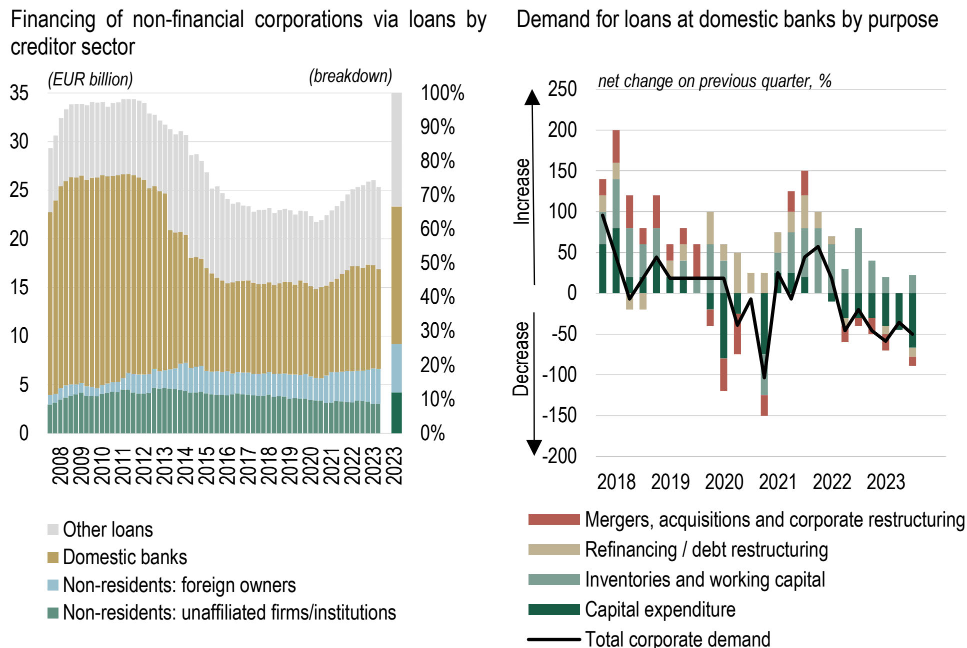
Financing via loans declined mainly at domestic banks in 2023, while loans from non-residents continued to record positive growth. Loans received from domestic banks declined by 5.1% last year, after recording double-digit growth in 2022. By contrast, foreign loans maintained a similar dynamic to 2022 with year-on-year growth of 3.8%. Foreign loans accounted for 29% of total loans to NFCs in 2023 (see Figure 5.7, left). The continuing positive growth in foreign loans was primarily attributable to growth in financing from parent companies, while financing from non-affiliates and from international institutions and banks in the rest of the world is declining further. Loans from foreign parent companies accounted for more than half of all foreign loans at the end of the year, significantly more than in 2018, when the figure merely stood at just over a third.

Financing via intra-sectoral loans in Slovenia strengthened in 2023. Business-to-business loans between NFCs in Slovenia were up on the previous year, while even higher growth was evident in loans received from sole traders (captured under the household sector; see Figure 8.15 in the appendix, left). Intra-sectoral loans accounted for 12.4% of total loans to NFCs at the end of the year, while the household sector accounted for a further 7.4%.[66]

[65] Financial accounts are available for Slovenia as of 2004.

[66] The breakdown of NFCs' liabilities compared with the euro area overall is illustrated in the appendix (Figure 8.17, left). The share of NFCs' total liabilities accounted for by loans (from all creditor sectors) was similar in the third quarter of 2023: 23.2% in Slovenia, and 25.8% in the euro area overall. There is a greater difference in the breakdown of financing when it comes to trade credits: 16.0% in Slovenia and 8.4% in the euro area overall.

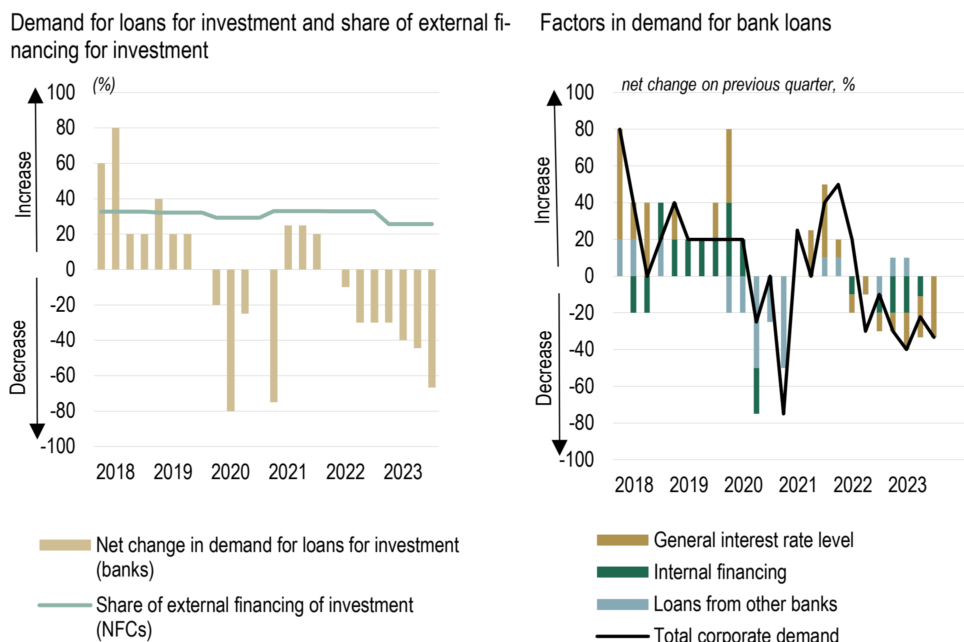
Figure 5.7: **Loans to non-financial corporations**



Sources: Banka Slovenije, BLS

High interest rates remain prevalent among the factors reducing demand for bank loans, with demand for loans for investment recording the largest decline. According to the BLS, only demand for loans for inventories and working capital has increased since the second half of 2022 (see Figure 5.7, right), while demand for loans of other types has declined. The most notable decline in demand was recorded by loans for investment purposes. According to the survey on access to finance of enterprises, a large share of the funds obtained via external financing (26% in 2023) is still going towards investment (see Figure 5.8, left). Some 62% of firms that did not apply for external financing cited sufficient internal resources as the reason. Banks in the BLS also assess this to have been a significant factor in demand for loans in 2023 (see Figure 5.8, right). The most important factor reducing demand for bank loans, which gained further importance towards the end of 2023, is the general level of interest rates (see Figure 8.15, right).

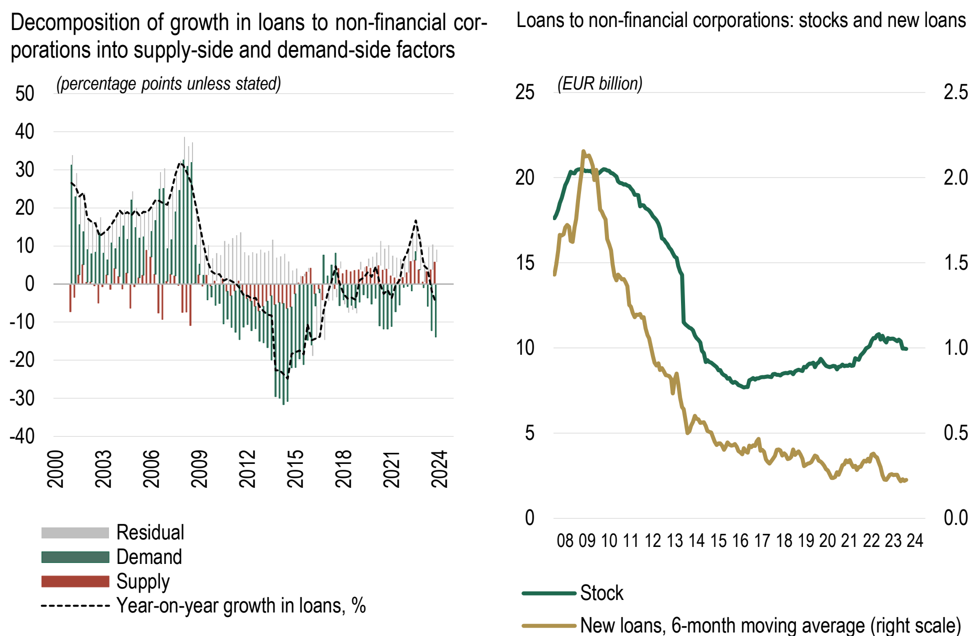
Figure 5.8: **Non-financial corporations' demand for bank loans**



Sources: Banka Slovenije, BLS, Survey on Access to Finance of Enterprises

Developments in bank loans to NFCs were decomposed into supply-side and demand-side factors by means of econometric methods.[67] The slowdown in growth in loans to NFCs and the recent decline in loan stock can be attributed in part to a base effect, loans to NFCs having increased by 12.8% in 2022. A trend of decline in financing at Slovenian banks has been discernible for some time now: the volume of new loans has been declining ever since 2009, amid minor fluctuations (see Figure 5.9, right). The decomposition of growth in the stock of loans to NFCs into supply-side and demand-side factors (see Figure 5.9, left) indicates that the negative growth in 2023 was driven by weaker demand. The supply-side component has been positive since 2016, which could be attributed to a decline in the stock of non-performing loans on bank balance sheets, and the relatively positive prospects for a resolution of the crisis in the euro area.

Figure 5.9: **Decomposition of growth and developments in loans to non-financial corporations**



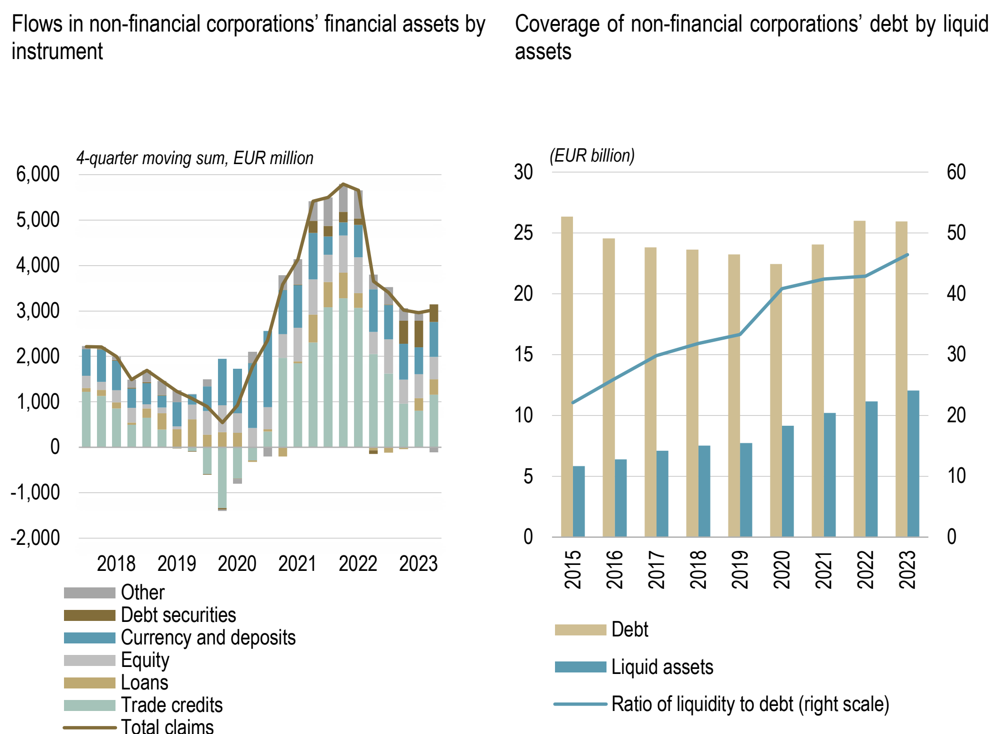
Note: Contributions to year-on-year growth in loans to NFCs are expressed in percentage points.
Source: Banka Slovenije

[67] Expanded analysis was published in the October 2021 issue of the Financial Stability Review.

Non-financial corporations' financial assets

Amid a notable slowdown on the liability side, NFCs' financial assets maintained a growth dynamic similar to that in 2022. The developments in financial assets were driven by a decline trade credits granted, and an increase in loans granted (see Figure 5.10, left). Through their loans granted, NFCs mainly financed other firms (NFCs and sole traders) in Slovenia (50% of the loan stock), with non-resident recipients accounting for slightly less (44%). There was a significant increase in NFCs' holdings of debt securities in 2023, which accounted for 12.8% of the annual flow in assets, although the modest nature of past investments of this type means they account for just 1% of the total stock of NFCs' financial assets. Holdings of currency and deposits increased by 8.0% or EUR 12.0 billion in 2023, and accounted for 18.0% of total financial assets at the end of the year, and thus constituted an additional source of financing of current operations and investment. Liquid assets have grown faster than debt at NFCs in recent years, and the gap widened sharply in 2023, thereby driving an improvement in the debt sustainability indicator (see Figure 5.10, right). Coverage of debt by liquid assets thus increased from 22% in 2015 to 43% at the end of 2022, before improving significantly to 46.4% in 2023 as the gap between growth in liquid assets and growth in debt widened.

Figure 5.10: **Non-financial corporations' financial assets**



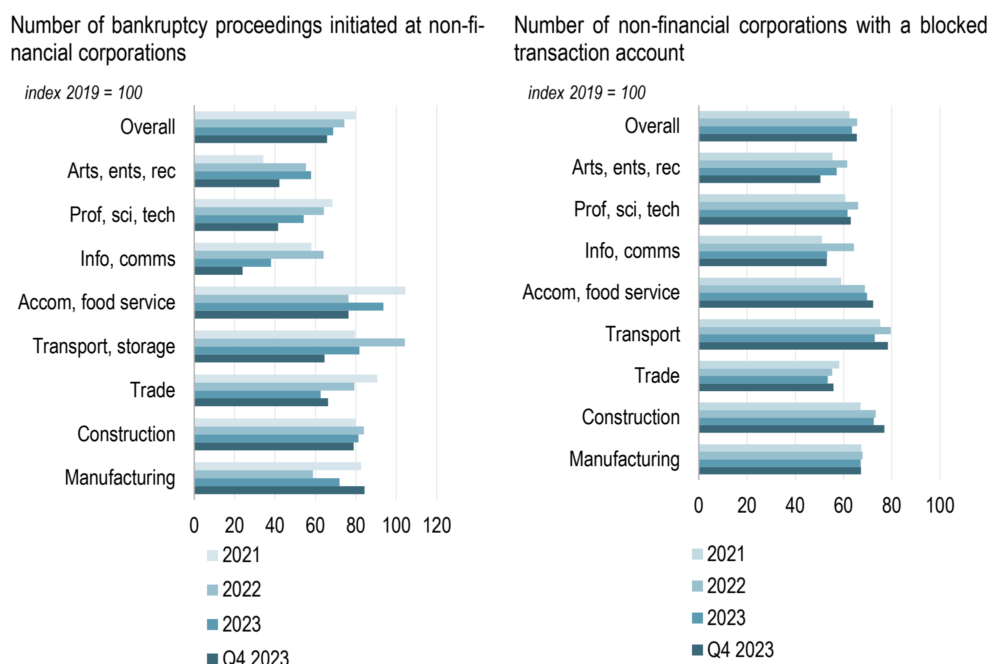
Source: Banka Slovenije

Bankruptcies and blocked transaction accounts at non-financial corporations

The number of bankruptcy proceedings initiated continued to fall, while the number of blocked transaction accounts has risen slightly in recent months. The number of bankruptcy proceedings has declined at similar rates over the last three years, namely at just over 7% annually. Only manufacturing firms stood out in 2023 (see Figure 5.11, left), with a rise of 22% in the number of bankruptcy proceedings initiated, the rise mainly coming in the final months of the year. A similar rise in bankruptcies was

also evident in accommodation and food service activities, particularly in early 2023, but the pace of new bankruptcies later slowed. Blocking of transaction accounts were less frequent than in 2022 (see Figure 5.11, right), but there was a rise in the final quarter of the year in the majority of sectors. No sector reached its average level from 2019, from before the outbreak of the pandemic and rise in geopolitical tensions, either in terms of the number of bankruptcy proceedings initiated or in terms of the number of blocked transaction accounts.

Figure 5.11: **Bankruptcies and blocked transaction accounts at non-financial corporations**



Note: The illustrated indices are calculated from the monthly averages of the number of blocked transaction accounts and bankruptcy proceedings initiated.
Sources: Supreme Court, AJPES, Banka Slovenije

6 Non-Bank Financial Institutions

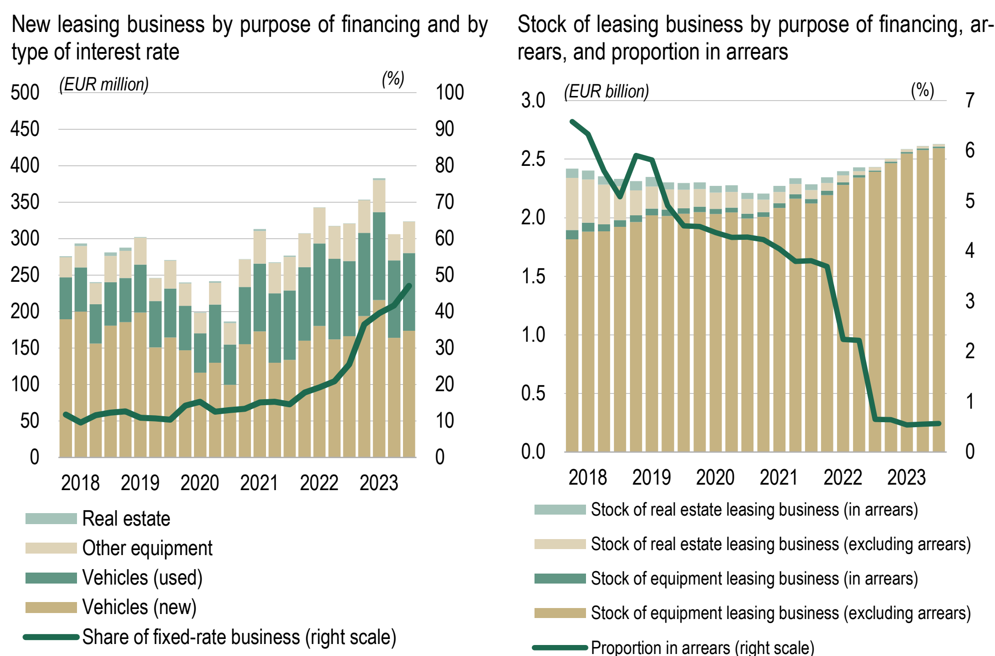
6.1 Leasing companies

The risk inherent in leasing companies is assessed as low. Leasing companies continued to strengthen their activities in 2023, which was reflected in increases in new business and the stock of business, and consequently in growth in their total assets. Amid the changes in interest rates, last year saw a rise in the number of operations approved at fixed interest rates. These accounted for almost half of new business last year. The quality of leasing business remains high, and profit also strengthened in year-on-year terms. The banks are continuing to strengthen their activities in the area of finance leasing, which was reflected in continuing high year-on-year growth in new finance leasing business.

Leasing companies saw a further increase in turnover in 2023. Finance leases are the prevalent form of business pursued by leasing companies.[68] The total value of new business approved by leasing companies reached EUR 1.4 billion in 2023, marking a 6.0% increase compared to the previous year (see Figure 6.1, left). Real estate sector within leasing continues to decline: it accounted for just 0.01% of the total number of leasing operations in 2023.

Car leasing business was the prevalent form of new business (50.3%), followed by leasing business for commercial and goods vehicles (34.6%). This breakdown is also reflected in the maturity breakdown of new business in 2023. The majority of business (51.8%) was concluded with a maturity of five to ten years, followed by business with a maturity of one to five years (34.5%). Households accounted for just over half (51.0%) of new business, with non-financial corporations accounting for the remainder (49.0%).

Figure 6.1: **New leasing business and stock of leasing business**



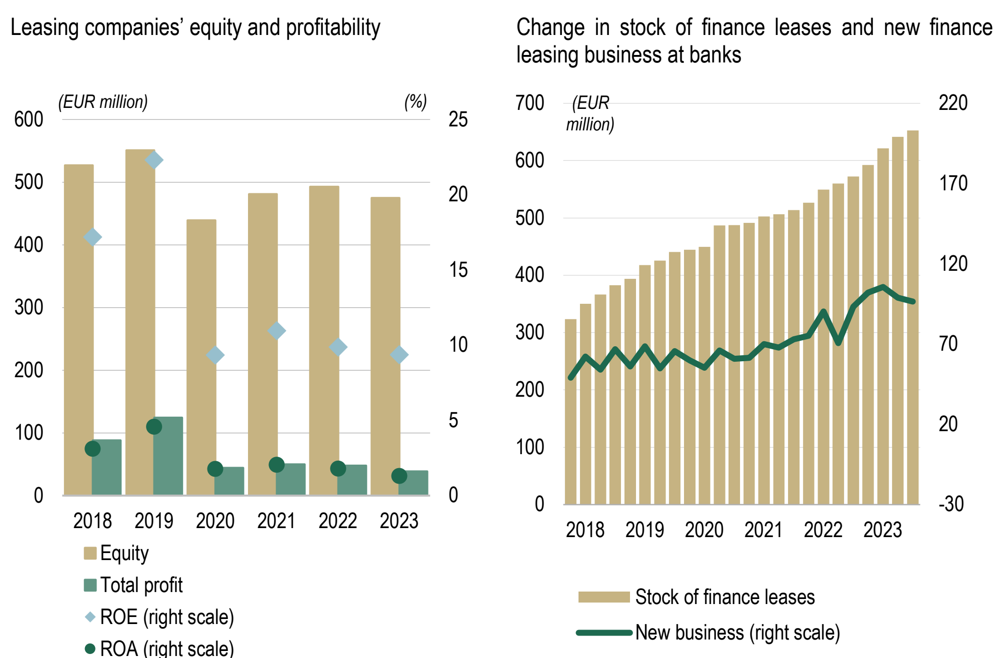
Source: Banka Slovenije

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

Amid the changes in interest rates, last year saw a rise in the number of operations approved at fixed interest rates. While the number of new operations with a variable interest rate in 2023 was down 23.2% on 2022, the number of new operations with a fixed interest rate rose by 103.2%. New business with a fixed interest rate accounted for almost half of all new business in 2023 (see Figure 6.1, left).

The rise in the number of new operations was reflected in an increase in leasing companies' total assets. Total assets amounted to EUR 3.0 billion at the end of 2023, up 3.8% in year-on-year terms. The stock of leasing business stood at EUR 2.6 billion at the end of 2023, up 8.0% in year-on-year terms. The quality of leasing business remains high. Claims more than 90 days in arrears amounted to 0.57% of the total stock at the end of 2023 (see Figure 6.1, right).

Figure 6.2: **Leasing companies' profitability and finance leases at banks**



Note: The stock of finance leasing business in the right chart represents the value of outstanding debt under finance leases at banks.
Source: Banka Slovenije

Leasing companies also saw their profitability strengthen in 2023 relative to 2022. Pre-tax profit amounted to EUR 38.5 million in 2023, up 2.7% in year-on-year terms[69] (see Figure 6.2, left). The banks also increased their financing of firms and households via finance leasing last year.[70] New business amounted to EUR 403.1 million in 2023, up 22.3% in year-on-year terms (see Figure 6.2, right).

6.2 Insurers

Inflationary pressures drove insurance corporations to raise their insurance premiums last year. In addition to high inflation, insurance corporations and reinsurance corporations faced major claims as a result of July's storms and August's floods, and also had to deal with the regulated price of supplemental health insurance premiums. Last year's claims payments by insurance corporations and reinsurance corporations were up on the previous year as expected,

[69] The profit comparison is only made with leasing companies that remain in the reporting sample. Banka Slovenije sets out the statistical sample of reporting entities on the basis of the significance of their operations, and does not cover the entire leasing sector. The sample of reporting entities can change between quarters.

[70] The analysis does not take account of bank operations from finance leasing.

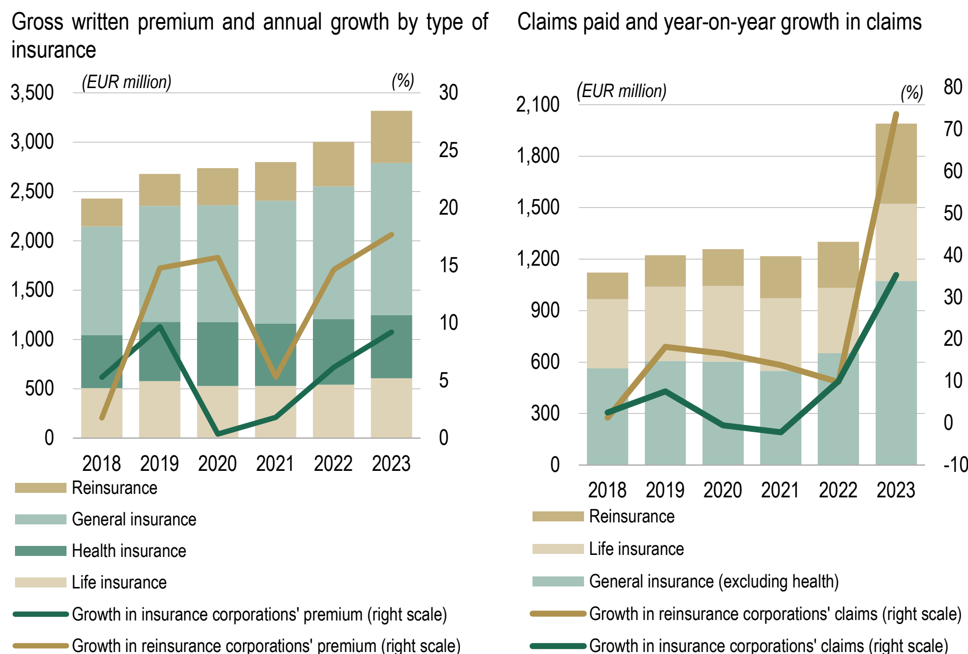
which raised the claims ratio at both. Profits were down, but insurance corporations and reinsurance corporations ended the year with a positive net operating result, despite all the challenges. There was a further increase in the total assets of insurance corporations and reinsurance corporations. The capital adequacy of insurance corporations in Slovenia remains above the regulatory requirements.

Insurance corporations recorded gross written premium of EUR 2.8 billion in total in 2023, up 9.2% in year-on-year terms. The largest factor in the increase in gross written premium was the rise in premiums. The year-on-year increase in gross written premium was driven by general insurance (where it rose by 14.5%) and life insurance (11.8%). The largest increases in gross written premium in the general insurance segment were recorded by marine insurance, aviation insurance and transport insurance, travel insurance, and vehicle liability insurance and other motor vehicle insurance. Reinsurance corporations recorded gross written premium of EUR 531.6 million last year, up 17.7% on the previous year (see Figure 6.3, left).

Supplemental health insurance was abolished at the beginning of 2024, and a compulsory health insurance levy was introduced. This produced gross written premium of EUR 641.8 million last year, equivalent to 23.0% of total gross written premium. Under the reforms a temporary decree capping supplemental health insurance premiums entered into force in early 2023, thus significantly reducing the profitability of the three insurance corporations that offered this type of insurance.

The insurance market in Slovenia faced a series of extreme events last year, which triggered large claims payments. Insurance corporations' gross claims paid were up fully 35.3% on the previous year. The total claims paid by insurance corporations operating in Slovenia amounted to EUR 2.3 billion last year, with general insurance driving the majority of the increase (see Figure 6.3, right). The high level of claims was mainly attributable to extreme events such as July's storms and August's floods. Additionally, inflationary pressures raised the cost of repairs and consequently of claims payments. The largest claims payments by insurance corporations and reinsurance corporations were seen in the third quarter of 2023. Total claims paid by the two reinsurance corporations amounted to EUR 465.8 million, a year-on-year increase of 73.7%.

Figure 6.3: **Gross written premium and claims paid**



Sources: ISA, Banka Slovenije

Insurance corporations saw their claims ratios increase in all insurance segments. The claims ratio at insurance corporations stood at 80.9% in 2023, up 15.6 percentage points in year-on-year terms (a deterioration), while the claims ratio at reinsurance corporations was up 28.4 percentage points at 88.0% (see Figure 6.4, left). The largest deterioration was evident in general insurance, where the claims ratio rose by 21.3 percentage points to 69.7%. The claims ratio in supplemental health insurance was driven up in particular by the government decree[71] capping premiums. It deteriorated by 18.7 percentage points to 114.1%. The claims ratio in life insurance deteriorated by 4.0 percentage points to 74.4%.

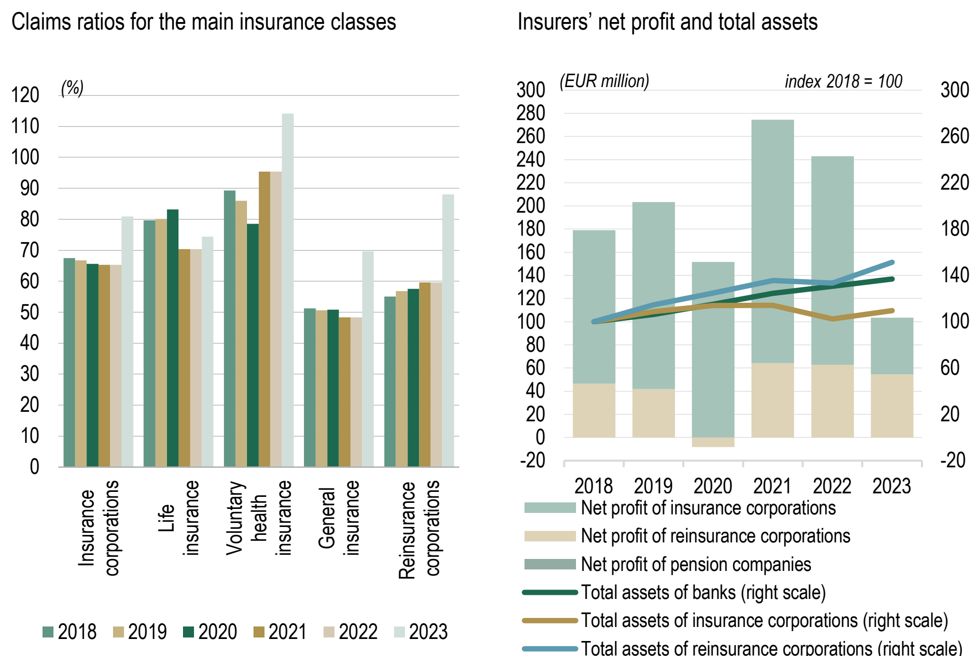
Insurance corporations and reinsurance corporations saw a significant decline in profit in 2023, but it remained positive. The non-life insurance segment recorded a loss of EUR 30.8 million last year,[72] while the life insurance segment recorded profit of EUR 79.8 million. The profit at insurance corporations thus declined by 72.8% in year-on-year terms to EUR 49.0 million (see Figure 6.4, right).[73] As stated previously, the decline in profit was mainly driven by an increase in claims payments, inflationary pressures, and the regulated price of supplemental health insurance. Conversely the increase in income on assets as a result of the favourable situation on the financial markets acted to increase profit. Profit at reinsurance corporations in 2023 was down 13.3% in year-on-year terms at EUR 54.5 million. Insurance corporations' total assets increased by 7.0% to EUR 7.7 billion, while reinsurance corporations' total assets increased by 13.6% to EUR 1.4 billion.

[71] Decree setting the maximum price of supplemental health insurance premiums (Official Gazette of the Republic of Slovenia, No. 44/23).

[72] Another factor in the decline in profit was the cap on supplemental health insurance premiums, as this type of insurance is classed as non-life insurance.

[73] Profit data has been reported under the new IFRS 17 since 2023. The net profits in the final quarter of 2022 and the final quarter of 2023 were not wholly comparable: the first figure was reported under the old IFRS 4, while the second was under IFRS 17.

Figure 6.4: **Claims ratio, net profit and total assets**



Note: Since 2017 the data for gross written premium and the claims ratio has been based on aggregate statistical reports in line with Solvency II. 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.
The data of profit is based on aggregated data. Since 2023 net profit has been reported under the new IFRS 17, while before 2023 it was reported under IFRS 4.
Sources: EIOPA, ISA, Banka Slovenije, own calculations

The capital adequacy of insurance corporations in Slovenia remains appropriate, meeting the requirements set by the Solvency II standards. Insurance corporations are required to provide adequate own funds. The median coverage of the solvency capital requirement (SCR coverage ratio) at insurance corporations in Slovenia stood at 256.8% at the end of 2023 (up 54 percentage points on December 2022). The median coverage of the minimum capital requirement (MCR coverage ratio) stood at 623.2% at the end of 2023, down 19 percentage points in year-on-year terms (see Figure 8.18 in the appendix). The median SCR and MCR coverage ratios in Slovenia in the third quarter of 2023 thus remained higher than in other EEA countries (see Figure 8.18 in the appendix).

6.3 Mutual funds

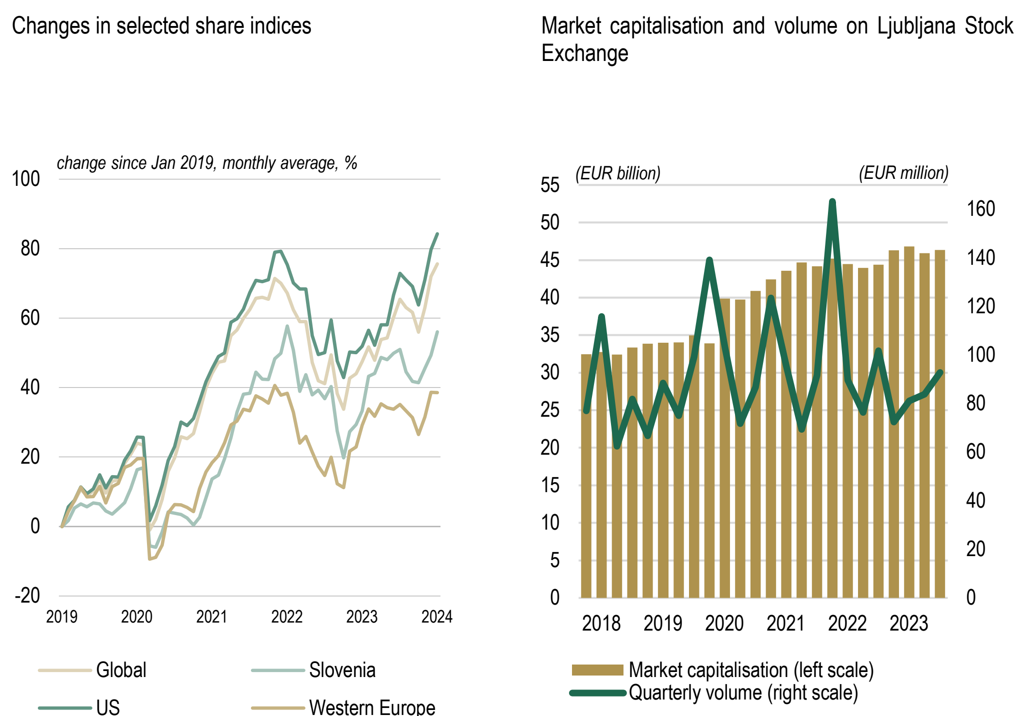
A positive mood prevailed on the equities markets in 2023. Corrections on foreign stock markets were also reflected on the domestic stock market, with the SBITOP gaining 19.8% last year. Savers had an appetite for investing in domestic mutual funds in 2023. The domestic mutual funds, whose largest holdings are in shares and investment fund units, recorded growth in assets last year, partly due to the value gains in equities. The domestic mutual funds primarily invest in shares from the US, while their holdings of debt securities are mostly focused on euro area countries.

The sharp falls in stock markets in 2022 were followed by gains in 2023. The main stock market indices hit record highs in December of last year. The S&P 500, the main US index, gained more than 20% in 2023, driven by tech shares in particular. The European STOXX Europe 600 gained almost 13% last year, while Slovenia's SBITOP was up a high 19.8% last year (see Figure 6.5, left).

The period of monetary policy tightening, which began with interest rate hikes in the spring of 2022, has most likely already reached its peak in the US and Europe. Inflation is now gradually slowing in Europe, as in the US. The recent inflation and unemployment figures are deferring any expectations of the first cuts in interest rates at the Fed.

The domestic stock market is poorly developed, and is facing low liquidity. There are only a limited number of financial instruments available for trading, which is leading to low volume and large monthly volatility in volume. Total volume amounted to EUR 330.2 million last year, down 23.4% in year-on-year terms (see Figure 6.5, left). Volume of trading in shares amounted to EUR 320 million (97.3% of the total), while treasury bills recorded volume of EUR 8.2 million (0.11%) and bonds volume of EUR 1.2 million (0.4%). Market capitalisation reached EUR 46.3 billion at the end of 2023, up 4.3% in year-on-year terms (see Figure 6.5, right). Debt instruments accounted for the majority of market capitalisation (EUR 37.2 billion), and are practically untraded, while market capitalisation of equity instruments amounted to EUR 9.2 billion. The government issued a people's bond in the amount of EUR 261 million in February 2024. The people's bonds are listed on Ljubljana Stock Exchange, and have a maturity of three years. They constitute an important innovation: the first issuance of government bonds in Slovenia that are aimed at small investors, and can serve as an alternative to bank deposits.

Figure 6.5: **Changes in share indices and market capitalisation on Ljubljana Stock Exchange**



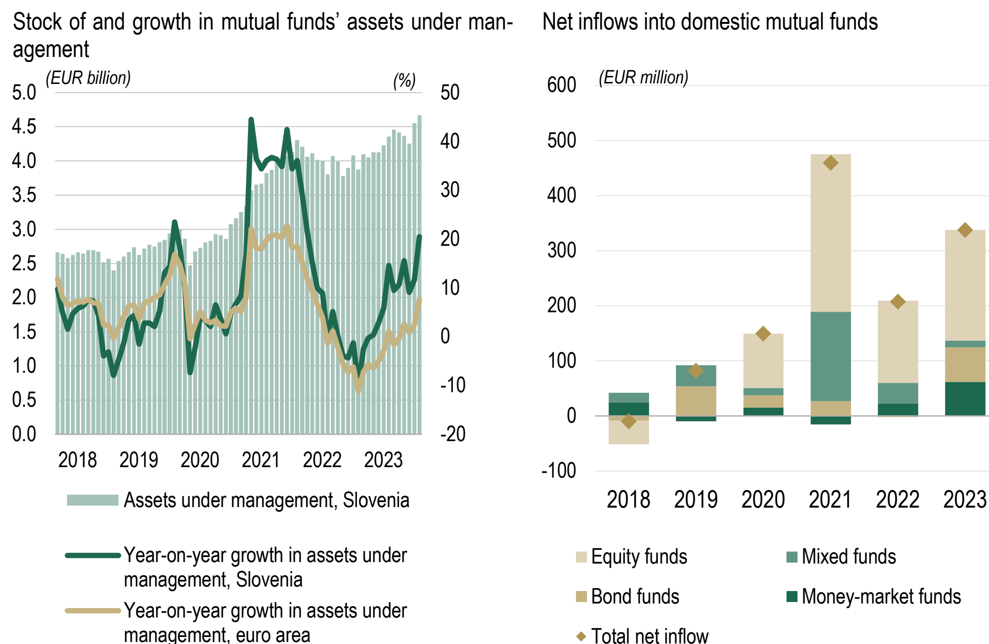
Note: The indices in the left chart are the S&P 500 for the US, the STOXX Europe 600 for western Europe, the SBITOP for Slovenia and the MSCI World Net Total Return Index for global equities. Data is to February 2024 inclusive in the left chart, and to December 2023 in the right chart.
Sources: Ljubljana Stock Exchange, Banka Slovenije

The mutual funds' assets under management increased last year, driven by the sharp gains in stock market indices and an increase in net inflows into mutual funds. The domestic mutual funds' assets under management amounted to EUR 4.8 billion at the end of December 2023, up 21.7% in year-on-year terms. The euro area also saw year-on-year growth in investment funds' assets under management, in the amount of 7.6% overall. The domestic mutual funds hold most of their assets in equity

and investment fund shares/units. Compared with the euro area overall, where funds have larger holdings in debt securities, the domestic mutual funds are more exposed to market risk on account of their larger holdings of equity. Revaluations combined with the increased net inflows into mutual funds drove higher growth in assets under management than in the euro area overall (see Figure 6.6, left).

The domestic mutual funds' equity holdings have their largest exposure to public limited companies in the US (53.6% of the total) and in euro area countries (19.7%). Their holdings of debt securities mostly focus on euro area countries (75.2% of the total).

Figure 6.6: **Domestic mutual funds' assets under management and net inflows**



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

Savers had an appetite for investing in domestic mutual funds in 2023. Inflows into the domestic mutual funds recorded notably high growth, with the appetite to invest fuelled by rises in their average unit prices. Net inflows into the domestic mutual funds amounted to EUR 337.6 million, up 62.8% on 2022 (see Figure 6.6, right). As in previous years, the largest net inflows in 2023 were recorded by equity funds (59.4% of the total), followed by bond funds (18.6%) and money-market funds (18.3%). No class of mutual funds recorded net withdrawals last year. The assets under management of alternative funds have increased sharply over the last five years, and rose by 31.6% last year to reach EUR 749.2 million. Private equity funds are the prevalent class of alternative funds.

The ownership structure of domestic investment fund units remains stable. Households recorded net inflows of EUR 243.1 million, a third of their increase in bank deposits (see Figure 8.20 in the appendix), and remain the largest holders of units in the domestic mutual funds (with 72.0% of the total), followed by other financial intermediaries with 20.4%.

7 Macroprudential Policy for the Banking System and Leasing Companies

The banking sector has recently faced risks posed by the macroeconomic environment and the natural environment. This is likewise the case for other EU Member States, which has also been reflected in their macroprudential policies. More and more Member States are introducing or raising their countercyclical capital buffer rates. Given the high profitability of the banks, Banka Slovenije has also decided to make further improvements to their resilience to various systemic and other risks. At the end of 2023 we modified the countercyclical capital buffer framework to introduce a positive neutral countercyclical capital buffer rate of 1.0%, which banks will have to meet as of 1 January 2025. This aims to address unpredictable economic shocks and the uncertainties related to cyclical systemic risks. At the same time we are using a measure restricting household lending to encourage sustainable household borrowing, thereby increasing borrowers' resilience, and reducing credit risk at banks.

Purpose of macroprudential policy

Macroprudential policy is used to identify, monitor, assess and reduce or prevent systemic risks to financial stability with the aim of safeguarding the stability of the entire financial system. The ultimate objective of macroprudential policy is ensuring that the financial sector makes a sustainable contribution to economic growth. 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 and the resilience of the financial system. Macroprudential instruments can be broadly divided into three main groups: 1) liquidity-based measures, 2) capital-based measures and 3) borrower-based measures. The capital-based measures are designed to build the banking system's resilience, while the borrower-based measures put minimum credit standards in place and can limit excessive credit growth. The less frequently used liquidity-based measures either reduce funding risk or increase the liquidity resilience of the banking system. Certain macroprudential instruments are used in the same form across EU Member States, while other instruments might differ and are formulated with regard to the specifics of the individual banking system or with regard to systemic risks (see Table 8.6).

Overview of macroeconomic policy across Europe

Maintaining the resilience of the banking system during the reversal of the financial cycle remains of key importance. EU Member States have further increased their requirements with regard to capital buffers, thereby strengthening the resilience of banks. The build-up of capital buffers has been made easier by the banks' high profitability and their large capital reserves, which have prevented procyclical effects. Macroprudential authorities are increasingly activating the countercyclical capital buffer, either with the aim of increasing resilience to rising credit risk, or with the aim of increasing the macroprudential manoeuvring space and the ability to release buffers (if necessary).[74] Since the release of the October 2023 issue of the Financial Stability Review, several more countries have opted to raise their countercyclical capital buffer

[74] Financial Stability Review, November 2023 (europa.eu), November 2023, p. 84

rates (Slovenia, Belgium, Cyprus, Latvia, Hungary), while one has lowered it (Czechia).[75] A trend of introducing a positive neutral countercyclical capital buffer rate is also evident in Europe. This approach gives precedence to expert judgment over mechanical rate setting, and allows competent authorities to build up the banking system's resilience even when there is no excessive increase in cyclical systemic risks. They are thus able to promptly address cyclical risks in the early phase of their occurrence, and can be more flexible in releasing the buffer in the event of shocks unrelated to financial imbalances. This approach is currently being taken by several European countries alongside Slovenia, including Cyprus, Estonia, Ireland, Latvia, Lithuania, the Netherlands, Czech Republic and Sweden, as well as the UK, which is no longer a member of the EU.[76]

Borrower-based measures (BBMs), which restrict lending to households, are also widespread in EU Member States. These measures encourage more sustainable borrowing by households, and improve their debt servicing capacity, which increases the resilience of borrowers and reduces credit risk at banks in particular. The most common instruments to restrict household lending are the caps on LTV and DSTI. The latter is defined as the ratio of the borrower's debt servicing amount to their income, and limits the total debt repayment amount relative to the borrower's income. Other less-frequent borrower-based measures are caps on loan maturity, and caps on DTI, which limits an individual's total indebtedness relative to their income, the LSTI, which in contrast to the DSTI takes account of the loan repayment amount in the numerator instead of the total debt repayment, and the LTI, which limits the amount of a loan relative to the individual's income (see Table 8.6).

In response to the increasing vulnerability of the residential real estate market, since the waning of the pandemic certain countries have been using targeted measures to increase resilience to these type of risks. Countries are introducing sectoral systemic risk buffers with the aim of strengthening the banking system's resilience to risks inherent in the residential real estate market, and also to certain other risks, while upholding existing macroprudential measures. In certain countries, such as Austria, Bulgaria, Croatia, Romania, Sweden and Finland, a sectoral systemic risk buffer applies to total exposure, and not solely to individual sectors. Conversely, the sectoral systemic risk buffers put in place in Slovenia, Belgium, Lithuania, Malta, Germany and Portugal address bank exposure to loans secured by residential real estate separately. Macroprudential authorities also address certain other risks with sectoral buffers. Slovenia applies the buffer also to household loans not secured by residential real estate, while France applies the buffer to exposures to certain NFCs.

All EU Member States identify other systemically important institutions (O-SIIs) each year. Additional capital buffers are imposed on these banks, the aim of which is to absorb any losses that might be suffered by banks that are of significant importance to a particular banking system, and whose failure would pose a major risk to the stability of the financial system.

[75] Details of the countercyclical capital buffer rates in EEA countries can be found on the ESRB website: Countercyclical capital buffer (europa.eu)

[76] A positive neutral rate for the countercyclical capital buffer – state of play in the banking union (europa.eu), Countercyclical capital buffer | Latvijas Banka

Banka Slovenije macroprudential policy

The identified key risks to the Slovenian banking system are actively mitigated by means of macroprudential instruments, which we also use to strengthen the banking system's resilience to the identified risks. There are four macroprudential instruments that currently apply to the Slovenian banking system. The buffer for other systemically important institutions (O-SII buffer), the countercyclical capital buffer (CCyB) and the two sectoral systemic risk buffers (SyRB) require a higher level of capital at banks, and thus strengthen the (capital) resilience of the banking system. The macroprudential restrictions on consumer lending put minimum credit standards in place, and at the same time are pitched at mitigating and preventing excessive credit growth and excessive leverage, thereby reducing credit risk.

Table 7.1: **Banka Slovenije macroprudential measures**

Macroprudential measure	Year of introduction/change	Type of instrument	Intermediate objective	Assessment of achievement of objective
Macroprudential restrictions on household lending (LTV, DSTI, caps on maturity)	2016[1]/2018[2]/2019[3]/2020[4]/2022[5]/2023[6]	BINDING	To mitigate and prevent excessive credit growth and excessive leverage	Improved credit standards in 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 (CCyB)	2016/2022/2023[7]	BINDING	To mitigate and prevent excessive credit growth and excessive leverage	Banks are required to meet the buffer in the amount of 0.5% as of 31 December 2023, and in the amount of 1.0% as of 1 January 2025 (positive neutral countercyclical capital buffer rate)
Sectoral systemic risk buffers	2022/2023[8]	BINDING	(a) to mitigate and prevent excessive credit growth and excessive leverage (b) to limit direct and indirect exposure concentrations	Banks are required to meet the buffer as of 1 January 2023 (1.0% for exposures secured by residential real estate, 0.5% for other exposures to natural persons), and then in the amount of 0.5% for both buffers as of 1 January 2025

Source: Banka Slovenije
[1] A recommendation with regard to LTV and DSTI was introduced in 2016 for housing loans.
[2] In 2018 the macroprudential recommendation was extended to consumer loans, to which a cap on maturity also applied alongside the cap on DSTI.
[3] The caps on DSTI and maturity became a binding macroprudential instrument in 2019.
[4] 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.
[5] Additional changes to the restrictions on consumer lending entered into force on 1 July 2022.
[6] The latest changes to the restrictions on consumer lending entered into force on 1 July 2023.
[7] The banks are required to meet a countercyclical capital buffer rate of 0.5% as of 31 December 2023, and a (positive neutral) rate of 1.0% as of 1 January 2025.
[8] The two sectoral systemic risk buffers were introduced in 2022, and entered into force on 1 January 2023. The systemic risk buffer requirement for all retail exposures to natural persons secured by residential real estate was reduced from 1.0% to 0.5% of the total risk exposure amount in November 2023. The banks will apply the new buffer rate as of 1 January 2025.

Countercyclical capital buffer

The countercyclical capital buffer is used to strengthen the resilience of the banking system in a period of rising cyclical systemic risks. In the event of the materialisation of credit risk, the buffer allows the banking system to cover losses with

the capital buffers built up by the active macroprudential policy. This reduces the likelihood of an excessive contraction in lending to the real sector in the event of the materialisation of the risks.

In 2023 the countercyclical capital buffer for exposures to Slovenia was raised from 0.5% to 1.0% of the total risk exposure amount. Banks will be required to meet the increased buffer requirement as of 1 January 2025. The buffer rate of 1.0% represents a positive neutral countercyclical capital buffer rate, which entails a buffer rate of 1.0% in a standardised or neutral environment. The standardised or neutral environment is one where cyclical risks are neither excessively high nor excessively low, and are being maintained at stable levels.[77]

The main reasons for the introduction of a positive neutral countercyclical capital buffer rate are as follows:

Unpredictable exogenous shocks. The Covid-19 pandemic, the war in Ukraine, and their impact on the economy showed that for the more effective resolution of financial shocks it is necessary to strengthen the role of capital buffers that can be released as needed, as these shocks can occur independently of the phase of the financial or business cycle in the domestic environment. The positive neutral countercyclical capital buffer rate increases the likelihood that in the event of systemic shocks not necessarily related to the accumulation of domestic imbalances, there will be sufficient capital available for release.

Increased volatility in data series. The rapid transition from the period of low interest rates and stable inflation into a period of elevated inflation, higher nominal interest rates, and the resulting increased volatility in nominal and real economic categories carries the potential for an increase in risks. These relate in particular to sub-optimal investment decisions potentially driven by major gaps between real and nominal categories. Cyclical developments might become more volatile and pronounced again in a situation of this type.

The inherent uncertainty in measuring cyclical risks and the time lag in the assessment of cyclical risks and the build-up of the countercyclical buffer. The positive neutral rate reduces the likelihood of an increase in cyclical systemic risks being recognised too late, and consequently of the resilience of the banking system being increased too late. A considerable lag arises in the implementation of the countercyclical capital buffer. The lag is caused by the use of quarterly data, which is usually available a few months after the end of the quarter. The process of notifying international institutions (ECB, ESRB) also needs to be undertaken before a final decision. After the adoption of a final decision, in normal circumstances the banks have another 12 months to meet the countercyclical capital buffer requirement.

Macroprudential restrictions on consumer lending

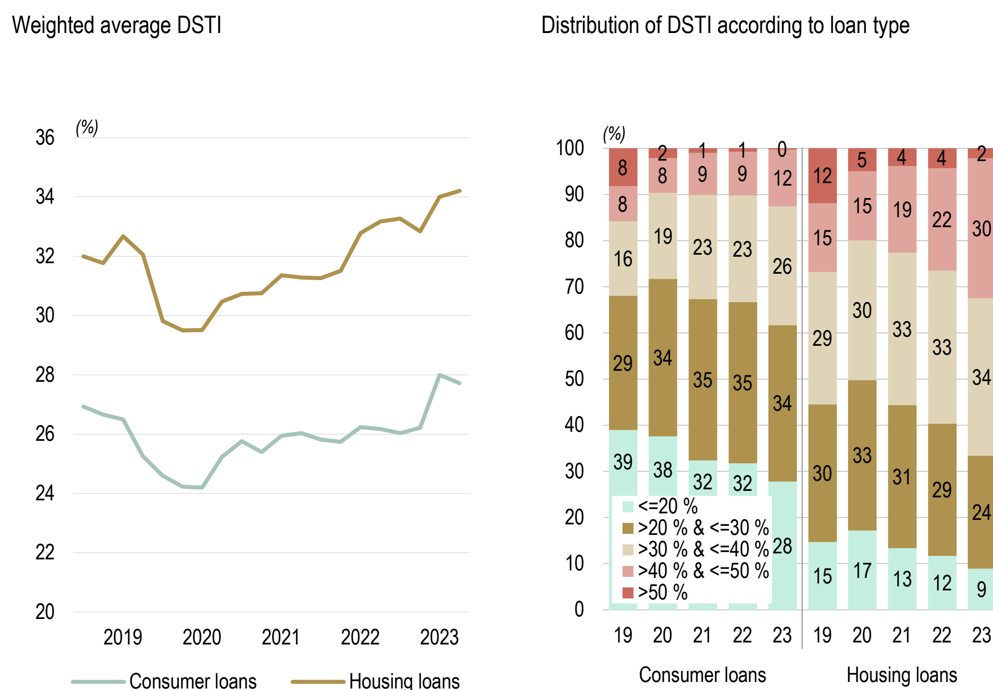
Three macroprudential instruments in the form of borrower-related measures are in use in Slovenia. These are: 1) a cap on DSTI, 2) a cap on LTV, and 3) caps on the maturity of consumer loans.[78]

[77] For more information about the positive neutral countercyclical capital buffer rate and the neutral risk environment, see the Banka Slovenije website.

[78] For more on the details and latest adjustments to the macroprudential restrictions on household lending, see: Macroprudential restrictions on consumer lending or Financial Stability Review, October 2023.

In addition to July's adjustments to the toolkit, the effectiveness of these instruments was also profoundly affected by developments in interest rates. Consumers spent a larger share of their income on debt repayments than in previous years. As a result of last year's adjustment to the macroprudential measure and the rise in interest rates, consumers saw an increase in their average DSTI (see Figure 7.1, left). During the adjustment to the macroprudential measure in July, the lower limit of creditworthiness was tied to the minimum cost of living. This relaxed the restriction on the maximum borrowing by consumers. To ensure that the macroprudential restrictions would not be too loose, we reduced the maximum allowable DSTI from 67% to 50%, and reduced the level of allowed deviations from the maximum DSTI from 10% to 3% (see Table 7.2). The DSTI averaged 27.7% for consumer loans in the second half of the year, and 34.2% for housing loans.

Figure 7.1: **Average DSTI on new loans, and distribution of DSTI on new loans**



Source: Banka Slovenije

The macroprudential restrictions on consumer lending had an impact on the distribution of new loans. Before the introduction of the binding macroprudential restrictions, almost half of the total volume of consumer loans went to consumers whose reported net income did not exceed the average net monthly wage of Slovenian households (more than half of all loans in terms of number). The figure was lower for housing loans, at around 20% (around 30% of all loans in terms of number). After the introduction of the macroprudential policy restrictions on consumer lending, the figures declined for consumer loans and housing loans alike (see Figure 7.2, left). As a result of the adjustment to the macroprudential measure, the figure rose again slightly in 2023. Figure 7.2 right illustrates the average DSTI with regard to reported income, and the average DSTI after an interest rate shock of 4 percentage points. It can be observed that housing loans are more sensitive to the change in interest rates, as they have larger amounts and longer tenors. Under the scenario of a sudden rise in variable interest rates, it is consumers with low income who are most vulnerable.

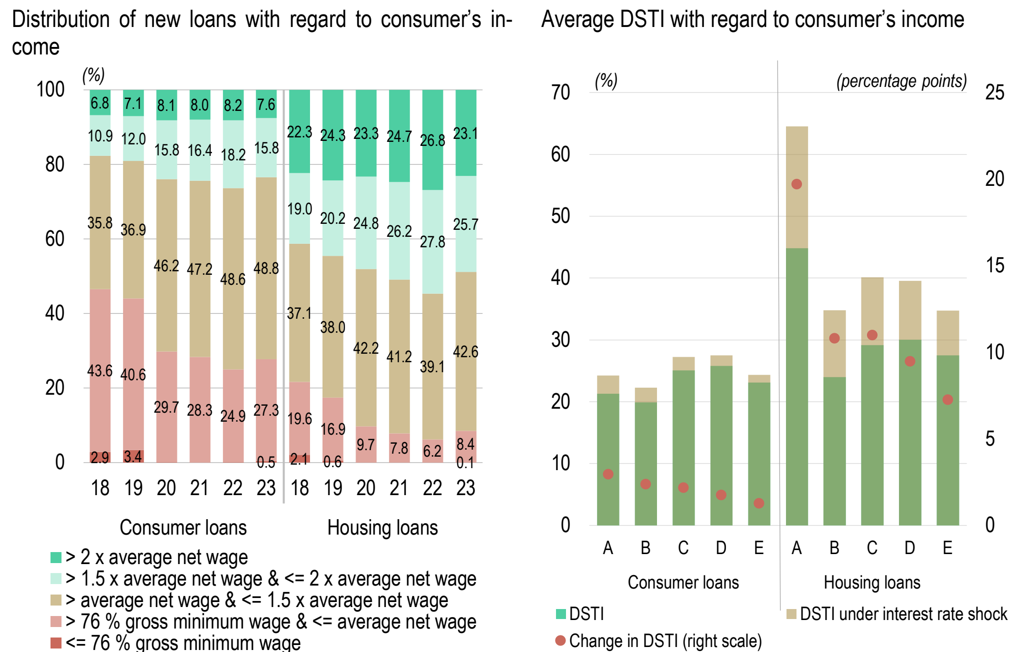
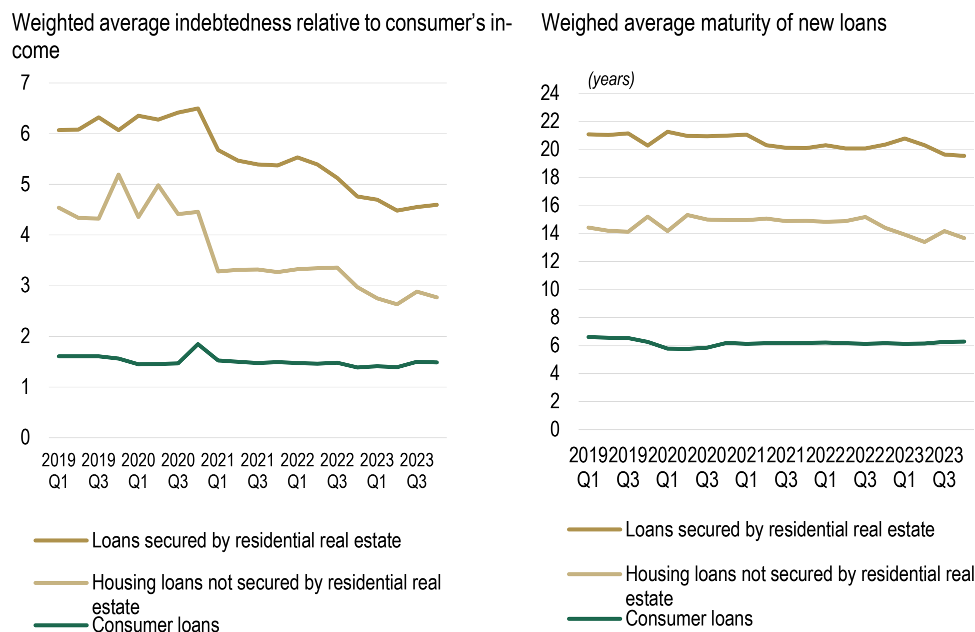


Figure 7.2: **Distribution of new loans with regard to consumer's income, and average DSTI with regard to consumer's income**

Note: 76% of the gross minimum wage in the calendar year: EUR 640 (2018), EUR 673 (2019), EUR 714 (2020), EUR 778 (2021), EUR 816 (2022) and EUR 914 (2023). Average net monthly wage in the calendar year: EUR 1,092 (2018), EUR 1,133 (2019), EUR 1,208 (2020), EUR 1,270 (2021), EUR 1,318 (2022) and EUR 1,445 (2023). The consumer's income in the BSMAP report takes account of earnings from all income sources as defined by the Personal Income Tax Act (employment income, income from business activities, pensions, earnings from the letting of real estate, financial investments and other sources). Figure 7.2 captures all loans with a variable interest rate approved between Q1 2018 and Q2 2022. Over the observation period 26.8% of consumer loans and 38% of housing loans were approved with a variable interest rate. A: <= 76% of the gross minimum wage. B: >76% of the gross minimum wage and <= average net wage. C: > average net wage and <= 1.5 x average net wage D: > 1.5 x average net wage and <= 2 x average net wage. E: > 2 x average net wage. The lowest income band captures just 87 housing loans, and 3,370 consumer loans. The interest rate shock is applied solely to newly approved bank loans. Debt servicing costs for other debt remains unchanged.
Sources: Banka Slovenije, SORS

There was no increase in consumer indebtedness relative to income. The DTI for consumers who have taken out a consumer loan remains stable (see Figure 7.3, left). The DTI for consumers who have taken out a housing loan declined over the course of the year. The average DTI for consumers who have taken out a consumer loan is approximately 1.2, while for consumers who have taken a loan and secured it with residential real estate the average is 4.1, and declined over the course of the year. The DTI also declined for consumers who have taken out a housing loan but did not secure it with residential real estate. The average maturity of new consumer loans remains stable at 5 years, while the average maturity of housing loans secured by residential real estate has declined slightly in recent years and stands at 18.5 years (see Figure 7.3, right).

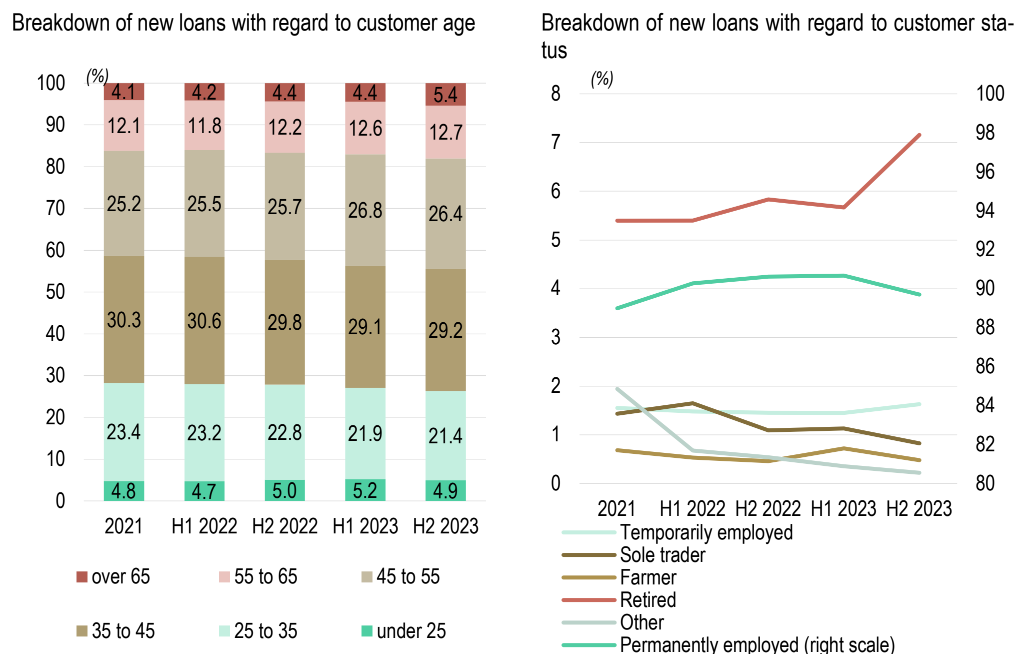
Figure 7.3: **Average indebtedness relative to consumer's income and average maturity**



Source: Banka Slovenije

Lending to older consumers increased. Soon after the adjustment to the macroprudential measure that entered into force in July 2022, the number of loans approved for customers aged over 45 began to rise (see Figure 7.4, left). This share increased even further after the modification of the instrument in 2023. There were no major changes in the number of loans with regard to customer status, other than the increase in the share of loans to customers with retired status (see Figure 7.4, right).

Figure 7.4: **Breakdown of new loans with regard to customer age and customer status**



Source: Banka Slovenije

The share of deviations from the cap on DSTI had fallen below the maximum allowed level by the end of the year. In the wake of the adjustments to macroprudential measures, banks had difficulties with calculating the allowed deviations from DSTI.

Consequently the level of deviations surpassed the maximum allowed level in the third quarter. The banks had rectified these issues by the end of the year. The LTV remains stable, at around 60% for loans for primary residences, and around 53% for loans for secondary real estate. The level of deviations from the recommended LTV increased in the second half of the year, with deviations from the recommendation more common in loans for secondary real estate. The average maturity of consumer loans increased slightly, while a slightly more pronounced shortening of maturity was evident in housing loans. The level of deviations from the cap on maturity for consumer loans remains stable at around 10%.

Table 7.2: **Average values of selected parameters for housing loans and consumer loans, and level of deviations from macroprudential instruments**

Weighted average	2019[1]	2020	2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
					Housing loans						
LTV	67.7%	67.6%	63.7%	61.8%	60.0%	57.8%	58.5%	58.3%	58.1%	60.8%	59.2%
Level of deviations in LTV[2]	19.8%	15.8%	11.1%	10.3%	9.9%	13.4%	9.1%	11.5%	10.0%	15.1%	11.5%
DSTI	32.1%	29.9%	31.0%	31.3%	31.5%	32.8%	33.2%	33.3%	32.8%	34.0%	34.2%
Level of deviations in DSTI[3]	15.7%	4.9%	5.5%	7.4%	2.9%	2.4%	3.2%	7.1%	5.7%	4.8%	2.5%
Average maturity, years	19.1	19.3	18.8	18.6	18.3	18.6	18.6	18.7	18.3	17.9	17.9
					Consumer loans						
DSTI	26.4%	24.6%	25.8%	25.8%	25.8%	26.2%	26.2%	26.0%	26.2%	28.0%	27.7%
Level of deviations in DSTI[3]	21.8%	4.3%	6.2%	6.0%	1.3%	3.1%	4.7%	7.0%	7.5%	3.7%	2.2%
Average maturity, years	6.5	5.8	6.2	6.2	6.2	6.1	6.2	6.1	6.2	6.3	6.3
Level of deviations in maturity[4]	2.3%	5.8%	12.2%	12.2%	10.7%	9.5%	9.8%	11.7%	11.3%	8.7%	11.7%

[1] The instruments capping DSTI and maturity (for consumer loans) only became binding on 1 November 2019. The maximum maturity for consumer loans was reduced at that time from ten years to seven years.
[2] The level of deviations in LTV is calculated as the ratio of the sum of all housing loans secured by residential real estate where the recommended LTV is exceeded to the sum of all housing loans secured by residential real estate approved in the same quarter.
[3] Until Q3 2022 the level of deviations in DSTI was calculated as the ratio of the sum of all loans secured where the cap on DSTI was exceeded to the sum of all loans that comply with the macroprudential measures approved in the same quarter. Since Q3 2022 the level of deviations has been calculated with regard to the sum of all loans that comply with the macroprudential measures approved in the previous quarter. The allowed level of deviations in DSTI stood at 10% until Q3 2023, and stands at 3% as of Q3 2023.
[4] Until Q3 2022 the level of deviations in maturity was calculated as the ratio of the sum of all loans secured where the cap on maturity was exceeded to the sum of all loans that comply with the macroprudential measures approved in the same quarter. Since Q3 2022 the level of deviations has been calculated with regard to the sum of all loans that comply with the macroprudential measures approved in the previous quarter.

Source: Banka Slovenije

Systemic risk buffer

Two sectoral systemic risk buffers entered into force on 1 January 2023. They address the risks inherent in the real estate market and in increased consumer lending, and at the same time serve to cover the risks posed by the approval of loans classed as exemptions in accordance with the Regulation on macroprudential restrictions on consumer lending. The sectoral systemic risk buffers were 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%.

A decision was taken last November to reduce the sectoral systemic risk buffer for exposures secured by residential real estate. Under the new regulation[79] the systemic risk buffer requirement for all retail exposures to natural persons secured by

[79] Regulation amending the Regulation determining the requirement to maintain a systemic risk buffer for banks and savings banks (Official Gazette of the Republic of Slovenia, No. 131/23).

residential real estate is reduced from 1.0% to 0.5% of the total risk exposure amount. The recalibration of the buffer is founded in our regular risk assessments in which we evaluate the corrections on the Slovenian RRE market as orderly,[80] which is reducing the need for a buffer of this kind. The banks will need to meet the new buffer rate as of 1 January 2025.

Other systemically important institutions

Article 242 of the Banking Act 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.[81] The aim of this buffer is to increase the capacity of these banks to absorb losses, and to indirectly address certain risks present in the financial system. For the identification of O-SIIs we meaningfully apply the EBA methodology. The score achieved in the assessment of systemic importance is the main criterion for buffer calibration and allocation of the O-SIIs to the corresponding bucket.[82] The methodology for determining the O-SII buffer rate was modified last year. Figure 8.20 illustrates the buckets for allocating O-SIIs on the basis of the systemic importance score and the corresponding buffer rate under the old and new methodologies. The bucket thresholds and the corresponding buffer rates are defined by the Regulation determining the capital buffer for other systemically important institutions (Official Gazette of the Republic of Slovenia, No 79/23). Table 7.3 illustrates the latest systemic importance scores for individual O-SIIs and the corresponding buffer rates.

Table 7.3: **Scores in assessment of systemic importance and capital buffer rates**

O-SII	**Systemic importance score** (EBA guidelines)	**Capital buffer rate** (as % total risk exposure)	**Capital buffer rate** (as % total risk exposure) effective 1 January 2025
NLB	3,875	1.25%	1.25%
NKBM	1,678	0.50%	0.75%
SID	793	0.25%	0.50%
UniCredit Banka	864	0.25%	0.50%
SKB	705	0.25%	0.25%
Intesa Sanpaolo	548	0.25%	0.25%

Source: Banka Slovenije

Box 4: Model-based assessment of the cap on LTV and the cap on DSTI

This box presents the results of an assessment of an integrated micro-macro model for the assessment of macroprudential measures, with a focus on housing loans in Slovenia. The integrated dynamic household balance sheet (IDHBS) model used in this analysis was developed by the ECB and the IMF.[83] It allows (i) an assessment of the impact of a macroprudential measure restricting lending on indicators such as residential real estate prices or aggregate growth in loans, and (ii) analysis of the sensitivity of risk parameters such as probability of default and loss given default for the household sector under macro scenarios.

[80] See Section 2.1 Risk inherent in the real estate market.

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

[82] The bucketing approach is the most common one for determining the O-SII buffer rate.

[83] References: Gross, M., and Población, J. (2017). Assessing the Efficacy of Borrower-Based Macroprudential Policy Using an Integrated Micro-Macro Model for European Households, Economic Modelling. Gross, M., Tressel, T., Ding, X. and Tereanu, E. (2022). What Drives Mortgage Default Risk in Europe and the U.S.? IMF Working Paper, No. 2022/065.

Macroprudential restrictions on lending can affect some households more than others. Differences in debt servicing capacity are a significant factor, and can in turn have an impact on risks in the financial sector. Models that combine micro and macro data and modelling approaches allow for better assessments of these measures, as they allow for the cross-section dimensions and macro dimensions to be combined in a single model framework.

The main input data for the assessment is micro data from the household finance and consumption survey (HFCS)[84] and Banka Slovenije data sources. The detailed data from the HFCS allows a household loan balance sheet to be composed. The macro module of the model draws up projections of variables defining the macro-environment, i.e. GDP, real estate prices, inflation, growth in loans, interest rates, and unemployment, and then inputs them into the micro module. Changes in the employment status of household members are the main source of income shock to households, and have a material impact on the ability of the household to repay its debt. Employment status is determined on the basis of the socioeconomic position of the individual household member, and the general level of unemployment prevailing in the economy.[85] In the model households cease repaying debt when their liquid assets no longer cover their current liabilities and living expenses.

Figure 7.5: **Generic household balance sheet**

Assets		Debt and equity	
Real estate	House/land (H) Other non-financial assets (Vr)	Lm	Mortgage debt
Financial assets	Currency (C) Sight deposits (Ds) Fixed-term deposits (Dt) Bonds (B) Shares (S) Other financial assets (V)	Lc	Consumer loans
		E	Equity

Note: Balance sheet items are used to determine the liquid assets and liabilities of households. Liquid assets consist of currency (C), deposits (D), bonds (B) and shares (S).

The results show that probability of default is impacted by different values for the cap on DSTI. The caps on LTV and DSTI have a very similar impact on loss given default (see Figure 7.6, left). The cap on LTV reduces probability of default merely by 1.5 percentage points from an initial probability of default of just over 4%.[86] This suggests that there are limited possibilities for the cap on LTV to have an impact on probability of default. Probability of default and loss given default are correlated. This finding is consistent with the findings for the euro area (Gross & Población, 2017).

The cap on DSTI has an advantage over other instruments, in that it causes the least disruption to credit growth for a given loss rate (probability of default multiplied by loss given default). The caps on LTV and DSTI reduce the stock of loans raised by households to the level determined by the upper limit of the instrument. A reduction in indebtedness strengthens the ability of households to repay their debt, but

[84] The household finance and consumption survey gathers data about the financial assets and consumption of households at the household level, and covers all euro area countries and several other European countries.

[85] In the simulation of household balance sheets using the attributes of household members such as qualifications, age, marital status, employment status is correlated by means of logistic regression. Employment status is forecast with regard to the attributes of household members and unemployment at the aggregate level, whereby the constant term in the regression is adjusted to fit the former. Employment income determines the household's holdings of currency and deposits. If the employment status of household members changes from employed to unemployed, income is reduced to the level of unemployment benefit.

[86] The baseline for probability of default is a generic value that is higher than the current average probability of default for housing loans.

can also weaken aggregate economic activity. The decline in lending driven by the cap on DSTI is smaller than that driven at an equal loss rate by the cap on LTV. The cap on DSTI reduces probability of default and loss given default alike.

The responses of key macroeconomic variables to a hypothetical tightening of borrower-based measures are simulated below. There are three scenarios for tightening macroprudential policy via borrower-based measures: (i) a cap on LTV of 70%, (ii) a cap on DSTI of 55% (a cap on DSTI of 55% corresponding to the loss rate[87] under a cap on LTV of 70%), and (iii) a joint cap, with a cap on LTV of 70% and a cap on DSTI of 55%. The reference value for the hypothetical scenarios of macroprudential policy tightening comes from the BMPE projections from November 2023. The responses of the macro variables differ from the baseline scenario because of the shock in demand for loans produced by the modified macroprudential policy. The shock in demand for loans is calibrated by estimation of the decline in the total stock of loans that results from the introduction of the restrictions.[88]

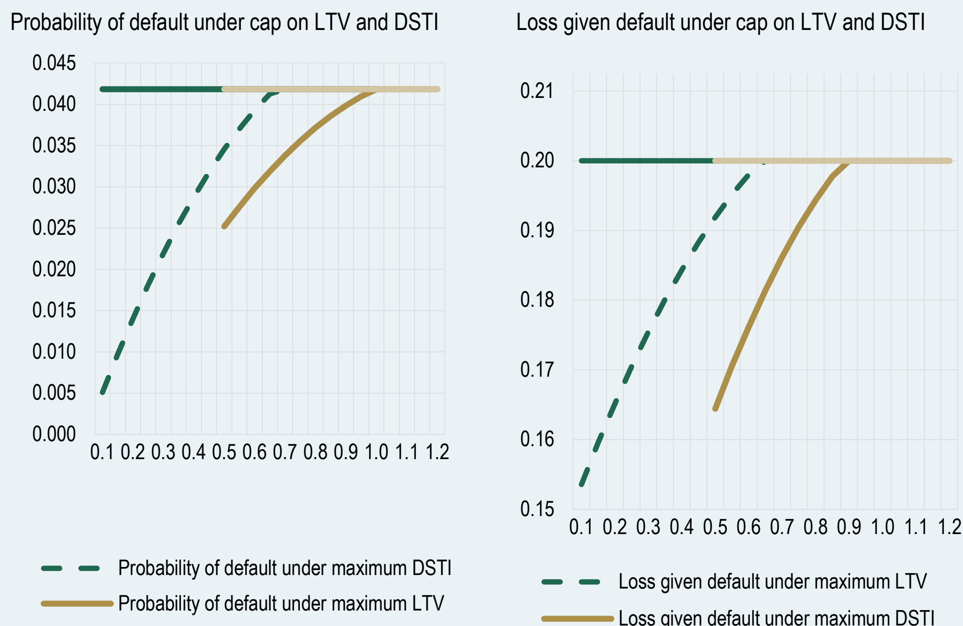
The cap on DSTI has least impact on macro variables, while the cap on LTV is a more effective measure to influence growth in loans and real estate prices (see Figure 7.6, right). The joint cap sets a limit on borrowing for borrowers, and therefore has the largest impact on macro variables.[89] The impact on macro variables is a consequence of the decline in the stock of housing loans, which has an impact on residential real estate prices via the curtailing of demand. The introduction of restrictions on lending could over time cause a decline in economic activity, as this effect persists over a longer period as a result of interactions between growth in loans, residential real estate prices and economic activity.

[87] The concept of loss rate equivalence means caps on LTV and DSTI that give rise to the same loss rate.

[88] The assumption is that the distribution of LTV and DSTI in loans over the last four quarters is representative, and the shock in demand for loans is sized to cause a reduction in the stock of loans equivalent to the share of loans that exceed the cap on LTV or DSTI.

[89] While the joint cap has the largest impact, the impact on macroeconomic results from applying the cap on LTV alone is very similar to the impact of the joint cap. This is because the majority of cases in which borrowers are bound by the cap on LTV of 70% and the cap on DSTI of 55% overlap (using the loan profile from 2023 as the reference). Only in 2.8% of these overlapping cases is the cap on DSTI the more stringent factor.

Figure 7.6: **Impact of LTV and DSTI on probability of default of housing loans**



Source: Banka Slovenije

The model also allows for the calculation of aggregated probability of default and loss given default depending on the macro scenario, including the secondary effects on the two parameters. Using the estimated probability of default and loss given default, it is possible to expand the illustrative application examined in this box to an estimate of the potential impact on bank capital, which represents a kind of stress test for loans to the housing sector.

The analysis contributes to an assessment of alternative policies by simulating their impact on significant parameters and variables of significance to policy-makers and the public. Although the methodological improvements allow for the use of more detailed information, the reliability of their use depends on the quality of the data used. The exhaustive data collected by central banks allows for in-depth descriptive analysis, and also model-based analysis.

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8 Appendices

Table 8.1: **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.
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 net impairments and provisions to gross income and ratio of net impairments and provisions 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 divided into 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 8.2: **Slovenian banking system balance sheet for selected time snapshots, 2004 to 2023**

	Stock, EUR million unless stated										Increase, EUR million			Year-on-year change, %		
	2004	Breakdown	2008	Breakdown	2013	2021	2022	Breakdown	2023	Breakdown	2021	2022	2023	2021	2022	2023
Assets																
Cash on hand, balance at central bank	592	2.5	1,250	2.6	2,452	11,495	10,445	20.7	12,762.9	24.0	2,671	-1,051	2,318	30.3	-9.1	22.2
Loans to banks	2,156	9.1	4,101	8.6	3,986	1,544	1,665	3.3	1,444.3	2.7	52	121	-221	3.5	7.8	-13.3
Loans to non-banking sector	**12,947**	**54.4**	**33,718**	**70.3**	**24,359**	**25,045**	**27,538**	**54.4**	26,934.3	**50.7**	**1,484**	**2,493**	-604	**6.3**	**10.0**	**-2.2**
of which to non-financial corporations	8,147	34.2	20,260	42.3	11,508	9,300	10,487	20.7	9,968.1	18.8	550	1,187	-519	6.3	12.8	-4.9
of which to households	3,262	13.7	7,558	15.8	8,467	11,263	12,138	24.0	12,556.1	23.7	551	875	418	5.1	7.8	3.4
Financial assets / securities	7,013	29.4	7,307	15.2	8,318	8,355	8,759	17.3	9,815.6	18.5	-603	404	1,056	-6.7	4.8	12.1
Other	1,112	4.7	1,572	3.3	1,229	1,811	2,168	4.3	2,125.2	4.0	-4	357	-43	-0.2	19.7	-2.0
Equity and liabilities																
													0			
Financial liabilities to Eurosystem	0	0.0	1,229	2.6	3,727	2,344	758	1.5	75.2	0.1	964	-1,586	-683	69.9	-67.6	-90.1
Liabilities to banks	4,719	19.8	18,168	37.9	7,729	1,716	2,034	4.0	1,746.0	3.3	-663	318	-288	-27.9	18.6	-14.2
of which to domestic banks	435	1.8	2,065	4.3	2,381	649	600	1.2	413.2	0.8	-150	-49	-187	-18.8	-7.6	-31.1
of which to foreign banks	4,254	17.9	16,098	33.6	5,348	1,066	1,434	2.8	1,332.7	2.5	-513	368	-101	-32.5	34.5	-7.1
Liabilities to non-banking sector (deposits)	**14,906**	**62.6**	**20,883**	**43.6**	**22,550**	**37,185**	**39,756**	**78.6**	41,061.8	**77.4**	**2,904**	**2,571**	**1,306**	**8.5**	**6.9**	**3.3**
of which to non-financial corporations	2,667	11.2	3,728	7.8	4,196	8,998	9,710	19.2	10,783.8	20.3	967	712	1,074	12.0	7.9	11.1
of which to households	9,904	41.6	13,407	28.0	14,365	23,953	25,784	51.0	26,514.3	49.9	1,516	1,832	730	6.8	7.6	2.8
Debt securities	973	4.1	1,276	2.7	1,657	1,250	2,066	4.1	3,163.7	6.0	191	817	1,097	18.1	65.4	53.1
Provisions	0	0.0	176	0.4	306	151	142	0.3	187.4	0.4	-34	-10	46	-18.4	-6.5	32.3
Shareholder equity	1,896	8.0	4,010	8.4	3,670	5,061	5,153	10.2	6,081.3	11.5	256	93	928	5.3	1.8	18.0
Other	1,326	5.6	2,206	4.6	704	545	665	1.3	766.8	1.4	-19	120	102	-3.3	22.1	15.3
Balance sheet total	**23,820**		**47,947.9**	**100.0**	**40,343.6**	**48,252**	**50,575**	**100.0**	**53,082.2**	**100.0**	**3,600**	**2,323**	**2,507**	**8.1**	**4.8**	**5.0**

Source: Banka Slovenije

Table 8.3: **Slovenian banking system income statement, 2018 to 2023**

	Amount, EUR million						Year-on-year growth, %						Ratio to gross income, %					
	2018	2019	2020	2021	2022	2023	2018	2019	2020	2021	2022	2023	2018	2019	2020	2021	2022	2023
Net interest	672	683	639	625	748	1442	3.0	1.6	-6.4	-2.2	19.6	92.8	58.2	54.4	47.0	51.9	56.9	72.9
Non-interest income	482	573	721	580	567	535	14.1	19.1	25.7	-19.5	-2.3	-5.6	41.8	45.6	53.0	48.1	43.1	27.1
commission	315	334	330	377	398	387	0.6	5.8	-1.2	14.4	5.5	-2.8	27.3	26.6	24.2	31.3	30.3	19.6
of which net trading gains/losses	13	12	16	18	31	10	-56.0	-6.9	31.8	10.8	76.4	-69.6 .	1.1	1.0	1.2	1.5	2.4	0.5
Gross income	1153	1256	1360	1206	1315	1978	7.4	8.9	8.3	-11.4	9.1	50.4	100.0	100.0	100.0	100.0	100.0	100.0
Operating costs	-669	-709	-718	-717	-758	-830	-0.6	5.9	1.3	-0.2	5.6	9.6	-58.0	-56.5	-52.8	-59.5	-57.6	-42.0
labour costs	-390	-401	-386	-398	-413	-447	2.2	2.8	-3.6	3.0	3.7	8.4	-33.8	-31.9	-28.4	-33.0	-31.4	-22.6
Net income	484	547	642	489	558	1147	20.8	13.0	17.3	-23.9	14.1	105.8	42.0	43.5	47.2	40.5	42.4	58.0
net impairments and provisions	47	46	-170	74	-14	-10	10.1	-2.8	-470.8	-143.4	-119.2	-27.7	4.1	3.6	-12.5	6.1	-1.1	-0.5
of which at amortised cost	68	60	-133	72	-23	-33		-12.9	-323.8	-153.8	-131.8	44.7	5.9	4.7	-9.8	6.0	-1.7	-1.7
Pre-tax profit	**531**	**593**	**472**	**562**	**543**	**1137**	**19.8**	**11.6**	**-20.3**	**19.1**	**-3.3**	**109.3**	**46.0**	**47.2**	**34.7**	**46.6**	**41.3**	**57.5**
corporate income tax	-36	-62	-22	-37	-42	-39	93.4	73.9	-65.0	70.1	13.1	-6.8	-3.1	-4.9	-1.6	-3.1	-3.2	-2.0
Net profit	495	531	450	525	502	1098	16.6	7.1	-15.1	16.6	-4.5	118.9	42.9	42.2	33.1	43.6	38.1	55.5

Source: Banka Slovenije

Table 8.4: **Selected bank performance indicators for the Slovenian banking system, 2011 to 2023**

(%)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	2.22
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	20.64
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	41.98
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	2.95
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	2.81
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	1.05
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	3.86

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

Table 8.5: **Moratoria and new loans approved for the August 2023 floods**

	Legal persons					Natural persons				
	Cumulative stock					Cumulative stock				
(EUR thousand unless stated)	New loans	Moratoria under emergency law		Debt forgiveness contract		New loans	Moratoria under emergency law		Other contractual changes	Debt forgiveness contract
		Yes	No				Yes	No		
Exposure on origination					Exposure on origination					
31 Aug 2023	0	0	127	0	31 Aug 2023	252	0	630	206	0
30 Sep 2023	5,285	356	4,601	29	30 Sep 2023	746	245	1,347	305	4
31 Oct 2023	6,980	2,559	4,821	29	31 Oct 2023	1,010	1,642	1,890	986	4
30 Nov 2023	12,980	3,099	5,072	29	30 Nov 2023	1,094	2,054	1,923	1,109	4
31 Dec 2023	15,140	3,150	5,116	29	31 Dec 2023	1,169	2,620	1,923	1,109	4
As % exposure	0.09	0.02	0.03	0.00	As % exposure	0.01	0.02	0.01	0.01	0.00
Number of contracts					Number of loans					
31 Dec 2023	22	32	28	1	31 Dec 2023	72	47	31	24	174

Source: Banka Slovenije

Table 8.6: **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-based 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[3]**
Austria	0%	1 Jan 2016					Cap on maturity, DSTI, LTV
Belgium	0% 0.5% 1.0%	1 Apr 2020 1 Apr 2024 1 Oct 2024	9.0%[1] 6.0%[1]	1 May 2022 1 Apr 2024			DSTI/LSTI, DTI/LTI, LTV
Bulgaria	0.5% 1.0% 1.5% 2.0%	1 Apr 2020 1 Oct 2022 1 Jan 2023 1 Oct 2023					
Cyprus	0% 0.5% 1.0%	1 Jan 2016 30 Nov 2023 2 Jun 2024					DSTI, LTV
Czechia	0.5% 1.0% 1.5% 2.0% 2.5% 2.25% 2.0% 1.75%	1 Jul 2020 1 Jul 2022 1 Oct 2022 1 Jan 2023 1 Apr 2023 1 Jul 2023 1 Oct 2023 1 Apr 2024					Cap on maturity, DTI, DSTI, LTV, loan amortisation
Denmark	1.0% 2.0% 2.5%	30 Sep 2022 31 Dec 2022 31 Mar 2023					LTV, LTI
Estonia	1.0% 1.5%	7 Dec 2022 1 Dec 2023				X	Cap on maturity, DSTI, LTV
Finland	0%	16 Mar 2015					Cap on maturity, DSTI, LTV
France	0.5% 1.0%	7 Apr 2023 2 Jan 2024					Cap on maturity, DSTI

Country	Countercyclical capital buffer		Sectoral systemic risk buffer associated with real estate risk		Other capital-based measures		Restrictions on lending
	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[3]
Greece	0%	1 Jan 2016					
Croatia	0.5% 1.0% 1.5%	31 Mar 2022 31 Dec 2023 30 Jun 2024			X[2]		
Ireland	0.5% 1.0% 1.5%	15 Jun 2023 24 Nov 2023 7 Jun 2024					LTV, LTI
Iceland	2.0% 2.5%	29 Sep 2022 15 Mar 2024					DSTI, LTV
Italy	0%	1 Jan 2016					
Latvia	0% 1.0%	1 Feb 2016 18 Jun 2025					Cap on maturity, DTI, DSTI, LTV
Lichtenstein	0%	1 Jul 2019	1.0%	25 Sep 2023	X		LTV, loan amortisation
Lithuania	0% 1.0%	1 Apr 2020 1 Oct 2023	2.0%	1 July 2022			Cap on maturity, DSTI, LTV
Luxembourg	0.5%	1 Jan 2021					LTV
Hungary	0% 0.5%	1 Jan 2016 1 Jul 2024					DSTI, LTV
Malta	0%	1 Jan 2016	1.5%	31 Mar 2024	X		Cap on maturity, DSTI, LTV
Germany	0.75%	1 Feb 2023	2.0%	1 Feb 2023			
Netherlands	1.0% 2.0%	25 May 2023 31 May 2024				X	Cap on maturity, LTV
Norway	1.0% 1.5% 2.0% 2.5%	13 May 2020 30 Jun 2022 31 Dec 2022 31 Mar 2023			X	X[2]	LTV, DTI, loan amortisation, exemptions from caps
Poland	0%	1 Jan 2016			X[2]		Cap on maturity, DSTI, LTV
Portugal	0%	1 Jan 2016	4.0%	1 Oct 2024			Cap on maturity, DSTI, LTV
Romania	0.5% 1.0%	17 Oct 2022 23 Oct 2023					Cap on maturity, DSTI, LTV
Slovakia	1.0% 1.5%	1 Aug 2020 1 Aug 2023					DSTI, cap on maturity, DTI, loan amortisation, LTV
Slovenia	0.0% 0.5% 1.0%	1 Jan 2016 31 Dec 2023 1 Jan 2025	0.5% (consumer loans) 1.0% (all other loans) 0.5% (all other loans)	1 Jan 2023 1 Jan 2023 1 Jan 2025	X		Cap on maturity, DSTI, LTV
Spain	0%	1 Jan 2016					
Sweden	1.0% 2.0%	29 Sep 2022 22 Jun 2023				X[2]	LTV, loan amortisation

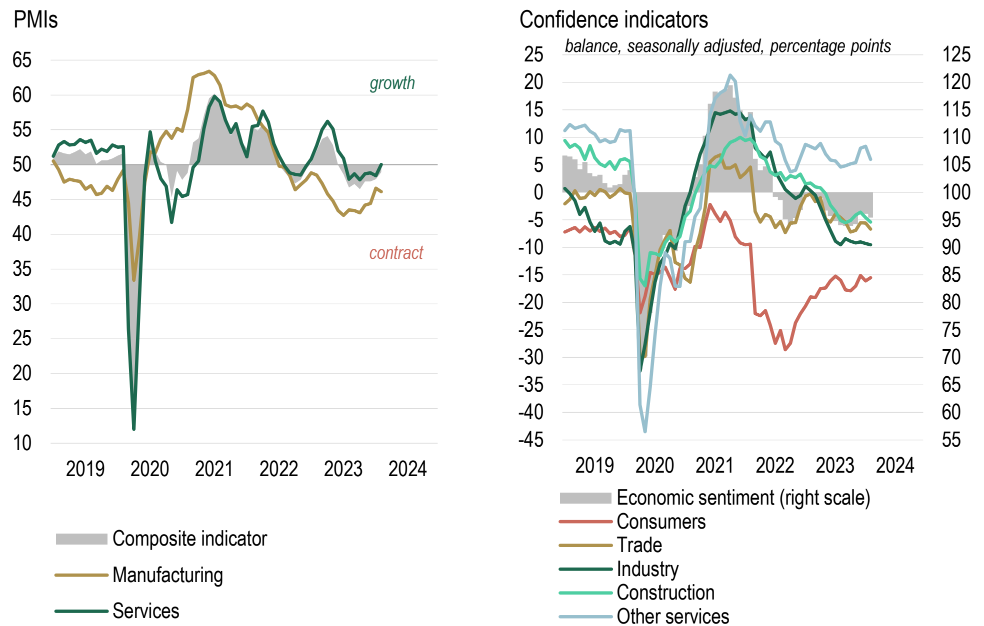
[1] The buffer replaces the measure under Article 458 of the CRR that allows a rise in risk weight in the event of a real estate bubble.

[2] Higher risk weights are also applied to exposures to commercial real estate.

[3] Includes binding measures and recommendations. The measures cited apply to consumer loans and to housing loans.

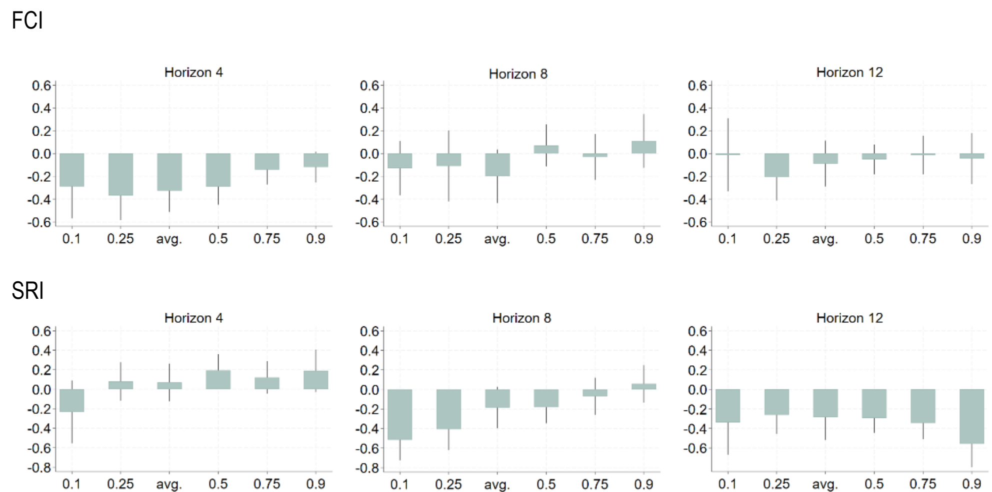
Sources: ESRB, ECB

Figure 8.1: **PMIs and confidence indicators in the euro area**



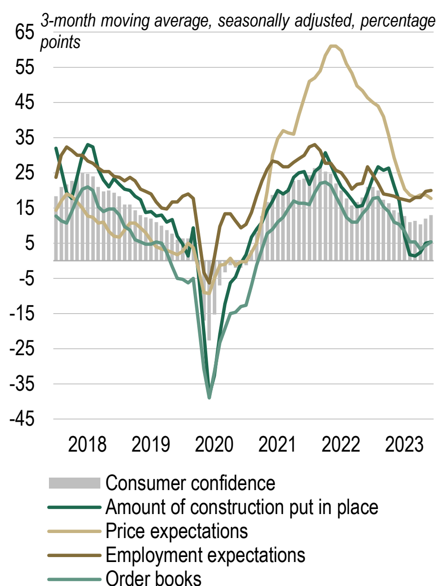
Note: In the left chart a PMI of more than 50 represents economic expansion with regard to the previous month, while a value of less than 50 represents contraction. The confidence indicators in the right chart are expressed in the form of the average balance, where the balance is the difference between the proportions of positive answers and negative answers.
Sources: Bloomberg, Eurostat, Banka Slovenije calculations

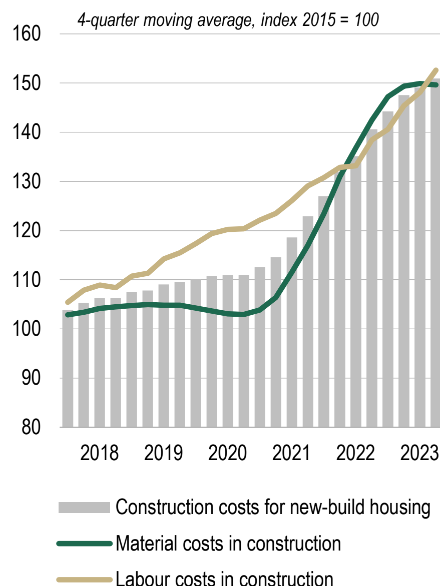
Figure 8.2: **Time structure of the financial conditions index (FCI) and the systemic risk index (SRI)**



Source: Banka Slovenije

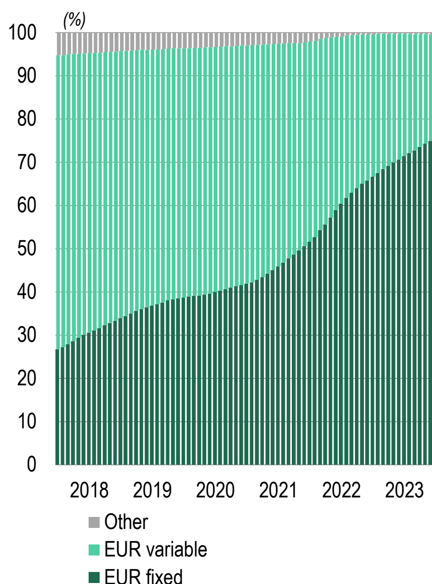
Figure 8.3: **Business trends in construction and construction costs for new-build housing**

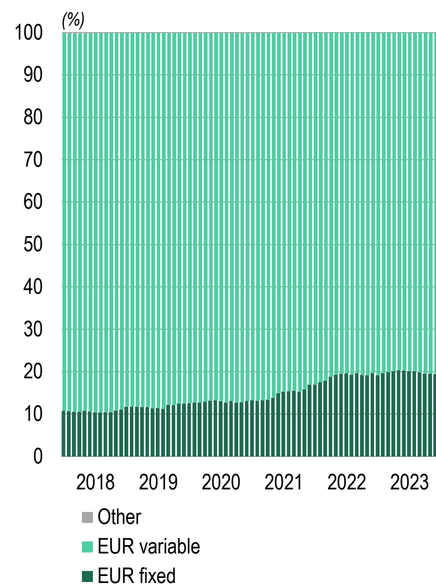




Note: Zero denotes the long-term average in the left chart. A positive figure shows that the indicator is above its long-term average, while a negative figure shows that it is below its long-term average. The long-term average is calculated from the average balance between the beginning of the time series and the December of the previous year.
Source: SORS

Figure 8.4: **Breakdown of stock of loans by remuneration type**

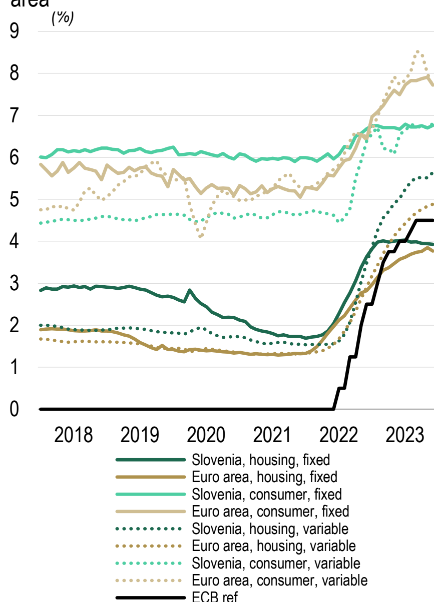




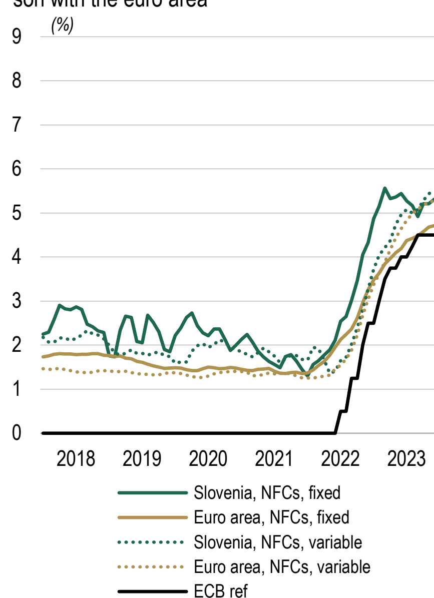
Note: Variable-rate loans comprise loans concluded with a variable interest rate or with an interest rate fixed for less than one year (even if it is fixed for the entire term to maturity), while fixed-rate loans comprise loans with an interest rate fixed for a period of more than one year. The category of other includes all loans in Swiss francs, which constitute the majority of other loans.
Source: Banka Slovenije

Figure 8.5: **Interest rates on loans**

Average contractual interest rates on new household loans by remuneration type, comparison with the euro area



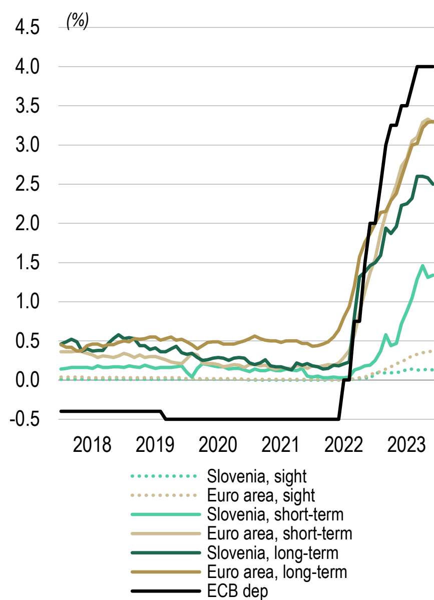
Average contractual interest rates on new loans to non-financial corporations by remuneration type, comparison with the euro area



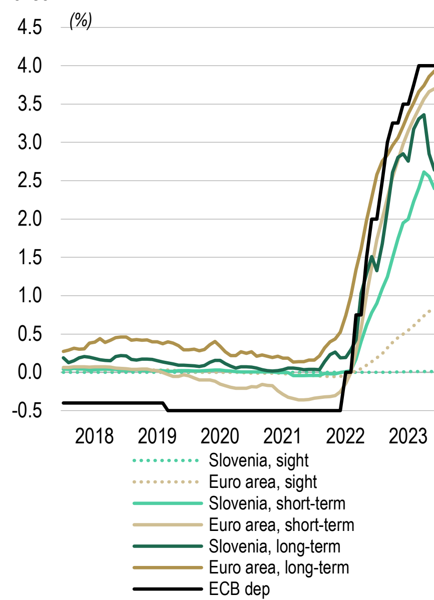
Source: ECB Data Portal

Figure 8.6: **Interest rates on deposits**

Average interest rates on new household deposits by maturity, comparison with the euro area



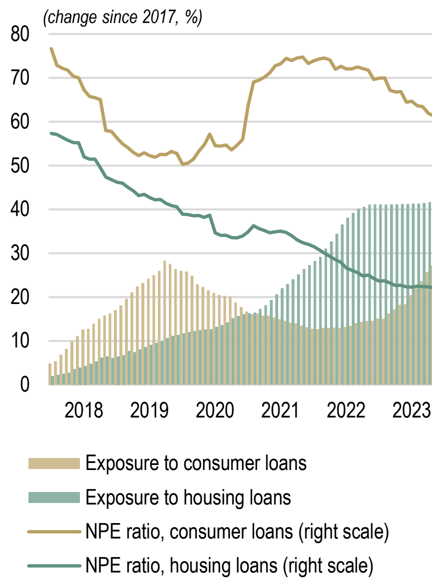
Average interest rates on new non-financial corporations deposits by maturity, comparison with the euro area



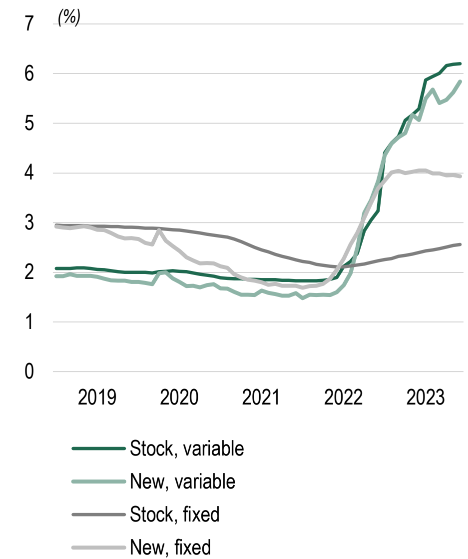
Source: ECB Data Portal

Figure 8.7: **Household segment: NPE ratios and interest rates on housing loans**

NPE ratios and growth in loans in the household portfolio



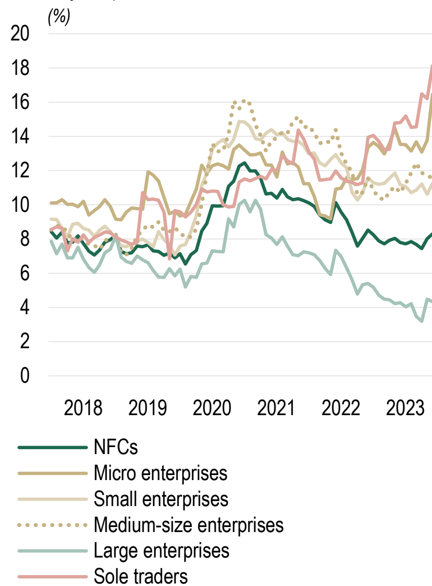
Interest rates on new loans and stock of housing loans



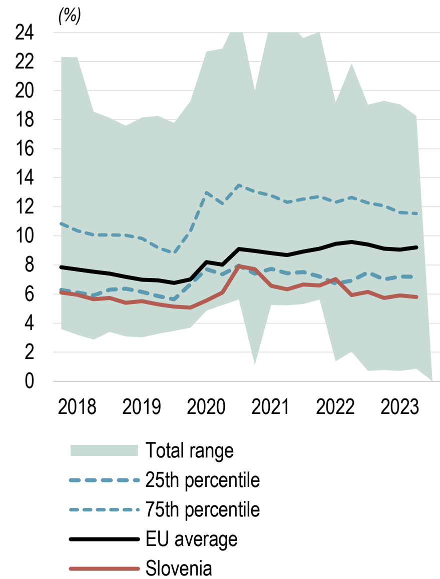
Source: Banka Slovenije

Figure 8.8: **Share of Stage 2 exposures by corporate size and in the EU**

Share of Stage 2 exposures to non-financial corporations by corporate size



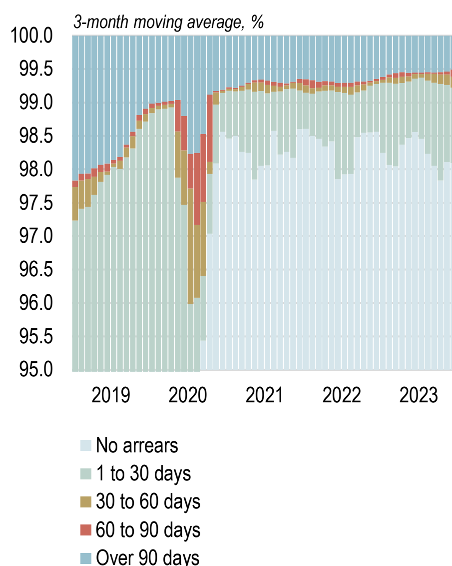
Distribution of share of Stage 2 exposures in the EU



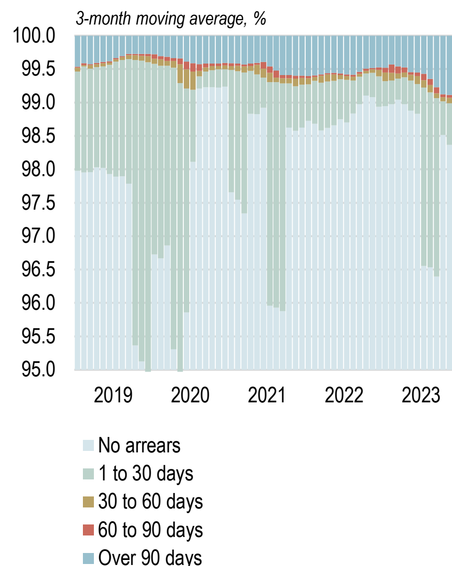
Sources: Banka Slovenije, EBA

Figure 8.9: **Breakdown of non-financial corporations portfolio according to duration of arrears**

Arrears in manufacturing



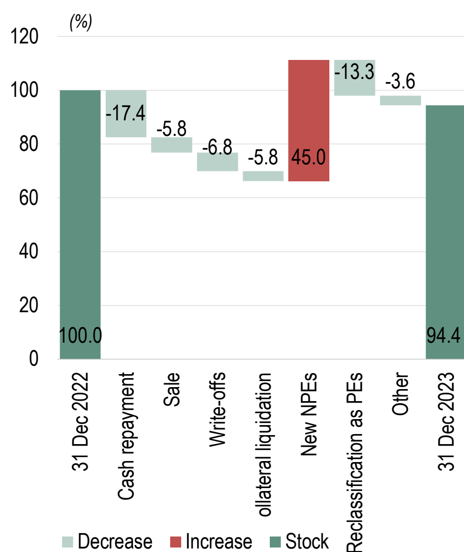
Arrears in transportation and storage



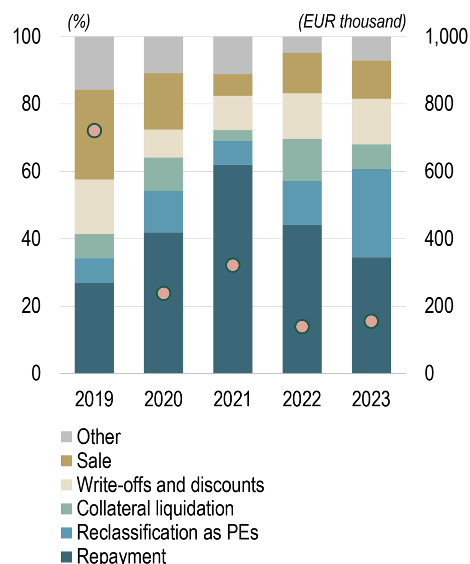
Source: Banka Slovenije

Figure 8.10: **Reduction in NPEs in the non-financial corporation's portfolio according to the bank survey**

Approaches to reduction and changes in NPEs to non-financial corporations in 2023

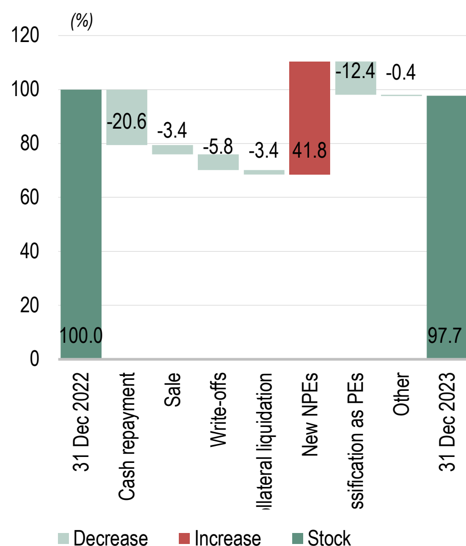


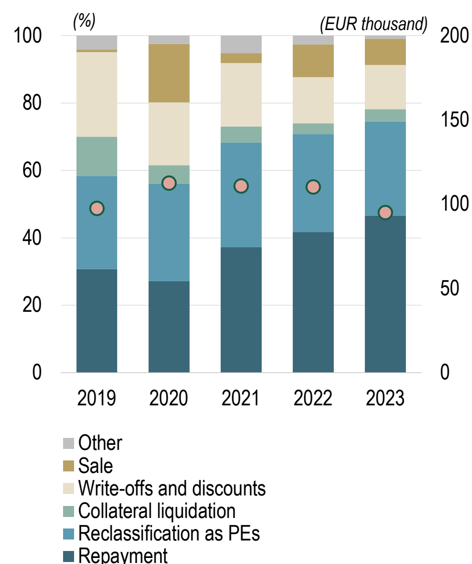
Breakdown of reduction in NPEs to non-financial corporations



Note: The right chart illustrates approaches to reducing NPEs excluding the increase in NPEs in the individual year (the red column in the left chart).
Sources: Regular bank survey, Banka Slovenije

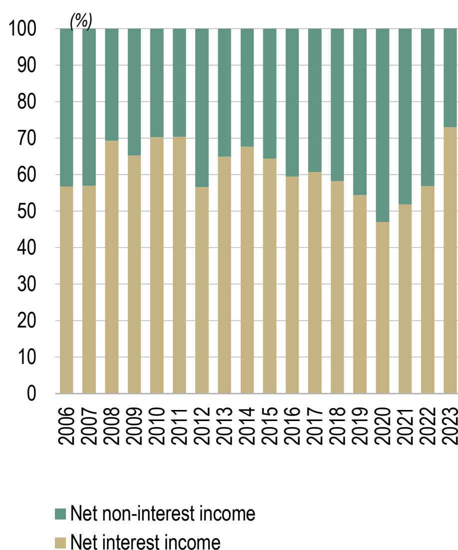
Figure 8.11: **Reduction in NPEs in the household portfolio according to the bank survey**

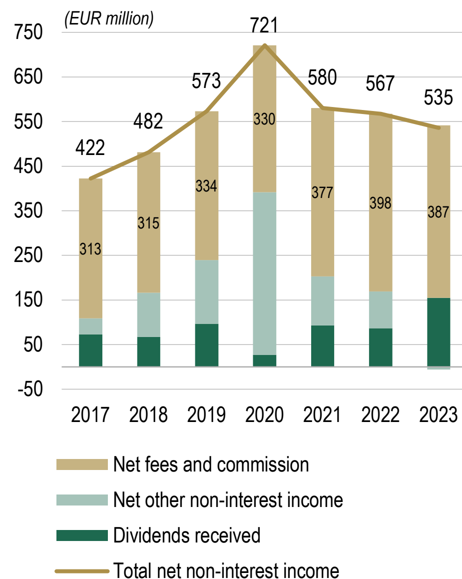




Note: The right chart illustrates approaches to reducing NPEs excluding the increase in NPEs in the individual year (the red column in the left chart).
Sources: Regular bank survey, Banka Slovenije

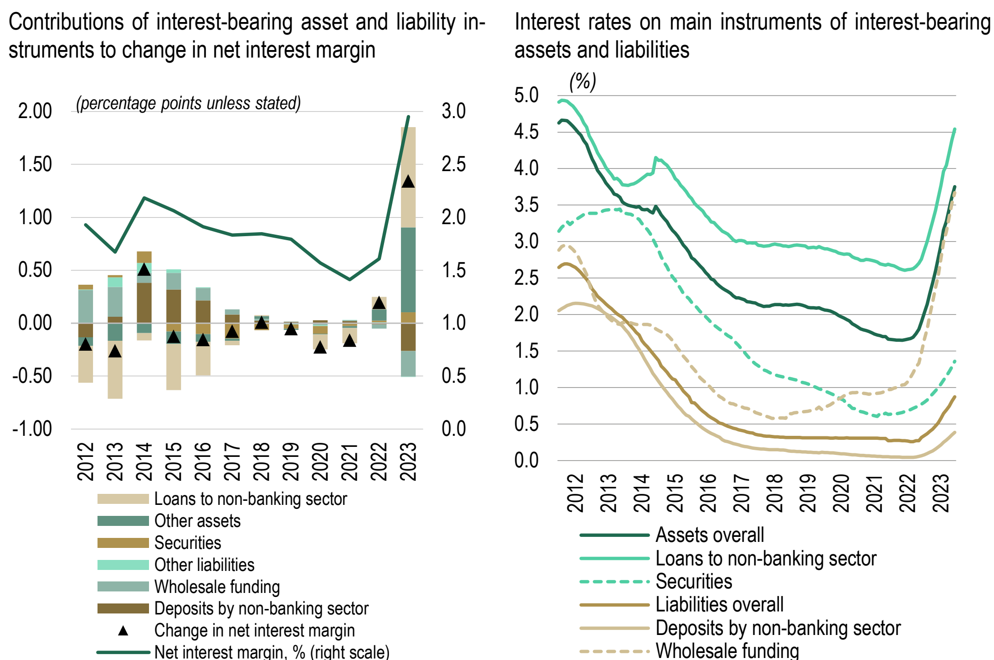
Figure 8.12: **Breakdown of gross income and non-interest income**





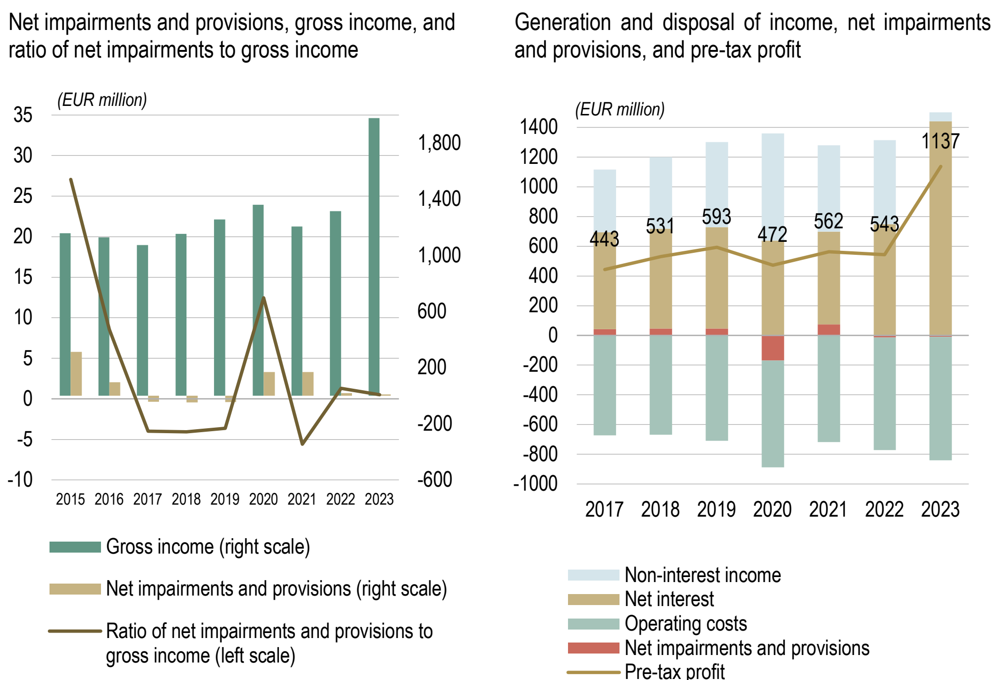
Source: Banka Slovenije

Figure 8.13: **Decomposition of change in net interest margin and interest rates**



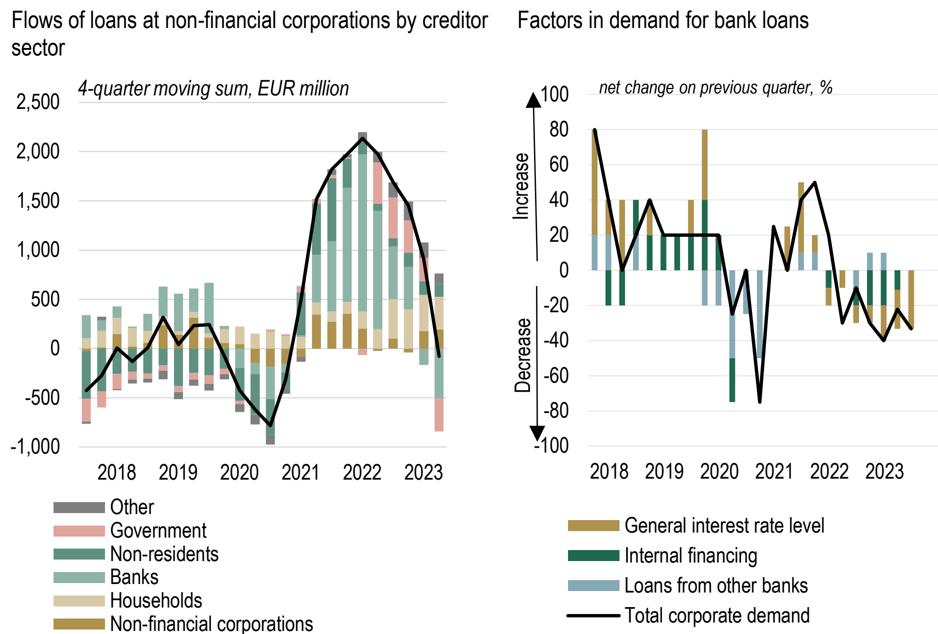
Note: In the left chart the change in asset items is the sum of the contributions made by loans, securities and other interest-bearing assets, while the change in liability items is the sum of the contributions made by deposits by the non-banking sector, wholesale funding and other interest-bearing liabilities. 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. Interest rates in the right chart are calculated from interest income/expenses stated in the income statement, and asset and liability categories, over the preceding 12 months.
Source: Banka Slovenije

Figure 8.14: **Net impairments and provisions, bank income, and other income statement categories**



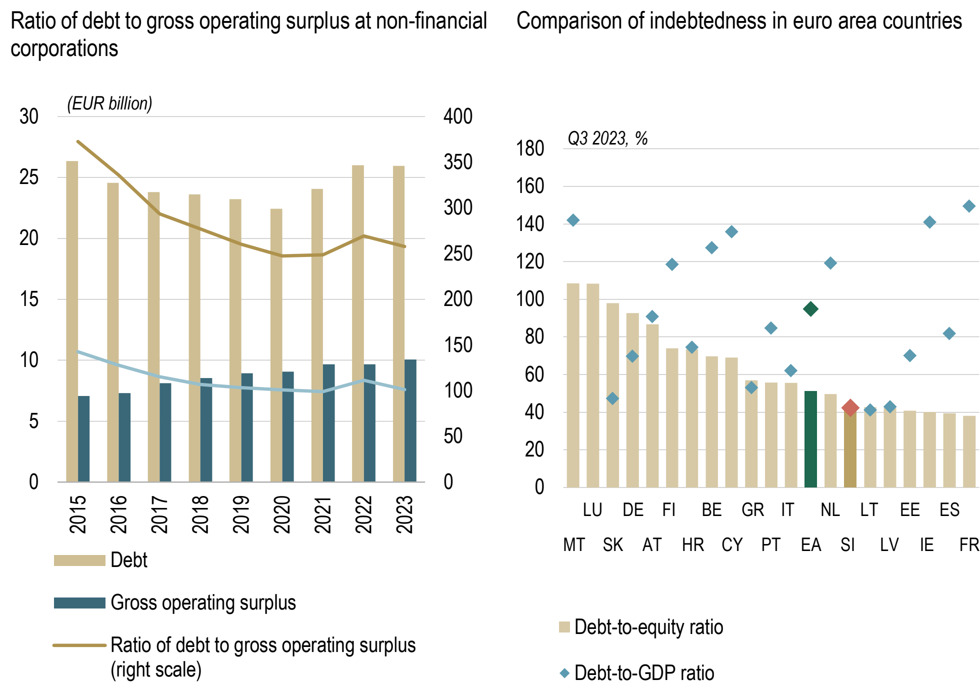
Note: Negative values for net impairments and provisions represent the net release of impairments and provisions in the left chart, and net creation in the right chart. The data for the Slovenian banking system comes from balance sheet figures on an individual basis.
Source: Banka Slovenije

Figure 8.15: **Loans by sector and factors in demand for loans**



Note: The increase under the government sector is attributable to a single large government loan in the final quarter of 2022.
Source: Banka Slovenije

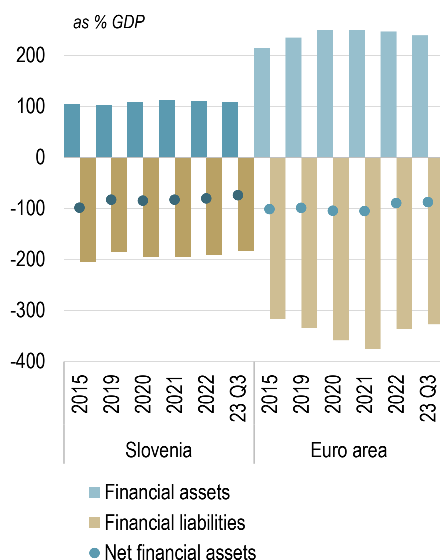
Figure 8.16: **Non-financial corporations' debt indicators**



Note: In the right chart comparing indebtedness across euro area countries, debt consists solely of loans and debt securities.
Sources: Banka Slovenije, ECB Data Portal

Figure 8.17: **Non-financial corporations' financial assets**

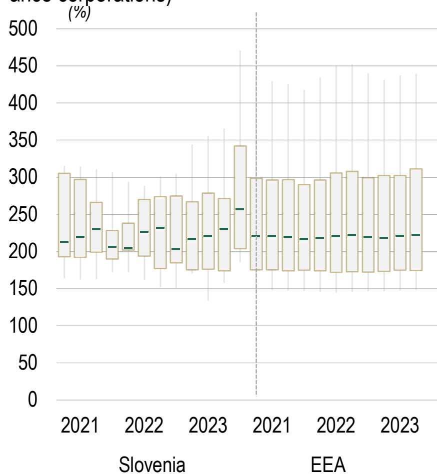
Net financial position of non-financial corporations



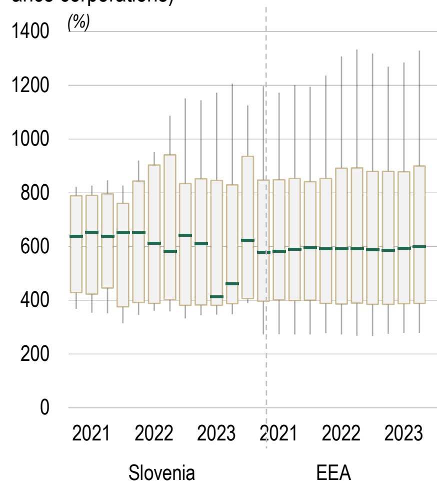
Source: Banka Slovenije

Figure 8.18: **Capital adequacy of insurance corporations**

Capital adequacy in terms of SCR coverage ratio (insurance corporations)

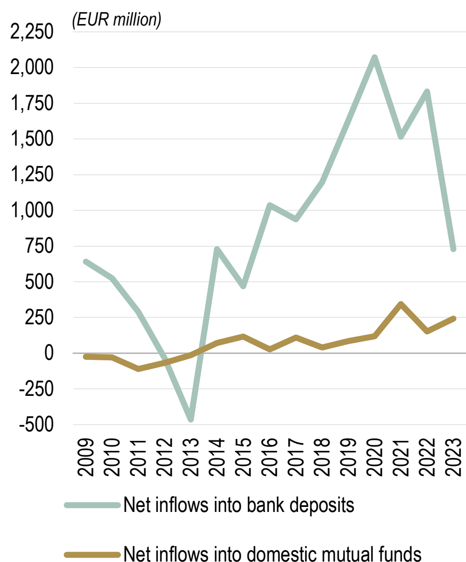


Capital adequacy in terms of MCR coverage ratio (insurance corporations)



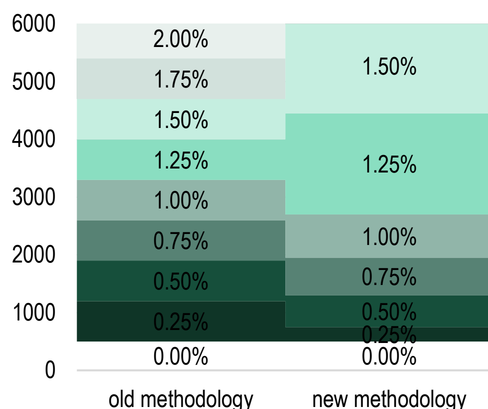
Note: The 10th and 90th percentiles are taken as the upper and lower limits for the SCR and MCR coverage ratios. The green line illustrates the median ratio. The data for the EEA is available to the third quarter of 2023 inclusive.
Sources: EIOPA, ISA, Banka Slovenije

Figure 8.19: **Net inflows into bank deposits and domestic mutual funds**



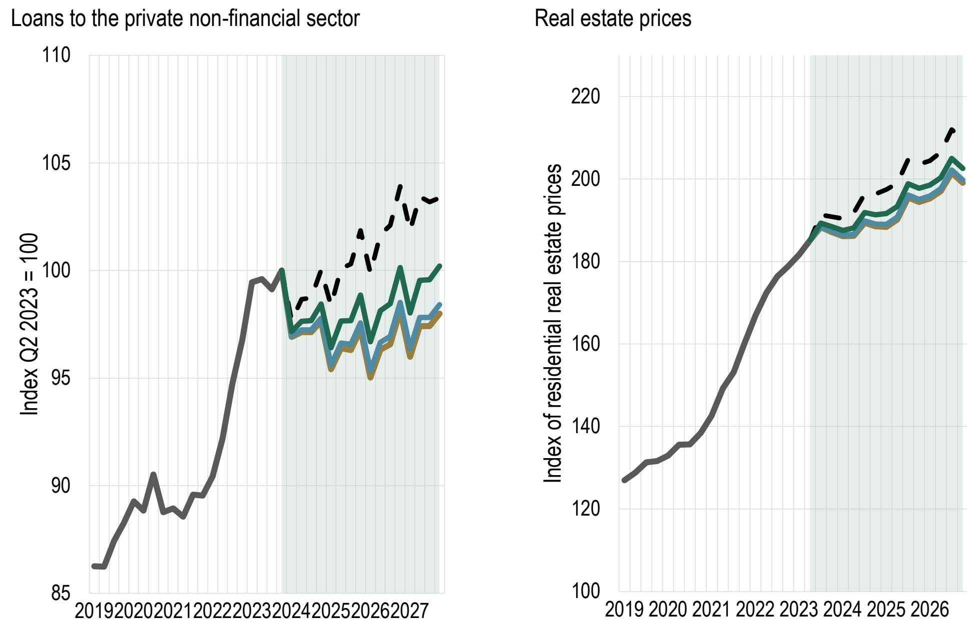
Note: Annual net flows are illustrated as the sum of monthly net flows in the year in question.
Source: Banka Slovenije

Figure 8.20: **Comparison of old and new methodologies: buckets for allocating O-SIIs on the basis of the systemic importance score and the corresponding buffer rate**



Note: The vertical axis represents the systemic importance score. A zero rate applies to banks not defined as O-SIIs.
Sources: Banka Slovenije, Regulation on the determination of the capital buffer for other systemically important institutions (Official Gazette of the Republic of Slovenia, No. 79/23 of 21 July 2023)

Figure 8.21: **Impact of the macroprudential measure restricting consumer lending on dynamics in loans and prices**



Note: The black dashed line illustrates the projections of loans and real estate prices on the basis of the baseline scenario under the BMPE for November 2023. The green line illustrates the projections of loans and real estate prices under a cap on DSTI of 55%, while the blue line illustrates them under a cap on LTV of 70%. The gold line illustrates the projections under both caps.
Source: Banka Slovenije

8.1 Key to abbreviations

Abbreviations

AJPES	Agency of the Republic of Slovenia for Public Legal Records and Related Services
AT1	Additional Tier 1 capital
AUP	Average unit price of mutual fund
BAMC	Bank Assets Management Company
BLS	Bank Lending Survey
BoS	Banka Slovenije
CA	Capital adequacy
CCyB	Countercyclical capital buffer
CET1	Common Equity Tier 1 Capital
CPI	Consumer price index
CPRS	Climate Policy Relevant Sectors
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DSTI	Debt-service-to-income ratio
EA	Euro area
EBA	European Banking Authority
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ECB	European Central Bank
EEA	European Economic Area
ESRB	European Systemic Risk Board
ESS	Employment Service of Slovenia
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
FCI	Financial conditions index
GDP	Gross domestic product
HICP	Harmonised index of consumer prices
ICT	Information and communications technology
IFRS	International Financial Reporting Standards
IFs	Investment funds
IRS	Interest rate swap
ISA	Insurance Supervision Agency
LCR	Liquidity coverage ratio
LTROs	Longer-term refinancing operations
LTV	Loan-to-value ratio
MCR	Minimum capital requirement
MPI	Macroprudential index
MREL	Minimum requirement for own funds and eligible liabilities
NFCs	Non-financial corporations
NGFS	Network for Greening the Financial System
NIS	Directive on measures for a high common level of cybersecurity across the Union
NPEs	Non-performing exposures
NSFR	Net stable funding ratio
OCR	Overall capital requirement
O-SIIs	Other systemically important institutions
ROA	Return on assets
ROE	Return on equity
ROS	Return on sales
RWAs	Risk-weighted assets
S&P	Standard and Poor's
SCR	Solvency capital requirement
SDW	Statistical Data Warehouse
SI	Slovenia / Slovenian banking system
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
SORS	Statistical Office of the Republic of Slovenia
SRI	Systemic risk indicator
SyRB	Systemic risk buffer
Tier 1	Tier 1 capital
Tier 2	Tier 2 capital
TLTRO	Targeted longer-term refinancing operation
ZBan-3	Banking Act