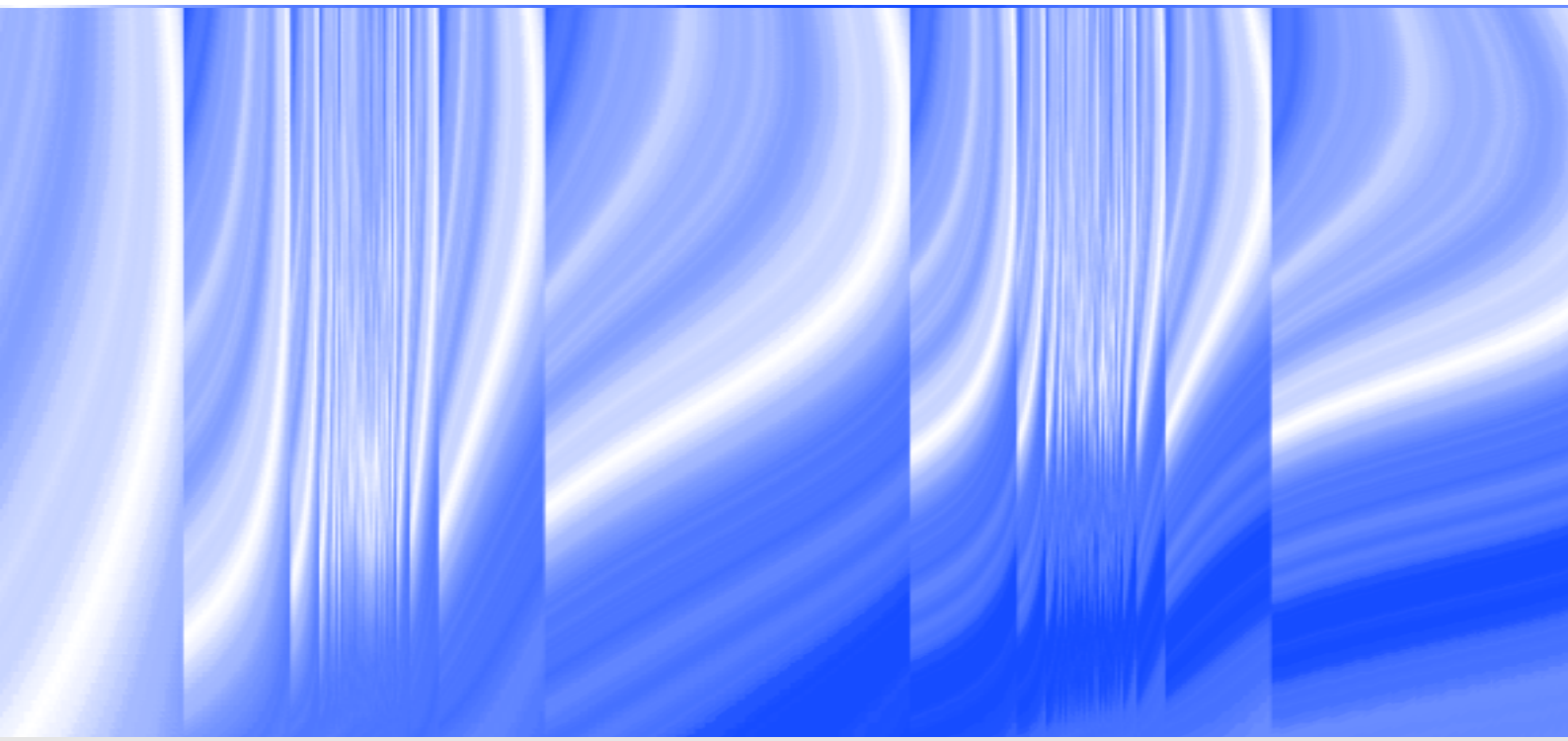
BANKA SLOVENIJE

EVROSISTEM

FINANCIAL STABILITY REVIEW



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Foreword to the Financial Stability Review

The global situation and the situation in Slovenia have generally improved since we last issued the Financial Stability Review. The global economy is recovering quickly, and has already surpassed its pre-pandemic level of output, although the recovery remains highly uncertain amid new outbreaks of cases and the appearance of new variants, and varies from country to country. Economic activity in Europe and in Slovenia also improved in the second quarter of this year. This year has brought a medical solution for the pandemic, and the faster rollout of the vaccine has allowed for a significant relaxation of containment measures. GDP growth reached almost 14% in the euro area in the second quarter, and was 2 percentage points higher in Slovenia. In our wider surroundings as well as in Slovenia economic growth is primarily being driven by private consumption, which has been highly curtailed since the outbreak of the pandemic, other than during the summer of last year. Economic growth is also being driven by other aggregates; investment is also recovering as the confidence indicators improve. Economic policy support measures have helped to preserve the economy's output potential, and the outlook for future growth has improved.

Certain risks nevertheless remain, as Slovenia entered a new wave of the pandemic in the autumn, which because of the low vaccination levels is more intense than in most other euro area countries. It nevertheless seems that this time the situation is different from the past year and a half. The vaccine is available with no supply constraints, and the level of vaccination is increasing. Currently there are no indications of the health situation worsening enough to require the imposition of stringent containment measures, which would hit certain parts of the economy, most notably the service sector. In light of the above, the outlook for this year and next year is improving. Our most recent projections drawn up under the aegis of the ECB forecast economic growth to reach 5% in the euro area, and to exceed 4% even under the adverse scenario. Amid the general recovery in the global economy, particularly in our trading partners, the diminishing uncertainty, and the surge in private consumption as the containment measures are relaxed, the outlook for Slovenia is even better: our June forecast is for economic growth of more than 5% this year. The favourable latest figures and a number of more recent forecasts suggest that this year's growth might be even higher.

It can thus be concluded that the measures put in place by economic policymakers over the last 18 months have proven to be successful. Monetary policy has been accommodative for a long time, and will remain so for a while yet, thereby ensuring ample liquidity and favourable financing conditions for the banking sector, the non-banking sector and euro area governments. At the same time certain other measures, in particular fiscal measures and measures that were put in place when the situation related to the pandemic was aggravated to support the economy and to ensure financial stability, are gradually being lifted amid the encouraging performance. It was already decided in the first half of the year that the system-wide measure of favourable treatment of loan moratoria is no longer necessary. On the basis of in-depth analysis and in line with the decisions taken at European level, the decision was also made recently not to extend the macroprudential measure that had temporarily (until the end of September) restricted banks and savings banks from profit distributions, and recommended moderation in profit distributions to leasing companies.

In light of the current state of the broader macroeconomic environment, and the situation and trends in the financial system, we conducted our regular assessment of risks in the financial system. For the whole European environment, and specifically for the Slovenian financial system, our assessment is that the general risk level is declining slightly relative to our assessments in the last few quarters, but at the same time we find that we need to switch our attention to slightly different risks from those that were in focus in the recent past. The improving macroeconomic situation and the gradual recovery of the economy are reducing macroeconomic and credit risk, but other risks are coming to the fore. Our assessment for the European environment is that the risks inherent in developments on the financial markets and in the real estate market have increased in recent months.

The latter is particularly the case in Slovenia, where year-on-year growth in residential real estate prices in the first quarter of this year was almost 2 percentage points higher than the euro area average. Only eight EU countries recorded a higher rate. In Slovenia it is still the case that growth in prices in the real estate

market is being materially determined by supply constraints, even amid increased demand. Thus for example year-on-year growth in output in construction was positive in EU countries (around 2% according to the latest figures), but negative in Slovenia (in the amount of almost 5%), and only seven EU countries recorded a worse figure than Slovenia.

But irrespective of the decline in the general risk level in the financial system and the minor shift in the hierarchy and materiality of individual risks, certain challenges from the past remain present in Slovenia. Certain risks present in the Slovenian banking system are consequently unchanged, or are even displaying a trend of increase in the near future. In this context the most pronounced is income risk, or the challenge of generating sufficient income at banks, which relates to individual elements of income generation and cost control. This is also linked to the resilience of the banking system. The ability to generate adequate earnings is crucial to the banking system, as this maintains the banks' capital capacity during business as usual and moderate credit growth, as well as under stress situations. It is true that the net interest margin of Slovenian banks in 2020 was in the mid range of those of EU countries, but it has declined by almost 1 percentage point over the last 15 years, from 2.44% to 1.45%. Neither non-interest income nor the increase in lending in the years before the outbreak of the epidemic were able to compensate for the loss of interest income, which has also been reflected in the profitability of the banking system. At first sight, by European standards this has been excellent in Slovenia: Slovenian banks led the way last year with an average ROE of more than 10%. But a detailed look at the factors in this profitability paints a considerably weaker picture: a large part was driven by one-off factors (last year for example was dominated by an accounting effect from the merger of two banks) and the reversal of impairments and provisions created in the past. Over the first six months of this year banks generated a profit of more than EUR 250 million, 90% more than in the same period last year, but in comparison to last year, the increase of profit comes from the net reversal of impairments and provisions. To put it another way, Slovenian banks would have seen their ROE this year fall to a third of the figure actually realised, had net impairment and provisions been at their long-term average, excluding outlying years of creation or release.

This brings us to the dilemma faced by the entire European banking space: is banking still attractive to the investors who provide the banking system with the vital component of capital? Will the competitive pressures, the adjustments to the banking business and the owners' strategies lead to structural changes that in the long run ensure the stability of individual banks and the entire financial system? In Slovenia the relatively small size of the local market means that we have one more or less universal business model, but even within this model variations can arise that serve stakeholders well, particularly users of banking services and owners. The consolidation of the Slovenian banking system, which has been underway for several years now, will undoubtedly help reduce operating costs, but further mergers could see it reach the optimum level, where further concentration will no longer reap benefits to financial stability, competition, and users of banking services. The pandemic has shown where banks still have opportunities, particularly in the sense of digital business and other sales channels. Working with fintech firms could most likely bring multiple advantages over the competition. And not least there is the green agenda, which has again come to the fore as the pandemic situation eases: given the specific structure of the financial system, where their financial intermediation is prevalent, European banks, including those in Slovenia, can take significant steps in our green transformation. In the coming years banks will have to carefully consider which projects to finance, in order to maintain the reputation of their owners, the trust of their clients and also the regulator.

As supervisors, regulators and setters of banks' rules of business we are adapting to the current trends and are trying to predict the coming challenges. Our focus in microprudential supervision and the prudential rules that we set for banking are being tailored to this. Our macroprudential policy is also being adjusted. Thus in October our toolkit of macroprudential measures was cut to four active instruments, whose necessity and effectiveness are still subject to regular review. The careful consideration of the toolkit of measures and the focus of our actions always rest on the mandate with which we have been entrusted.

Primož Dolenc,
Deputy-Governor

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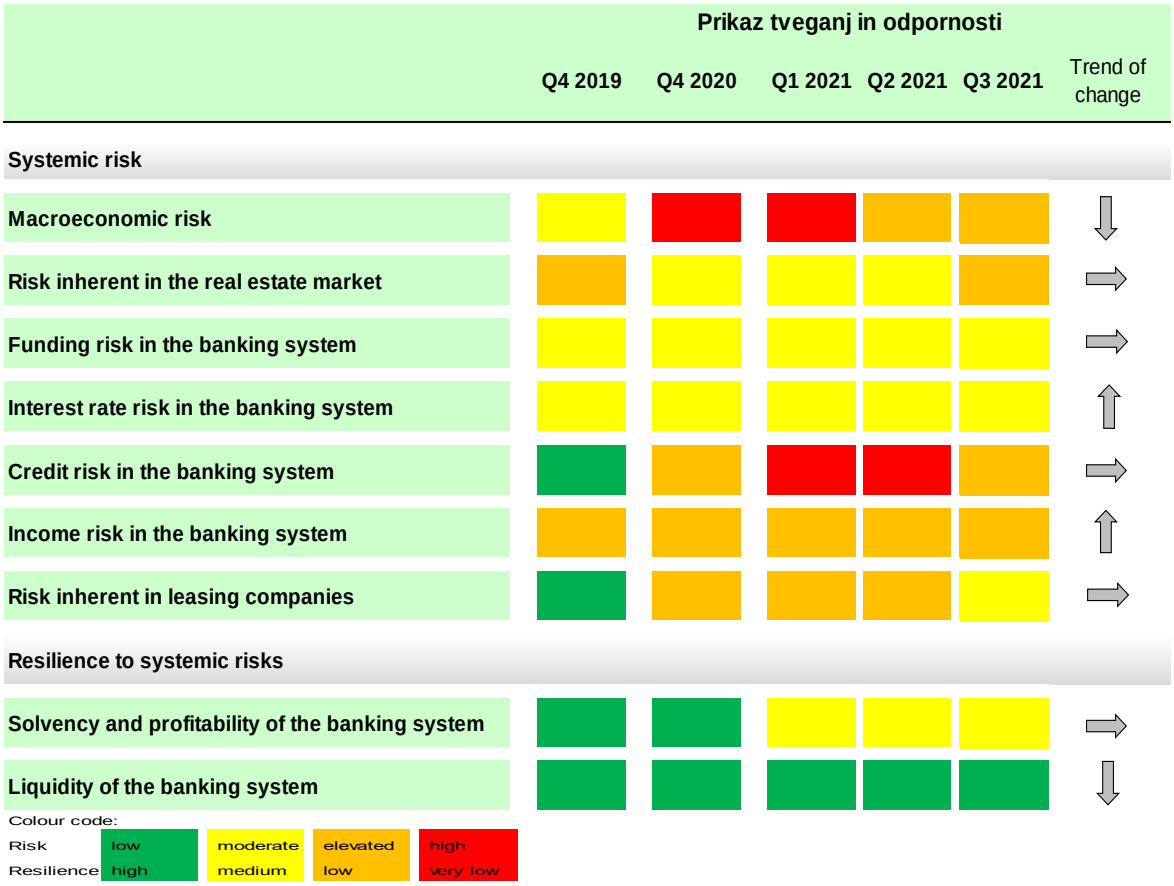
The economic recovery has slightly reduced the general level of systemic risks to financial stability relative to the previous Financial Stability Review from April 2021, but the risks remain elevated or moderate. Despite the economic recovery and the improvement in the banks' business conditions, the most significant risk identified in the third quarter of 2021 was income risk, which was elevated and still rising. The two other systemic risks that are material to financial stability are credit risk and the risk inherent in the real estate market. The resumption of repayment of the majority of loans subject to a moratorium has reduced credit risk relative to the previous assessment, but it is still elevated and is expected to remain so in the future. As all the support measures expire and the economic recovery potentially slows, the quality of the credit portfolio could deteriorate. The risk inherent in the real estate market is again in the fore, primarily on account of the high growth in residential real estate prices, which might continue in the future. Macroeconomic risk is easing as the economy recovers, but remains elevated in light of the new wave of cases and low vaccination levels, which could slow the recovery. Funding risk and interest rate risk remain moderate, while the risk inherent in leasing companies has also declined. The banking system's resilience to the identified risks remains solid, which was also confirmed by this year's stress tests. More than half of the banks saw their capital ratios rise in the first half of this year, thanks primarily to retained earnings. The sustainability of the banks' current profitability remains uncertain, and with it the possibility of strengthening capital and maintaining stable capital adequacy. The banking system's resilience in the liquidity segment remained high in the first half of 2021. In light of the improvement in the economic situation, the macroprudential restrictions on profit distributions by banks and leasing companies were left to expire in September 2021, as had been anticipated.

Table 1: Banka Slovenije's risk and resilience dashboard for the Slovenian financial system



Note: *The colour code in the risk and resilience dashboard relates to the assessment for up to one quarter in advance. The arrow illustrates the expected change in risk or resilience in the scale (up or down) over a slightly longer horizon of around one year. For risks, an up arrow means an increase in risk, and vice-versa, while for resilience it means strengthening, and vice-versa. The risk and resilience dashboard is based on 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. April's Financial Stability Review brought a change to the treatment of income risk, which now focuses on the risk to the generation of (net) income, while profitability is addressed together with solvency in the section on the banking system's resilience to systemic risks. The relative importance of impairments and provisions in the disposal of gross income is now solely addressed in the section on credit risk. The changes are methodologically driven, to eliminate duplication in the treatment of risks under income risk and credit risk. The commentary on the profitability of the banking system is given under the broader section on solvency and profitability, where the impact on the resilience of the banking system from developments in profitability is assessed. A description of the individual types of risk and resilience is given in the appendix.

Source: Banka Slovenije

Amid the uncertain developments in net interest income and the volatility in non-interest income, income risk is elevated, as banks are currently seeing a decline in income. *Net income, which reflects aggregate developments in the banks' net interest income, net non-interest income and operating costs, has been declining since June, and the shortfall on the same period last year has widened in recent months. Growth in net interest income remains negative, although the shortfall in net interest on the same period last year has narrowed slightly in recent months as growth in loans has gradually stabilised, and reached 4.3% in July. Net interest margin is continuing to decline, reaching 1.45% in July for the preceding 12 months. The decline in net interest income is being driven by price factors and quantity effects alike. Loans to the non-banking sector have otherwise begun increasing again. Bank financing of non-financial corporations ceased its decline in June, and growth is now approaching the overall rates in the euro area. Growth in housing loans is strengthening, while the pace of contraction in the stock of consumer loans slowed slightly (see Figure 3). In the short term, despite the positive trends described above, there is no expectation of major changes in the generation of interest income.*

Net non-interest income was slightly up on the same period last year. Having surged on account of one-off factors, non-interest income saw its year-on-year growth decline. The net non-interest margin has been high over the last two years, and stood at 1.61% in July measured over the preceding 12 months. However, this growth was significantly driven by one-off developments: the merger of two large banks had a significant impact in September of last year, while the increase in income in March and April of this year was the result of one-off developments in connection with the revaluation of financial assets at certain banks. Non-interest income, and with it gross income and net income, can vary considerably, driven by the general state of the economy and by one-off factors. Banks' income from net fees and commission has increased as the economic situation improves, and growth in this income is relatively high. Of the other forms of non-interest income, dividends received are down sharply on last year. Operating costs remain comparable to last year.

Figure 1 Growth in loans by type

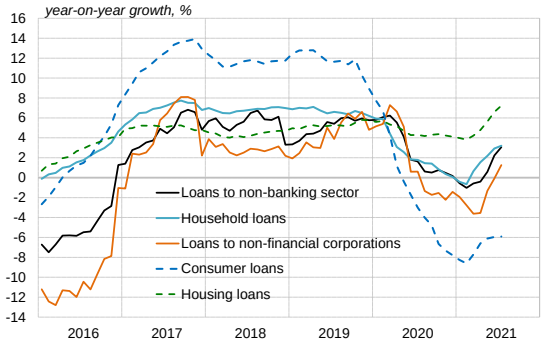
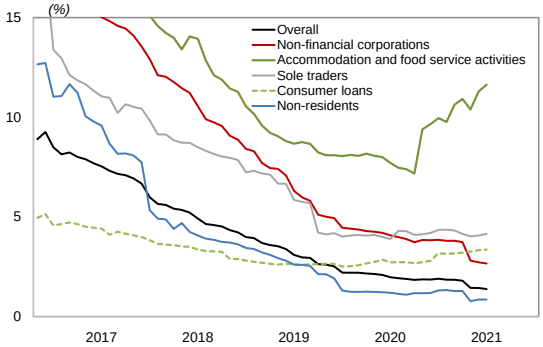


Figure 2 NPE ratios for selected portfolio segments



Sources: SURS, ECB (SDW), Banka Slovenije

The economic recovery and the resumption of repayments of the majority of loans covered by a moratorium have brought a decline in credit risk, but it remains one of the key risks, in part because of the uncertainty and the expectations of an increased inflow of NPEs after the support measures expire. *The NPE ratio declined even during the pandemic (see Figure 2), reaching 1.3% in July of this year. The majority of EU Member States have seen a continuation of the trend of decline in NPEs. Further evidence of the banks' more favourable perception of credit risk comes from the reclassification of exposures from the stage of increased credit risk under IFRS 9 back to the stage with low risk. Coverage of NPEs by impairments has also improved in 2021, and Slovenia remains in the top third of EU Member States.*

There remains uncertainty surrounding the resumption of loan repayments, particularly in the worst-hit sectors. In Slovenia, in other countries and at international institutions there are still expectations of an increased inflow of NPEs after the remaining support measures expire. NPEs are already increasing in certain segments. The NPE ratio in the consumer loans portfolio has been increasing since November of last

year. The NPE ratio has also begun increasing in the portfolio of loans to non-financial corporations in accommodation and food service activities, the sector hit hardest by the pandemic. Amid the economic recovery businesses and households resumed repayments in the first half of this year on the majority of loans covered by a moratorium last year, although we find the quality of the loans covered by a moratorium to be significantly lower compared to other loans, both in terms of NPE ratios and in terms of the share classified as Stage 2. The decline in quality is evident both in loans that are already past due, and in loans with active moratoria.

Our assessment is that the risk inherent in the real estate market has again increased from the previous period, as growth in residential real estate prices is currently high, and could remain so in the future. *Price growth had increased sharply (see Figure 1), before slowing only slightly as economic growth slowed and the crisis caused by the pandemic hit in 2020. Residential real estate prices were up 7.3% in year-on-year terms in the first quarter of this year, and 9.9% in the second quarter. Prices have now surpassed their nominal levels from 2008, although they are still down slightly in real terms. The majority of indicators suggest that residential real estate became slightly overpriced relative to fundamentals in the first quarter of 2021. The high demand for real estate and the rise in commodity prices could lead to further growth in real estate prices in the future.*

Year-on-year growth in housing loans, which had remained moderate in the early part of this year, reached 7.2% in July. Credit activity is still reflecting the dynamics in the majority of indicators in the residential real estate market, and is similar to growth in the euro area overall. In the medium term there are grounds for optimism on the supply side of the real estate market, as the number of issued building permits for residential and non-residential buildings in the first half of 2021 was higher than in the first half of 2020.

Figure 3 *Residential real estate price indices in Slovenia and the euro area, indicator of real estate overvaluation in Slovenia*

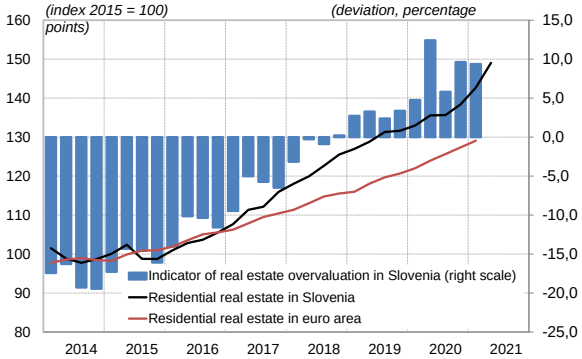
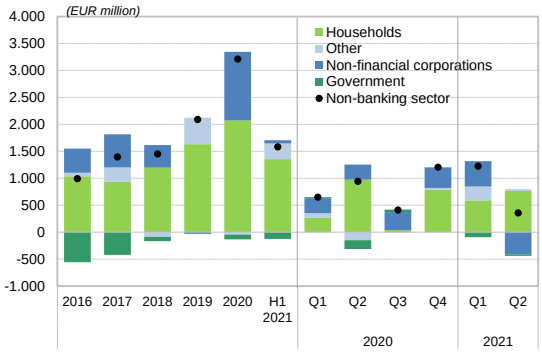


Figure 4 *Net change in deposits by sector*



Source: *Banka Slovenije*

Macroeconomic risk declined with the economic recovery, but remains elevated amid the uncertainty brought by the new wave of cases and low vaccination levels, which could slow the recovery. *The easing of the epidemiological situation and the relaxation of containment measures in the second quarter of this year saw GDP rise in year-on-year terms by 16.3%, amid a large base effect. Growth was driven by private consumption, investment and foreign demand. Economic sentiment surpassed its pre-crisis level in May, confidence indicators having also strengthened in sectors hit hardest by the crisis. The situation in the labour market is improving, but the outlook remains uncertain. The fiscal position is continuing to deteriorate, as measures to alleviate the impact of the epidemic still constitute a large part of expenditures, but the deterioration has slowed amid the faster recovery in economic activity and the very favourable terms of borrowing.*

Deposits by the non-banking sector strengthened further in Slovenia and in many other euro area countries, and remain a stable source of funding for Slovenian banks. *Household deposits strengthened sharply in the banking system, despite the improvement in the epidemiological situation and the increased opportunities to spend (see Figure 4). By contrast, non-financial corporations began reducing their holdings at banks, most likely in part because of a need for liquidity in rebooting their activities at full capacity. Growth in deposits by non-financial corporations remains higher than before the outbreak of the pandemic. The uncertainty still surrounding the evolution of the pandemic, the low interest rates and the introduction of custody fees are the most likely reasons that savers still want to be able to have savings at their disposal.*

The banking system's resilience in the segment of solvency and profitability remains solid, although there is uncertainty surrounding the sustainability of banks' profitability, and with it the possibility of strengthening capital and maintaining stable capital adequacy. *Pre-tax profit (see Figure 6) over the first seven months of the year was high, albeit primarily because the majority of banks recorded a net release of impairments and provisions, while their net income was actually down on the same period last year. More than half of the banks saw their capital ratios rise in the first half of this year, thanks primarily to retained earnings (see Figure 5). Risk-weighted assets mainly increased at the banks that strengthened their lending to non-financial corporations and households.*

There are considerable differences in individual banks' resilience to the adverse impact of stress events, because of variation in the size of their capital surpluses over the overall capital requirement, and differences in the quality and structure of their credit portfolios. The expiry of the support measures or a renewed deterioration in the epidemiological situation could in the future lead to a downturn in the quality of the credit portfolio and reduce the ability to generate profit, which would consequently lead to a deterioration in the banks' capital positions.

Figure 5 *Banking system's capital ratios on an individual basis*

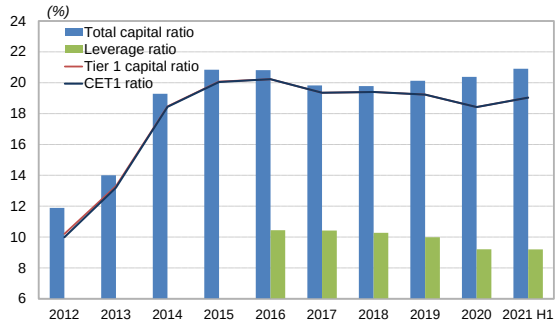
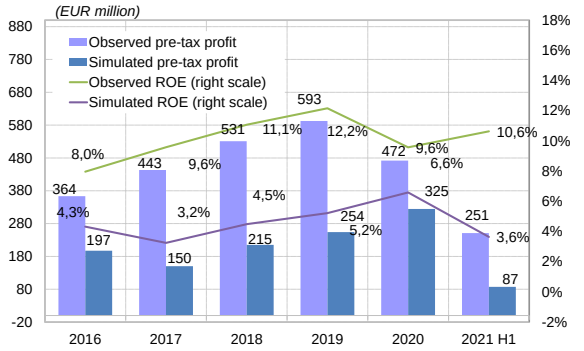


Figure 6 *Bank profitability*



Note: *The simulated pre-tax profit and ROE reflect the long-term average of the ratio of net impairment and provisions to gross income in the Slovenian banking system.*
Source: *Banka Slovenije*

The banking system's liquidity position has further improved, which is confirmed by the results of the liquidity stress tests. *Amid sharp growth in deposits by the non-banking sector and weak lending, both primary and secondary liquidity strengthened, increasing the banks' capacity to cover the liquidity outflows that might arise in the event of the realisation of funding risk. There remain considerable differences between individual banks. Prudent liquidity management remains important, particularly at banks with lower liquidity surpluses, in the event of a renewed downturn in the economy.*

The financial position of households and non-financial corporations remained solid during the pandemic. *Amid government support, there was an improvement in the economic situation, and consequently also in household expectations. Non-financial corporations saw their indebtedness decline to one of the lowest figures in the euro area. Because the pandemic and the containment measures had differing impacts on different parts of the economy, the recovery in economic growth is uneven. These differences could widen further during autumn.*

The performance of leasing companies is gradually returning to its pre-pandemic level. *More and more firms are opting to make use of leasing services to finance their purchase of equipment, but households remain the main driver of new leasing business. The build-up of arrears in individual segments of business with firms seen at the end of last year came to an end in the first half of this year, and remains limited. Leasing companies saw their profits fall further, but remain positive, while their capital structure improved. The risks inherent in the performance of leasing companies therefore declined in the third quarter, and are moderate.*

The insurance sector recorded growth in insurance premiums in the first half of the year, driven by general insurance and life insurance, which had a beneficial impact on the claims ratio. *The profitability and capital adequacy of insurance corporations and reinsurance corporations improved, despite the negative impact of the low interest rate environment. As the positive trend on the stock markets continued and the*

economy recovered, domestic mutual funds again recorded above-average net inflows from households and growth in assets in the first half of this year. They also received net inflows from non-financial corporations, who had made withdrawals from mutual funds in previous years. The trend remained similar in July.

In addition to identifying and assessing systemic risks to the stability of the banking system and the financial system, Banka Slovenije also puts measures in place to increase the resilience of the financial system or to prevent and reduce the build-up of systemic risks. *Banka Slovenije's macroprudential policy toolkit currently encompasses macroprudential restrictions on household lending, the countercyclical capital buffer, the O-SII buffer, and the macroprudential liquidity recommendation (the GLTDF).*

The macroprudential restrictions on profit distributions by banks and leasing companies, which expired in September of this year, were aimed at increasing the capital resilience of the banking system and leasing companies. Given the improving economic picture and the diminishing uncertainty surrounding the economic recovery, it was decided that the two measures could be allowed to expire at the end of September, as had been envisaged. In the future we will however enhance the monitoring of the capital and dividend plans of banks and savings banks on an individual basis within the framework of the regular supervisory review and evaluation process. The resilience of individual banks could decline in the wake of a decision to distribute profits after the expiry of the macroprudential measure restricting profit distributions.

A similar role in raising the banking system's resilience to shocks deriving from overly optimistic and excessive credit activity is played by the countercyclical capital buffer, which has remained at a zero rate since its introduction in 2016, in light of the long recovery from the previous economic and financial crisis. The O-SII buffer is a structural instrument that aims to strengthen the resilience of the banking system's most important institutions, by reducing the probability of them finding themselves in difficulties that would be transmitted to the entire banking and financial system because of their size.

The macroprudential restrictions on household lending, initially in the form of recommendation, and then in the form of a binding measure since 2019, were introduced with the aim of putting minimum credit standards in place and preventing or reducing excessive credit growth. Both objectives have been achieved, and credit risk is thus continuing to decline, but the macroprudential restrictions will remain in place in the future with the aim of maintaining minimum credit standards. The slowdown and contraction in consumer loans can over the last year and a half partly be ascribed to a decline in demand for consumer loans as a result of the epidemic. By contrast, the risks inherent in the real estate market have strengthened recently. There are several factors at work here, but in Slovenia the supervisory and macroprudential instruments are limited solely to the part relating to credit-supported demand.

Given the low funding risk, the high liquidity resilience and the recovery in credit growth, the importance of the GLTDF instrument introduced to slow the excessive decline in the LTD ratio and to stabilise the funding structure is diminishing, which is why in the near future we will examine whether it is reasonable to retain this measure in the toolkit of macroprudential instruments.

Banks are facing new challenges in their business, which bring certain risks with them. The macroprudential policy to monitor and address these risks is still under development. *Digitalisation, which could be a major factor in the banks being able to successfully withstand income risk, is increasing their cyber vulnerability. According to a survey of banks, the digitalisation of banking services strengthened during the Covid-19 pandemic, but banks remain cautious in their use of new fintech. There were no evident changes in the use of fintech between 2019 and 2021. As they highlighted in the survey, banks are however trying to keep pace with progress, and are adjusting their business models to the new situation in the market and making use of new fintech. In recent years more than half of the banks have made use of certain new fintech, e.g. digital and mobile wallets, biometrics, and big data, but they remain more cautious in the use of smart contracts and AI.*

The digitalisation of the banking system is also increasing the importance of cyber security. *In a survey Slovenian banks highlight that in recent years they have earmarked additional funding for cyber security in bank information systems. Banks nevertheless still face problems in connection with the lack of supervision of outsourcing and suppliers, the obsolescence of information systems, and cyber hygiene, albeit less than they did two years ago. The number of cyber incidents during the Covid-19 pandemic was low, and did not pose a threat to the banking system.*

In the survey banks also signalled a shift in dealing with the issue of sustainability, particularly from the perspective of awareness of the importance of climate risks, and the more concrete operationalisation of their strategies with the introduction of the first sustainability indicators. *Sustainability is a part of the business strategy at the majority of Slovenian banks, and is gradually being incorporated into the business processes of individual institutions. The supervisory stress tests for climate change envisaged for 2022 will therefore be able to make a significant contribution to harmonising the treatment of climate risks. Banks are proceeding cautiously in the development of sustainable financial products and green investment. Almost half of the banks offer or intend to develop green financial products, and four banks already have green loans in the form of housing loans and consumer loans.*

1 KEY RISKS TO THE BANKING SYSTEM

1.1 Macroeconomic risk

Global economic activity is increasing fast, but there is uncertainty surrounding future economic growth amid new outbreaks of cases and the emergence of new variants of the virus. The recovery varies from country to country, and disruptions to supply chains are increasingly causing problems. Euro area GDP is forecast to regain its pre-crisis level in the final quarter of 2021, but the recovery will vary markedly between individual countries. All should nevertheless have regained their pre-crisis level of GDP by the end of 2022. Domestic economic activity had recovered strongly by August of this year as the epidemiological situation eased, containment measures were relaxed and business conditions normalised to a significant extent. However, given the low vaccination levels and a new surge in the epidemic, the recovery could slow down again with new containment measures and the shutdown of parts of the economy. Economic policy support measures have helped to preserve the economy's output potential, and the outlook for future growth has improved. Amid a large base effect, GDP in the second quarter was up sharply in year-on-year terms, by 16.3%, which was alongside the growth in exports most notably driven by private consumption, investment and inventories. After falling for almost a year, consumer prices rose again in the second quarter. Year-on-year inflation as measured by the HICP stood at 2.1% in August. The situation in the labour market is improving as firms step up hiring, although signs of labour shortages are already appearing, and the outlook remains uncertain given the rise in Covid-19 case numbers. The fiscal position continued to deteriorate in the first quarter, as measures to alleviate the impact of the epidemic still constituted a large part of expenditure, although developments in the public finances began to improve in the second quarter amid the faster recovery in economic activity and the very favourable borrowing terms. Given the uncertainty still present, the future recovery will also be tied to the expiry of active support measures, which will require a gradual approach, flexibility and targeting, and will depend on the further evolution of the pandemic and its impact on different sectors and firms. In light of the recovery, which has been faster than expected, domestic and international institutions have revised their growth forecasts for 2021 upwards. Macroeconomic risk is still easing, but remains elevated, given the persistent uncertainty.

International environment

Global economic activity is increasing fast, and has already surpassed its level from before the outbreak of the pandemic, but there is still considerable uncertainty surrounding future economic growth amid new outbreaks of cases and the emergence of new variants of the virus, while the recovery varies from country to country. Extensive economic policy measures, which contributed to a fast recovery in manufacturing, still have an important role, while international trade is continually strengthening as the containment measures are being relaxed. The recovery has also spread to service sectors hit harder by the containment measures, albeit with a lag, which was helped by the increase in private consumption driven by the relaxation of containment measures, while travel services are strengthening again as international restrictions on crossing borders are being lifted. The recovery is uneven across different countries and regions with advanced economies regaining their pre-crisis levels faster on average. Meanwhile, developing countries are finding it harder to manage their health situation and are exposed to the risk of a long-term recovery amid new outbreaks of cases, given their lower vaccination levels and more-limited capacity to finance support of their economies. The outlook is being made even worse by new variants of the virus, against which existing vaccines may be less effective or even ineffective, which means there is considerable uncertainty surrounding further economic growth.

Macroeconomic risk in the rest of the world is continuing to ease as economic activity recovers following the lifting of the most stringent containment measures. Economic activity indicators at half-year point to strong expansion, not only in manufacturing but also in services, where developing countries are not tracking the fast pace set by advanced economies. The PMI pointed to significantly faster expansion over the summer than before the outbreak of the pandemic, globally and for the euro area in particular (see figure 1.1), although it started to slowly ease off. A faster easing in macroeconomic risk on the supply side is being slowed by disruptions in international trade caused by bottlenecks in supply chains and shortages of certain inputs to production. An additional risk comes from high commodity price inflation and rising consumer price inflation, although the expectation is that this will only be temporary. Another significant element of macroeconomic risk is the lifting of support measures that are still active, without which the worst-hit firms and firms with unviable business models will find it harder to survive. Despite the additional uncertainty, the

outlook for future growth is better than previously projected. The global economy having contracted by 3.2% in 2020, is projected to grow by 6.0% in 2021 and by 4.9% in 2022 (IMF, see Figure 1.2). The global economy has regained its pre-pandemic level of activity, although by the end of 2022 will remain below the projections made before the outbreak of the pandemic.

Figure 1.1 JPMorgan global PMI and IHS Markit PMI for the euro area

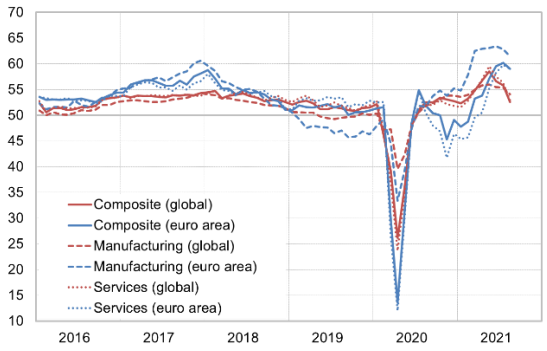
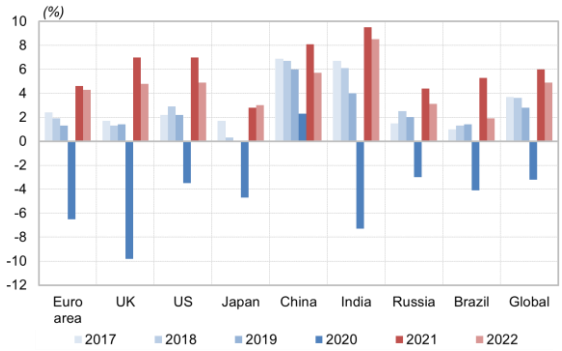


Figure 1.2 GDP growth in major global economies, and forecasts for 2021 and 2022



Note: A PMI of more than 50 represents expansion with regard to the previous month, while a value of less than 50 represents contraction. The data for 2021 and 2022 in the right figure is the IMF forecasts.
Sources: IMF (July 2021), IHS Markit

Euro area economies were gaining new impetus in economic activity in the second quarter of this year as the epidemiological situation improved and the containment measures were relaxed (see figure 1.3 andFigure 1.4). Because of the containment measures and the rise in vaccination levels, Covid-19 case and hospitalisation numbers had fallen sharply by the summer in the majority of countries, which allowed many countries to relax containment measures, thus giving services in particular the opportunity to return to a more normal framework of activity. At the same time consumer confidence and private consumption strengthened, the latter having been significantly curtailed while more stringent measures were in place. Private consumption will be a major driver of growth in the upcoming period, alongside investment. Growth this year and in the following years will be higher than had previously been projected. In its summer projections for the euro area the European Commission revised its growth forecast for 2021 upwards by 0.5 percentage points to 4.8%, and also raised its forecast for 2022 (by 0.1 percentage points) to 4.5%. Euro area GDP is forecast to regain its pre-crisis level in the final quarter of 2021, one quarter earlier than forecast in the spring, although the recovery will vary markedly between individual countries. All should nevertheless have regained their pre-crisis level of GDP by the end of 2022.

Figure 1.3 Confidence indicators in the euro area

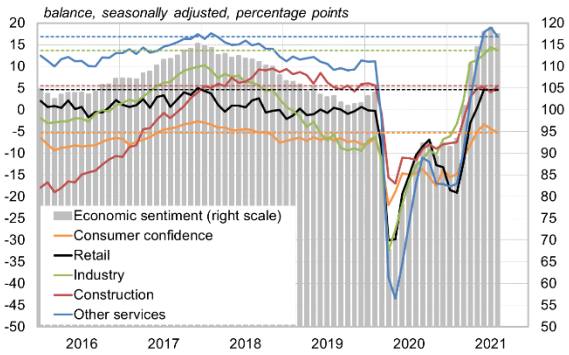
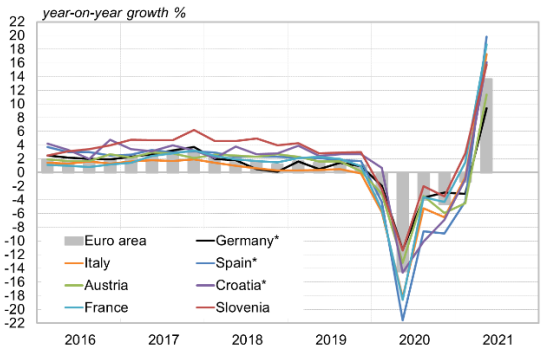


Figure 1.4 GDP growth in selected euro area countries by quarter



Note: Confidence indicators are expressed in the form of an average balance. The balance is the difference between the proportions of positive answers and negative answers. The GDP growth figures are seasonally adjusted and calendar-adjusted. Provisional figures for Germany, Spain and Croatia.
Sources: Eurostat, European Commission

Required yields on euro area government bonds rose in the period up to May 2021 amid higher inflation expectations, before falling again (see Figure 1.5). Despite this year's increase, they remained close to record lows, with spreads also having narrowed again. With low required yields on government bonds favourable financing conditions for governments, businesses and households are being maintained,

thus providing favourable conditions for the ongoing economic recovery. These conditions will further be supported by ECB monetary policy measures. Key interest rates will remain unchanged, and the pandemic emergency purchase programme (PEPP) will also continue, with an envelope that has been significantly expanded compared with the early months of the year, and a horizon until at least March 2022. The maturing principal payments from securities purchased under the PEPP will be reinvested until at least the end of 2023. Net purchases will also continue to be made under the asset purchase programme (APP), and extensive liquidity will continue to be provided via the third series of targeted longer-term refinancing operations (TLTRO-III). In addition to the continuation of the existing programmes, the ECB's new strategy has introduced a symmetric medium-term inflation target of 2%.

Figure 1.5 Required yield on 10-year government bonds

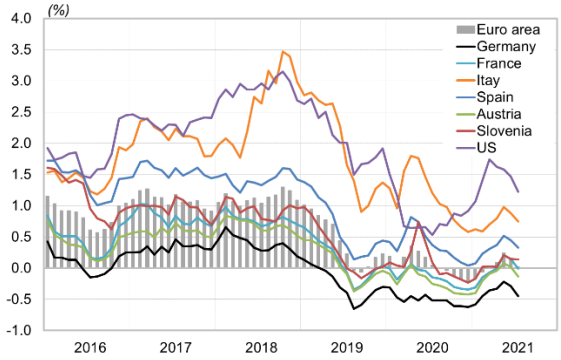
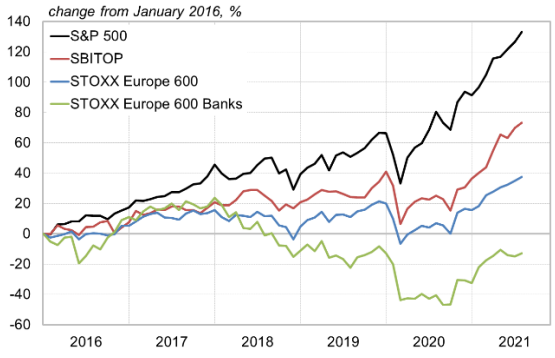


Figure 1.6 Change in stock market indices



Sources: European Commission, Investing, Ljubljana Stock Exchange

Financial markets have continued to rise in 2021 amid the improving economic outlook and the accommodative monetary policy (see Figure 1.6). The rise was particularly pronounced in the US, where the S&P 500 followed its strong trend from the beginning of the pandemic and reached record highs as the economic recovery picked up pace. The big rise in equity markets is attributable to even slightly more favourable financing conditions, while yields on 10-year government bonds peaked in March of this year, before falling again between April and July. The growth trend from the beginning of the pandemic also continued in Europe, albeit at a weaker pace than in the US, but share prices have nevertheless already surpassed their pre-pandemic levels. The growth was also driven in a large part by expectations of a continuing recovery, the accommodative monetary policy, and reporting of high profits by firms. Shares of European banks also strengthened, although only to their 2019 levels. Amid a strong recovery, financial markets also saw a further gradual decline in volatility, although it nevertheless remained above its average of the pre-crisis years.

Box 1.1 What do market inflation measures say about the future of low interest rates?

The ECB's new strategy[1] has raised the inflation target from close to but below 2% to a symmetric target of 2%. The HICP,[2] the primary measure of inflation in the euro area, averaged 1.35% in the decade before the pandemic. This was below the target set by the Eurosystem, namely close to but below 2%, which explains the long period of accommodative monetary policy. A new monetary policy strategy was announced on 8 July 2021, part of which encompasses a symmetric inflation target of 2% over the medium term. Market participants are asking whether the inflation target will be more attainable. There are several positive factors in its favour. First, the slowdown of globalisation and the restructuring of supply chains could lead to higher inflation in the future. Second, fiscal support is more accommodative than in the past, and could provide sufficient inflation support in combination with monetary policy. Third, the ECB's strategy review has increased the possibility of a longer period of accommodative measures, which are still effective, as evidenced by the response of the financial markets during the pandemic. Fourth, the new strategy is positive for actual inflation expectations, which are an important factor in realised inflation (if the economy is expecting higher inflation, it will be taken into account in advance in its pricing policy, which will pass through into higher realised inflation at a later phase). This box focuses on market inflation expectations, as they offer a volatile but responsive and quickly available measure of inflation expectations.

[1] The ECB's monetary policy strategy statement, 8 July 2021.
[2] The Harmonised Index of Consumer Prices is published by Eurostat.

Market inflation expectations have been rising since May 2020. The price of the financial instrument known as an inflation swap is the most relevant measure of market inflation expectations in the euro area. In an inflation swap the two parties agree to exchange a cash flow for a predetermined period, where one party pays the other the realised inflation during that period, while the other pays the first an agreed fixed amount that reflects the expectations of what average inflation will be until the instrument matures. The long-term inflation swaps are particularly informative, including the five-year five-year-forward inflation-linked swap rate (5y5y ILS), i.e. the expected average inflation over a five-year period beginning in five years and ending in ten years. The 5y5y ILS averaged 0.9% in May 2020, since which it has risen, and averaged 1.6% over the summer of this year. The current value is comparable to the average between 2015 and 2018, when the ECB was carrying out its first asset purchase programme, one of the primary measures to drive inflation in the low interest rate environment.

Figure 1.7 Long-term market inflation measures in the euro area, and cost of hedging against inflation of more than 3% (price of inflation option)

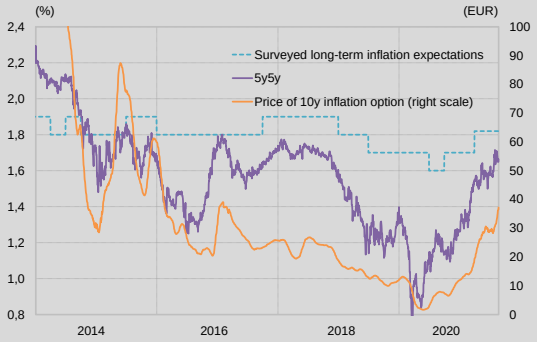
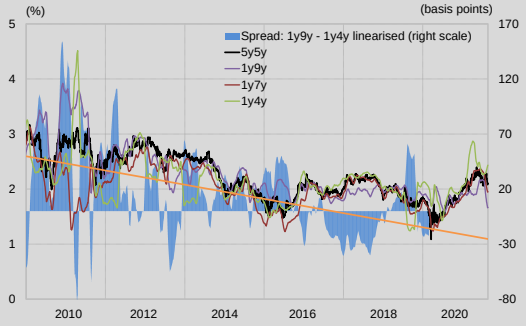


Figure 1.8 Long-term market inflation measures in the US, and compression of the long-term section of the breakeven inflation curve



Note: In the left figure the market inflation measure is the price of the inflation swap (ILS), while the survey measure comes from the ECB's SPF. An inflation call option gives the option holder the right to conclude a financial transaction where they receive the difference between average realised inflation and a predetermined inflation strike rate (3% in this case) for the lifetime of the option, or nothing if the realised inflation rate is lower. In the right figure the market inflation measure is breakeven inflation, i.e. the difference between the nominal yield of a US government bond and a Treasury Inflation-Protected Security (TIPS) of the same maturity that reflects the required real yield on borrowing in the US. The gradient is the difference between one-year inflation in nine years and in four years; the linear trend in the gradient is calculated on data from January 2010 to February 2020 (before the pandemic).

Sources: Bloomberg, Banka Slovenije calculations, ECB (SDW), ECB Survey of Professional Forecasters (SPF), Federal Reserve Bank of New York, *The Persistent Compression of the Breakeven Inflation Curve*, Liberty Street Economics, 22 March 2021

Market inflation measures do not suggest that the euro area is threatened by a period of high or excessive inflation. The rise in market inflation measures over the last year cannot simply be extrapolated into the future, despite the high probability that monetary and fiscal policy will remain accommodative. The rise in the 5y5y ILS is also attributable to a higher inflation premium, which adjusts faster and is more responsive than pure inflation expectations; the price of any market financial instrument can be broken down into the pure expectations and the uncertainty surrounding these expectations, where the latter is indicative of the inflation premium. The economic recovery is reducing the likelihood of low inflation or deflation, which generally raises the inflation premium faster than pure inflation expectations. This is confirmed by ECB's quarterly survey (SCF), where survey respondents (experts employed at financial and non-financial institutions) give their opinions of their own pure inflation expectations. In the most recent survey (the third quarter of 2021), respondents raised their inflation expectations over the long term comparable to the 5y5y ILS, albeit gradually, from 1.7% to 1.8%. The prices of inflation call options to hedge against inflation of more than 3% over the next five or ten years (for an explanation of the instrument, see the note below Figure 1.7) have risen over the last year, but the premium for this protection remains at lower levels than before the initiation of the ECB's first asset purchase programme in March 2015, the aim of which was to encourage inflationary pressures. The low price of inflation call options is an indication that market participants who sell protection of this type do not place a high probability on the scenario of high inflation in the coming years. Because the market inflation measures are financial instruments that are highly responsive to the evolution of the macroeconomic situation, they could soon paint a different picture of the expectations of upcoming inflation. Market participants frequently highlight that for more durably revaluating their inflation expectations to higher levels, it would be useful if stronger inflationary pressures were to be evidenced beforehand in higher realised inflation.

Despite the higher inflation expectations, it is possible that a longer period of accommodative monetary policy will still be needed, and with it the maintenance of low interest rates. The market inflation measures show that there are still global factors in the background of the reduced inflationary pressures, which the ECB will find it difficult to address. The latter are evidenced in the long-term trend of decline in market inflation measures in other economies comparable to the euro area. In the US the 5y5y breakeven inflation (the US dollar version of the 5y5y ILS) rose from an average of 1.45% in May 2020 to 2.15% in the summer of 2021, although this is still below the level of five to ten years ago, when it regularly ranged from 2.5% to 3% (see Figure 1.8). Furthermore, although the current values are above 2%, this is still below the target set by the Fed. The financial instrument relies on the CPI, while the Fed targets the PCE,[3] an index that is generally 20 to 40 basis points lower than the CPI. Another indication of a trend of decline in US inflationary pressures could come from the ongoing decline in the premium demanded by investors to hold financial instruments of longer maturities, which reveals the expected long-term breakeven inflation rate; the longer the maturity of a particular financial instrument is, the higher in general is the premium demanded by the investor. Conversely, the difference between the expected one-year inflation nine years from now (1y9y) and the expected one-year inflation four years from now (1y4y), which can be used as an approximation in estimating the premium for holding exposure to long-term inflation (i.e. an inflation premium), is displaying a downward trend. The Fed announced a new strategy[4] on 27 August 2020, which envisages a temporary regime of flexible average inflation targeting (FAIT) of 2%, a measure that is expected to not only raise inflation expectations, but also the inflation premium.

Economic situation in Slovenia

The easing of the epidemiological situation and the relaxation of containment measures saw domestic economic activity continue to recover in the early part of the third quarter of 2021, although growth is slowing slightly amid a new wave of Covid-19 cases. Various mobility indicators (see Figure 1.9) show the normalisation of public life, while business conditions have normalised as well, even largely for firms in the sectors most constrained by the containment measures. The extensive economic policy support measures have helped the economy preserve output potential, while the improving outlook has seen confidence indicators strengthen (see Figure 1.10), as private consumption, investment and foreign demand all drive growth. The economic sentiment surpassed its pre-crisis level in May of this year, the confidence indicators having also strengthened in the worst-affected sectors. High growth has seen retail confidence already surpass its pre-crisis level, while the services confidence and consumer confidence indicators remain down on their pre-crisis marks. The rise in manufacturing confidence and in construction confidence slowed at the mid-point of 2021, albeit at levels above the pre-crisis marks. The recovery is expected to continue in the third quarter, with a rise in activity in sectors related to tourism. The implementation of the recovery and resilience mechanism will also have a beneficial impact on growth in investment in the future.

Figure 1.9 Google mobility data

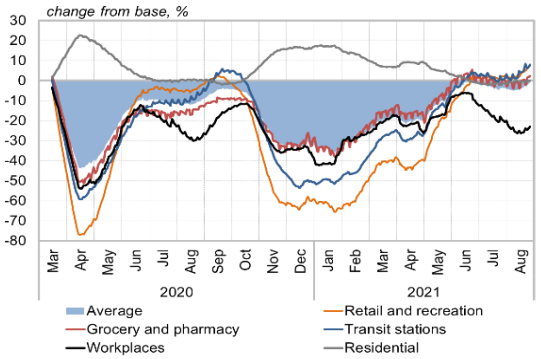
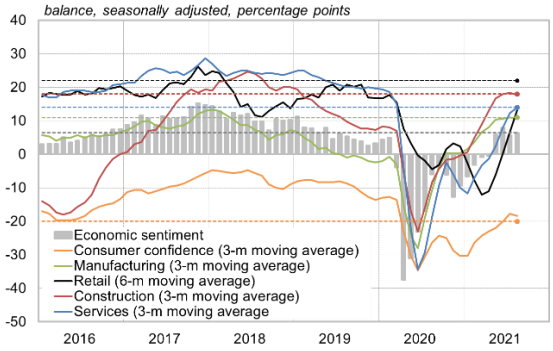


Figure 1.10 Confidence indicators and economic sentiment indicator



Note: The base in the left figure is the median of the corresponding day of the week in the five-week period between 3 January and 6 February 2020. The original frequency of the data is daily, but 30-day moving averages are illustrated because of the high variability. The confidence indicators in the right figure are illustrated as three-month or six-month moving averages (other than the economic sentiment indicator). Dots indicate the latest actual data (August 2021), while the dashed horizontal lines serve to compare the latest data with indicators in previous periods.

Sources: Google, SORS, Banka Slovenije calculations

[3] The Consumer Price Index (CPI) is published monthly by the Bureau of Labor Statistics (BLS), while the Personal Consumption Expenditures Price (PCE) index is published by the Bureau of Economic Analysis (BEA).

[4] Board of Governors of the Federal Reserve System (Fed): Review of Monetary Policy Strategy, Tolls, Communic., 27 August 2020.

There is still great uncertainty, given that amid low vaccination levels the recovery could potentially be slowed by new containment measures due to a resurgence of the epidemic, and further disruptions to supply chains. If new outbreaks of cases are dealt with successfully, and the number of people who are fully vaccinated rises, the future recovery will be less and less contingent on control of the health situation, and increasingly dependent on the approach to the lifting of support measures that are still in place, and the successful implementation of a longer-term strategy for supporting the economy. The lifting of the still-active support measures will require a gradual approach, flexibility and targeting, and will depend on the further evolution of the pandemic and its impact on different sectors and firms.

GDP recorded sharp year-on-year growth of 16.3% in the second quarter of 2021, primarily as a result of a large base effect (see Figure 1.11).[5] It was up 15.7% according to seasonally adjusted and calendar-adjusted data; despite the large base effect growth also remained solid compared to the previous quarter, with activity up 1.9%. The largest contributor to economic growth in the second quarter was private consumption, which accounted for 9.3 percentage points, having been largely curtailed during the period of stringent containment measures, which left households unable to spend, and increased uncertainty. After a large decline, gross investment also strengthened and accounted for 3.6 percentage points of the growth. It will remain an important driver of growth in the future, with extensive support via the recovery and resilience facility. Amid the favourable outlook, firms significantly built up their inventories, which accounted for 3.4 percentage points of the aggregate growth, while the contribution made by government consumption declined, but nevertheless remained positive, as certain support measures were withdrawn. Foreign demand strengthened as the situation in the largest trading partners improved, but the increased domestic demand and resulting imports meant that the contribution by net exports was negative in the amount of 0.3 percentage points. Given the faster-than-expected economic recovery in the first quarter of 2021, the latest forecasts by domestic and international institutions are projecting an even faster recovery, with the growth forecasts for 2021 being revised upwards. The forecasts[6] range from 3.5% to 6.1% for this year, and from 4.5% to 5.0% for 2022, where the highest forecasts are also the most recent. Macroeconomic risk is continuing to ease in Slovenia, but the uncertainties remain large, and hence the risk is still elevated.

Figure 1.11 GDP growth and contributions to GDP

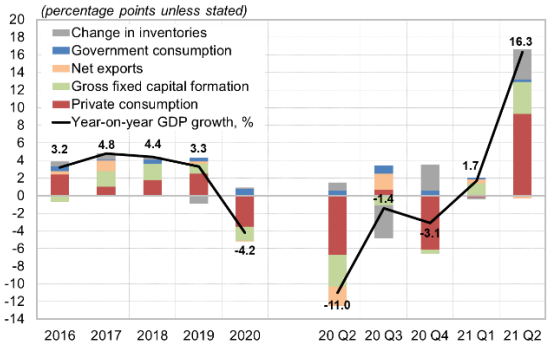
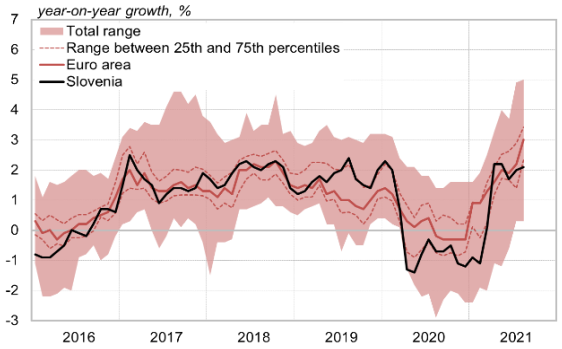


Figure 1.12 Inflation (HICP)



Note: The data for August in the right figure is provisional.
Sources: SORS, Banka Slovenije calculations

After falling for almost a year, consumer prices rose again in the second quarter as the economy recovered (see Figure 1.12). Year-on-year inflation as measured by the HICP returned to its pre-pandemic level in April. By August of this year it had reached 2.1%, 0.9 percentage points less than the euro area average, putting Slovenia in the bottom quarter of countries with the lowest inflation rates. The economic recovery saw global oil prices rise sharply again from a low base following last year's fall, which meant that the majority of domestic inflation in the second quarter of 2021 came from year-on-year rises in energy prices. They again made a major contribution to headline inflation in August, in the amount of 1.2 percentage points. After falling in February and March, prices excluding energy and unprocessed food rose again in April, albeit slowly. Year-on-year core inflation stood at 0.7% in July, 0.2pps less than the euro area average.

[5] The shutdown of large parts of the economy and the lockdown brought a sharp decline in GDP in the second quarter of 2020, which correspondingly led to a sharp increase in the second quarter of 2021 as the situation normalised and the economy recovered, which led to a very high year-on-year growth rate in the second quarter.

[6] IMAD, September 2021 (2021: 6.1%, 2022: 4.7%, 2023: 3.3%), Banka Slovenije, July 2021 (2021: 5.2%, 2022: 4.8%, 2023: 3.1%), European Commission, July 2021 (2021: 5.7%, 2022: 5.0%), IMF, May 2021 (2021: 3.9%, 2022: 4.5%, 2023: 3.6%), OECD, May 2021 (2021: 3.5%, 2022: 4.6%).

The positive outlook for future growth brought a sharp rise in inflation expectations, among firms and consumers alike.

Figure 1.13 Growth in employment, unemployment rate and growth in gross wages

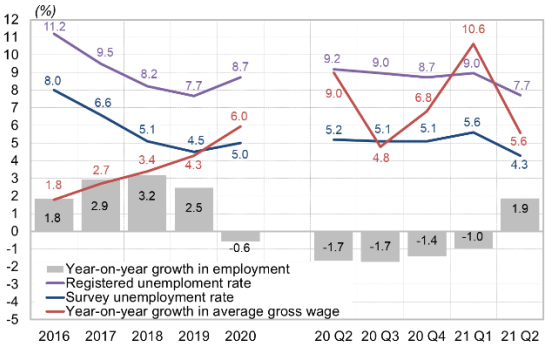
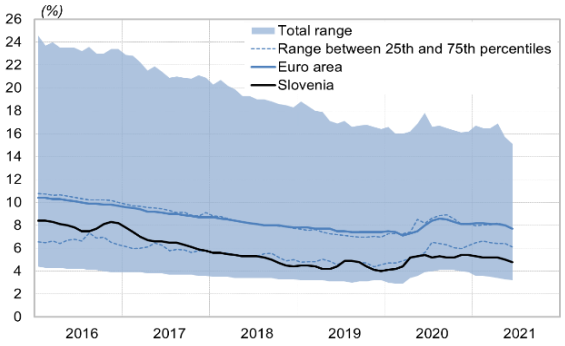


Figure 1.14 Survey unemployment rate



Note: The employment growth figures are seasonally adjusted and calendar-adjusted. The employment figures are from the national accounts, while the gross wage figures are from monthly statistics. As a result of the measures put in place in connection with the Covid-19 epidemic, there was a break in the time series of the data on wages, with greater variability in the average gross wage in the period after the adoption of the measures, which is also reflected in the year-on-year rates of growth.

Sources: Eurostat, ECB (SDW), Banka Slovenije calculations

The labour market situation is improving as the containment measures are relaxed and economic activity increases. In the improving economy firms are hiring more intensively, although the pace varies in different sectors. After a year of falling employment, year-on-year growth in aggregate employment turned positive again in the second quarter amid a large base effect, at 1.9% (see Figure 1.13), driven by mostly public services,[7] administrative and support service activities, industry and construction. The aggregate contribution of wholesale and retail trade, transportation, and accommodation and food service activities remained negative. The improving situation is also being reflected in a rise in the number of vacancies, and reports of labour shortages by firms in certain sectors. After a significant slowdown in 2020, the year-on-year rise in the number of work permits for foreign nationals picked up pace again in the first half of 2021. After rising in the first quarter of this year, registered and survey unemployment rates fell significantly, to 7.7% and 4.3% respectively.[8] The harmonised survey unemployment rate was among the four lowest in the euro area in July 2021 (see Figure 1.14). Growth in the average gross wage remained high in the second quarter of 2021 (see Figure 1.13), again driven primarily by public sector activities, where growth stood at 9.1% amid bonus payments made in connection with the Covid-19 epidemic, while growth in private sector activities stood at 4.0%. Despite the improving situation, the outlook for the labour market remains uncertain, and future developments will depend on the evolution of the epidemiological situation and potential future containment measures or job preservation measures.[9]

[7] The sectors of public administration and defence, compulsory social security, education, and human health and social work activities according to the SKD 2008.

[8] The box entitled Impact of methodological changes on labour market statistics in the July 2021 issue of Economic and Financial Developments explains the impact of changes in surveying methodology on labour market statistics.

[9] On the labour market the furlough scheme expired on 30 June 2021, while the short-time work scheme was extended to 30 September 2021, with the option of extension to the end of the year. Wage compensation for workers ordered to quarantine or unable to work on the grounds of force majeure because of care obligations, public transport shutdowns or border closures was extended to 31 December 2021.

Figure 1.15 General government revenues, expenditures and position

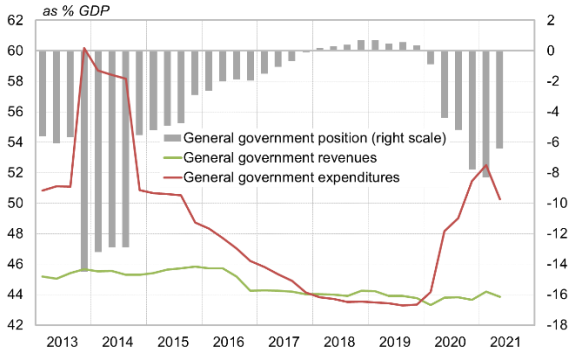
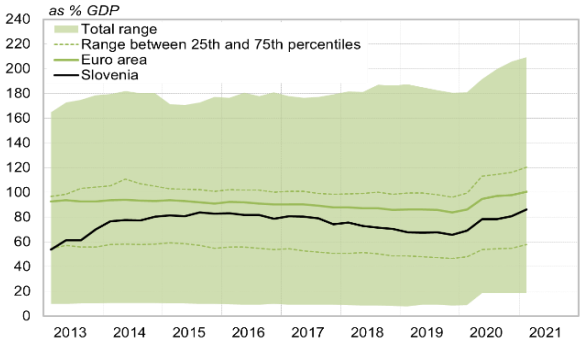


Figure 1.16 Government debt (consolidated)



Note: The data in the left figure is illustrated as annual moving averages, and the data in the right figure as annual moving sums.
Sources: Eurostat, ECB (SDW), Banka Slovenije calculations

The general government position has continued to deteriorate, albeit to a smaller degree as the economic recovery gathers pace. With growth in expenditures continuing to significantly outpace growth in revenues, the deficit widened in the first half of the year, and amounted to 5.8% of GDP in the second quarter (see Figure 1.15). This took the consolidated general government debt to 80.0% of GDP at the end of the second quarter; it remained considerably below the euro area average at the end of the first quarter (see Figure 1.16). Revenues increased as the economy expanded, with an increase of direct and indirect tax revenues, as well as non-tax revenues. Measures to alleviate the epidemic meanwhile continued to account for the largest share of expenditures (see Figure 1.15). Given the favourable situation on the financial markets and the low required yields on government bonds, the increased borrowing was undertaken at highly favourable terms. A large deficit is expected in 2021, forecast at 8.6% of GDP,[10] but the deficit will gradually narrow over the following years as the focus shifts from providing support during the epidemic to promoting economic growth. The main rating agencies have left their ratings for Slovenia unchanged. S&P and Fitch confirmed their ratings of AA and A- in June, with a stable outlook. S&P expects the strong economic growth over the next two years to repair the damage caused to public finances by the epidemic, while the public debt remains manageable. Going forward, once Slovenia has recovered from the current crisis, it is forecasting a possible upgrading.

Figure 1.17 Probability of a financial crisis in the next 12 months in Slovenia, with contributory factors

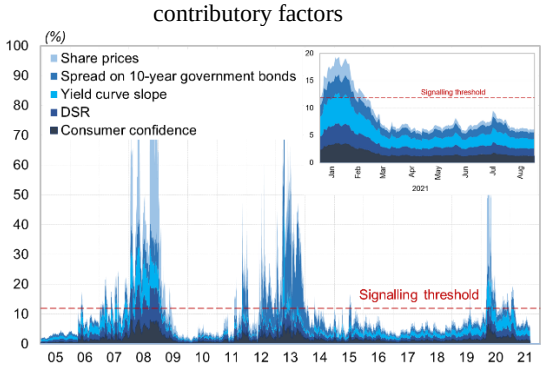
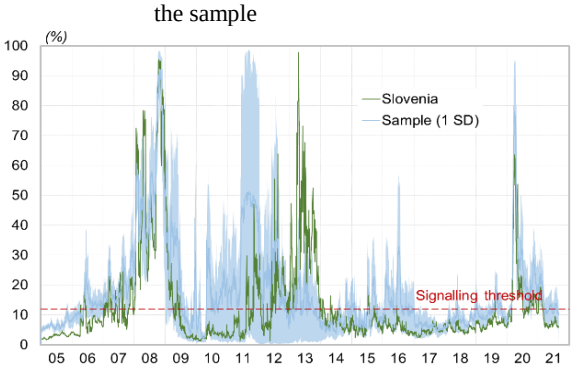


Figure 1.18 Probability of a financial crisis in the next 12 months in Slovenia and in countries in the sample



Note: The left figure illustrates the probability of a crisis for Slovenia in the next 12 months over the entire sampling period, decomposed by contributory factors. In the right figure the light blue area illustrates the probability in countries captured in the sample that fall within one standard deviation of the mean (almost two-thirds of the sample). Latest data: 31 August 2021.
Source: Banka Slovenije

The estimated probability of a crisis in the next 12 months for Slovenia[11] is lower than the signalling threshold,[12] despite its high level at the outbreak of the Covid-19 pandemic in April of last year.[13] The

[10] According to Stability Programme plans.
[11] The probability of a crisis is estimated by means of a logistic early warning model. The model variables include: debt servicing level of the non-financial private sector (annual change, with a two-quarter lag because of delays in publication), consumer confidence indicator (European Commission survey, with a one-month lag), government bond spreads (interest rate spread on 10-year government bonds relative to the euro area average), annual growth in share prices, realised volatility in share prices over the last month, and risk-free return curve slope. Growth in prices of equities and volatility as measured by share indices are combined into the

probability of a crisis in Slovenia estimated by means of a real-time early warning model remains lower than in the majority of euro area countries (see Figure 1.18). In contrast to previous systemic crisis events, namely the global financial crisis in 2008 and the euro area debt crisis in 2013, the DSTI and the spreads on government bonds are not major risk factors in Slovenia (see Figure 1.17). Other than a brief rise in the early phase of the pandemic in April 2020, neither the stock market developments nor the consumer confidence indicator indicate any risks. By March and April of this year the estimated probability of a crisis had fallen to its pre-pandemic level, while the number of hospitalisations in connection with Covid-19 fell, and the pace of vaccination increased.

Box 1.2 Importance of national macroprudential policy in the pursuit of financial stability amid the interaction of the business cycle and the financial cycle

Financial stability doctrine began to be developed more intensively in the mid-nineties after the outbreak of the Asian debt crisis, when a number of financially advanced countries identified the need to more systematically monitor the evolution of the financial situation in the private sector and the public sector alike, and its impact on business developments. Although certain elements of financial stability could be found in the actions of central banks and government authorities even before this, in previous crises (e.g. the Nordic banking crisis of the early nineties), the more systematic and planned monitoring of the financial situation only began in the late nineties. This monitoring acquired its most formal interpretation with the regular publication of financial stability reviews, the first of which in Europe were issued by the English and Swedish central banks in 1996 and 1997. They were followed very quickly by other central banks. Banka Slovenije began regularly issuing the aforementioned publication in 2004.

Even greater changes in the area of financial stability were brought by the global financial crisis of 2007 and 2008, which after the price crash on the US real estate market and the collapse of Lehman Brothers, a US bank, transformed into a profound banking crisis in Europe. A financial system predominantly based on bank intermediation is inherently procyclical, and is therefore liable to promote the creation and uncontrolled bursting of price bubbles. Recessions in the real economy are generally more pronounced and the recovery even slower when they follow bubbles in prices of financial assets and real estate prices, and excessive growth in credit supply (Claessens et al., 2011).[14] Uncontrolled financial cycles therefore further increase the volatility of business cycles.

A highly illustrative example of the described interaction of financial and business cycles occurred in Slovenia at the outbreak of the global financial crisis. Following a period of economic boom between 2005 and 2008, which was supported by increased borrowing on international financial markets by Slovenian banks, it was thought that real growth in GDP in Slovenia would rebound rapidly after a relatively short period of decline. But the economic recovery never came, and Slovenia slid into a second recession in 2012. The collapse of the overheating construction sector, the closure of several labour-intensive manufacturing firms and the general slowdown in economic activity triggered a serious banking crisis, including a gradual increase in non-performing loans. Instead of rising slowly, bank lending fell sharply. It was not until 2014, six years after the outbreak of the global financial crisis, that the stock of bank loans bottomed out. It should be reiterated that institutional changes were a significant factor in the reduced stock of loans, namely the transfer of non-performing loans to the BAMC in 2013 and 2014, and the liquidation of two banks in 2016, alongside the actual contraction in credit supply. The stock of corporate lending is not expected to return to its pre-crisis level, in part because of changes in the structure of the economy. This is reflected in a sharp contraction in the construction sector, whose business before the financial crisis was based on bank lending, and in a sharp decline in the number of financial holding companies and in their turnover. Prior to 2008 financial holding companies had inflated their leveraging and sale of numerous large firms to foreign investors, who financed further growth in the firms directly from abroad.

category of "share prices" in the presentation of results. Data on share prices, the yield curve slope, and government bond spreads is daily. The sample includes 18 euro area countries plus Denmark and Sweden. The sample covers the period of January 2004 to August 2021. The identification and dating of systemic financial crises are based on the ECB/ESRB public database of financial crises.

[12] The signalling threshold is a compromise between false alarms occurring and the possibility of missing serious crisis events, with a higher weight assigned to preventing a serious crisis event from being overlooked.

[13] By the end of August 2021 the probability of a crisis in the next 12 months in Slovenia was estimated at approximately 6% according to the early warning model. The average probability of a crisis in the next 12 months in the sample of European countries was estimated at approximately 11%.

[14] Claessens, S., Kose, M.A. and Terrones, M.E. (2011). How Do Business and Financial Cycles Interact? IMF Working Paper WP/11/88.

It was the severe impact on the real sector and the financial sector after the global financial crisis that drove the faster development of macroprudential policy in the EU and in Slovenia. The de Larosière report (2009) on the causes of the financial crisis in Europe and on proposals for improving financial supervision, which was drawn up under the aegis of the European Commission, yielded the important conclusion that it is not enough to simply supervise individual financial institutions, but it is necessary to supervise the stability of the entire financial sector. The European Systemic Risk Board (ESRB) was established in December 2010, and assumed responsibility for implementing macroprudential policy at EU level and coordinating macroprudential policy between EU Member States in accordance with Regulation (EU) No 1092/2010. This was followed by the rapid evolution of the institutionalisation of macroprudential policy with the development of a framework, instruments and measures.

Slovenia too followed this process, and independently developed its own process using specific macroprudential measures. The Macroprudential Supervision of the Financial System Act (ZMbNFS; Official Gazette of the Republic of Slovenia, No. 100/13) was adopted in December 2013, and on its basis the Financial Stability Board was established. The aforementioned law sets out the approach to macroprudential supervision in Slovenia, and the tasks, powers, supervisory measures and instruments, and work of supervisory bodies in the area of macroprudential supervision.

The purpose of macroprudential policy is to mitigate the effects of financial cycles and to increase the resilience of the financial system to the disruptions caused by the realisation of systemic risk. This is even more the case for financial systems where bank intermediation is prevalent, such as Slovenia, as in general they are more exposed to cyclical systemic risks than to structural risks. In its practice to date Banka Slovenije has focused more on developing macroprudential measures for responding to cyclical systemic risks that are a reflection of developments in the real sector, which is also reflected in the history of its use of macroprudential measures. Analysing and studying the relationship between business cycles and financial cycles is therefore even more important, and is the key to properly calibrating macroprudential measures in timely fashion.

This box also presents an assessment of the differences between cyclical factors of business and financial cycles in Slovenia on the basis of various macroeconomic and financial data. In so doing, we use the multivariate structural time series model (STSM) proposed by Rünstler and Vlekke (2018).[15] A multivariate STSM with three variables (trivariate STSM) is used to break down time series (GDP, household loans, real real estate prices)[16] into various components, where the assumption is that they can affect the behaviour of a specific variable. These components are the trend, the cycle and the irregular component. With regard to the actual dynamics in GDP and household loans, and the model estimate of the trend in the two variables (see Figure 1.19 and Figure 1.20), it can be seen that the difference between the trend and the observed variable is attributable to cyclical and irregular components.

Figure 1.19 Actual GDP and trend GDP

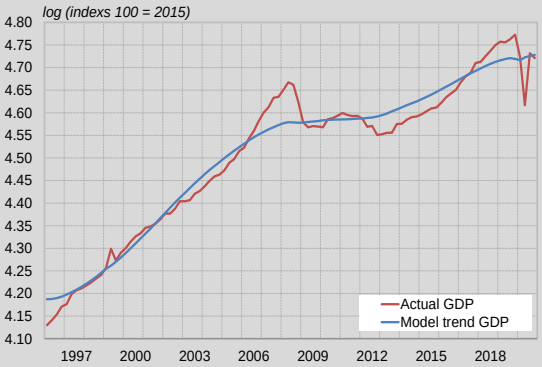
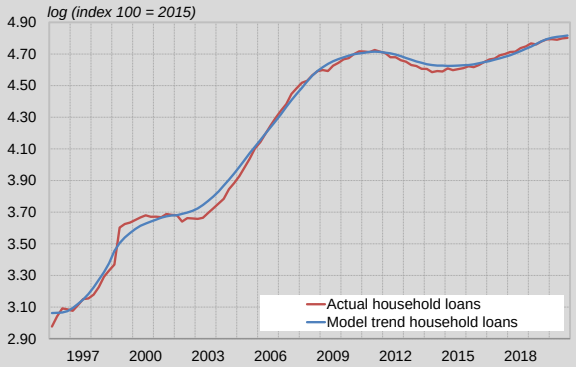


Figure 1.20 Actual household loans and trend household loans



Sources: SORS, Banka Slovenije, own calculations

[15] Rünstler, G. and Vlekke, M. (2018). Business, housing, and credit cycles. Journal of Applied Econometrics, 33(2), pp. 212-226.

[16] For the sake of simplicity, the model dynamics of residential real estate prices are not illustrated in the box, but the dynamics in residential real estate prices do play a significant role in the model estimation of all components, where the assumption is that the real estate market represents and link between the dynamics of financial cycles and business cycles. The bivariate and univariate STSMs do not take account of the impact of the real estate market.

The trivariate STSM is further used to illustrate an estimate of the cyclical components of GDP and household loans, in which various phases of business cycles and financial cycles are evident. The results show that financial cycles are longer and deeper on average than business cycles (see Figure 1.21). This was confirmed by the trivariate and bivariate STSMs, and the results were supported by the univariate model as well. There is also a significant difference between the attributes of the crises themselves. There was a highly pronounced irregular component in real variables in the period during the pandemic, but it was much smaller during the time of the global financial crisis (see Figure 1.22). Conversely, irregular components did not have a significant impact on financial variables in the crisis periods.

Figure 1.21 Estimate of cyclical components

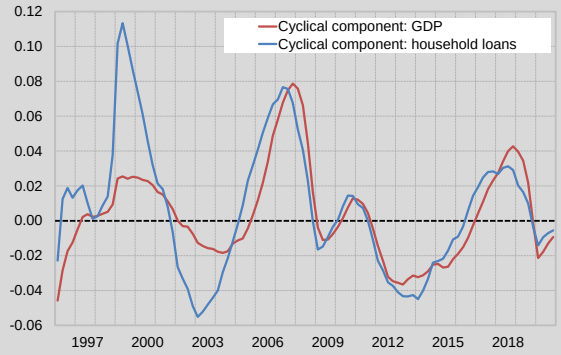
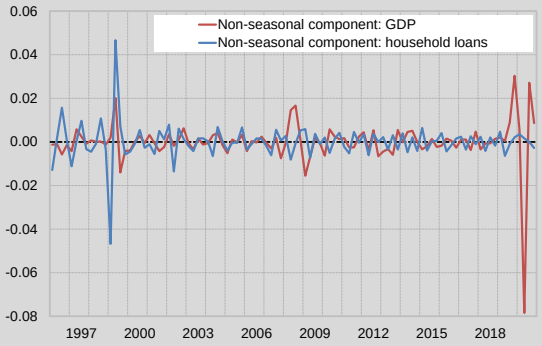


Figure 1.22 Estimate of irregular components



Sources: Banka Slovenije, own calculations

Although the results in the general literature are not novelties, they are extremely important to economic policymakers, as under the monetary policy mandate they emphasise the importance of pursuing national financial stability within the framework of macroprudential policy, particularly in the structure of a monetary union such as the euro area.

1.2 Risks inherent in the real estate market

As of the third quarter of 2021, the risks inherent in the real estate market are no longer assessed as moderate, but as elevated, primarily on account of the renewed high growth in residential real estate prices, and partly on account of a rise in prices of construction materials. Residential real estate prices rose by 4.6% in 2020, but the year-on-year rate of growth surged to 7.3% in the first quarter of 2021 amid the gradual economic recovery in the early part of the year, and to 9.9% in the second quarter. A significant rise in residential real estate prices was recorded in the majority of European countries: the year-on-year rate averaged 5.8% in the euro area. The increased growth in residential real estate prices has been reflected in indicators of the overvaluation of residential real estate: the majority of the indicators already suggest that prices are high relative to fundamentals. Nominal residential real estate prices have now surpassed their peak from 2008, while real residential real estate prices remain down around 10% on their peaks from 2007 and 2008. Year-on-year growth in housing loans stood at 5.6% in the second quarter of 2021. The commercial real estate market is also showing signs of recovery, although transactions in commercial real estate were dependent mostly on sales of office space and retail and catering establishments. There is also moderate optimism on the real estate market over the medium term on the supply side, particularly in the construction sector, where the number of issued building permits for residential buildings remained relatively high in the first half of 2021. The banks' exposure to the construction and real estate activities sectors remains low: the stock of loans amounted to EUR 0.95 billion at the end of June, down around EUR 2.5 billion on the peak exposure from 2011.

Developments on the residential real estate market

Although it had seemed that growth in residential real estate prices had eased off in late 2020, it strengthened again in the first half of 2021. Residential real estate prices were up 7.3% in year-on-year terms in the first quarter of this year, and fully 9.9% in the second quarter (see Figure 1.23). A surge in year-on-year growth (to 13.1%) was seen in the first quarter in prices of newly-built residential real estate, growth in which had been outpaced by growth in prices of used housing in 2018, 2019 and, in part, 2020. Growth in prices of new-build residential real estate slowed in the second quarter of this year. Despite their high growth in recent quarters, the number of transactions in newly-built real estate indicates that they account for just a small share of volume compared with used flats (see Figure 1.24). The total number of transactions in the

third wave of the epidemic (Q4 2020 and Q1 2021) was down around 400 on the third quarter of 2020 in the final quarter of 2020 and around 900 in the first quarter of 2021, but was up on the second quarter of 2020 during the first wave of the epidemic. The number of transactions rose again in the second quarter of 2021, to around 4,000.

Figure 1.23 Residential real estate prices

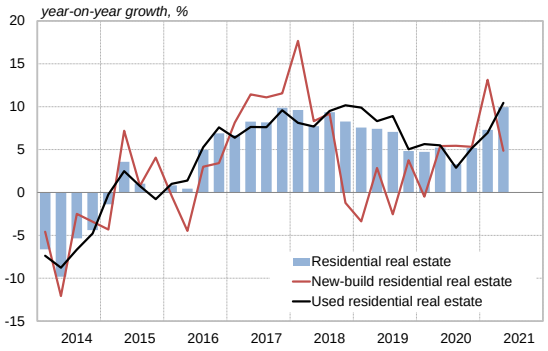
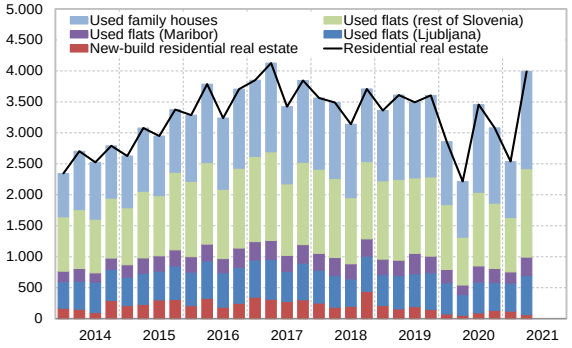


Figure 1.24 Number of transactions in residential real estate



Source: SORS

Residential real estate prices rose sharply in the first quarter of 2021, irrespective of location and type. According to the SMARS figures, the prices per square metre of used flats rose most in the second half of 2020 on the coast, and in Ljubljana and its surroundings, where they remain highest in absolute terms, at between EUR 2,500 and EUR 3,000 (see Figure 1.25). Growth in the price per square metre in Maribor, Celje and Kranj slowed in the second half of 2020. Growth in prices strengthened in the first quarter of 2021 for all types of residential real estate other than newly-built family houses (see Figure 1.26).

Figure 1.25 Average prices of used flats across Slovenia and in major towns

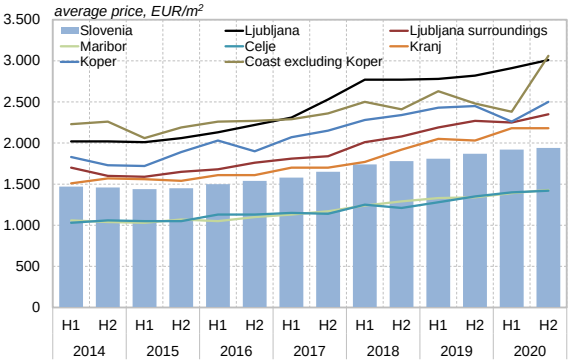
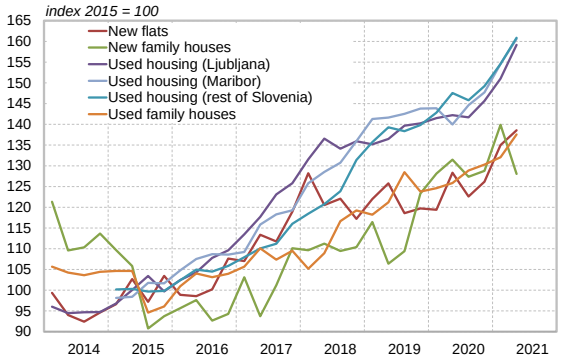


Figure 1.26 Change in residential real estate prices according to type of property



Note: The average price of used flats across Slovenia and in the major towns in the left figure is estimated for the second half of 2020 on the basis of SMARS figures for all of 2020 and the first half of 2020, according to the following calculation: $P_{2020} = P_{2020H1}/2 + P_{2020H2}/2$ or $P_{2020H2} = 2*P_{2020} - P_{2020H1}$.

Sources: SMARS, SORS

Price dynamics on the residential real estate market in Europe remain heterogeneous, although the high growth in prices warns of an overheating real estate market in the majority of countries.[17] Slovenia's year-on-year growth in residential real estate prices in the final quarter of 2020 (7.3%) ranks it above the euro area average (5.8%) and the EU average (6.1%) (see Figure 1.27). In certain countries, including larger EU economies such as Germany, Austria and the Netherlands, year-on-year growth in residential real estate prices exceeded 8% in the final quarter. By contrast, year-on-year growth in construction output in Slovenia was negative in the final quarter, in the amount of 4.4% (see Figure 1.28) Year-on-year growth in construction output was positive in the euro area overall and the EU overall, at 2.0% and 1.2% respectively.

[17] Conversely, the number of transactions on the real estate market was down in year-on-year terms in late 2020 and in the first quarter of 2021 in the majority of countries reporting the data to Eurostat (ten countries, including Slovenia).

Figure 1.27 Year-on-year growth in residential real estate prices in EU Member States

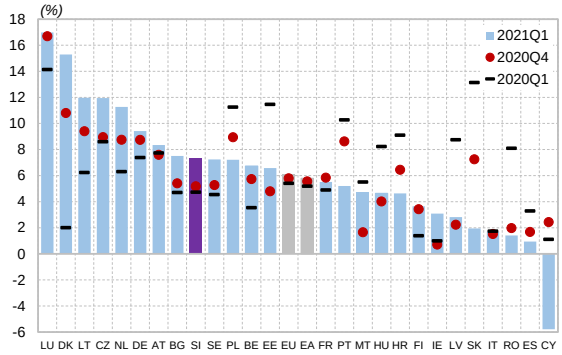
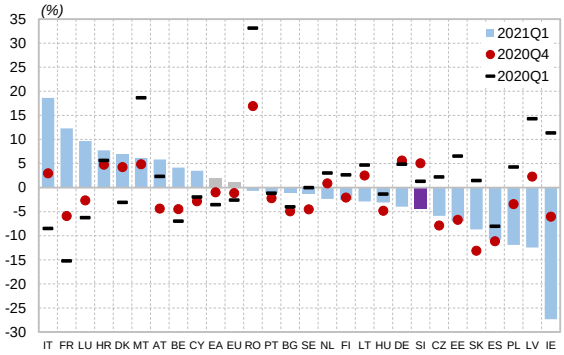


Figure 1.28 Year-on-year growth in construction output in EU Member States



Source: Eurostat

Sales of residential real estate in the first quarter of 2021 remained at levels similar to those seen after the significant decline in the second quarter of 2020, but increased significantly in the second quarter of 2021 as the number of transactions in used residential real estate rose. The decline in sales in 2020 was primarily reflected in the newly-built segment: sales of newly-built residential real estate in 2019 were almost double those in 2020 (see Figure 1.29). By contrast, the number of issued building permits in the first half of 2021 remained at the level seen at the end of 2020. It is also encouraging that the share of building permits for residential real estate accounted for by multi-dwelling buildings increased in the final quarter of 2019, and averaged 8% between Q4 of 2019 and Q2 of 2021 (see Figure 1.30). The figure had averaged just 4% between 2014 and the end of 2019. In the medium term this might be indicative of an additional revival of the residential real estate market.

Figure 1.29 Sales of residential real estate

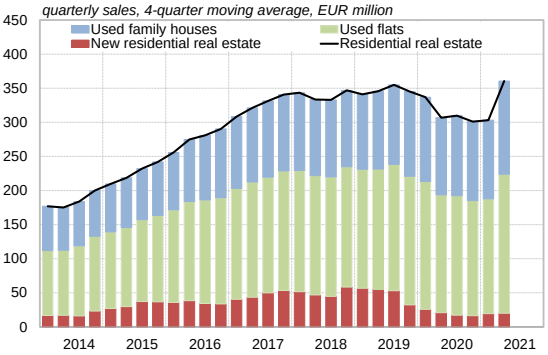
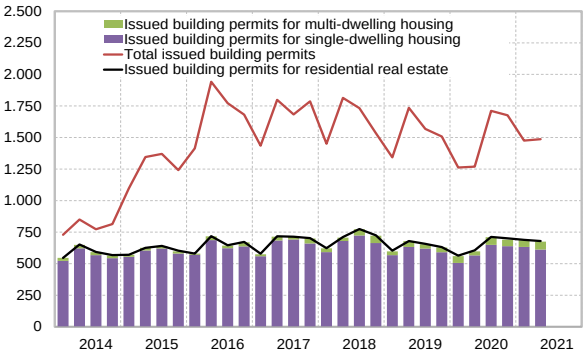


Figure 1.30 Number of issued building permits



Source: SORS

The trend of rising housing prices in Slovenia reflected the general growth in GDP and in household disposable income, and the favourable borrowing terms on the bank lending market, particularly in the years leading up to the pandemic. During the pandemic, however, the price dynamics of residential real estate did not respond particularly to the decline in GDP in 2020, other than through a slowdown in growth (see Figure 1.31). Furthermore, price growth responded to the onset of the recovery of the Slovenian economy in the first half of 2021 by increasing, similarly to other EU Member States. The recent higher growth in residential real estate prices is attributable to the fact that amid the government support measures households have maintained their income at relatively high levels, despite the decline in consumption, while lending for the purchase of residential real estate remained robust. The latest construction figures show employment in construction and real estate activities to be rising, while value-added in both sectors remains robust (see Figure 1.32). The decline in productivity in real estate activities has consequently come to an end, while productivity in construction is at the level seen in 2015.

Figure 1.31 Change in real GDP and in nominal and real residential real estate prices

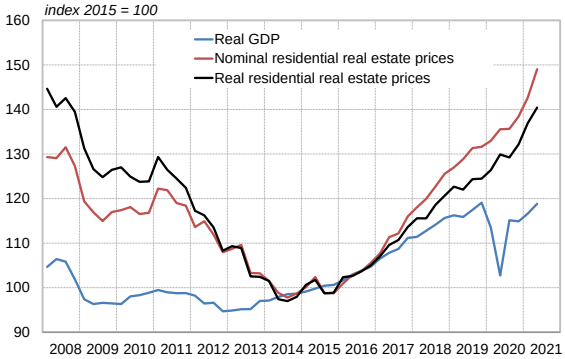
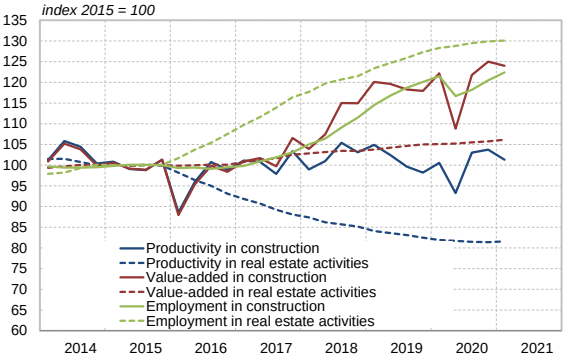


Figure 1.32 Productivity, value-added and employment in construction



Note: Real residential real estate prices are calculated from nominal residential real estate prices and the HICP deflator. Productivity in construction is defined as average labour productivity relative to value-added.

Source: SORS

The recent dynamics in the majority of indicators of the overvaluation of residential real estate suggest that prices of residential real estate are moving into the region of overvaluation relative to fundamentals.[18] In particular the price-to-rent ratio indicates that average prices of residential real estate in Slovenia have increased significantly compared with rents, which were down in year-on-year terms in late 2020 and early 2021 (see Figure 1.33). The more complex indicator of overvaluation of residential real estate is also on the threshold of 10% overvaluation, with multiple sub-components contributing equally to the overvaluation, with the exception of the loan sub-component (see Figure 4.12). The UOC model estimate and the real index of real estate prices are also close to the region of moderate overvaluation (see Figure 1.33). By contrast, the ratio of residential real estate prices to disposable income and the ratio of the average price of a used flat in Ljubljana (60 m^2) to the number of average annual wages are around their long-term averages, as the income base (i.e. the average net annual wage or aggregate disposable income) increased sharply in late 2020 and early 2021 alongside the higher growth in residential real estate prices.

Figure 1.33 Various indicators of overvaluation of residential real estate

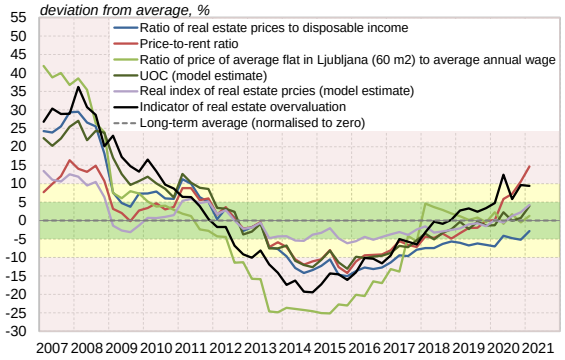
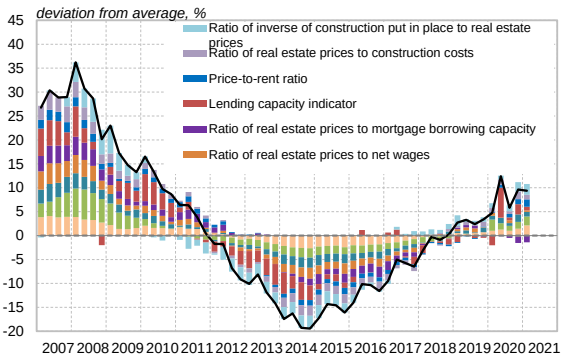


Figure 1.34 Indicator of overvaluation of real estate and subcomponents thereof



Note: The indicators of housing price alignment with fundamentals are normalised around their own long-term averages, which are assigned a value of zero. This provides for a simpler comparison between different indicators, while each indicator's deviation from the long-term average illustrates the overvaluation or undervaluation of residential real estate. The majority of indicators are calculated as the ratio of two different indices, while the calculation of the indicator of overvaluation of real estate follows the methodology set out by Lenarčič and Damjanović (Lenarčič, Č. and Damjanović, M. (2015), Slovene residential property prices misalignment with fundamentals, Banka Slovenije Discussion Papers), while the model-estimated real index of real estate prices follows the methodology that was described in detail in the thematic section of the June 2019 issue of the Financial Stability Review. The UOC (unobserved components methodology) is based on the methodology of isolating cyclical and one-off components from the trends in a particular time series (the calculation follows the methodology of Rünstler and Vlekke, 2018). The difference between the actual data and the smoothed UOC time series represents the deviation in real estate prices from their long-term average. The thresholds of overvaluation are defined such that a deviation

[18] The indicators of overvaluation illustrate the relative overvaluation of real estate, and not absolute overvaluation. When this text refers to "overvaluation", it means in the sense of relative overvaluation. Relative overvaluation means that the dynamics in residential real estate prices are compared with the long-term dynamics in another particular fundamental or fundamentals, which in most cases have the nature of income (e.g. GDP, disposable income), prices (e.g. general inflation, rents) or costs (e.g. construction costs, interest rates on housing loans). The advantage in calculating relative overvaluation rather than absolute overvaluation is that relative overvaluation can be assigned a specific reference point (the fundamental in the numerator). With absolute overvaluation there is no reference point; instead it is the subjective perspective of the buyer or vendor that is important. Absolute overvaluation from the perspective of the buyer can differ considerably from that from the perspective of the vendor.

of more than 10% (red band) above or below the long-term average represents overvaluation or undervaluation of real estate, while a deviation of between 5% and 10% (yellow band) indicates slight overvaluation or slight undervaluation of real estate. The indicators are aligned with fundamentals if they lie in the green band, i.e. if the deviation from the long-term average is less than 5%. The indicators of overvaluation also differ in terms of observation period. The UOC indicator is taken from the period between Q1 1996 and Q1 2021. The ratio of the average price of a flat (60 m^2) in Ljubljana to the average annual wage is taken from the period between Q1 2000 and Q1 2021. The indicator of overvaluation of real estate is also taken from the period between Q1 2000 and Q1 2021. The model-estimated real index of real estate prices is taken from the period between Q4 2001 and Q1 2021. The ratio of real estate prices to disposable income and the price-to-rent ratio are taken from the period between Q1 2007 and Q1 2021.

Sources: Eurostat, SORS, SMARS, ECB (SDW)

The dynamics in average prices per square metre of used flats in Slovenia and in Ljubljana were similar over time, and the gap between average price levels in Slovenia and in Ljubljana was relatively stable, although it has widened slightly in the last three years. The ratio of the average price of a used flat in Ljubljana (60 m^2) and the number of average net annual wages is around 12, compared with a figure of around 8 for Slovenia overall (see Figure 1.35). The gap between the two indicators was widest in 2007 and 2008, when it needed around 5 average net annual wages more to buy a used flat in Ljubljana than in Slovenia overall. Conversely, the gap was narrowest in 2013, at around 3 average net annual wages. When real estate prices fell between 2010 and 2015, rental yields increased (see Figure 1.36). The beginning of the period of extremely low interest rates in 2014 saw rental yields also begin to fall, with a lag. This was attributable in part to a lack of safer but higher-yielding alternative investments compared with long-term deposit rates. Given the larger spread between the long-term deposit rate and rental yields, in recent years there has been a tendency to assume that real estate prices would rise in the future.

Figure 1.35 Ratio of average price of a used flat in Ljubljana and in Slovenia (60 m^2) to average annual wage

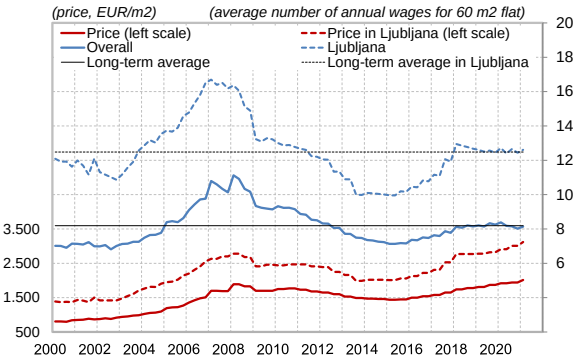
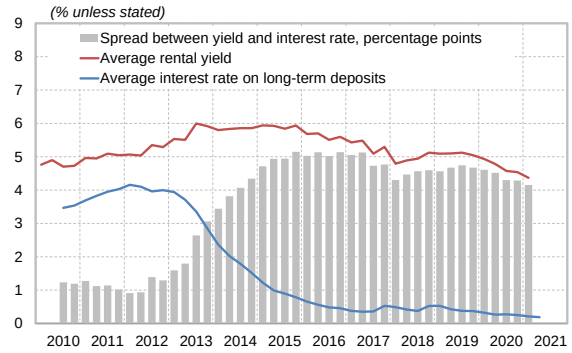


Figure 1.36 Rental yield



Note: Rental yield is calculated as follows: (annual gross rental income / price of real estate)*100 = ((monthly rent per square metre *12) / average price per square metre of real estate)*100.

Sources: SMARS, SORS, Slonep

Supply and demand on the real estate market

Consumer confidence, which is not yet at its pre-pandemic levels, was gradually improving into the summer of 2021. Consumer indicators improved in all segments, as expectations of the future economic situation and the financial situation of households rose, while expectations of a rise in unemployment fell (see Figure 1.37). Consumers' expectations with regard to the timing of major purchases also rose, as did expectations of price trends in the next 12 months. There is also pronounced optimism evident in business trends in construction, which have now reached their level of 2018 (see Figure 1.38).

Figure 1.37 Consumer confidence

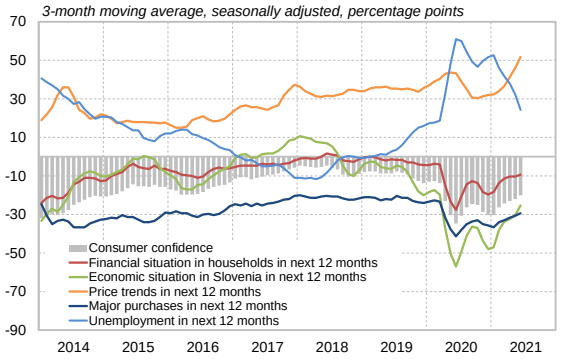
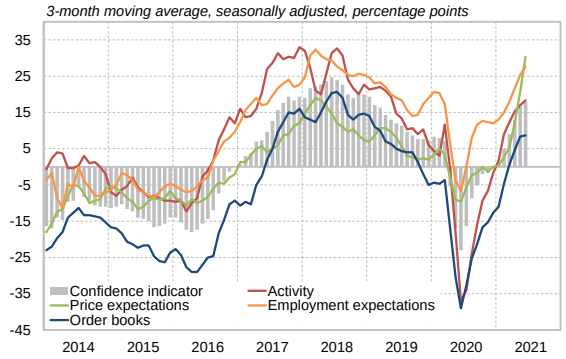


Figure 1.38 Business trends in construction



Source: SORS

The improvement in confidence indicators also brought an increase in demand for housing loans. There were several factors at work here, but the increase was driven most notably by the outlook for the housing market, the low interest rate environment, and the availability of financing[19] (see Figure 1.39). On the supply side construction costs are rising, driven primarily by labour costs, which are rising in line with hiring in construction (see Figure 1.40). Material costs also rose in the first quarter of 2021, in line with the rise in global commodity prices.

Figure 1.39 Demand for housing loans and demand factors

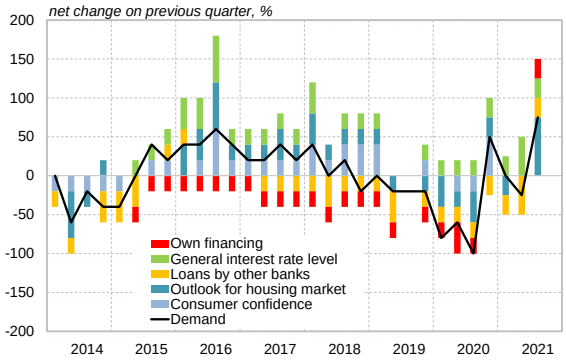
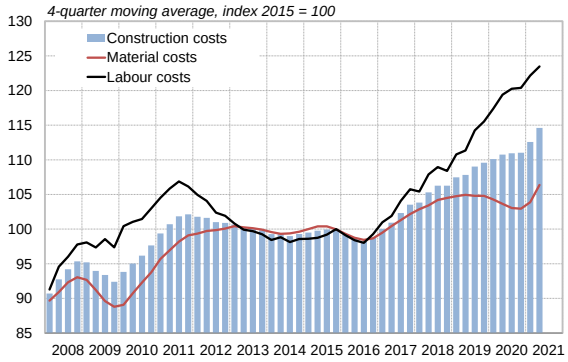


Figure 1.40 Nominal costs in construction



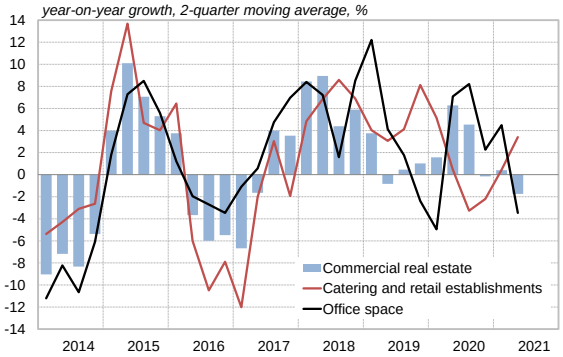
Sources: SORS, ECB (SDW)

Developments on the commercial real estate market

Prices on the commercial real estate market fell slightly in the second quarter of 2021, having risen by 1.3% in year-on-year terms in the first quarter, driven above all by sales of office space and retail and catering establishments. Commercial real estate prices had come under the negative influence of Slovenia's cooling economy in 2019, and were then affected by the pandemic situation in 2020 (see Figure 1.41). Prices of retail and catering establishments were up 0.9% in year-on-year terms in the first quarter of 2021, while year-on-year growth in prices of office space was slightly higher, at 4.3%. Prices of office space suffered a downward correction in the second quarter, in the amount of 11.2% in year-on-year terms, while year-on-year growth in prices of retail and catering establishments strengthened to 5.9%. The number of issued building permits in the first half of 2021 was down slightly on the end of 2020, but a larger share of the construction of commercial real estate was intended for own use (see Figure 1.42). The commercial real estate market in Slovenia thus remains small, and is concentrated solely in the major retail centres and the central parts of the largest towns. As a result, high volatility in prices and transactions is typical of the commercial real estate market, while the rental market is highly competitive because of the small number of commercial premises aimed at the market.

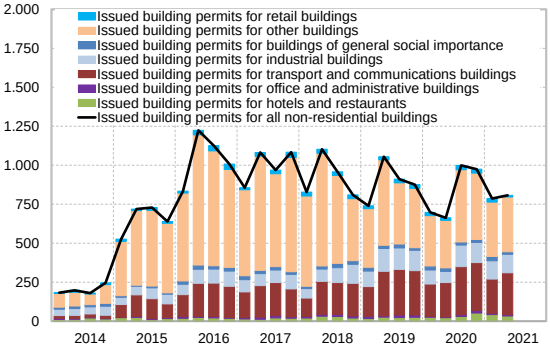
[19] For more on developments in interest rates on housing loans, see the section on interest rate risk.

Figure 1.41 Commercial real estate prices



Source: SORS

Figure 1.42 Issued building permits for commercial real estate



Real estate market and the banking system

After recording moderate growth in the first quarter of 2021 (a year-on-year rate of 4.0%), housing loans were up 5.6% in year-on-year terms in the second quarter. The moderate increase in growth in housing loans is still reflective of the dynamics in the majority of indicators on the commercial real estate market (see Figure 1.43). The higher growth in new housing loans brought an increase in the share of the total stock of housing loans accounted for by new housing loans, to around 2.5%.[20] Following the moderate increase, growth in housing loans slightly outpaced growth in housing loans in the euro area overall, but remains between the 25th and 75th percentiles of the distribution of growth in euro area countries (see Figure 1.44).

Figure 1.43 Share of total stock of housing loans accounted for by new housing loans, and year-on-year growth in housing loans

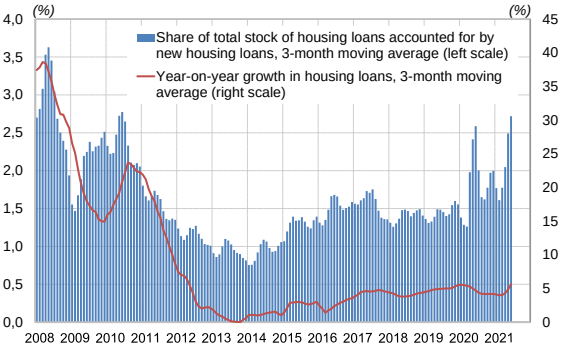
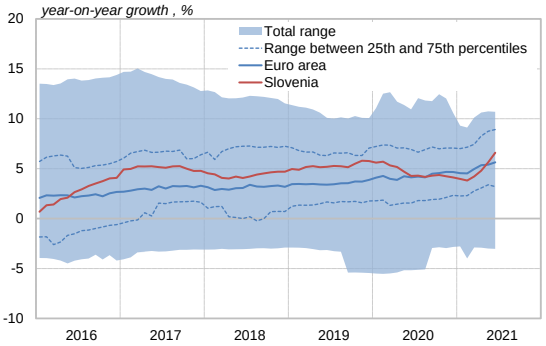


Figure 1.44 Comparison of growth in housing loans between Slovenia and the euro area



Sources: Banka Slovenije, ECB (SDW), Banka Slovenije calculations

The tightening of credit standards on new housing loans reduced in the first half of 2021 compared with 2020, and particularly the first half of the year, in Slovenia and in the euro area overall (see Figure 1.45). The LTV for new housing loans in the second quarter of 2021 stood at 63.4%, down almost 5 percentage points on the figure of 67.9% recorded at the end of 2020. This brought an improvement in the structure of the LTV for housing loans: the share of housing loans with an LTV of more than 80% stood merely at around 10% in the second quarter of 2021 (see Figure 1.46). The figure had stood at 20% in 2019, and 15% in 2020.

[20] The share of the total stock of housing loans accounted for by new housing loans in the euro area is around 2.5%.

Figure 1.45 Credit standards for housing loans

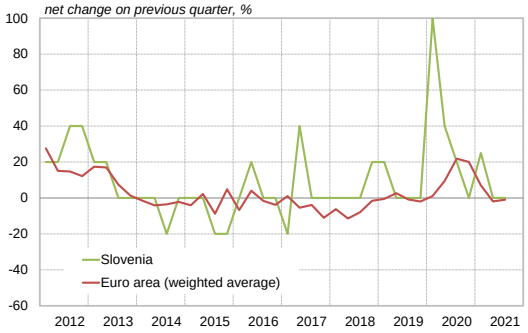
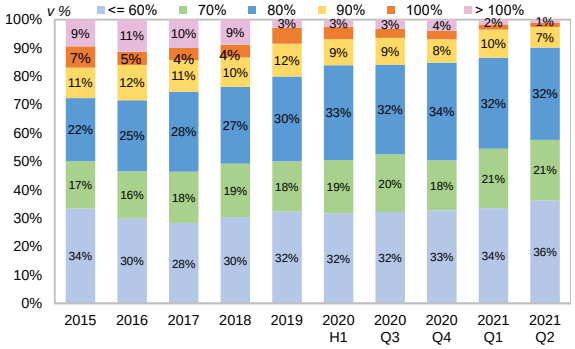


Figure 1.46 Distribution of LTV for housing loans



Note: The data in the left figure illustrates the net percentage change in the credit standards on the previous quarter (the net percentage of credit institutions in the sample recording a tightening of credit standards). A positive net change indicates a tightening of credit standards, while a negative net change indicates an easing of credit standards.
Sources: Banka Slovenije, ECB (SDW)

Despite an improvement in the majority of indicators in the construction sector, the banks only saw a slight increase in the share of corporate loans accounted for by their exposure to construction and real estate activities, to 10.6%, or 4.0% of loans to the non-banking sector. Exposure to construction and real estate activities accounted for 10.0% of total corporate loans at the end of 2019 before the pandemic (see Figure 1.47). The stock of loans earmarked for the construction sector and the real estate activities sector amounted to EUR 0.95 billion at the end of June 2021. The stock of household loans is increasing more strongly: it amounted to around EUR 7.1 billion at the end of June 2021, or 29.2% of total loans to the non-banking sector, as new loans averaged EUR 143 million over the same period (see Figure 1.48).

Figure 1.47 Stock of loans to the construction and real estate activities sectors

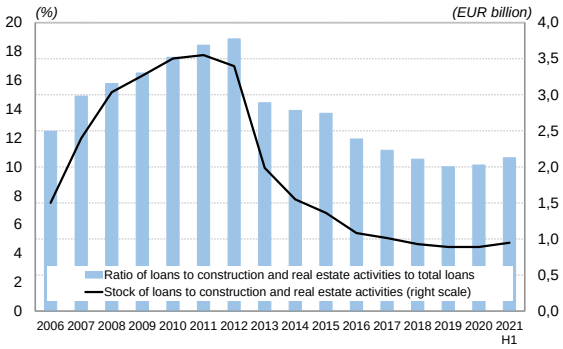
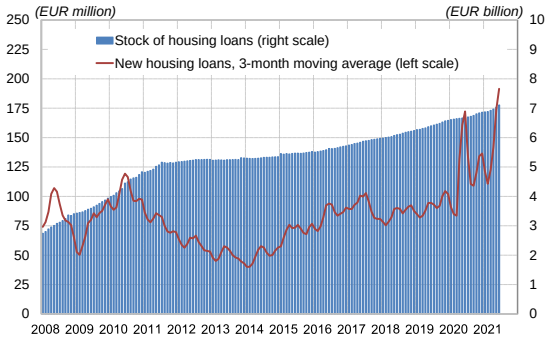


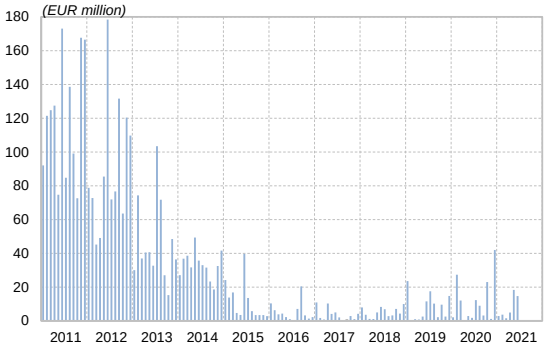
Figure 1.48 Stock of and growth in housing loans



Source: Banka Slovenije

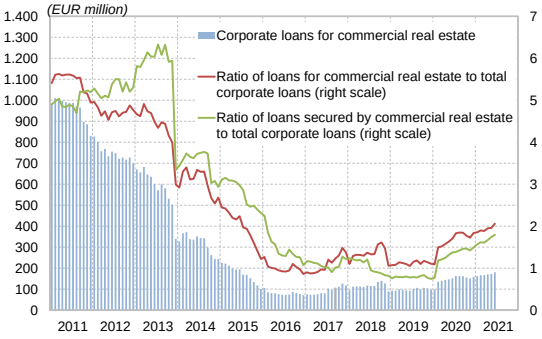
Growth in bank loans to non-financial corporations to finance the purchase of real estate remained moderate in the first half of 2021. The stock of loans to non-financial corporations for commercial real estate amounted to EUR 181 million in June of this year, up around EUR 30 million in year-on-year terms (see Figure 1.50). New loans for commercial real estate averaged EUR 7.7 million per month in the first half of the year, compared with EUR 10 million in the same period last year (see Figure 1.49). The slower pace of developments in the commercial real estate market compared with the residential real estate market is nevertheless a general reflection of the reduced corporate demand for bank financing in the last six years.

Figure 1.49 New corporate loans for commercial real estate



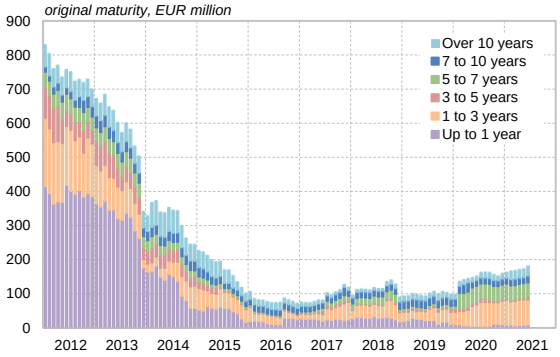
Source: Banka Slovenije

Figure 1.50 Stock of corporate loans for commercial real estate



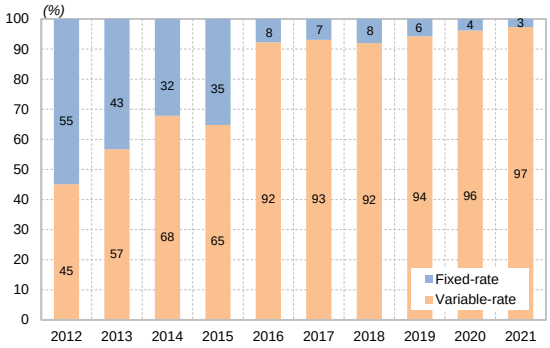
The majority of loans for commercial real estate are still variable-rate. Some 97% of all loans for commercial real estate were variable-rate at the end of June 2021, and all loans were euro-denominated (see Figure 1.52). The maturity breakdown of loans stabilised in the first half of 2021, at an average maturity of around 5 years (see Figure 1.51).

Figure 1.51 Breakdown of stock of loans for commercial real estate by maturity



Source: Banka Slovenije

Figure 1.52 Breakdown of stock of loans for commercial real estate by type of remuneration



1.3 Funding risk

Deposits by the non-banking sector again increased sharply in the first half of this year, and thus remained a stable source of funding for Slovenian banks. The main increase was in household deposits, as households remained cautious in the disposal of their savings, despite the increased opportunities to spend as the containment measures were relaxed. By contrast, non-financial corporations began reducing their holdings at banks in the second quarter, most likely because of a need for liquidity in rebooting their activities at full capacity, while some also made withdrawals as a result of a cut in the threshold at which custody fees apply. The uncertainty surrounding the evolution of the pandemic, the low interest rates and the introduction of custody fees are the most likely reasons that savers still want to be able to freely dispose of their savings held in bank accounts. The current inflow of deposits nevertheless remains an important source of bank funding, while the high and still-rising proportion of sight deposits is contributing to a relatively large maturity gap, as a result of which funding risk continues to be assessed as moderate. A sudden stress event could trigger withdrawals of deposits, and thus funding instability at certain banks, but our current assessment is that the probability of the realisation of this risk in the near future is low. The banking system's dependence on wholesale funding remains low, as does exposure to the risk of the international financial markets having an adverse impact on the funding of Slovenian banks.

Bank funding

After the epidemiological situation improved in the spring and opportunities to spend increased, deposits by the non-banking sector, primarily household deposits, strengthened sharply in the first half of 2021. The stock of deposits by the non-banking sector increased by EUR 1.6 billion in the first half of the

year (see Figure 1.54), comparable to the increase in the first half of 2020. Year-on-year growth in deposits by the non-banking sector slowed in the second quarter of the year, primarily as a result of a decline in deposits by non-financial corporations, and stood at 9.8% in June, still above its pre-pandemic level.

The main increase in other sources of funding was recorded by liabilities to the Eurosystem. Certain banks participated in TLTRO-III tenders at the Eurosystem and obtained favourable funding, which in the future they intend to primarily direct into financing businesses. Despite the increase, the proportion of total funding accounted for by these liabilities remained relatively low (see Figure 1.53), at 5.2% at system level in June 2021. As in recent years, the majority of banks had no major need for borrowing at foreign banks or via the issuance of debt securities in the first half of 2021, and the proportion of total funding accounted for by wholesale funding thus remained at 5.9%. Given Slovenian banks' low dependence on wholesale funding, their funding remains less exposed to the transmission of adverse influences from foreign financial markets.

Figure 1.53 Bank funding

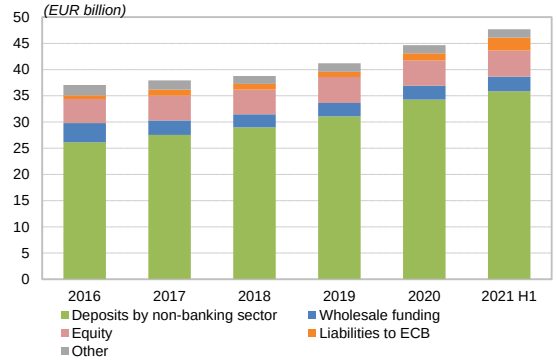
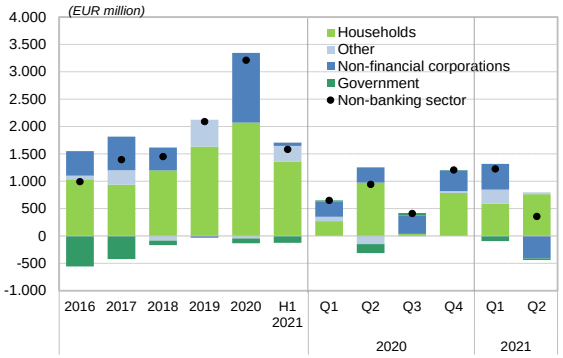


Figure 1.54 Net change in deposits by sector



Note: Wholesale funding comprises liabilities to banks in the rest of the world and issued debt securities.
Source: Banka Slovenije

The increase in household deposits, which became even more pronounced after the containment measures were tightened in October 2020, continued in the first half of 2021. The stock of deposits increased by EUR 1.4 billion to EUR 23.8 billion. Year-on-year growth in household deposits slowed to 10.1%, on account of the slightly higher inflows in the second quarter of 2020. Households continued to increase their holdings in bank accounts, even after the rebooting of all sectors of the economy in the second quarter of 2021 and the increase in opportunities to spend and invest. The growth in household savings at banks was driven by wage growth, government financial support to alleviate the impact of the pandemic and, in part, seasonal factors (payment of leave allowance). The monthly increase in household deposits averaged EUR 255 million in the second quarter of 2021, up a third of the average monthly increase in 2020.

This behaviour by households in the disposal of their savings is most likely attributable in part to precautionary behaviour and the need to ensure personal liquidity reserves, as the evolution of the pandemic remains uncertain. For fully 88% of people,[21] their savings[22] held at a single bank are less than EUR 20,000, where the average holding in this bracket is EUR 2,800. Custody fees on personal banking customers' savings have only been introduced by a few banks, for savers whose total holdings exceed a certain predetermined threshold. This varies from bank to bank and can change, but at no bank was it lower than EUR 100,000 in September 2021. Some 1.1% of personal banking customers held more than EUR 100,000 of savings at a single bank at the end of 2020, their holdings amounting to EUR 4.9 billion. The further introduction of custody fees for personal banking customers' savings or reductions in the thresholds could trigger the partial withdrawal of deposits from banks and the switching of bank deposits into other forms of investment (mutual funds, pension saving, real estate), which has already been noted by certain

[21] The data given later in this paragraph is based on data for 2020, which the banks report to Banka Slovenije in accordance with the Regulation on the deposit guarantee scheme (Official Gazette of the Republic of Slovenia, Nos. 49/16, 27/17 and 139/20), and which covers eligible deposits of depositors as defined in Article 9 of the Deposit Guarantee Scheme Act (Official Gazette of the Republic of Slovenia, No. 27/16). The nomenclature for the forms of deposits used in the analysis complies with Appendix IV of the Regulation on the deposit guarantee scheme (Official Gazette of the Republic of Slovenia, Nos. 49/16, 27/17 and 139/20). Detailed analysis of this data was presented in the April 2021 issue of the Financial Stability Review (Box 1.3 on page 39).

[22] "Savings" means all funds that an individual personal banking customer holds with an individual bank (current account balances, regular savings accounts, savings accounts, fixed-term deposits and other forms of saving).

banks that have introduced custody fees.[23] They state that savers are redirecting some of their savings internally at the same bank, most notably into mutual funds.

Year-on-year growth in deposits by non-financial corporations slowed in the first half of 2021 (see Figure 1.55), but remained higher than before the pandemic, at 10.6% in June. The stock of deposits by non-financial corporations increased by just EUR 61 million to EUR 8.1 billion, as firms reduced their savings at banks, particularly in the second quarter. They primarily declined at the banks that during this period reduced the threshold for charging custody fees. The stock of non-financial corporations' savings held at banks in the rest of the world, primarily Austria, Germany and Italy, most likely the countries where their business partners or owners are headquartered, has increased by EUR 223 million over the last 12 months to EUR 991 million. Our expectation is that deposits by non-financial corporations at banks will gradually decline in the future, as during an economic crisis the worst-affected firms in particular will need liquidity for current operations, while others will need it for financing new investment or investment postponed during the pandemic.

Like in Slovenia, deposits by the non-banking sector have strengthened over the last year in two-thirds of euro area countries. Slovenia was not an outlier in terms of year-on-year growth in deposits by the non-banking sector, which averaged 7.6% in the euro area, but is in terms of the importance of this funding to its banks (see Figure 1.56). Slovenia is ranked second in the euro area in terms of the ratio of deposits by the non-banking sector to the balance sheet total. Household deposits and deposits by non-financial corporations are the prevailing deposits.

Figure 1.55 Growth in deposits by sector

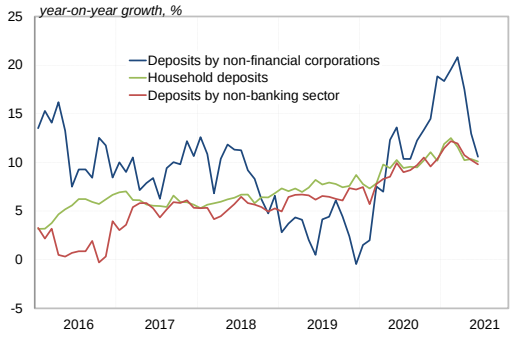
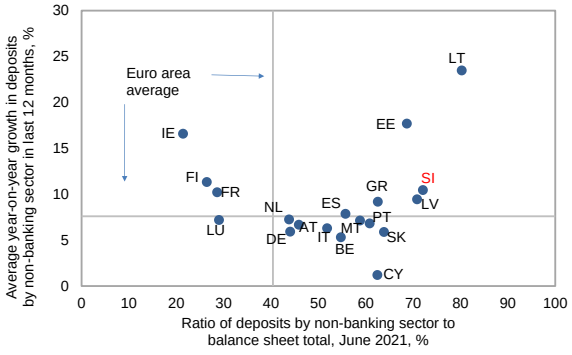


Figure 1.56 Comparison of deposits by the non-banking sector between Slovenia and the euro area



Note: The right figure illustrates consolidated data. Average year-on-year growth in deposits by the non-banking sector is calculated for the preceding 12 months (May 2020 to June 2021).
Source: Banka Slovenije

The LTD ratio for the non-banking sector declined further in the first half of 2021, as a result of growth in deposits by the non-banking sector significantly outpacing growth in loans. It stood at 66.9% in June, down 5 percentage points on a year earlier (see Figure 1.57). The increase in loans to the non-banking sector in the first half of 2021 was merely just over a quarter more than the increase in deposits by the non-banking sector. This means that the banks were able to fully finance their lending activity without depending on other (non-deposit) funding. At the same time it also indicates that they were not able to direct the majority of funding, which has been left in accounts at the central bank, into lending, which is a vital asset for banks from the perspective of their returns. In Slovenia, as in all other euro area countries, the LTD ratio has declined over the last 12 months (see Figure 1.58), and averaged 89% in the euro area overall at the end of the first quarter of 2021. Five countries, mainly smaller countries, had an LTD ratio lower than Slovenia.

[23] The findings are based on a survey of future challenges facing the banking system, which was conducted at banks, savings banks and branches in August 2021.

Figure 1.57 LTD ratio for non-banking sector

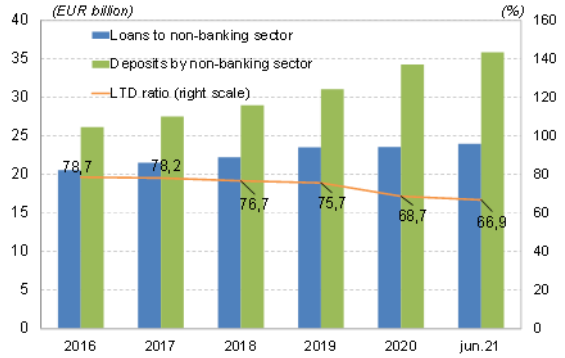
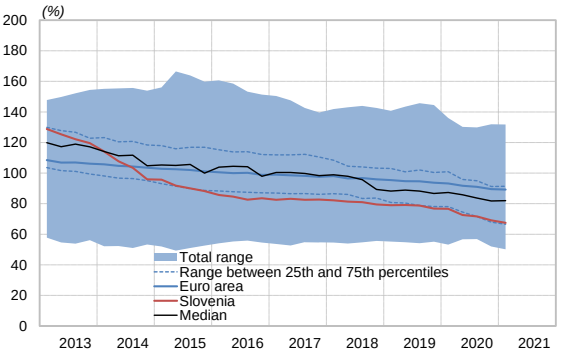


Figure 1.58 Comparison of LTD ratio for non-banking sector between Slovenia and the euro area



Sources: Banka Slovenije, ECB (SDW), own calculations

Deposit maturity and maturity gap between assets and liabilities

Low deposit rates, the introduction of custody fees at certain banks, and the uncertainty surrounding the future evolution of Covid-19 are continuing to deter savers from committing to fixed-term deposits at banks. Sight deposits therefore increased sharply again in the first half of 2021, and at the end of June accounted for almost 81% of total deposits by the non-banking sector (see Figure 1.59) and 85% of total household deposits, the highest figure since 1994. Short-term and long-term deposits declined (see Figure 1.60). Savers are thus retaining the option of immediately using their savings in the event of liquidity needs, and our expectation is that this trend will continue in the future.

Figure 1.59 Breakdown of deposits by the non-banking sector by maturity

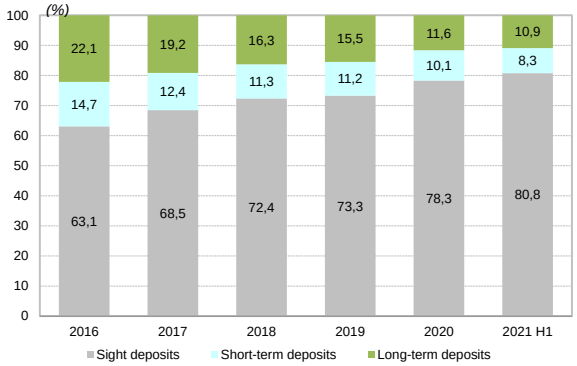
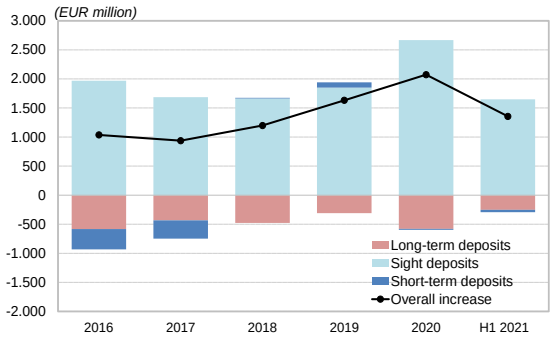


Figure 1.60 Increase in household deposits by maturity



Source: Banka Slovenije

Like in Slovenia, household sight deposits increased in the first half of 2021 in all other euro area countries. Growth in household sight deposits in Slovenia stood at 15.4%, outpacing the euro area average by almost 5 percentage points. Among euro area countries Slovenia is notable for the importance of household deposits on bank balance sheets, predominantly sight deposits (see Figure 1.62). Slovenian banks are thus more exposed to funding risk in the event of any instability in this funding than are banks in countries where the ratio of sight deposits to the balance sheet total is lower.

Figure 1.61 Proportion of household deposits accounted for by sight deposits in Slovenia and the euro area

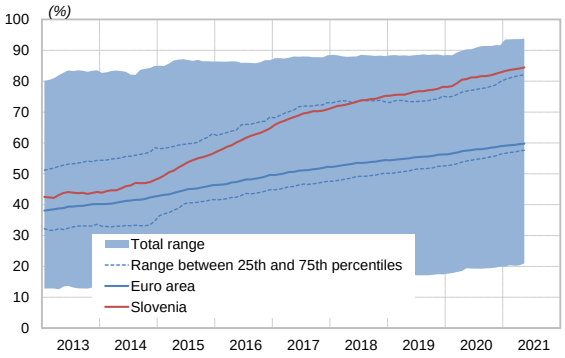
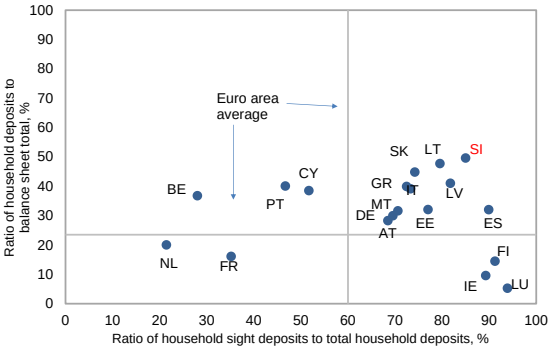


Figure 1.62 Comparison of sight and total household deposits by individual euro area countries, June 2021



Sources: ECB (SDW), own calculations

A potential source of instability in funding comes from the maturity gap between assets and liabilities, which despite narrowing remains relatively large. This risk might be realised at certain banks in the event of a sudden switching of deposits between banks or a withdrawal of deposits from the banking system. The maturity gap declined by 2 months over the first half of 2021 to 4.4 years, still almost 1 year more than the figure prior to the surge in sight deposits in 2013 (see Figure 1.63). The narrowing of the gap was primarily attributable to the increase in liquid assets in accounts at the central bank, which was more pronounced than the increase in short-term and long-term loans to the non-banking sector (see Figure 1.64), as a result of which the weighted average maturity of assets shortened. The weighted average maturity of liabilities remained low, given the high level of sight deposits by the non-banking sector, which is still increasing. Deposits by the non-banking sector have thus remained a stable source of funding, despite the Covid-19 pandemic and the introduction of custody fees for personal banking customers' savings by certain banks. The potential introduction of custody fees by other banks and reduction in the threshold at which personal banking customers' savings begin to accrue fees could drive minor switching of deposits between banks, or withdrawal from the banking system.

Figure 1.63 Weighted average maturity of assets and liabilities, and maturity gap

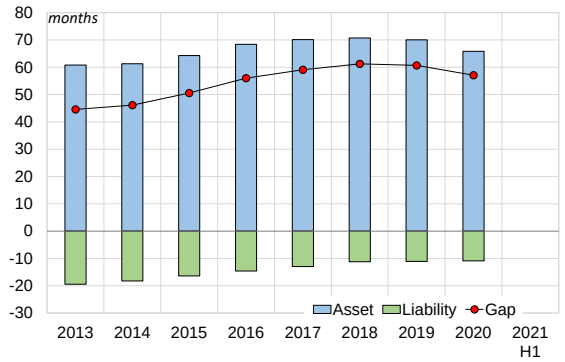
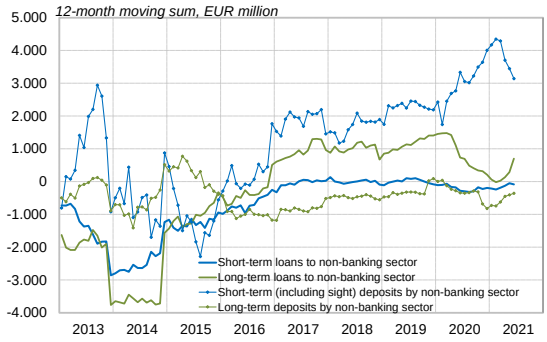


Figure 1.64 Net increases in deposits and loans to the non-banking sector by maturity



Note: Loans to the non-banking sector solely include loans at amortised cost.
Source: Banka Slovenije

1.4 Interest rate risk

In the first half of 2021 lending activity remained relatively weak, with very high growth in banks' most liquid assets and strong growth in sight deposits by the non-banking sector. This resulted in only a small increase in the banks' interest sensitivity, and interest rate risk thus remains moderate. Interest rate risk originates from the maturity mismatch between assets and liabilities that have a fixed interest rate, or in other words, from the repricing gap between assets and liabilities. The proportion of the banking system's total assets accounted for by loans to the non-banking sector declined to a half of the balance sheet total over the first half of this year, while the proportion accounted for by liquid assets increased to almost a quarter. The impact of these changes on the average repricing period of assets was largely neutralised; it lengthened

slightly during this period. By contrast, liabilities to the non-banking sector, sight deposits in particular, continued to increase sharply, shortening the average repricing period of liabilities. The repricing gap, which serves as the main parameter for monitoring interest sensitivity, thus increased slightly, although it remained strongly negative when the stability of the core component of sight deposits is taken into account. In the event of a rise in market interest rates, asset interest rates would adjust faster than liability interest rates, with a positive impact on the banks' net interest income. The average maturity of new household loans has lengthened in 2021, thanks to strong growth in housing loans, while the share of fixed-rate loans is also increasing sharply. The average maturity of new corporate loans has lengthened considerably over the last 12 months, while the share of fixed-rate loans in the first half of the year remained at a similar level to 2020. Interest rates on new long-term loans to the non-banking sector continued to fall, thereby further improving the financing conditions.

Interest sensitivity

Banks' interest sensitivity increased slightly in the first half of 2021, amid relatively weak lending activity, continued very high growth in the most liquid assets and strong growth in sight deposits by the non-banking sector, although interest rate risk remains moderate. The proportion of the banking system's total assets accounted for by loans to the non-banking sector declined over the first half of the year to stand at a half in June, down almost 7 percentage points on its pre-pandemic level. The proportion of total assets accounted for by highly liquid assets, such as cash on hand, balances at the central bank and sight deposits at banks, continued to increase sharply, reaching almost a quarter by June 2021 (see Figure 1.65). The lengthening maturities and rising share of new loans with a fixed interest rate significantly lengthened the average repricing period for loans to the non-banking sector (see Figure 1.68). The average repricing period for total assets nevertheless lengthened only moderately, as the proportion of total assets accounted for by loans to the non-banking sector declined, while there was a sharp increase in the proportion accounted for by the most liquid assets, whose maturities are very short.

Figure 1.65 Growth in the banking system's assets

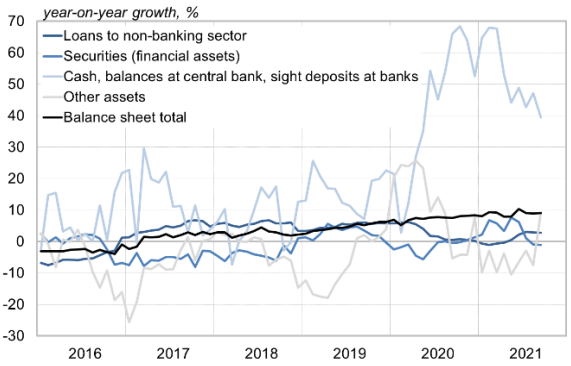
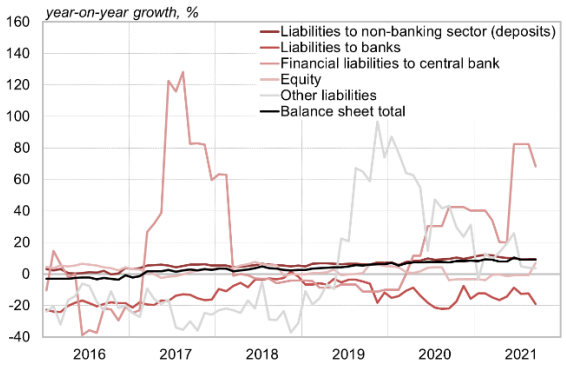


Figure 1.66 Growth in the banking system's liabilities



Note: The banking system's assets in June 2021 were broken down as follows: loans to non-banking sector 50.3%, cash in hand, balances at the central bank and sight deposits at banks 23.2%, securities (financial assets) 19.5%, loans to banks and the central bank 3.1%, investments in subsidiary banks, joint ventures and associates 1.9%, other financial assets classed as loans and receivables 0.3%, other assets 1.6%. The banking system's liabilities in June 2021 were broken down as follows: liabilities to the non-banking sector (deposits by the non-banking sector) 75.2%, equity 10.4%, financial liabilities to the central bank 5.2%, liabilities to banks 5.0%, other liabilities 4.2%. Due to rounding errors figures for individual assets or liabilities do not necessarily sum to 100%.
Source: Banka Slovenije

Liabilities to the non-banking sector continued to increase sharply in the first half of 2021, most notably sight deposits, which by June accounted for 81% of total deposits by the non-banking sector (see Figure 1.66). The average repricing period for deposits by the non-banking sector was further shortened by the increase in sight deposits (see Figure 1.68), thereby reducing the average repricing period for total liabilities. This slightly increased the repricing gap, although it remained strongly negative when the stability[24] of the core component of sight deposits is taken into account (see Figure 1.67), which means that

[24] The effective maturity and stability of sight deposits need to be taken into account for the assessment of interest rate risk. Irrespective of the contractual maturity, which for sight deposits is zero, sight deposits are classed as funding with indeterminate maturity. Their effective maturity is not unambiguously defined, and under normal market conditions it is the case that it sharply exceeds the contractually determined maturity, and can even amount to several years.

in the event of a rise in market interest rates, asset interest rates would adjust faster than liability interest rates, with a positive impact on the banks' net interest income.

Figure 1.67 Comparison of repricing gaps including off-balance-sheet items

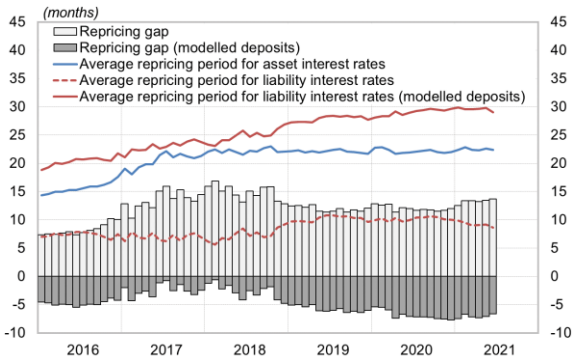
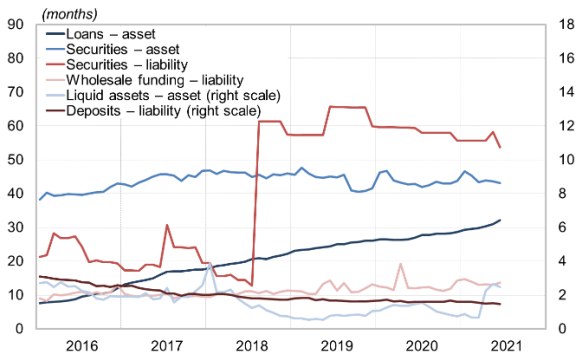


Figure 1.68 Repricing periods for individual balance sheet items



Note: The left figure takes account of a sight deposit stability of 89%[25] with the allocation of the core component of sight deposits across intervals (modelled deposits), derivatives hedges, and amortisation schedules.
Source: Banka Slovenije

The cumulative interest gap indicates that interest rate risk is increasing, the gap for the period of up to one year having declined further in the first half of 2021. Given the stability of the core component, sight deposits are allocated into maturity buckets of longer maturities. Only 38% of all sight deposits are allocated to the horizon of up to one year, while the total liabilities (including sight deposits) in the time horizon of up to one year account for approximately half of the banking system's total liabilities. By contrast, assets in the time horizon of up to one year account for 64% of the banking system's total assets, a significantly higher figure, which means that any rise in market interest rates would have a positive impact on the banks' net interest income over a period of one year. Meanwhile the gap is negative over longer time horizons, and has further increased in absolute terms, which means that any rise in market interest rates in horizons of more than one year would have a negative impact on net interest income.

Developments in loan maturity, share of fixed-rate loans, and interest rates

The average maturity of new household loans[26] has lengthened in 2021, thanks to strong growth in housing loans (see Figure 1.69), while the share of fixed-rate loans increased sharply, driven by a large increase in the share of fixed-rate housing loans (see Figure 1.71 and Figure 1.72). The average maturity for new fixed-rate housing loans remains at 18 years, while their share increased sharply as they accounted for fully 71% of all housing loans in the first half of the year. The share of the stock of housing loans accounted for by fixed-rate loans thus increased sharply in the first half of the year as it rose by 5 percentage points to 39%, the same as the increase over the whole of 2020. This increased the banks' interest sensitivity and their exposure to interest rate risk. The introduction of the binding macroprudential instrument capping maturity at seven years had seen the average maturity of consumer loans fall to below six years by the beginning of 2020, but it lengthened again over the course of the year, and fluctuated somewhere above six years in the first half of 2021, for fixed-rate and variable-rate loans alike. The share of new consumer loans accounted for by fixed-rate loans stood at 77% in the first half of the year, up 10 percentage points on 2020 amid the ongoing large year-on-year contraction in the stock. The share of the stock accounted for by fixed-rate loans is also increasing, which amid the renewed lengthening of the average maturity of these loans is increasing the banks' sensitivity to changes (rises) in market interest rates.

[25] 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.
[26] The data for the average maturity of housing loans and consumer loans has been obtained by means of a different data capture methodology, which means that the data on average maturity differs slightly from that reported in previous issues of the Financial Stability Review.

Figure 1.69 Average maturities of individual types of new long-term loan

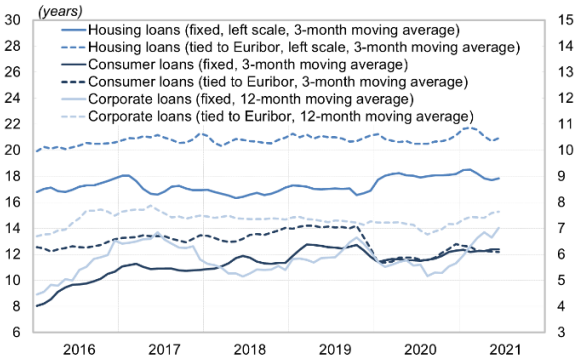
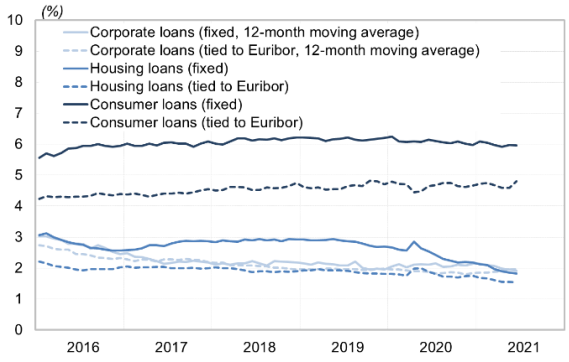


Figure 1.70 Average interest rates on individual types of new long-term loan



Note: The maturities for housing loans and consumer loans in the left figure are illustrated as three-month moving averages, while the maturities for corporate loans are given as 12-month moving averages. The data for housing loans and consumer loans has been obtained by means of a different data capture methodology, which means that the data series differ slightly from those given in previous issues of the Financial Stability Review. In the right figure the interest rate on corporate loans is illustrated as a 12-month moving average.
Source: Banka Slovenije

The average maturity of new corporate loans has lengthened considerably over the last 12 months (see Figure 1.69), while the share of fixed-rate loans in the first half of the year remained at a similar level to 2020 (see Figure 1.71 and Figure 1.72). Corporate lending continued to decline in year-on-year terms over the first half of the year, with new loans being predominantly long-term loans, which amounted to more than double the new short-term loans. The share of fixed-rate new loans remained close to its level from 2020 at 29%, thereby further increasing the share of the stock accounted for by fixed-rate loans, which reached 19% by June. There was a change in the type of interest rate breakdown of long-term loans, with the share of new fixed-rate long-term corporate loans increasing to a quarter in the first half of 2021, up 9 percentage points on the share in 2020. The lengthening of the average maturity of corporate loans and the rise in the share of fixed-rate loans lengthened the average repricing period, thereby increasing the banks' sensitivity to changes in market interest rates.

Figure 1.71 Share of fixed-rate loans for individual types of new loan

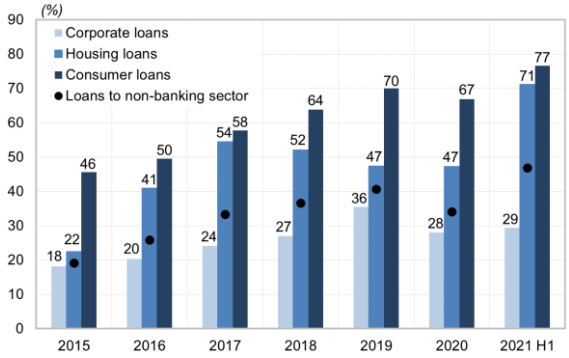
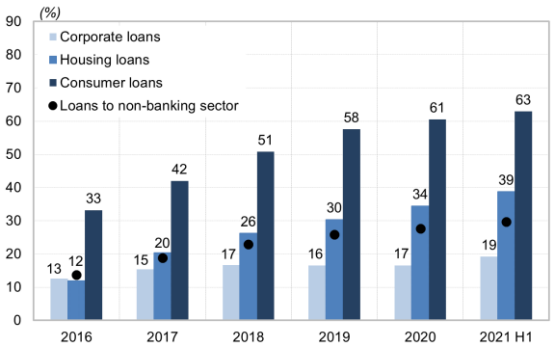


Figure 1.72 Share of fixed-rate loans for individual types of loan stock



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). Fixed-rate loans comprise loans concluded with a fixed interest rate for a period of more than one year. Loans with a combined interest rate for a maturity period of more than one year account for a negligible share, and are not included under fixed-rate loans.
Source: Banka Slovenije

Interest rates on new long-term loans to the non-banking sector continued to fall in the first half of 2021, thereby further improving the financing conditions (see Figure 1.70). These improved considerably for housing loans, as the average contractual fixed interest rate declined by a third of a percentage point over the first half of the year to reach 1.8% in June, a record low, which reduced the spread with the euro area average to just over half a percentage point (see Figure 1.73). The fall in fixed interest rates between December 2019 and June 2021 was largest in Slovenia among euro area countries (see Figure 1.74). The average variable interest rate on housing loans also fell, reaching 1.5% in June, narrowing the spread with the euro area average (see Figure 1.73). Terms for consumer loans remained similar to the beginning of the year for both types of interest rate, with an average contractual fixed interest rate of 6.0% and an average variable

interest rate of 4.6%. The spread with the euro area average was also preserved. Firms saw their terms of long-term financing deteriorate in the variable-rate segment, which accounts for three-quarters of long-term corporate loans, the contractual interest rate averaging 2.0% over the first half of the year. Meanwhile the terms improved in the fixed-rate segment, the contractual interest rate averaging 1.8% over the first half of the year. It was mainly the spread with the euro area average in the fixed-rate segment that narrowed. In general the financing conditions further improved for all sectors via the continuing accommodative monetary policy stance.

Figure 1.73 Comparison of fixed interest rates on new housing loans between euro area countries

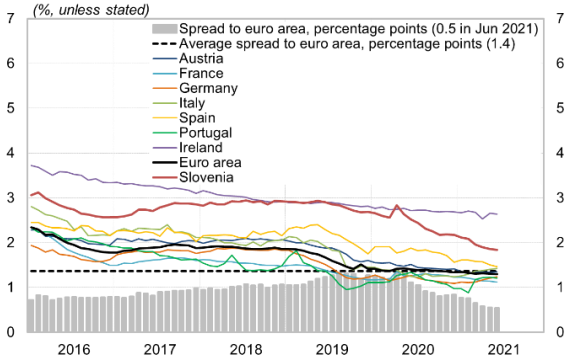
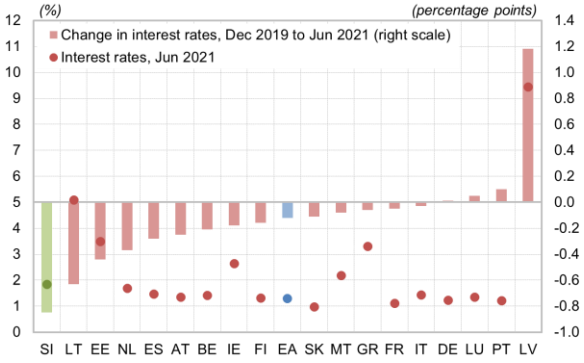


Figure 1.74 Comparison of change in and level of fixed interest rates on new housing loans between euro area countries



Sources: Banka Slovenije, ECB (SDW), Banka Slovenije calculations

1.5 Credit risk

The first half of 2021 brought an economic recovery, amid the gradual expiry of emergency measures. From the perspective of credit risk in the first half of the year, amid the ongoing restrictions on business in certain sectors, the greatest uncertainty came from loans that had been covered by a moratorium falling due for payment. NPEs remained low during this period. Further evidence of the banks' more favourable perception of credit risk comes from the reclassification of exposures to the stage with low credit risk. Conversely, certain indicators point to the continued presence of elevated credit risk. NPE ratios on loans still covered by a moratorium are significantly higher than in the rest of the portfolio. NPE ratios and the share of exposure classified as Stage 2 under IFRS 9 have both increased this year in the consumer loans portfolio, amid falling coverage by impairments and collateral. It is a similar situation in the sole traders portfolio, albeit with lower exposure, where all the aforementioned indicators point to adverse developments. In the most vulnerable sectors, most notably accommodation and food service activities, and arts, entertainment and recreation, there is huge uncertainty surrounding restrictions on doing business in the autumn months of this year. In the context of these opposing trends, credit risk is assessed as slightly lower than in previous periods, but remains elevated.

Non-performing exposures at banks

NPEs remained at low levels in the first half of 2021, despite the gradual expiry of emergency measures and the expiry of moratoria approved for bank loans. Ever since the outbreak of the pandemic credit risk has been rising sharply at banks in Slovenia and across the euro area, as a result of the extensive containment measures in the economy and in social life. Thanks to economic policy support measures, NPEs have remained low in the majority of countries, and have declined further during the pandemic (see Figure 1.75). Only four EU Member States saw a rise in NPE ratios over this period, of which the largest was 0.3 percentage points. In individual countries and at international institutions there are still expectations of an increased inflow of NPEs after the support measures expire.

Figure 1.75 NPE ratios in EU Member States

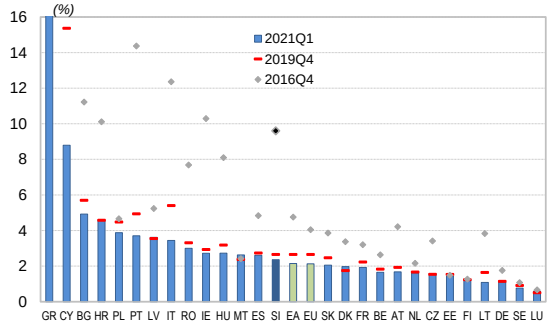
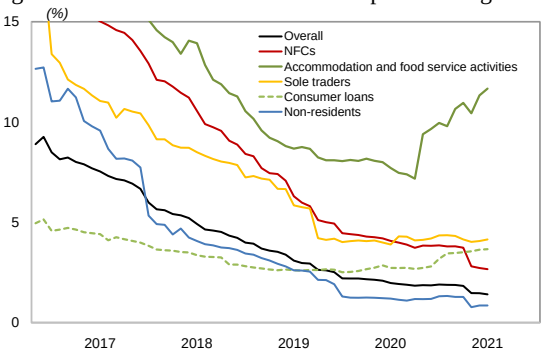


Figure 1.76 NPE ratios for selected portfolio segments



Note: The data for NPE ratios in EU Member States is at the consolidated level. The capture of NPEs in these comparisons is narrower than in the figures for the Slovenian banking system in the remainder of this section: only exposures from debt instruments are captured, which primarily reduces the denominator and consequently increases the NPE ratio. Some figures for Greece and Cyprus are off the scale of the y-axis.
Sources: ECB (SDW), Banka Slovenije

Changes in the stock of NPEs and NPE ratios in the Slovenian banking system have remained minimal since September of last year, although certain portfolio segments have seen a trend of increase for several months. The NPE ratio declined by 0.4 percentage points in April 2021 as a result of a one-off major debt repayment by a single firm (see Figure 1.76).[27] The stock of NPEs and the NPE ratio hit record lows in June, at EUR 724 million and 1.4% respectively. Without this one-off effect, the changes over the last nine months have been minor. A more detailed examination of individual segments of the portfolio reveals two different trends: stable or gently falling NPEs in most customer segments and sectors, and a trend of increasing NPEs over several months' duration in a small part of the portfolio. The most notable rising NPEs are in the accommodation and food service activities sector, where the NPE ratio hit 11.6% in June. NPE ratios in the manufacturing sector, which accounts for just over a quarter of the banks' exposure to NFCs, remain low, at 2%. NPE ratios in other sectors in the NFCs portfolio have declined in 2021 (with the exception of two sectors where NPE ratios are already low).[28] The recovery of large parts of the economy soon after the first partial relaxation of containment measures in February 2021 had a positive impact on customers' ability to repay their debts. By contrast, the maintenance of restrictions in accommodation and food service activities for most of the first half of the year was reflected in an additional increase in NPEs in the sector.

In the part of the portfolio for which banks have approved moratoria, NPE ratios are above average and still rising. NPE ratios for exposures covered by a moratorium (active and expired) in accommodation and food service activities increased from 10.7% in December of last year to 13.7% in June (see Figure 1.78). High NPE ratios for exposures covered by a moratorium were also recorded in June by construction (21.3%), and professional, scientific and technical activities and administrative and support service activities (13.4%). The majority of other sectors also saw an increase in NPE ratios. The NPE ratio for the entire NFCs portfolio covered by a moratorium increased from 5.9% at the end of 2020 to 7.3% in June of this year. The reclassification of exposures covered by a moratorium as NPEs is not necessarily tied to arrears, as not enough time has passed for instalments that fell due in the second quarter of 2021 to accrue long arrears. The majority of exposures to NFCs covered by a moratorium (81%) have seen the moratorium expire by June, compared with 7% with a moratorium expiring in the third quarter and 11% in the final quarter (see Figure 1.77). The expiry of moratoria was slightly lower in accommodation and food service activities, at 73%, while a significant proportion saw the moratorium expire over the summer, when the restrictions on the sector were largely relaxed. This could reduce the inflow of new NPEs, or reverse existing arrears in debt servicing, but there is still huge uncertainty in accommodation and food service activities, and also in arts, entertainment and recreation, where the majority of the moratoria do not expire until the final months of this year. The potential for additional restrictions in the wake of a deterioration in the epidemiological situation means that uncertainty also remains in other parts of the portfolio. The banks' assessments of a rise in probability of default under these circumstances could change further.

[27] The repayment also significantly reduced NPE ratios in the NFCs sector (from 3.7% to 2.8%), in the wholesale and retail trade sector (from 8.1% to 3.4%), and in the large enterprises portfolio (from 3.0% to 1.4%). It also had a significant impact in reducing NPEs to non-residents (from 1.3% to 0.8%), as a result of the repayment of debt of subsidiaries in the rest of the world.

[28] In two sectors with low NPE ratios, namely electricity, gas, steam and air conditioning supply and water supply, sewerage, waste management and remediation activities (0.7%) and transportation (1.7%), the NPE ratios increased by 0.1 percentage points in the first half of 2021.

Figure 1.77 Expiry of moratoria by NFCs sector, June 2021

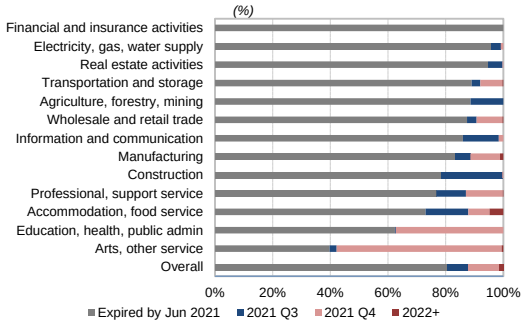
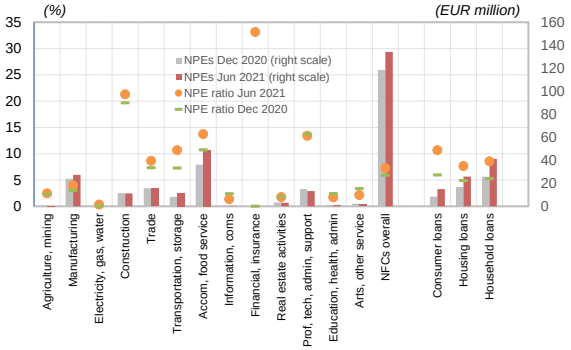


Figure 1.78 NPEs covered by moratorium by NFCs sector and by type of household loan



Source: Banka Slovenije

The trend of increase in the stock of NPEs and the NPE ratio continued in the consumer loans portfolio. After a slow rise in the NPE ratio over the majority of 2020, there was a jump in December from 2.8% to 3.2%, and the trend of increase continued in the first half of 2021, the NPE ratio reaching 3.7% in June (see Figure 1.85). Further indication of difficulties with loan repayments comes from the survey of demand for loans, which suggest that there has been a sharp rise in demand for consumer loans for the purposes of debt repayment. By contrast, the NPE ratio in the housing loans portfolio declined during the pandemic, from 1.9% in February 2020 to 1.7% throughout the second half of 2020, before rising slightly to 1.8% in June 2021. Given the favourable trends in household disposable income, savings and expectations, the deterioration in the consumer loans portfolio is likely related primarily to credit standards in their approval. Vintage analysis of consumer loans shows that the default rate for consumer loans concluded in the period of one year before the introduction of the macroprudential measure restricting household lending is higher than that for loans concluded after its introduction. In the April 2021 issue of the Financial Stability Review[29] we reported the finding that loans that deviate from the measure capping DSTI are more likely to be covered by a moratorium and to become non-performing, and a similar finding for loans that deviate from the measure capping maturity.

Figure 1.79 Breakdown of arrears in settlement of debt from past-due performing loans covered by a moratorium by NFCs sector, June 2021

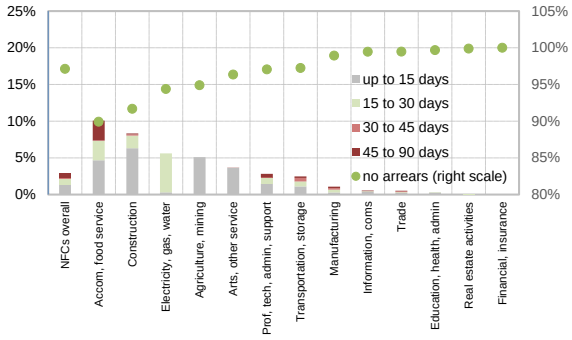
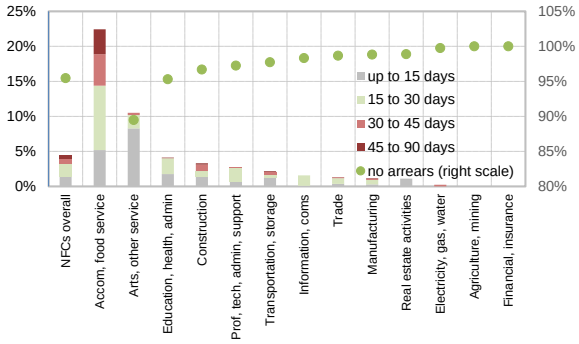


Figure 1.80 Breakdown of arrears in settlement of debt from past-due performing loans covered by a moratorium by NFCs sector, April 2021



Note: Both figures solely take account of contracts for which a moratorium was approved (irrespective of whether it has expired) and that still have performing status.
Source: Banka Slovenije

A certain increase in new NPEs to non-financial corporations could also be expected in cases when arrears in the settlement of liabilities have already arisen after the expiry of the moratorium. Of the exposures covered by a moratorium that were up to 90 days in arrears in June of this year (and had not yet been classified as NPEs), 57% were to firms from accommodation and food service activities, while the remaining exposures were divided across all other sectors. The share of exposures with expired moratoria that are up to 90 days in arrears was 10% in the accommodation and food service activities sector (see Figure 1.79). The share was also high in construction, at just over 8%, while in other sectors it was less than 5%. However, there is also a favourable trend of decline discernible in arrears, particularly in accommodation and food service activities, where arrears of up to 90 days had accounted for 23% of past-due exposures with a

[29] https://bankaslovenije.blob.core.windows.net/publication-files/fsr_april_2021_en.pdf, Box 5.3.

moratorium in April of this year (see Figure 1.80), and in arts, entertainment and recreation, where the figure declined from more than 10% in April to just a third of that by June. The breakdown of arrears of up to 90 days is also more favourable: average arrears were less than one month in the majority of sectors in June. The summer months could see a further improvement in this picture as restrictions on doing business ease considerably.

Credit risk stages[30]

While the favourable trends in NPE ratios mostly do not reveal increased credit risk during the pandemic, the dynamics in transitions between credit risk stages are more telling. The one-year transition rates[31] between individual credit risk stages (under IFRS 9) show a lively dynamic in particular between Stages 1 and 2 (see Figure 1.81). The high transition rates from Stage 1 to Stage 2 slowed in the first half of 2021, but they are still significantly higher than in the pre-pandemic period. Some 9.7% of exposures to NFCs in Stage 1 migrated to Stage 2 in the final quarter of 2020 (compared with 4.3% in the final quarter of 2019, before the pandemic), but six months later the transition rate had declined to 8.1%. Transitions in the opposite direction, from Stage 2 back to Stage 1, increased at the same time in 2021.

Figure 1.81 Transition rates between credit risk stages for NFCs

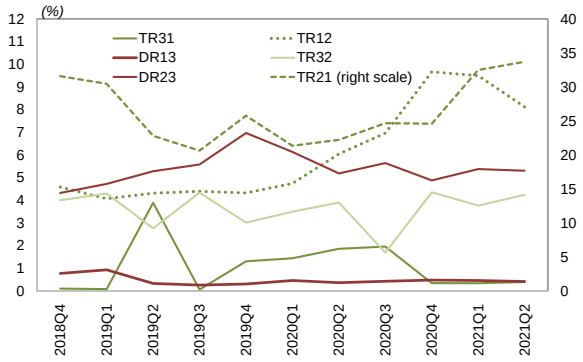
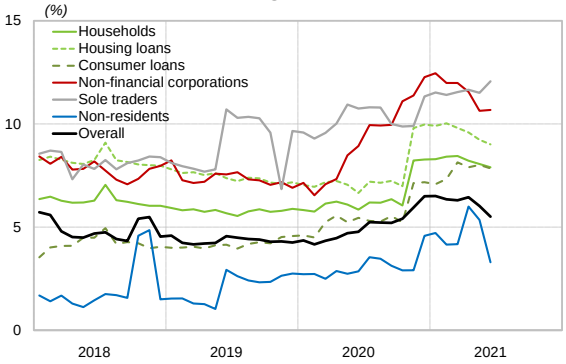


Figure 1.82 Share of exposures classified as Stage 2 by customer segment



Note: The labels in the key in the right figure refer to the transition rates (TR) for transitions between credit risk stages (1, 2 and 3). The unit of observation for calculating the transition rates of exposures between individual credit risk stages is the commercial bank-contract-date. All exposures that are classified claims with a positive amortised cost and were in a particular credit risk stage at the start of the observation period are included. The figure for the end of the period takes account of the final data available for the contract during the year.
Source: Banka Slovenije

The risk level of the credit portfolio as measured by the share of Stage 2 exposures varies greatly between individual customer segments. The share is still rising in the highest-risk segments. At the level of the total portfolio, the share accounted for by Stage 2 had increased to 6.5% by the end of 2020, up from 4.2% at the end of 2019, before declining again in May and June to reach 5.5% (see Figure 1.82). This was partly attributable to the significant growth in the banks' total exposure to NFCs, households, non-residents and, in particular, the central bank (of the total increase of EUR 3.5 billion in exposure, fully EUR 2.1 billion relates to the central bank) in the first half of 2021. A major factor is the reversal in the prevailing flows between credit risk stages compared with 2020: exposures in Stage 2 were reclassified back to Stage 1, driven by the favourable developments in the economy and the improved forecasts of future growth. There has been a pronounced decline in the share of Stage 2 exposures in the NFCs segment and the housing loans portfolio, while a reversal has also been seen over the last two months in the non-residents portfolio. Conversely, the consumer loans and sole traders portfolios continued to see an increase in Stage 2 exposures, the latter recording the highest share of Stage 2 exposures of any segment in June, at 12.1%.

[30] Banks classify financial assets into three credit risk stages in accordance with IFRS 9. Stage 1 and Stage 2 consist of exposures to non-defaulters. Financial assets whose credit risk has increased significantly since the recognition date are classified under Stage 2. The defaulters category (Stage 3) consists of all exposures that are defined as exposures in default.

[31] The unit of observation for calculating the one-year transition rates of exposures between individual credit risk stages is the commercial bank-customer-contract-date. Contracts that were included in the stock at the start of the observation period and that were classified with a positive amortised cost and an identified credit risk stage at that time are included. Exposure in both the numerator and the denominator means gross on-balance-sheet and off-balance-sheet exposure (without application of conversion factors) from the start of the observation period *T*.

Figure 1.83 Share of exposures to NFCs classified as Stage 2 by sector

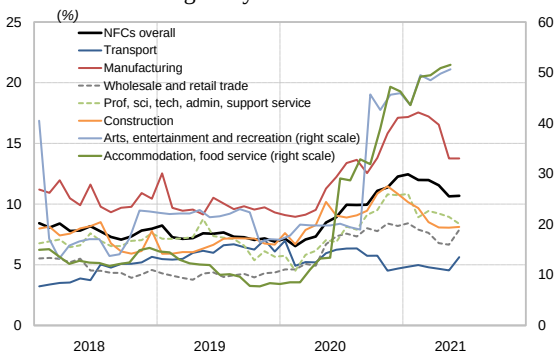
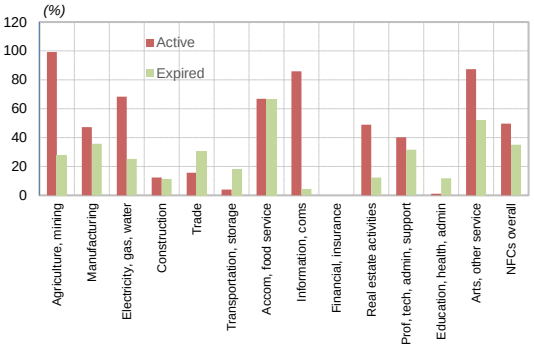


Figure 1.84 Share of exposures to NFCs with an active or expired moratorium classified as Stage 2



Source: Banka Slovenije

There has also been variation in the reclassification of exposures between credit risk stages this year within the non-financial corporations segment. The general rising trend in all sectors in 2020 changed in 2021 with regard to the scale of the restrictions on their business. In sectors that were unable to resume business in full because of the pandemic (accommodation and food service activities, and arts, entertainment and recreation), more than half of exposures are classified as Stage 2, with a trend of further increase (see Figure 1.83). The shares in other sectors were significantly lower, and were falling in 2021. The majority of sectors saw a renewed rise in June, but it was not yet possible to speak of a reversal in the trend based on a single month. The banks assess that exposures to NFCs with a moratorium entail a higher risk than the remainder of the portfolio, as the share of exposures with a moratorium (active or expired) classified as Stage 2 stood at 35.1% in June, compared with 10.7% across the entire NFCs portfolio. The risks are also evaluated differently according to the expiry of the moratoria. In the majority of sectors the share classified as Stage 2 is higher for exposures with an active moratorium than for exposures with an expired moratorium (see Figure 1.84), which reflects the banks' uncertainty with regard to the future servicing of loans covered by a moratorium after the moratorium has expired.

Reclassification to the stage with increased credit risk began later in the household portfolio, in the final months of 2020, and in the consumer loans portfolio has continued in 2021. Some 7.2% of consumer loans were classified as Stage 2 at the end of 2020, the figure then increasing to 8.1% in March of this year, before declining slightly to 7.8% in June (see Figure 1.86). The share in the housing loans portfolio is higher (9.0%), but with a trend of decline in 2021. The NPE ratios further increased over this period in the consumer loans portfolio, and declined moderately in the housing loans portfolio.

Figure 1.85 NPE ratios for households by loan type

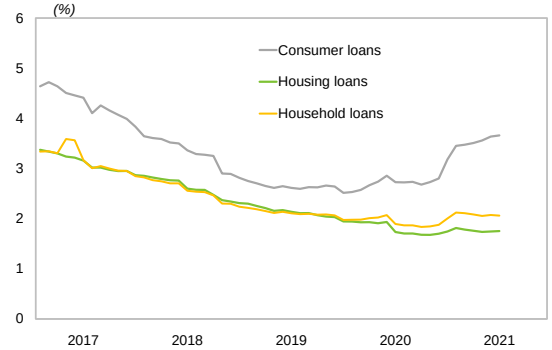
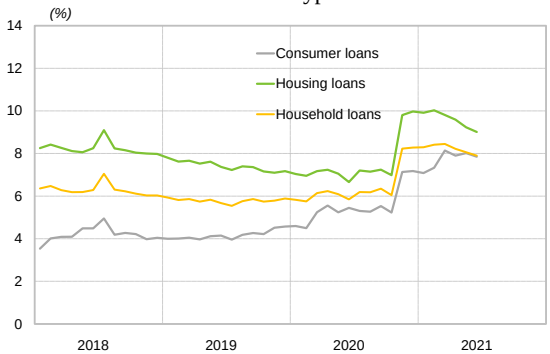


Figure 1.86 Share of exposures classified as Stage 2 by household loan type



Note: The increase in the share classified as Stage 2 at the end of 2020 was the result of a methodological change at one particular bank.
Source: Banka Slovenije

Credit standards at banks

According to the Bank Lending Survey,[32] credit standards in Slovenia remained virtually unchanged in the first half of 2021 for household loans and loans to non-financial corporations alike. Two of the four reporting banks were assessing in the first quarter that the general economic situation was driving a tightening of credit standards for household loans, but only one bank made this assessment in the second quarter. However, credit standards for households and NFCs remained unchanged (see Figure 1.87 and Figure 1.88), which might be a reflection of the banks' willingness to increase lending. Loan terms remained mostly unchanged. One bank assessed that aggregate loan terms for housing loans had relaxed moderately, as a result of a decline in the margin on housing loans and less stringent loan collateral requirements. Only one reporting bank assessed in the first quarter that credit standards on loans to NFCs had further tightened relative to the final quarter of 2020, while no bank made such an assessment in the second quarter. Only one reporting bank reported a relaxation of loan terms in the NFCs portfolio, for large enterprises and SMEs alike.

Figure 1.87 Credit standards for loans to NFCs

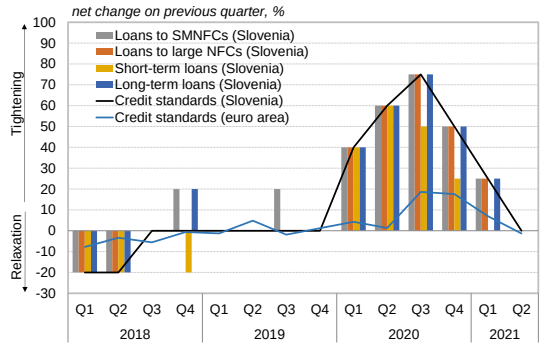
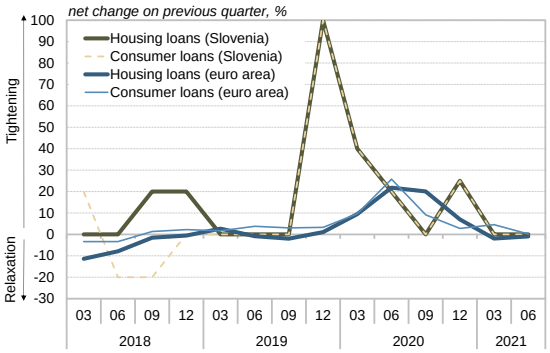


Figure 1.88 Credit standards for household loans



Sources BLS, Banka Slovenije

Coverage by impairments and provisions[33] and by collateral

After three years of net release of impairments, the banks recorded a net increase of impairments and provisions in 2020 amid the downturn in the economy caused by the pandemic. The net increase was low compared with the long-term average and with regard to international accounting standards, because of the government support measures (moratoria, guarantees).[34] Impairment costs accounted for just over a tenth of the disposal of the banks' gross income in 2020, slightly more than half of the long-term average.[35] In accordance with international accounting standards, some of the impairments were driven by the downgrading of claims to lower credit risk stages, and this year has seen a reversal in this process.[36]

A comparison of the data for net impairments and provisions and the balance sheet total between EU Member States[37, 38] reveals the Slovenian banking system to have had relatively high impairments. The

[32] The BLS for Slovenia covers four reporting banks, who accounted for 60.5% of the banking system in terms of the balance sheet total at the end of June 2021, and for 51.1% of loans to NFCs, 64.5% of housing loans and 60.4% of consumer loans (calculated on the basis of data reported to Banka Slovenije on an individual basis).

[33] The term "impairments" is used in this section as an abbreviation of "impairments and provisions", and refers to allowances, value adjustments and provisions for credit losses that were recorded by banks in accordance with IFRS 9.

[34] Similarly to the accrual of interest, it should be noted that loan moratoria based on Slovenian law or the EBA guidelines have also reduced the volume of impairments and provisions in the last year.

[35] Impairments and provisions accounted for 22.7% of the banks' disposal of gross income between 1996 and 2020. This calculation excludes 2012, 2013, and 2014, when impairment and provisioning costs were far above average, and 2017, 2018 and 2019, when the banks recorded a net release of impairments and provisions. Net impairments and provisions accounted for 12.5% of the disposal of gross income in 2020.

[36] See also the table giving a comparison of exposures by credit risk stage (Stages 1, 2 and 3) in the recent period, e.g. in the August 2021 monthly report. We have often stated that the nature of IFRS 9 means that in the event of a rise in the default rate and a rapid increase in expected credit losses from transitions to Stage 3, the additional creation of impairments and provisions is also expected in Stages 1 in 2. In the event of a sudden significant downgrading of the economic forecasts, the recalibration of the credit risk parameters could lead to sudden significant growth in credit risk impairments and provisions. These impairments and provisions are based on: (a) re-estimation of the credit parameters to include the latest macroeconomic forecasts, and (b) the transfer of financial assets from Stage 1, for which 12-month expected credit losses are created, to Stage 2, for which lifetime expected credit losses are created.

[37] Consolidated banking data (CBD) from the SDW, for the period of 2007 to 2020. Data from 2008 onwards is available for the vast majority of countries. Data has been available for all countries since 2014, although the data for the UK is incomplete.

ratio of net impairment and provisioning costs to the balance sheet total averaged 1.47% between 2007 and 2020, compared with 0.77% for EU Member States on aggregate. The median value was 0.45%. Slovenia's deviation from the EU average was even more pronounced between 2007 and 2015 (2.24% compared with 1.02%) because of the sharp deterioration in the portfolio of the Slovenian banking system and the asset quality review conducted before the bank recovery and resolution. The figures from 2014 to the end of 2020 are highly comparable, although it should be noted that Slovenian banks were still creating high net impairments and provisions in 2014 and 2015.[39] Conversely, the comparison for the period of 2014 to 2020 shows the Slovenian banking system recording a ratio of net impairment and provisioning costs to the balance sheet total of 0.39%, below the EU average over this period (0.53%) and entirely comparable to the weighted average in the euro area.[40] While in 2020 virtually all the credit institutions in Slovenia (15 of the 16, according to audited figures) created net impairments and provisions, this year the trend has reversed. The majority of the banks (11 of the 16 credit institutions) released impairments and provisions in the first half of the year, in the amount of EUR 26 million across the system, having recorded net impairments and provisions in the same period last year (in the total amount of EUR 98.5 million).

The Slovenian banking system was comparable with the EU median in 2020 in terms of the creation of impairments and provisions. The figures for the first quarter of 2021 on the basis of impairments of the majority of financial assets[41] indicate a decline in the ratio of these net impairments to the balance sheet total. The average figure in the first quarter of this year slightly exceeded the average from the final quarter of 2019, while the two median figures (for the EU and the euro area) declined below the level from the final quarter of 2019. These developments were also a factor in the banks' increased profitability.[42] According to these figures (FINREP), Slovenia was one of the countries that recorded a net release of impairments and provisions in the first quarter of this year, alongside Ireland, Denmark and Lithuania.

Figure 1.89 Net impairments and provisions, gross income, and ratio of net impairments to gross income

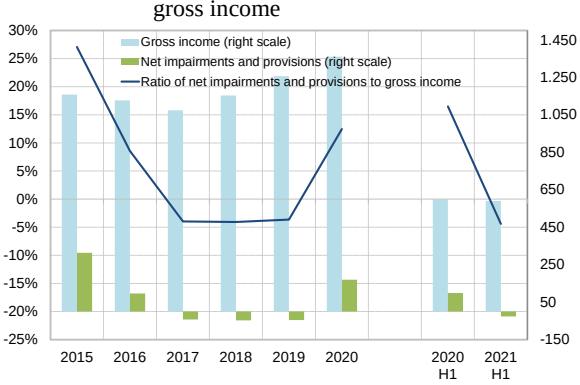
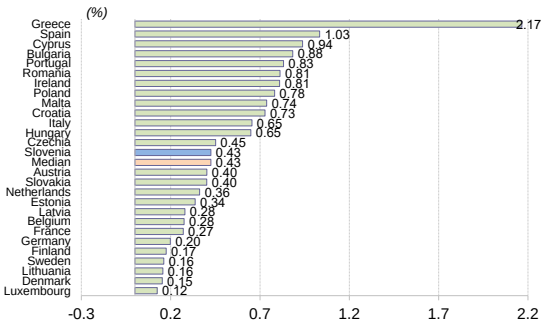


Figure 1.90 Ratio of net impairment and provisioning costs to balance sheet total in EU Member States



Note: Negative values in the right figure represent the net release of impairments and provisions.
Source: Banka Slovenije

Coverage of NPEs by impairments has also improved in 2021, and remains favourable compared with other EU Member States. The large increase in April was the result of the aforementioned one-off event,[43] while the rise in coverage continued over the next two months, the figure reaching 54.2% in June (see Figure 1.91). Slovenia thus remains among the countries with higher coverage of NPEs by impairments (see Figure 1.92). During the pandemic the majority of EU Member States saw a decline in coverage, generally driven by

[38] In this case impairment and provisioning costs in all years are taken into account for Slovenia, including for example 2013 (recovery and resolution of the banking system), and no year is excluded.
[39] The data shows these costs to have exceeded the EU average (available data of countries in the database) for the whole decade (2007 to 2015).
[40] Data reflecting all banks for the entire euro area is in this case only available for this period.
[41] Impairments of financial assets accounted for 90% of aggregate impairment and provisioning costs last year (EU average), and 93% in Slovenia. The data in the commentary for the first quarter of this year relates to impairments of financial assets not measured at fair value, which account for the largest component of impairments.
[42] For more, see the section on solvency and profitability.
[43] The fluctuations in coverage in the final months of 2020 were attributable to the simultaneous impact of methodological and institutional changes: the methodological changes in the reporting of excluded interest on NPEs during all months of the final quarter of 2020 contributed to an increase in coverage, while the merger of two banks in September led to a reduction.

a reduction in NPEs, which usually triggers a decline in coverage by impairments in the remaining NPE's portfolio.[44]

Figure 1.91 Coverage of performing and non-performing exposures by impairments

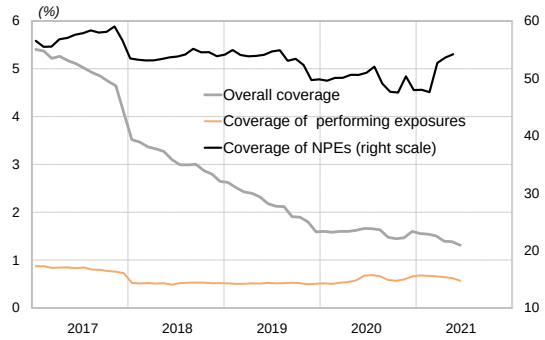
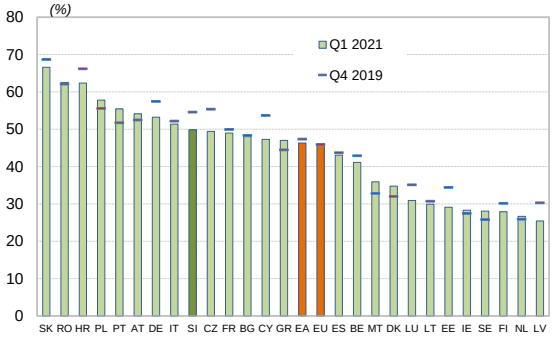


Figure 1.92 Coverage of NPEs by impairments by EU Member State



Source: Banka Slovenije

The increase in impairments in the performing segment of the portfolio in the first year of the pandemic caused by increased credit risk eased off in the first half of 2021, although once again trends in different portfolio segments varied. Coverage of performing exposures by impairments increased from 0.50% to 0.66% in 2020, before gradually declining again to 0.57% in June of this year (see Figure 1.93). Amid the reclassification of exposures from Stage 2 to Stage 1, which reflects the reduced risk perception in 2021, some impairments are being released, and the overall coverage of the performing segment of the portfolio is declining. There are several reasons for the decline in coverage of performing exposures. Strengthened lending growth and increased inflow of new loans generally increase exposure in the lowest risk stage, and at the same time relatively few impairments are created for those loans. Transitions from performing to non-performing status also entail the simultaneous movement of impairments and a reduction in coverage in both credit risk stages. Reduced coverage of performing exposures by impairments can also be the result of more favourable model estimates of credit parameters driven by improved macroeconomic forecasts. Coverage of performing exposures declined in the NFCs segment in the first half of 2021, and at the majority of banks (see Figure 1.94). Coverage also declined in the housing loans portfolio, but was increasing in the consumer loans portfolio until May inclusive, after which it declined in June. A similar decline was seen in June in the sole traders portfolio, where coverage by impairments is significantly higher than in other portfolio segments.

Figure 1.93 Coverage of performing exposures by impairments by selected customer segment

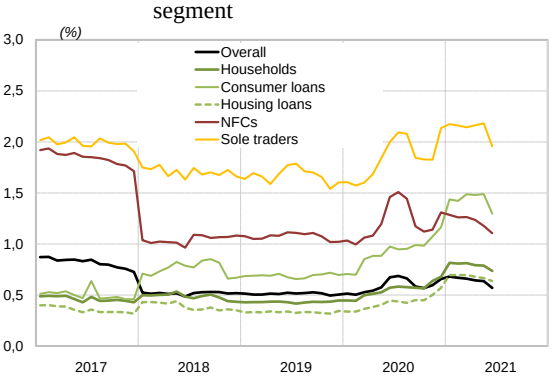
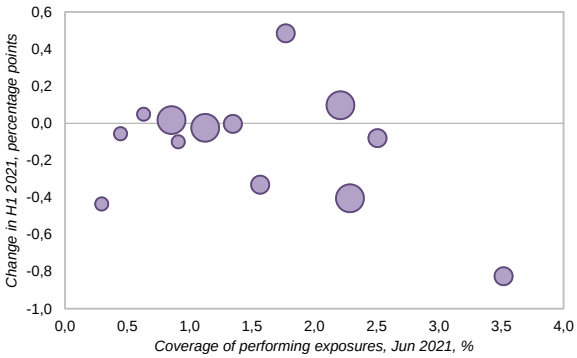


Figure 1.94 Coverage of performing exposures in the NFCs portfolio at individual banks



Note: The size of the circle in the right figure denotes the volume of performing exposures, grouped into three size brackets.
Source: Banka Slovenije

Banka Slovenije analysed the banking system's sensitivity to a deterioration in the quality of the non-financial corporations portfolio with active moratoria as at 30 June 2021. The sensitivity analysis made

[44] The reduction of NPEs through write-offs and sales generally entails the exclusion from the portfolio of those NPEs with above-average coverage by impairments.

use of three different hypothetical scenarios of transitions between stages under IFRS 9,[45] where the most severe variant envisages the transition of all performing exposures to NFCs with active moratoria from Stages 1 and 2 to Stage 3 (non-performing exposures). None of the scenarios sees losses or a decline in capital adequacy at system level. The banking system's current profit as at 30 June 2021 would be sufficient to absorb the additional losses generated by the creation of additional impairments and provisions under the scenarios. The adverse impact of the scenarios would be seen in the NPE ratio, which would rise by 0.6 percentage points under the most severe scenario.

Figure 1.95 Coverage of NPEs by impairments and collateral by selected customer segment

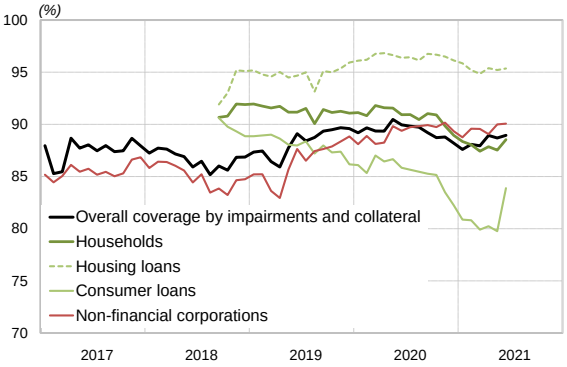
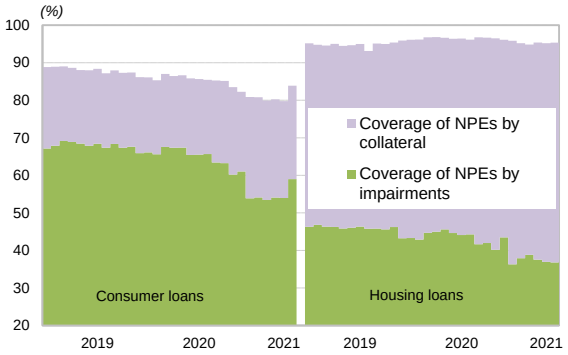


Figure 1.96 Coverage of NPEs by impairments and collateral for consumer loans and housing loans



Note: In the left figure overall coverage before September 2018 does not include households, for which data on collateral is only available after that date. In both figures the collateral in an individual contract is taken into account up to a maximum of the unimpaired value of the non-performing exposure. The increase of 5 percentage points in coverage by impairments (and consequently in overall coverage by impairments and collateral) for consumer loans in June 2021 is the result of a large increase in coverage in that month at one particular bank.

Source: Banka Slovenije

Coverage of NPEs by impairments, provisions and collateral has increased this year, but in June did not deviate significantly from its pre-pandemic level. The highest overall coverage is recorded by the NFCs portfolio and the housing loans portfolio, while the consumer loans portfolio has seen a deterioration (see Figure 1.95). Overall coverage of NPEs remains at a high level in the housing loans portfolio, where a larger share of the coverage has been taken up by collateral as impairments have declined: coverage by impairments declined to 36.8%, while coverage by collateral increased to 58.5% (see Figure 1.96). The relative importance of collateral in overall coverage has also increased in the consumer loans portfolio, albeit not sufficiently to make up for the loss of coverage by impairments. Approving loans at lower credit standards and without adequate collateral has been one of the drivers of this state of affairs in the consumer loans portfolio, while another is the failure to identify increased credit risk in the portfolio in timely fashion, and the consequent failure to create sufficient impairments in timely fashion.

Sole traders[46]

Sole traders constitute a pool of customers with increased credit risk. The NPE ratio remains at its level from the final quarter of 2019, with minor fluctuations, at 4.1% (see Figure 1.97), higher than other customer segments. The breakdown of the sole traders portfolio by sector also shows the maintenance of stable NPE ratios during the pandemic, and an end to the trend of decline seen in previous years (see Figure 1.98). The sectors of wholesale and retail trade, and accommodation and food service activities are notable for their above-average NPE ratios, of 7.7% and 7.4% respectively. In contrast to NFCs, the NPE ratio for sole traders in the accommodation and food service activities sector is not increasing, which might be attributable to the small exposures, where banks are perhaps slightly slower in identifying probability of default.

The share of exposures to sole traders classified as Stage 2 has increased throughout the pandemic period. This share had risen to 12.1% by June 2021, up from 9.3% at the beginning of the pandemic (for comparison, the NPE ratio for NFCs had declined to 10.7% by June of this year). Exposure to sole traders is small, and accounts for 1.3% of the banking system's total exposure. It has increased in absolute terms by

[45] Under the first scenario all operations with increased credit risk (Stage 2) transition to default (Stage 3). Under the second scenario all operations with increased credit risk transition to default, and all non-defaulters (Stage 1) transition to the stage with increased credit risk. Under the third scenario all non-defaulters and all operations with increased credit risk transition to default.

[46] The sole traders portfolio includes sole traders with a registration number, and individuals pursuing business activities who do not have a registration number (farmers, freelancers).

0.7% since April 2020, but the growth in total banks' exposure means that sole traders' share of total exposure has declined by 0.2 percentage points. The banks whose business is primarily with smaller customers have higher exposure to this segment.

Figure 1.97 NPE ratio and share of exposure classified as Stage 2 in the sole traders portfolio

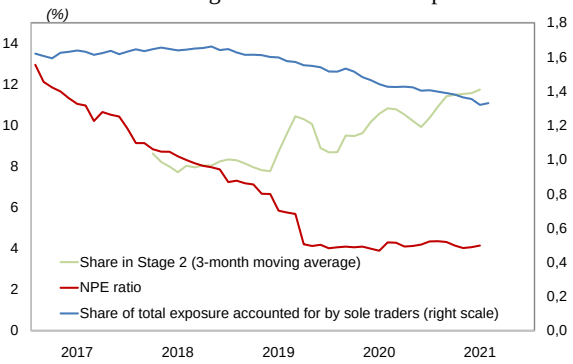
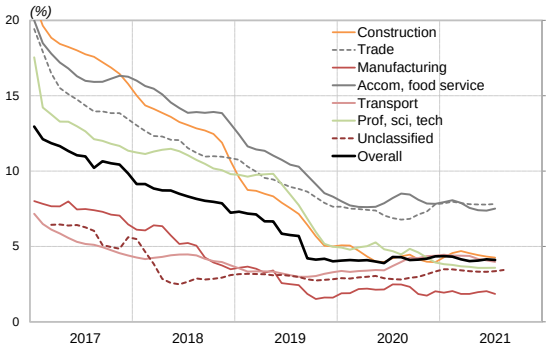


Figure 1.98 NPE ratio in the sole traders portfolio by sector



Note: The sectoral breakdown in the right figure is given only for sole traders with a registration number where data is available for the business activity and sector. Data on business activity is not available for approximately a third of the banks' exposure to this segment.
Source: Banka Slovenije

As in the non-financial corporations portfolio, accommodation and food service activities accounted for most recipients of moratoria in the sole traders portfolio. There were still EUR 81 million of exposures to sole traders covered by a moratorium in June of this year, 11.7% of total exposure to the segment (see Figure 1.99). A further 2.4% of the exposure consisted of loans approved for bridging liquidity difficulties caused by the epidemic. In the sole traders portfolio moratorium approvals were also dominated by accommodation and food service activities, where exposures covered by a moratorium amounted to EUR 26 million, or 41.5% of total exposure to this sector (in the NFCs portfolio the equivalent figure in June was 58.9%; see Figure 7.5 in appendix). The moratorium levels in wholesale and retail trade, transportation, and professional, scientific and technical activities are higher than in the NFCs portfolio, although none of them exceeds a share of 15% of total exposure to the economic sector.

Figure 1.99 Share of total exposure accounted for by Covid-related exposure in the sole traders portfolio by sector, June 2021

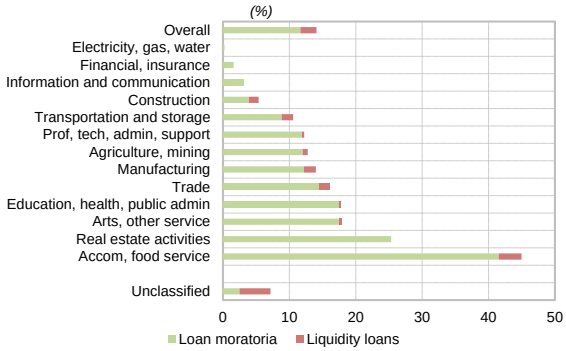
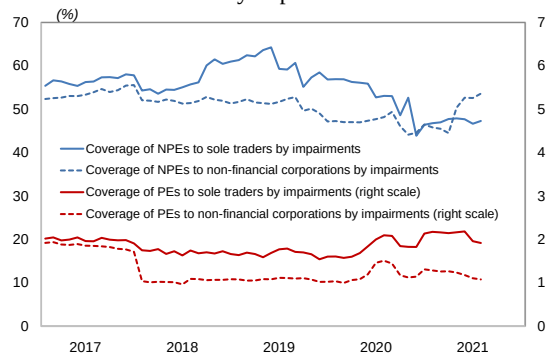


Figure 1.100 Coverage of performing and non-performing exposures to sole traders and NFCs by impairments



Source: Banka Slovenije

Coverage of performing exposures to sole traders by impairments is higher than in other customer segments, while coverage of NPEs is lower. Coverage of NPEs by impairments had been among the higher levels in previous months, but in recent months it has begun to trail the NFCs portfolio as the latter recorded a large increase (see Figure 1.100). The sole traders portfolio has notably higher coverage of performing exposures by impairments than the NFCs portfolio, and also other portfolio segments (see Figure 1.93), which is attributable to the identification of increased credit risk. This was not only the case during the pandemic, when increased credit risk was evidenced in an increase in exposures to sole traders classified as Stage 2, but also in the years before the pandemic, exposures to sole traders having consistently maintained above-average impairments.

1.6 Income risk

The conditions for generating income in the banking system remain aggravated. The banking system's income in the first half of 2021 was down on the same period last year. Growth in net interest income remains negative, although the shortfall in net interest on the same period last year has narrowed slightly in recent months as growth in loans has gradually stabilised in positive territory. The decline in net interest income is being driven by price effect and quantity effects alike. In the short term there can be no expectation of major changes in the generation of interest income. Operating costs remain comparable to last year. The banking system's net income is down slightly on last year. Amid weak credit growth and a small increase in net non-interest income, the trends are continuing, and income risk is therefore assessed as elevated, despite the improvement in the economic situation and the business conditions for banks.

Gross income and net income

The banking system's gross income in the first half of 2021 was down 1.3%. Net income, i.e. gross income minus operating costs, declined by 2.4%. From the perspective of changes in income and cost categories, this year's entire increase in profit compared with last year comes from the release of net impairments and provisions.[47]

Net interest margin and net non-interest margin

After declining sharply in 2020, the net interest margin declined again in the first half of 2021. The decline was driven by a decline in net interest income and high growth in liquid interest-bearing assets. In June of this year the net interest margin reached its lowest figure of the last six and a half years (see Figure 1.102).[48] There were several factors simultaneously at work in the decline in the net interest margin (of 0.1 percentage points in the first half of 2021, and 0.33 percentage points since the end of 2019): diminishing rates of returns on assets as a result of low interest rates, changes in asset structure with a higher proportion of low-yielding liquid assets, and low growth in loans in the recent period. Conversely, the banks have sharply reduced their interest expenses in recent years, as a result of the fall in interest rates and the pronounced increase in sight deposits. Only custody fees might bring an increase in the net interest margin.

Figure 1.101 Net interest income, net non-interest income, operating costs and net income

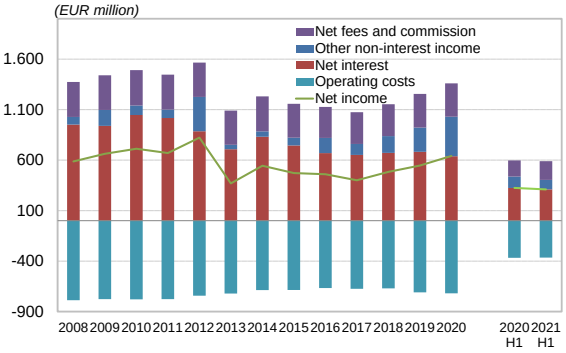
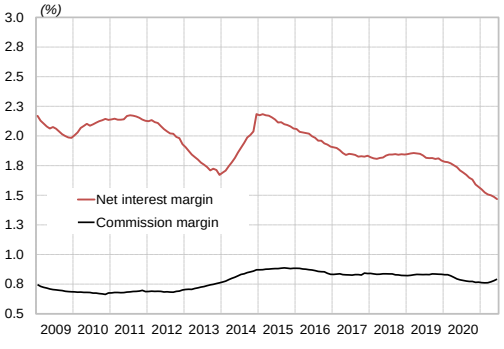


Figure 1.102 Net interest margin and net commission margin



Note: In the figures the two margins are calculated for the preceding 12-month period. Net fees and commission in the right figure is the most important and least volatile component of non-interest income.
Source: Banka Slovenije

The decline in the net interest margin has so far come on the asset side. For several years now the banks have been unable to effect a rise in the net interest margin via the reduction of interest expenses (see Figure 1.102). The long-term expectation of low interest rates with the corresponding decline in returns on bank assets, and weak lending are the main drivers of the decline in interest income. Over the last year and a half there has also been increased impact from the most liquid assets, claims against the central bank in the form of negatively remunerated excess reserves, which has been reflected in higher interest expenses.

The difference between growth in interest-bearing assets and growth in net interest income was widening until the end of the first quarter of this year. Growth in net interest income has been negative since April 2020, and the decline increased until March of this year, when the year-on-year decline in net

[47] See the section on profitability and solvency.
[48] The net interest margin has been declining again since mid-2019, and underwent a major decline in 2020, after which the decline continued in the first half of this year.

interest (calculated for the preceding 12 months) stood at fully 8.2%. The figure had slowed to 6.9% by June. Growth in interest-bearing assets was increasing in 2020 as a result of the large inflow of sight deposits by the non-banking sector, which in the absence of lending have built up on the asset side of the balance sheet in the form of excess reserves. The banks' excess reserves have increased by more in 2021 than in the previous year, and claims against the central bank accounted for 23% of the banking system's total assets at the end of the first half of 2021.[49]

The decline in net interest income picked up pace until the end of the first quarter of 2021, then slowed. The year-on-year decline in net interest slowed slightly in May and June, but was still of the magnitude of 4.5%. The majority of the change in net interest is being driven by interest income, whose decline also slowed leading up to June, to 1.9%, comparable to the end of last year. Interest income from securities, which account for a diminishing proportion of interest income, was down a quarter (25.8%) on the same period last year. Interest expenses were up 10% in June of this year. Interest expenses are being driven up by a slight increase in the cost of funding, e.g. issuance of debt securities, and primarily by the negative remuneration of the banks' excess reserves.[50] The decline in interest income nevertheless accounted for almost two-thirds of the decline in net interest.[51]

The decline in net interest income in the first half of 2021 was attributable to price effects and quantity effects alike. The decline in lending activity means that last year the banks were unable to compensate for the negative price effects through loans (quantity effects) (see Figure 1.103). Positive quantity effects disappeared entirely in the first half of this year as growth in loans averaged around zero.Price effects, which have made a negative contribution to net interest income for several years now amid falling returns, accounted for more than three-quarters of the year-on-year decline in net interest income in the first half of 2021.The negative impact from the price effects came more from loans and securities, although the negative price effect of loans declined. Price effects were positive on the liability side, as a result of lower interest rates and the additional increase in sight deposits, which by June 2021 accounted for more than four-fifths of total deposits (see Figure 1.104).

Figure 1.103 Contribution made by quantity effects and price effects to the change in net interest income and net interest margin

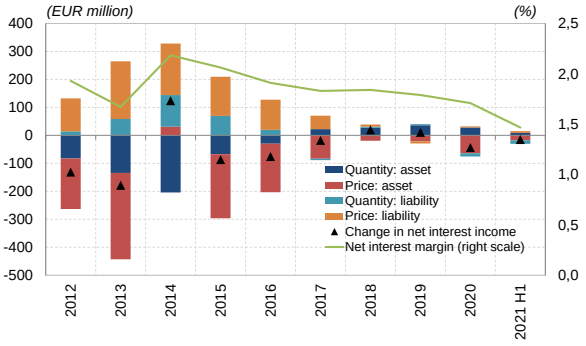
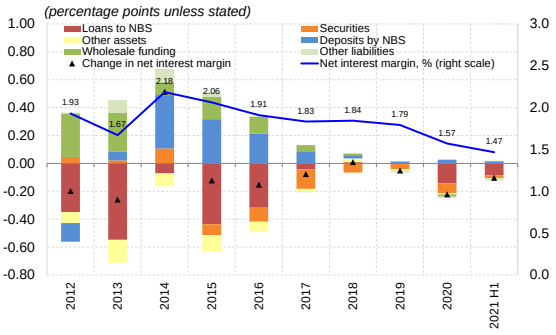


Figure 1.104 Contributions of interest-bearing asset and liability instruments to change in net interest margin



Note: The figures take account of the 12-month moving total of interest income/expenses, while the net interest margin is calculated for the same period.
Source: Banka Slovenije

In 2021 banks began responding to the aforementioned developments in income by introducing custody fees.[52] Survey data on custody fees from 2020 shows that the vast majority of banks, 13 of the 16,

[49] Interest-bearing assets increased by 9.8% on aggregate in the first half of this year (comparison of average stock), loans to the non-banking sector stagnated (up 0.1%), securities increased by 5.3% and other interest-bearing assets by 44.3%, of which claims against the central bank increased by 56.8%.

[50] The banks have had significant excess reserves in recent years, and they increased further in the first half of 2021. Excess reserves held at the central bank are remunerated at a negative interest rate (0.5%) above a set threshold. These are non-exempt excess reserves, i.e. those in excess of seven times the minimum reserve requirement, which means the minimum reserve requirement plus excess reserves with a multiplier of six applied. These reserves consequently do not only entail an opportunity cost from zero remuneration, they actually cause the banks to accrue interest expenses. These amounted to EUR 17.5 million last year, and to EUR 13.9 million in the first half of this year. The increase in excess reserves has further increased this "income" pressure for the banks.

[51] The ratio of interest income to interest expenses was very stable for a long time: it averaged 1.8 between 1996 and the beginning of 2014. Since then both interest income and interest expenses have begun a sharp and rapid decline, which rapidly increased the ratio, which had reached 7.3 by the beginning of 2020, before beginning a gradual decline, but even now it still stands at 6.2. Interest expenses have fallen fast, as a result of the fall in interest rates and the profound shortening of the maturity breakdown, i.e. the increase in sight deposits. This has prevented an even faster decline in the net interest margin.

[52] See the section on bank funding.

state that they charge custody fees. They are small in scale for now, at EUR 10.6 million, or 0.78% of the banking system's gross income, 1.47% of net non-interest income and 3.21% of total net fees and commission. Incomplete survey data from 2021 shows the banks to be pursuing a relatively active policy in this area, which could see them at least double their income this year compared with last year. In examining the developments in (net) interest income, it was highlighted in previous reports that banks were able to keep charging interest without disruption thanks to the loan moratoria allowed under the ZIUOPOK and the EBA guidelines.[53] For now the data even after the expiry of the moratoria[54] does not show this currently putting any additional downward pressure on interest income. It is growth in loans to the non-banking sector that above all will be the key to developments in net interest income.

After slowing dramatically at the outbreak of the pandemic, and hitting negative territory in the early part of this year, growth in loans to the non-banking sector turned positive again in the second quarter (see Figure 1.105). It nevertheless remained lower than before the pandemic, and just below the euro area average (see Figure 1.106). The positive year-on-year growth was attributable to increased growth in housing loans and a smaller contraction in consumer loans and loans to NFCs. Meanwhile the dynamics in the euro area were slightly different: amid higher growth in loans to NFCs in certain major economies, growth initially strengthened in the pandemic, before gradually declining. The slowdown in growth in consumer loans was more pronounced than in the euro area overall, but the decline began even before the pandemic. The decline had slowed slightly by the end of June 2021, albeit at rates that were significantly lower than in the euro area overall. Growth in housing loans slowed slightly with the outbreak of the pandemic, and was close to the euro area average in the second half of 2020 and the early part of 2021, before rising in the second quarter of this year amid the favourable financing conditions and fast-growing prices on the real estate market, although it only exceeded average growth in the euro area by a fraction. With the exception of loans to NFCs, where the rate has been outpaced by the euro area over the long term, average credit growth over the last three years has been comparable to the euro area average and median, which is indicative of a slightly different dynamic in credit activity. In the consumer loans portfolio, for example, the above-average growth in credit activity in 2018 and 2019 in Slovenia compensated for the above-average decline in 2020.

Figure 1.105 Comparison of growth in loans to the non-banking sector between Slovenia and the eurozone

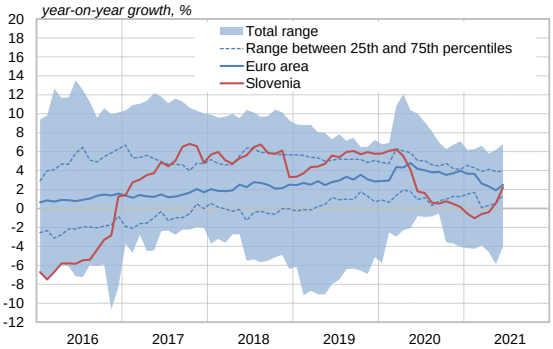
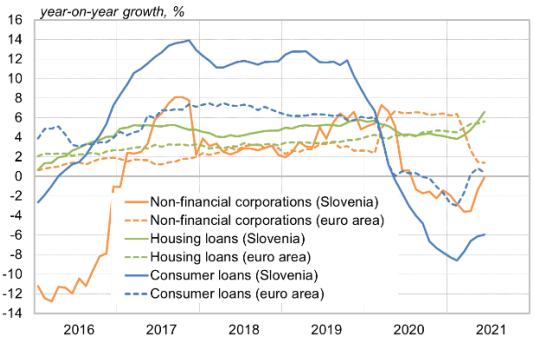


Figure 1.106 Comparison of growth in loans by portfolio between Slovenia and the euro area



Sources: Banka Slovenije, ECB (SDW), Banka Slovenije calculations

[53] See the Emergency Deferral of Borrowers' Liabilities Act (ZIUOPOK), and the EBA guidelines, available at https://eba.europa.eu/eba-publishes-guidelines-treatment-public-and-private-moratoria-light-covid-19-measures.
[54] See the section on credit risk.

Figure 1.107 Year-on-year growth in interest income, interest expenses and net interest

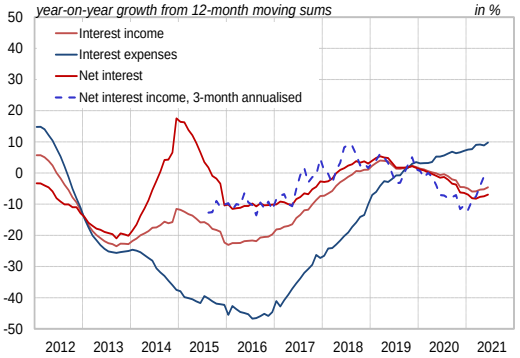
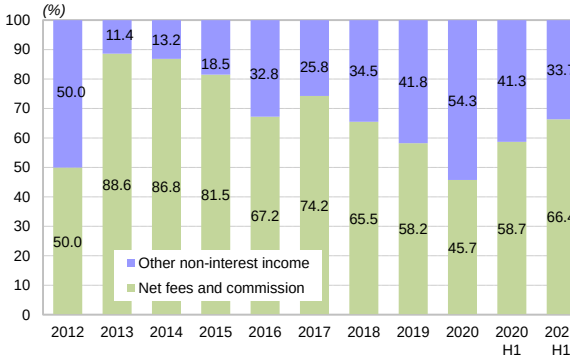


Figure 1.108 Breakdown of non-interest income



Source: Banka Slovenije

Non-interest income in the banking system in the first half of 2021 was up only slightly (2.7%) on the same period last year (see Figure 1.107). Having surged in previous months on account of one-off factors, the year-on-year rate of growth had slowed by June. The net non-interest margin at system level has reached a high level in the last two years. Calculated for the preceding 12 months, it stood at 1.62% in June, driven primarily by the effect of the merger of two large banks in September of last year, while the increase in income in March and April of this year was primarily the result of one-off developments in connection with the revaluation of financial assets at certain banks. Non-interest income,[55] and with it gross income and net income, can vary considerably, driven by the general state of the economy and by one-off factors.Of the other forms of non-interest income, dividends are down sharply on last year, by three-quarters.

The banks' income from net fees and commission has increased as the economic situation improves, and is recording relatively high growth. Over the first half of this year it was up 16.1% on the same period last year. Despite the relatively high growth in the balance sheet total, the net commission margin rose, reaching 0.79% in June. The increase in fee and commission income was attributable to the increasingly active policy of charging for various services, and the improvement in the economic situation and outlook.

The banking system's net interest margin in 2020 was comparable to the EU median (see Figure 1.109). The net interest margin has been declining in recent years, primarily as a result of the low interest rate environment, as the banks replace higher-yielding assets from the past with lower-yielding assets. This is maintaining the downward pressure on margins, which can be expected to continue in the future. While in the previous year the net interest margin had been ranked slightly below the top third of countries, in 2020 it merely reached the median level. The net interest margin according to consolidated banking data (CBD) stands at 1.58%, and is the same as that recorded by small banks in the EU (1.57%), while the EU average is 1.11%, which reflects the data of all banks, including those substantially larger.

Figure 1.109 Net interest margin in Slovenia and other EU Member States, 2020

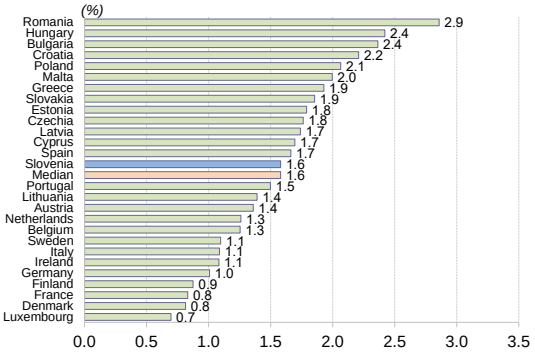
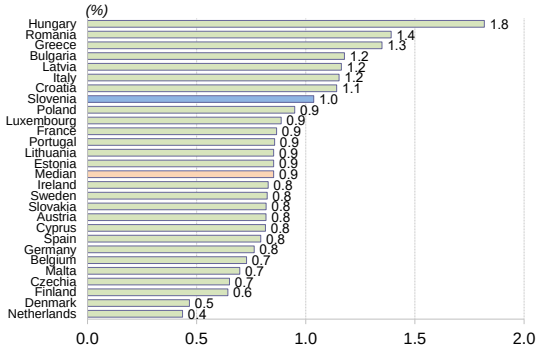


Figure 1.110 Net non-interest margin in Slovenia and other EU Member States, 2020



Note: The net interest margin and other indicators for Slovenia according to the ECB's CBD differ slightly from the values on an individual basis in the report.

[55] See for example the figure in the appendix, which illustrates developments in the aggregate net non-interest margin and the net commission margin.

Slovenia ranks high in terms of its net non-interest margin and net commission margin (see Figure 1.110). A comparison of the non-interest margin in the Slovenian banking system with other EU Member States shows that, as in the previous year, Slovenia has one of the higher figures, and is ranked seventh. Here the impact of one-off developments on the size of last year's net non-interest income in the Slovenian banking system should be noted. The non-interest margin thus exceeded the weighted EU average (0.92%) and was comparable to the margin at small banks (1.08%). As in the previous year, Slovenia was again notable for a higher commission margin in 2020. Its figure of 0.74% was higher than the overall commission margin in the EU, although it should be highlighted that the net commission margin in the Slovenian banking system is lower than the margin achieved by banks of comparable size in the EU overall (0.81%).[56]

Operating costs

Operating costs in the Slovenian banking system this year were comparable to the same period last year (see Figure 1.111). The ratio of operating costs to the balance sheet total improved further to stand at 1.60% in June of this year, mainly due to the increase in the balance sheet total. This year's ratio of operating costs to gross income is comparable to the same period last year.[57] Operating costs in the first half of 2021 were down 0.5% in year-on-year terms. Labour costs, the most important component of costs, are up slightly this year (by 0.5%), compared with their decline of 3.6% last year. The Cost-to-income ratio (CIR) stood at 59.5% in 2020 (see Figure 1.112), slightly above the EU median (57.1%), but below the weighted EU average (61.5%) and significantly below the average at small banks (68.7%). Certain larger European countries (Italy, France, Germany) traditionally have a notably higher CIR.

Figure 1.111 Growth in operating costs, labour costs and balance sheet total

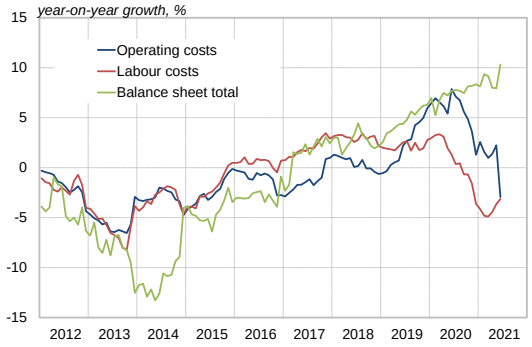
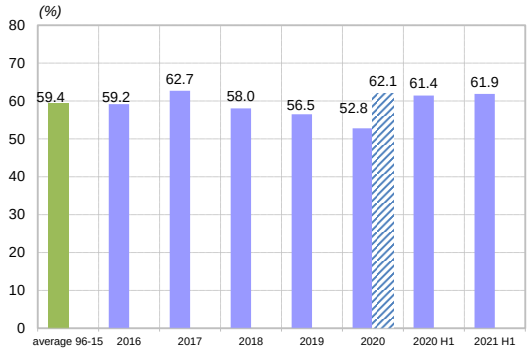


Figure 1.112 Cost-to-income ratio (CIR)



Sources: Banka Slovenije, ECB

Box 1.3 Empirical analysis of supply of and demand for corporate loans

The following analysis decomposes the evolution of lending by banks to the non-financial sector to supply and demand side factors employing an econometric approach. the recovery period that followed the global financial crisis in the euro area as well and recent developments since the outbreak of Covid-19 pandemic. The application of the microeconometric approach also suggest that credit supply shocks in Slovenia have significant impact on real economy.

In the five years before the outbreak of the Covid-19 pandemic Slovenia recorded moderate but sustained economic growth. Annual GDP growth averaged 3.8% between 2015 and 2020, although growth in loans was not a significant factor in this recovery. During this period the ratio of the outstanding bank loans to NFCs to GDP declined from 118.8% to 74.7%. While a decline in indebtedness contributes to the resilience of the financial system, any bottlenecks in the supply of loans or demand for loans could impede future economic growth.

The contributions to growth in loans by supply-side and demand-side factors cannot be observed directly. This box presents a preliminary assessment of the factors affecting the supply of and demand for loans to NFCs. The analysis combines data from the credit register and the business register (AJPES), and uses microeconometric empirical methods. In the final step, the analysis provides an empirical assessment of the credit supply shocks on the real sector (see Figure 1.113 and Figure 1.114). The supply of loans depends

[56] See the appendix with the international comparison of banking system indicators in the EU.
[57] The decline in the CIR in 2020 was largely attributable to one-off factors that raised net non-interest income and gross income.

on the banks' willingness to lend to NFCs, which in turn depends on the creditworthiness of the borrower and the general economic outlook, and on the banks' capacity to lend. These are contingent in part on the individual bank characterisitcs, and also on banking regulations. The demand side is comprised by NFCs who opt for debt financing for their fixed assets, inventories and/or working capital.

Figure 1.113 Assessment of supply-side shocks

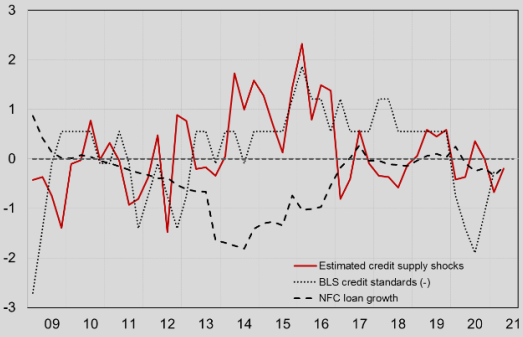
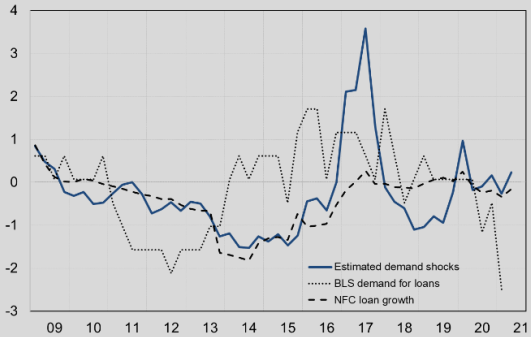


Figure 1.114 Assessment of demand-side shocks



Note: The figures illustrate the assessments of supply and demand and the results of the bank lending survey (BLS). The estimated supply shocks are premultiplied with (-1) for easier comparison with the credit standards from the survey. The negative values of the reported credit standards represent a tightening. The supply-side and demand-side shocks and the results of the bank lending survey are standardised and illustrated as standard deviations.

Sources: Banka Slovenije, AJPES, Banka Slovenije calculations

In the estimated panel regression[58] the growth in loans to NFCs is explained by bank-time fixed effects, which reflect changes on the supply side, and industry-size-location-time (ISLT) fixed effects,[59] which capture changes in demand for loans.[60] The main assumption in this estimation approach is that the characteristics of the individual borrower can be on average represented by the common factors of the industry, location and size of the NFCs. The estimated fixed effects are interpreted as shocks in supply and demand that affect growth in loans.

Credit conditions and credit supply have not been a major limiting factor for the loan dynamics between 2014 and 2016, but rather the decline in the stock was mainly driven by weak demand for loans. The results of the analysis show that credit conditionas and credit supply have not been limiting factor in the period between 2014 and 2016, as the euro area monetary policy was particularly accommodative (including the introduction of negative interest rates on deposits in 2014 and the asset purchase programme (APP) in 2015). Slovenia was also completing the bank recovery and resolution process at that time. The finding that loan terms were not a limiting factor is also supported by the BLS results,[61] where a net percentage[62] of the sample of banks in Slovenia reported that they had relaxed their credit standards in the same period. According to the model, the reduction in outstanding volume of credit between 2014 and 2016 can be mainly attributed to weak demand. The period of contraction in the stock of loans came to an end in 2017. The model attributes the change in the trend to increased demand for loans during the year in question.

The lower growth in loans to NFCs between the outbreak of the pandemic and the second quarter of this year is explained by negative shocks on the demand side. Since the outbreak of the Covid-19 pandemic, the trend in demand for loans from NFCs in three sectors of interest, namely construction, services and manufacturing,[63] has been falling for most of the time. As a result of a negative shock in demand, growth in loans remained reduced until the second quarter of 2021. Looking specifically at developments in loan

[58] The following regression equation is estimated: $\Delta L_{bst} = \alpha + \delta_{bt} + \gamma_{st} + \varepsilon_{bst}$, where ΔL_{bst} is growth in loans at bank b to a specific segment of demand s (which encompasses all firms classified under a common industry, size and location); δ_{bt} and γ_{st} are the bank-time fixed effects and ISLT fixed effects, which constitute a unique identifier of the effects on the supply side and the demand side respectively; $\alpha, \varepsilon_{bst}$ are the constant and the measurement error.

[59] The definition of industry follows the NACE classification (the statistical classification of economic activities in the EU). The location of a firm is defined in accordance with the NUTS (nomenclature of territorial units for statistics) for Slovenia, or more accurately at NUTS 3 level, i.e. statistical regions. The size of a firm follows the AJPES definition and the Companies Act (ZGD-1).

[60] The analysis is based on the following literature: Degryse, H., De Jonghe, O., Jakovljević, S., Mulier, K. and Schepens, G. (2019). Identifying credit supply shocks with bank-firm data: Methods and applications, *Journal of Financial Intermediation*; and Greenstone M., Mas A. and Nguyen H. (2020). Do Credit Market Shocks Affect the Real Economy? Quasi-Experimental Evidence from the Great Recession and "Normal" Economic Times, *American Economic Journal: Economic Policy*.

[61] For more on the BLS with regard to loans to NFCs, see the section on non-financial corporations.

[62] The net percentage is defined as the difference between the percentage of banks responding "tightening of credit standards" (increase in demand) and the percentage of banks responding "relaxation of credit standards" (decline in demand).

[63] In 2019 the share of loans approved was 38.5% in industry, 35.5% in services, and 4.4% in construction.

demand of SMEs, it stays particularly weak in the services in the same period. BLS results also indicate lower demand for loans than previously (see Figure 1.115 and Figure 1.116).

Figure 1.115 NFCs' demand for loans by sector

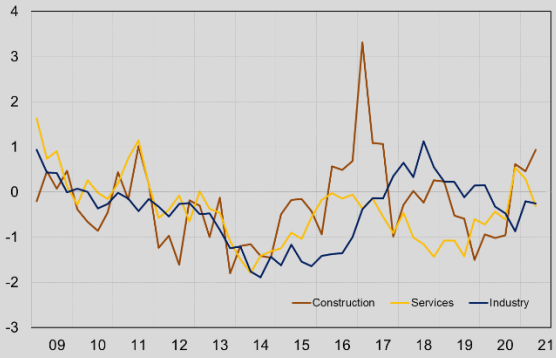
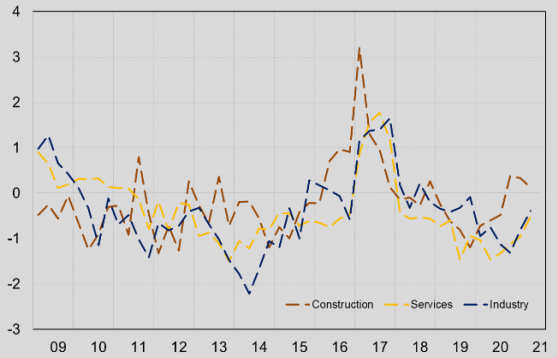


Figure 1.116 SMEs' demand for loans by sector

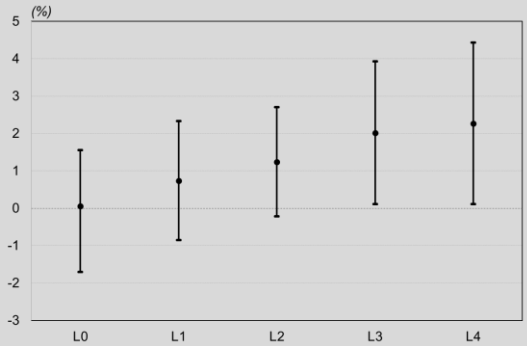


Note: The assessed shocks in demand are standardised and expressed in terms of standard deviations. Industry encompasses Sectors B, C, D and E, services Sectors G, H and I, and construction Sector F.

Sources: Banka Slovenije, AJPES, Banka Slovenije calculations

The analysis identifies a positive correlation between factors affecting the banks' capacity and/or willingness to lend, and the value-added of the sector where they are lending.[64] The impact of credit supply shocks on real economy can be denoted as a real economy multiplier. The real economy multiplier of credit supply is estimated to be largest at the fourth lag, i.e. after four quarters (Figure 1.117), where an increase of 1% in the supply of bank loans is reflected in an increase of 2.3% in value-added in the sector.[65] These results emphasise the importance of bank loans to Slovenian NFCs and the economy in general.[66]

Figure 1.117 Impact of supply-side shocks on the real sector



Note: The figure illustrates the estimated impact of supply-side shocks on sectoral value-added. The coefficients (real sector multiplier) are illustrated together with the 90% confidence interval over time or *L* (between the instantaneous effect and the effect four quarters later).

Sources: Banka Slovenije, AJPES, Banka Slovenije calculations

The decline in GDP growth during the Covid-19 pandemic was not accompanied by a credit crunch such as that observed after 2008 during the global financial crisis, or during the sovereign debt crisis that followed in the euro area. These developments are reflected in the analysis as it does not find any significant negative supply shocks in the credit market following the outbreak of the Covid-19 pandemic. This phenomemnon can be explained by the relatively low levels of non-performing loans and the generally good level of capitalisation of the banking system, which in turn can largely be attributed to the swift and joint response of monetary and fiscal policies and their supportive role to both supply of and demand for loans. On the demand side, even though 2020 saw a sharp decline in year-on-year growth in loans to NFCs,

[64] The economic activity of a particular sector is expressed via the value-added of the sector. To estimate the real economy multiplier the estimated supply shocks are aggregated at sector level using the bank's share of loans to the particular sector as weights $S_{st} = \sum_b w_{bs(t-1)} * \widehat{\delta_{bt}}$. Growth in gross nominal value-added is estimated on the basis of the following regression: $\Delta y_{st} = \alpha + \eta_s + \gamma_t + \beta S_t + \varepsilon_{st}$, where the right side of the equation includes, in addition to the aggregate shock in bank supply at sector level, a constant, a segment- and a time fixed effects and a measurement error.

[65] This result implies that the effect increases over time taking into account the feedback loop between banks and the real sector.

[66] A negative shock to the banking system could impact the real sector via several transmission channels, where the credit channel is extremely important for the euro area and for the Slovenian economy. For example, bank loans account for almost 50% of NFCs' debt financing in the euro area, compared with less than 25% in the US. This is indicative of the SMEs' high level of dependence on bank lending, and of the important role that bank loans play in the economy.

which became a contraction in the second half of the year, the analysis suggests a slight improvement in demand for loans in early 2021, particularly in construction. SMEs' demand for loans in industry and services nevertheless remains weak.

2 RESILIENCE OF THE BANKING SYSTEM

2.1 Solvency and profitability

The banking system maintained a sound capital position in the first half of 2021, with the high credit risk yet to be realised. The expiry of all support measures or a renewed deterioration in the epidemiological situation could in the future lead to a downturn in the quality of the credit portfolio and reduce the ability to generate profit. The banking system's resilience to the adverse impact that this would have therefore continues to be assessed as moderate in the segment of solvency and profitability, while we emphasise that there is still considerable variation among the banks in their capacity to absorb any adverse impact. Although the total capital ratio at system level at the end of 2020 was below the euro area average, this reflects a deterioration in the capital position at individual banks caused by mergers. More than half of the banks saw their capital ratios rise in the first half of this year. In upholding the macroprudential measure restricting profit distributions, the banks increased their regulatory capital via retained earnings, while risk-weighted assets mainly increased at the banks that strengthened their lending to non-financial corporations and households. In the future individual banks that opt for profit distributions after the expiry of the macroprudential measure restricting profit distributions by banks might see a decline in their resilience. Given the uncertainty surrounding the future sustainability of the high profitability that would allow the banks to maintain stable capital adequacy, careful assessment of the suitability of dividends payments will be vital, particularly at banks with smaller capital surpluses over the overall capital requirement.

Solvency

The banking system's capital ratios on an individual basis increased in the first half of 2021. Primarily due to more pronounced growth at one particular bank, regulatory capital increased by more during this period (see Figure 2.2) than did risk-weighted assets (RWA). The total capital ratio on an individual basis consequently rose by 0.5 percentage points to 20.9% at system level, while the common equity Tier 1 capital ratio rose by 0.6 percentage points to 19.0% (see Figure 2.1). The increase in regulatory capital was driven by retained earnings, while the increase in RWA was driven by a gradual increase in corporate and household lending.

Figure 2.1 Banking system's capital ratios on an individual basis

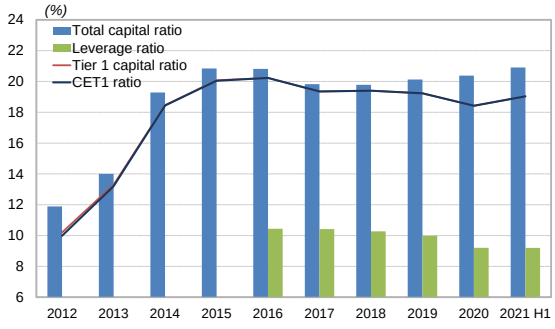
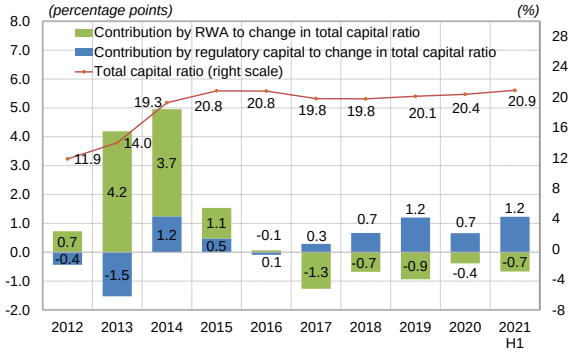


Figure 2.2 Contributions by individual components to the change in the total capital ratio on an individual basis



Source: Banka Slovenije

The total capital ratio of the Slovenian banking system remained below the euro area average at the end of 2020, albeit primarily on account of a decline in capital adequacy at certain banks. The total capital ratio on a consolidated basis increased by 0.2 percentage points in the first half of this year to 18.5%, while the CET1 ratio increased by 0.3 percentage points to 17.0% (see Figure 2.3). Like the figures on an individual basis, the rise in the consolidated capital ratios was driven by regulatory capital rising by more than RWA. The total capital ratio of the Slovenian banking system on a consolidated basis fell below the euro area average at the end of 2020 for the first time since 2018, and remained lower over the first quarter of 2021.[67] The CET1 ratio remained above the euro area average (15.8%), although its level of 16.5% in the first quarter of 2021 was down almost 1 percentage point on the median CET1 ratio in the euro area. The

[67] The comparison of Slovenia with the euro area is made on the basis of data for the first quarter of 2021, as the data for the second quarter was not available at the time of writing. The total capital ratio in the euro area overall stood at 19.1%, while the CET1 ratio stood at 15.8%.

decline in the ratios at system level at the end of last year was driven by individual banks, as a result of mergers. The total capital ratio at almost half of the banks was above the euro area average in the first quarter of this year, while before the decline in the capital adequacy at system level just under a third of the banks were below the euro area average. The greater robustness of the Slovenian banking system compared with the majority of other euro area countries is also reflected in the relatively high ratio of regulatory capital to the balance sheet total, which stood at 10.7% at the end of the first quarter, more than a third higher than the euro area average (see Figure 2.4).

Figure 2.3 Capital ratios compared with the euro area, consolidated basis

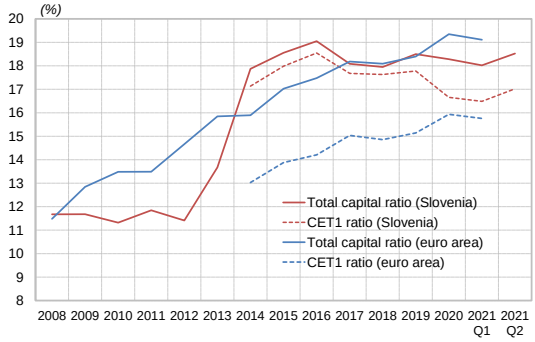
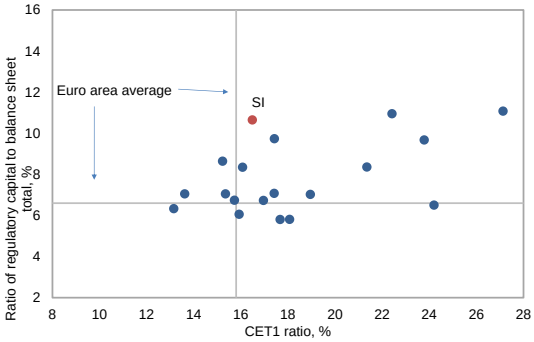


Figure 2.4 CET1 ratio and ratio of regulatory capital to balance sheet total by euro area country, consolidated basis, Q1 2021



Sources: Banka Slovenije, ECB (SDW)

Figure 2.5 CET1 ratio and leverage ratio at individual banks, individual basis

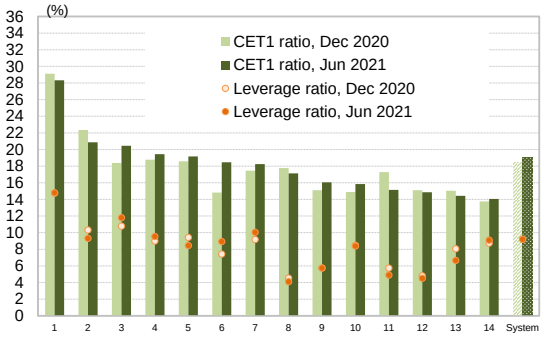
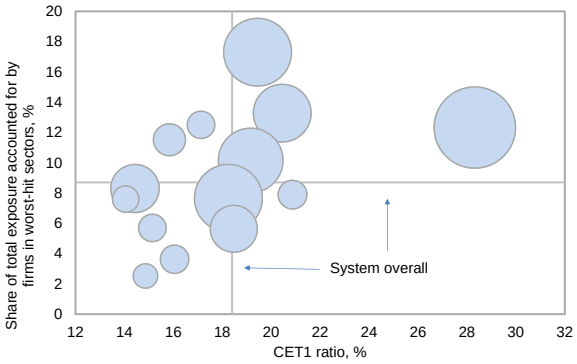


Figure 2.6 CET1 ratio on an individual basis versus exposure to non-financial corporations in the worst-hit sectors at individual banks, Q2 2021



Note: The right figure includes exposures to non-financial corporations in the following sectors: transportation; accommodation and food service activities; professional, scientific and technical activities; administrative and support service activities; arts. The size of the bubbles illustrates the percentage surplus over the total capital requirement (OCR + P2G), which is calculated on consolidated data.
Source: Banka Slovenije

There remain considerable differences in individual banks' resilience to the adverse impact of stress events, because of variation in the size of their capital surpluses over the overall capital requirement, and differences in the quality and structure of their credit portfolios. More than half of the banks saw their capital ratios rise in the first half of this year (see Figure 2.5). Although the small domestic banks and savings banks are no longer notable for having the lowest capital ratios, this is not the case for the leverage ratios. In the wake of a more modest increase in regulatory capital compared with the growth in the balance sheet total, the leverage ratio at the small domestic banks and savings banks declined in the first half of the year and remained below the banking system average (9.2%). The differences between the banks in their capital ratios and leverage ratios are also attributable to differences in the structure of the assets of individual banks and savings banks. The increase in regulatory capital increased the capital surplus over the overall capital requirement[68] at the majority of banks, although there remains considerable variation in the size of the surplus at individual banks (see Figure 2.6). The capital surplus amounted to EUR 1,237 million at system level at the end of June 2021, or 4.12% of RWA. Covering the adverse impact of the potential deterioration

[68] The overall capital requirement encompasses the Pillar 1 and Pillar 2 capital requirements and the capital buffers.

in the quality of the credit portfolio that might occur after the expiry of the support measures or a renewed deterioration in the epidemiological situation[69] will be more difficult for banks with smaller capital surpluses[70] and banks with large exposure to the sectors hit hardest in the crisis.

The banks increased their regulatory capital in the first half of 2021 primarily through retained earnings. The banking system's regulatory capital increased by 6% to EUR 4,977 million. In upholding the macroprudential restriction on profit distributions by banks, the banks mainly strengthened their common equity Tier 1 capital, as they increased their retained earnings and other reserves (see Figure 2.7). The banks issued no Tier 2 capital instruments in the first quarter of 2021, which reduced the share of total regulatory capital accounted for by Tier 2 capital to 8.9%, a third lower than the euro area average. Although bank profitability is high for the moment, there are question marks over its future sustainability (see below in the section on profitability), and with it the possibility of strengthening capital and maintaining stable capital adequacy. Resilience might decline in particular at the banks that opt to distribute retained earnings, which will be allowed by the expiry of the macroprudential instrument restricting profit distributions. Although simulations of various scenarios of dividend payments have shown that the banking system as a whole would maintain capital adequacy even in the event of the realisation of the large dividend payments scenario, it will be particularly important to make a careful assessment of the suitability of dividend payments at the banks with smaller capital surpluses.

Our assessment is also that the banks will have no difficulty in covering the MREL shortfall over the transition period provided. Another factor in capital management is the need to meet the minimum requirements for own funds and eligible liabilities (hereinafter: MREL). The amended Directive establishing a framework for the recovery and resolution of credit institutions and investment firms was transposed into national legislation this year, and sets out the MREL requirements in the form of a percentage of total risk exposure and the total exposure. This will make it easier for banks to plan the requisite MREL instruments. Under the amended directive banks with a shortfall in MREL-eligible instruments will have a transition period available until 2024 in which they will be able to provide for the requisite MREL-eligible instruments. All banks in Slovenia have been informed of their MREL requirements. Banks that are earmarked for compulsory wind-down have an MREL in the amount of their Pillar 1 and Pillar 2 capital requirements, while banks that meet the conditions for resolution have higher requirements. MREL-eligible instruments at banks in Slovenia amounted to 13% of their total equity and liabilities at the end of 2020, down 1 percentage point on the end of 2019. Banks that are earmarked for resolution and have an MREL that is higher than their capital requirements primarily met the MREL via own funds, which accounted for 81% of all MREL-eligible instruments at the end of 2020 (unchanged from 2019), and less via unsecured claims and non-covered deposits (by financial institutions, pension funds, government). The expectation is that for the sake of cost-efficiency, additional MREL-eligible instruments will be provided via unsecured claims, both in the form of issued debt securities and in the form of loans raised.

Figure 2.7 Decomposition of change in CET1 ratio, individual basis

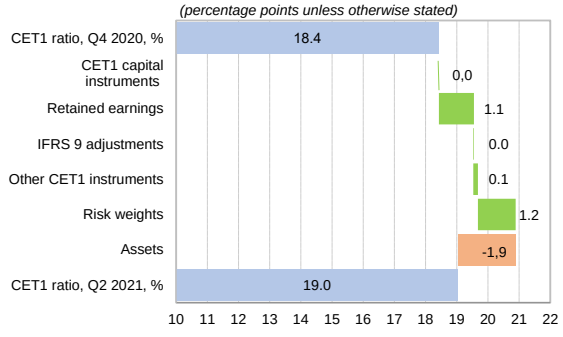
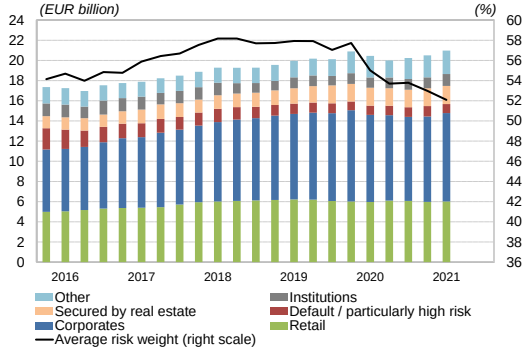


Figure 2.8 Breakdown of risk-weighted assets for credit risk, and average risk weight, individual basis



Note: In the left figure the items that acted to reduce the CET1 ratio are denoted by orange bars, while the items that acted to increase it are denoted by green bars.
Source: Banka Slovenije

[69] For more, see the section on credit risk.
[70] The size of the capital surplus and the bank's capital position is just one aspect of the comprehensive treatment of individual banks and their dealing with the impact of the Covid-19 pandemic.

RWA increased by 3.4% in the first half of 2021 to EUR 23.8 billion as credit activity gradually strengthened. RWA for credit risk increased, primarily at the banks that increased their corporate and household lending. There was a slight increase in exposures secured by real estate, which allow the banks to use lower risk weights, but they account for less than a tenth of total RWA. The proportion of total RWA accounted for by exposures in default and exposures associated with particularly high risk, where the highest weights are applied, declined by 0.5 percentage points over the first half of the year to 3.7%. Although the forecasts of economic recovery are encouraging, the expiry of the support measures and the maturing of the majority of the debt covered by moratoria could bring a deterioration in the quality of the credit portfolio,[71] which via higher risk weights would also have an impact on risk-weighted assets, and thus on capital adequacy. Driven primarily by high growth in risk-free liquid assets on bank balance sheets, the average risk weight[72] declined by 1.7 percentage points over the first half of 2021 to 52% (see Figure 2.8), but remained a third higher than the euro area average (35%). The higher average risk weight in the Slovenian banking system is not necessarily a reflection of lower portfolio quality, but is attributable in part to the use of a more conservative risk assessment method, which makes banks more robust and better prepared to face the consequences of potential stress events. Fully 83% of RWA is assessed using the standardised approach, while the figure in the euro area overall is almost a half lower.

Profitability

The improvement in the economic situation and outlook also brought an improvement in the banks' business conditions, but their high pre-tax profit in the first half of 2021 was primarily the result of the majority of banks recording a net release of impairments and provisions. At the same time it should be noted that income is down on the same period last year. Pre-tax profit in the first half of the year amounted to EUR 251 million, almost double that in the same period last year (up 90%). Pre-tax ROE at system level stood at 10.6% (compared with 9.6% in 2020, and 5.4% in the first half of 2020), while ROA stood at 1.11%, comparable to the figure of 1.10% recorded across the whole of last year. ROA meanwhile stood at 0.63% in the first half of last year. Amid the decline in net income,[73] the increase in profit was solely attributable to the component that reflects how the banks assess credit risk, i.e. the net release of impairments and provisions.

Figure 2.9 Pre-tax profit and impact of changes in components of generation and disposal of gross income, H1 2020 to H1 2021

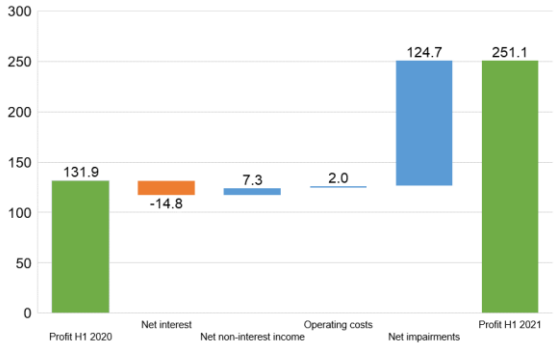
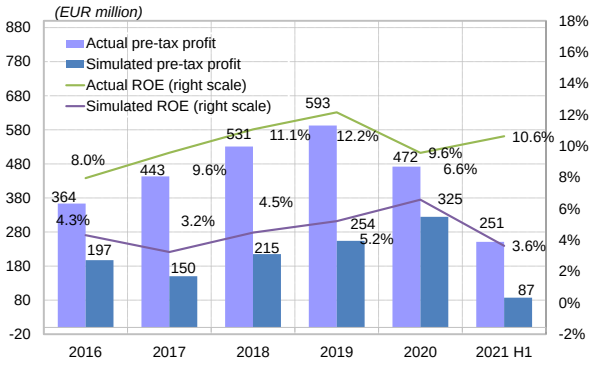


Figure 2.10 Actual bank profitability and simulated profitability with ratio of impairment and provisioning costs to gross income at its long-term average



Note: The simulated profit and ROE reflect the long-term average of the ratio of net impairments and provisions to gross income. This takes into account that impairments and provisions accounted for 22.7% of the banks' disposal of gross income between 1996 and 2020, where 2012, 2013, and 2014, when impairment and provisioning costs were far above average, are excluded. Similarly excluded are 2017, 2018 and 2019, when the banks recorded a net release of impairments and provisions. Net impairments and provisions accounted for 12.5% of the disposal of gross income in 2020.
Source: Banka Slovenije

Although not permanent in nature, the rise in profit, means that the banking system's resilience from the perspective of the maintenance of capital adequacy remains good. There are doubts as to the sustainability of these developments, as the banks are seeing a decline in income. The rapid and relatively strong improvement in the economy, the solid loan repayments even after the expiry of the

[71] For more, see the section on credit risk.
[72] The average risk weight is calculated as the ratio of RWA to the balance sheet total on an individual basis, excluding branches.
[73] See the section on income risk, which addresses the generation of income by the banks, and their costs. Net income in the first half of this year was down on the same period last year (by 2.4%).

moratoria, and the greater optimism in the banks' expectations are giving rise to increasingly optimistic risk assessments, and thus to an increase in profitability. The Slovenian banking system as a whole is continuing to operate at an above-average level of profitability this year. However, it should be noted that for now the banks face difficulties in generating income because of the low interest rate environment and weak lending activity. Even in the short term the banks cannot compensate for the adverse trends in net interest income[74] by significantly raising non-interest income and reducing operating costs. The net release of impairments and provisions is more the exception than the rule over the long term. Had the banks recorded impairment and provisioning costs at their long-term average in the first half of 2021, their ROE would have been merely a fraction more than a third of the actual level achieved.

Figure 2.11 Pre-tax ROE and ratio of impairments and provisions costs to the balance sheet total

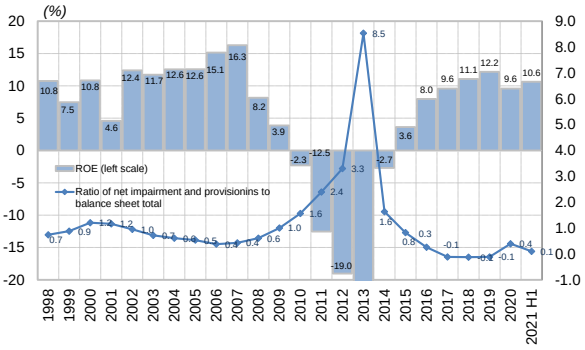
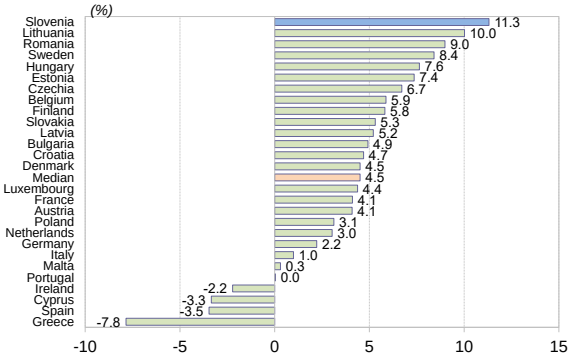


Figure 2.12 ROE across EU Member States, 2020



Note: In the left figure the two ratios for June are calculated for the preceding 12 months. ROE is calculated for the half-yearly period, and is restated on an annual basis. The right figure shows what the banking system's profit and ROE would be were the ratio of impairment and provisioning costs to gross income at its long-term average. In light of the data source (ECB SDW consolidated banking data), the values for Slovenia in the right figure differ slightly from those based on the banks' balance sheet figures on an individual basis.

Sources: Banka Slovenije, ECB (SDW)

Figure 2.13 Ratio of net impairments and provisions to the balance sheet total and ratio of net income to the balance sheet total, 2020

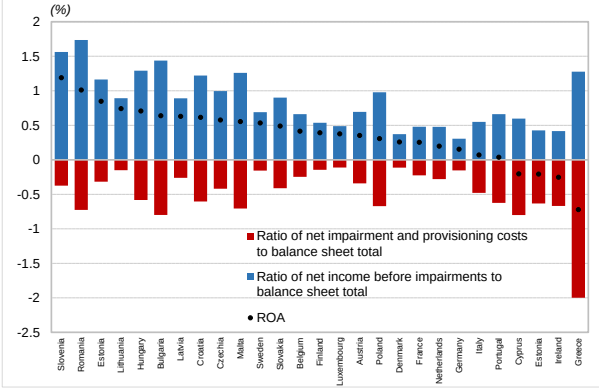
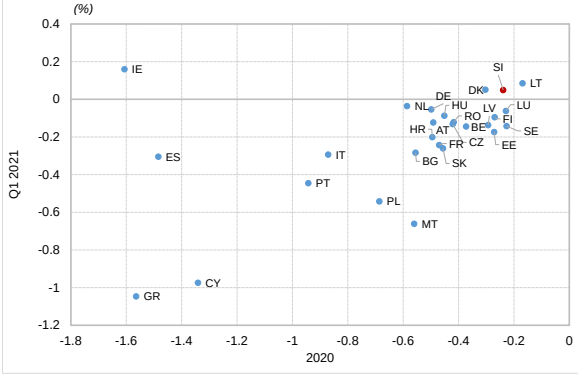


Figure 2.14 Ratio of net impairments and provisions to net income, 2020 and Q1 2021



Note: Simplified calculation of net income. The figures are restated from the ratios to the balance sheet total. The calculated income relates to income before impairments and provisions, i.e. all income in excess of the profit that is not earmarked for net impairments and provisions.

Source: ECB (SDW)

The Slovenian banking system was notable in 2020 for its ROE. ROE in the Slovenian banking system stood at 11.3% in 2020 (according to the ECB's consolidated banking data), and exceeded the EU median (4.5%) and the average for banks of comparable size, i.e. small banks (4.3%). The high ROE in 2020 was primarily attributable to the effects of the merger of two banks (see the April 2021 issue of the Financial

[74] The latest figures show that the shortfall in gross income and net income on last year's performance has continued to increase since June.

Stability Review), although the ROE of the Slovenian banking system would have exceeded the aforementioned figures even in the absence of this effect.[75]

The figures for the first quarter of this year show an improvement in profitability in the EU. The median ROE in EU Member States reached 7.5% (up from 4.5% last year). Similarly high figures[76] were recorded in the EU overall and the euro area overall (weighted average). According to these figures, Slovenia was no longer notable for its ROE in the first quarter of this year (9.3%), but was ranked at the beginning of the second quartile of countries.

The figures show that banks in Slovenia earmarked less of their income for impairments and provisions in 2020 and the first quarter of 2021 than did banks in the EU overall. The comparable ratio of net impairments and provisions to remaining income in 2020 was close to -24% in Slovenia, while the EU median was -47%. The same was true for the first quarter of this year, when the ratio for Slovenian banks was 5%, while the EU median was -14%. By contrast, it is evident from the components of ROA that the values for net interest margin and the ratio of net impairments and provisions to the balance sheet total are comparable to the EU median, while for other components such as non-interest income and operating costs and ROA itself, the value for the Slovenian banking system exceeded the EU median (see Figure 2.15).

Figure 2.15 Components of ROA in EU Member States, 2020

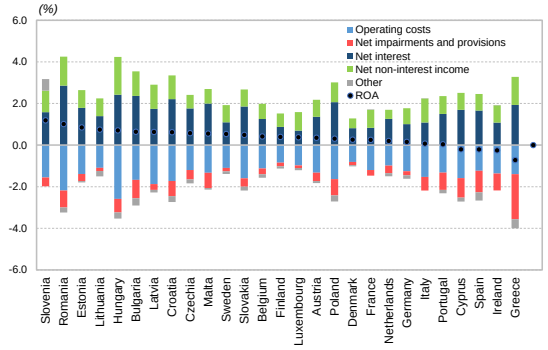
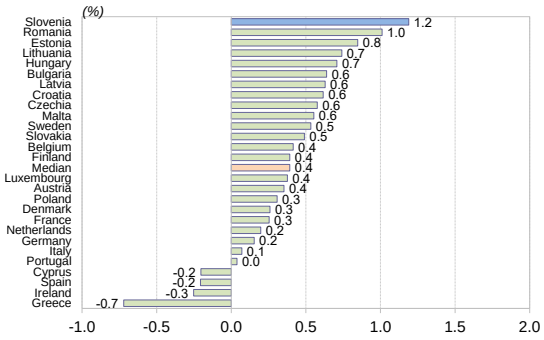


Figure 2.16 ROE across EU Member States, 2020



Source: ECB (SDW)

2.2 Liquidity

The banking system's sound liquidity position improved further in the first half of 2021, although there remained considerable differences between individual banks. Amid sharp growth in deposits by the non-banking sector and weak lending, both primary and secondary liquidity strengthened, increasing the banks' capacity to cover the liquidity outflows that might follow in the event of the realisation of funding risk. Prudent liquidity management remains important, particularly at banks with smaller liquidity surpluses, as any renewed downturn in the epidemiological situation and consequently in the economy could weaken their liquidity position.

The capacity to cover net liquidity outflows over a short-term stress period remained high at system level. The liquidity coverage ratio (LCR) increased by 12 percentage points in the first half of 2021 to 336% (see Figure 2.17), and remains more than three times higher than the regulatory requirement of 100%. In the wake of the sharp increase in household deposits, which have mainly been placed in accounts at the central bank, growth in the liquidity buffer was higher than growth in net liquidity outflows. The liquidity surplus over the regulatory requirement thus increased further, reaching EUR 10.5 billion in June of this year, the highest figure to date.

The liquidity surplus over the LCR regulatory requirement increased at the majority of banks, although there are considerable differences in the surpluses at individual banks. All the banks met the

[75] The Financial Stability Review cited figures of 9.6% for pre-tax ROE in 2020 and 5.5% for ROE excluding the one-off effects of the merger of two banks on the basis of data on an individual basis. The data is not entirely comparable to the consolidated banking data (CBD) because of the methodology, and because the ROE figures are calculated post tax in this case.

[76] It is a matter of restating relatively volatile quarterly data on an annual basis. The results reveal an improvement, which is largely attributable to the improvement in the economy and to lower impairment and provisioning costs, or even (in certain countries) the net release of impairments and provisions.

minimum regulatory requirement for the LCR (100%), and only at two banks was the LCR lower than double the aforementioned requirement (see Figure 2.18). The small banks and savings banks are notable for high LCRs, while it was mainly the subsidiary banks under foreign ownership that remained below the average for the banking system.

Figure 2.17 LCR in the banking system

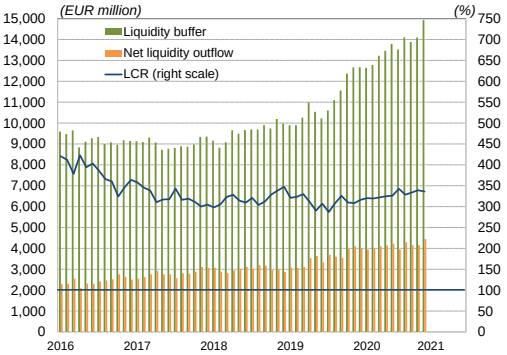
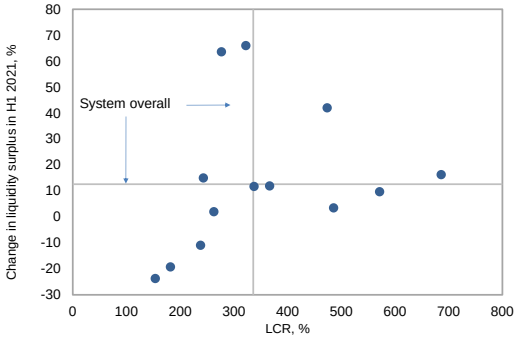


Figure 2.18 LCR and change in the liquidity surplus at individual banks



Note: In the left figure the horizontal blue line denotes the minimum requirement for the LCR in accordance with the CRR (100%). For the sake of clarity, one bank is not illustrated in the right figure: its LCR was 1,806%, and the change in its liquidity surplus in the first half of 2021 was -7.8%.

Source: Banka Slovenije

The pronounced growth in primary liquidity[77] increased the banks' resilience, and with it their capacity to cover the adverse effects of any realisation of funding risk. Growth in primary liquidity, which became more pronounced after the outbreak of the Covid-19 pandemic (in March of last year), strengthened further in the first half of this year (see Figure 2.21). It increased by EUR 2.2 billion to EUR 11.1 billion, almost double the figure from before the pandemic. This also brought changes to the structure of the asset side of the banking system's balance sheets. Primary liquidity reached a record high level, accounting for 23.2% of total assets, and becoming the second most important form of asset, although it is the lowest-yielding. The main drivers of the increase in primary liquidity were the sharp increase in deposits by the non-banking sector and the funding obtained by certain banks in the TLTRO-III tenders at the Eurosystem, which for now the banks have only redirected into lending and other assets to a small extent, while placing the remainder in accounts at the central bank. If the increase in deposits by the non-banking sector continues to strongly outpace the increase in loans, primary liquidity can be expected to strengthen further in the future.

Like in Slovenia, the majority of other euro area countries have also seen an improvement in their liquidity position, despite the pandemic. According to the latest figures,[78] all but two of the euro area countries have seen an increase in the LCR since the outbreak of the pandemic (see Figure 2.19). Slovenia continues to be ranked fourth in the euro area in terms of the LCR, and it is mainly the small banking systems that have high LCRs. Like banks in Slovenia, they also face high growth in primary liquidity in the form of cash and balances at the central bank (see Figure 2.20).

[77] Primary liquidity comprises cash on hand, balances at the central bank and sight deposits at banks.
[78] Data up to the first quarter of 2021 inclusive was available at the time of writing.

Figure 2.19 LCR in euro area countries

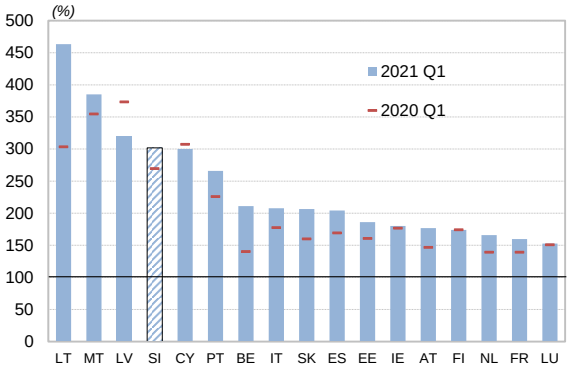
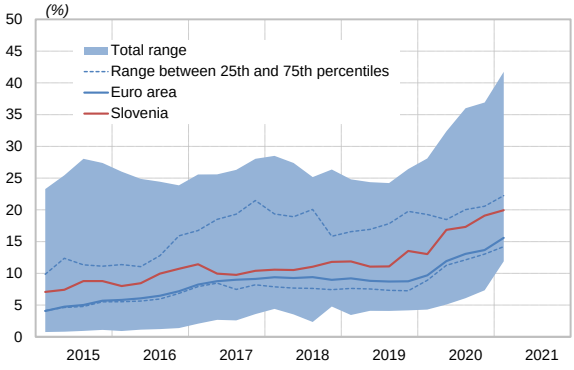


Figure 2.20 Ratio of primary liquidity to the balance sheet total in Slovenia and other euro area countries



Note: In the left figure the horizontal blue line denotes the minimum requirement for the LCR in accordance with the CRR (100%).

Source: ECB (SDW)

The banks also increased their secondary liquidity[79] via investments in domestic and foreign securities, albeit significantly less than primary liquidity. The stock of secondary liquidity increased by 1.9% in the first half of 2021 to EUR 8.0 billion. Despite the increase, the ratio of secondary liquidity to the balance sheet total declined to 16.8%, on account of the higher growth in the balance sheet total (see Figure 2.22). The banks increased their holdings of Slovenian government securities and foreign marketable securities rated BBB or higher, as a result of which there was no significant change in the breakdown of secondary liquidity. Slovenian government securities thus accounted for 43% of total secondary liquidity in the banking system in June 2021, while their concentration at less significant banks[80] remained higher.

Figure 2.21 Primary and secondary liquidity

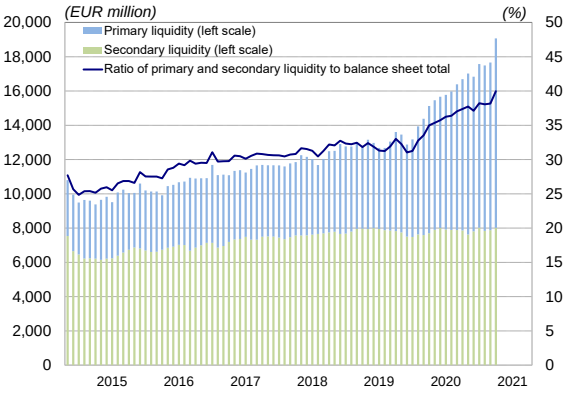
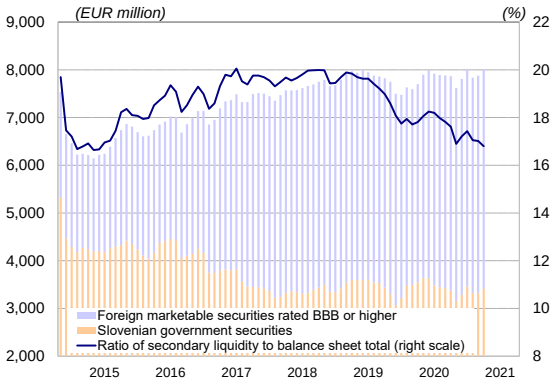


Figure 2.22 Breakdown of secondary liquidity



Note: Primary liquidity comprises cash on hand, balances at the central bank and sight deposits at banks. Secondary liquidity is calculated as the sum of the monthly average of Slovenian government securities and foreign marketable securities rated BBB or higher.

Source: Banka Slovenije

There was a sharp decline at system level in the proportion of the pool of eligible collateral at the Eurosystem that is free, but the banks still hold a large stock of financial collateral on their balance sheets that could be included in the pool, thereby granting access to additional liquidity at the Eurosystem. The aforementioned proportion of free collateral declined by 21 percentage points over the first half of 2021 to 45% for the banking system (see Figure 2.23), as a result of the participation of certain banks in the targeted longer-term refinancing operations (TLTRO-III) at the Eurosystem. Despite the considerable decline, this figure remained more than double that in the euro area overall, which had declined to 21% by June of this year. Slovenian banks mainly include government bonds and loans in the pool of eligible collateral (see Figure 2.24). For now the banks have just over a third of their total eligible collateral

[79] Secondary liquidity is calculated from liquidity ladder data as the sum of the monthly average of Slovenian government securities and foreign marketable securities rated BBB or higher.

[80] These are banks that are not under the direct supervision of the ECB, and are therefore not included in the Single Supervisory Mechanism (SSM).

registered in the pool with the Eurosystem, which at system level amounted to EUR 9.6 billion in June 2021. Just 27% of this collateral is encumbered, which allows the banks to obtain additional liquidity at favourable cost to ensure the economy is financed without disruption. Slovenian banks had taken up just 35% of their potential borrowing in TLTRO-III operations by June 2021; they have no need for additional funding given their high liquidity surplus and weak lending activity. The overall take-up of potential borrowing in the euro area is significantly higher, at 82%.

Figure 2.23 Banks' claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free

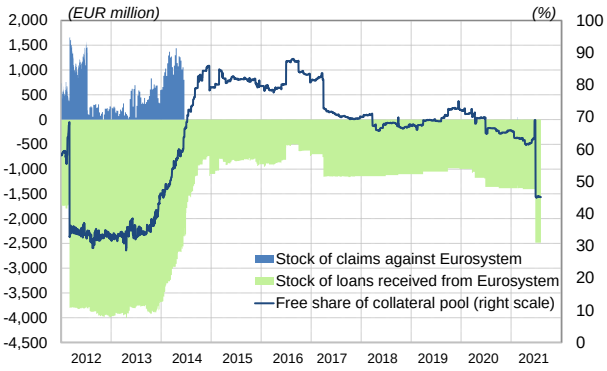
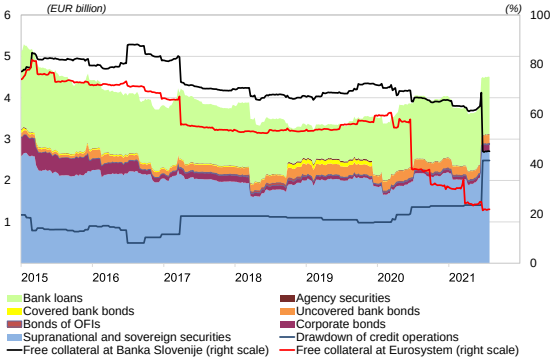


Figure 2.24 Breakdown of eligible collateral for Eurosystem operations



Source: Banka Slovenije

The liquidity stress tests[81] show the liquidity of the banking system to have improved slightly in the first half of 2021. The liquidity surplus at system level increased under all the stress tests. Under the baseline scenario, which represents the most likely course of events, all institutions pass the stress test. This means that the survival period is longer than six months, while the net position at the end of the stress period is positive. Under the more severe scenarios, which represent very challenging but still plausible situations, the stress test is failed by three (adverse scenario) or five (extreme scenario) of the 14 banks. Although the survival period does not fall below two months (under the adverse scenario) or one month (extreme scenario) for any bank, the banks must ensure that there is sufficient manoeuvring room to potentially make adjustments to liquidity positions and to carry out mitigation measures. There is greater sensitivity to liquidity shocks at the subsidiary banks under foreign ownership where secondary liquidity is lower, and at banks whose business model is primarily based on optimising the liquidity position in cost terms and covering the liquidity position directly through ordinary cashflows.

[81] In light of the importance of monitoring key risks at the level of individual banks and savings banks and at the level of the system overall, Banka Slovenije regularly conducts liquidity stress tests, which are one of the most important tools for the quantitative monitoring of liquidity risk on a prospective basis. The approach is based on a micro top-down calculation, and the ECB SSM methodology for targeted liquidity stress tests in 2019. The scenarios used (an adverse scenario and an extreme scenario, presented in detail in the October issue of the Financial Stability Review, page 46) are based on previous liquidity crises, and were calibrated for all European countries by the ECB. The banks' results are evaluated through a survival period, and a normalised net liquidity position at the end of the six-month test horizon.

3 HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS

3.1 Households

The financial position of households remained relatively stable in the early part of 2021, as it had in the second half of 2020. Amid government support the economic situation in Slovenia improved, and with it the survey expectations of households with regard to their future financial situation. Households nevertheless continued to save at higher rates, partly on precautionary grounds, and mainly in the form of currency and deposits, but their holdings of equity and various insurance schemes also increased. After falling in 2020, household expenditure was again up in year-on-year terms in the second quarter (by 21.4%). Growth in investment stagnated. The stock of the household sector's liabilities remained at similar levels in absolute terms, but improved slightly as a ratio to disposable income, while stabilising as a ratio to GDP. In the event of a slower macroeconomic recovery, and a merely gradual improvement on the labour market, the vulnerability of the sector might be reflected mainly at households with below-average income.

Similarly to 2020, households recorded growth in disposable income in the second quarter of this year, in the amount of 9.5% in year-on-year terms (see Figure 3.1). Households continued to show an appetite for saving, on precautionary grounds: gross household saving in the second quarter of 2021 reached the level seen in the whole of 2012 (see Figure 3.2). Conversely, household expenditure in the second quarter was also up in year-on-year terms, by 21.4%. The saving-investment gap remains wide, gross investment having remained at a similar level to 2020.

Figure 3.1 Gross disposable income and final consumption expenditure

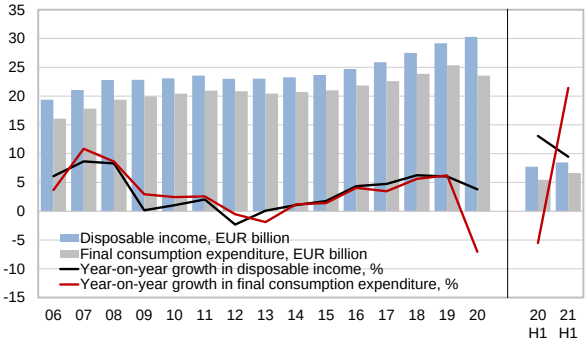
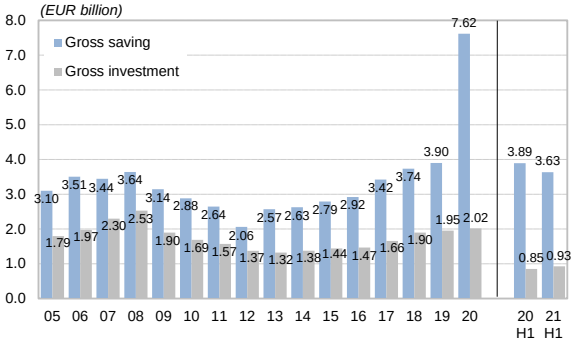


Figure 3.2 Household saving and investment



Source: SORS

Survey indicators of consumer opinion in the first half of 2021 were already reflecting a considerable improvement in households' expectations of their financial situation, although they were yet to reach the level seen in 2019. The reasons for the improvement in Slovenian consumers' expectations as measured by the survey indicators (see Figure 3.3) include the growth in the average net wage in almost all economic sectors under the SKD 2008 classification other than accommodation and food service activities (Sector I), which was in any case the sector with traditionally the lowest average net wages (see Figure 3.4). The epidemiological situation over the last year and a half meant that the highest growth in average net wages was mainly recorded by the sectors of human health and social work activities (Q), public administration and defence, compulsory social security (O) and education (P).

Figure 3.3 Consumer assessment of the financial situation of households

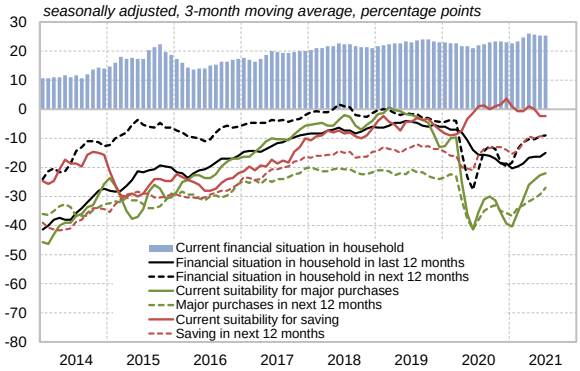
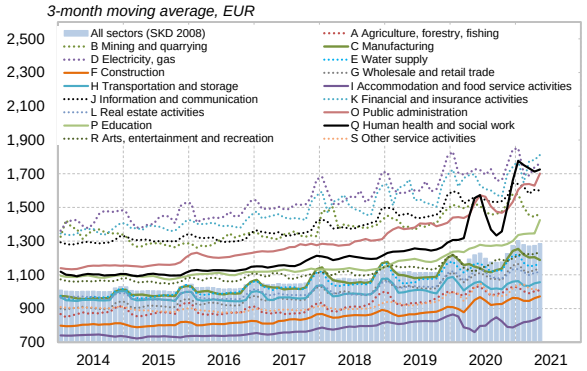


Figure 3.4 Average monthly wage by economic sector (SKD 2008)



Source: SORS

The ratio of household financial liabilities to disposable income is gradually declining as a result of the general rise in income in 2020 and the early part of this year, while the rise in their ratio to GDP came to an end in the first quarter of this year. Compared with the euro area overall, the dynamics in financial liabilities are more favourable in Slovenia: the overall stock of household financial liabilities in Slovenia remained virtually unchanged over the first quarter of 2021 at EUR 14.8 billion (see Figure 3.5).[82] The breakdown of household financial assets reveals that precautionary motivation remained highly significant in the first quarter of 2021: it was mainly deposits (EUR 2.5 billion) and equity (EUR 1.4 billion) that continued to increase in year-on-year terms, the latter driven in part by a rise in asset valuations (see Figure 3.6). Significant contributions to the year-on-year increase in financial assets also came from insurance, shares and investment fund units, and currency.

Figure 3.5 Household financial liabilities, absolute amount and as ratio to GDP and disposable income

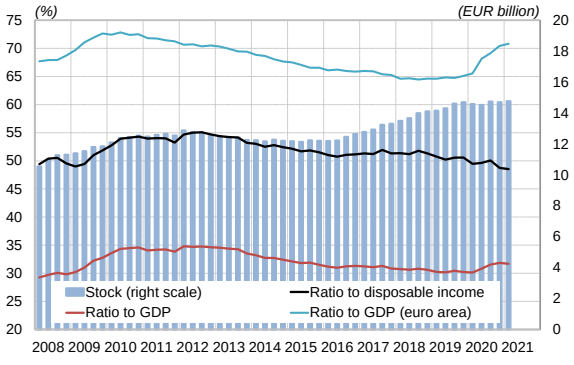
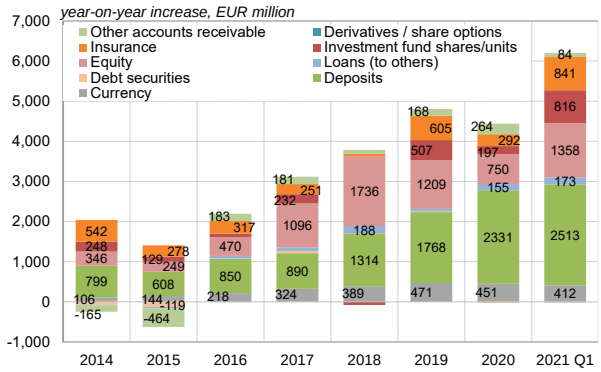


Figure 3.6 Breakdown of increase in household financial assets



Note: Equity is a financial asset, and consists of listed shares, unlisted shares and other equity. Investment fund shares or units include shares in an investment fund when the fund has a corporate structure.
Sources: Banka Slovenije, SORS, Eurostat

The average household in Slovenia differs considerably from the average household in the euro area, both in dynamics and in the ratios of financial assets and liabilities to GDP. The ratio of financial liabilities to GDP stood at around 32% in Slovenia in the first quarter of this year, significantly less than in the euro area overall, where it had risen to 71% (see Figure 3.7). Although the ratio of household financial assets to GDP is increasing in Slovenia, it is almost a half less than in the euro area overall: the figure stood at 136% in the first quarter of this year in Slovenia (compared with 243% in the euro area overall).

The pandemic did not have an impact on the breakdown of Slovenian households' financial assets: currency and deposits still prevail, and account for almost half of the total (48%). The proportions accounted for by equity and by various insurance schemes are also notable (see Figure 3.8). The other forms of household financial assets are less important. The breakdown of household financial assets in Slovenia differs from that in the euro area overall: deposits and insurance schemes are prevalent at the average household in the euro area.

[82] Year-on-year growth in household financial liabilities in the euro area stood at 3% at the end of the first quarter of 2021.

Figure 3.7 Household financial assets and liabilities in Slovenia and the euro area

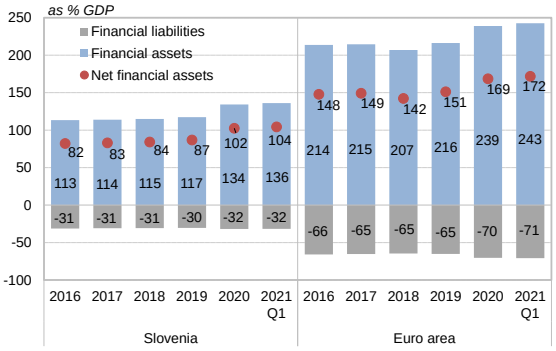
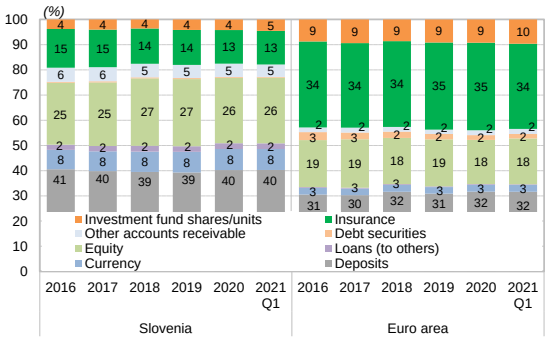


Figure 3.8 Breakdown of household financial assets in Slovenia and the euro area



Sources: ECB (SDW), Banka Slovenije

According to financial accounts figures, loans account for the majority (88%) of household financial liabilities. The remaining liabilities of households are defined as other liabilities. In a bank survey of demand for loans banks state that the share of consumer loans approved in the first half of 2021 was down on 2020 and 2019, particularly for temporary employees, who remain the group facing the highest level of rejections of credit applications, pensioners and sole traders, for whom the share of approved consumer loans had already declined in 2020 (see Figure 3.9). Permanent employees also saw a decline in the share of approved consumer loans. By contrast, the share of approved housing loans in the first half of 2021 remained relatively stable compared with previous years (see Figure 3.10).

Figure 3.9 Share of approved consumer loans in terms of number of applicants

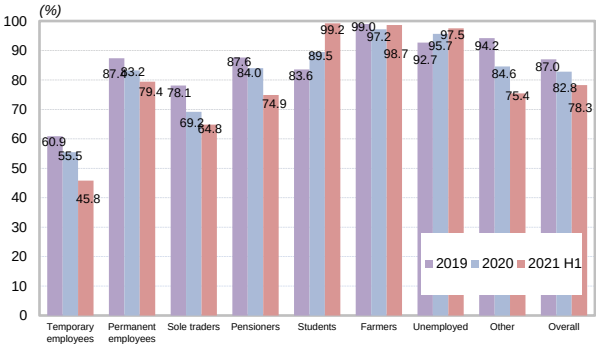
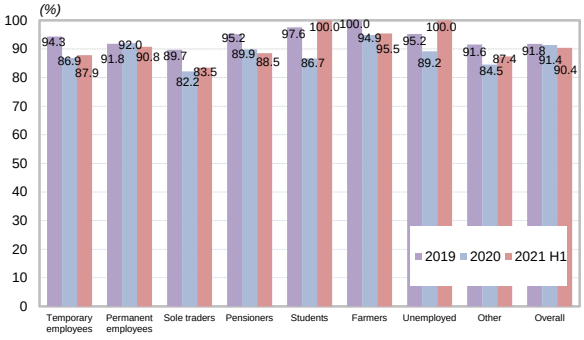


Figure 3.10 Share of approved housing loans in terms of number of applicants



Note: The survey covered 11 banks, while the figures for 2019 with regard to the scale of household demand relate to nine banks.

Source: Banka Slovenije

The banks report that the largest demand for consumer loans and housing loans comes from permanent employees (see Figure 3.11). The bank survey also clearly shows the increase in demand for loans and the resulting increase in approved loans: the volume of loans in the first half of 2021 was already close to the volume attained in the whole of 2020 (see Figure 3.12).

Figure 3.11 Demand for consumer loans according to status of applicant

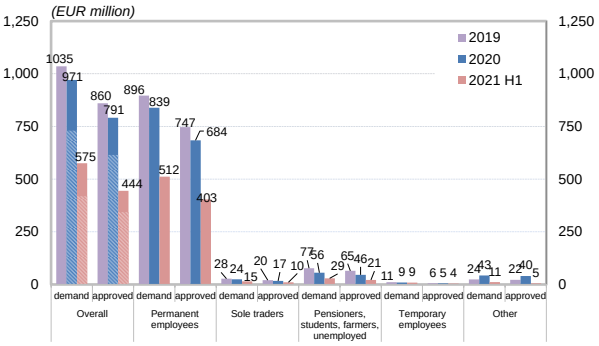
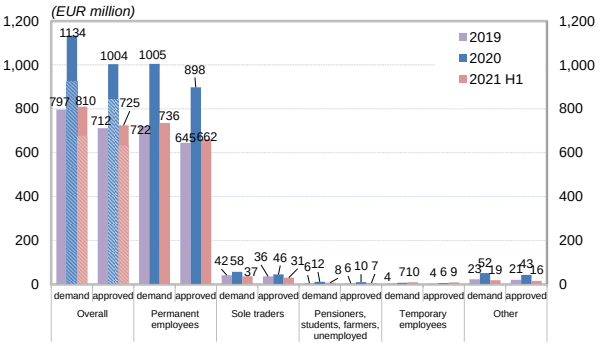


Figure 3.12 Demand for housing loans according to status of applicant



Note: The survey covered 11 banks, while the figures for 2019 with regard to the size of household demand relate to nine banks. The columns with the diagonal hatching show the figures for 2020 and 2021 that solely include the nine banks that reported in 2019.

Source: Banka Slovenije

Judging by the bank survey, the main grounds for the rejection of household loans are the banks' credit standards and undefined "other" reasons (see Figure 3.13). For housing loans, the banks also cite the non-acceptance of terms by customers. Rejection on the grounds of non-compliance with a macroprudential measure is more evident for consumer loans than for housing loans, and does not constitute the primary grounds for rejection for either type of loan. As far as the purpose of the loans is concerned, the banks report that the highest demand from applicants came for loans for general consumption, while demand for loans for the purchase or construction of real estate was significantly lower, if only the number of customers is taken into account (see Figure 3.14). In terms of loan amount, the highest demand is for loans for the purchase or construction of real estate and for general consumption, while share of demand accounted for by loans for debt repayment and for the renovation of real estate also increased slightly in the first half of 2021. The level of demand for loan moratoria because of the Covid-19 epidemic was notable in 2020, but this figure was down 2 percentage points in the first half of 2021.

Figure 3.13 Breakdown of rejections by type according to amounts of loan applications by households

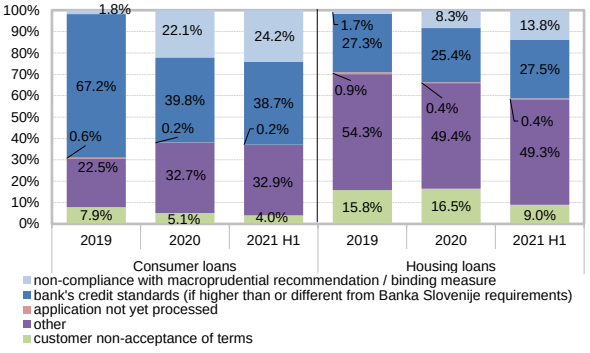
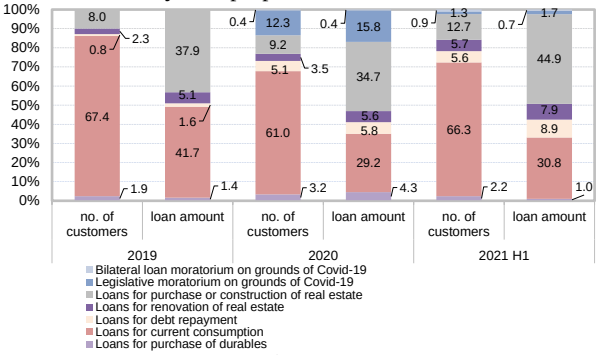


Figure 3.14 Breakdown of demand for household loans by loan purpose



Note: The banks reported in the survey that non-compliance with the cap on DSTI was the main reason for loan rejection on the grounds of non-compliance with a macroprudential measure. The caps on maturity and LTV, and the allowed quotas for DSTI and maturity are not cited by the banks as grounds for loan rejection. With regard to the question concerning the breakdown of demand in terms of loan purpose, one of the ten banks cited only demand for loan moratoria because of the epidemic. The breakdown of demand in terms of loan purpose is also illustrated separately for housing loans and consumer loans (for more, see the appendix: Figure 7.25 and Figure 7.26).

Source: Banka Slovenije

3.2 Non-financial corporations

The indebtedness of non-financial corporations declined during the Covid-19 pandemic. The debt ratios at the end of the first quarter of 2021 remained favourable compared with previous years, and were among the lowest in the euro area. Bank financing of NFCs had ceased its decline by June, and growth in loans is now approaching the overall rates in the euro area, from which they had diverged sharply during the pandemic. Financing at subsidiaries in the rest of the world has begun to increase. Deposits by NFCs at banks began to decline after a long period of growth. As the moratoria on bank loans expire, this might be a reflection of the

increased need for liquidity for debt servicing, and also of their use for financing of new investments. Because the pandemic and the containment measures had differing impacts on different parts of the economy, the recovery in economic growth is uneven. These differences could widen further during the autumn.

Financing and indebtedness of non-financial corporations

Financing of non-financial corporations began to increase again in the early part of 2021, primarily as a result of a continuing inflow of equity. NFCs paid down debt financing in the form of loans and trade credits in the early part of the pandemic. They have resumed receiving trade credits amid the revival of economic growth (see Figure 3.15). The overall flow of debt financing nevertheless remained negative in the first quarter of this year.

Figure 3.15 Flows in NFCs' financial liabilities by instrument

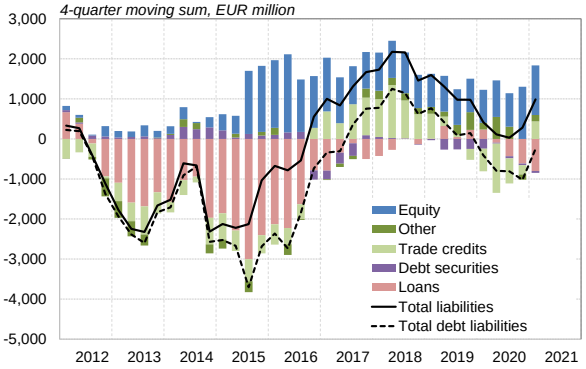
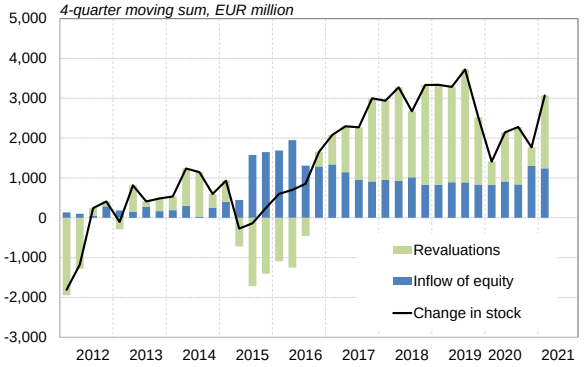


Figure 3.16 Change in capital of NFCs, and contributions by transactions and revaluations



Source: Banka Slovenije

The debt ratios remained low compared with their previous levels, and compared with other euro area countries. The leverage ratio in the NFCs sector declined to 80% in the first quarter of 2021 (see Figure 3.17), driven largely by the growth in equity. Since 2017 the equity of NFCs has been driven upwards more by revaluations than by actual inflows (see Figure 3.16). The second debt ratio, the ratio of debt to GDP, increased by 1.2 percentage points in 2020 as GDP declined, and by a further 0.7 percentage points in the first quarter of 2021 to reach 80.7%. Amid rising GDP, the stock of NFCs' debt liabilities also increased slightly in the early part of the year,[83] primarily as a result of an increase in the stock of trade credits. Compared with the euro area overall, Slovenian NFCs are less indebted in terms of the debt-to-equity ratio, and the gap is even more evident in the ratio of debt to GDP. Only Lithuania had a lower ratio of debt to GDP according to the figures for the first quarter of 2021, while also Ireland and Estonia had lower debt-to-equity ratios. The indebtedness of NFCs as measured by the ratio of debt to GDP increased during the pandemic (compared with the end of 2019) in all euro area countries (other than Ireland and Luxembourg). In the majority of these countries the rise in indebtedness was driven by both a decline in GDP and an increase in debt.

After several years of decline, financing via loans from the rest of the world rose again slightly in the second quarter of 2021, as a result of an increase in loans raised at foreign parent undertakings. The stock of loans raised from foreign owners reached EUR 3 billion in June, up 22% on the end of the first quarter (and on the end of 2020). The stock of debt to non-affiliates and institutions was still declining over this period. The total stock of loans raised by Slovenian NFCs in the rest of the world amounted to EUR 6.3 billion at the end of June. The ratio of foreign loans to loans from domestic banks increased from 22% in 2008 to 72% in 2016, before declining over the following years to 68% (see Figure 7.29). The increase in financing via foreign loans has largely been driven by growth in financing at foreign owners, particularly after acquisitions.

[83] The mismatch with the figures for flows in debt liabilities is attributable to the high variability in quarterly flows, for which reason four-quarter moving sums are used in the analysis.

Figure 3.17 NFCs' debt ratios

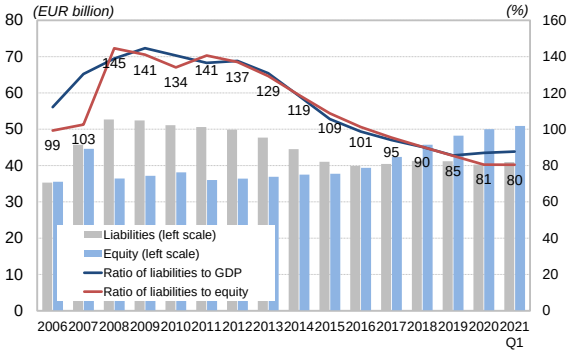
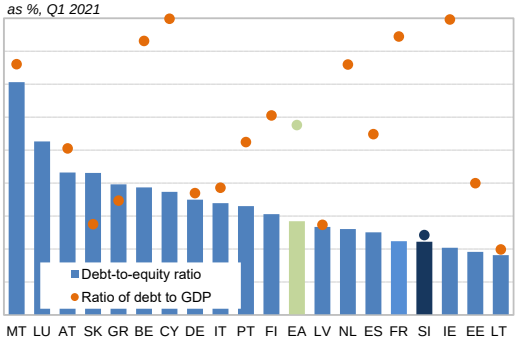


Figure 3.18 NFCs' debt ratios in euro area countries



Note: The left figure illustrates NFCs' liabilities excluding equity. In the right figure, where a comparison is made with the euro area, debt solely includes loans and debt securities. The figure for the ratio of financial debt to GDP for Luxembourg (334%) lies outside the scale of the y-axis.

Source: Banka Slovenije

Financing at domestic banks

Borrowing at domestic banks during the pandemic has been affected by the uncertainty with regard to its duration and its impact on the economy. The decline in bank loans to NFCs continued in 2021, and was most pronounced in March and April, but then eased by the end of June, as the year-on-year rate of growth approached positive territory. In terms of the breakdown by sector, the most notable negative contributions continued to come from wholesale and retail trade, while the positive contributions from accommodation and food service activities and construction in the second quarter were joined in June by information and communication and by the electricity and water supply sectors (see Figure 3.20). Since the outbreak of the pandemic growth has diverged significantly from the euro area average, which strengthened further in the pandemic amid higher growth in certain larger economies, but in recent months the gap has closed again (see Figure 3.19).

Figure 3.19 Growth in bank loans to NFCs in Slovenia and the euro area

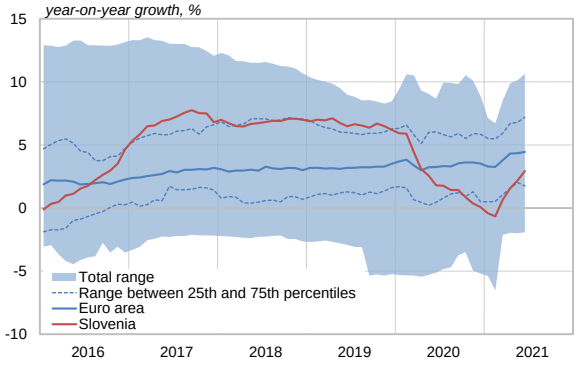
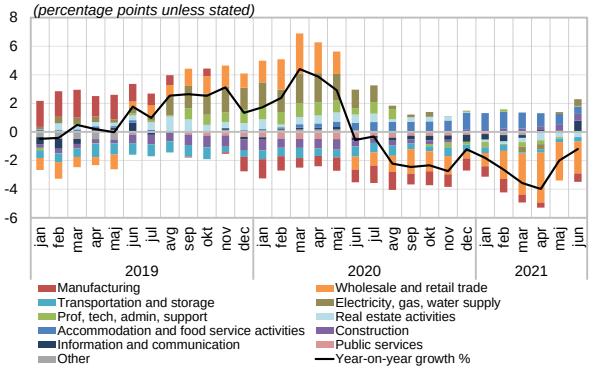


Figure 3.20 Contributions to growth in loans to NFCs by sector



Sources: Banka Slovenije, ECB (SDW), Banka Slovenije calculations

Large and medium-size enterprises in particular sharply reduced their debt at banks in 2020, but the trend has reversed at medium-size enterprises this year. The stock of bank loans to medium-size enterprises in June was up 3.3% on the end of 2020, although the year-on-year rate of growth remained negative in the amount of 2.3% on account of the earlier rapid decline (see Figure 3.21). Loans are also rising at micro and small enterprises, which together account for 38% of total loans to NFCs. The trend of debt repayments at large enterprises carried over into 2021, when they further reduced their bank debt by 1.7%. The overall dynamics in the financing of NFCs at banks are largely defined by the trends at large enterprises, for which reason the increased lending to small enterprises and, in particular, to micro enterprises remains less evident.

Figure 3.21 Growth in loans to NFCs by corporate size

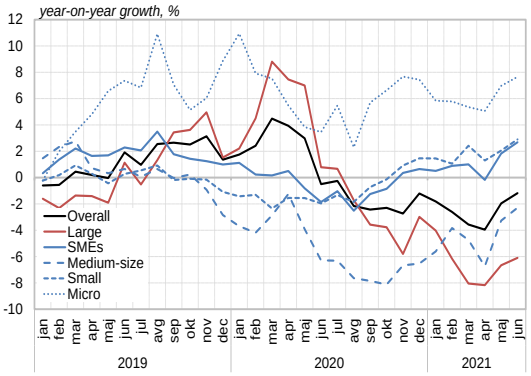
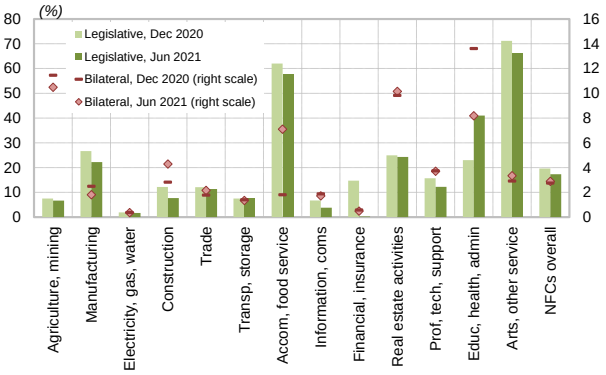


Figure 3.22 Share of legislative and bilateral loan moratoria by sector



Source: Banka Slovenije

Another factor in the decline in the stock of loans was the expiry of a large part of the moratoria on loans to non-financial corporations in the first half of 2021; the share of loans covered by a moratorium began to decline as regular repayments resumed. Loans covered by a moratorium accounted for 20.2% of the stock of bank loans to NFCs at the end of June 2021, compared with 22.4% at the end of 2020. The majority of NFCs are regularly repaying their debts after the moratoria expire, but arrears are accruing in above-average levels in particular at those hit in part or in full by restrictions on business (for more, see the section on credit risk). The share of loans covered by a moratorium declined in the majority of sectors in the first half of 2021 as a result of regular or early repayments. The notable exception is accommodation and food service activities, where the share covered by a moratorium increased by 0.8 percentage points over the first half of the year to 64.7% (see Figure 7.5). The increase in accommodation and food service activities was driven by an increase in the share of bilateral (non-legislative) moratoria, which were approved by the banks independently of the emergency laws or after their expiry (see Figure 3.22). Bilateral moratoria also increased in most other sectors, although it was only in accommodation and food service activities that they drove an increase in the total share of moratoria, which is additional evidence of the difficult position faced by accommodation and food service firms. There is also a high share of loans covered by a moratorium in arts, entertainment and recreation, where legislative and bilateral moratoria together accounted for 69.5% of total loans to the sector.

Non-financial corporations' demand for loans

Demand for loans at NFCs underwent a notable decline in the first quarter of this year, but the trend reversed in the second quarter. The developments this year have coincided with the evolution of the Covid-19 pandemic. Demand for loans declined sharply in the first quarter of this year at large enterprises and SMEs alike (see Figure 3.23), as confirmed by three of the four reporting banks. The decline in demand was attributable to a reduced need for new capital expenditure, and for the financing of inventories and working capital, and also an increase in loans at other banks. The majority of banks were not anticipating any major changes in NFCs' demand for loans in the second quarter, which came to pass: only one bank reported increased demand for loans in June. The increase in demand related to all NFCs and all maturities, although in terms of loan purpose it was capital expenditure and refinancing that were most prominent.

Figure 3.23 Demand for loans from NFCs

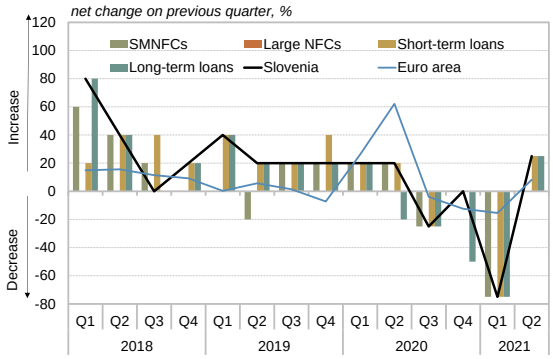
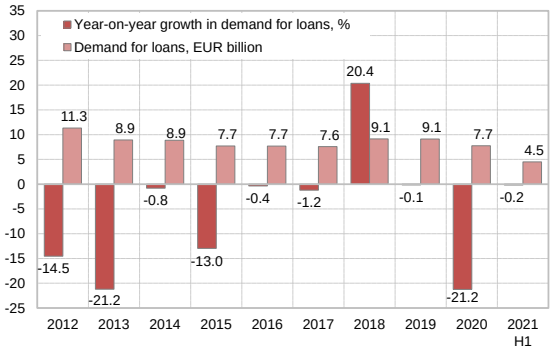


Figure 3.24 Demand for loans, amount and growth



Note: Two banks were excluded from sample in connection with the growth figures in 2020 and the first half of 2021 in the right figure. One bank was excluded from the sample in connection with demand and growth in demand between 2012 and 2019.
Sources: BLS, Banka Slovenije, Bank survey of demand for loans

Similar findings in connection with demand for loans also come from the annual survey of non-financial corporations' demand for loans. After declining in 2020, demand in the first half of 2021 was up 1.9% in year-on-year terms (see Figure 3.24), primarily as a result of growth in demand for loans for investment and for other loans (including loans for refinancing). In the breakdown of demand, there was an increase in loans for refinancing in the first half of this year (prior to 2020 they had been included under other loans), which the banks attribute to increasing competition and reductions in interest rates (see Figure 3.26). There was a significant decline in demand for liquidity loans, which firms had needed to alleviate liquidity difficulties during the epidemic. They accounted for 2.2% of the total in the first half of this year, down from 9.5% last year.

Figure 3.25 Demand for loans by loan type

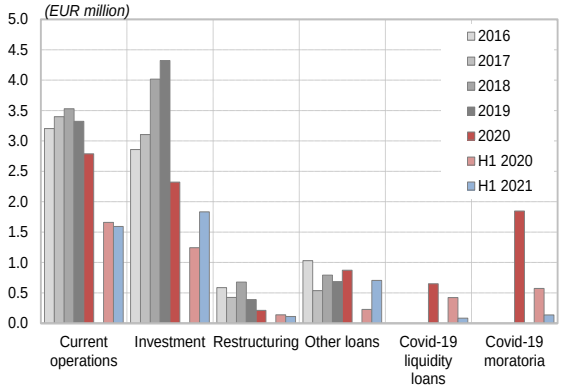
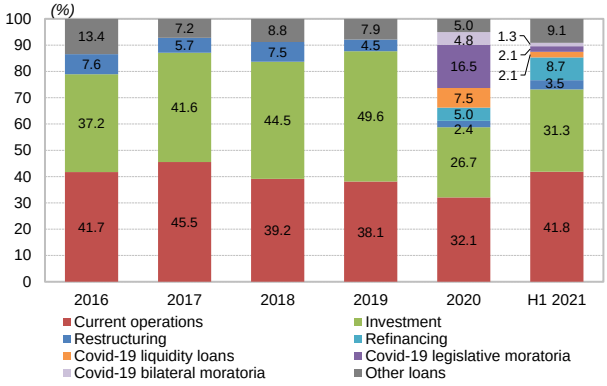


Figure 3.26 Breakdown of demand for loans by loan type



Note: One bank was excluded from the sample between 2016 and 2019 in both figures. One bank was excluded in 2020 and the first half of 2021 in the right figure (a different bank from the previous years).
Sources: Banka Slovenije, Bank survey of demand for loans

Demand from non-financial corporations for loan moratoria amounted to almost a quarter of total demand last year, but the figure has fallen to just 3.4% this year. There was still notably high demand for loan moratoria in the first half of 2021 in accommodation and food service activities, where it reached a fifth of total demand (see Figure 3.27). Real estate activities also recorded a high figure, of 12%. Accommodation and food service activities and arts, entertainment and recreation are also notable for the high share of demand for loans for restructuring, at 12% in each sector. Loans for restructuring are generally approved for customers with difficulties in debt servicing, which is further confirmation of the difficult position in the aforementioned sectors.

Figure 3.27 Breakdown of demand for loans in each sector by loan type including moratoria, H1 2021

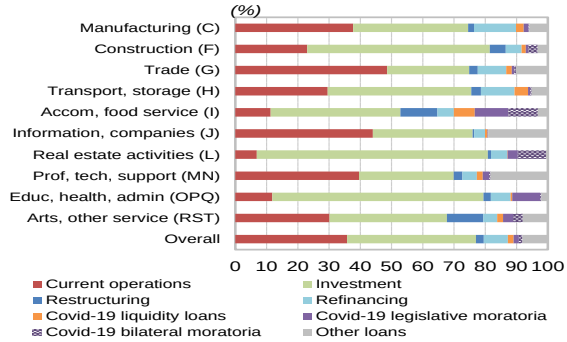
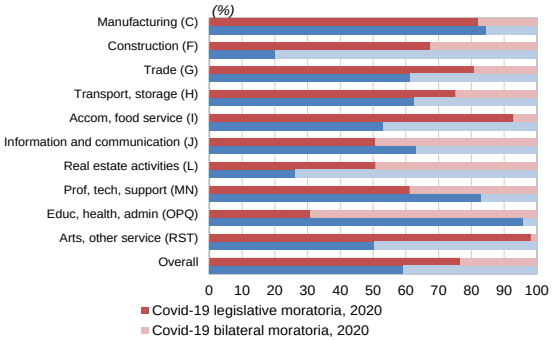


Figure 3.28 Breakdown of demand for loan moratorium in connection with Covid-19 by sector, 2020 and H1 2021



Note: One bank was excluded from the sample in both figures.
Sources: Banka Slovenije, Bank survey of demand for loans

Bankruptcies of non-financial corporations

Thanks to the government mitigation measures in the area of bankruptcy proceedings,[84] the number of proceedings across the non-financial corporations sector remained low in the first half of 2021, albeit with a slight increase in certain sectors. The number did cease falling at sector level (see Figure 3.29), and even increased slightly in certain sectors: in manufacturing, where despite rising the number was low, given the size of the sector, in wholesale and retail trade, and in construction. Accommodation and food service activities is again notable for having seen a rise of bankruptcy proceedings in 2020, which continued in the first half of this year (see Figure 3.30). Given that to a great extent firms' actual difficulties will only appear several months after the expiry of the moratoria, a lag of several months is expected in the rise in the number of bankruptcies. There remains uncertainty surrounding the evolution of the pandemic in the autumn and the potential for additional restrictions on business, and in this connection the potential for additional mitigation measures, which would again limit the rise in the number of bankruptcies.

Figure 3.29 Number of bankruptcy proceedings initiated against NFCs

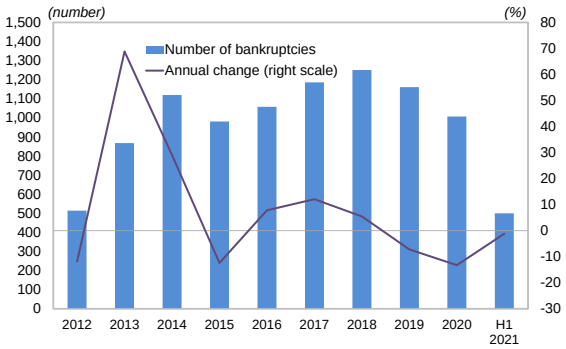
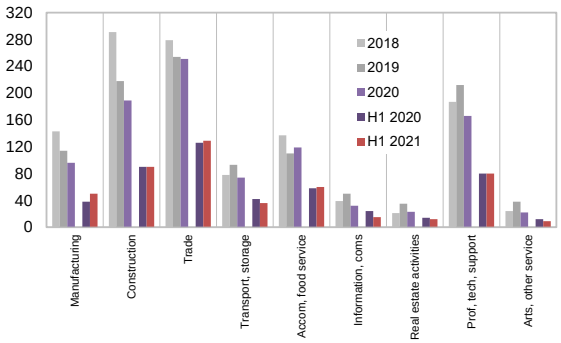


Figure 3.30 Number of bankruptcy proceedings initiated against NFCs by sector



Sources: Banka Slovenije, Supreme Court, AJPES

Non-financial corporations' financial assets

Non-financial corporations increased their deposits at Slovenian banks throughout the pandemic, before recording their first decline in deposits for some time in the second quarter of this year. The government support measures to provide liquidity to firms and their own caution in spending these funds on investment were factors in the retention and actual increase of liquid assets at banks (see Figure 3.31). In March 2021 these deposits accounted for 16.2% of NFCs total financial assets, up 2.4 percentage points on the end of 2019, while currency and deposits together reached 18.6%. The stock of deposits at banks declined by 4.8% in the second quarter, to the level seen at the end of 2020 (see Figure 3.32). The reasons for this decline can be found in the gradual expiry of the majority of loan moratoria in the first half of 2021, and the use of these funds to resume debt servicing, and in the renewed growth in corporate investment, which given the decline in profits in 2020 might also be partly financed by the available liquidity at banks.

[84] The measures with regard to bankruptcy proceedings in cases when the firm's insolvency was attributable to the declaration of the epidemic under Articles 96 and 97 of the Act Determining Emergency Measures to Contain the Covid-19 Epidemic and Mitigate its Consequences for Citizens and the Economy (ZIUZEOP). The two measures were in place from the official declaration of the epidemic until 30 August 2020. Under Articles 56 and 57 of the ZIUPOPDVE, the measures remained in place in modified form until March 2021, and were then extended until 30 September 2021 with two changes.

Figure 3.31 Flows in NFCs' financial assets by instrument

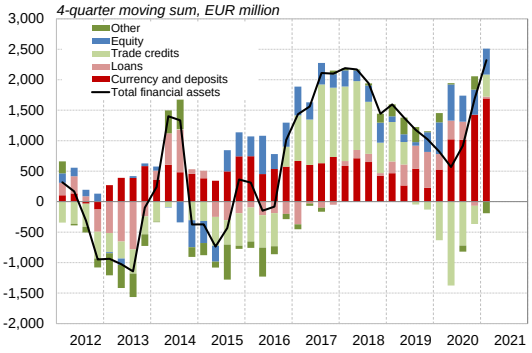
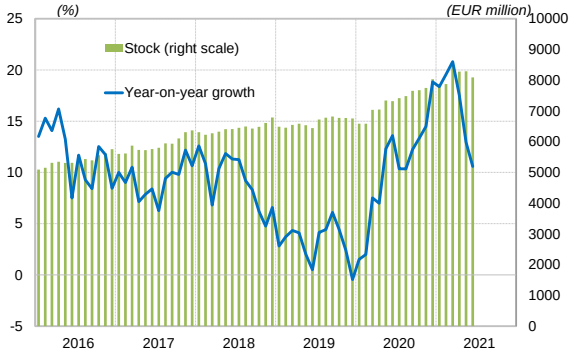


Figure 3.32 NFCs' deposits at banks



Source: Banka Slovenije

Sole traders

Sole traders saw a decline in income in the 2020 financial year, albeit a significantly smaller decline than at non-financial corporations. Net income was down 11.5% on 2019 at sole traders, and down 31.8% at NFCs (see Figure 3.23). As it did for NFCs, the emergency legislation acted to reduce the number of bankruptcy proceedings initiated. They continued to fall in number in 2021, and during the first half of the year were merely just under a quarter of the number recorded in 2019 before the crisis (see Figure 3.34). Conversely, the number of sole traders that ceased trading rose significantly last year, although there was no significant change in the total number of active sole traders (start-ups and closures are numerous and frequent in this segment of business entities) (see Figure 3.35). As the pandemic went on, a trend became evident of a fall in the number of business closures, and a simultaneous rise in the number of active sole traders.

Figure 3.33 Net profit of NFCs and sole traders

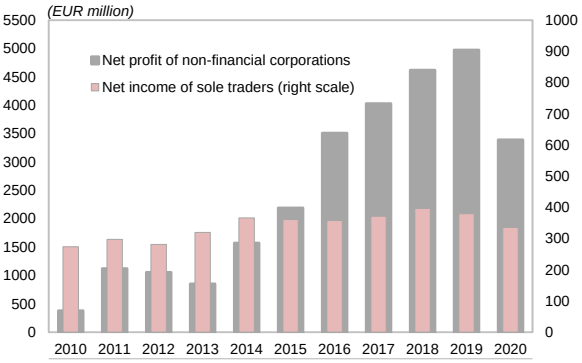
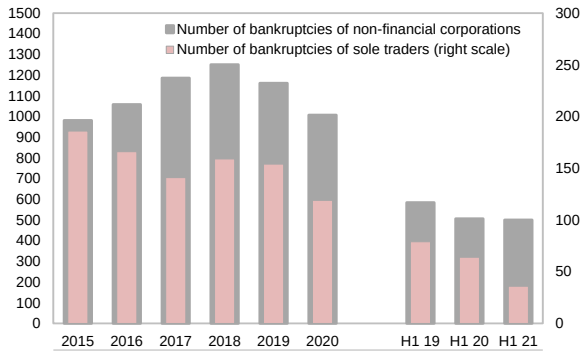


Figure 3.34 Number of bankruptcies of NFCs and sole traders



Sources: Banka Slovenije, AJPES, Supreme Court

After declining for two years, borrowing at banks by sole traders began rising again in the second quarter of 2021. Most notably there is rising lending to sole traders in professional, scientific and technical activities, which previously had mostly been declining sharply (see Figure 3.36). After recording high growth in 2020, lending to accommodation and food service activities declined in the first half of 2021. Growth in lending to individuals trading without registration numbers has remained positive, but there is no sectoral breakdown of these customers. The stock of bank loans to these customers is relatively large, and amounted to EUR 192 million in June, having increased by 3.2% since the outbreak of the pandemic.

Figure 3.35 Number of closures and active NFCs and sole traders

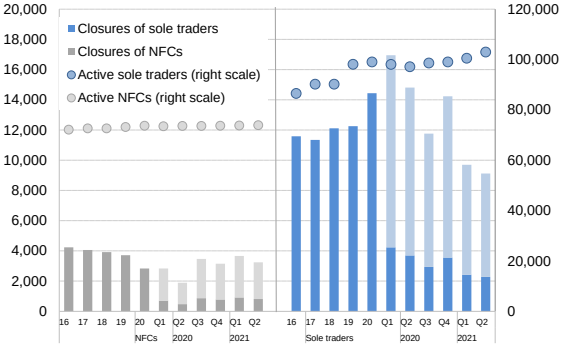
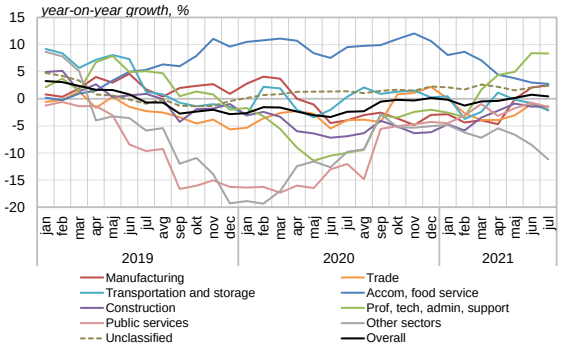


Figure 3.36 Growth in bank loans to sole traders by sector



Sources: Banka Slovenije, AJPES

Box 3.1 Analysis of input-output tables with a focus on accommodation and food service activities and arts

Extensive containment measures and emergency measures were a feature of 2020. The containment measures hit the sectors of accommodation and food service activities, arts, entertainment and recreation, tourism and other service activities particularly hard, and the share of moratoria was highest in those sectors. This box provides insight into the possibility of difficulties in these sectors spilling over into other sectors, making use of symmetric input-output tables. The finding is that fishing, food products, employment services and air transport are the sectors most dependent on tourism and arts.

In 2020 the most evident increase was in the stage with increased credit risk (Stage 2 under IFRS 9), and the related transitions from Stage 1 to Stage 2, while a rise in default rates (DRs) did not happen thanks to the extensive emergency measures. An increase in Stage 2, which is indicative of high credit risk, was mainly evident in loans to firms in the sectors hit hardest by the crisis, i.e. accommodation and food service activities and arts, entertainment and recreation (see Figure 3.37 and Figure 3.38).

Figure 3.37 *One-year exposure-weighted default rates (DRs) for NFCs, 2019 and 2020*

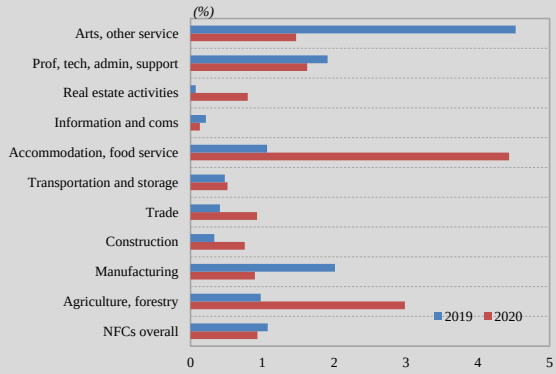
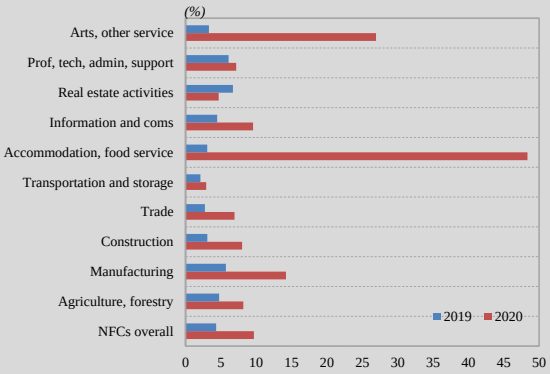


Figure 3.38 *One-year exposure-weighted transition rate between Stage 1 under IFRS 9 and Stage 2 (TR12) for NFCs, 2019 and 2020*



Note: Exposure means gross on-balance-sheet and off-balance-sheet exposure (without application of conversion factors). The portfolio measured at amortised cost is used, and bank branches are excluded. Defaulter is defined according to the EBA definition of non-performing exposure at the customer level. The unit of observation for the calculation of DR is the bank-customer-date. A default in any month of the year is taken into account for the calculation of DR. In the calculation of TR12 the figure for the end of the period takes account of the final data available for the contract during the year. The unit of observation for the calculation of TR12 is the bank-customer-date-contract.

Source: Banka Slovenije

The analysis identifies whether a deterioration in the situation in the aforementioned sectors could lead to difficulties in other sectors. The answer is not simple, and part of the answer is provided by symmetric input-output tables illustrating the links between sectors. A symmetric input-output table[85] is a matrix whose

[85] Symmetric input-output table in base prices (source: SORS) for 2015. Although the most recent input-output tables are only available for 2015, our assumption is that the majority of the links between sectors remained similar until 2020, or at least show the dependencies that could have been hit by Covid-19 and the related measures.

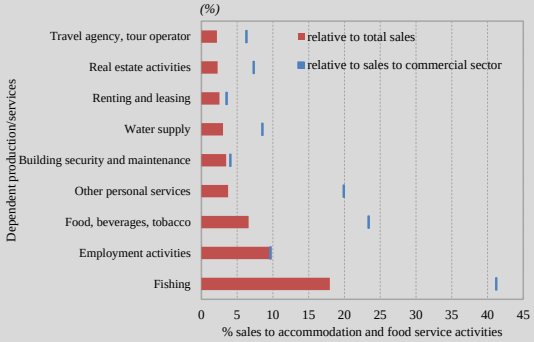
rows and columns use the same classification, in our case sector. It links sectors with sectors, thereby providing a detailed description of the domestic production process and transactions of products of the domestic economy.[86] Information can be obtained from this table about how much sector *x* purchases from other sectors, then consumes it in its production process and converts into value-added. Perhaps even more interesting information can be obtained about how many products are sold by sector *x* to sector *y*. The share of the total sales of a particular sector (e.g. fishing) that is sold to another particular sector (e.g. accommodation and food service activities) can also be calculated. This provides information on one sector's dependence on the performance of another sector. This share can be calculated with regard to intermediate consumption within commercial sectors, but in this analysis it is also relativised against the sum of the aforementioned intermediate consumption within commercial sectors and final consumption of exports, government and household.

The analysis focuses on certain sectors that were most evidently impacted by containment measures, i.e. accommodation and food service activities, arts, entertainment and recreation, travel agency and tour operator services, and air transport.[87] Certain other sectors, manufacturing for example, also took up higher levels of moratoria, but these sectors are not covered in this analysis. The Covid-19 pandemic also caused difficulties indirectly for certain sectors, for example as a result of problems in supply chains, which will only become evident over time. These sectors are also not subject to analysis.

In light of the deterioration in credit parameters over the course of 2020 as identified above, the accommodation and food service activities sector is analysed in greater detail first. Accommodation and food service activities is strongly dependent on household final consumption, as this accounts for more than 70% of its output. Using the input-output tables for the sector, the first task is to examine inputs (for accommodation and food service activities this might identify which sectors it purchases its intermediate goods from), which can help identify potential problems in the supply chain. There is a strong dependence for example on the output of the food products, beverages and tobacco products sector (which accounts for 28% of the total), followed by real estate activities, employment activities, and wholesale (each of which accounts for just under 10%). In the event of a major decline in output in these sectors, this could cause major problems for accommodation and food service activities in obtaining inputs for its operations.

The sectors most affected by problems in accommodation and food service activities are also important (see Figure 3.39). The most prominent is fishing, which sells more than 40% of its output that is sold back to the commercial sector to the sector of accommodation and food service activities. In terms of the total output of the fishing sector (including sales to government and households, and exports), the dependence declines to 18%, as the commercial sector and direct sales to households account for approximately equal shares of the sector's sales. Even on the basis of total sales, fishing's dependence on accommodation and food service activities is still very high.

Figure 3.39 Sectors most dependent on accommodation and food service activities



Note: The red bars denote the percentage of the total output of the particular sector that is sold to accommodation and food service activities; the blue lines denote the figure as a percentage of the sector's output that is sold solely to other commercial sectors rather than other institutional sectors. Sectors where the dependence is greater than 2% are illustrated.
Sources: SORS, Banka Slovenije calculations

Among sectors that were highly dependent on accommodation and food service activities and that were consequently affected during the Covid-19 pandemic it is also worth mentioning "employment

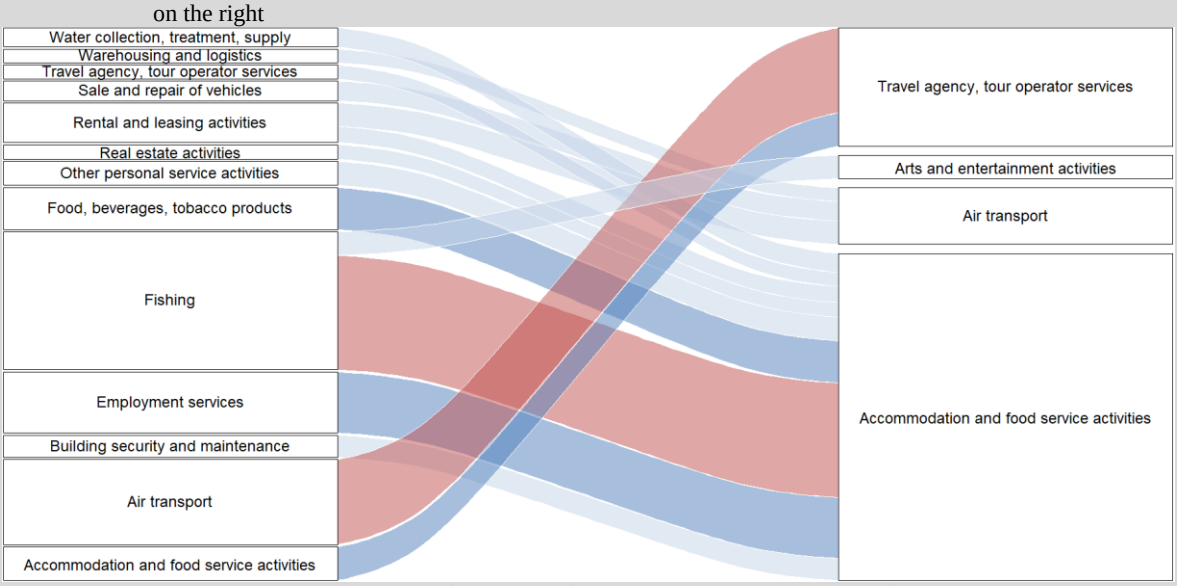
[86] The table captures transactions from the perspective of production and the generation of value-added and income across individual sectors, and the supply and consumption of products on the domestic market and for exports.
[87] A more detailed classification of the analysed sectors is as follows: accommodation (I55) plus food and beverage service activities (I56); creative, arts and entertainment activities, libraries, archives, museums and other cultural activities, gambling and betting activities (R90-R92); travel agency, tour operator and other reservation service and related activities (N79); air transport (H51).

activities", "food products, beverages and tobacco products",[88] and "other personal service activities", although in these cases the dependence was already quite low when sales to households are taken into account in addition to sales to the commercial sector. It is also worth highlighting building security and maintenance services, real estate activities, rental and leasing activities, and travel agency services. Certain sectors are not captured directly. For example, "crop and animal production, hunting and related service activities" is indirectly dependent, via "food products, beverages and tobacco products". Almost 30% of its total sales and almost 70% of its sales to the commercial sector depend on the latter.

The situation with travel agency and tour operator services is similar to accommodation and food service activities, in that it is highly dependent on sales to households. In terms of the dependence of the sector's total sales, a large share of the output is intra-sectoral, which could be a consequence of the large number of intermediaries on the path to the final customer. It is followed by air transport and accommodation and food service activities, each with less than 14%. In all three cases the intra-sectoral dependence within commercial sectors is very high, however on a broader basis (including output sold to the commercial sector, households and the government sector and intended for exports), the dependence on travel agency and tour operator services is significantly lower, which means that this sector obtains a large part of its revenues outside the commercial sector (other economic sectors). In the arts, entertainment and recreation sector too there is high dependence on economic operators in the same sector, albeit only when sales to the commercial sector alone are taken into account. A large part of the output of this sector is also purchased by other institutional sectors. None of the other commercial sectors purchases more than 4% of the output of arts, entertainment and recreation.

Based on analysis of the dependence of sectors on the sectors hit hardest by the Covid-19 pandemic (as stated in the beginning, this is not a complete list; instead selected sectors hit hardest by the containment measures were analysed), it can be seen that alongside the analysed sectors, the sectors that were worst affected indirectly were fishing, food products (and via this agriculture), employment activities, and also sectors such as real estate activities, personal service activities, and building security and maintenance (see Figure 3.40).

Figure 3.40 Links between sectors in terms of the proportion of its sales that the sector on the left makes to the sector on the right



Note: Intra-sectoral links have been excluded for the sake of clarity. The strong links in terms of the total output to all economic sectors are primarily in arts, entertainment (8%) and travel agency and tour operator services (28%). The red links are the strongest (over 10%), the deeper blue are medium-strong (over 5%), and the light blue are the weakest links (only those where dependence is over 2% are illustrated; dependence is defined as in the charts above, i.e. how much of a particular sector's total sales go to the sectors that were identified as being hit hardest by the Covid-19 pandemic, where intermediate consumption of firms, exports, government and households is taken into account in full).

Sources: SORS, Banka Slovenije calculations

[88] While catering establishments were closed, this sector probably increased its direct sales to households, bypassing intermediaries in accommodation and food service activities.

4 NON-BANK FINANCIAL INSTITUTIONS

4.1 Leasing companies

The performance of leasing companies is gradually returning to its level from before the outbreak of the pandemic. More and more firms are again opting to make use of leasing services to finance their purchase of equipment, but households remain the main driver of new leasing business. The stock of leasing business at the end of the first half of 2021 was broadly unchanged from a year earlier, while the proportion of claims more than 90 days in arrears declined further. The build-up of arrears in individual segments of business with firms seen at the end of last year came to an end in the first half of 2021, and remains limited. Leasing companies saw their profits fall further, but remain positive, while their capital structure improved. The risks inherent in the performance of leasing companies declined in the third quarter, and are moderate.

Leasing companies reported a large increase in new business in the first half of 2021. It amounted to EUR 585 million, up 33.2% in year-on-year terms (see Figure 4.1). The increase in new leasing business in the first half of this year was primarily attributable to a base effect from the first half of 2020, when new business declined sharply. Non-financial corporations increased their leasing business to EUR 282 million in the first half of 2021, up 47.1% in year-on-year terms, but remained behind households, whose new leasing business of EUR 300 million exceeded that recorded in the same period of 2019. The breakdown of new business remains similar to previous years: the majority (56%) of leasing business was for the purchase of new goods vehicles and cars. The average financed value in new equipment leasing business stood at EUR 14 thousand, up 24.9% in year-on-year terms and up 7.7% on the same period of 2019. The share of new equipment leasing business with a maturity of up to one year or between five and ten years increased, while the share accounted for by the most commonly used maturity of one to five years declined by 3.2 percentage points to 41.1%.

Figure 4.1 New leasing business[89]

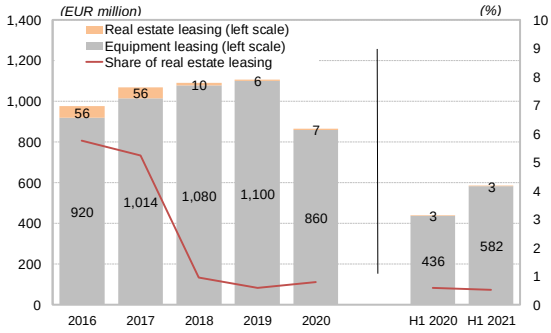
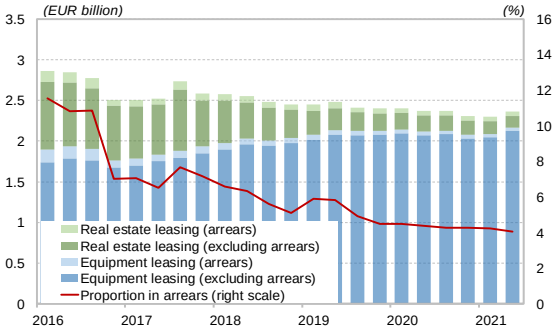


Figure 4.2 Stock of leasing business and proportion of arrears



Source: Banka Slovenije

Increased demand for vehicles is being reflected positively in the total stock of leasing business.[90] This was unchanged in year-on-year terms at EUR 2.3 billion, having increased by 2.9% over the first quarter of this year (see Figure 4.2). The stock of equipment leasing business, which constitutes the majority of leasing business, was up 2.3% in year-on-year terms at the end of the first half of this year. The largest increases in stock were in leasing of ships, trains and aircraft (30.1%) and other equipment leasing (24%), although together they amounted to just EUR 173 million or 8.1% of the total stock of equipment leasing business, while the stock of vehicle leasing business increased by 1.6% to EUR 1.8 billion, or 85.2% of the total stock of equipment leasing business.Despite the renewed increase in demand from non-financial corporations for the purchase of equipment, the stock of equipment leasing business with non-financial corporations declined slightly in year-on-year terms, while the share of the stock of equipment leasing business accounted for by non-financial corporations declined by 1.2 percentage points to 41.2%. The decline in the stock of equipment leasing business with non-financial corporations was most evident in transportation and storage and in

[89] Leasing business is disclosed at financed value, excluding the financing of inventories. Leasing companies are not entering into new real estate leasing business, and the value of new real estate leasing business is attributable to the reprogramming of existing business.

[90] The gradual withdrawal of leasing companies from real estate leasing, which accounted for 6.5% of the total stock of leasing business at the end of the first half of this year, is still having an impact on the stock of leasing business, but its impact is diminishing each year.

manufacturing, while there was a sharp increase in stock in construction and in administrative and support service activities. The stock of equipment leasing business with households stood at EUR 1.2 billion at the end of June 2021, or 58.2% of all equipment leasing business. It was up 4.7% in year-on-year terms, driven by an increase in the stock of vehicle leasing business and other equipment leasing business.

The proportion of claims more than 90 days in arrears declined further in the first half of 2021. Having been highlighted in the latter part of last year and the early part of this year, the debt servicing difficulties faced by NFC remain limited, while levels of arrears are continuing to decline at households (see Figure 4.3). The proportion of claims more than 90 days in arrears at the end of the first half of 2021 was down 0.3 percentage points in year-on-year terms at 4%. This was attributable to a decline in arrears in equipment leasing, and an increase in the stock of equipment leasing business. The proportion of arrears increased slightly in the real estate segment as the year-on-year decline in the stock of real estate leasing business outpaced the decline in arrears. The concentration of claims more than 90 days in arrears remains high: three leasing companies accounted for 85.2% of the total arrears, while the proportion of the total stock of leasing business that they account for was just 12.4%. The sector most notable for a year-on-year increase in the proportion of arrears is accommodation and food service activities, where the proportion of arrears increased from 10% to 15.5%, while most other sectors saw a decline in the proportion of arrears. The increase was driven by a decline in the stock of leasing business and a simultaneous moderate increase in arrears. Accommodation and food service activities accounted for 2.3% of total arrears. Numerous firms remain directly or indirectly reliant on government support and on fiscal and monetary policy measures, which are gradually expiring. The expectation is therefore that arrears of more than 90 days could increase further in the future.

Figure 4.3 Stock and proportion of leasing business with non-financial corporations and households more than 90 days in arrears

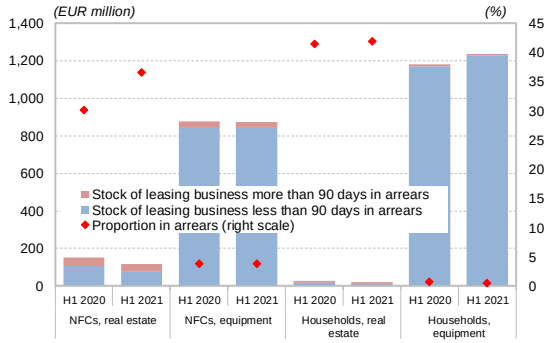
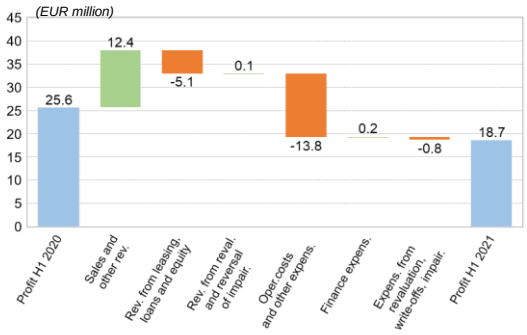


Figure 4.4 Impact of income statement components on total profit



Source: Banka Slovenije

Leasing companies saw a further slight deterioration in their performance in the first half of 2021, but they remain profitable. Total pre-tax profit was down 26.9% in year-on-year terms, as the majority of leasing companies (accounting for 97.2% of total assets) operated with a profit (see Figure 4.4). The decline in profit was driven by a decline in income from participating interests (certain leasing companies did not receive profit distributions because of the Banka Slovenije macroprudential recommendation temporarily restricting profit distributions by leasing companies), a decline in income from operating leasing and loans, and an increase in operating costs and other expenses caused by a rise in costs of services. Total assets were unchanged from June 2020, while equity was up 8.1%. In the wake of the simultaneous decline in financial liabilities, the debt-to-equity ratio declined slightly to 4.1. Leasing companies' performance is gradually returning to its level before the pandemic. Arrears of more than 90 days have increased moderately in individual segments, but on aggregate they have continued to decline, which is having a favourable impact on the systemic risks inherent in the performance of leasing companies.

4.2 Insurers

The insurance sector recorded growth in insurance premiums in the first half of the year, driven by general insurance and life insurance. The rise in gross written premium and the decline in the frequency of claims caused by occasional restrictions in connection with the Covid-19 pandemic brought an improvement in the claims ratio in general insurance and life insurance, meanwhile it deteriorated in health insurance. The

profitability and capital adequacy of insurance corporations and reinsurance corporations improved, despite the negative impact of the low interest rate environment. The risks in the insurance sector remain moderate.

The insurance sector continued to see growth in gross written premium in the first half of 2021. Insurance corporations' gross written premium over the first six months of the year was up 3% in year-on-year terms at EUR 1.3 billion, while reinsurance corporations saw an increase of 2.4% (see Figure 4.5). The growth in gross written premium was driven by general insurance and life insurance, while health insurance premium remained at its level of 2020. The growth in gross written premium in general insurance was attributable to an increase in real estate insurance against fire and other natural disasters, motor vehicle insurance other than car liability insurance, and credit and guarantee insurance. The growth in the life insurance segment was driven by unit-linked life insurance. The two reinsurance corporations increased their gross written premium in the area of insurance/reinsurance against fire and other natural disasters, employee liability insurance, and life insurance/reinsurance.

Figure 4.5 Gross written premium and annual growth by type of insurance

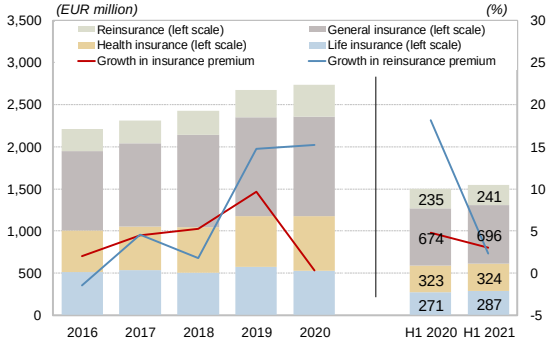
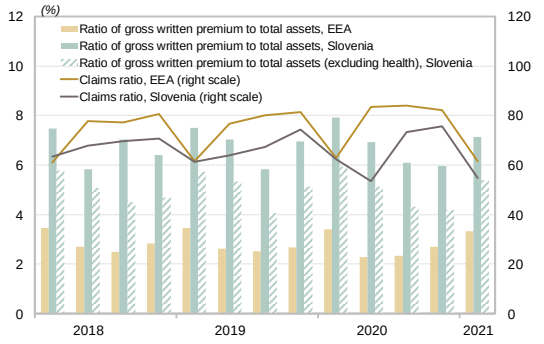


Figure 4.6 Ratio of gross written premium to total assets and claims ratio in Slovenia and the



Note: The figures for gross written premium and claims ratio are based on aggregate statistical reports until 2017 inclusive, and on Solvency II reporting after 2017. The data for the EEA is available to Q1 2021 inclusive. 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.
Sources: ISA, EIOPA, Banka Slovenije, own calculations

The ratio of gross written premium to total assets at insurance corporations in Slovenia declined throughout 2020, but the ratio began to rise again in the second half of the year in the EEA overall. Insurance corporations in Slovenia had higher growth in gross written premium and a better claims ratio, although the situation in Slovenia deteriorated relative to the EEA in the second half of 2020, when insurance corporations recorded a further slowdown in growth in gross written premium and higher growth in total assets driven by the ongoing rise in securities prices. The ratio of gross written premium to total assets at insurance corporations stood at 5.9% at the end of the year in Slovenia, compared with 2.7% in the EEA overall (see Figure 4.6).[91]

Figure 4.7 Claims ratios for the main insurance classes

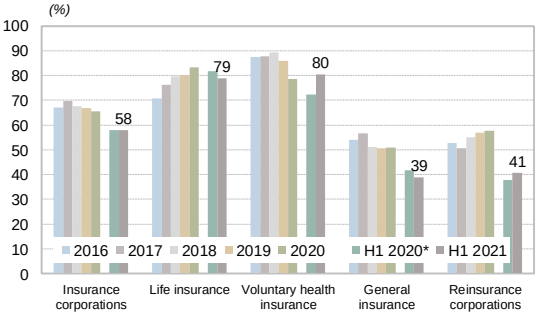
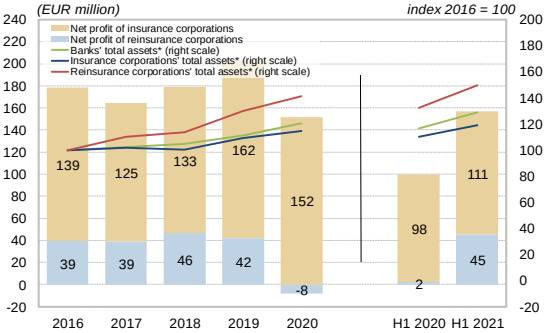


Figure 4.8 Insurers' net profit and total assets



Note: The figures to 2016 are based on aggregate data from the financial statements, while the subsequent figures are based on Solvency II reports. The exception is the figures for profit, which are based on aggregated data.
Left figure: * In light of the seasonal effect, the claims ratio for H1 2020 is also illustrated. Right figure: *Total assets: index 2016 = 100.
Sources: ISA, Banka Slovenije

[91] Changes in prices of supplementary health insurance also had a significant impact on gross written premium in the health insurance segment in Slovenia, for which reason changes excluding this effect have also been shown.

There was no significant change in the insurance corporations' claims ratio in the first half of 2021. It improved by 0.1 percentage points in year-on-year terms to stand at 57.9% (see Figure 4.7). The claims ratio in general insurance improved by 2.8 percentage points to 38.8% as a result of a decline in claims and a simultaneous increase in gross written premium, while the claims ratio in life insurance improved by 3.5 percentage points to 78.8% as a result of an increase in gross written premium. In certain insurance classes insurance corporations also saw a decline in the frequency of claims in the first half of 2021 as a result of the occasional restrictions in connection with the Covid-19 pandemic. In the health insurance segment, where gross claims increased by 11.4% because of the pandemic, the claims ratio deteriorated by 7.6 percentage points to 80.4% as gross written premium remained virtually unchanged. Reinsurance corporations saw their gross claims ratio in the first half of 2021 deteriorate by 2.7 percentage points in year-on-year terms to 40.6%, as a result of increased payments in the general insurance segment (the earthquake in Croatia) and the health insurance segment (the impact of the Covid-19 pandemic).

The profitability of insurance corporations and reinsurance corporations in the first half of 2021 improved in year-on-year terms. Insurance corporations saw profits rise by 14.2% in year-on-year terms, while the reinsurance corporations saw profits rise from EUR 2 million to EUR 45 million (see Figure 4.8). Insurance corporations saw their profit increase in year-on-year terms in the segments of general insurance (38.3%) and life insurance (134.5%), while profit declined by 74.8% in the health insurance segment. The growth in profit in the general insurance and life insurance segments was driven by an improvement in the claims ratio, while the low interest rate environment had a negative impact on returns on assets (other than returns on the assets of life insurance policyholders who assume the investment risk) because of a decline in net interest income and a decline in realised capital gains. The two reinsurance corporations increased their profit in the observation period thanks to an improvement in the technical result in general insurance and an increase in income on assets (increased income from dividends and other profit distributions at undertakings in the group). Total assets were up 13% in year-on-year terms at the reinsurance corporations at the end of June 2021, and up 10% at insurance corporations.

The capital adequacy of insurance corporations in Slovenia improved. The median SCR coverage ratio at insurance corporations operating in Slovenia stood at 219.7% in June (up 25 percentage points on June 2020). Of the 13 insurance corporations in Slovenia, the number with an SCR coverage ratio of less than 200% fell from seven to five (see Figure 4.9). The median MCR coverage ratio in Slovenia increased to 653%, thereby exceeding its pre-pandemic peak (see Figure 4.10). The rise in capital adequacy was driven by the decision by insurance corporations to withhold dividend payments in line with the recommendation by the ISA.

Figure 4.9 Capital adequacy in terms of SCR coverage ratio (insurance corporations)

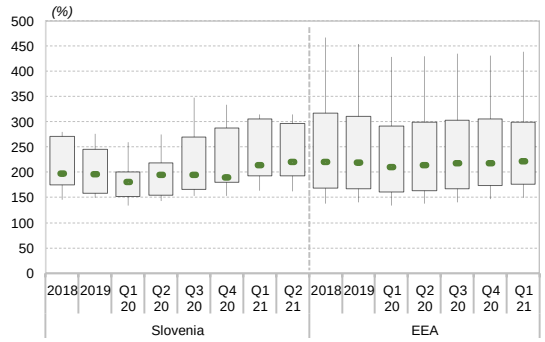
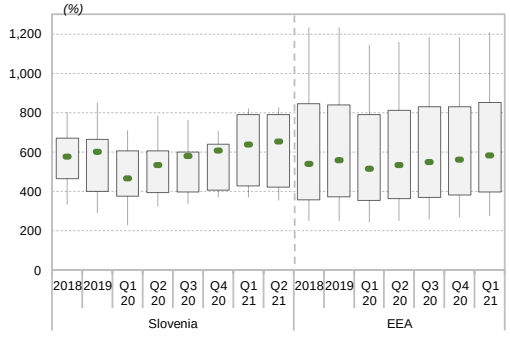


Figure 4.10 Capital adequacy in terms of MCR coverage ratio (insurance corporations)



Note: The 10th and 90th percentiles are taken as the upper and lower limits.The data for the EEA is available to Q1 2021 inclusive.
Sources: EIOPA, ISA, Banka Slovenije

The risk profile of insurance corporations, which is calculated on the basis of a standard formula, has not changed significantly in recent years. The proportion of the unallocated capital requirement at insurance corporations and reinsurance corporations accounted for by the capital requirement for underwriting risk, the largest single component, declined to 46.7% in 2020, while the proportion accounted for by market risk increased by 1.5 percentage points to 43% as a result of the increased uncertainty (see Figure 4.11). Within the framework of market risk the insurance sector is most exposed to interest rate risk

and equity risk. The capital requirement for credit risk[92] declined further in 2020 thanks to good structure and diversification, while operational risk remained at its level of 2019.

The structure of the insurance sector's assets remains stable. The exposure of insurance corporations and reinsurance corporations (excluding assets where the policyholder bears the investment risk) to investment-grade government bonds and shares in increasing, while their exposure to corporate bonds and other assets is declining. Over the last two years insurance corporations and reinsurance corporations have increased their exposure to bonds with the highest credit quality step[93] (0 or 1): in June 2021 they accounted for 30.3% of their bond holdings, up 3.3 percentage points in year-on-year terms (see Figure 4.12). The proportion of debt security holdings with a credit quality step of 2 or 3 stood at 64% in June of this year, down 2 percentage points in year-on-year terms, while the proportion with a lower credit assessment or unrated declined to 5.7%.

Figure 4.11 Risk profile in unallocated capital requirement

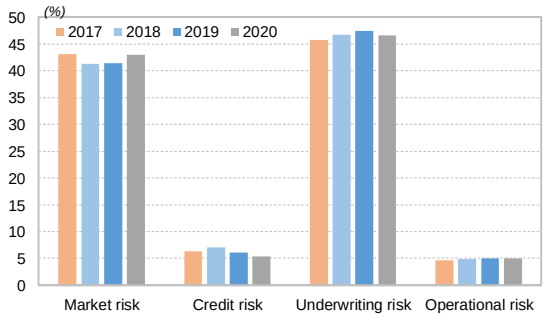
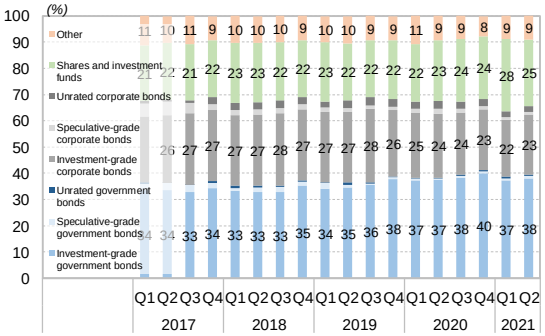


Figure 4.12 Structure of financial assets by type and grade



Note: The risk profile is based on the individual annual reports of insurance corporations and reinsurance corporations submitted under Solvency II annual reporting, while the capital requirement in the calculation does not take account of risk interaction effects (i.e. diversification). The structure of financial assets is based on individual quarterly reports under Solvency II (the data for Q2 2021 is not finalised), but does not take account of assets included in products tied to changes in the value of securities. Investments in government and corporate bonds are divided into investment grade (rated Aaa to BBB-), speculative grade (rated Ba1 and lower), and unrated.
Sources: ISA, Banka Slovenije

4.3 Mutual funds

Domestic mutual funds recorded above-average net inflows also in the first half of 2021. They received net inflows also from non-financial corporations, who had made withdrawals from mutual funds in previous years. The pronounced rise in stock markets is increasing market risk, while currency risk is also rising as exposures to foreign currencies increase. The risks inherent in the performance of mutual funds remain moderate.

As stock market indices continue to soar, the growth in assets and the increased inflows into mutual funds continued in the first half of this year. Domestic mutual funds' assets under management increased by double the average increase in the euro area over the first five months of the year (see Figure 4.13). As growth continued in June, domestic mutual funds' assets under management were up 18% on the end of 2020. Domestic mutual funds' high exposure to equities was a factor in their growth outpacing the euro area average. Another factor was the pronounced growth in net inflows into domestic mutual funds: the net inflows over the first half of 2021 were equivalent to 7% of assets under management.[94]

[92] Takes account of counterparty risk.
[93] In the standard formula for calculating capital requirements, credit quality is expressed in numbers from 0 to 6, and is determined on the basis of the credit assessment, where 0 denotes the best credit quality and 6 the worst.
[94] This part of the analysis (comparison between domestic mutual funds and other mutual funds marketed in the euro area) did not take account of money-market funds, as these are not reported in the ECB SDW together with other statistics for the performance of mutual funds, but as part of the statistics for monetary financial institutions.

Figure 4.13 Changes in assets under management and net inflows into funds in Slovenia and the eurozone

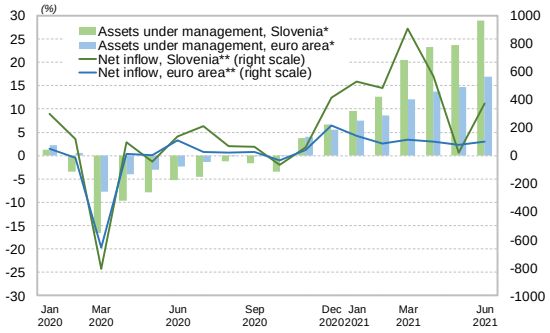
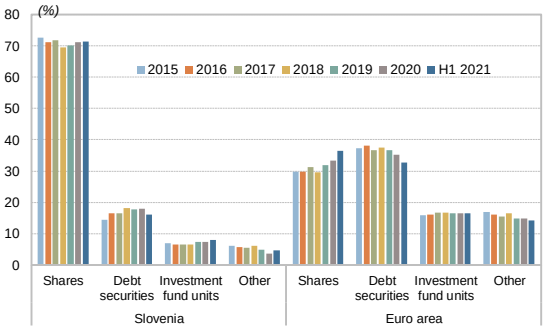


Figure 4.14 Breakdown of mutual funds' assets under management by class of security



Notes: Money-market funds are not included in the calculation.
Left figure: * Change in stock compared with December 2019. ** Change relative to monthly average in 2019. The net inflow was negative in March and May 2020 in Slovenia, and in March 2020 in the euro area overall.
Sources: ECB (SDW), Banka Slovenije

The breakdown of assets under management by fund type remains stable.[95] Equity funds continue to account for fully 65.5% of mutual funds' total assets under management, followed by mixed funds with 25.8% (see Figure 4.14). This asset breakdown primarily gives rise to market risk, while in other euro area countries, where the proportion of assets under management accounted for by bond funds is larger, interest rate risk and liquidity risk are also present. Amid the net inflows, the asset breakdown of domestic mutual funds has not changed significantly over the recent period. Shares and investment fund units account for 78.1% of domestic mutual funds' assets under management, 1 percentage point above the ten-year average figure, while liquid assets (currency and transferable deposits) account for 4.3%, 1.3 percentage points above the ten-year average. Domestic mutual funds' exposure to securities listed in the US has been increasing for more than a decade now. These holdings exceeded holdings in the euro area for the first time last year, and in June 2021 accounted for 38.3% of all securities holdings, while exposure to assets in the euro area had declined to 31.3%. The increase in exposure to foreign currencies is also raising currency risk.

Domestic investors continued to increase their holdings of mutual funds. The record net inflows in the first half of 2021 reached EUR 253 million, well above even the annual net inflows over the last ten years. Households recorded net inflows of EUR 177 million over the first six months of the year, most notably into equity funds (69% of the total) and mixed funds (28%), while making net withdrawals from money-market funds. Insurance corporations[96] also increased their net inflows, the majority of which went into mixed funds. In recent years non-financial corporations have mainly made net withdrawals from funds, but they recorded net inflows of EUR 15 million in 2020, and a similar trend continued in the first half of 2021, with net inflows in excess of EUR 8 million (see Figure 4.15). Like households, the majority of their inflows went into equity funds. Domestic equity funds' assets under management were up 45.1% in year-on-year terms in the wake of the gains on stock markets, which followed the sharp fall in March of last year, and increased net inflows. Domestic mutual funds' assets under management amounted to EUR 3.9 billion at the end of June 2021, up 34.5% in year-on-year terms, and equivalent to more than 8% of GDP (see Figure 4.16).

[95] A shortage of information means that alternative investment funds (AIFs) are not included in the analysis. According to available figures published on the SMA website (www.a-tvp.si), AIFs' assets under management increased by 34.7% in 2020 to EUR 229 million, while the number of AIFs operated by AIF operators established in Slovenia rose from 35 to 47.

[96] The inflows from the insurance sector were not spread across different insurance corporations, and the assumption is therefore that this was a one-off event.

Figure 4.15 Net inflows into mutual funds by investor sector

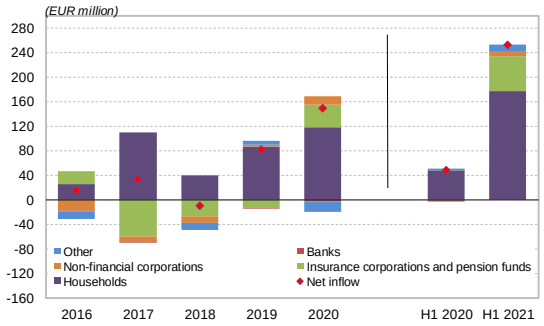
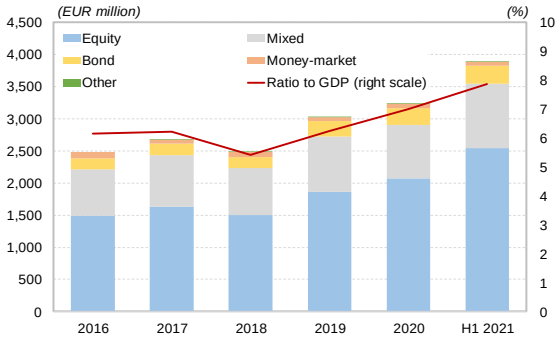


Figure 4.16 Breakdown of assets by fund type and ratio to GDP



Sources: SMA, Banka Slovenije

5 MACROPRUDENTIAL POLICY FOR THE BANKING SYSTEM AND LEASING COMPANIES

Macroprudential policy aims to identify, monitor and assess systemic risks to financial stability. Its purpose is to safeguard the stability of the entire financial system. This is achieved by strengthening the resilience of the financial system, and by preventing and mitigating the build-up of systemic risks. This way a sustained contribution to economic growth from the financial sector can be ensured. Banka Slovenije's macroprudential policy toolkit currently encompasses macroprudential restrictions on household lending, the countercyclical capital buffer, the O-SII buffer, and the macroprudential liquidity recommendation (GLTDF). The macroprudential restrictions on profit distributions by banks and leasing companies expired in September of this year.

Banka Slovenije has made use of six sets of macroprudential instruments to prevent and mitigate systemic risks in 2021. These are summarised in Table 5.1. They are described in detail on the Banka Slovenije website.

Table 5.1 Macroprudential instruments

MACROPRUDENTIAL INSTRUMENT	YEAR OF INTRODUCTION	MACROPRUDENTIAL POLICY INTERMEDIATE OBJECTIVE	VALIDITY	DESCRIPTION	ASSESSMENT OF ATTAINMENT OF OBJECTIVE
Macroprudential restriction of profit distributions by banks	2020	to limit the systemic impact of misaligned incentives with a view to reducing moral hazard	sep.21	to retain capital at banks so that the Slovenian banking system is better able to withstand potential losses, and to continue supplying credit to businesses and households	the capital adequacy of the banking system and with it the resilience of the financial system remained high, and after a temporary decline in lending the banking system is again strengthening its supply of credit to businesses and households
Macroprudential recommendation on the temporary restriction of profit distributions by leasing companies	2020	to limit the systemic impact of misaligned incentives with a view to reducing moral hazard	sep.21	to retain capital at leasing companies so that they are better able to withstand potential losses, and to continue supplying leasing to businesses and households	the capital adequacy of leasing companies remained high
Macroprudential restrictions on household lending	2016*	to mitigate and prevent excessive credit growth and excessive leverage	no limit	to limit excessive growth in consumer loans and to establish minimum credit standards for new household loans	growth in consumer loans is no longer excessive, and credit standards have improved for new consumer and housing loans
Countercyclical capital buffer	2016	to mitigate and prevent excessive credit growth and excessive leverage	no limit	to protect the banking system against potential losses when these would come from an increase in risks in the system as a result of excessive growth in lending, thereby directly increasing the resilience of the banking system and preventing excessive growth in lending	the buffer rate remains at zero, given the state of the credit cycle and financial cycle
O-SII buffer	2016	to limit the systemic impact of misaligned incentives with a view to reducing moral hazard	no limit	to increase the resilience of O-SIIs and consequently the entire banking system	higher resilience as a result of higher requirements for common equity Tier 1 capital, which for now are not binding on the banks
GLTDF	2014**	to mitigate and prevent excessive maturity mismatch and illiquidity	no limit	to slow the pace of reduction in the LTD ratio in the banking system, to help stabilise the structure of the banking system's funding, and to reduce systemic funding risk	slowed the pace of reduction in the LTD ratio in the banking system after the bank recovery and resolution process, and helped stabilise the structure of funding

Notes: In light of the elevated risks to financial stability arising from the excessive growth in consumer lending, Banka Slovenije introduced binding macroprudential restrictions on household lending in 2019. Earlier in 2016 Banka Slovenije had introduced a recommendation in the area of housing loans, which put in place non-binding restrictions on LTV and DSTI for housing loans. In 2018 it expanded the macroprudential recommendation to consumer loans, to which a cap on maturity also applied alongside the cap on DSTI. The caps on DSTI and maturity became binding in 2019. ** The instrument was changed to a recommendation on 1 January 2018.

Source: Banka Slovenije

Macroprudential measure and macroprudential recommendation to leasing companies in connection with restrictions on profit distributions

The two macroprudential instruments temporarily restricting profit distributions by banks, savings banks and leasing companies expired on 30 September 2021. The main factor in the introduction of the macroprudential measure and the macroprudential recommendation to leasing companies, which happened in April and May of last year, was the huge uncertainty surrounding the impact that the Covid-19 pandemic would have on the real economy and the financial system. The aim of the measures was to increase the resilience of the financial system to financial shocks, to maintain financial stability, and to prevent disruptions to the financial system.

The macroprudential measure was originally to have been in place for one year, but it was assessed at EU level at the end of 2020 that the impact of the economic shock in connection with Covid-19 had not yet been fully reflected in the banking sector. Recommendations were therefore adopted at the level of the ESRB and the ECB in December of last year, extending the restrictions on profit distributions by banks, with certain exemptions. Dividend payments were limited to 15% of accumulated profit in the 2019 and 2020 financial years, or 20 basis points of the common equity Tier 1 capital ratio, whichever is the lower. Banka Slovenije operationalised the recommendations of the ESRB (ESRB/2020/7 and ESRB/2020/15), the ECB (ECB/2020/62), and also the Financial Stability Board (OFS/2021/1) by extending and modifying the macroprudential measure in February of this year.[97]

The banks that notified us of dividend payments complied with the restrictions set out by the Regulation on the macroprudential restriction on profit distribution by banks. It was the limit of 20 basis points on the CET1 ratio that was the binding restriction on all the banks that opted to pay dividends. The total dividend payments amounted to EUR 28.1 million, or 6.4% of the profit generated in 2020.[98] In upholding the macroprudential instrument restricting profit distributions by banks, the banks strengthened their common equity Tier 1 capital, as they increased their retained earnings and other reserves. Banks also notified us of the payment of variable remuneration to identified staff, where the restriction was changed into a recommendation this year in light of the non-systemic impact on bank capital.

The good economic situation was also reflected in an improvement in the performance of leasing companies in the first half of 2021, the proportion of claims more than 90 days in arrears declining. Profitability remains positive at the leasing companies, despite a small deterioration, and their capital structure has improved. In the wake of the extension of the measure in April 2021, the vast majority of leasing companies confirmed that on the basis of the macroprudential recommendation they would retain their profit generated in 2020.[99]

Our assessment is that the objectives were achieved, as the two measures contributed to the retention of capital at banks and leasing companies to allow them to continue providing credit and leasing to businesses and households. We will continue the enhanced monitoring of the capital and dividend plans of banks and savings banks on an individual basis within the framework of the regular supervisory review and evaluation process. The regular supervisory review process encompasses the periodic in-depth monitoring of current capital adequacy and the adequacy of capital planning in terms of amount and structure. We also review the banks' preparedness for less-frequent events that might have an impact on capital adequacy. Supervisory review also includes reviewing whether in their internal documents banks are adequately defining their own assessment of capital needs with regard to the risks that they expect to take up.

Macroprudential restrictions on household lending

The macroprudential restrictions on household lending remain in place; they introduced minimum credit standards for household loans, thereby leading to the improvement in the portfolio quality. A gentle tightening of credit standards was observed in the first half of 2021 (see Table 5.2).[100] The average DSTI remained unchanged, which is a consequence of reporting changes. The expansion of regular reporting on 1 January 2021 introduced the collection of data on leasing liabilities, exempted income and dependent family members. The inclusion of this data has increased the reliability and accuracy of the data on DSTI,

[97] For more, see the April 2021 issue of the Financial Stability Review.
[98] Net profit after tax, excluding branches.
[99] For more, see subsection 4.1 (leasing companies).
[100] The data from the BLS does not show any tightening of credit standards.

and the computed DSTI is now larger as a result. If we eliminate the effect of the reporting changes, the average DSTI would have declined from 30.5% in the final quarter of 2020 to 29.7% in the second quarter of 2021 for housing loans, and from 25.2% to 24.0% for consumer loans. The average LTV also declined for housing loans in the first half of 2021. It had fluctuated around 67% for several years, but was 4.5 percentage points less than this in the second quarter of 2021. The average maturity remained unchanged for consumer loans, but in the second quarter of this year was down 0.6 years on the previous quarter for housing loans. We will need to wait for a few quarters more for a more reliable assessment of whether the tightening of credit standards is a one-off effect, or a more lasting change in bank policy.

Table 5.2 Average values of selected parameters for housing loans and consumer loans, and level deviations from macroprudential instruments

*Weighted average (level of deviations)**	2019***	H1 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
Housing loans						
LTV	67.7% (20.0%)	67.3% (16.1%)	67.9% (15.9%)	67.9% (15.2%)	65.1% (13.5%)	63.4% (9.9%)
DSTI	32.1% (15.7%)	29.7% (5.5%)	29.5% (3.9%)	30.5% (3.7%)	30.8% (9.6%)	30.7% (3.0%)
Maturity**	19.1	19.3	19.2	19.3	19.2	18.6
Consumer loans						
DSTI	26.4% (21.8%)	24.5% (5.4%)	24.2% (3.1%)	25.2% (3.5%)	25.8% (11.7%)	25.4% (4.6%)
Maturity**	6.5 (2.3%)	5.8 (4.1%)	5.9 (5.1%)	6.2 (9.9%)	6.1 (10.2%)	6.2 (10.0%)

Notes: * Calculated level of deviations based on data from regular reporting.
** Maturity in years.
*** The instruments capping DSTI and maturity (for consumer loans) became binding on 1 November 2019. The maximum maturity was reduced at that time from ten years to seven years.
Source: Banka Slovenije

The gross minimum wage was increased to EUR 1,024.24 in January 2021, which raised the threshold of creditworthiness and (assuming no change in income) reduced the maximum allowed DSTI.[101] Deviations from the cap on DSTI consequently increased for housing loans and consumer loans alike (see Figure 5.1). A higher level of deviations was only evident in the first quarter of 2021, which was attributable in part to the aforementioned expansion of reporting. Without this effect the level of deviations would have been around 6 percentage points lower in the first quarter for housing loans and consumer loans. This effect was smaller in the second quarter at 1 percentage point for housing loans and 1.6 percentage points for consumer loans (in both cases deviations would have been lower had the reporting changes been eliminated).[102] In addition to the level of deviations, it is also necessary to analyse the size of the deviations as measured by the difference between the maximum allowed value of the parameter and the actual value. From the perspective of credit risk, loans where the deviations are larger are more problematic. Analysis of the size of deviations from the cap on DSTI reveal them to be relatively evenly distributed across different brackets. Since the introduction of the binding measure, loans have not been approved to persons who are not creditworthy. Deviations are therefore a consequence of excessive indebtedness at persons who are creditworthy. According to the reporting by banks, the share of identified deviations from the cap on DSTI that can be explained by the application of the exemptions is negligible. In a small number of loans the deviations are smaller than 2%. It is not necessarily the case that these loans actually deviate from the cap on DSTI, as the data required for computing the actual DSTI and maximum DSTI are reported in rounded form. The level of deviations from the cap on DSTI is acceptable at the level of the banking system, for housing loans and consumer loans alike as it is significantly below the allowed level (10%).

[101] The rise in the minimum wage was proposed by the Ministry of Labour, Family, Social Affairs and Equal Opportunities.
[102] Only loans with a single borrower were taken into account in the simulations.

Figure 5.1 The structure of deviations from the cap on DSTI for new household loans

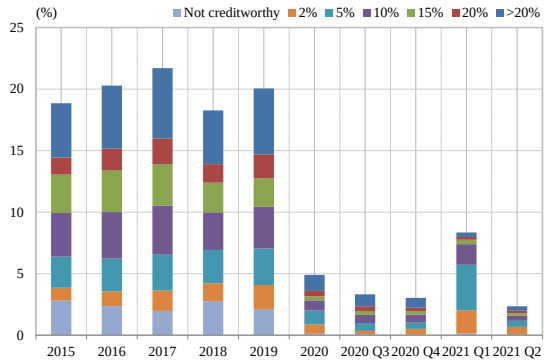
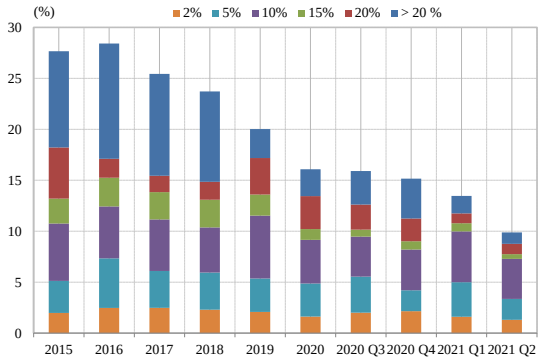


Figure 5.2 The structure of deviations from the cap on LTV for loans secured by residential real estate

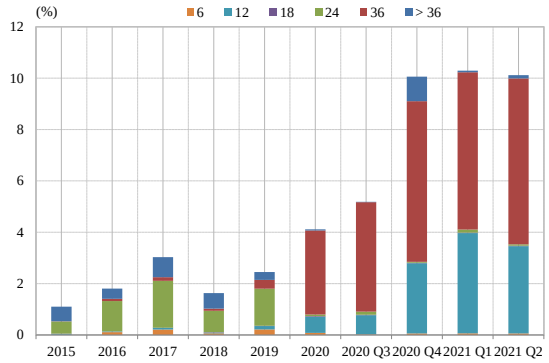


Note: In the left figure the category "not creditworthy" denotes borrowers whose low income makes them not creditworthy. In the right figure only loans secured by residential real estate are included in the calculation.

Source: Banka Slovenije

The structure of deviations from the cap on LTV has improved in recent years. The level of deviations has declined over recent years, driven by a decrease in loans with an LTV of more than 90% (see Figure 5.2). The volume of these loans declined in particular between 2018 and 2019, largely as a result of the improvement in the quality of reporting. The proportion of the most problematic loans, i.e. those without any deposit from the borrower (an LTV of more than 100%), has also declined in 2021. The structure of deviations from the cap on maturity has changed since 2019, partly as a result of the reduction in the maximum allowed maturity from ten years to seven years (see Figure 5.3). The level of deviations increased in 2020 and 2021. Deviations can be classified into two main groups: loans with a maturity of up to eight years, and loans with a maturity of up to ten years. According to bank reporting, 60% to 70% of the deviations from the cap on maturity can be explained by the approval of allowed exemptions. There are almost no loans with a maturity of more than ten years (with the exception of the final quarter of 2020). The level of deviations from the cap on maturity is acceptable for consumer loans at the level of the banking system as it is below the allowed level (15%).

Figure 5.3 The structure of deviations from the cap on maturity (consumer loans)



Note: The maximum maturity was reduced in November 2019 from ten years to seven years.
Source: Banka Slovenije

Box 5.1 Comparison of behaviour of vintages before and after the introduction of the macroprudential restriction on household lending

The comparison of the behaviour of vintages before and after the introduction of the macroprudential restrictions on household lending comes with limitations and uncertainty, as the analysis has been made more difficult by the Covid-19 pandemic, and there are numerous impacts on the behaviour of vintages, including economic policy measures and other regulatory changes. There are also data limitations in the analysis, namely loans as a unit of observation that on one hand disappear from the sample, or on the other are not yet part of the sample because not enough time has elapsed since origination.

Based on the default rate for consumer loans 12 months after origination, a comparison was made between the default rates of vintages (vintage analysis) that began one year before the introduction of the macroprudential measure, and vintages that ended in July 2020. The second group, which encompasses vintages after the measure, displays default rates that are lower on average, an indication that consumer loans 12 months after origination were approved with lower credit risk on average. In any case in this analysis it is impossible to duplicate the Covid-19 pandemic, which had a greater impact on the second group than on the first.

Using vintage analysis, which was divided into individual monthly originations of consumer loans, it was examined whether customer behaviour differed before and after the introduction of the macroprudential restriction on household lending. There are considerable limitations in the analysis: before the time of analysis vintages seize to exist with their lifecycle, while new originations of loans create new vintages with shorter lifetimes. This fact means that the two groups are not wholly comparable. There are also limitations because not enough time has passed since the introduction of the measure for optimum comparability. Despite these limitations, monitoring the risk level that customers bring into the banking system is desirable over the shortest possible time.

Despite the aforementioned caveats, comparing the vintages before and after the introduction of measures could to a certain extent allow it to determine whether loans approved under harsher circumstances represent higher or lower risk. This test would show whether the restrictive measures achieved their purpose. Monthly vintages originated in the period from April 2018 to June 2021 were observed for the purposes of the analysis. The vintages were divided into two groups, with an equal number of vintages from before and after the date of the introduction of the measures. This time horizon allowed for a comparison of the cumulative default rate from one to 19 months after origination. The group of vintages from before the introduction of the measures are denoted in the figure below by the darker shade, while the group of vintages from after the introduction of the measure are denoted by the lighter shades.

Figure 5.4 Comparison of cumulative default rates of vintages before and after the introduction of the macroprudential measure

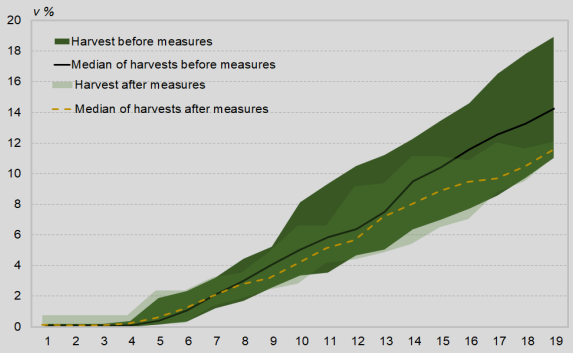
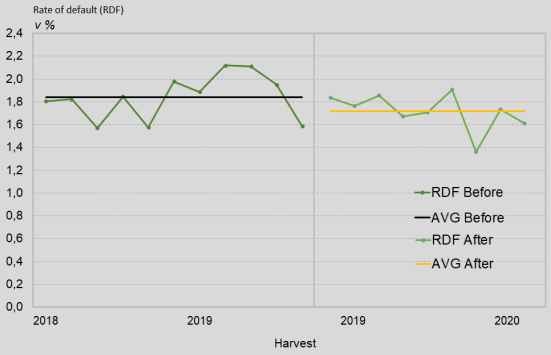


Figure 5.5 Realised default rates of vintages before and after the introduction of the macroprudential measure



Note: In the right figure default is said to have occurred if the customer becomes a defaulter within 12 months of loan origination. Newly originated loans in an individual month (vintage) are taken into account.

Source: Banka Slovenije

The illustrated data shows the measures have contributed to a reduction in the credit risk of consumer loans. The evolution of the cumulative default rate shows the default rate rising with distance from origination in both groups, but at a lower pace in the second group than in the first. The median of the second group is lower, and the distribution of default rates is also narrower in the second group. On this basis it could be concluded that the measures contributed to a reduction in the default rate of consumer loans. As stated, there are also data limitations, namely in loans as a unit of observation that on one hand disappear from the sample, or on the other are not yet part of the sample because not enough time has elapsed since origination. Because the Covid-19 pandemic was also affecting the behaviour of loans in the second group for the majority of the time, this also needs to be taken into account in interpretation.

Macroprudential liquidity instruments

A macroprudential instrument known as gross loans to deposits flows (GLTDF) recommends that banks with a positive annual inflow of deposits by the non-banking sector should have an annual increase in lending to the non-banking sector (before impairments) that is not negative. The instrument was introduced in June 2014 to slow the pace of reduction in the LTD ratio in the banking system. Before the great financial crisis

the banks were largely funding their growth in assets via wholesale funding. During the crisis the banks had problems in rolling over this funding, which caused a contraction in credit and total assets.
After 2016 and before the outbreak of the Covid-19 epidemic the LTD ratio at system level stabilised at approximately 80%. The GLTDF instrument remained in force, with the aim of continuing to prevent the overuse of unstable wholesale funding. It limits the opportunity for banks to reduce lending while deposits are increasing. The expectation was therefore that credit growth would not be excessively funded by unstable wholesale funding, which comes with rollover risk, and thus the risk of being forced to reduce lending in the future and failing to comply with the GLTDF requirement.

The instrument primarily addressed deleveraging in connection with the banks' difficulties in obtaining funding. Credit activity might also decline as a result of reduced demand for credit caused by a downturn in the economy, as indeed happened after the outbreak of the Covid-19 epidemic. Furthermore the increased uncertainty brought a deterioration in the creditworthiness of firms and households, and the banks tightened their credit terms, having assessed that risk had increased, and reduced the acceptable risk level. In a situation when demand for loans is falling, the effectiveness of the measure is limited to communicating to banks that they should not cease rolling over loans being used by firms to finance their current costs.

The latest data from the BLS and the survey of demand for loans indicate that an increase in demand for loans has been realised, or is at least expected. The banks are currently mostly funded via deposits, which are still increasing, and funding risk is assessed as moderate. The risk of deleveraging caused by difficulties for the banks in rolling over funding is expected to be insignificant in the near future. There is an expectation that the banks will approve loan applications if they meet the credit standards, irrespective of the GLTDF recommendation.

As described, the indirect purpose of the GLTDF instrument is to prevent high credit growth funded by unstable funding. Until the uncertainty caused by the Covid-19 epidemic is fully banished, a scenario of credit growth funded by unstable funding is unlikely to be realised, and at the same time this risk can be addressed by the countercyclical capital buffer. In light of the above, in the near future Banka Slovenije will assess whether it is sensible to retain this measure as part of the toolkit of macroprudential instruments.

Box 5.2 Change in prudential requirements under the CRR2 and adjustments to macroprudential instruments in the ZBan-3[103]

The CRR2,[104] which was adopted in June 2019, brought changes to prudential requirements in the areas of liquidity, leverage, credit risk and market risks, and the large exposure framework. This transposed the remaining elements of the post-crisis banking reforms (Basel III) into EU legislation. The content of the aforementioned requirements, which began to be applied by banks on 28 June 2021,[105] are summarised below:

- Requirement in connection with the net stable funding ratio (NSFR): in addition to the existing requirement in connection with the liquidity coverage ratio (LCR), the purpose of which is to ensure sufficient liquidity for covering liquidity outflows over a short-term stress period, a binding minimum requirement in connection with the net stable funding ratio (NSFR) has been introduced, the purpose of which is ensuring long-term stability in the structure of bank funding in ordinary and stress conditions. Compliance with the NSFR requirement is determined by calculating the NSFR, which compares available stable funding with required stable funding. The requirement must be met at all times, on an individual and consolidated basis.

- Leverage ratio (LR): a binding minimum requirement has been introduced with regard to the leverage ratio, the purpose of which is to limit the build-up of leverage during times of economic growth. Compliance with the minimum requirement of at least 3% is determined by calculating the LR, which compares a bank's Tier 1 capital with its total exposure. The existing system of reporting and disclosing information in connection with the LR is therefore being modified and augmented. Within the framework of the Pillar 2 requirements, a new feature in connection with the treatment of the risk of excessive leverage is the Pillar 2

[103] Official Gazette of the Republic of Slovenia, Nos. 92/21 and 123/21 [ZBNIP].
[104] Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012 (OJ L 150 of 7 June 2019, p. 1).
[105] Except for the calculation of capital requirements for market risks, as explained below.

requirement (P2R) and the Pillar 2 guidance (P2G), although the requirement to monitor the risk of excessive leverage remains in place.

- **Capital requirements for credit risk**: The rules of the revised Basel standard for calculating minimum capital requirements for banks' exposures from units and shares in collective investment undertakings (CIUs) were transposed into European legislation by the CRR2. The new rules set out a clear hierarchy of approaches that reflects the level of transparency of the underlying exposures. When a bank fails to meet the conditions for using either the look-through approach or the mandate-based approach, it must apply a risk weight of 1,250% to exposures from units and shares in CIUs.

- **Capital requirement for market risk**: a more stringent boundary between the trading book (TB) and the banking book, and thresholds for using various approaches to calculating capital requirements for market risk with regard to on-balance-sheet and off-balance-sheet business subject to market risk are being introduced. In addition to standardised approach and the internal models approach used to date, the banks will also have at their disposal an alternative standardised approach (ASA), which should be more sensitive to changes in the market, and also takes account of the risk of probability of default and a premium for complex instruments, and an alternative internal models approach (A-IMA), which encompasses an expected shortfall model, the stress scenario risk measure and the own funds requirement for default risk. The reporting of the calculation of capital requirements under the ASA began in September 2021, and will be followed by the use of ASA for the purposes of capital requirements for market risk, which will be set out by the CRR3. Similarly, the A-IMA will initially be calculated solely for reporting purposes, and then later the comprehensive use of the framework for capital requirements purposes will be allowed.

- **Capital requirements for counterparty credit risk (CCR)**: within the framework of CCR the methods for calculating exposure are being modified, whereby only the internal models approach is being left unchanged, while the current exposure method and standardised method are being abolished. The old original exposure method is being modified, and a new standardised approach (the SA-CCR) and simplified SA-CCR are being introduced. The changes should better reflect banks' exposures from derivatives, while taking consistent account of coverage and collateral.

- **Large exposures**: Tier 1 capital is now used instead of eligible capital as the capital base for defining and limiting large exposures, with the aim of improving institutions' capacity to cover losses. When a bank uses collateral for the purpose of calculating the capital requirement for credit risk, it must also take it into account in the calculation of the exposure for the purpose of limiting large exposures. The use of the substitution approach is mandatory when an exposure is secured by guarantee or by third-party securities. No more than one exemption may be applied simultaneously to a single exposure. Banks are now required to also report their exposures on a consolidated basis that are equal to or greater than EUR 300 million but are not classed as large exposures.

- **Supervisory reporting and disclosure requirements**: owing to substantive changes to prudential requirements, changes are also being made to reporting and disclosure requirements. The new technical standards for supervisory reporting and for disclosures bring greater standardisation in the sense of the format and content of reported and disclosed information, while an unofficial mapping table has also been published as an aid to banks. Alongside the prescribed format and content, there are certain other innovations in the area of disclosures: the frequency of individual disclosures is determined with regard to proportionality (the requirements with regard to the scope and frequency of disclosures increase in parallel with the size of the bank; small and non-complex banks are required to disclose the most basic information just once a year), disclosures must be subject to adequate internal auditing, they must be published at the same time as financial reports, in electronic form and in a single place, and an archive of publications for previous periods must also be available.

The new Banking Act (ZBan-3) of June 2021 transposed the content of the latest capital requirements directive (CRD V) into the Slovenian legislative framework. The table summarises the key changes introduced to macroprudential policy capital buffers by the CRD V.

- **Systemic risk buffer**: the biggest changes in the area of macroprudential instruments were made in the part regulating the systemic risk buffer, which may no longer address risks to which the countercyclical capital buffer or the O-SII buffer apply. In order to prevent and mitigate systemic or macroprudential risks,

Banka Slovenije may now set a systemic risk buffer for all exposures or for one or more subsets of exposures as follows:

(i) all retail exposures to natural persons secured by residential real estate,
(ii) all exposures to legal persons secured by mortgage on commercial real estate,
(iii) exposures to legal persons other than those referred to in point (ii),
(iv) exposures to natural persons other than those referred to in point (i).

With the introduction of the sectoral systemic risk buffer, the buffer may be used to manage systemic risk in the broader sense (a buffer for all exposures), but may also be targeted on risk management in certain sectors or subsets. The weighted buffer rate determined for sectoral exposures is added to the buffer rate for all exposures. The sum represents the overall systemic risk buffer.

Table 5.3: Key changes to macroprudential policy capital buffers under the CRD V

Monetary policy instrument	CRR / CRD IV	CRR II / CRD V
Countercyclical capital buffer	Quarterly notifications to the ESRB, irrespective of any changes	ESRB notified only in the event of a change in the buffer
Systemic risk buffer	- used to mitigate long-term non-cyclical structural risks - applied to all exposures or domestic exposures only, and to all banks or certain banks	- applied to risks that are not covered by instruments defined in the CRR, the countercyclical capital buffer or the O-SII buffer - may also be applied to subsets of exposures
O-SII buffer	- the maximum buffer rate is 2% of the total risk-weighted exposure amount	- the maximum buffer rate is 3% of the total risk-weighted exposure amount; exceptionally it may be more, subject to the prior approval of the European Commission - a raised maximum buffer rate for subsidiary O-SIIs, if the parent institution is an O-SII or G-SII in the EU
Interaction between O-SII/G-SII buffer and systemic risk buffer	- if the systemic risk buffer relates to all exposures, the higher of the O-SII buffer and the systemic risk buffer applies	- the O-SII buffer and the systemic risk buffer are summed up to a level of 5% (and to more than 5% subject to the prior approval of the European Commission)

Source: Taken from HNB, Macroprudential diagnostics, 2021

- **O-SII buffer**: the maximum buffer rate for the buffer for other systemically important institutions (O-SII buffer) has been increased from 2% to 3% of risk-weighted assets. The limit on the rate that may be applied to banks whose parent institution is an O-SII or a global systemically important institution (G-SII) in the EU has also been modified. This means that the buffer rate for an O-SII that the host country applies to subsidiaries in the EU on an individual or subconsolidated basis is 1 percentage point higher than the buffer rate for O-SIIs/G-SIIs applied to the group at the consolidated level by the home country, having regard for the general limit of 3% (exceptionally it may be more, subject to the prior approval of the European Commission).

6 MEDIUM-TERM CHALLENGES OF THE BANKING SYSTEM: DIGITALISATION, CYBER SECURITY AND SUSTAINABILITY

6.1 Digitalisation of the banking system

The digitalisation of banking services is increasingly changing the operations of banking. The pandemic crisis also accelerated the digitalisation of the banking sector, which allowed the economy to recover faster. In recent years digitalisation has been driven by the rise of fintech[106] *firms and digital banks,*[107] *who can use fintech to compete with banks. In response to the rise of competitors, the banks have begun introducing and using various financial technologies in their operations, and adapting their business models. Banks use financial technologies, but there has been no appreciable increase since 2019, which is indicative of their caution in adopting fintech as a component of banking. This section is based on the results of a survey of future challenges in the banking system conducted by Banka Slovenije in August 2021.*

The banks have faced competitive pressure from fintech firms and digital banks for several years now. Banks report that fintech firms and digital banks are competitive primarily on transaction account management, payments, and consumer credit. Certain banks are working with individual fintech firms (such as mBills and Toschl), and are thus supplement their own IT solutions or are even providing certain payment services for fintech firms (see Figure 6.1).

In recent years banks have allocated more funds for the developing of new products based on mobile wallets, biometrics and big data analysis. The Covid-19 pandemic has encouraged banks to expand their offer of services related to mobile wallets and apps, as bank customers increasingly make use of services remotely via online applications. Banks do not see added value in using other fintech (such as distributed ledger technology, smart contracts and artificial intelligence) in their services for customers or internal business processes. Our estimate is that the banking system is conservative in its introduction of fintech, which means that banks make a thorough assessment of the added value of the technology before they decide to implement it. If we compare the level of use of fintech with 2019 then we can see that there are no drastic shifts in the use of new financial technologies in the banking system (see Figure 6.2).

Figure 6.1 Banks' cooperation with fintech firms

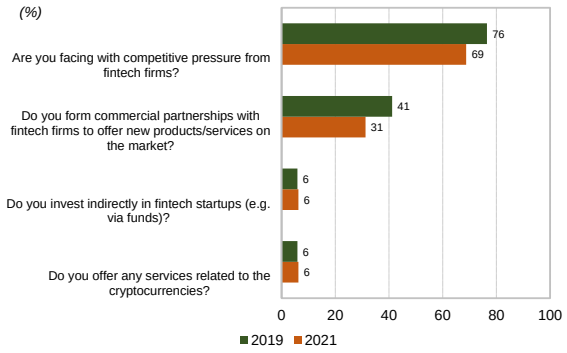
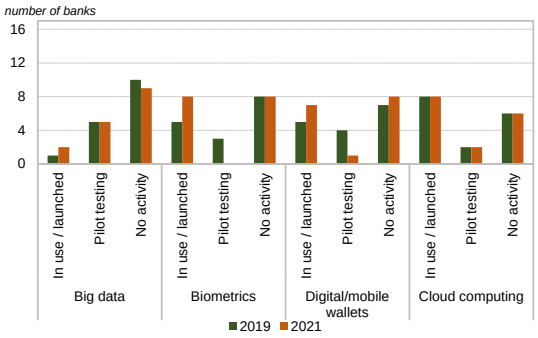


Figure 6.2 Usage of fintech in the banking system



Note: A total of 17 banks and savings banks took part in the survey in 2019, and 16 in 2021.
Source: Banka Slovenije

In the introduction of fintech, banks are pursuing the objectives of increased competitiveness on the market, and improved performance. The banks are using digital/mobile wallets, biometrics and big data to raise competitiveness on the market. Meanwhile they are using fintech such as cloud computing and AI (including machine learning) to improve profitability (see Figure 6.3). Fintech is having an impact on banks' business models and strategies, particularly in the segments of retail banking, commercial banking, and payments and settlement. By tailoring their business models to the market situation, banks are becoming more competitive with fintech firms and digital banks. Banks are making changes with the aim of using

[106] Here fintech refers to the following areas: cloud computing, digital/mobile wallets, biometrics, big data, artificial intelligence and machine learning, smart contracts, and distributed ledger technology (such as blockchain).
[107] Digital banks do business with customers exclusively through mobile apps or online platforms. Digital banks do not have physical branches , and do not do business with customers in a way that is typical of traditional banking. Two digital banks are currently trading in Slovenia via the direct provision of services: N26 and Revolut.

fintech (such as mobile apps and wallets) to increase competitiveness, and also to increase profits. This applies to all business segments in which banks reported increased competitive pressure back in 2019. Fintech is bringing banks increased revenue in the area of payments and settlement, while in other business segments this trend is somewhat slower (see Figure 6.4).

Figure 6.3 Added value for the banking system from individual types of fintech

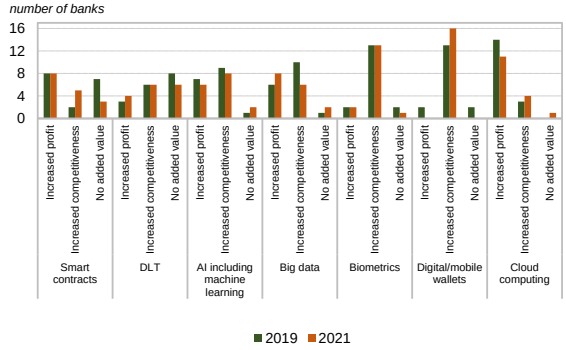
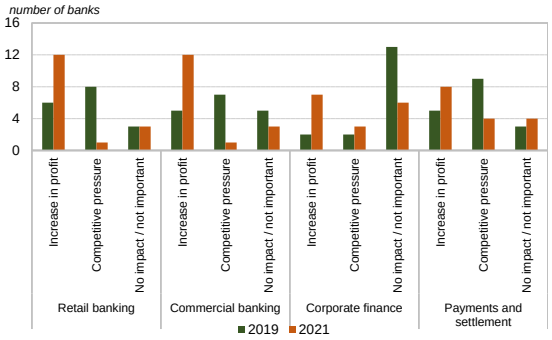


Figure 6.4 Changes in the banking system due to the development of fintech



Source: Banka Slovenije

Banks are introducing fintech-based services with the aim of optimising operations and processes, attracting new customers, and meeting with the rising expectations of existing customers. They aim to offer services that are as digitalised as possible, to satisfy new and existing customers. Banks are therefore making increasing use of fintech for the following processes and activities, which are improving external and internal business processes alike: open banking/APIs, AML/CFT monitoring, fraud detection and data quality. Due the increasing competitive pressures and the requirements of the new payment services directive (PSD2), banks have begun using and developing fintech to improve their services in the area of open banking. Compared with their survey responses in 2019, banks are using fintech more in their business processes and customer-facing services.

In making planned changes as part of the digitalisation process, banks face a lack of resources, legislative restrictions and fast-paced technological changes. Similarly to 2019, banks mention that there is a shortage of employees with the requisite skills, a lack of qualified contractors (IT firms), and a lack of existing high-quality solution providers. The findings in the area of legislation are similar to 2019: Slovenia's banking regulatory environment is too limiting with regard to the use of fintech, and the competition (non-bank entities) have lower standards than banks with regard to the entire credit process (microcredit on fintech platforms). Banks conduct SWOT analysis more than once a year in connection with digitalisation.

Banks estimate that fintech is helping them to increase their revenues and raise their number of customers, improve new/existing services, and increase competitiveness. Compared with 2019 banks are adapting quickly to the market situation through new products and services, and are continuing to invest in the digitalisation and automation of business processes. Fintech firms and digital banks are nevertheless continuing to compete with banks through their free services for customers (this might change in the coming years, because the fintech firms and digital banks can start to charge for their services). Banks earmarked 1% of their revenues for the internal development of fintech in 2020. In 2021 they are expected to increase investment in the internal development of fintech and the upgrade of existing IT infrastructure. Over the last year banks have invested more money in the development of biometrics, robotisation, and in data quality and analysis. They see the added value of digitalisation primarily in optimising internal business processes (which entails reductions in labour costs and the headcount), and in interactive banking services and products for customers. Fintech is bringing opportunities for banks to improve their customer-facing operations and their back-office operations. All of this allows banks to increase their profitability and their competitiveness in the market.

Banks are already working with firms such as Big Tech[108] and see them more in the role of business partners than as competitors. In this year's survey Slovenian banks again assess that the BigTech firms

[108] Big Tech currently means Facebook, Apple, Amazon, Microsoft and Google. The Big Tech firms are dominant in their sectors: Apple in smart communications devices, Facebook in social media, Google in online search, Microsoft in software and Amazon in e-commerce. Given their dominance in the tech market, the Big Tech firms also exert a major influence on the economy and society as a whole.

will enter the market for banking services in the next few years, and will improve the user experience, reduce prices, increase turnover with customers and create new partnerships in the market. With business partners banks can offer their customers more innovative products/services and business models. Banks also have certain advantages over BigTech and fintech firms, such as better risk management and more personalised customer management.

The Covid-19 pandemic has accelerated the digitalisation of business processes, increased the banking system's accessibility via various digital channels, and increased the use of online applications for remote communications. Turnover in online banking is up around 22% on the pre-pandemic period, which means that banks are generating increasing revenues and profits with digitalised services.

The banking system digitalised at pace during the pandemic, and modified its range of services. During the pandemic banks accelerated the digitalisation of internal processes and strengthened projects allowing business to be transacted remotely. Investments in digitalisation and the use of online channels (online and mobile banking) were also increased. Customers made more use of online shopping during this period, which increased the interest in using online and mobile banking services and cards, which are more accepted by online merchants. Customers also made greater use of digital solutions, and their trust in digital services increased. During the pandemic banks increased the amount of money they were earmarking for digitalising banking. They upgraded their information systems, encouraged customers to go cashless, developed new digital services and intensified their advertising of online banking. The digitalisation of the banking system also brought a reduction in costs in segments such as retail banking and commercial banking.

In the event of the introduction of a digital euro,[109] banks are of the opinion that they should play a key role in providing services related to the digital euro and should act as intermediaries in the distribution of the digital euro to end customers or provide for the exchange of euros for digital euros. They emphasise that they are key stakeholders who are already trusted by end customers in safekeeping and transacting in currencies of all kinds. According to banks, the digital euro should provide the same levels of privacy and data protection as those seen in transactions (ensuring transaction traceability and privacy). The introduction of the digital euro should have a positive impact on the competitiveness of the banking system compared with fintech firms and virtual currency providers. Banks say that the quantity constraints[110] are sensible, as they prevent the excessive build-up of the digital euro (relative to the euro), and reduce the possibility of deposits moving into the digital euro in less favourable economic times, which could endanger financial stability. They nevertheless reiterate that it has not yet been resolved how the quantity constraints would affect the risk of providing for exchange between digital euros and euros. The banks' assessment is that the best technological approach is the incorporation of the digital euro into existing online and mobile products. Ensuring the standards and the capacity for integrating the solutions on which the digital euro is based would be vital in this.

6.2 Cryptoassets markets and their impact on financial stability

In September 2020 the Eurosystem published its proposed legislation relating to markets in cryptoassets.[111] This legislative framework will regulate all forms of cryptoasset and cryptoasset services for the first time in the EU. From the perspective of financial stability, which is specifically targeted by this legislation, the new subset of cryptoassets known as stablecoins[112] is particularly important. Stablecoins are a class of cryptoasset that were created with the aim of reducing volatility in their prices, as typically seen in speculative cryptoassets such as Bitcoin and Ether. Stablecoins have attracted the attention of regulators and the public across the globe in recent years. They are most often used in trading on crypto exchanges, where they serve as a replacement for fiat currencies such the US dollar or the euro.

[109] For more on the plans for the introduction of a digital euro, see the April 2021 issue of the Financial Stability Review.
[110] The proper management of the large quantity of digital euros in circulation (e.g. via quantity constraints) by central banks would ensure that shifts in a large quantity of money by commercial banks do not affect the transmission of monetary policy.
[111] The Proposal for a regulation of the European Parliament and of the Council on markets in cryptoassets is available at the following link: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593 (published September 2020).
[112] There is no universal definition of stablecoins. Stablecoins are above all a response to deficiencies in existing payment systems: a lack of universal access to financial services and inefficient cross-border retail payments. Stablecoins provide the following functions: (i) the issuance, repurchase and stabilisation of the value of coin, (ii) the transfer of coin between customers, and (iii) interaction with customers. The most common forms of stablecoin are issued at parity with a fiat currency, as a claim against the issuer, and as a share in a portfolio of assets.

Although cryptoassets markets present no threat to financial stability, this could change in the event of an increase in the volume of transactions in global stablecoins[113] and other cryptoassets. The use of global stablecoins is still negligible on the market. The risk to financial stability could in particular increase if larger firms capable of offering their services in the form of cryptoassets to the general public enter the market.

The European Commission's proposal covers cryptoassets falling outside existing EU financial services legislation, and has four key objectives:

- Legal certainty: for cryptoassets markets to develop within the EU, there is a need to put in place clear regulatory treatment of all cryptoassets that are not covered by existing financial services legislation.
- Support for innovation: to promote the development of cryptoassets and the wider use of distributed ledger technology, it is necessary to put in place a framework to support innovation.
- Appropriate levels of consumer and investor protection and market integrity: cryptoassets not covered by existing financial services legislation pose certain risks to financial infrastructure. Consumers and investors need to be protected from high-risk investments when transacting in global stablecoins and other cryptoassets.
- Financial stability: cryptoassets are continuously evolving. While some have a quite limited scope and use, others, such as stablecoins, have the potential to become widely accepted, which could potentially increase systemic risks.

The protective measures primarily relate to ensuring the protection of the consumers and investors who would transact in stablecoins in the near future. To mitigate the risks to financial stability in the broader financial system, special capital requirements should apply to coin issuers.

The proposal also includes the findings and recommendations of the Financial Stability Board and the G7 Working Group on Stablecoins, which issued recommendations focusing on the risks to financial stability. In its report[114] the Financial Stability Board defines the following risks to financial stability from transacting in stablecoins: (i) traditional financial risks, such as market risk, liquidity risk and credit risk, (ii) operational risk (including cyber risk) and risk of data loss, and (iii) risks relating to the applications and components on which users keep their private keys and exchange stablecoins.

The G7 Working Group on Stablecoins presented the following findings in its report:[115]

- Ensuring adequate protection of consumers and investors when transacting in global stablecoins is challenging. The regulatory approach is likely to require both cross-border and cross-agency collaboration on the protection of consumers and investors.
- If global stablecoins were to become a widely used means of payment, any disruption to transactions might cause delays in payments and damage to the real sector. These disruptions to transactions could harm confidence in the very use of global stablecoins. The impact on financial stability would depend primarily on the extent to which other means of payment could adequately substitute in the event of transactions in global stablecoins halting.
- Banks and other financial institutions directly or indirectly exposed to global stablecoins could suffer capital and liquidity losses in the event of a fall in their value.

The advent of global stablecoins and their potential impact on monetary policy and financial stability has encouraged central banks to consider introducing their own central digital currencies.[116] One of the main drivers of the potential introduction of a digital euro is the public's increased interest in global stablecoins[117] and in digital currencies issued by other central banks. In its report on a digital euro[118] the ECB

[113] Global stablecoins can be spoken of when they begin to be traded internationally.
[114] The FSB's *Regulation, Supervision and Oversight of Global Stablecoin Arrangements* can be found on the following link: https://www.fsb.org/2020/10/regulation-supervision-and-oversight-of-global-stablecoin-arrangements/ (published October 2020).
[115] *Investigating the impact of global stablecoins* can be found on the following link: https://www.bis.org/cpmi/publ/d187.pdf (published October 2019).
[116] The Banka Slovenije website gives a definition of a CBDC: a digital form of fiat currency issued by central banks, with recognised status as legal tender, which is appearing primarily as a potential response to the challenges brought by digitalisation. It is complementary to cash, which grants households and industry universal access to a lawful means of payment in digital form.
[117] The most widespread global stablecoin is tether.
[118] The Report on a digital euro can be found on the following link: https://www.ecb.europa.eu/pub/pdf/other/Report_on_a_digital_euro~4d7268b458.en.pdf (published October 2020).

reiterates that a digital euro could serve as an alternative cryptoasset, and could prevent the large-scale migration of household and corporate deposits into higher-risk assets and non-bank money.

6.3 Cyber security of the banking system

In recent years the banks have earmarked additional funding for cyber security in their information systems. This is also evident from the survey of Slovenian banks, where it was recognised that the cyber resilience of the banking system has improved. The banks nevertheless still face with problems in connection with the lack of supervision of outsourcing and suppliers, the obsolescence of information systems, and cyber hygiene, although less than they did two years ago. There were around 460 cyberattacks between March 2020 and July 2021, a period of rapid digitalisation driven by the Covid-19 pandemic. The number of cyber incidents was low, and did not pose any particular threat to the banking system.

The banking system faces with three cyber vulnerabilities: (i) insufficient supervision of outsourcing and suppliers, (ii) obsolescence of information systems, and (iii) issues with cyber hygiene.119 The global trend is towards hiring information solutions and support for them from outsourcers and suppliers, which could increase exposure to cyberattacks and cyber incidents. The banks conduct supervision of outsourcing on the basis of their outsourcing policy documents, which follow the requirements of the EBA guidelines on outsourcing, which recommend improvements to the resilience of the banking system. The banks are still dealing with outmoded information systems, which poses a risk of cyber penetrations. The banks otherwise report that they are intensively upgrading and updating their information systems, partly with the aim of better protecting against attack. The banking system is also facing with cyber hygiene issues. The banks report that they occasionally identify problems with the cyber hygiene of employees, which is reflected in various minor deviations from the bank's security policy. Alongside a variety of software, regular employee training is also being used to manage this risk. Comparing the cyber vulnerabilities of the banking system with 2019, the cyber resilience of the banking system has improved (see Figure 6.5). The survey also aimed to learn how the banks are tackling cyber vulnerabilities in terms of priorities. The assessment was that they are seriously addressing the vulnerabilities that were identified with the help of the survey results. The banking system's cyber resilience has improved since 2019, an indication that it is well-prepared for cyberattacks and is capable of mitigating their consequences should they be realised (see Figure 6.6).

Figure 6.5 Cyber vulnerability of the banking system

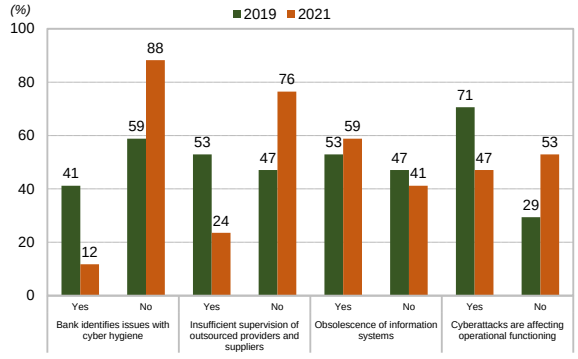
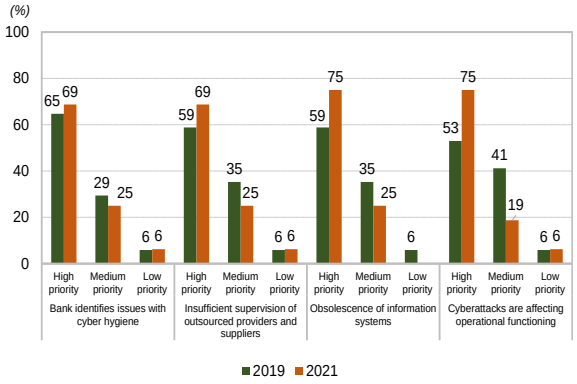


Figure 6.6 Prioritisation of cyber vulnerabilities in the banking system



Source: Banka Slovenije

Impact of the Covid-19 pandemic on the cyber security of the banking system

The majority of banks identified a rise in the number of cyberattacks on bank information systems during the Covid-19 pandemic. During the pandemic the banking system faced the following types of cyberattacks, which caused disruption to operations or financial damage: DDoS, phishing attacks, directory fraud, scanning of external IP addresses and ransomware. There were 14 cyber incidents during the pandemic (between March 2020 and July 2021), which are estimated to have caused around EUR 375 thousand of financial damage. The banks have not reported any increased exposure to cyberattacks on information systems caused by the increase in working from home. The majority of banks increased their spending on

[119] Cyber hygiene is the practices and steps that users of computers and other devices take to improve online security.

cyber security as follows during the pandemic: (i) the introduction of additional protection against cyberattacks (such as DDoS attacks), (ii) the use of fintech to identify potential security developments and attacks, and (iii) project plans to raise the level of cyber security. The pandemic also induced the banks to change their strategic cyber security planning by updating the information security strategy and incorporating access controls for working from home.

Different approaches and tools for monitoring systemic cyber risk

To ensure financial stability and implement macroprudential policy, it is important to set out the right tools and approaches that will serve to improve the cyber resilience of the financial system. This is also the reason that central banks are increasingly deliberating the broader use of various tools to allow the financial system to be as well-prepared as possible (with the help of various scenarios) for cyberattacks, and to adequately mitigate their consequences. In the monitoring of systemic cyber risk, there is an increasing focus on defining tools to mitigate the consequences of cyberattacks. Tools for mitigating cyberattacks are currently divided into two groups: (i) preventive tools that aim to drill various scenarios of cyberattacks on the financial system (such as cyber stress tests), and (ii) tools that reduce the impact of a cyberattack (existing tools to mitigate the liquidity and capital consequences of financial crises).

In its report the IMF try to explain various approaches and tools for monitoring, analysing and mitigating systemic cyber risk:

- **Including cyber risk in existing risk analysis approaches:** solvency and liquidity stress tests and analysis of contagion risk already encompass certain aspects of cyber risk. Solvency stress tests simulate a fall in asset prices. Cyberattacks can hit market prices, and cause a fall in prices of financial institutions' assets. Liquidity stress tests too already simulate a situation when investors withdraw from a particular financial institution because of various developments. One such development is a cyberattack, which could affect the liquidity of financial institutions. A long period in which investors' assets are unavailable harms the reputation of and trust in financial institutions. Analysis of contagion risk on the basis of the network of bilateral exposures between financial institutions simulates the cascade transmission of credit risk and liquidity risk.
- **Designing key indicators for monitoring of cyber risk:** these might be based on data on past incidents, investments, financial damage, the number of devices with obsolete software, the time required for managing a risk and dependence on suppliers of IT services.
- **Drawing up a cyber risk assessment matrix:** this is based on research encompassing various scenarios and the probability of their realisation for a particular financial institution. The research usually posits two scenarios, within the framework of which banks or other financial institutions must answer with regard to the vulnerabilities and threats that they face. The first scenario concerns how a direct cyberattack would impact the functioning of the financial institution, while the second concerns how institutions would response in the event of a cyberattack on an independent IT service provider. Financial institutions usually submit documentation for both scenarios covering the following information: (i) qualitative analysis of the transmission channels, (ii) mitigation measures that could be put in place in response to a cyberattack, and (iii) quantitative assessment of potential financial losses for each scenario with and without mitigation measures.
- **Cyber stress tests:** these aim primarily at testing the adequacy of capital and liquidity buffers that can be threatened by cyberattacks, and also encompass business continuity testing, and the crisis management plan for response and recovery, including good communications and coordination. The cyber stress tests measure the potential losses of financial institutions under a particular scenario from direct and indirect cyberattacks. The various scenarios encompass deliberate cyberattacks, which are divided into the following forms: theft of data or money, interruptions of business (denial of access to servers, networks, equipment), and infliction of harm (financial, infrastructural). The cyber stress tests can help provide a potential estimate of financial losses caused by a decline in demand for loans, withdrawals and similar, and define what the resulting decline in profit, capital ratios and LCR would be.
- **Analysing cyber risks in connection with outsourced IT service providers:** financial institutions include outsourced IT service providers in their operations. This increases competition (providers offer highly specialised services), but also poses inherent cyber risks in connection with information security. Potential cyber breaches at outsourced service providers can lead to disruptions to the outsourced services and the leaking of sensitive information about customers, or interruptions to financial institutions' IT solutions put in place with their partners. This poses certain risks, which

need to be monitored. If several financial institutions rely on the same IT service provider, this poses a higher level of risk on account of market concentration.

- **Cyber mapping:** this tool allows regulators not only to analyse mutual financial exposures, but also to analyse exposure to cyber risk. For example, two firms might not be directly linked, but can be linked with other firms through a combination of financial links and information and communication technology links. All of these links could entail a contagion risk during a cyberattack.

Central banks are increasingly deliberating various approaches and tools for monitoring systemic cyber risk. The Bank of England has been intensively conducting cyber stress tests in recent years, with an emphasis on the functioning of payment systems in the UK economy. In this case the cyber stress tests focused primarily on strengthening the resilience of the financial system to cyber risks, which include the ability to withstand cyber incidents, and the restoration of the functioning of the financial system after an incident. In addition the IMF reiterates in its report that capital-focused macroprudential instruments are also beneficial to a reduction in systemic cyber risk, which could mitigate against cyber incidents expanding into a systemic crisis, or help maintain confidence when they occur. Capital instruments allow financial institutions to absorb financial losses, albeit only after the consequences of cyberattacks are already known. Conversely, cyber stress tests aimed at testing various scenarios and simulating cyberattacks on the financial system represent a potential tool for identifying cyber vulnerabilities in the financial system. Central banks (in addition to monitoring the key indicators) are increasingly considering the use of cyber mapping, which provides an overview of the mutual operational and financial links between various market entities. If a network is created from which it is possible to deduce the financial and cyber exposure between various market entities, then various cyber stress tests scenarios could be applied to a specific part of the financial system and the financial consequences could be determined. The described approaches to monitoring and mitigating systemic cyber risk are still relatively new, and in the development and pilot analysis phase.

6.4 A review of accounting for sustainability in the banking system

A shift in tackling the issue of sustainability was evident across Slovenian banks in 2021, particularly in terms of the awareness of the importance of climate risks, and more concrete operationalisation with the introduction of the first sustainability indicators. According to the survey of the future challenges facing the banking system conducted in 2019, Slovenian banks are aware of the importance of sustainability and climate risks, albeit more in principle than in practice. The responses to the repeated survey in 2021 reveal that banks have shifted to a more concrete operationalisation of sustainability considerations in their business models. The definitions of sustainability across most banks are based on international principles of sustainability or the definition of the banking regulator, while some banks use their own definitions. The majority of banks use or intend to introduce ESG assessments for classifying credit portfolios, while six banks use their own ESG questionnaire. The introduction of sustainable financial products and green investment is still in its early phase across Slovenian banks.

Sustainability is part of the business strategy at most Slovenian banks and is gradually being incorporated into the business processes of individual institutions. While the majority of banks had included sustainability in the business strategy by 2019, in 2021 it was possible to note increased investment in human capital in the area of sustainability (see Figure 6.7). More than half of the banks have established sustainability task forces, while a third have developed specific measures to implement their sustainability strategy. Climate risks are part of the management board's regular discussions at various banks, while some banks have already set up a climate risk committee or department, or are planning to do so. The impact of the pandemic on the introduction of sustainability varies significantly from bank to bank. The Covid-19 pandemic did not impact the inclusion of sustainability in business models at almost half of the banks surveyed, while it delayed the introduction or actually accelerated it across other banks.

Figure 6.7 Sustainability considerations in business processes at Slovenian banks

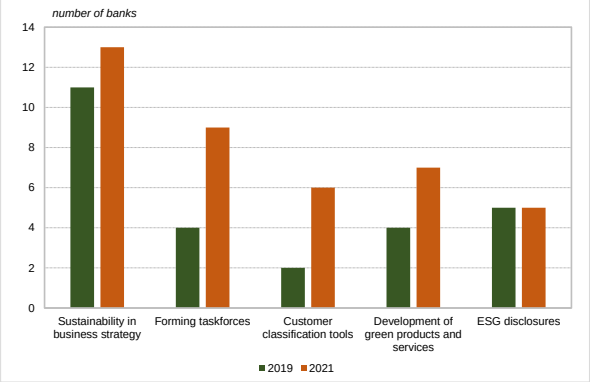
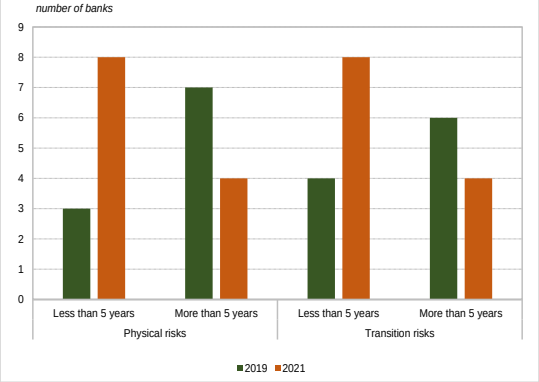


Figure 6.8 Assessment of the relevant horizon of climate risks



Note: A total of 17 banks and savings banks took part in the survey in 2019, and 16 in 2021.
Source: Banka Slovenije

Regarding risk management, there is a discernible shift in the relevant horizon of climate risks from long-term to medium term, but measures are nevertheless only in their initial phase. There was a significant rise in the number of banks assessing climate risks as relevant over the medium term (five-year horizon) in 2021, which is true for physical and transition risks alike (see Figure 6.8). Climate risks are still not included in the risk management framework in terms of scenario analysis or the risk appetite assessment at most banks. Climate risks are assessed as the most important aspect of ESG and the use or development of ESG assessments is evident at most banks.

The majority of banks are already using or intend to develop ESG assessments for the purpose of classifying exposures. Banks report the development of their own ESG questionnaires, which they use for customer classification and credit risk assessment. The methodologies used are not harmonised and are based on an external methodology or on internal qualitative models that account for the relevant climate aspects. Such measures in the area of ESG assessments are an important step towards introducing a more comprehensive climate risk framework, though comparability of assessments across banks is lacking. It is also possible to note a selective use of ESG assessments for a segment of the portfolio, e.g. based on large exposures only. Harmonising banking regulations in the area of ESG risks will therefore contribute significantly to ensuring the comparability of climate risk assessments at the bank level.

Figure 6.9 Factors in the development of green products and services

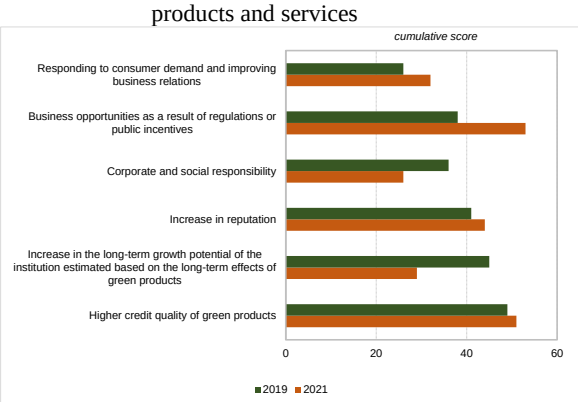
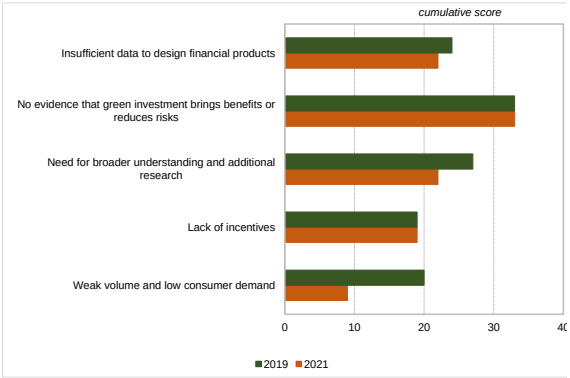


Figure 6.10 Barriers to entry in the green finance market



Note: The importance of the factors is calculated as the product of the factor score and the number of banks that assigned a particular score (1 to 6).
Source: Banka Slovenije

A cautious approach can be discerned in the development of sustainable financial products and green investment. Almost half of banks offer or intend to develop green financial products and four banks already have green loans in the form of housing and consumer loans. They cite corporate and social responsibility, an increase in the long-term potential for the growth of the institution, and responding to consumer needs as factors in the development of green products and services (see Figure 6.9). The factors hindering the development of green products and services are a lack of demand and regulatory incentives, and the need for

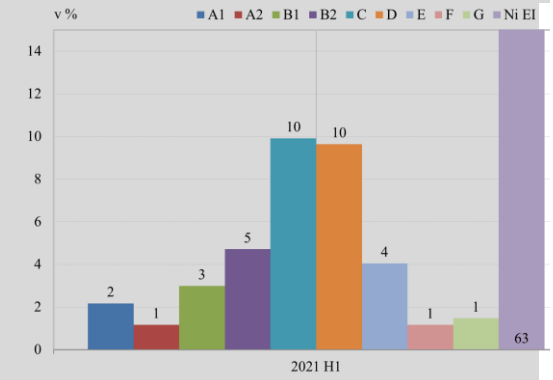
a broader understanding and additional research (see Figure 6.10). Investing in green and social impact bonds remains limited, and with the exception of one bank, Slovenian banks do not issue bonds of this type.

Data gaps are one of the main challenges in accounting for climate risks, in addition to the harmonisation of the methodology. The challenges that banks face in tackling climate risks include data gaps in environmental data, for both physical and transition risks, and non-standardised definitions of ESG and climate sensitivity factors. The EU taxonomy introduces a definition of an environmentally sustainable activity, but does not address all the ESG or climate sensitivity factors. An assessment of compliance with the taxonomy is envisaged for a small number of banks for now. Another aspect of accounting for climate risks might be in the direction of greater granularity of the analysis or considering firm-specific factors within individual sectors (e.g. distinguishing between the production of electric and internal combustion engine vehicles, which are classified in the automotive industry). The data gaps in environmental data and the need for a broader understanding and additional research into climate risks consequently affect the ability to design sustainable financial products. The supervisory climate stress tests envisaged for 2022 will therefore contribute significantly to a more harmonised accounting for climate risks.

Box 6.1 Energy efficiency of real estate collateral

An upgrade to regular reporting that entered into force on 1 January 2021 saw us begin to collect data on the energy efficiency of residential real estate collateral. This data is important for the assessment of transition climate risks, as there is an expectation that the future dynamics in real estate prices will also depend on their energy characteristics. A fall in prices of less energy-efficient real estate could have an impact on credit risk at banks, as coverage of loans by collateral would decline. One of the indirect objectives of expanding reporting was to improve the banks' ability to assess climate risks. This is necessary because it has been found that the banks are having difficulties just in collecting data on the energy efficiency of real estate as the data was not available for 63% of new loans.[120] Consequently the expectation is that at the earliest possible opportunity the banks will put in place appropriate systems for obtaining the required data. Our finding is that the banks most often accept real estate in energy grade C (9.92% of the total) as collateral, followed by D (9.65%) and B (7.70%).[121] The share of real estate in the lower energy efficiency grades (G, E and F) is low, but not negligible. A risk to banks could also be come from the real estate collateral for existing loans, although this risk diminishes over time as the loan principal is repaid. Exposure to physical climate risks (e.g. floods) can also have a major impact on real estate values. The data here is lacking for now, for this reason we are planning to upgrade the regular reporting with more accurate data on the location of real estate.

Figure 6.11 Energy efficiency of real estate collateral



Note: The figure illustrates the data on the energy efficiency of real estate that needs to be reported for housing loans intended for purchase or for purchase and construction and secured by the house or flat that is the subject of the purchase or renovation.
Source: Banka Slovenije

[120] In the first half of 2021 the banks approved around 2,500 loans where data on the energy efficiency of the real estate needed to be reported, although it was actually reported only for a little over 900 operations.
[121] Followed by E (4.05%), A (3.3%), G (1.47%) and F (1.16%). The shares do not sum to 100%, as they are expressed as a ratio to the total loans where it is necessary to report data on the energy efficiency of the real estate.

7 APPENDIX

Summary

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

Risk and resilience dashboard	Description	Indicators
Macroeconomic risk	Macroeconomic risk is the risk of weak economic growth, economic stagnation or a decline in economic activity.	There are several main indicators for monitoring, and their individual significance depends on the risk level that the individual indicator indicates, and on the area from which the risk comes. The main indicators are GDP growth, economic sentiment and confidence indicators, indicators of price developments, indicators of developments on the labour market, indicators of the fiscal position, and indicators of individual areas for the international environment.
Risk inherent in the real estate market	The risk inherent in the real estate market primarily relates to high rates of growth in real estate prices, which increase the banking sector's exposure, and also the possibility of a large negative revaluation of real estate collateral during a crisis.	Growth in prices, sales and loans for residential and commercial real estate, indicators of real estate overvaluation, construction sector indicators, LTV, LTC and DSTI.
Funding risk	Funding risk is the risk of the potential instability of funding or the sudden outflow of individual classes of funding from the banking system, and depends on the maturity of the funding.	Funding structure, developments in deposits by the non-banking sector, particularly household deposits and deposits by non-financial corporations, LTD, changes in the maturity breakdown of deposits by the non-banking sector, residual maturity gap between assets and liabilities.
Interest rate risk	Interest rate risk is the risk of investment losses as a result of changes in interest rates, and comes from the maturity mismatch between assets and liabilities that have a fixed interest rate, and from the repricing gap between assets and liabilities.	The main indicator for monitoring interest rate risk is the repricing gap between asset and liability interest rates, where the most important factor for liability interest rates is the assumption about the stable component of sight deposits. Other indicators are: the average repricing period for asset interest rates, the average repricing period for liability interest rates, the share of new loans and existing loans accounted for by fixed-rate loans, and the average maturity of new loans and existing loans.
Credit risk	Credit risk is the risk of loss resulting from the failure of a debtor to settle their liabilities to the creditor, and comes from the debtor's inability to meet their financial liabilities by the agreed deadline, which may be temporary (illiquidity) or permanent (insolvency).	The main indicators are NPE ratios, the breakdown of exposures into credit risk stages, credit parameters (default rates, probabilities of default, transition rates), and coverage of NPEs and performing exposures by impairments, provisions and collateral. Moratoria and arrears in settlement of past-due instalments previously subject to a moratorium are also significant indicators in the current pandemic.
Income risk	Income risk is the risk to the generation of adequate income by banks, and is based on developments in components of income generation and cost control.	The main indicators follow the generation and disposal of income, to the point of net income: net interest margin, net non-interest margin, net commission margin, gross income, developments in operating costs, CIR, developments in net income.
Risk inherent in leasing companies	The risk inherent in leasing companies is the risk of the generation of operating losses caused by a decline in turnover, the build-up of arrears of more than 90 days, and the potential spillover of adverse consequences into other sectors.	New business, stock of business, arrears of more than 90 days, other performance indicators of leasing companies (ROE, ROA, debt-to-equity ratio).
Solvency and profitability of the banking system	Resilience from the perspective of the capital position is the ability to absorb adverse effects or losses that would occur during a stress event, while from the perspective of profitability it is a sustainable source of capital adequacy.	Total capital ratio and CET1 ratio (both ratios on an individual and a consolidated basis), leverage ratio, capital surplus over the overall capital requirement (as a percentage of RWA), contribution of individual components to the change in the total capital ratio and CET1 ratio, ROE, ROA, ratio of impairment and provisioning costs to gross income and ratio of impairment and provisioning costs to net income.
Liquidity of the banking system	Resilience from the perspective of liquidity is the ability to repay all due liabilities, and the ability to absorb the adverse effects that would follow in the event of the realisation of funding risk.	LCR, developments in the ratio of primary and secondary liquidity to the balance sheet total, proportion of the pool of eligible collateral at the Eurosystem that is free.

Source: Banka Slovenije

Funding risk

Figure 7.1 Interest rates on new short-term household deposits

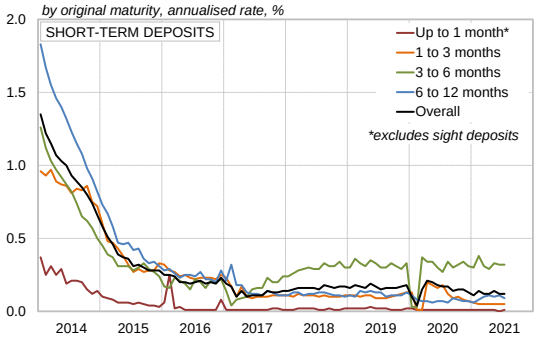
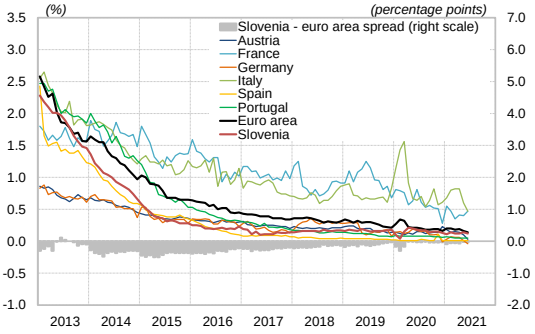


Figure 7.2 Interest rates on household deposits of up to one year



Sources: Banka Slovenije, ECB (SDW)

Credit risk

Figure 7.3 Non-performing claims indicators:

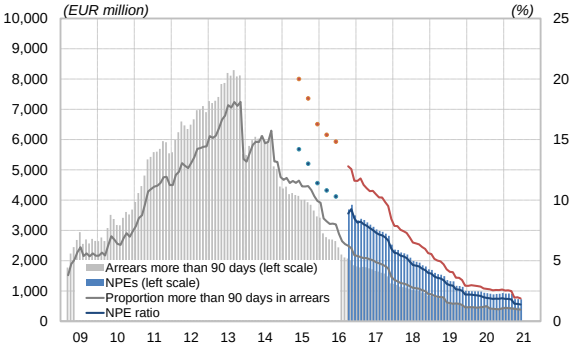
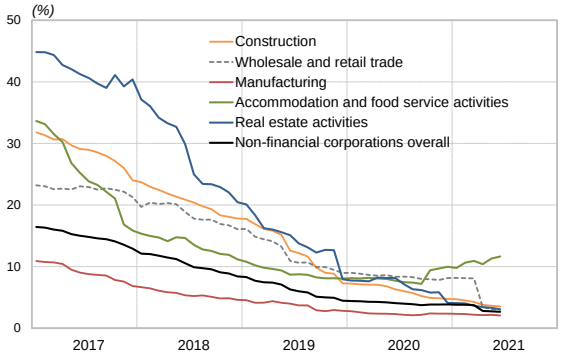


Figure 7.4 NPE ratios by sector



Source: Banka Slovenije

Figure 7.5 Share of total exposure accounted for by Covid-related exposure, in the non-financial corporations portfolio by sector, and in the household portfolio by loan type

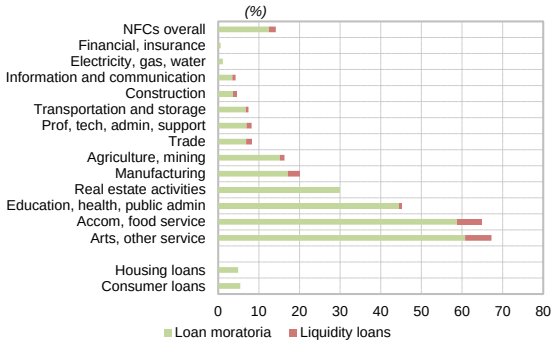
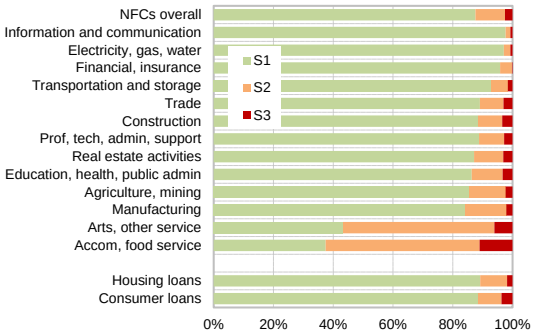


Figure 7.6 Breakdown of non-financial corporations portfolio and household portfolio by credit risk stage



Note: Includes all exposures covered by a moratorium or approved because of the Covid-19 pandemic (under the emergency laws or independently of them), even if the measures have expired in the interim.
Source: Banka Slovenije

Figure 7.8 Coverage by impairments in Stages 1 and 2

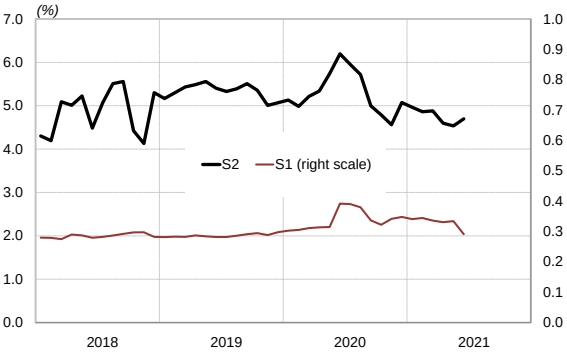
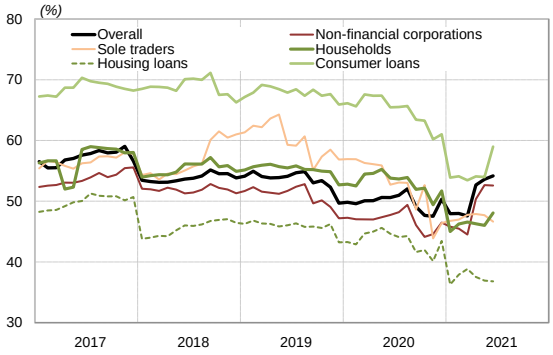
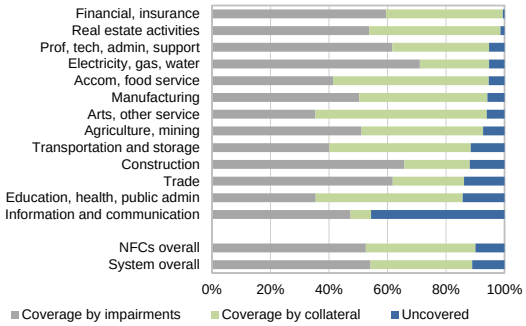


Figure 7.9 Coverage of NPEs by impairments by selected customer segment



Source: Banka Slovenije

Figure 7.10 Breakdown of coverage of NPEs by impairments and collateral across different sectors, June 2021



Note: In the figure the collateral in an individual operation is taken into account up to a maximum of the unimpaired value of the non-performing exposure.

Default rates and transition matrices for non-financial corporations

Table 7.2 Default rate for micro, small and medium-size enterprises, and large enterprises

	Micro, small and medium-size enterprises	Large enterprises
DR 2016-2017	4.1	1.9
DR 2017-2018	6.2	3.1
DR 2018-2019	5.1	2.3
DR 2019-2020	5.1	4.5

Note: The calculation of one-year default rates is based on the following assumptions:
1. Unit of observation: in the calculation of default rates the unit of observation is customer-date. Only one piece of data is taken into account for each customer, even if the customer has exposures at various banks. Banks and savings banks are included in the calculation. All customers whose classified claims measured at amortised cost are positive on the initial date are included in the calculation.
2. Defaulter is defined according to the EBA definition of non-performing exposure at the customer level.
3. Calculation of default rate:
The numerator of the default rate is defined as the number of customers who were non-defaulters on the initial date (end of year *T*) and have become defaulters at any time in the following year (*T+1*), where it is not necessary that they remain defaulters at the end of year *T+1*.
The denominator of the default rate is defined as the number of customers who were non-defaulters on the initial date (end of year *T*).
Each customer is taken into account in the calculation only once, even if the customer has exposures at various banks. A conservative approach has been used, where a customer who has been a defaulter at any bank at least once during the observation period is classed as a defaulter.

Table 7.3 Transition rates between ratings of micro, small and medium-size enterprises, and large enterprises (transition matrices)[122]

Micro, small and medium-size enterprises

		dec.20				
		A	B	C	D	E
dec.19	A	83.2	12.0	2.4	1.4	0.9
	B	15.1	71.1	9.9	2.8	1.0
	C	6.2	15.7	64.4	10.3	3.5
	D	1.3	1.8	4.5	74.6	17.8
	E	0.8	0.2	0.8	3.8	94.4

Large enterprises

		dec.20				
		A	B	C	D	E
dec.19	A	88.5	10.8	0.4	0.3	0.0
	B	11.9	83.0	5.2	0.0	0.0
	C	7.7	20.0	63.1	9.2	0.0
	D	1.9	0.0	3.7	85.2	9.3
	E	0.0	0.0	0.0	1.4	98.6

Note: The calculation of one-year transition rates is based on the following assumptions:
1. Unit of observation: in the calculation of transition rates the unit of observation is bank-customer-date. Each customer is taken into account in the calculation with regard to the number of exposures at various banks in the banking system. Banks and savings banks are included in the calculation. Customers whose data was in the credit register data at the beginning of the year in question are taken into account. The figure for the end of the period takes account of the final data available for the customer during the year. All customers whose classified claims have a positive amortised cost and who have a particular rating at the beginning of the observation period, and who were included in Sector S.11 in the business register on the date in question, are included in the analysis.
2. Calculation:
The numerator of the transition rate from ratings *i* to *j* is defined as the number of customers who had rating *i* on the initial date (end of year *T*), and whose latest available rating in year *T+1* was *j*, where it is not necessary that they still held that status at the end of year *T+1*.
The denominator of the transition rate from ratings *i* to *j* is defined as the number of customers who had rating *i* on the initial date (end of year T).

Income risk

Figure 7.11 Breakdown of banks' gross income

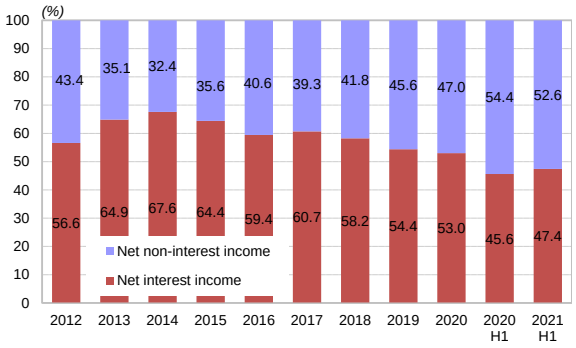
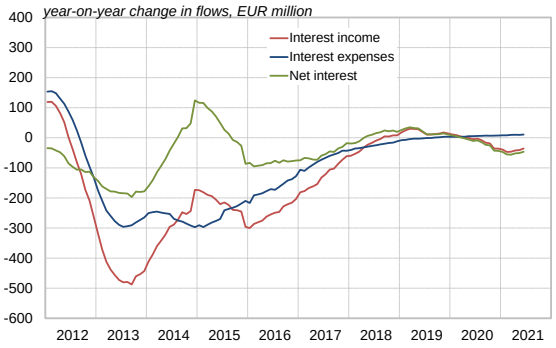


Figure 7.12 Growth in interest income, interest expenses and net interest



Source: Banka Slovenije

[122] The transition matrices for 2016 to 2019 are published in the appendix to the 2020 issue of the Financial Stability Review (Table 6.2 on page 86).

Figure 7.13 Effective interest rates by main instruments of interest-bearing assets and liabilities

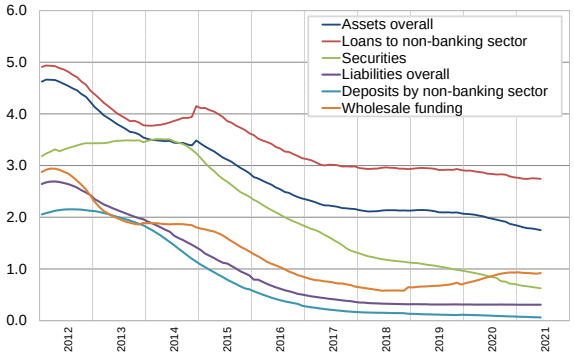
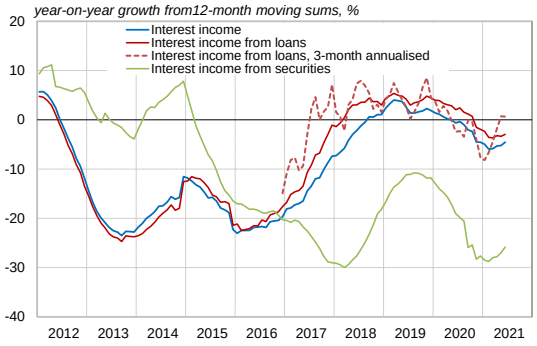


Figure 7.14 Growth in interest income by type



Source: Banka Slovenije

Figure 7.15 Net non-interest margin and net commission margin

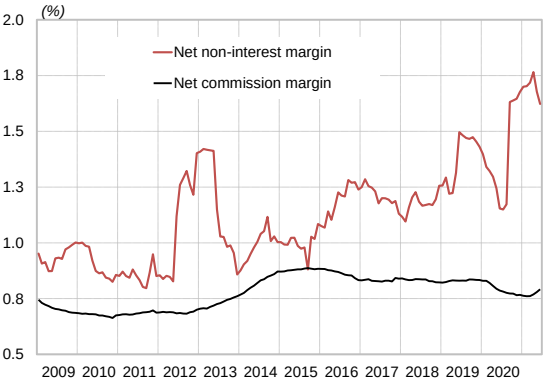
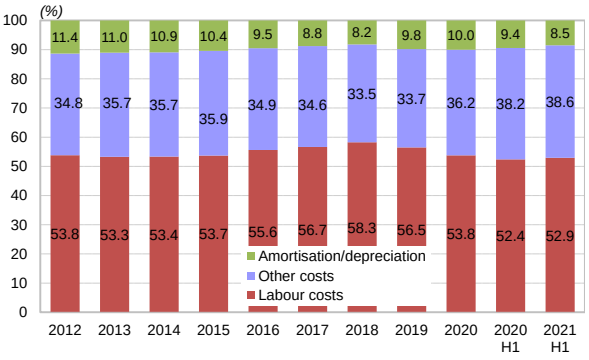


Figure 7.16 Breakdown of operating costs



Note: The two margins are calculated continuously for the preceding 12 months.
Source: Banka Slovenije

Figure 7.17 Net interest margin in Slovenia and other EU Member States, 2020

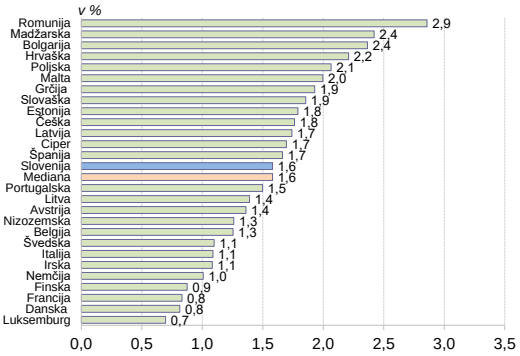
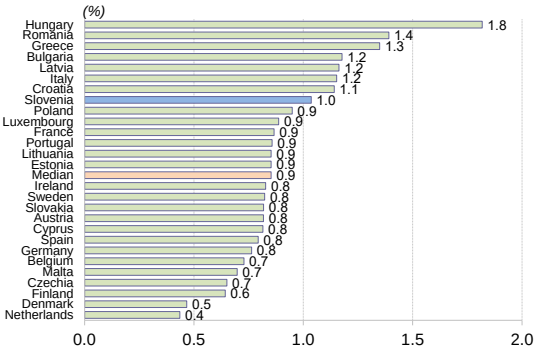


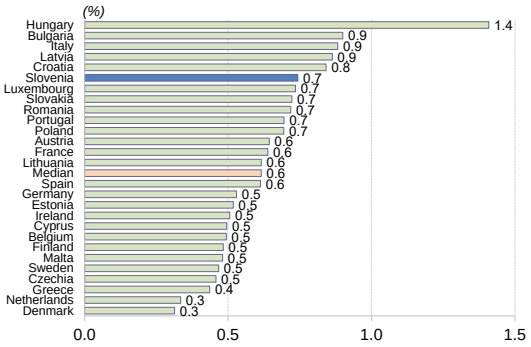
Figure 7.18 Net non-interest margin in Slovenia and other EU Member States, 2020



Note: The net interest margin and other indicators for Slovenia according to the ECB's CBD differ slightly from the values on an individual basis in the report.

Source: ECB (SDW [consolidated banking data])

Figure 7.19 Net commission margin (ratio of net fees and commission to balance sheet total) in EU Member States, 2020



Source: ECB (SDW [consolidated banking data])

Figure 7.20 Ratio of operating costs to balance sheet total in EU Member States, 2020

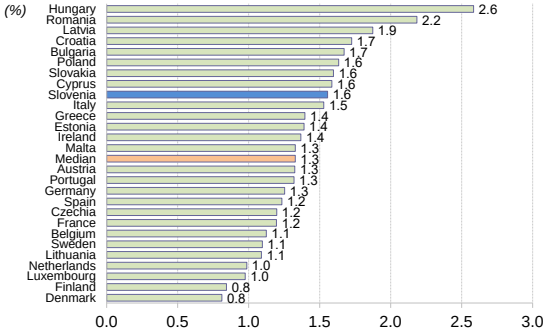
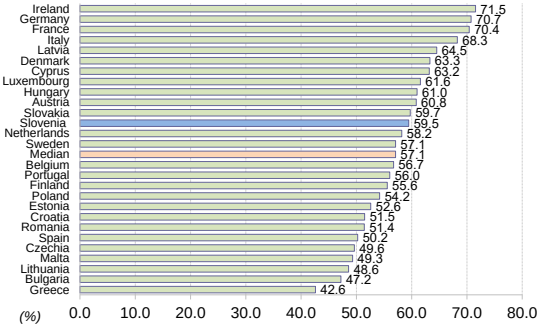
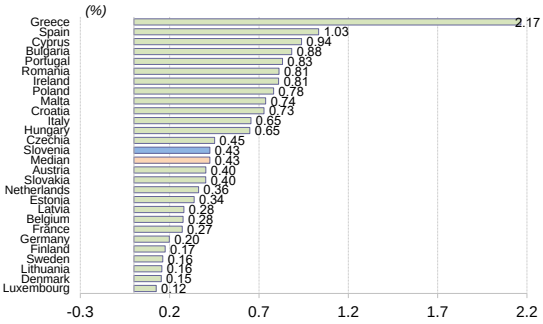


Figure 7.21 Cost-to-income ratio (CIR) in EU Member States, 2020



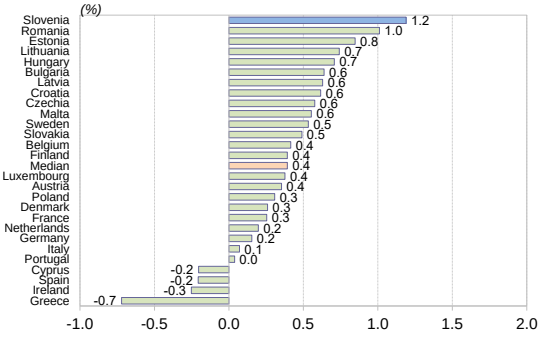
Source: ECB (SDW [consolidated banking data])

Figure 7.22 Ratio of impairment and provisioning costs to balance sheet total in EU Member States, 2020



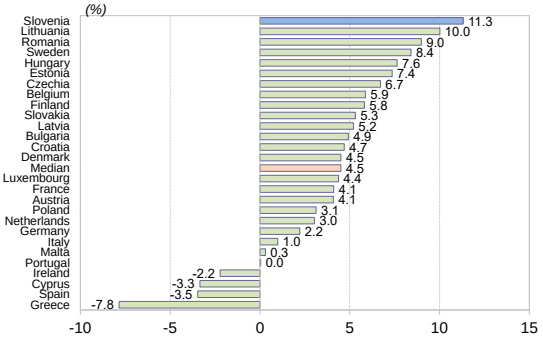
Source: ECB (SDW [consolidated banking data])

Figure 7.23 ROA in EU Member States, 2020



Source: ECB (SDW [consolidated banking data])

Figure 7.24 ROE in EU Member States, 2020



Households

Figure 7.25 Breakdown of demand for consumer loans by loan purpose

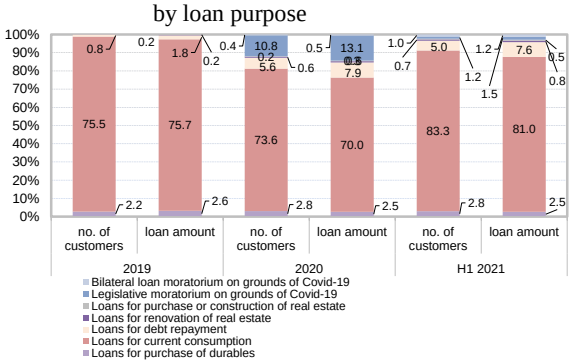
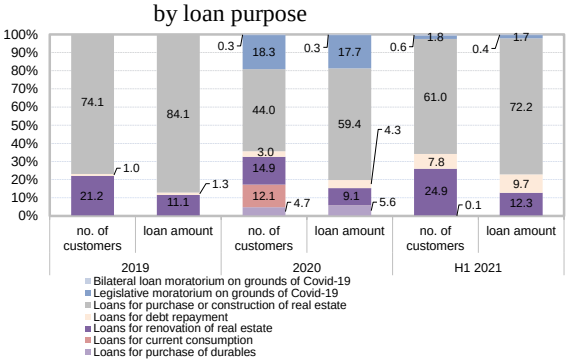


Figure 7.26 Breakdown of demand for housing loans by loan purpose



Source: Banka Slovenije

Non-financial corporations

Figure 7.27 Flows in NFCs' financial liabilities by instrument

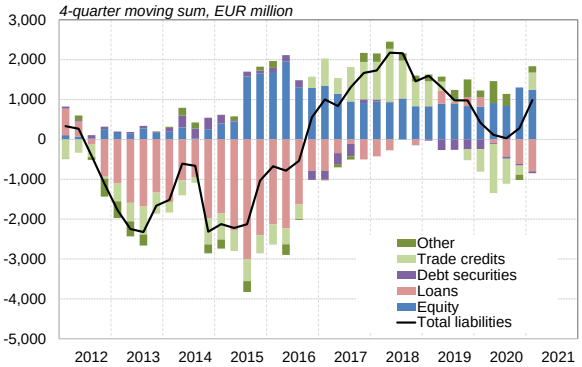
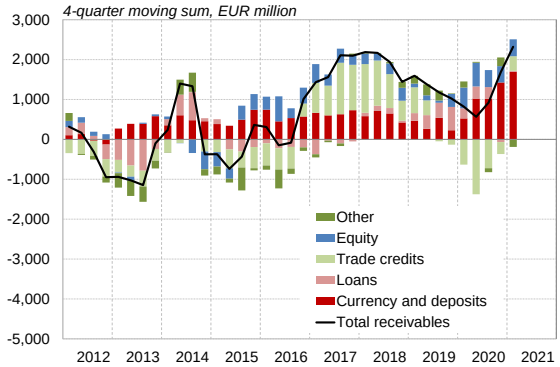


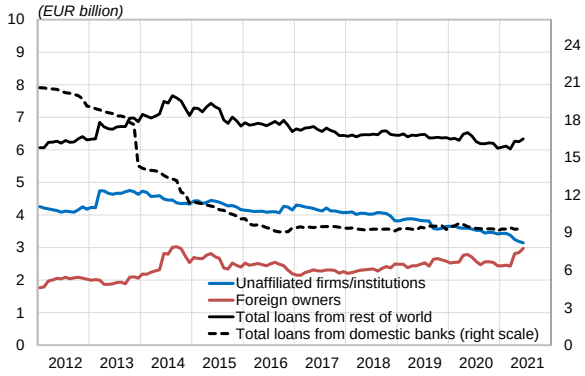
Figure 7.28 Flows in NFCs' financial assets by instrument



Note: Financial assets and liabilities are disclosed under the financial accounts methodology, where financial assets and liabilities also include claims and liabilities from business relationships arising when there is a difference of timing between transactions and payments (trade credits, advances, etc.).

Source: Banka Slovenije

Figure 7.29 Loans to NFCs from the rest of the world by ownership link



Abbreviations:

AJPES	Agency of the Republic of Slovenia for Public Legal Records and Related Services
SMA	Securities Market Agency
ISA	Insurance Supervision Agency
GDP	Gross domestic product
BLS	Bank Lending Survey
BoS	Banka Slovenije
BSIs	Balance sheet items
CCoB	Capital conservation buffer
CCyB	Countercyclical capital buffer
CET1	Common equity Tier 1 capital
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
OFIs	Other financial institutions
O-SIIs:	Other systemically important institutions
DSTI	Debt-service-to-income ratio
TARS	Tax Administration of the Republic of Slovenia
BAMC	Bank Assets Management Company
EBA	European Banking Authority
ECB	European Central Bank
SSM	Single Supervisory Mechanism
EMU	European Monetary Union (euro area)
ESRB	European Systemic Risk Board
EU	European Union
EURIBOR	Interbank interest rate at which representative banks in the euro area offer deposits to one another
Eurostat	Statistical Office of the European Communities
Fed	Board of Governors of the Federal Reserve System
FARS	Financial Administration of the Republic of Slovenia
GSIIs	Global systemically important institutions
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
HICP	Harmonised Index of Consumer Prices
IFs	Investment funds
KDD	Central Securities Clearing Corporation
TR	Turnover ratio
CIUs	Collective investment undertakings
LGD	Loss given default
LTD	Loan-to-deposit ratio
LTROs	Longer-term refinancing operations
LTV	Loan-to-value ratio
MCR	Minimum capital requirement
IMF	International Monetary Fund
SMEs	Small and medium-size enterprises
NFCs	Non-financial corporations
MROs	Main refinancing operations
PELTRO	Pandemic emergency long-term refinancing operation
PEPP	Pandemic emergency purchase programme
P2G	Pillar 2 guidance
ROE	Return on equity
RWA	Risk-weighted assets
S&P	Standard and Poor's
SBI TOP	Blue-chip index at Ljubljana Stock Exchange
SCR	Solvency capital requirement
SDW	Statistical Data Warehouse
SRB	Systemic risk buffer
SREP	Supervisory review and evaluation process
SORS	Statistical Office of the Republic of Slovenia
Tier 1	Tier 1 capital
Tier 2	Tier 2 capital
TLTRO	Targeted longer-term refinancing operation
AUP	Average unit price of a mutual fund
RWA	Risk-weighted assets
MF	Mutual fund
ZBan-3	Banking Act
ZIUPOK	Emergency Deferral of Borrowers' Liabilities Act

ZMbNFS	Macroprudential Supervision of the Financial System Act

Figures and tables

Tables

Figures: