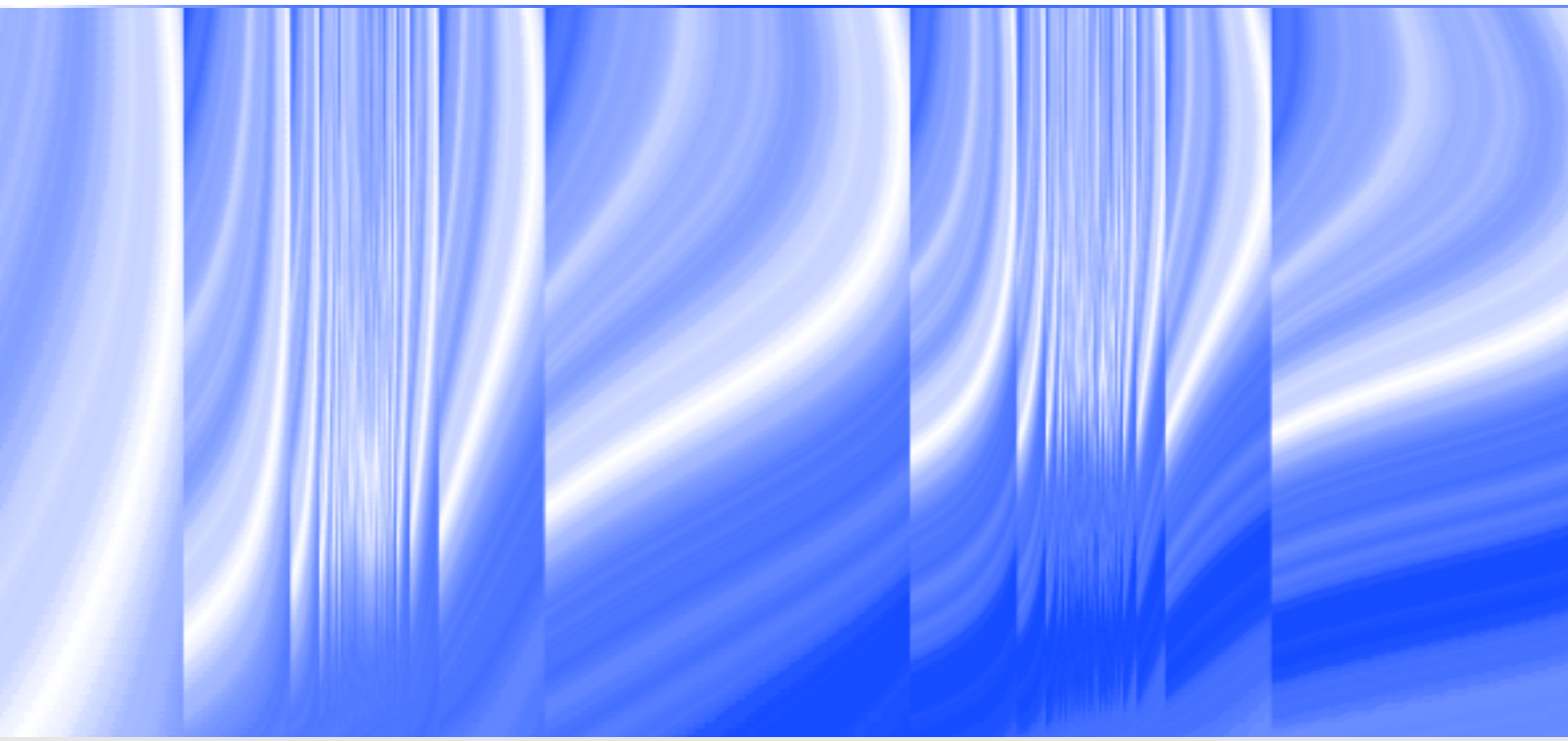
BANKA SLOVENIJE

BANK OF SLOVENIA

EUROSYSTEM

FINANCIAL STABILITY REVIEW



DECEMBER 2019

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The Financial Stability Review is based on figures and information available in mid-November 2019, unless explicitly stated otherwise.

ISSN 1581-9760 (online version)

CONTENTS

EXECUTIVE SUMMARY

The first section of the Financial Stability Review highlights the key systemic risks to financial stability in Slovenia in 2019, while the second section examines the resilience and vulnerabilities of the financial system to the systemic risks identified. The third section examines the Bank of Slovenia's macroprudential instruments that aim to strengthen the resilience of the financial system and to prevent and reduce the build-up of systemic risks, thereby ensuring the financial sector's sustainable contribution to economic growth. The thematic section of the Financial Stability Review examines the opinions of banks with regard to the impact of new financial technologies (fintech), and the impact of climate risk and cyber risk as major challenges facing the banking system today and in the future.

Key risks to financial stability

The key systemic risks to financial stability in the second and third quarters of 2019 were assessed as elevated or moderate with a trend of increase. *Income risk is now assessed as elevated, primarily on account of increased uncertainty with regard to the generation of stable income as one of the key challenges facing the banking system. The risk inherent in the real estate market remains elevated, primarily on account of surging residential real estate prices in recent years, but with a trend of decline. Other risks to financial stability come from the macroeconomic environment, particularly from the uncertainty in the international environment, and the cooling of the economy in Slovenia too. Credit risk is assessed as low, on account of the successful reduction in non-performing exposures in recent years, but is nevertheless highlighted because of the easing of credit standards on consumer loans, which in the absence of the Bank of Slovenia's measures in this area could bring a renewed deterioration in portfolio quality. Four key systemic risks have been highlighted here, and all systemic risks to financial stability are illustrated in the table.*

Income risk is assessed as elevated, on account of the persistent low interest rate environment and the expectation of a less favourable situation for the banks in generating net interest income. The conditions for achieving and maintaining profitability are worsening. *The banking system's high profitability was mainly attributable to high non-interest income, and a net release of impairments and provisions. The net interest margin is lower than before, while the most important role in the generation of net interest income will be played by income from loans to the non-banking sector, which is increasing more slowly than predicted a year ago. In the low interest rate environment, with economic growth slowing, the banks' profitability will continue to depend on their lending activity, not just to households, but above all to corporates. As economic growth slows, the net release of impairments and provisions, which has been a major factor in the banks' high profitability, can no longer be sustained. Operating costs rose again in 2019.*

Table: Bank of Slovenia's overview of risks to the Slovenian banking system

Systemic risk	Risk assessment								
	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Trend in risk	Risk assess Q3 2019	Trend in risk
Income risk							⇧		⇧
Risks, arising from the real estate market							⇩		⇩
Macroeconomic risk							⇧		⇧
Funding risk							⇨		⇨
Interest rate risk							⇨		⇨
Credit risk							⇨		⇨
Risk, arising for the leasing companies							⇧		⇧
Solvency risk							⇨		⇨

Colour code: low | moderate | elevated | high

Note: The data on which the risk assessments for solvency risk, contagion risk and large exposures are based is not yet available for Q3, and thus the assessments are the same as for Q2.
Source: Bank of Slovenia

The cooling economy and a downturn in the labour market could also reduce households' ability to repay loans. The introduction of macroprudential measures by the Bank of Slovenia has reduced this risk in household lending. *Residential real estate prices have surged in recent years, but growth began to ease somewhat in 2019 as economic growth slowed. Prices are assessed as being close to fundamental levels, with no overvaluation, and are likely to continue rising at lower rates in the future. There is still an imbalance between supply and demand on the real estate market. The risk to the banking system from the real estate market continues to be assessed as elevated, although growth in housing loans is moderate and stable, and the banking system's exposure to construction is low.*

The uncertainties in the international environment are still increasing, which is being reflected in weaker growth in the Slovenian economy. *Economic growth is slowing in the euro area amid the decline in growth in global trade and the uncertainty surrounding Brexit, and according to forecasts and confidence indicators will remain slower in the future. The economic situation in Slovenia was relatively good this year: the labour market remained buoyant amid growth in wages and private consumption, general government debt declined, and inflation strengthened. Further cooling in the economy could weaken the economic situation, and increase the risks to the banking system. The risks to the banking system inherent in the international environment nevertheless remain moderate, but are increasing.*

Credit risk in the banking system is assessed as low, although the consumer loan segment constituted a source of risk before the introduction of the macroprudential measures. *Consumer loans constitute a smaller proportion of the banks' credit portfolio, but due to their high growth in recent years, they have risen rapidly in importance. There has been a sharp increase in the average size of consumer loans in recent years, while average maturity is continuing to lengthen, despite being among the longest in the EU. Another potential source of credit risk is the rapid growth in loans to the rest of the world, which is forecast to continue in the future. The Slovenian banking system is ranked ninth among EU Member States in terms of the NPE ratio, but is one of the countries to have seen the largest reductions in the NPE ratio over the last two and a half years. The banks further reduced the NPE ratio in the corporate segment in 2019, thereby reducing the burden on the portfolio from legacy non-performing loans. The inflow of NPEs from new loans is small. The actual quality of this portfolio segment and the credit standards applied will only be revealed when the economy cools.*

Resilience of households, corporates, the banking system and non-bank financial institutions

The financial position of households, on which the banks have been increasingly focusing in recent years, was relatively sound, although with the rapid increase in consumer loans this could begin to change. *Households still have an appetite for saving, despite the low interest rates, and investment remains low. Another factor in the resilience of the household sector is the low level of owner-occupiers with a mortgage, which is among the lowest in the euro area, in part because of the high ownership rate. However, this could potentially point to higher indebtedness on the part of individuals with a mortgage or other loans. In the event of further cooling in the macroeconomic environment and a consequent downturn in the labour market, these vulnerabilities could in particular be reflected in households with below-average income levels, which received more than half of the new consumer loans approved in 2018.*

Low debt ratios, high profits and high liquidity mean that corporates could be able to successfully absorb potential shocks from the external environment, which would limit their spread to the banking sector. *Corporate financing has been declining since the second half of 2018, most notably in trade credits. Inflows of equity are also declining. This is to be expected, given the slowdown in economic growth and falling demand, particularly in manufacturing. The decline in corporate financing at domestic banks compared with the past has also reduced their potential for generating interest income. Corporates' resilience to potential shocks is evidenced in their surplus liquidity, which they are managing in part by increasing loans to the rest of the world. The persistence of the low interest rate environment means that the debt servicing burden faced by corporates remains low.*

The banking system's capital adequacy is relatively good, which is strengthening the capacity to cover losses in the event of potential stress situations, although there is significant variation from bank to bank. *The slowdown in economic growth is making profit generation more of a challenge for banks, and sensible profit distribution will therefore be important, particularly at banks with low capital surpluses. At the Bank of Slovenia the resilience of the banking system is determined in part through macro stress tests, which show*

the banking system to be stable, as it discloses sufficient capital adequacy under the baseline scenario and under the adverse scenario alike.

High liquidity means that the banking system's resilience to the risks inherent in maturity mismatch is good. *There is considerable variation between banks in their capacity to cover net liquidity outflows, although they also have the option of obtaining additional funding from the Eurosystem at a favourable cost.*

The banks are protected against credit risk through their good coverage of NPEs by impairments and collateral, while the unimpaired portion of NPEs is well-covered by regulatory capital. *Concerns are being raised about the low coverage of total exposures by impairments, which is at a record low level, primarily as a result of the reduction in the NPE ratio. A slowdown in economic growth generally brings an increase in NPEs, as a result of which the coverage of increased NPEs by impairments could initially be lower than it is at present.*

The resilience of the non-bank financial system, which accounts for a quarter of the financial system in Slovenia, is relatively high, although risks are increasing in certain areas. *The low interest rate environment constitutes a significant risk to insurance corporations, although they are currently performing well, which is being reflected in growth in gross written premium, total assets and profit. Capital adequacy in the sector also remains favourable. The low interest rate environment is having an adverse impact on the performance of pension companies and funds, particularly in the guaranteed fund sector, where the investment risk is borne by the fund operators. Leasing companies' resilience remains good, and this is being reflected in further growth in total profits, in an improvement in the ratio of equity to loans, and in a further decline in the proportion of claims more than 90 days in arrears. The cooling economy is already being reflected in slower growth in new loans by leasing companies, which is also attributable to increased competition from banks in the finance leasing sector. Mutual funds' resilience also remains good: their investment structure guarantees sufficient liquidity, while savers' appetite for mutual funds remains stable.*

Bank of Slovenia's macroprudential policy and macroprudential measures

Macroprudential policy primarily acts preventively, for the purpose of ensuring the stability of the financial system. *In so doing macroprudential policy pursues two key objectives: strengthening the resilience of the financial system, and limiting the build-up of systemic risks. The toolkit of macroprudential instruments depends on the types of imbalances and shocks that need to be managed. Given its primarily preventive nature, macroprudential policy should be distinguished from policies for managing and addressing financial crises. Macroprudential measures need to be adopted in timely fashion, before the risks can be reflected in the banks' credit portfolio. Under the Macroprudential Supervision of the Financial System Act (ZMbNFC), the Bank of Slovenia is responsible for conducting macroprudential supervision of banks in Slovenia.*

In light of the elevated risks to financial stability, the Bank of Slovenia modified the macroprudential measure in the area of household lending in November 2019, changing it in part from a recommendation to a binding measure. *It stipulates the size of housing loans and consumer loans that banks may approve with regard to the DSTI, sets a cap on the maturity of consumer loans, and sets a maximum level of deviations from (exceptions to) the aforementioned caps. The cap on LTV for housing loans and consumer loans remains in the form of a non-binding recommendation. The measure primarily addresses consumer loans. It is also expected to have a minor impact in housing lending. The expectation is that the introduction of the measure will reduce the high growth in consumer loans, and shorten their average maturities. Macroprudential measures in household lending have been introduced by the majority of European countries.*

The countercyclical capital buffer aims to limit cyclical systemic risks and to contribute to mitigating and preventing excessive credit growth and excessive leverage. *The purpose of the countercyclical capital buffer is to protect the banking system against potential losses when excessive growth in lending is associated with an increase in risks in the system as a whole. In light of indicators of potential imbalances in the banking system originating in excessive corporate lending, and on the basis of expert judgment, the capital buffer rate has remained unchanged at zero since its introduction.*

The buffer for other systemically important banks (the O-SII buffer) aims to help meet the intermediate macroprudential policy objective of limiting the systemic impact of misaligned incentives with a view to reducing moral hazard. *The Bank of Slovenia first identified other systemically important banks (O-SIIs) in 2015, when it defined a transition period for meeting the capital buffer, namely from 1 January 2019. During a review of the O-SII criteria in 2019 the Bank of Slovenia identified one more bank as systemically important, while the banks that had been identified as O-SIIs in previous years remained classified as such, and maintained their buffer rates as defined in the previous year.*

The risk of excessive maturity mismatch and illiquidity is currently being addressed by two macroprudential measures. *The first measure requires banks to calculate two liquidity ratios (the first-bucket liquidity ratio and second-bucket liquidity ratio), and to report them to the Bank of Slovenia. The measure will cease to be in force on 1 April 2020. The second measure stipulates a recommendation for gross loans-to-deposits flows (GLTDF). It was introduced in June 2014, and has been applied as a recommendation since January 2018. Its purpose is to slow the pace of the decline in the LTD ratio in the banking system, thereby improving the (impaired) intermediation of financial assets to the non-banking sector. In the future consideration should be given to a potential upgrade in the instrument, which would signal where a healthy cap on the LTD ratio would be at the level of individual banks.*

Challenges in the banking system today and going forward

The thematic section examines the impact of new financial technologies (fintech), and the impact of climate risk and cyber risk as major challenges facing the banking system today and in the future. The analysis is based primarily on a survey of future challenges in the banking system conducted by the Bank of Slovenia in October 2019, and this section thus mainly represents banks' views of the subject in question. The survey asked banks about the impact of fintech, climate risk and cyber risk, and also questioned them on the possible introduction of fees for household deposits. These answers shall be presented within a broader analysis in early 2020.

Digitalisation and the introduction of fintech are bringing progress, but fintech firms are at the same time putting competitive pressure on banks, and are thereby having an impact on their business models. *While the majority of banks are facing competitive pressure from fintech firms, some banks have also entered into commercial partnerships to be able to bring new products and services to the market. Banks are earmarking more and more money to develop new products based on fintech, but are expected to focus mainly on established technologies. The banks who are introducing technological innovations into their business processes and business models are becoming tougher competition for other banks in the market, and also for fintech firms.*

The financial system is exposed to climate risk, and will have to adapt to the necessary energy transition to a low-carbon economy. *The risks to financial stability associated with climate change have increased in recent years, and are above all accompanied by uncertainty. Climate risk comes from extreme weather events, or from changes in environmental policies, consumer preferences or technologies. From the perspective of environmental targets, the risks in Slovenia are low. The risks in the banking system are also assessed as low if exposure to sectors with a high carbon footprint are taken solely into account, but the risks are relatively significant if exposure to households is included. The banks have high awareness of the importance of sustainability and the existence of climate risk, but more at the conceptual rather than the operational level. With increasing awareness of climate change, progress will need to be faster in this area, particularly in sustainable financing within the framework of general initiatives for green growth.*

The banks are relatively well-equipped to see off cyber attacks, but their capacity to mitigate the consequences of such attacks, when they do occur, is deficient. *The banks believe that they are facing down cyber attacks and incidents and successfully resolving them through technical means, such as firewalls, and system software to protect against penetration or malware. The majority of banks also conduct drills in various cyber attack scenarios at least once a year. They are nevertheless dealing with outmoded information systems, and have insufficient oversight of outsourcing and IT service providers.*

1 KEY RISKS TO FINANCIAL STABILITY

The first section of the Financial Stability Review highlights the key systemic risks to financial stability in 2019. The key risks are examined in order, largest to smallest, as assessed in the risk dashboard (the table on page 1). Although the risks are examined in the order of largest to smallest, their importance and the magnitude of their impact on the banking system may differ. Systemic risks interact; e.g. macroeconomic risk and the risk inherent in the real estate market have an impact on the entire financial system, and thus on the evolution of risk at banks.

1.1 Income risk

Income risk is assessed as elevated, with a trend of increase, as the conditions for achieving and maintaining profitability worsen amid the persistent low interest rate environment. Growth in interest income is slower than had been anticipated, and the increase in net interest income is unstable. The cooling economy means that credit growth is increasing more slowly than expected. The banks achieved record profits in 2018. Profits increased further in 2019, and by the end of the third quarter had almost reached the total of the previous year. The key factors in the higher profits are an increase in non-interest income, a net release of impairments and provisions, and positive growth in net interest. In harsher conditions for banks, namely the low interest rate environment and slowing economic growth, bank profitability will strongly depend on the volume of lending activity, the generation of stable non-interest income, control of operating costs, and management of credit risk.

Net interest margin and net non-interest margin

The net interest margin has been below its long-term average in recent years, and while the low interest rates persist the banks will find it difficult to even maintain it at current levels.[1] Having stabilised in 2018, the net interest margin declined again in 2019, reaching 1.81% in September. Having narrowed for several years, the distribution of net interest margin across banks has widened slightly in the last two years, an indication that differences between banks are increasing slightly in this core segment.

Figure 1.1: Net interest margin and commission margin in the banking system

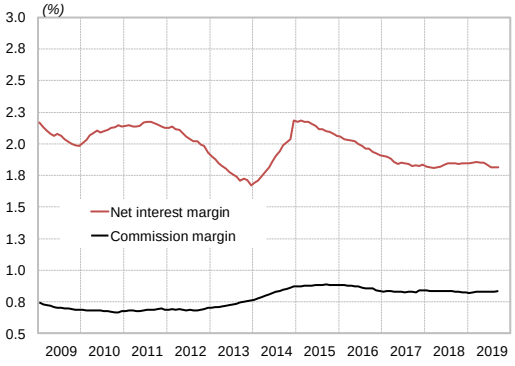
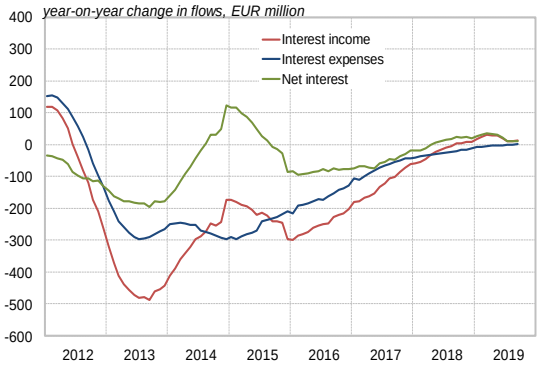


Figure 1.2: Changes in interest income, interest expenses and net interest



Note: In the left figure the margins are calculated for a moving 12-month period. Only the most important and least volatile component of non-interest income is illustrated in the figure, namely the ratio of net fees and commission to the balance sheet total.
Source: Bank of Slovenia

In the low interest rate environment, it is quantity effects that are having a prevailing impact on growth in net interest income, and consequently the potential cooling of the economy will have a significant impact on its size. Quantity effects prevailed over price effects in 2018 and 2019, and produced positive growth in net interest income. The banks' strengthening lending activity is however driving growth in net interest income less than might have been expected. The persistence of the low interest rate environment and falling returns on investments from the past mean that growth in interest income from loans is moderate, while aggregate growth in interest income is low, at 1.6%. Thanks to record low interest rates and the increase in sight deposits, interest expenses have fallen to their minimum level.

[1] The net interest margin on interest-bearing assets averaged 2.39% between 2001 and 2018.

Figure 1.3: Contribution made by quantity effects and price effects to the change in net interest income, and net interest margin

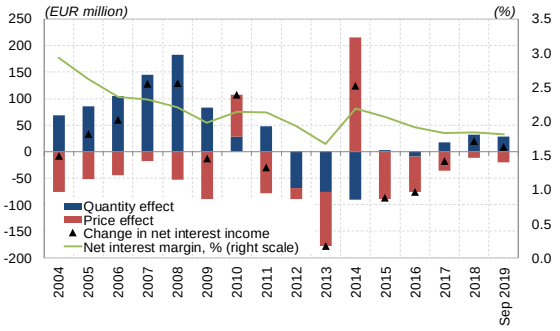
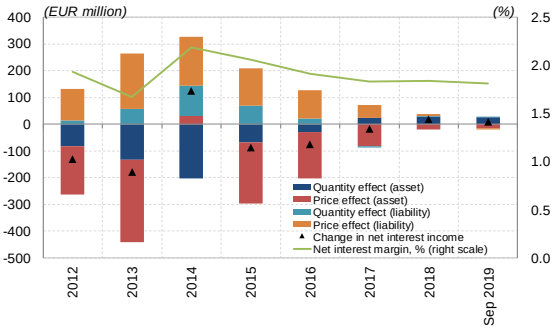


Figure 1.4: Changes in the banks' net interest income, decomposed into asset-side and liability-side quantity effects and price effects



Note: The right figure takes account of the 12-month moving total of interest income/expenses, while the net interest margin is calculated for the same period.
Source: Bank of Slovenia

Interest income from the banks' loans to the non-banking sector will thus play the most important role in the generation of positive growth in (net) interest income. Effects on the income side will have the decisive impact on developments in net interest income in the future.[2] Growth in interest income is low: the year-on-year rate stood at just 1.6% in September. The gradual increase in the proportion of interest-bearing assets accounted for by loans and the banks' focus on higher-yielding consumer loans have recently had a favourable impact on interest income. The banks are nevertheless finding it difficult to replace higher-yielding investments from the past with investments of the same level of return.

Figure 1.5: Growth in loans to the non-banking sector versus growth in net interest income at individual banks

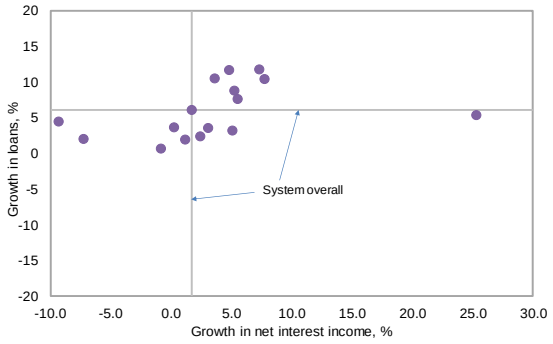
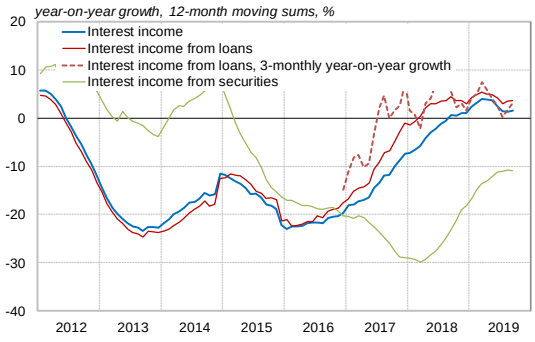


Figure 1.6: Growth in interest income by type



Source: Bank of Slovenia

The banks are partly compensating for the weak growth in net interest income with a more active approach to generating non-interest income. High growth in non-interest income brought an increase in the net non-interest margin this year. It had risen to 1.47% by September (measured over the preceding 12 months). Aggregate non-interest income in the banking system is relatively volatile over the long term, and so too is the non-interest margin. The pronounced increase in non-interest income, particularly at some of the largest banks, is attributable to several factors, such as dividend payments, revaluations of shares and banks' claims against corporates, and the sale of assets. The banks have continued to increase the more-stable part of their non-interest income from net fees and commission, growth in which outpaced average growth in the total assets. The growth in net fees and commission is a reflection of more-active policies for generating income and introducing a variety of new packages of services, and price rises. Through their more-active policies the banks are trying to compensate for the weak growth in net interest income, and to mitigate the current adverse income effects of the low interest rate environment. Net fees and commission, the largest and most stable component of non-interest income, was up 5.4% in year-on-year terms during the first nine

[2] The largest factor on the asset side in the increase in net interest in 2018 and 2019 was positive quantity effects from loans. By contrast, price effects on the asset side were still negative in both years, in particular effects from falling yields on securities. The banks generate the majority of their interest income from loans, which accounted for 84% of the total over the 12 months to September. Securities accounted for 11%, while other investments, mainly in more-liquid forms, accounted for just a small proportion.

months of the year. The banks' net commission margin was relatively stable. By contrast, the ratio of net fees and commission to non-interest income has declined over the last two years, as a result of the aforementioned increase in other non-interest income.

Figure 1.7: Breakdown of the banks' gross income into net interest income and net non-interest income

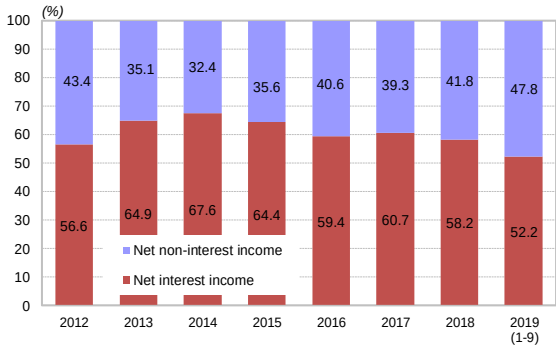
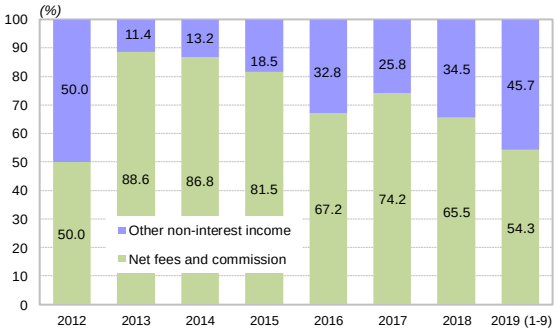


Figure 1.8: Breakdown of the banks' non-interest income into net fees and commission, and other non-interest income



Source: Bank of Slovenia

Income risk is present throughout the euro area. The net interest and net non-interest margins in the Slovenian banking system are among the highest in international comparisons. The net interest margin in European countries has undergone a trend of decline in recent years. In 2018 the net interest margin at Slovenian banks surpassed the average in the EU28 (the median stood at 1.66%[3]), and also the weighted average in the euro area (1.17%) and the EU28 (1.27%). Note should be taken of the lack of data comparability in these comparisons, as banks in Slovenia are mainly classed as small and medium-size banks, whose banking services predominantly consist of deposit taking and lending. The net interest margin at small banks across the EU, whose values are the most comparable to banks in the Slovenian banking system, stood at 1.72% in 2018. Slovenia's non-interest margin was also higher compared with other countries in 2018 (the median in the EU28 stood at 0.87%), as a result of the relatively high level of non-interest income in the country during the year. A gap was also evident in the commission margin: the median in the EU28 was 0.70% according to the cited data, compared with 0.79% in Slovenia.

Factors raising profitability

Operating costs increased again in 2019. There was nevertheless virtually no change in the cost competitiveness indicators. Despite growth of 5.4% in operating costs, the ratio of operating costs to total assets stood at 1.76% in September (for the preceding 12 months), comparable to last year. The Cost-to-income ratio (CIR) improved to 52.5% on account of an increase in gross income. Net income over the first three quarters of 2019 was up a fifth, as growth in gross income outpaced growth in operating costs.

Figure 1.9: Cost-to-income ratio (CIR) in the banking system

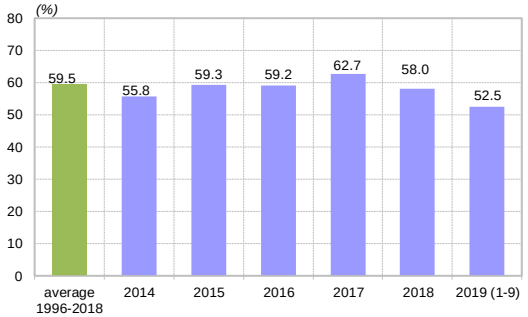
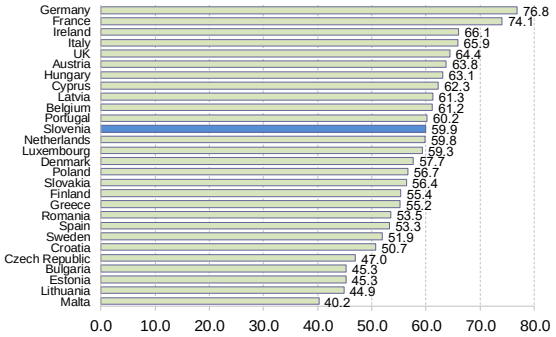


Figure 1.10: Cost-to-income ratio (CIR) across the EU28 in 2018



Note: The values in the left figure are calculated on the basis of monthly balance sheet figures for the Slovenian banking system on an individual basis, while the values in the right figures are consolidated banking data figures (ECB SDW).
Sources: Bank of Slovenia, ECB

[3] The comparison is made on the basis of the consolidated banking data from the ECB SDW, which differs slightly from figures based on balance sheets.

As economic growth slows, the net release of impairments and provisions, which has been a major factor in the banks' high profitability, can no longer be sustained. The net release of impairments and provisions was the dominant factor at the level of the banking system in 2019, for the third consecutive year. It contributed EUR 62 million to profit over the first nine months of the year; normally banks dispose of a significant portion of their gross income on impairment and provisioning costs. More than half of the banks recorded a net release of impairments and provisions, most notably the largest banks. The banks had expected to see the trend come to an end, but the net release of impairments and provisions nevertheless continued in 2019. The continuation of the trend, which is unusual in terms of long-term developments,[4] was attributable to the improvement in the quality of the credit portfolio, and also partly to the banks' business policies. The net release of impairments and provisions is one of the most important factors in the above-average profitability of the Slovenian banking system. The process of reducing legacy NPEs has already seen a sharp decline in the stock of non-performing claims at numerous banks, and a further release of impairments on this account is less likely. The slowdown in economic growth will increase the need for future creation of new impairments and provisions, which is also to be expected given their current record low levels relative to the balance sheet total. The ratio of impairments to the total assets fell to a record low, reaching 1.9% in September.[5] The reduction in non-performing claims and the release of impairments and provisions was a significant factor in the increase in profitability in previous years at the banks that made the fastest reductions in NPLs.

An additional factor that could affect the income position of banks and financial institutions in Slovenia and across the euro area in the future is a sudden fall in securities prices on financial markets. This would be reflected in an increase in credit risk and in other financial effects resulting from revaluations on the financial markets, which could reduce bank profitability in the medium and long term. Rising values saw financial institutions increase their income on assets in previous years, but given the high current valuations of debt securities, it is unlikely for a similar trend to continue in the future. Slovenian banks have significant holdings of debt securities in their portfolios: they amounted to EUR 9 billion or 22% of total assets at the end of the third quarter of 2019.

Figure 1.11: Reduction in NPL ratio at selected groups of banks

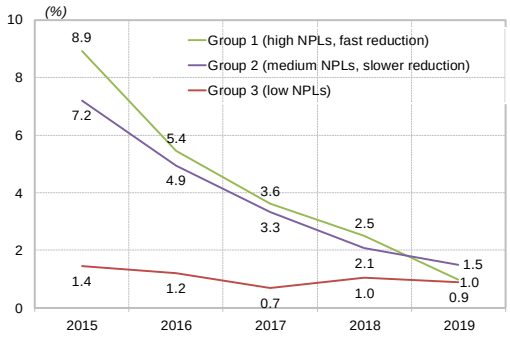
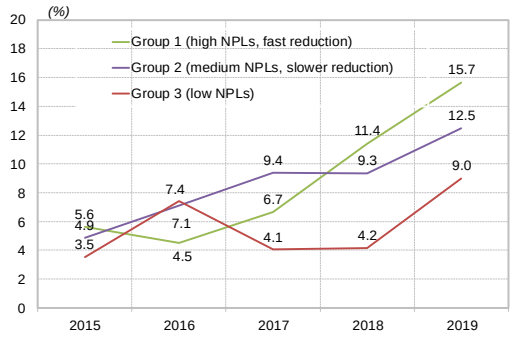


Figure 1.12: Increase in pre-tax ROE at selected groups of banks



Note: The values (NPL ratio, ROE) in both figures are the median for the selected banks in each group.
Source: Bank of Slovenia

The Slovenian banking system was an exception among the EU28 in recording a net release of impairments and provisions in 2018, while its ROE was also above-average. ROE in the Slovenian banking system stood at 10.7% in 2018 (according to the ECB's consolidated banking data), and exceeded the EU28 euro area median of 8.2%, and also the euro area average (5.7%) and the EU28 average (5.9%). The simulated ROE, which excludes the impact of the net release of impairments and provisions and takes account of the long-term average of impairments and provisions to gross income, would be less than half of the observed values in 2018 and 2019.

[4] As stated in previous issues of the Financial Stability Review, banks in Slovenia disposed of 23% of their gross income on impairment and provisioning costs on average between 1996 and 2018. This calculation excludes 2012, 2013, and 2014, when impairment and provisioning costs were far above average, and 2017 and 2018, when the banks recorded a net release of impairments and provisions.
[5] See also the section entitled *Resilience to credit risk*.

Figure 1.13: Comparison of observed and simulated bank profitability

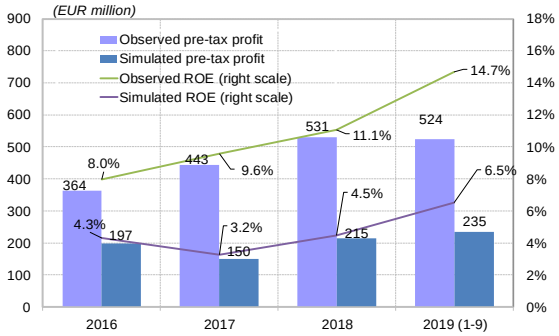
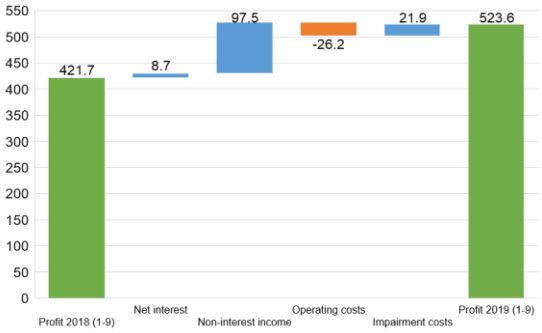


Figure 1.14: Pre-tax profit and impact of changes in components of generation and disposal of gross income



Source: Bank of Slovenia

Figure 1.15: Ratio of impairment and provisioning costs to total assets across EU28, 2018

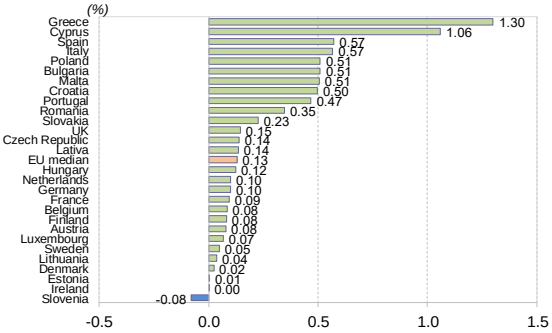
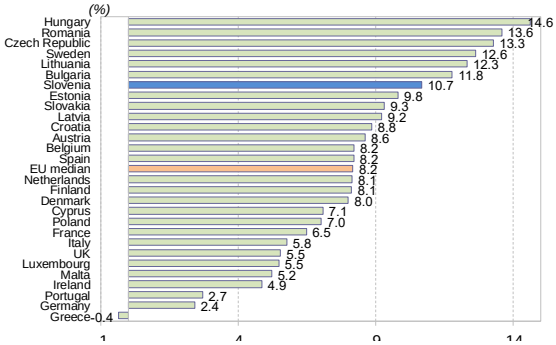


Figure 1.16: ROE across EU28, 2018



Note: Negative values in the left figure represent the net release of impairments and provisions. In light of the data source (ECB SDW consolidated banking data), the values for Slovenia in the two figures differ slightly from those based on the banks' balance sheet figures on an individual basis.
Source: ECB (SDW [consolidated banking data])

1.2 Risks inherent in the real estate market

Amid high growth in residential real estate prices, the risks to the banking system inherent in the real estate market remain elevated, with a trend of decline, given the gradual slowdown in price growth in the first half of year 2019. Another factor of the elevated risk is the uncertainty surrounding the future trajectory of residential real estate prices and rents as economic growth slows. The indicators of real estate valuations did not suggest any overvaluation of residential real estate prices in the first half of the year; prices are in fact close to the level suggested by fundamentals. In the event of a reversal in the economic cycle, risk regarding the realisation of numerous construction projects in progress could increase and consequently the viability of the financial structures employed by investors. In the event of a downturn in the labour market, uncertainty could also come from a decline in households' debt servicing capacity. The commercial real estate market remains sluggish: prices did not rise in the first half of 2019, and the number of transactions remained low.

Residential real estate market

As the economy cooled, the surging residential real estate prices seen in the two previous years slowed in the first half of 2019. The resurgence in the real estate market peaked in 2017 and 2018, when prices rose by 10.0% and 9.1% respectively. Year-on-year price growth had slowed to 5.8% by the second quarter of 2019. Prices of new-build residential real estate fell by 13.5% in year-on-year terms, although volatility remained high amid shortages and low sales numbers. Growth in prices of used residential real estate is also gradually slowing, but remains relatively high at 8.3%. Residential real estate prices in the second quarter of 2019 were at the same level as 2008 in nominal terms, but are down 11.5% in real terms on their peak. Developments in residential real estate prices in previous years were strongly dependent on economic growth, and as the economy slows the real estate market can also be expected to cool.

Figure 1.17: Residential real estate prices

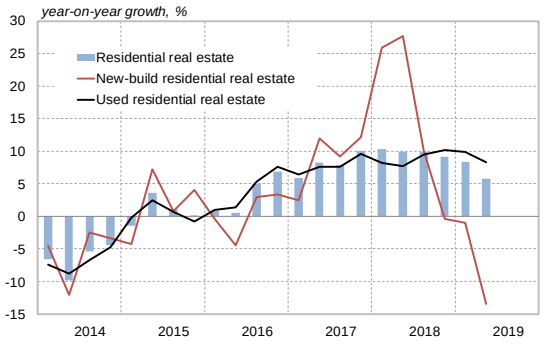
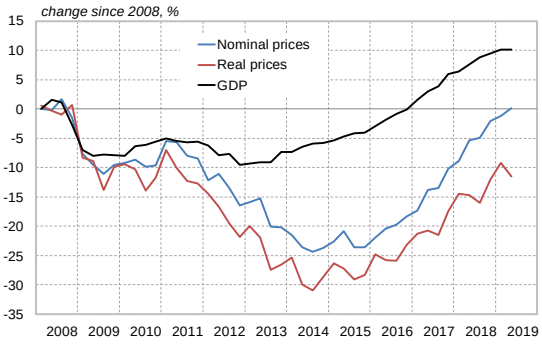


Figure 1.18: Change in nominal and real residential real estate prices, and GDP



Note: The GDP figures in the right figure are seasonally adjusted.
Sources: SORS, Eurostat

Growth in residential real estate prices in Slovenia is converging on the euro area average. With the exception of Italy, all euro area countries saw rises in real estate prices in the first half of 2019, although rates are discernibly slowing as the economic situation weakens. There was considerable variation in price developments from country to country, but Slovenia recorded the most pronounced slowdown in year-on-year price growth in the first half of the year alongside Ireland and Romania, although the rate remained 1.6 percentage points higher than the euro area average in the second quarter of 2019. Favourable loan terms also remain a major factor in the rise in residential real estate prices in the euro area, but the growing impact of the cooling economy, is gradually becoming more evident. Prices of used housing in Slovenia's large towns rose again in the first half of 2019, with the exception of Ljubljana, where prices stagnated following their surges in previous years. Residential real estate prices can be expected to continue rising in the future, albeit at a slower pace. No significant fall can be expected until there is a downturn in the economy and the labour market.

Figure 1.19: Residential real estate prices, international comparison

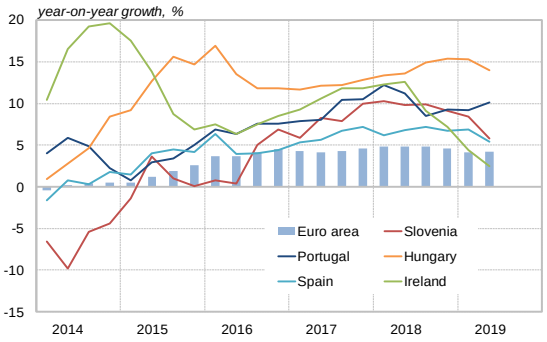
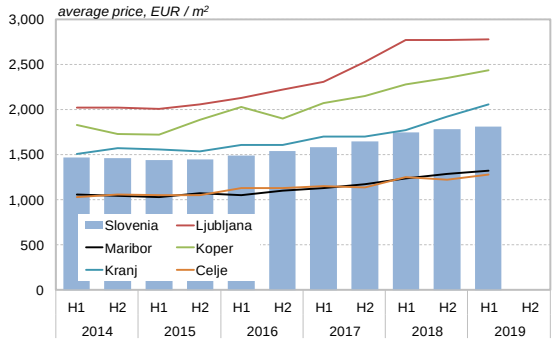


Figure 1.20: Average prices of used flats in major towns in Slovenia



Sources: Eurostat, SMARS

The slowdown in prices on the real estate market is expected to be reflected in a slowdown in growth in rents, which could increase risks for investors. Rents have risen alongside real estate prices since 2015, which additionally encouraged investors to purchase real estate for letting purposes. The growth in tourism and the rise in online rental portals have seen the rental market become an opportunity to generate additional income, particularly in Ljubljana, where the average monthly rent for a two-room flat rose from EUR 690 in 2014 to EUR 920 in 2018. The price-to-rent ratio declined in the first half of 2019 for the first time since the rise in the real estate market began, as real estate prices increased by less than rents. Rents are expected to respond more slowly to the cooling economy, in part because of longer-term tenancy agreements, but a similar slowdown to prices can be expected in the future. Holiday rentals can be expected to respond more quickly to the cooling economy, as terms are shorter and they are more adaptable to the market situation. A possible slowdown in growth in rents could increase the risks to investors who used loans to purchase real estate for the purpose of letting, in the expectation of further growth and a corresponding increase in debt servicing capacity. With the exception of Ljubljana, the rental market throughout Slovenia is poorly developed, mainly on account of a shortage of suitable housing for rent, and partly on account of legal arrangements from the past, which led to high owner-occupancy, and a propensity to ownership on the part of Slovenian households.

Figure 1.21: Rents in selected major towns

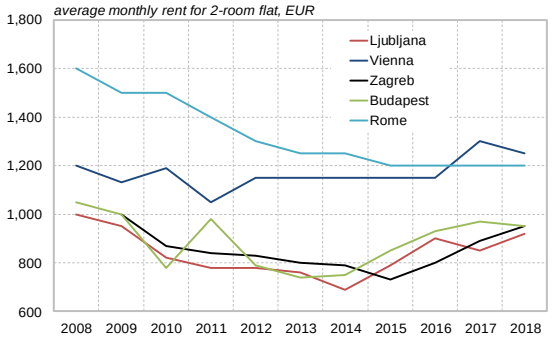
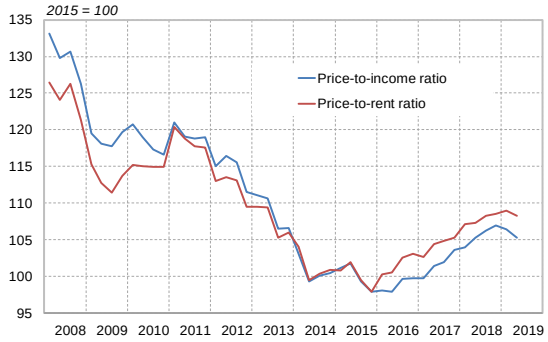


Figure 1.22: Price-to-income and price-to-rent ratios



Sources: Eurostat, SORS

According to overvaluation indicators, residential real estate is not overvalued despite the growth in recent years, and is close to the level suggested by fundamentals. That prices are close to their fundamental levels is suggested by the price-to-income and price-to-rent ratios. A comparison of the number of net annual wages required to purchase housing with its long-term average also shows no suggestion of overvaluation: the ratio stood at its long-term average in the second quarter of 2019. The potential overvaluation of residential real estate is also assessed on the basis of an empirical model,[6] which shows prices not to be out of line with fundamentals.

Figure 1.23: Ratio of housing prices to wages in Slovenia compared with long-term average

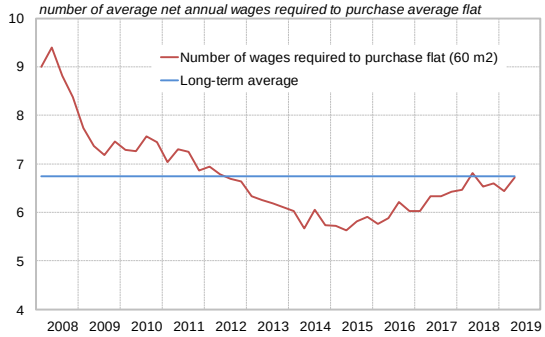
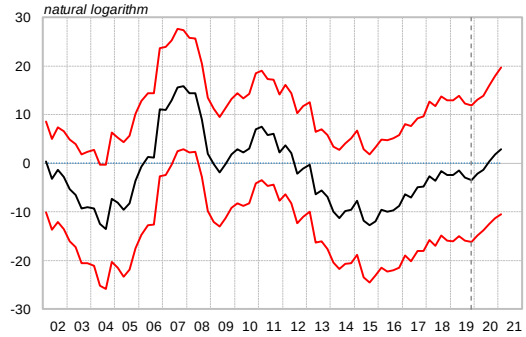


Figure 1.24: Estimated gap with fundamentals, and unconditional eight-quarter forecast



Notes: The y-axis in the right figure illustrates the difference between the natural logarithm of actual prices and estimated fundamental prices. The black line is the mean estimate of the temporary element of residential real estate prices, while the red lines illustrate confidence intervals of one standard deviation. The grey line denotes the second quarter of 2019, and the eight-quarter forecasts begin in the third quarter of 2019.
Sources: Bank of Slovenia calculations, SMARS, SORS

Supply and demand

The number of housing units sold is gradually falling, but the transaction volume remains high in value terms. The number of housing units sold peaked in 2017 (at 14,865), before falling in 2018 (to 13,154) and the first half of 2019 (to 6,748) in line with the slowdown in prices. The number of units of used housing sold remains relatively high, while there was a sharp fall in the number of new-build units owing to a shortage on the market. When the supply of new-build residential real estate increases, sales of this type of real estate can also be expected to increase, although this will also depend on investors setting realistic terms of sale.

[6] The model is presented in detail in the thematic section of the June 2019 Financial Stability Review.

Figure 1.25: Number of sales of residential real estate

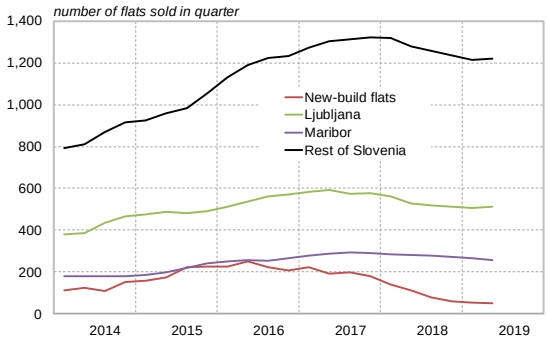
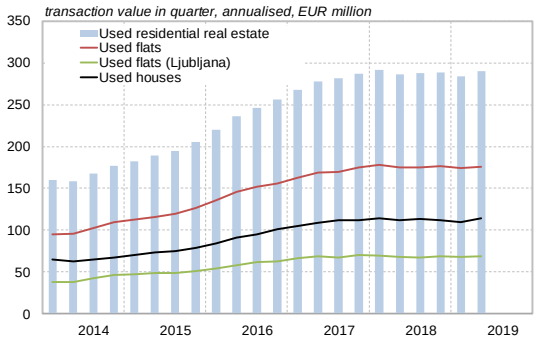


Figure 1.26: Transaction volume in residential real estate



Source: SORS

Demand for residential real estate is gradually slowing. Since the second half of 2018 this has been reflected in falling sales (which is also dependent on supply), and in the results of the BLS.[7] As the economy cools, consumers become more pessimistic with regard to the future economic situation in Slovenia and their own financial position, which can increase uncertainty and lead to reduced demand for real estate. According to the BLS, in which banks are asked about developments in demand for residential real estate, demand fell slightly in 2019, and the main factor was borrowers' concerns over the outlook for the housing market. Demand for real estate is also slowing because of diminishing affordability; real estate prices are still rising faster than disposable income, although the slowdown in prices means that housing affordability is diminishing more slowly.

Despite growth, the supply of housing has not yet matched demand, and there remain risks surrounding the realisation of announced projects and their financial structure. Construction confidence indicators remain relatively high despite a decline, and this is evident in the ongoing increase in the amount of construction put in place. In previous years it was mainly the amount of construction put in place for residential buildings that recorded a sharp increase, and it has remained high in 2019. Construction costs are also rising sharply, which is indicative of construction activity remaining high, although in the wake of the slowdown in the real estate market the number of issued building permits for residential buildings is falling in 2019. As far as new-build real estate is concerned, the impact on the real estate market will primarily depend on realisation and affordability, i.e. on the actual execution of projects, and whether vendors' price expectations are realistic, particularly for housing in higher price brackets. Should investors' selling prices prove too high, whether because of unrealistic expectations or because of high costs, much new-build housing could remain on the market unsold, similarly to the last crisis.

Figure 1.27: Consumer confidence

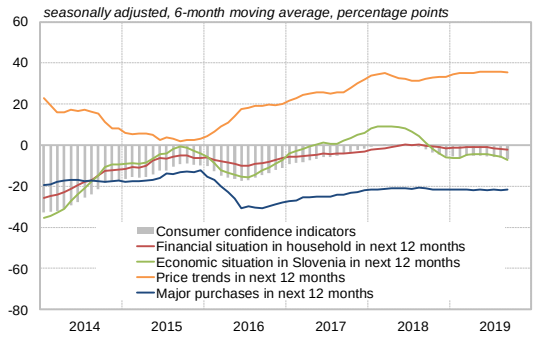
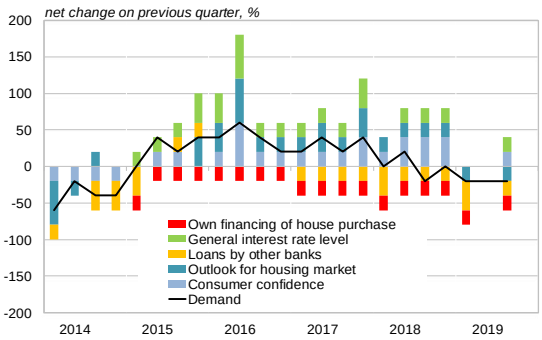


Figure 1.28: Demand for housing loans and demand factors



Note: The data in the right figure illustrates the net percentage change on the previous quarter. A positive net change indicates that the factor is increasing demand, while a negative net change indicates that the factor is reducing demand.
Sources: SORS, Bank of Slovenia (ECB SDW)

[7] Bank Lending Survey.

Figure 1.29: Business trends in construction

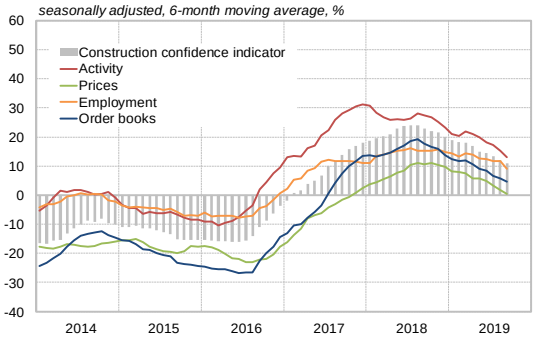
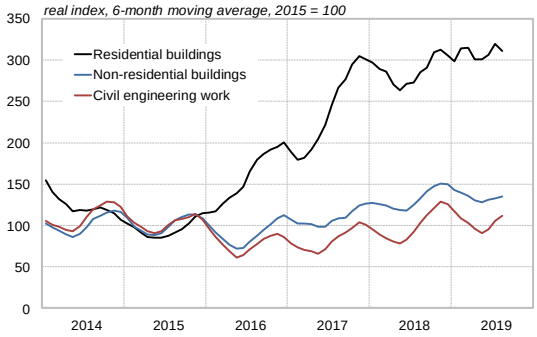


Figure 1.30: Amount of construction put in place



Source: SORS

The cooling economy will also have an impact on the real estate market, particularly in the sense of increasing uncertainty with regard to future developments in prices and in the sale of new-build real estate. Economic growth in Slovenia is forecast to be lower in the next few years than in the last three years, which could also have an impact on the labour market. Any downturn in the labour market would reduce buyers' ability to pay, making sales of new-build residential real estate more uncertain. Uncertainty in the economy could also be reflected in creditworthy demand. In the event of a sharper reversal in prices on the real estate market or on the labour market, banks could seen an increase in credit risk.

Credit standards for housing loans

The level of deviations from the Bank of Slovenia's recommended caps on LTV[8] and DSTI[9] has been high in recent years, thereby increasing the probability of default by households in the event of a downturn on the labour market. The DSTI is particularly important to mitigating the adverse consequences; it has not been reduced over the years, and the level of deviations from the Bank of Slovenia's recommendations has not fallen either. An economic downturn could increase the loan servicing burden, and therefore the Bank of Slovenia modified the macroprudential recommendation for a cap on DSTI into a binding macroprudential instrument. The reasons for the introduction of binding instruments are presented in detail in a box in the *Credit risk* section, while the instruments are described in the *Macroprudential instruments* section.

Figure 1.31: Distribution of DSTI

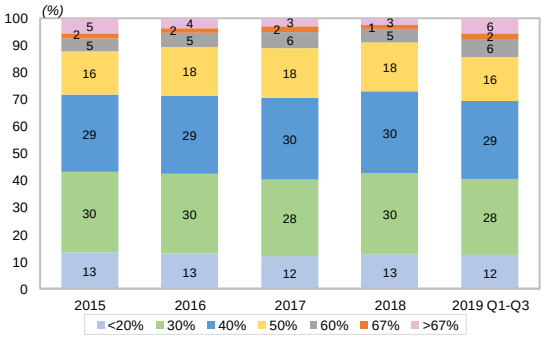
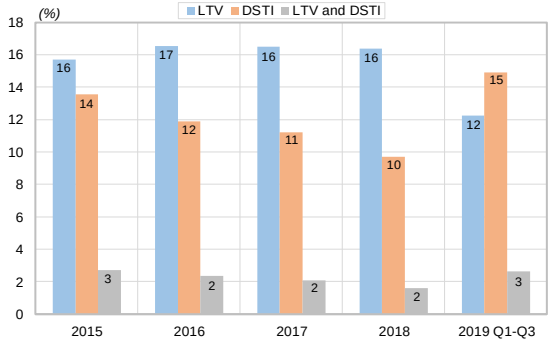


Figure 1.32: Level of deviations from [10]the LTV[11] and DSTI recommendations at system level



Source: Bank of Slovenia

Note: The right figure uses survey data for the period of 2015 to 2018, and for 2019 uses data from ordinary reporting, which partly explains the change in level of deviations between the two periods.

[8] The loan-to-value is the ratio of the value of a housing loan to the value of the residential real estate pledged as collateral.
[9] The debt service-to-income is the ratio of the annual debt servicing costs to the borrower's annual income when the loan agreement is concluded.
[10] The macroprudential instruments of caps on LTV and DSTI for housing loans were in force as a recommendation until 31 October 2019. As of 1 November 2019 the cap on LTV has remained a recommendation, while cap on DSTI has been modified into a binding instrument. For more, see the *Macroprudential instruments* section.
[11] Deviations in LTV are illustrated with regard to all new loans, whether subject to a cap on LTV or not.

1.3 Macroeconomic risk

Global economic growth has been slowing this year, with weaker growth also seen in the euro area and in Slovenia's major economic partners. The main factors in the slowdown in economic growth are the decline in global trade caused by protectionist measures, and the uncertainty surrounding Brexit. The increased uncertainty in the international environment is already being reflected in weaker growth in the Slovenian economy, where growth slowed to 2.3% in the third quarter. Given the increased risks inherent in the international environment, the macroeconomic risk to the banking system is assessed as moderate.

The economic growth forecasts for Slovenia and the euro area as a whole have been reduced for this year, and the confidence indicators suggest that the slowdown in growth will continue. A slowdown could entail an increase in the risks to the Slovenian banking system, particularly on account of uncertainty in the volume of lending, and could consequently impact profitability, while credit risk could increase in the wake of a further deterioration in the economic situation. The macroeconomic indicators in Slovenia remain good, as the labour market remains buoyant and developments in the public finances remain favourable, with falling debt. The exposure of the Slovenian economy and financial system to the UK is relatively low, and is diminishing. Despite strengthening consistently until August, average inflation in Slovenia over the first eleven months of the year was down slightly on the previous year, but after a gap of several years it is again significantly higher than inflation in the euro area overall, where there was a considerable fall over the same period.

International environment

Growth in global economic activity continued to slow in the first half of 2019, thus increasing the risk inherent in the international environment. According to IMF figures, global economic growth stood at 3.6% in 2018, down slightly on the previous year, while its forecast for 2019 stood at 3.0%, down significantly on the previous projections. The slowdown was largely attributable to rising trade and geopolitical tensions, which via increased uncertainty led to a decline in confidence and investment, and reduced growth in global trade. International institutions are forecasting a further slowdown in economic growth for major global economies in 2019. Growth will also be weaker in the euro area, where numerous local risks are still present alongside the adverse global influences. Having slowed to 1.9% in 2018, the European Commission forecast the economic growth in the euro area in 2019 and 2020 at 1.1% and 1.2%, respectively.

The main factors in the slowdown in economic growth in the euro area are the decline in global trade and the uncertainty surrounding Brexit. The slowdown in the trade of goods will also be reflected indirectly in Europe as the protectionist measures of major global economies take effect via constraints such as the imposition of tariffs by the US on goods from the EU, and retaliatory measures by the EU. There is still uncertainty surrounding Brexit, despite some progress on a deal between London and Brussels.

Tabela 1.1: European Commission forecasts of selected macroeconomic indicators for Slovenia's main trading partners

(%)	Real GDP growth				Unemployment rate				Inflation				Government position /			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
EU	2.0	1.4	1.4	1.4	6.8	6.3	6.2	6.2	1.9	1.5	1.5	1.7	-0.7	-0.9	-1.1	-1.2
Euro area	1.9	1.1	1.2	1.2	8.2	7.6	7.4	7.3	1.8	1.2	1.2	1.3	-0.5	-0.8	-0.9	-1.0
Germany	1.5	0.4	1.0	1.0	3.4	3.2	3.4	3.5	1.9	1.3	1.2	1.4	1.9	1.2	0.6	0.2
Italy	0.8	0.1	0.4	0.7	10.0	10.0	10.0	10.0	1.2	0.6	0.8	1.1	-2.2	-2.2	-2.3	-2.7
Austria	2.4	1.5	1.4	1.4	4.9	4.6	4.6	4.6	2.1	1.5	1.6	1.6	0.2	0.4	0.2	0.4
France	1.7	1.3	1.3	1.2	9.1	8.5	8.2	8.0	2.1	1.3	1.3	1.3	-2.5	-3.1	-2.2	-2.2
Croatia	2.6	2.9	2.6	2.4	8.4	6.9	5.8	4.9	1.6	0.9	1.4	1.5	0.3	0.1	0.0	0.0
Slovenia	4.1	2.6	2.7	2.7	5.1	4.4	4.2	4.2	1.9	1.8	1.9	2.0	0.8	0.5	0.5	0.6

Note: The grey area signifies European Commission forecasts.
Source: European Commission, autumn forecasts.

The sharp slowdown in economic growth in Slovenia's largest trading partners is already being reflected in weaker growth in the Slovenian economy. Economic growth remained weak in Slovenia's most important trading partners in the first half of 2019, and confidence indicators also declined in the euro area. There was a sharp decline in economic growth in Germany, Slovenia's most important trading partner, in 2018, and growth remained weak in the first half of 2019. Meanwhile Italy saw insignificant economic growth in the first half of 2019. A further slowdown in growth in Slovenia's major trading partners could be reflected in the banking system, via weaker growth in the Slovenian economy, as additional pressure on

corporate credit growth, which is already modest. It could result in an increase in income risk and, in the wake of a further downturn in the economic situation, also in credit risk.

Figure 1.33: GDP in major global economies, and forecasts for 2019 and 2020

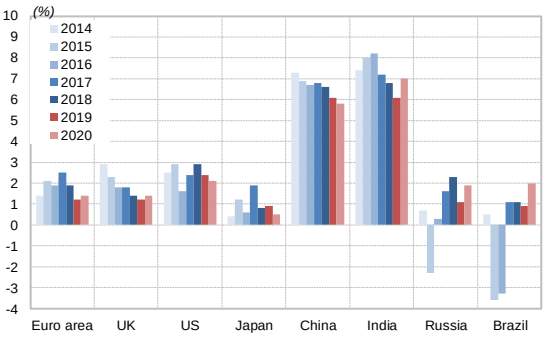
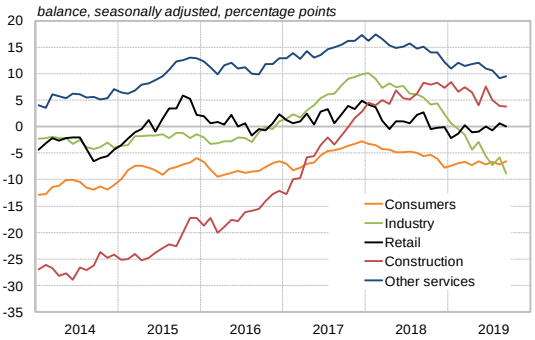


Figure 1.34: Confidence indicators in the euro area



Note: The figures for 2019 and 2020 in the left figure are forecasts. The confidence indicators are expressed in the form of the average balance, which is the difference between the proportions of positive answers and negative answers.
Sources: IMF, European Commission

The confidence indicators for the euro area suggest that growth will remain slow. Amid the rising uncertainty in global trade, and weak foreign demand, confidence in industry continued to decline sharply over the first three quarters of 2019. There was an adverse impact from the increased uncertainty in economic policy, which entails the ongoing risk of weaker growth. There was also a sharp decline in the surveyed PMI for industry over the same period, which reflects falling expectations of new orders, and falling output and employment in industry. The decline in services confidence also continued, while retail confidence and consumer confidence remained broadly unchanged from the end of the previous year. After increasing for several years, construction confidence has declined slightly since the beginning of the year.

Figure 1.35: Index of economic policy uncertainty

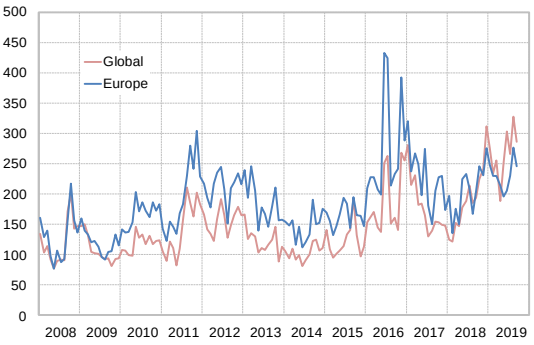
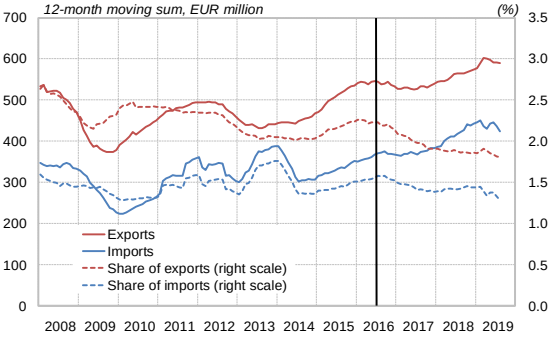


Figure 1.36: Trade of goods between Slovenia and the UK



Note: The index of economic policy uncertainty is made up of three components. One component quantifies newspaper coverage of policy-related economic uncertainty. A second component reflects the number of federal tax code provisions set to expire in future years. The third component uses disagreement among economic forecasters as a proxy for uncertainty. (for more on the methodology, see Measuring Economic Policy Uncertainty). The vertical black line in the right figure represents the month of the referendum on the UK's membership of the EU (June 2016). The dotted lines in the right figure represent the share of Slovenia's total imports or exports.
Sources: Economic Policy Uncertainty, Eurostat

The exposure of the Slovenian economy and financial system to the UK is diminishing. Despite growth in trade of goods between the two countries in previous years, the UK's share of Slovenia's total exports has been gradually declining since its referendum decision to leave the EU in 2016. The share of Slovenia's exports accounted for by the UK had declined to 1.8% by August of this year, while its share of imports had declined to 1.3%. The Slovenian financial system's exposure to debt securities issued in the UK had declined to EUR 386 million by September 2019, of which the banks accounted for EUR 156 million. Exposure to the UK accounts for 3.5% of the Slovenian financial system's total exposure to foreign debt securities. The direct adverse impact of Brexit remains minor, though there are more significant indirect effects that could be felt by the Slovenian economy and banking system via its largest trading partners.

Figure 1.37: Inflation (HICP)

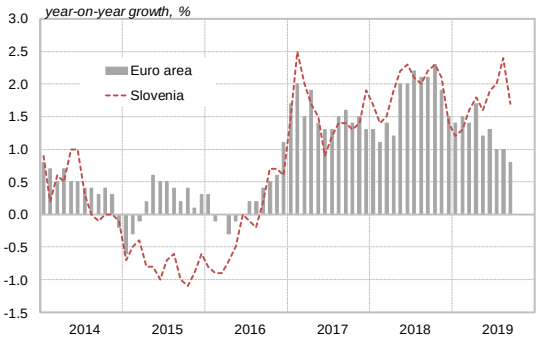
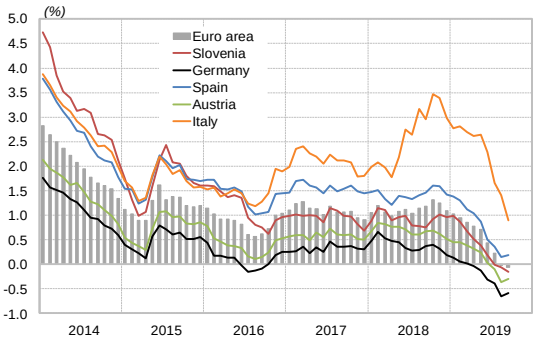


Figure 1.38: Required yield on 10-year government bonds



Source: Eurostat

Inflation as measured by the HICP strengthened in Slovenia over the first eight months of the year, reaching 2.1% in the third quarter, its highest rate of the last year, before slowing again to 1.4% in November. After several years, the gap with the euro area average widened again in the second and third quarters, exceeding 1 percentage point in the third quarter. While price developments in 2018 were strongly shaped by external factors, including movements in energy prices, since the beginning of 2019 inflation has primarily been driven by changes in its domestic components. There has been a year-on-year rise in food prices since the beginning of the year; service price inflation has increased as well. Consumer expectations of future inflation remain similar to the beginning of the year, while firms' expectations have declined.

The required yield on government bonds has fallen sharply since the beginning of 2019 in the majority of euro area countries. The fall was particularly pronounced in Italy, despite its economic and domestic political difficulties, while in many countries the required yields have fallen into negative territory. Major contributing factors were the ECB's forward guidance for the maintenance of low interest rates over the long term, and the upcoming new stimulus measures. The ECB trimmed the deposit facility rate by 10 basis points to -0.50%, and in November resumed net purchases under the asset purchase programme at a monthly volume of EUR 20 billion.

Economic situation in Slovenia

The increased uncertainty in the international environment is also being increasingly reflected in weaker economic growth in Slovenia, which slowed but remains above the euro area average. After slowing to 4.1% in 2018, economic growth declined further over the first three quarters of 2019, reaching 2.3% in the third quarter. The economic sentiment and confidence indicators in all sectors are also declining, most notably consumer confidence and manufacturing confidence. Amid the buoyant labour market and the growth in wages and social transfers, growth in household consumption remains robust, but the slowdown in economic growth is increasingly being reflected in weaker growth in gross fixed capital formation. With the exception of the third quarter, there was stronger growth in construction investment, but growth in investment in machinery and equipment slowed, primarily on account of low foreign demand. Economic growth in Slovenia over the first three quarters of 2019 approached its long-term average (2.7%), but remains significantly above the euro area average (by 1.5 percentage points in the second quarter of 2019). According to forecasts by domestic and international institutions, economic growth will approach 3% this year, and will remain at similar levels for the next two years.

Figure 1.39: GDP growth and contributions to GDP growth

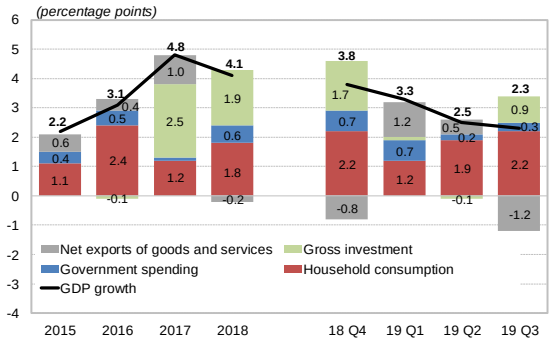
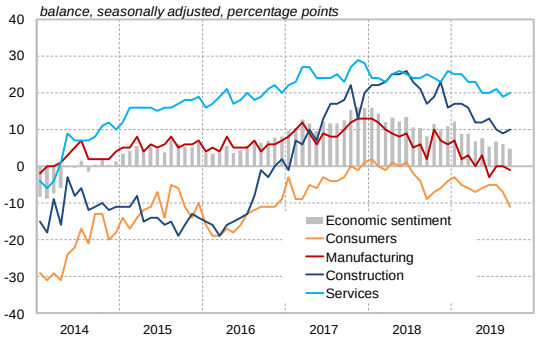


Figure 1.40: Confidence indicators and economic sentiment indicator



Note: The confidence indicators are expressed in the form of the average balance, which is the difference between the proportions of positive answers and negative answers.
Source: SORS

The slowdown in economic growth could entail new challenges for the Slovenian banking system, particularly in terms of changes in approaches to corporate financing and the uncertainty of developments in household loans. Numerous firms have changed their financing models in recent years, particularly in the sense of increasing the use of equity and reducing debt financing. Growth in lending activity consequently remained relatively modest, despite the favourable loan terms and expansion in turnover in the favourable economic conditions. The increasing use of internal resources to finance current operations and investment has been enabled by high corporate profits, which could fall in the wake of a further slowdown in economic growth. This could lead to greater corporate demand for bank loans, although turnover will also be a major factor in credit demand. Developments in household loans will also be more uncertain in the future; the banks have focused on this segment amid the lack of demand from firms, but the slowdown in economic growth will also gradually be reflected on the labour market, which could affect household borrowing capacity.

Figure 1.41: Saving and investment

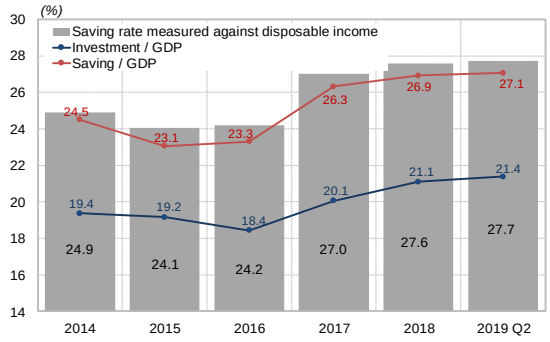
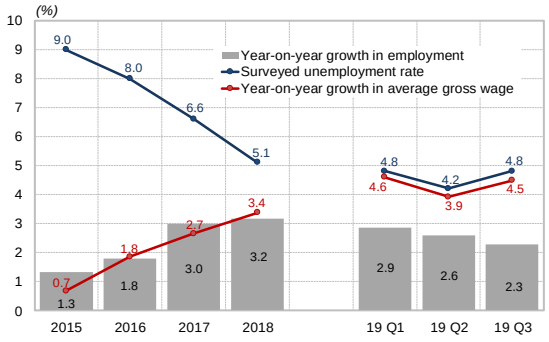


Figure 1.42: Employment, unemployment rate and gross wages



Source: SORS

The labour market remains strong, keeping the risks to the banking system moderate and not increasing, although there is uncertainty surrounding the future situation. The surveyed unemployment rate stood at 4.8% in the third quarter of 2019, close to its low of 4.1% in the third quarter of 2008. Despite the slowdown, employment growth remains high, and increased in all segments of the private sector, most notably in construction. Survey indicators of employment expectations remain favourable, but are slacking, most notably in manufacturing; this trend can be expected to continue as full employment is approached. Year-on-year growth in the average gross wage strengthened slightly over the first nine months of 2019, which has had a favourable impact on household disposable income, and consequently on private consumption. The slowdown in economic growth could lead to a fall in employment in the future, thereby increasing the risks to the banking system.

Figure 1.43: Public finances

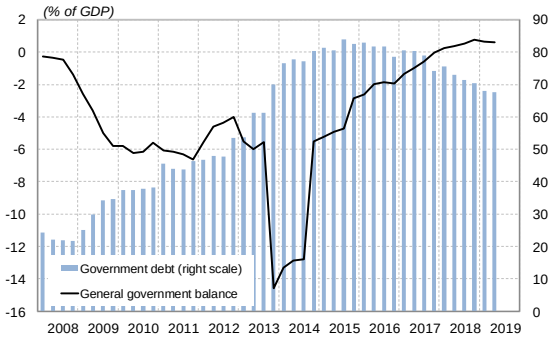
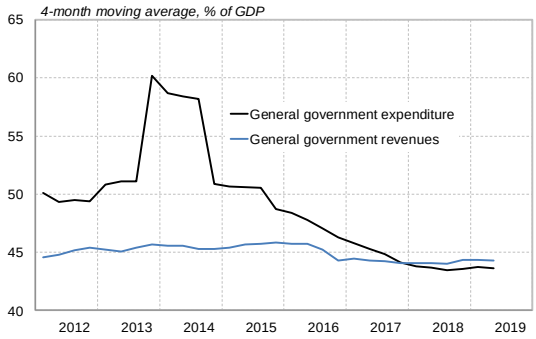


Figure 1.44: General government revenues and expenditure



Source: SORS

Public finances are improving, with a general government surplus and a decline in public debt, which is also being reflected in upgrades in Slovenia's sovereign credit ratings. Three major rating agencies upgraded their ratings for Slovenia in 2019, citing the successful consolidation of public finances as the main argument in doing so. The general government debt had fallen to 67.7% of GDP by the end of June 2019, and a further decline is expected in the second half of the year. According to the Ministry of Finance forecasts, the general government sector is expected to record a surplus of 0.8% of GDP this year, as both general government revenues and expenditure rise. The rise in revenues is being driven by social security contributions, tax revenue and a higher pace of funding from the EU, while the rise in expenditure is manly attributable to employee compensation and social security benefits. Expenditure on interest is continuing to decline. The upgrades to Slovenia's sovereign credit ratings are thus attributable to the relatively high economic growth, the strong balance of payments position, the strengthening and stability of the banking sector, and the buoyant labour market.

Tabela 1.2: Slovenia's sovereign credit ratings at the major rating agencies

Agency	Rating	Outlook	Last change
Standard and Poor's	AA-	stable	June 2019
Moody's	Baa1	positive	April 2019
Fitch Ratings	A	stable	July 2019

Source: Ministry of Finance

1.4 Funding risk

The banks are continuing to finance themselves primarily through deposits by the non-banking sector. The high growth in sight deposits and growth in long-term loans are increasing the maturity mismatch between assets and liabilities, which is introducing risk to the funding stability of the banking system and individual banks in the event of major withdrawals of deposits from the system or large-scale switching of assets between banks. We estimate that funding risk is moderate, and the likelihood of its realisation in the upcoming short-term period is low, given the still-favourable economic environment and the banks' regular adjustments to the market situation. The low dependence on wholesale funding means that the banks are also less exposed to potential adverse influences from the external environment.

Bank funding

The banks are primarily funding their investment activity via deposits by the non-banking sector, while their dependence on other funding is low. Growth in deposits by the non-banking sector was relatively high and stable over the first nine months of 2019, the year-on-year rate averaging 6.3%. While the increase in deposits by the non-banking sector in 2018 was almost double the increase in loans to the non-banking sector, the increase in loans over the first nine months of 2019 slightly exceeded the increase in deposits by the non-banking sector. The increased growth in loans to the non-banking sector brought an end to the decline in LTD, which could give rise to a need to set a cap on the ratio. A low LTD is indicative of the banks' low dependence on funding on the wholesale markets. The banks also paid down debt to banks in the rest of the world in 2019, while only two banks obtained funding via the issuance of debt securities.

Figure 1.45: Structure of bank funding

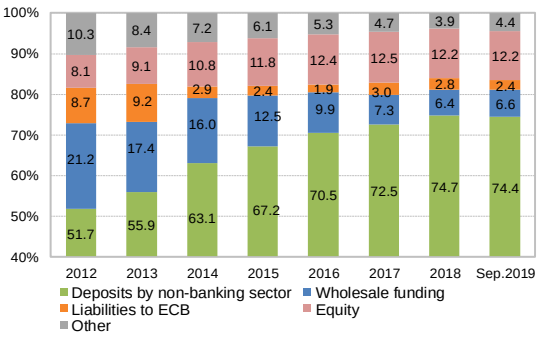
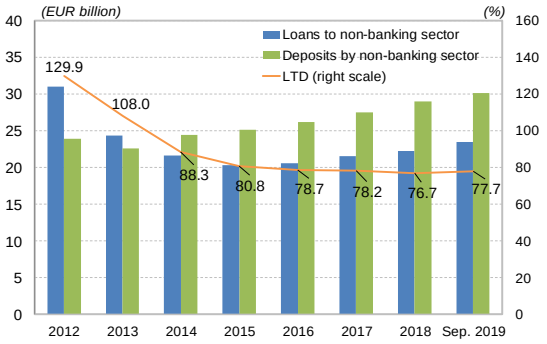


Figure 1.46: LTD ratio for non-banking sector



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

Household deposits are the most important source of funding for Slovenian banks, accounting for 49% of the balance sheet total. Year-on-year growth in deposits by the non-banking sector has been strengthening since 2014, and reached 7.8% in September 2019. Unemployment is low, growth in the wage bill is outpacing growth in private consumption, and the financial position of households is thus improving, which lays the foundation for increased saving. This year's increase in bank deposits is also partly attributable to the higher payments of annual leave allowance as a result of a tax break on this benefit. The continual rise in household deposits at banks shows that households are prioritising security over returns when it comes to managing their savings, because the return on fixed-term deposits at banks remains extremely low. Alongside household deposits, corporate deposits also remain an important source of funding, although growth in corporate deposits has slowed in the last 12 months. Corporates held assets of almost EUR 6.8 billion at banks in September 2019, when the year-on-year rate of growth stood at 6.1%.

Figure 1.47: Growth in deposits by sector

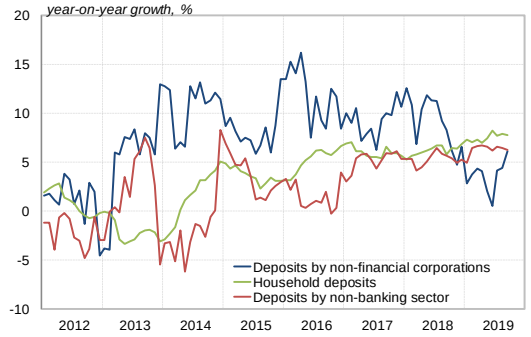
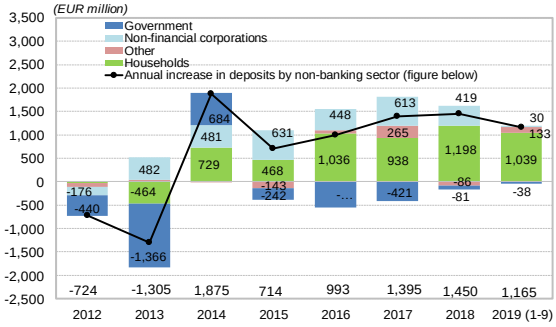


Figure 1.48: Increase in deposits by sector



Source: Bank of Slovenia

Maturity gap between assets and liabilities

Low interest rates on deposits are deterring savers from fixing deposits at banks, which means that it is primarily sight deposits that are increasing. The proportion of sight deposits had increased to 74% of total deposits by the non-banking sector and 77% of total household deposits by September 2019. Short-term deposits by households have been recording positive year-on-year growth since the second half of 2018, although their increase is minimal compared with sight deposits. Interest rates on new short-term deposits by households remain extremely low, and below the euro area average. The only slight exception are interest rates on deposits of 3 to 6 months, where higher rates are available at individual banks. Italy stands out among the neighbouring euro area countries with slightly higher deposit rates, and is mainly able to attract deposits from Slovenian nationals living in border regions. The recent cut in the ECB's key interest rate (to -0.50%) suggests that the low interest rate environment will persist for some time yet, and the increase in deposits by the non-banking sector is therefore expected to come mostly from sight deposits in the future.

Figure 1.49: Stock of deposits by the non-banking sector by residual maturity

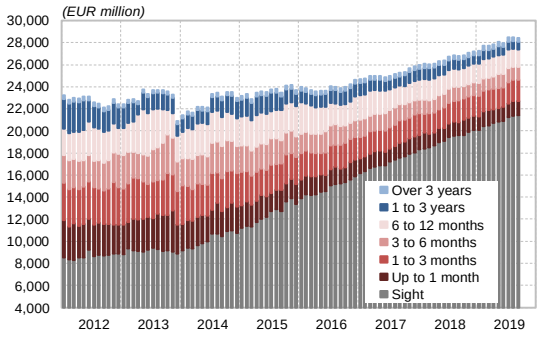
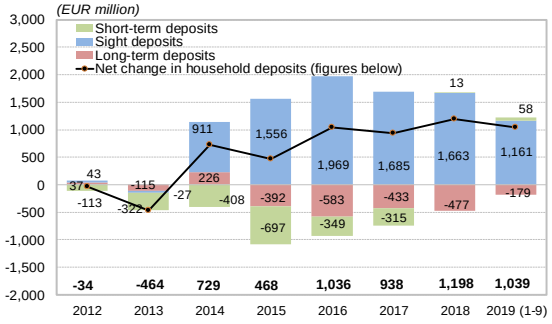


Figure 1.50: Change in stock of household deposits by maturity



Source: Bank of Slovenia

Figure 1.51: Interest rates on household deposits of up to 1 year

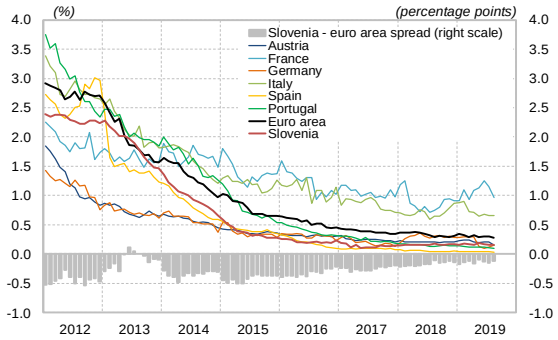
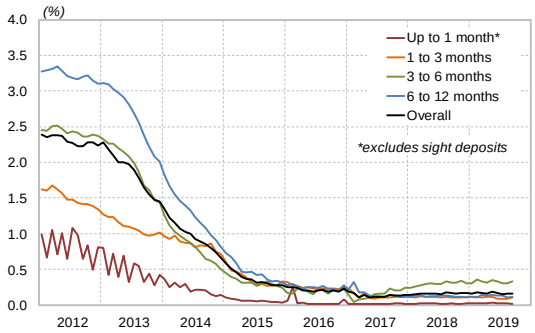


Figure 1.52: Interest rates on new short-term household deposits



Source: Bank of Slovenia

The maturity gap between assets and liabilities remains a potential source of funding instability in the event of sudden deposit flight from the banking system. The increase in long-term loans and sight deposits is increasing the maturity mismatch between assets and liabilities. Since the beginning of the surge in sight deposits in 2013, the maturity gap has widened by almost 19 months to stand at fully 5 years in September 2019.

Figure 1.53: Net gap between assets and liabilities by residual maturity

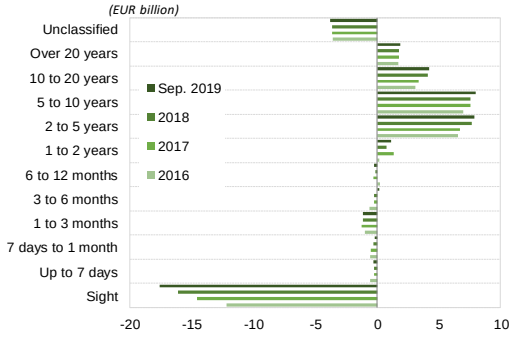
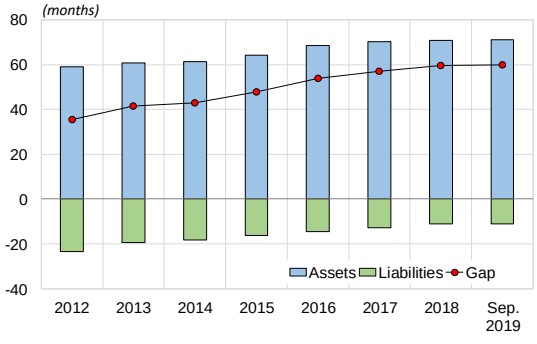


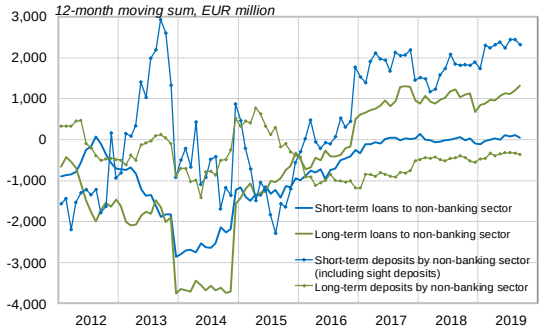
Figure 1.54: Weighted average maturity of assets and liabilities, and maturity gap



Source: Bank of Slovenia

The likelihood of a sudden major withdrawal of deposits from the banking system that would cause instability in the financial system or at individual banks is assessed as low in the upcoming short-term period. Deposit flight could be triggered by an unexpected stress event, which is unlikely given the high profitability of the banking system and the ongoing strength of the economy in Slovenia. The potential introduction of deposit charges for household accounts at certain banks could lead to some switching of savers' assets between banks. In the future the banks' funding stability will depend heavily on their prompt response to market changes and the behaviour of competitor banks.

Figure 1.55: Net increases in deposits by and loans to the non-banking sector by maturity



Note: Loans to the non-banking sector solely include loans at amortised cost.
Source: Bank of Slovenia

1.5 Interest rate risk

Interest rate risk remains moderate in 2019, despite the increase in the share of new loans with a fixed interest rate, the lengthening maturities of said loans and the continuing growth in sight deposits. The average repricing period for asset interest rates remains stable, while the average repricing period for liability interest rates lengthened slightly. There was no significant change in interest rates on individual types of new long-term loan over the first nine months of the year. Overall interest rates remain low.

The average maturity of new long-term fixed-rate loans to the non-banking sector is lengthening. The average maturity of housing loans has lengthened by 0.5 years since the final quarter of 2018, and stood at 18.1 years in the third quarter. This is above its long-term average,[12] but below the peak in 2017, when it got close to the 20-year mark. While the average maturity of consumer loans has been gradually lengthening for several years now, in September it reached its peak of the last few years. Having stood at less than 5 years at the beginning of 2016, it had lengthened to 7.2 years by the third quarter of 2019. Maturities of corporate loans have been subject to great variation from year to year, though the average maturity is lengthening, and reached 8.0 years in the third quarter. In terms of the impact on interest sensitivity, the lengthening maturities of fixed-rate loans are a significant factor. It is therefore important for banks to hedge against such changes appropriately. When it comes to consumer loans, part of this risk will be mitigated by the binding macroprudential instrument, which has capped maturities on consumer loans to 7 years since November of 2019.

Figure 1.56: Average maturities of individual types of new long-term loan

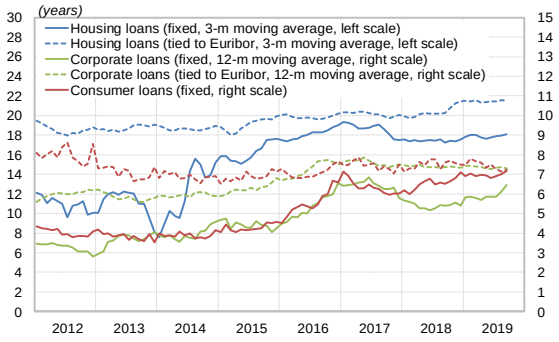
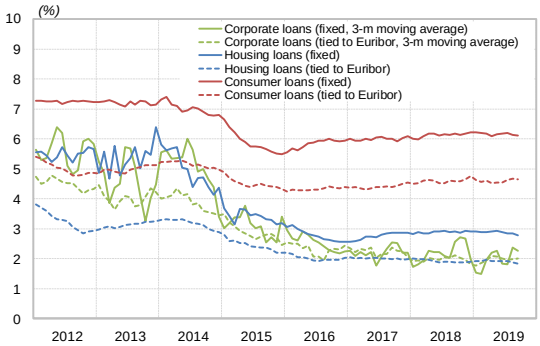


Figure 1.57: Average interest rates on individual types of new long-term loan



Note: In the left figure the maturity of housing loans and corporate loans is calculated as a three-month average and 12-month average, respectively, owing to high variability. In the right figure the interest rate on corporate loans is calculated as a three-month average, owing to high variability.
Source: Bank of Slovenia

There was no significant change in interest rates on individual types of new long-term loan over the first nine months of the year. Overall interest rates remain low. The largest increase was recorded by fixed interest rates on corporate loans, though they are highly volatile, and remain below their long-term average

[12] The long-term average is measured over the entire length of the data series in the figures (January 2012 to September 2019).

even after the latest rise. The spreads between fixed and variable interest rates on individual types of loan have remained unchanged. Owing to their high variability, interest rates on corporate loans are most subject to changes in the spreads, though they nevertheless remain small in multi-month averages. In the third quarter fixed-rate consumer loans were, on average, 1.5 percentage points more expensive than variable-rate loans. Meanwhile the spreads on housing loans and corporate loans were 1.0 and 0.3 percentage points, respectively.[13]

Recent years saw an increase in new fixed-rate loans of longer maturities. In the household segment, this increase was seen in both consumer loans and housing loans. The growth in loans of this type in previous years also shifted the breakdown between fixed-rate and variable-rate loans. The share of loans to the non-banking sector accounted for by fixed-rate loans has gradually but continually increased since 2015.

Figure 1.58: New fixed-rate housing loans by maturity

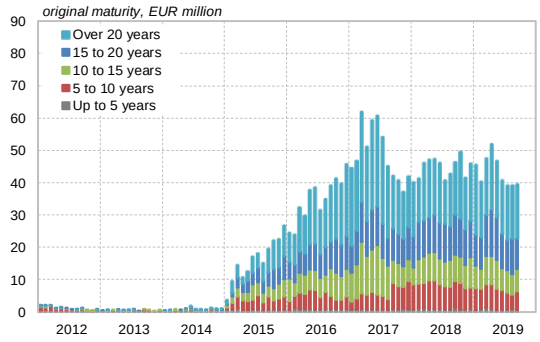
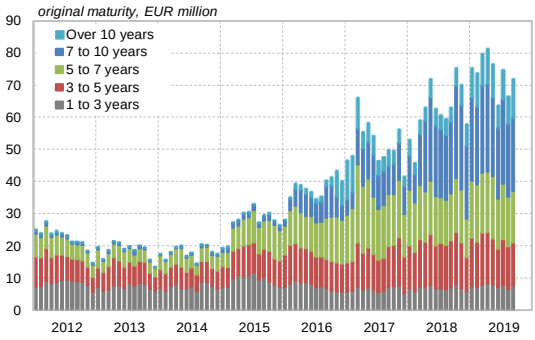


Figure 1.59: New fixed-rate consumer loans by maturity



Source: Bank of Slovenia

The share of new loans to the non-banking sector with a fixed interest rate during the first nine months of 2019 was higher than in the same period last year. While the share of fixed-rate loans has been gradually declining this year for new housing loans, the figures for consumer loans and corporate loans have continued to rise. Fixed-rate loans accounted for 46.6% of new housing loans during the first nine months of 2019, which brought an increase in the share of the stock they account for. The share of the total stock of consumer loans accounted for by fixed-rate loans also increased. Fixed-rate loans accounted for 70.8% of new consumer loans during the first nine months of the year. Despite the increase in the share of fixed-rate corporate loans, the share of total stock they account for is only increasing slowly. Because the increase in the share of fixed-rate loans is one of the major factors in the lengthening of the average repricing period for asset interest rates, it is important, in terms of interest sensitivity, that banks use appropriate instruments to hedge against such changes.

Figure 1.60: Share of fixed-rate loans for individual types of new loan

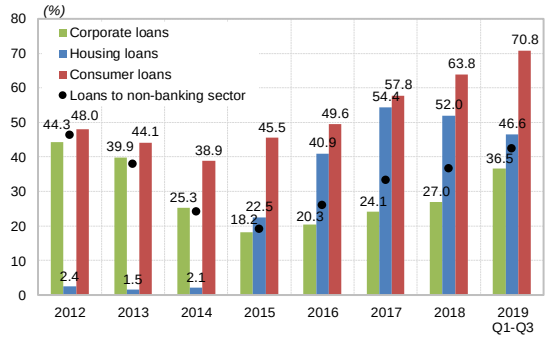
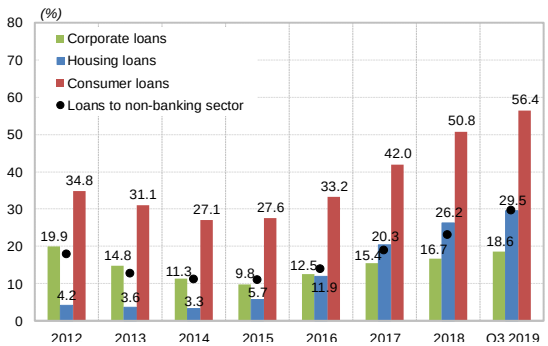


Figure 1.61: Share of fixed-rate loans for individual types of loan stock



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.

Source: Bank of Slovenia

[13] The spreads between fixed and variable interest rates are similar across individual maturities, i.e. the variability in spreads across individual maturities is small.

Figure 1.62: Average repricing period by loan type

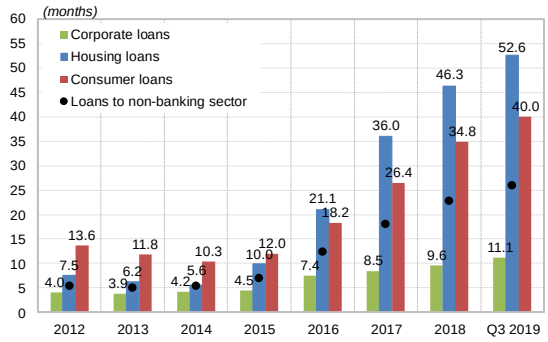
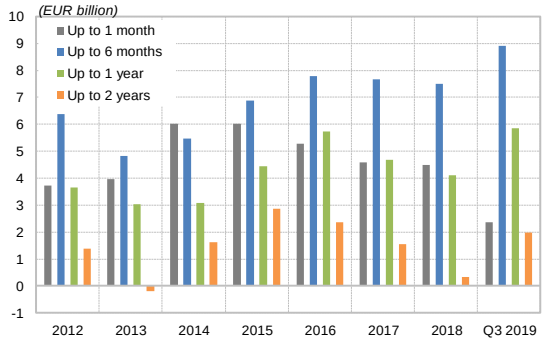


Figure 1.63: Cumulative repricing gap



Note: The cumulative repricing gap in the right figure takes account of the stability of sight deposits by allocating the core part of sight deposits across maturity buckets. In the cumulative repricing gap of up to 1 month the share of sight deposits whose interest rate changes after one month is 87%, in the gap of up to 6 months the share of sight deposits whose interest rate changes after six months is 74%, in the gap of up to 1 year the share of sight deposits whose interest rate changes after one year is 62%, and in the gap of up to 2 years the share of sight deposits whose interest rate changes after two years is 44%.

Source: Bank of Slovenia

In the wake of the increase in the stock and share of fixed-rate loans, the average repricing period of loans is lengthening.[14] The effect is largest with regard to housing loans, where the average repricing period has now closed in at five years. The increase is attributable to the increase in the stock of fixed-rate loans of longer maturities, and to the increase of their share relative to variable-rate loans. It is a similar case with consumer loans, where the average repricing period had exceeded three years by September. The lengthening maturities of fixed-rate consumer loans has been a major factor in the increase in the average repricing period for several consecutive years now, while the share of such loans relative to variable-rate loans has also been increasing for several years. These dynamics in household loans were a major factor in the lengthening of the average repricing period for asset interest rates, which is increasing the banks' interest sensitivity, although the high stability of sight deposits is lengthening the average repricing period for liability interest rates, thereby significantly reducing this sensitivity.

Taking the stability of sight deposits into account, the cumulative repricing gap up to 1 year remained positive in September 2019, having increased since the end of 2018. Because a large share of sight deposits have an effective maturity of more than one year, i.e. their interest rates are repriced in more than a year's time, the cumulative repricing gap in this time horizon is positive. Any rise in market interest rates would have a positive impact on the banks' net interest income over a period of one year.[15] It is a similar case with the cumulative repricing gap up to 2 years, which is smaller, but still positive.

The decline in risk in 2019 was attributable to the lengthening of the average repricing period for liability interest rates, while it remained stable for asset interest rates. Taking account of off-balance-sheet items and amortisation schedules, interest rate hedges and the stability of sight deposits,[16] in September the average repricing period for liability interest rates was longer than that for asset interest rates. The average repricing period for asset interest rates remained stable: taking account of interest rate hedges and amortisation schedules, there was no significant change in the average maturity of the stock of fixed-rate loans, despite the lengthening average maturity of new fixed-rate loans. The rise in the share of fixed-rate loans also did not result in any significant lengthening of the average repricing period for asset interest rates. For asset interest rates, the impact of changes in the maturities of securities was minimal, given the low holdings. The repricing gap thus remained negative, and increased slightly in absolute terms. The interest-sensitive position at system level closed further.

[14] Does not take account of amortisation schedules.

[15] 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 *de facto* zero, sight deposits are classed as funding with indeterminate maturity. Their effective maturity is not unambiguously defined, and under normal market conditions it greatly exceeds the contractually determined maturity, and can even amount to several years.

[16] The allocation of the core part of sight deposits across maturity buckets takes account of a model-based estimate, and differs from that reported in previous issues of the Financial Stability Review. The core part of sight deposits is estimated at 89%.

Figure 1.64: Comparison of repricing gaps (excluding off-balance-sheet items)

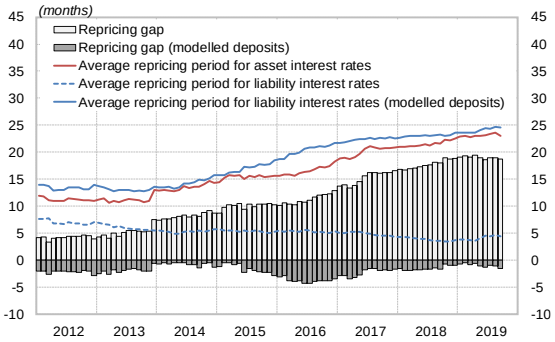
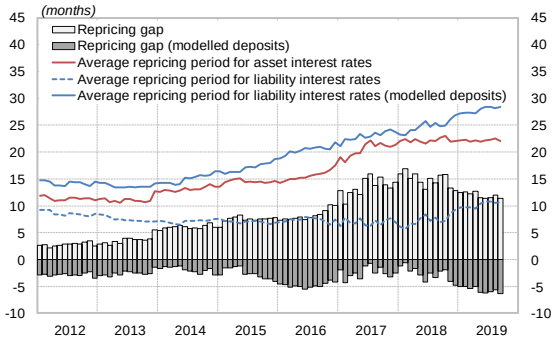


Figure 1.65: Comparison of repricing gaps (including off-balance-sheet items)



Note: Both figures take account of a sight deposit stability[17] of 89% (where "modelled deposits" is stated), derivatives hedges, and amortisation schedules. The gap calculated in the right figure includes off-balance-sheet items.
Source: Bank of Slovenia

Due to asset interest rates being repriced faster, in the event of a rise in market interest rates the banks would not suffer a sudden decline in interest income. Given the structure of interest-sensitive portfolios, higher interest rates would have a positive impact on net interest income. Interest sensitivity is mainly being reduced by the high stability of sight deposits, and by off-balance-sheet items on the liability side, whose maturities further lengthen the average maturity of total liabilities. Interest rate risk remained moderate at the end of the third quarter, despite the increase in the share of new loans with a fixed interest rate, the lengthening maturities of these loans, and the continuing growth in sight deposits.

A slight decline in sensitivity to interest rate risk is also reflected through the economic value of equity (EVE) indicator.[18] This represents the change in the net present value of open positions relative to common equity Tier 1 capital with regard to changes in the yield curve. Under a parallel upward shift in the yield curve of 200 basis points, which produces the largest reduction in the EVE under the various scenarios, the indicator diminished from -19.3% at the end of 2018 to -19.1% in September 2019. Taking account of the core part of sight deposits, the indicator would diminish from -10.9% to -6.4% over the first nine months of the year. In contrast to the EVE, a rise in interest rates would have a positive impact on net interest income[19] because of the structure of the interest-sensitive portfolio. Taking account of the core part of sight deposits, the positive impact would increase from 4.9% to 6.5%.

1.6 Credit risk

Banks accelerated their reduction of non-performing exposures (NPEs) in 2019, most notably legacy non-performing claims from the crisis years, while the generation of new non-performing exposures is small. A small inflow of new NPEs in the corporate portfolio is to be expected, given the high economic growth of recent years, while the actual quality of the portfolio of new loans and the credit standards applied during approval will be revealed when the economy cools, as expected.

The risk of inflows of new NPEs is also elevated in the consumer loans segment, where lower credit standards were applied, particularly with regard to the debt service to income ratio and the long maturities of these loans. These risks were mitigated for future consumer loans by the Bank of Slovenia's introduction of a binding macroprudential instrument in November 2019. Another potential source of credit risk in the future is the rapid growth of new loans to the rest of the world. Weak economic growth in countries in which non-resident bank customers do business could adversely affect their debt servicing capacity.

[17] The stability of sight deposits is estimated by means of a model, which provides an estimate of the core part of sight deposits. The core part is the part of sight deposits whose interest rates are highly unlikely to change even in the event of a significant change in market interest rates.
[18] The EVE is based on the discounting of net open positions within gap analysis, and is derived from the maturity structure of interest-sensitive instruments in the banking book. The change in net present value depends on the maturity and size of the open position, and the size of the change in interest rates. The smaller (in absolute terms) the indicator is, the lower is the sensitivity to a change in interest rates.
[19] Net interest income represents the difference between the income from interest-sensitive assets and the cost of servicing interest-sensitive liabilities. In addition to the size of the change in interest rates, the estimate also depends on the size of the cashflows, and the repricing period.

Non-performing exposures

The portfolio quality of Slovenian banks has improved sharply from previous years and in international comparisons. At the time of the bank resolution and recovery process, the banks' non-performing claims amounted to 18% of their total classified claims, which were generally increasing their losses. By September 2019 the share of claims more than 90 days in arrears had fallen to 1.5%, while the NPE ratio stood at 2.6%. In international comparisons, which are only available on consolidated level, and with a different capture of exposures, the Slovenian banking system is ranked ninth among EU Member States in terms of the NPE ratio in the portfolio of debt instruments, but is one of the countries to have seen the largest reductions in the NPE ratio over the last two and a half years.

Figure 1.66: NPEs, NPLs and claims more than 90 days in arrears, stocks and ratios

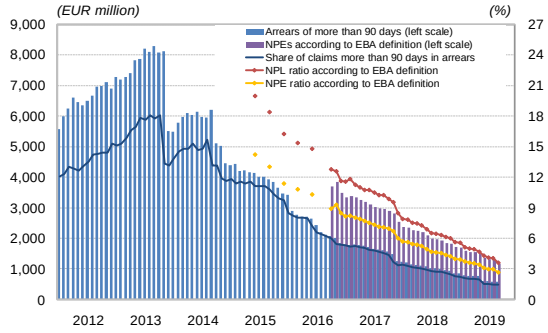
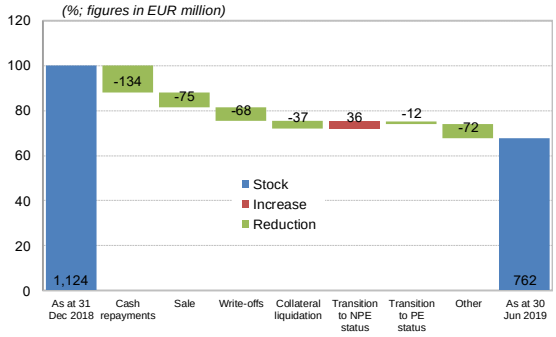


Figure 1.67: Approaches to the reduction of NPEs in the corporate portfolio in the first half of 2019



Sources: Bank of Slovenia, half-yearly NPE reporting by banks

Corporate portfolio and credit risk

The largest reduction in NPEs in 2019 came in the corporate portfolio. This included the successful reduction of the burden from legacy non-performing claims. Although the NPE ratio for corporate exposures is still among the highest for any customer segment at 5.1%, it has been significantly reduced, both in respect of SMEs (6.4% in September) and large enterprises (4.2%). While the SMEs segment saw the fastest reduction in NPEs in 2017 and 2018, over the first nine months of 2019 there was a larger reduction in NPEs to large enterprises. In both cases the reduction was achieved by addressing (mostly legacy) exposures to firms in bankruptcy.[20]

Another major factor in the improvement in the quality of the corporate portfolio was the favourable macroeconomic environment of recent years, although in light of the anticipated slowdown in economic growth this factor could be of limited impact in the future. More than in previous years, the reduction in NPEs to corporates in the first half of 2019 was the result of repayments (37% of the total reduction), most likely mainly on account of the favourable economic environment and the stronger financial position of firms. Repayments accounted for just 26% of the reduction in NPEs in 2017.[21] Other approaches to the reduction of NPEs, which require greater activity on the part of the banks (sales, write-offs, collateral liquidation), were less important in the first half of 2019 than in previous years. Low indebtedness and increased creditworthiness of firms are factors that could deteriorate in the anticipated downturn in the economic environment. It is important that the banks continue the quick reduction of their remaining NPEs, thereby mitigating the adverse impact of the future inflow of new NPEs on profitability.

[20] The banks' exposure to firms in bankruptcy was reduced by EUR 74 million in 2017, by EUR 120 million in 2018, and by EUR 141 million over the first nine months of 2019 (bankrupt claims accounted for two-thirds of the reduction in the SMEs segment over the three years).

[21] See June 2018 Financial Stability Review, *Credit risk* section. Comparable figures for 2018 are not available, on account of a change in the content of the survey, and the merger of the two previous bank surveys.

Figure 1.68: NPEs from new long-term contracts, Q4 2016 to Q3 2019, and the success of their reduction, by bank

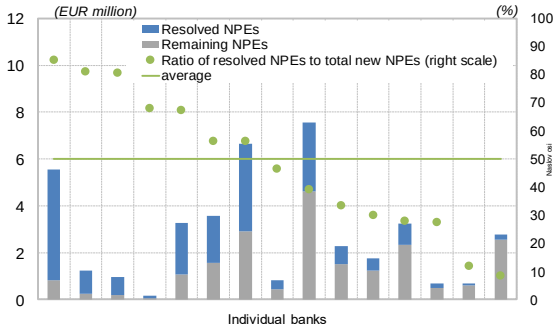
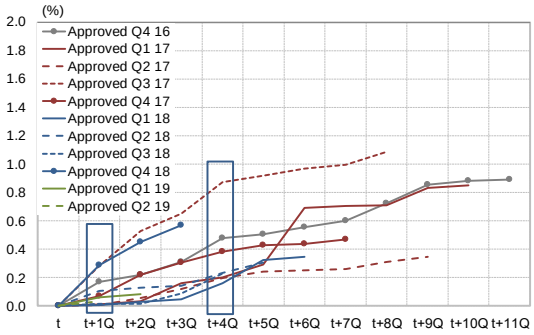


Figure 1.69: New contracts entering NPE status after a certain number of quarters, as share of total exposure



Source: Bank of Slovenia

The favourable influence of the macroeconomic environment was reflected in the small inflow of NPEs from new transactions. The stock of NPEs from new long-term contracts with corporates over the last three years[22] is small: a total of EUR 41 million of new NPEs were generated during this period, but the stock had fallen to just EUR 21 million by September 2019. NPEs from new contracts accounted for just 2.9% of the stock of NPEs in the corporate segment in September. Even at individual banks NPEs from new contracts did not significantly affect the quality of the corporate portfolio: the share of the stock of NPEs to corporates accounted for by new NPEs stood at no more than 5% at the majority of banks in September, and the banks where the figure was higher had lower NPEs overall. The small burden from new NPEs is attributable to their prompt reduction: half of the banks had succeeded in reducing their new NPEs that have occurred over the last three years until September 2019 by more than 50%.

The actual quality of new contracts in the corporate portfolio will be revealed as the economy cools, when any differences in the credit standards applied will be reflected in a greater inflow of new NPEs. Vintage analysis of the corporate credit portfolio reveals that in no individual quarterly portfolios since the end of 2016 did the proportion of new NPEs exceed 1% of contract value within the first year after approval. The share of new NPEs in contracts concluded in 2017 are slightly higher than those in portfolios from 2018, although not all of the quarterly portfolios from the latter year have yet reached a year in age. Judging by the BLS, in previous years there was no significant change in the relatively tight credit standards in corporate lending; the small inflow of new NPEs was primarily attributable to the strong economy. The actual quality of the credit standards applied in recent years will only be revealed when the economy slows.

Lending to non-residents and credit risk

The rapid growth in exposures to non-residents could raise credit risk in this segment of the portfolio. The banks began expanding their lending to the rest of the world at high growth rates in 2018; year-on-year growth in loans to the foreign non-banking sector (primarily corporates) reached 40% in 2019. Total exposure in terms of loans to non-residents is not high at present, and at EUR 2.5 billion accounts for 5.6% of the banks' total exposure. However, in light of the banks' forecasts of an increase in investments of this type in western Europe and in the Balkans, there is an increased possibility of the realisation of credit risk, particularly at banks that have more ambitious plans in this asset segment. The quality of investments in the non-resident segment continued to improve in 2019, although the actual quality of the portfolio and the credit standards applied to new transactions with non-residents will be revealed when the economy slows, particularly in countries to which the banks have recently been increasing their exposure.[23]

[22] Bank reporting at contract level and by contract date has been available since October 2016.

[23] When a domestic bank participates in the financing of a foreign firm via a syndicated loan, only the information about the registered office of the bank that arranged the syndicated loan is available, and not information about the registered office or residency of the debtor.

Figure 1.70: Growth in loans by type

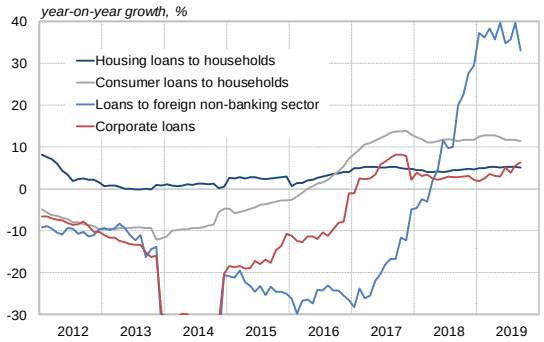
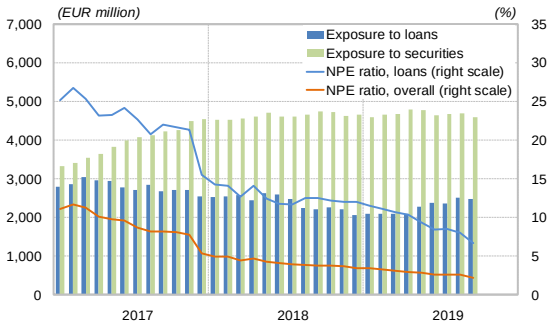


Figure 1.71: Breakdown of non-residents portfolio and corresponding NPE ratios



Note: In the left figure growth in loans is calculated from bank balance sheet items. In the right figure exposures to loans and securities include on-balance-sheet and off-balance-sheet exposures to all non-resident sectors.
Source: Bank of Slovenia

Household lending and credit risk

The rapid increase in loans to households compared with other portfolio segments is increasing the importance of the sector in terms of all bank assets and in terms of NPEs. Although the current quality of claims against households is good, and improving as measured by the NPE ratio, the share of NPEs accounted for by the household sector is increasing. The share of the banking system's total NPEs accounted for by households stood at 20.0% in September 2019, double the figure from the end of 2016. While the inflow of new NPEs in other portfolio segments, the corporate segment in particular, is low (relative to the size of the portfolio), the household portfolio has seen a relatively large inflow of new NPEs relative to the current stock of NPEs. This did not have an impact on the total stock of NPEs to households, because the reduction in new NPEs was quicker than in the corporate segment, where banks are still dealing with a portfolio several years in age. In the wake of the prompt reduction of NPEs to households, largely via repayments, but also via write-offs and collateral liquidation, the NPE ratio remains low, at 2.6% for consumer loans and 2.1% for housing loans.

Figure 1.72: Breakdown of NPEs by main client segment

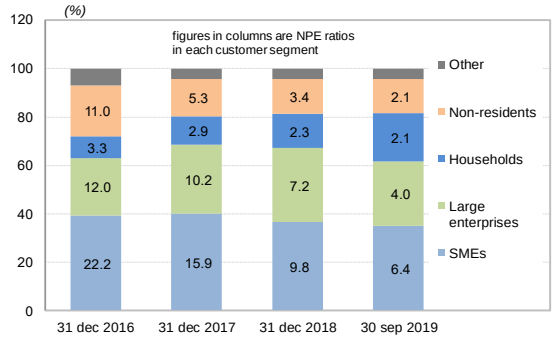
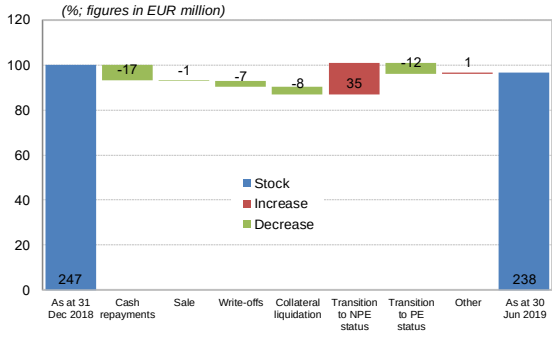


Figure 1.73: Approaches to the reduction of NPEs in the household portfolio in the first half of 2019



Source: Bank of Slovenia

The Bank of Slovenia mitigated the risk of a future rise in NPEs in the household segment as a result of an economic downturn by adopting a binding macroprudential measure for household lending.[24] Although household indebtedness is low on average, as is unemployment, the excessive lending to more vulnerable segments of the household sector may lead to an inflow of new NPEs from loans approved at lower credit standards, particularly on loans with disproportionately long maturities.

[24] See the *Macroprudential policy* section.

Box 1.1: Easing of credit standards for consumer lending

Several factors have driven the rise in consumer lending in recent years; they are partly related to the last financial crisis and the economic recovery. After several years of contraction, growth in consumer loans exceeded 10% in March 2017, and remains above this level in 2019. Growth in Slovenia is strongly outpacing the euro area median, and even the 75th percentile of the euro area. The stock of consumer loans amounted to EUR 2.91 billion in September 2019, and has now reached its pre-crisis level. The most important factor in the high growth seen in previous years is certainly the economic recovery and the improvement in the macroeconomic situation, which brought a fall in the unemployment rate. This led to an increase in disposable income and consumer confidence, which encouraged consumption, while relatively low interest rates further encouraged borrowing. The high growth in consumer loans might also be a reflection of the banks' efforts to increase profit in the low interest rate environment, and the pressured interest margins[25] in the housing and corporate loans segments. Although the banks' exposure to consumer loans is low relative to the balance sheet total, it exceeds exposure comprared to other countries. The sustained high growth in this loan segment is a particular cause for concern.

Figure 1.74: Growth in consumer loans, comparison with euro area

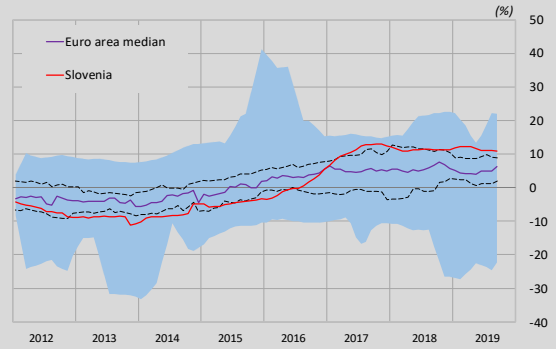
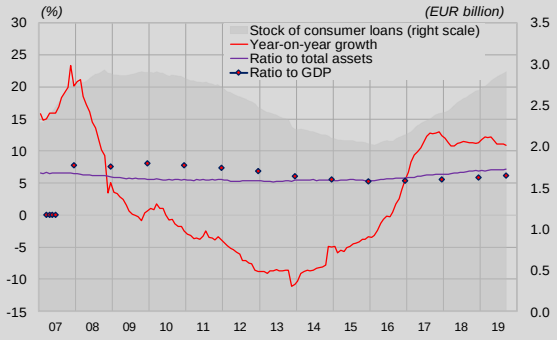


Figure 1.75: Growth in and stock of consumer loans



Note: In the left figure the blue area illustrates the minimum and maximum values. The dotted black lines represent the 25th and 75th percentiles.
Sources: ECB (SDW), Bank of Slovenia

Consumer loans constitute a smaller share of the banks' credit portfolio, but they are rapidly gaining in importance. It is evident that the banks have adjusted their business models in recent years, and have focused on consumer lending by tailoring their offer, simplifying the approval process, raising the available contractual values of loans, and allowing longer maturities for consumer loans. The banking system's exposure to consumer loans increased by almost 2 percentage points over the last three years to stand at 7.2% of the balance sheet total. There is also a trend of increase in the ratio of consumer loans to GDP. Despite the high GDP growth, this ratio increased by 1 percentage point between the beginning of 2016 and September 2019, to reach 6.2%. Compared with the euro area overall, the Slovenian banking system is notable for the ratio of consumer loans to total assets, the share of household loans accounted for by consumer loans, and the share of total loans to the non-financial private sector (NFPS) accounted for by consumer loans. Slovenia's largest deviation from the euro area median (12%) is in the share of household loans accounted for by consumer loans, where its figure is 27%.

[25] The interest margin is the difference between the interest rate on loans and the interest rate on funding in the banking system.

Figure 1.76: Share of consumer loans to various categories, comparison with euro area

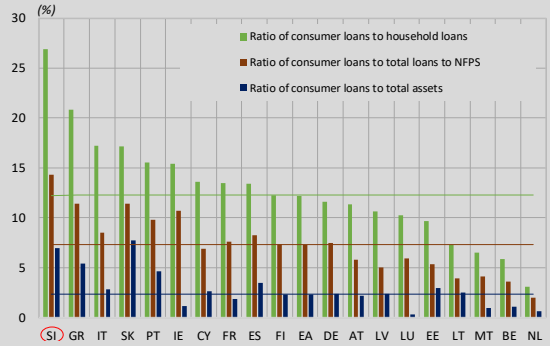
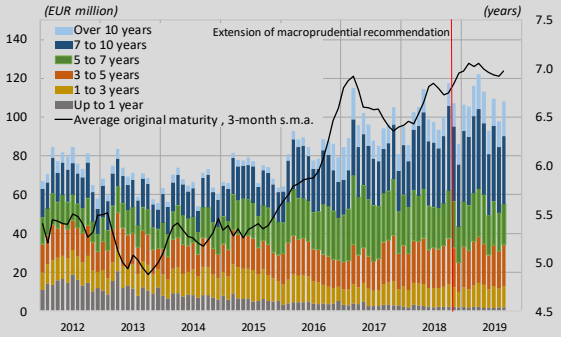


Figure 1.77: Breakdown of new consumer loans by original maturity, and average maturity of new consumer loans



Note: In the left figure the green horizontal line represents the euro area median of the share of total household loans accounted for by consumer loans (12.2%). The red horizontal line represents the euro area median of the share of total loans to the non-financial private sector accounted for by consumer loans (7.3%). The blue horizontal line represents the euro area median of the ratio of consumer loans to total assets (2.3%).
Sources: ECB, Bank of Slovenia

The average original maturity of new consumer loans has increased markedly over the last four years. The average maturity of consumer loans increased by almost 2 years between the beginning of 2015 and September 2019 to reach 7.1 years. After the extension of the macroprudential recommendation for household loans on 22 October 2018, which recommended that maturities be capped at 10 years, there was no reduction in the share of new consumer loans with maturities of more than 10 years. The figure has averaged 14% on a monthly basis since the extension of the recommendation. The share of the stock of consumer loans accounted for by loans with maturities of more than 10 years hereby reached almost 19%. Consumer loans with a maturity of 7 to 10 years account for 37.2% of the total stock. Compared with the euro area overall, Slovenia is also notable for its share of long-term consumer loans. While consumer loans with a maturity of more than 5 years account for 50% of all consumer loans on average across the euro area, the corresponding figure in Slovenia is almost 80%. Slovenia is also ranked first among the euro area countries in terms of the share of consumer loans with a maturity of more than 5 years.

Figure 1.78: Share of consumer loans with a maturity of more than 5 years, comparison with euro area

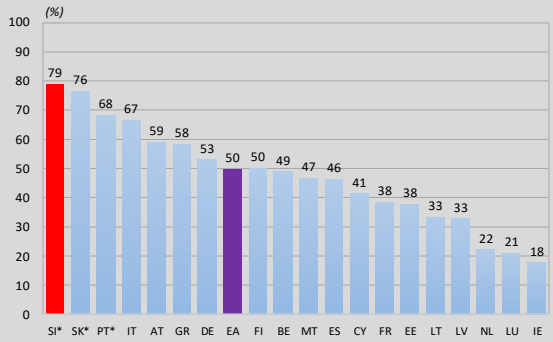
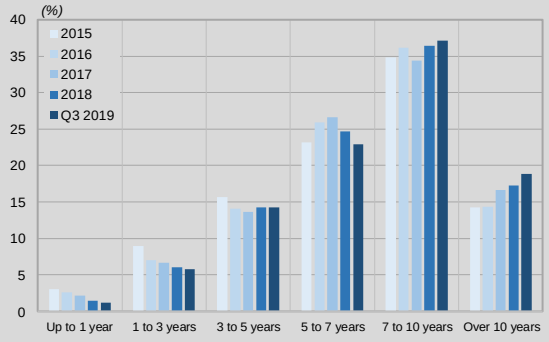


Figure 1.79: Breakdown of stock of consumer loans by maturity



Note: In the left figure the countries denoted by the asterisk have introduced macroprudential restrictions on the maturity of consumer loans.
Sources: Bank of Slovenia, ECB SDW

According to survey data, the average contract value of new consumer loans has increased over the last four years. The average contract value had increased from approximately EUR 6,000 at the beginning of 2015 to more than EUR 8,100 by the end of 2018, an increase of 34%. Among borrowers whose net monthly income is less than the average net monthly wage,[26] the average contract value increased by 25% to more than EUR 6,800. The average contract value for borrowers whose net monthly income is more than the average net monthly wage increased by fully 38% to more than EUR 9,500. According to the survey data, in 2018 approximately 54% (in terms of number) or 45% (in terms of value) of new consumer loans were approved for borrowers whose net monthly income is less than the average net monthly wage. Merely 6% (in

[26] According to the Statistical Office of the Republic of Slovenia, the average net monthly wage stood at EUR 1,092 in 2018.

terms of number) or 3% (in terms of value) of new consumer loans were approved for borrowers whose net monthly income is less than the minimum net monthly wage.[27]

Figure 1.80: Average contract value of consumer loan

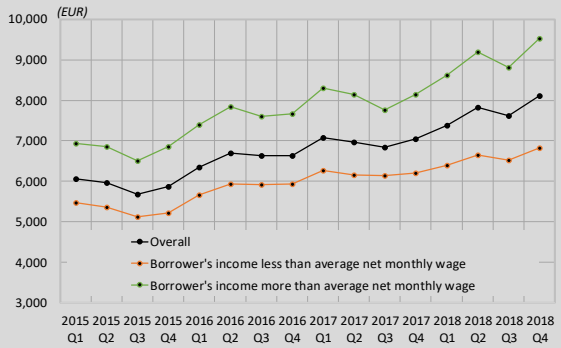
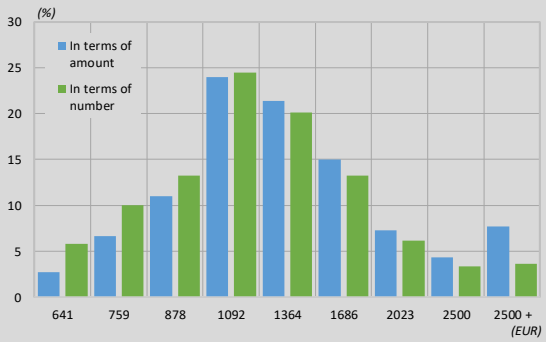


Figure 1.81: Breakdown of approved consumer loan agreements by borrower income (in terms of number and value)



Note: In the right figure the borrower's average monthly income is calculated on the basis of annual income. The first net monthly income band of EUR 641 represents the minimum wage in 2018; EUR 759 represents the minimum wage plus the shared maintenance of one child; EUR 878 represents the minimum wage plus the full maintenance of one child; EUR 1,092 represents the average net monthly wage in 2018.
Sources: Bank of Slovenia, survey data

Irrespective of the type of interest rate and the original maturity of the loan, the banks are securing a significantly smaller share of their new consumer loans than in previous years. Compared with 2015, when almost 60% of consumer loans were secured, the figure had shrunk by half by September 2019, to 28%. The decline in the share of secured loans was evident in fixed-rate and variable-rate consumer loans alike. An examination of collateral according to original maturity also reveals a decline in the share of secured loans in all maturity buckets. Consumer loans with an original maturity of up to 1 year have the highest level of security. Short-term loans are obviously a higher risk from the bank's perspective, which could mean that they are approved for borrowers with low net income. The survey data confirms that the average income of borrowers taking loans with a maturity of up to 1 year is lower than the average income of borrowers taking loans with a maturity of more than 1 year. The largest decline in the level of security of consumer loans compared with 2015 could be seen in the maturity bucket of 7 to 10 years, where the share of secured loans was down 42 percentage points at 14%. Credit insurance with an insurer remains the most common form of security for consumer loans, accounting for 50% of the total.

Figure 1.82: Breakdown of new consumer loans by collateral type and type of remuneration

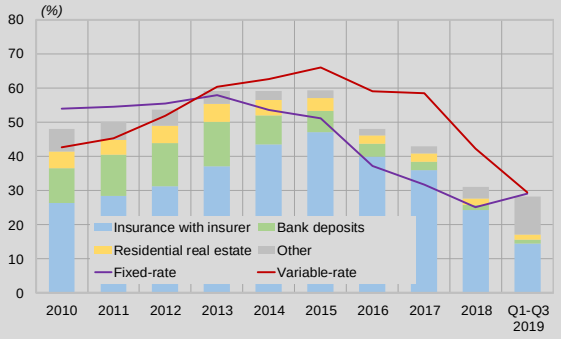
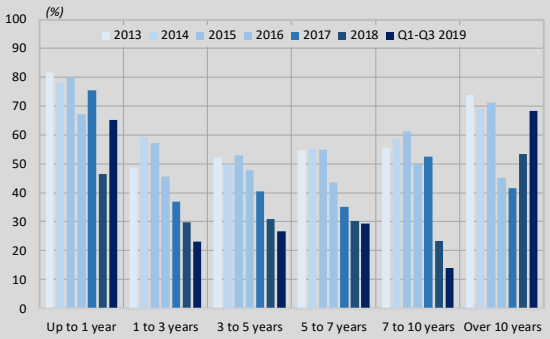


Figure 1.83: Share of secured new consumer loans by maturity



Source: Bank of Slovenia

Growth in consumer loans is higher in countries where interest rates on consumer loans are relatively higher than interest rates on housing loans. The graph below illustrates that there is a positive correlation between growth in consumer loans and the spread between interest rates on consumer loans and housing loans. This means that strengthening consumer lending could be a sign of a general increase in the banks' risk appetite in the low interest rate environment. While interest rates on housing loans have fallen to record lows in Slovenia, there has been no significant change in interest rates on consumer loans. Because interest

[27] The minimum wage (Official Gazette of the Republic of Slovenia, No. 5/18), as set by the Minimum Wage Act (Official Gazette of the Republic of Slovenia, Nos. 13/10, 92/15 and 83/18).

rates on housing loans have fallen by more than interest rates on consumer loans, the interest rate spread between consumer loans and housing loans has widened, which means that the relative return on consumer lending has increased. A widening interest rate spread is evident in fixed-rate and variable-rate consumer loans alike. The higher relative return could be additionally pushing banks to approve consumer loans.

Figure 1.84: Growth in consumer loans versus spread between interest rates on consumer loans and housing loans

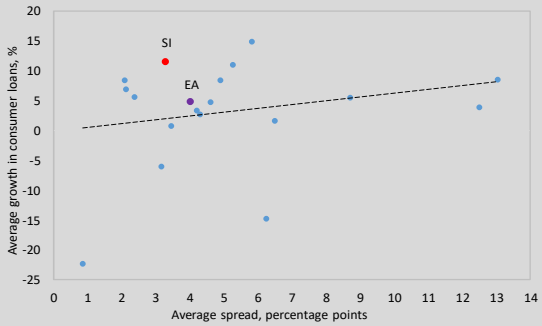
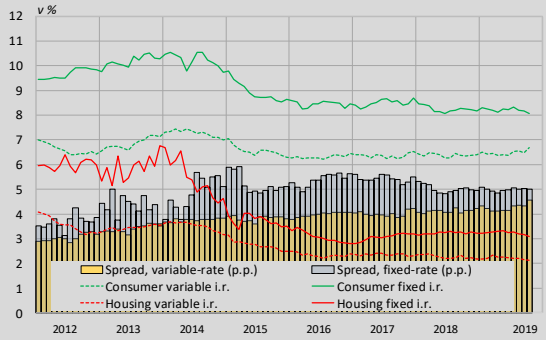


Figure 1.85: Effective interest rates on consumer loans and housing loans



Note: In the left figure the average growth in consumer loans and the interest rate spread are calculated for the period of January to September 2019. The interest rate spread is defined as the difference between the average interest rate on consumer loans and the average interest rate on housing loans. The figure exclude Luxembourg.
Source: ECB (SDW), Bank of Slovenia

During the period of falling market interest rates, Slovenian banks approved the majority of their consumer loans with a variable interest rate. Between 2012 and 2014, when the ECB was reducing its key interest rate, around 60% to 70% of consumer loans approved by the banks had a variable interest rate. The average maturity of these loans was 6.5 years, compared with an average maturity of 2.7 years for fixed-rate loans. The share of fixed-rate consumer loans has undergone a sustained increase since 2015, reaching almost 70% in the third quarter of 2019. While there was no significant change in the average maturity of variable-rate loans, the average maturity of fixed-rate loans increased by almost 4 years. Between 2011 and 2017 it was variable-rate loans that prevailed in the stock of consumer loans, but since 2018 fixed-rate loans have accounted for the majority. In the event of a rise in interest rates, fixed-rate loans reduce the impact of higher interest rates on borrowers' debt servicing costs, but could result in lower net income for banks as interest income remains unchanged.

Figure 1.86: Breakdown of new consumer loans by remuneration type

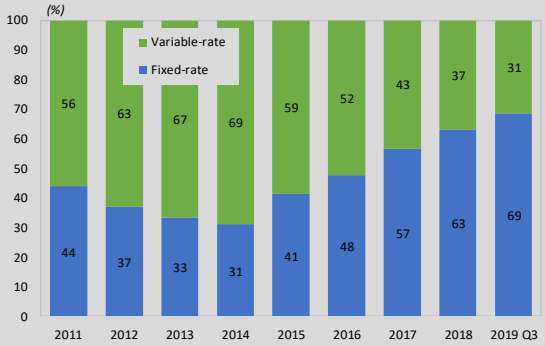
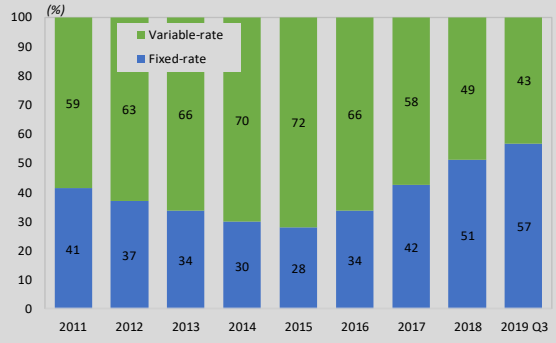


Figure 1.87: Breakdown of stock of consumer loans by remuneration type



Note: Includes consumer loans with a maturity of more than 1 year only.
Source: Bank of Slovenia

Box 1.2: Vintage analysis of the household credit portfolio[28]

Vintage analysis is first and foremost a retrospective method, and is usually employed by financial institutions to analyse the realisation of the risks of individual products and to measure their performance. The analysis is often conducted at a highly granular level, and is usually combined with prospective methods.

[28] Vintage analysis of the credit portfolios of other customer segments was presented in the June 2019 Financial Stability Review.

The analysis of lending to individuals in the household sector was conducted on new credit transactions between M1 2012 and M5 2019 for the consumer loans and housing loans segments. The basic metric is a cumulative function defined as the ratio between the exposure to new defaulters (defined by arrears of more than 90 days and an exposure of at least EUR 100) and the initial exposure to the full set of non-defaulters at the time of the conclusion of the transaction (the vintage). Transition to default status is irreversible in the calculation.[29] The denominator of the cumulative function is static, while the numerator takes account of the current (amortised) value at the time of the transition to default status.

The gradient of the curve depends on the credit standards at the time of loan approval, and the macroeconomic environment in the years following the conclusion of the transaction. Comparing new housing loans to new consumer loans reveals, as one would expect, a slightly higher proportion of defaulters in the consumer loans segment. The difference between the shares of new defaulters on consumer loans and housing loans ranges between approximately 0.5 percentage points and 1.0 percentage points for the majority of the vintages (with the exception of 2018), which confirms that the aforementioned portfolio is a slightly higher risk. Due to a profound change in the macroeconomic environment between 2012 and 2018, the effect of credit standards alone is difficult to isolate. Evidence of a potential deterioration in credit standards comes from a comparison vintages in their second year (12 to 24 months), where in the consumer loans segment the cumulative function of newer vintages (2015 to 2017) is increasing faster than that from 2012 and 2013 (a period in which the macroeconomic situation was significantly worse). The reversal can also be partly explained by the reversal in growth in household lending in the consumer loans segment, where year-on-year rates of growth turned positive in 2016, before surging to over 10% in 2017.

Figure 1.88: Cumulative share of exposures more than 90 days in arrears among consumer loans of a particular vintage (annual data), by period after conclusion

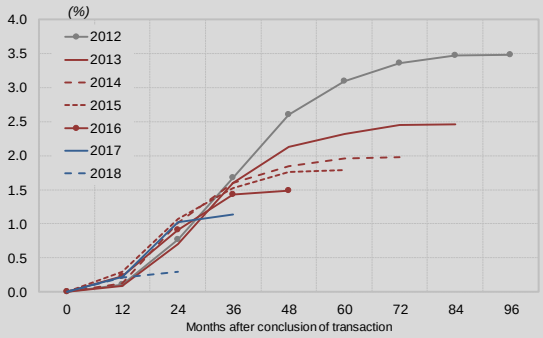
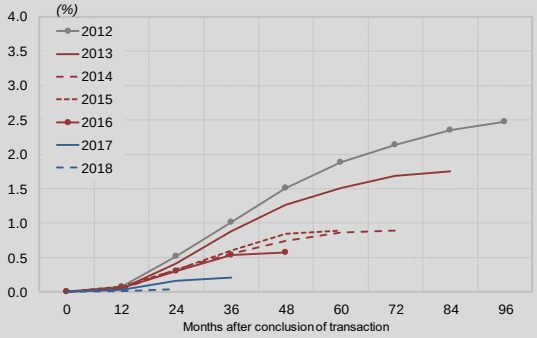


Figure 1.89: Cumulative share of exposures more than 90 days in arrears among housing loans of a particular vintage (annual data), by period after conclusion



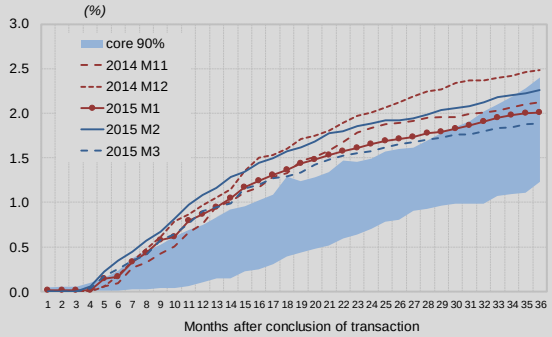
Note: The calculations are made on an annual basis for consumer loans (left) and housing loans (right).
Source: Bank of Slovenia

A slightly more precise analysis can be conducted using monthly data. Some 89 vintages were constructed for the period of M1 2012 to M5 2019. Of these, 90% constitute a relatively homogenous band, named the core band, while the remaining 10% are outliers. The cumulative functions are empirically limited to 36 months. All the vintages are treated in the same way, irrespective of the exposure amount.

In the consumer loans segment, the core band reaches a value of between 1.2% and 2.4% at the end of the time horizon. When exposure weighting is taken into account, the values would converge on those illustrated in Figure 1.88. Surprisingly, half of the outlying vintages are from the period between M11 2014 and M3 2015, i.e. the period when growth in consumer loans was negative. In the majority of cases outliers do not reflect systemic developments, but often involve a specific bank or specific transactions.

[29] Any transaction that has become non-performing is treated as non-performing even if it subsequently begins to be repaid and exits non-performing status. This ensures the capture of all transactions that ever become non-performing, irrespective of subsequent changes, and does not lose transactions that are written off, sold or otherwise removed from the portfolio by the banks.

Figure 1.90: Cumulative share of exposures more than 90 days in arrears for particular vintages (monthly data), by period after conclusion



Note: The time horizon is limited to 36 months. The blue area is the core band, i.e. the relatively homogenous aggregate of 90% of the cumulative functions of all vintages. The individual coloured lines represent the outliers (specific vintages with higher values for transition to default status).
Source: Bank of Slovenia

Given the small number of transactions, there is no point in conducting analysis of the monthly vintages in the housing loans segment.

2 RESILIENCE OF THE FINANCIAL SYSTEM

The second section of the Financial Stability Review examines the resilience of the financial system, with a focus on the resilience of households, corporates, the banking system and non-bank financial institutions. The resilience of the financial system is defined as its ability to absorb adverse shocks, while continuing to provide products and services to the real economy.[30] The resilience of the banking system can be seen as its ability to withstand adverse shocks originating outside the banking system with a minimum impact on the supply of credit to households, corporates and other parts of the economy. The resilience of the banking system is evidenced in adequate solvency and liquidity in the system, and is determined by the Bank of Slovenia with the help of stress tests. There is also an examination of the resilience of other sectors whose potential vulnerability could have a material impact on the evolution of risks in the financial system.

2.1 Households and corporates

Households

The financial structure of households' assets and their debt indicators reflect relatively high resilience on average to a deterioration in the economic situation. In the event of further cooling in the macroeconomic environment and a consequent downturn in the labour market, the risks could mainly be reflected in households with below-average income levels, which received more than half of the new consumer loans approved in 2018.[31] Credit growth is raising household debt, but it remains stable as a ratio to disposable income and to GDP.

Households have an appetite for saving, which is continuing to increase despite the relatively low interest rates. Gross household saving amounted to EUR 3.9 billion over the first half of 2019, and the gap with gross investment widened sharply. Any downturn in the economy would also be reflected on the labour market, thereby weakening household purchasing power, and consequently reducing the capacity for growth in consumption and investment. A downturn would also have an impact on households' capacity to service their financial liabilities.

Figure 2.1: Gross disposable income and final consumption expenditure

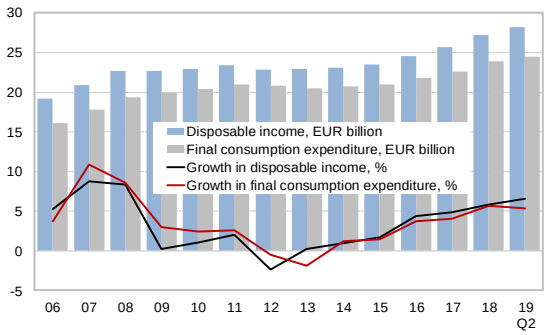
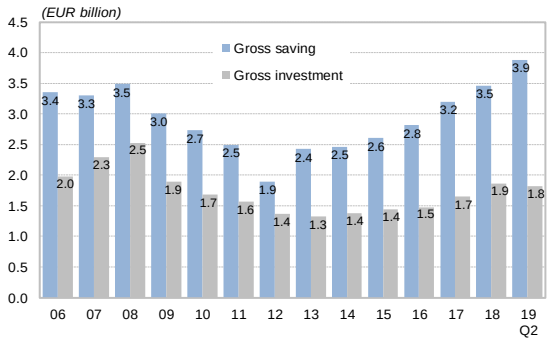


Figure 2.2: Household saving and investment



Source: SORS

The last three years have seen an increase in household financial liabilities, primarily as a result of high credit growth. The household sector's financial assets increased even more sharply in the first half of 2019, by EUR 2.3 billion, while their financial liabilities increased by EUR 236 million. The household sector's net financial assets thus increased to EUR 41.2 billion, or 88% of GDP, but the gap with the euro area average (151% of GDP) widened further on account of the high economic growth in Slovenia. The growth in financial liabilities is increasing risk, particularly at households with higher levels of debt and relatively low income. Household debt as a ratio to GDP and to disposable income remains stable overall in Slovenia.

[30] https://www.esrb.europa.eu/pub/pdf/reports/esrb.report190408_features_macroprudential_stance_initial_considerations~f9cc4c05f4.en.pdf

[31] For more, see Box 1.1: Easing of credit standards for consumer lending, in the *Credit risk* section.

Figure 2.3: Household financial assets and liabilities

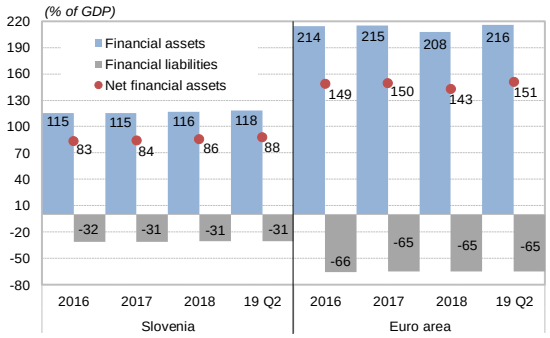
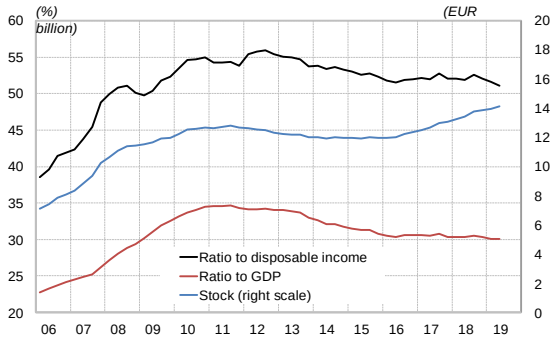


Figure 2.4: Household financial liabilities



Source: ECB (SDW)

Hire purchases and other non-housing loans represented a large or medium-large burden for the majority of borrowers. The survey of income and living conditions (SILC), which in Slovenia is conducted by the SORS, shows that hire purchases and other non-housing loans represented a large or medium-large burden for a significant proportion of the surveyed households holding liabilities of this type. According to the breakdown by type of household, hire purchases and other non-housing loans are a particular burden for single-parent households with at least one dependent child. The share of households of this type responding that hire purchases are a large or medium-large burden for them is seen to be larger at households with dependent family members. The lowest share of households responding that hire purchases and other non-housing loans represent a large or medium-large burden was recorded by adults with no dependent children. A review of the data with regard to arrears for financial reasons in the repayment of hire purchases and other non-housing loans over the last 12 months reveals that arrears are more common at households with dependent family members. The share of households responding that they are in arrears is highest among single-parent households with at least one dependent child. The lowest share of households responding that they are in arrears was recorded by households with no dependent children.

Figure 2.5: Share of households for whom hire purchases represent a large or medium-large burden

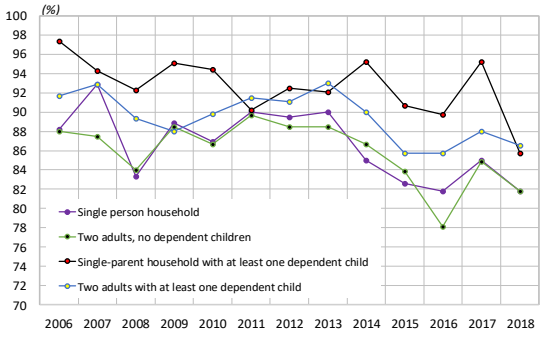
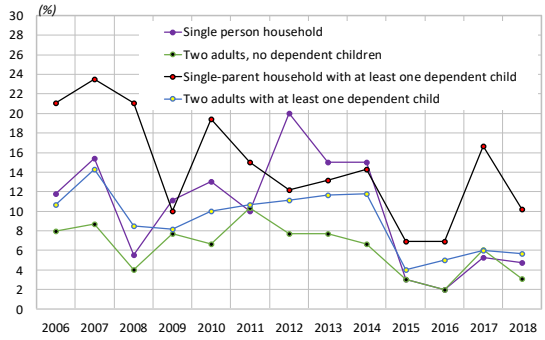


Figure 2.6: Share of households responding that they have been in arrears with payments in the last 12 months



Source: SORS

There was a sharp increase in deposits among households' financial assets in the first half of the year. Pension entitlements recorded a notably larger increase in the first half of 2019 than in the previous year, although there were also smaller increases in life insurance and annuity entitlements and in investment fund shares or units. Despite the very low interest rates, the dominant factor was still the increase in household deposits, which increased sharply in the first half of this year, and together with currency account for almost half of household assets. The gradual increase in investments in other forms of asset might be attributable to the growing awareness that interest rates on deposits will remain low for a long time, and the resulting increase in households' willingness to invest in long-term saving, and also in higher-risk assets. An increase in the proportion of assets held in higher-risk forms would move Slovenian households closer to the household asset structure seen in the euro area overall, where assets of this type account for approximately two-thirds of total holdings. The higher proportion of low-risk assets held by Slovenian households entails slower growth in their financial assets.

Figure 2.7: Breakdown of household financial assets, stocks

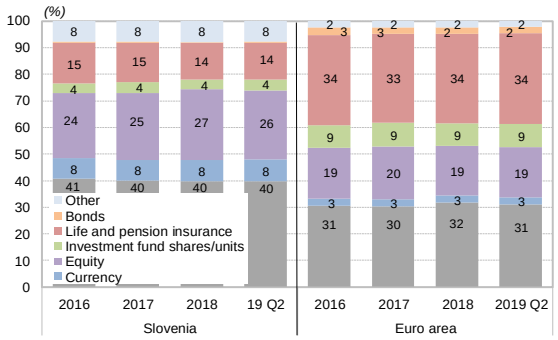
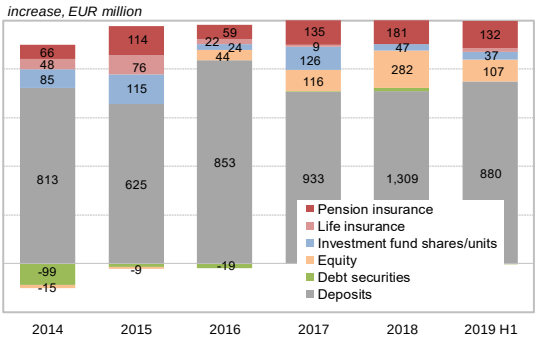


Figure 2.8: Breakdown of household financial assets, transactions



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.

Source: Bank of Slovenia

The share of owner-occupiers with a mortgage has increased in Slovenia in recent years. The share of owner-occupiers has increased by 10 percentage points since 2006, while the share of owner-occupiers with no mortgage has declined by 20 percentage points over the same period. In Slovenia approximately three-quarters of households are owner-occupiers and a quarter are tenants, while the share of owner-occupiers with a mortgage is lower, because much residential real estate was built more than 30 years ago and the mortgages have since been paid off.

Figure 2.9: Breakdown of households into owner-occupiers and tenants

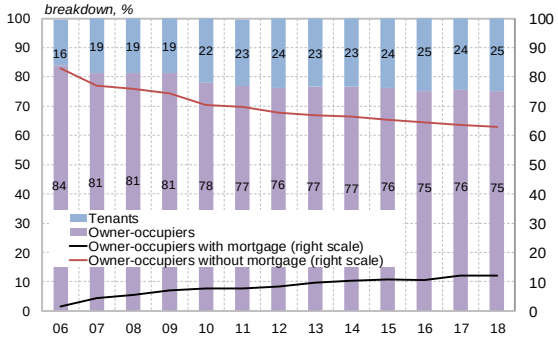
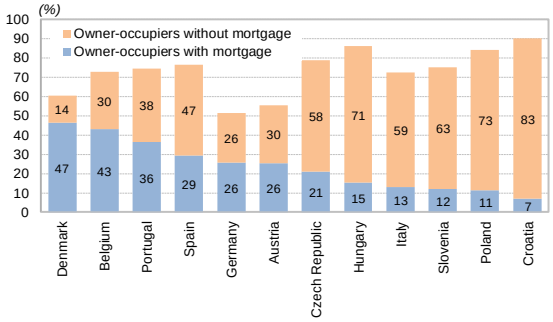


Figure 2.10: Owner-occupiers with and without a mortgage compared with total population, 2018



Source: Eurostat (EU-SILC)[32]

Corporates

Corporate indebtedness, an important indicator of the financial position of corporates with direct impact on credit risk in the banking system, has declined sharply in recent years. Growth in corporates' total liabilities is slowing, and leverage remains below 90%. Given the trend of borrowing in the most important sectors and the subdued forecasts of future growth in investment, there is no expectation of any major changes in corporate indebtedness. The current models of corporate financing are not raising credit risk at the banks. The forecasts that the low interest rate environment will persist are also acting in the same direction, which is helping to maintain a low debt servicing burden. Low corporate indebtedness, high profits and high liquidity are factors that entail the ability to absorb any shocks from the external environment at corporates themselves, before they are transmitted to the banking sector.

Corporate indebtedness

The sharp decline in corporate indebtedness compared with the time of the financial crisis is having a favourable impact on credit risk at the banks. Leverage declined further in the first half of 2019, to below 90%. Corporates' total liabilities have grown at low rates since 2017, at no more than 2% in annual terms. Equity increased by significantly more over the same period, thereby helping to further reduce leverage. Two-thirds of the increase in corporates' equity, which amounted to EUR 7.2 billion over the last two and a

[32] European Union Statistics on Income and Living Conditions.

half years, came from revaluations, while the remaining third was actual equity inflow. Downward revaluations, which could occur during any major price corrections on the financial markets, could see a renewed increase in leverage, independently of the actual inflow of equity into corporates. In the last year there has been a discernible trend of gradual decline in the inflow of equity into non-financial corporations, while at the same time there have been changes in ownership: a net inflow of equity from the rest of the world amid net withdrawals by other (domestic) owners. The changes in the ownership of corporates were a major factor in the change in the model of corporate financing, and the resulting reduced demand for loans at domestic banks.

Figure 2.11: Corporate debt indicators

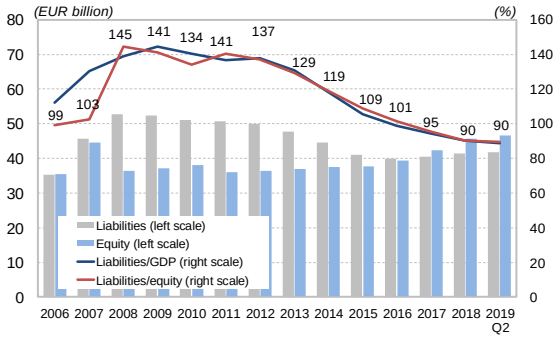
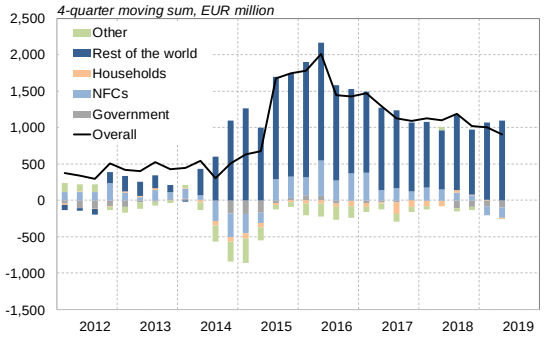


Figure 2.12: Equity flows by creditor sector



Note: Corporate liabilities exclude equity in the left figure.
Sources: Bank of Slovenia, ECB

Corporate financing flows[33] have been declining since the second half of 2018. The last year has seen a pronounced decline in the flow of trade credits received, while the inflow of equity into non-financial corporations is also slightly smaller. The total annual flow of financing via all instruments declined from EUR 2 billion in mid-2018 to EUR 1.1 billion in the second quarter of 2019. The smaller increase in corporate liabilities is to be expected, given the slowdown in economic growth and weak demand, particularly in manufacturing.

Figure 2.13: Flows of corporates' financial liabilities by instrument

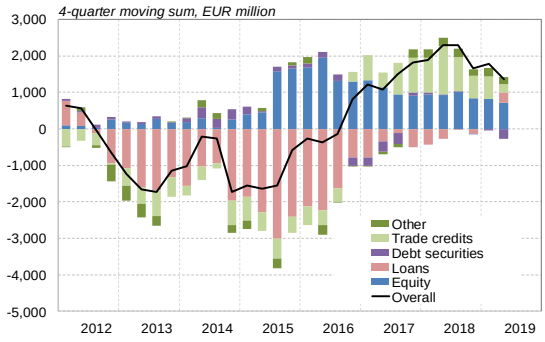
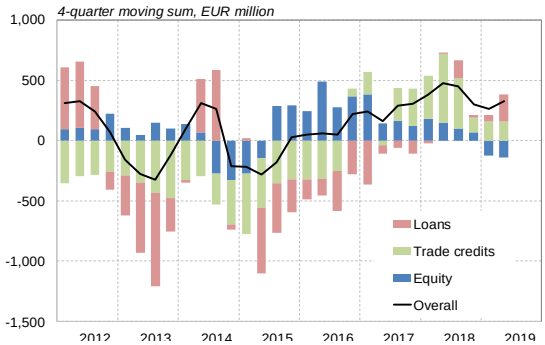


Figure 2.14: Flows of business-to-business financing by instrument



Note: Total loans to corporates consist of loans from the rest of the world, loans from domestic banks, loans from the government and other financial institutions, business-to-business loans, and loans from households. DS: debt securities.
Source: Bank of Slovenia

Corporates are reducing their financing from all creditor sectors other than financing from other corporates, whether in Slovenia or in the rest of the world. A rise in loans has been a feature of business-to-business financing in Slovenia in the last year. With regard to financing in the rest of the world, for several years now there has been a trend of net repayments of loans to all creditor sectors other than loans raised at foreign firms, where loans from affiliates are prevalent. As a result of the growth in loans at domestic and foreign firms, and the simultaneous growth in loans at domestic banks, total financing recorded positive growth for the first time since 2011. The poorly developed domestic capital market offers limited opportunities to finance businesses by issuing debt securities or equity. This is another reason for corporates' diminishing issuance of securities in recent years. Given the change in corporate financing models, where they are increasingly relying on internal resources and financing between affiliates, there are uncertainties surrounding the continuing growth in loans at domestic banks. The latest survey data on growth in corporate

[33] Total financing according to the financial accounts methodology encompasses financing via debt and equity instruments, excluding non-financial corporations' internal resources.

demand for bank loans is still showing an increase in demand (see box), but the rising competition between banks is also bringing an increase in the amount of transactions that are refused or not concluded.

Corporate lending at domestic banks strengthened in the second half of 2019 after previously recording relatively modest rates of growth, but the dynamics in loans to individual sectors do not suggest that this growth is particularly sustainable. The sharp rise in loans in June and August was largely attributable to individual large transactions at banks. Loans to manufacturing firms have displayed a slowing trend for the whole year, the rates of growth approaching negative territory. Loans to construction and transport firms have been declining for more than a year, and were joined in August by loans to the accommodation and food service activities sector. Growth in loans to the trade sector achieved positive growth after a major transaction in June, without which it would also have been negative. Similar dynamics are evident in individual sectors in borrowing in the rest of the world, which suggests that it is not a matter of one source of financing being replaced by another.

Figure 2.15: Corporate loans at domestic banks

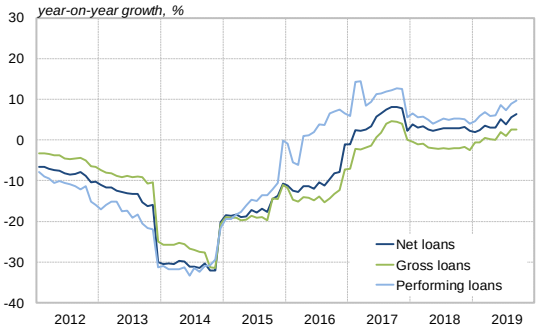
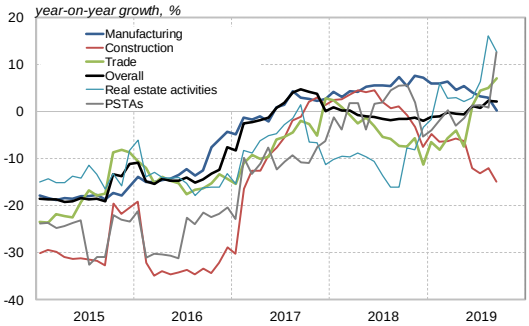


Figure 2.16: Corporate loans at domestic banks by sector



Source: Bank of Slovenia

Corporates' total dependence on financing from the rest of the world has begun to diminish, but they remain profoundly subject to developments on the financial markets. After continually increasing for four years, the stock of corporates' liabilities to the rest of the world declined in the second quarter of 2019, as did the proportion of the total stock of corporates' liabilities accounted for by the rest of the world, to 28.6%. Alongside the reduction in debt from loans at foreign banks and international institutions, this was also attributable to a sharp slowdown in trade credits raised in the rest of the world. Similar dynamics were seen in trade credits raised at Slovenian firms. The growth in trade credits over the last two years coincided with strong economic growth, and their slowdown could also be a reflection of the recent slowdown in economic activity.

Figure 2.17: Stock of loans from the rest of the world by creditor sector, and loans at domestic banks

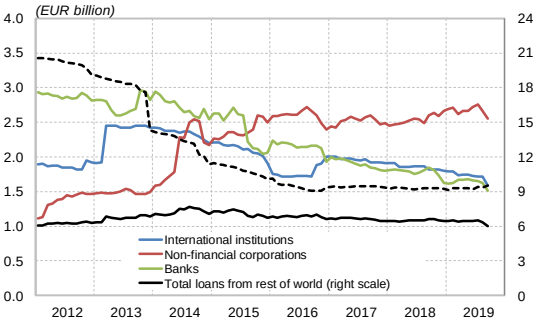
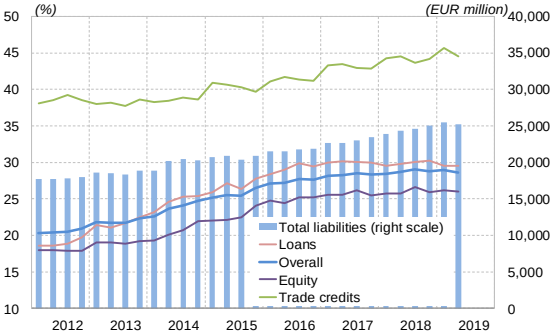


Figure 2.18: Stock of corporates' liabilities, and proportions accounted for by the rest of the world by instrument



Source: Bank of Slovenia

Financial assets of corporates

Corporates' resilience to potential shocks is evidenced in their surplus liquidity, which they are managing in part by expanding loans to the rest of the world. Corporates' total financial assets display similar dynamics to their liabilities, with a decline in flows since the second half of 2018. The main decline is in business-to-business trade credits granted (which is a mirror image of their liabilities under this

instrument). Deposits at banks increased slightly more slowly in the first half of 2019 than in the preceding two years, but they still account for a significant proportion of corporates' financial assets (15.2%), and represent an additional resource in the financing of current operations and investment. A notable change in the financial assets is the approval of loans for other institutional sectors. In addition to the aforementioned business-to-business lending in Slovenia, the last two years, and even more notably this year, have seen an increase in financing of the rest of the world via loans. As was the case for borrowing via foreign loans, loans between affiliates were prevalent in loans granted to the rest of the world. The difference is that until mid-2017 lending to subsidiaries in the rest of the world was equal in magnitude to lending to foreign owners of Slovenian firms. Since then it is only loans to foreign owners[34] that have been rising, and the rate of growth increased further in 2019. Given corporates large holdings of liquid assets at banks, this is probably a consequence of the management of their surplus liquidity, which has partly been directed into affiliates in the same group instead of into bank deposits with low or even negative interest rates.

Figure 2.19: Corporates' financial assets by instrument

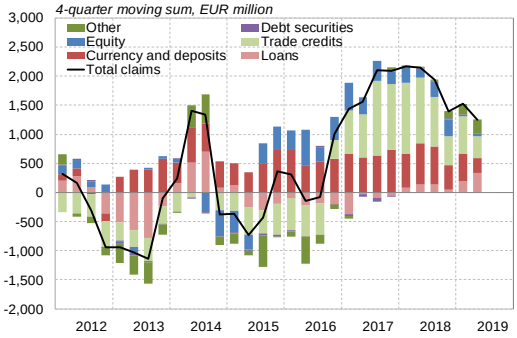
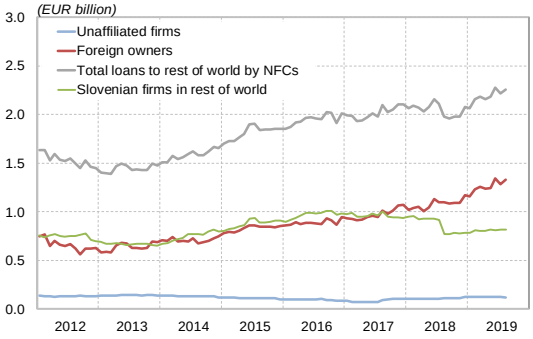


Figure 2.20: Corporates' loans to the rest of the world by ownership link



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

Box 1.3: Corporate demand for loans on the basis of the bank survey

Corporate demand for loans, as reported by the banks in an annual survey since 2010, increased in 2018 for the first time in ten years. Growth in the stock of bank loans turned positive in 2017; alongside demand, it is also subject to the volume of contracts concluded and the level of refused demand, and also the pace of the maturing of existing loans. Total demand for loans is also being driven by the replication of the same demand at a number of different banks in the quest for more favourable borrowing terms and amid the increased competition between banks. Demand for loans increased by 17.7% in 2018, before the rate slowed to 2.6% in the first half of 2019.

The breakdown of demand for loans reveals extremely volatile dynamics at lower levels of aggregation, by sector and by individual bank. The volatility in demand at lower levels of aggregation can partly be explained by the banks' observation of high demand for the refinancing of existing loans raised at one bank with more favourable loans from another bank, and the migration of demand between banks. Growth in demand is alternating from positive to negative between individual banks, and even at the same bank from year to year. The monitoring of demand at individual banks can also be based on different methodological approaches, as a result of which the migration of demand between banks does not necessarily sum to zero.

[34] One feature of lending to foreign owners is that it is generally in one direction only: of the 184 firms that provided financing to foreign owners via loans, there were only 20 that also received a loan from the same foreign owners, albeit smaller than the loan granted, and another 20 who received a larger loan from their foreign owners.

Figure 2.21: Growth in demand and excess demand

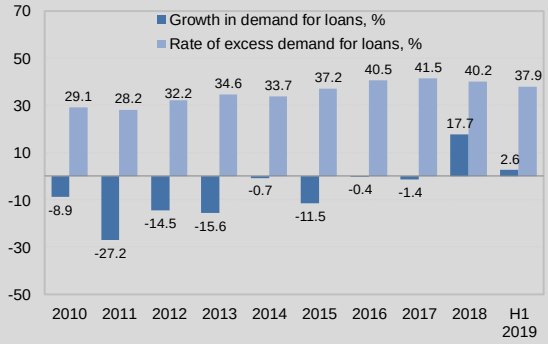
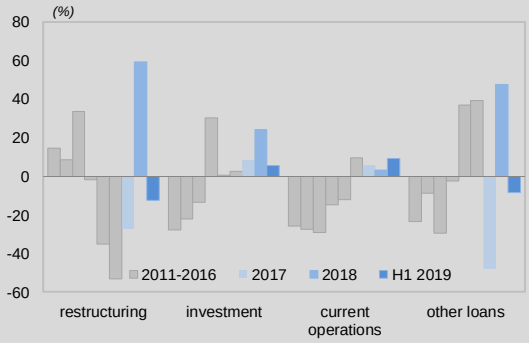


Figure 2.22: Growth in demand for loans by loan type



Source: Bank of Slovenia

Demand for the two main categories of loan, for investment and for current operations, has been growing for slightly longer than aggregate demand (since 2014 as opposed to 2016). The reason lies in the large fall in demand for loans for restructuring between 2014 and 2016, which had a decisive impact on aggregate demand for loans. Loans for restructuring accounted for just 5.2% of total demand in the first half of 2019, compared with just under a quarter in 2013 and 2014.

Figure 2.23: Breakdown of demand for loans by loan type

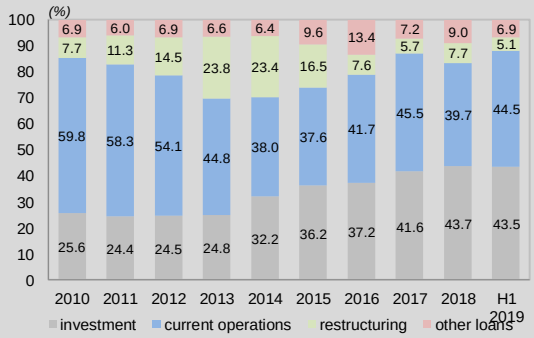
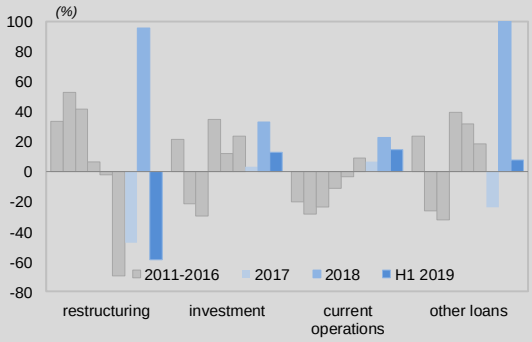


Figure 2.24: Growth in demand for loans in the manufacturing sector by loan type



Source: Bank of Slovenia

Year-on-year growth in demand for loans for investment slowed to 5.6% in the first half of 2019, down from 24.1% in 2018, which coincided with the slowdown in growth in investment. According to bank assessments, demand for loans for investment is higher at firms doing business on the domestic market, i.e. those less dependent on foreign markets. Some banks have observed increased demand for project financing in the construction sector. Demand in construction and real estate activities at the level of the banking system confirms these observations: growth was high in the first half of 2019, albeit after a relatively sharp decline in 2018.

Demand for loans for current operations was slightly higher in the first half of 2019 than in the preceding two years. The banks' findings with regard to the trends in this demand are contradictory (some say falling, others rising), although the small banks are particularly aware of the competitive pressure from the larger banks, who amid the lack of demand from larger firms are tailoring their services to smaller firms and are partly encroaching on the market segments covered by banks who generally serve SMEs.

Figure 2.25: Excess demand by loan type

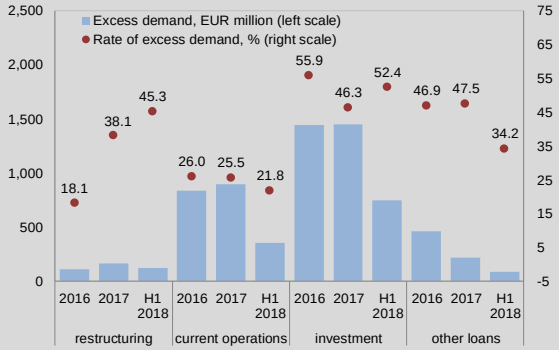
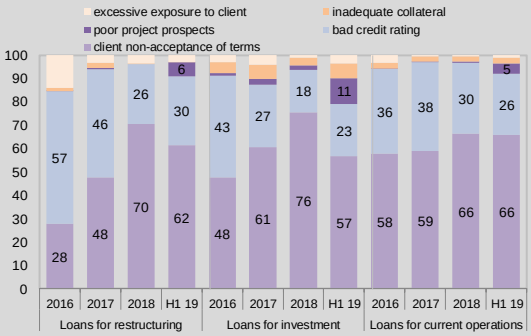


Figure 2.26: Breakdown of reasons for loan refusal by loan type



Source: Bank of Slovenia

In parallel with the rising demand, there was also an increase in loan approvals, which outpaced the rise in demand in 2018, but was slower than the rise in demand in the first half of 2019. The rate of excess demand therefore fluctuated: the rate of excess demand (agreements not concluded) stood at 40.2% in 2018, before falling to 37.9% in the first half of 2019. There was a pronounced trend of increase in the rate of excess demand for loans for restructuring, from 18.1% in 2016 to 60.8% in the first half of 2019. The main reasons cited for the agreements not being concluded was the customer's non-acceptance of the terms. Given that restructuring is conducted at creditor banks, and that debtors requiring restructuring do not obtain offers from other banks, it is likely that the banks set stricter terms for debt restructuring.

The rate of excess demand for loans for current operations declined sharply to just 11.2% in 2019. The loans are generally of shorter maturities and represent a lower risk for the banks than longer-term investments, which are also generally large in value. The rate of excess demand for loans for investment remains at just over 50%. The main reason cited for loan agreements not being concluded, which is gaining in importance in respect of loans for investment, remains the customer's non-acceptance of the terms offered by the bank, which is also a reflection of the high level of competition in the lending market, and the banks' efforts to increase market share through better offers. The proportion of loan applications refused because of the poor prospects of the project also saw a notable rise.

2.2 Banking system

The Slovenian banking system is maintaining a good capital position, and thereby the capacity to cover losses during any stress situations. Although the banking system's capital adequacy remains relatively good, there is significant variation from bank to bank. As economic growth slows, profit generation will remain a challenge for the banks, and sensible profit distribution will therefore be important, particularly at banks with low capital surpluses.

High liquidity is increasing the banking system's resilience to the funding risk primarily inherent in maturity mismatch. There is considerable variation between banks in their capacity to cover net liquidity outflows, although they also have the option of obtaining additional funding from the Eurosystem at a favourable cost.

The banks are protected against credit risk through their good coverage of NPEs by impairments, while the unimpaired portion of NPEs is well-covered by regulatory capital. Coverage by impairments and collateral is also good. Concerns are being raised about the low coverage of total exposures by impairments, which is at a record low level, primarily as a result of the reduction in the NPE ratio. An economic downturn generally causes claims to transition to lower rating grades and stages with higher credit risk, which could gradually be reflected in increased creation of impairments.

Solvency

The banking system's overall capital adequacy on an individual basis remains good. The gradual revival of credit growth has seen risk-weighted assets (RWA) increase by more than regulatory capital in recent years. This has gradually reduced the total capital ratio, but it remains higher than after the bank recapitalisations during the recovery process in 2014. The banks are meeting their capital requirements through the highest-quality form of capital, as a result of which the common equity Tier 1 capital (CET1)

ratio remains at 19.2% on an individual basis, only slightly lower than the total capital ratio, which stood at 19.7% at the end of the first half of 2019.

Figure 2.27: Banking system's capital ratios on an individual basis

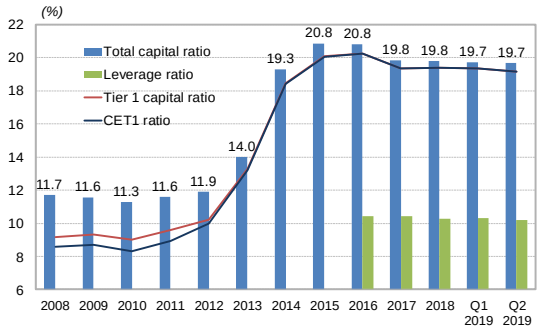
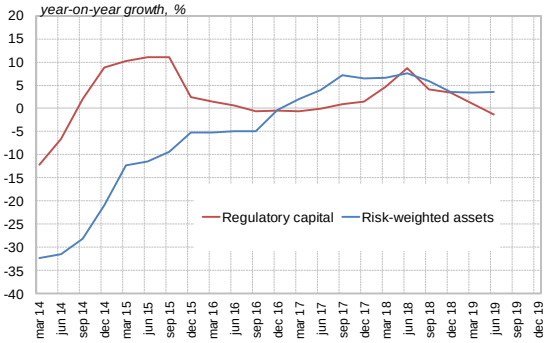


Figure 2.28: Changes in components of the total capital ratio on an individual basis



Source: Bank of Slovenia

The Slovenian banking system's total capital ratio on a consolidated basis has equalised with the euro area average,[35] **while its CET1 ratio is much higher.** The total capital ratio increased by 0.2 percentage points in the first half of 2019 to stand at 18.1%, as a result of a larger increase in regulatory capital than in RWA. The CET1 ratio remained unchanged at 17.6%, which ranks Slovenia in the top third of euro area countries. An additional indicator of the robustness of the Slovenian banking system is the ratio of regulatory capital to total assets, which at 12.5% is much higher than the EU average (6.9%).

Figure 2.29: Total capital ratio compared with the euro area, consolidated basis

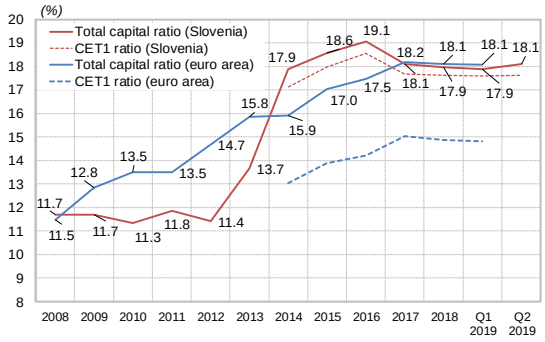
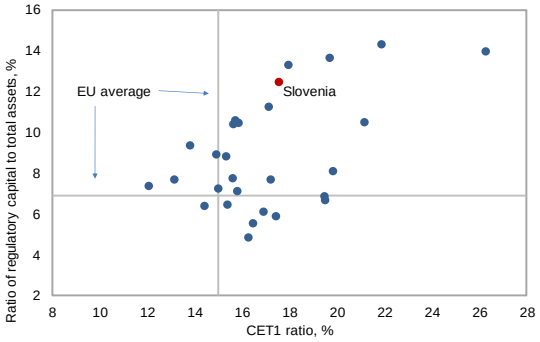


Figure 2.30: CET1 ratio and ratio of regulatory capital to total assets by EU country, March 2019, consolidated basis



Sources: Bank of Slovenia, ECB (SDW)

The risk weights used by Slovenian banks are higher than the euro area average. Credit risk exposures constitute the majority of total RWA (more than 85%) in the Slovenian banking system and on average in the euro area. The average risk weight for this segment of RWA stood at 45.3% in Slovenia in March 2019, compared with the euro area average of 30.2%. In contrast to the euro area average, credit risk exposures at the majority of Slovenian banks are assessed using the standardised approach,[36] which entails less opportunity on average to reduce the risk weights.

Capital position of banks

There remain significant differences in the capital positions of different banks. The significant banks[37] continue to stand out for their high total capital ratios and leverage ratios, which grant them better ability to cover any losses than is the case for other banks. The small domestic banks and savings banks made a slight improvement to their resilience to potential adverse shocks, as recapitalisations have seen them improve the CET1 ratio by 1.1 percentage points over the last 12 months to 14%. Despite the recapitalisations, their

[35] At the time of writing the latest data available for the euro area was for the first quarter of 2019. Data on a consolidated basis is used for all comparisons between Slovenia and the euro area overall.

[36] The standardised approach is used to assess 95% of risk-weighted credit risk exposures in the Slovenian banking system, compared with the euro area average of 54%.

[37] In line with the definition of the Single Supervisory Mechanism (SSM), they comprise the three largest banks in Slovenia, which are under the ECB's direct supervision: https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.listofsupervisedentities20190301.en.pdf

leverage ratio remains low at 4.7%, compared with the average across the banking system, which stood at 10.2% in June 2019.

Figure 2.31: CET1 ratio at various bank groups and sub-groups, individual basis

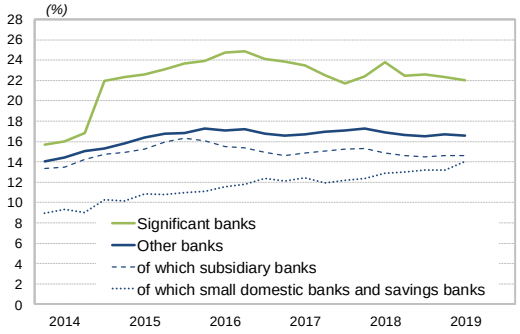
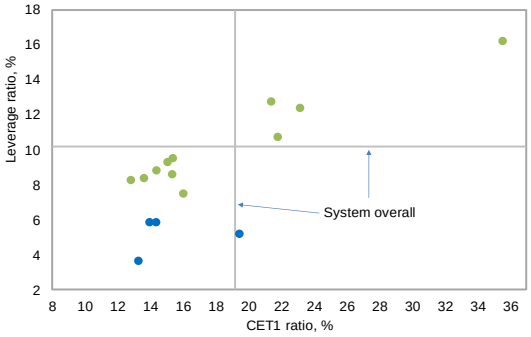


Figure 2.32: CET1 ratio and leverage ratio at individual banks, individual basis



Note: In the left figure the banks are divided into two groups: significant banks (in line with the definition of the SSM, they include the three largest banks in Slovenia, which are under the ECB's direct supervision), and other banks. The small domestic banks and savings banks constitute a sub-group of other banks. In the right figure the small domestic banks and savings banks are denoted by the blue dots.
Source: Bank of Slovenia

In addition to the highest-quality form of capital (common equity Tier 1 capital), the first half of 2019 also saw an increase in Tier 2 capital in the form of subordinated bonds issued by one bank. After a long period of decline, the proportion of regulatory capital accounted for by Tier 2 capital increased to 2.8% at the level of the banking system, but remained low relative to the euro area average (12.3%[38]). The increase in common equity Tier 1 capital was primarily in the form of retained earnings and other reserves, whereby the banks, in particular those under majority foreign ownership, did not retain their profits in full, but distributed them in the form of a shareholder dividend. As economic growth slows, profit generation will remain a major challenge for the banks, and sensible profit distribution will therefore be even more important to the maintenance of stable capital adequacy.

A major factor in capital management in the future will be the need to meet the minimum requirements for own funds and eligible liabilities (hereinafter: MREL). Banks that are earmarked for compulsory wind-down will provisionally receive an MREL in the amount of their capital requirements,[39] while higher requirements will be received by banks that meet the conditions for resolution.[40] All the banks will learn of their MRELs by the end of 2019. Slovenian banks' MREL-eligible instruments amounted to 15% of their total equity and liabilities at the end of 2018. Banks that are earmarked for resolution and have an MREL that is higher than their capital requirements primarily met the MREL via own funds (77% of the total), and less via unsecured claims and non-covered deposits (deposits by financial institutions, pension funds, government). Banks with a shortfall in MREL-eligible instruments have a transition period in which they will be able to provide for the requisite MREL-eligible instruments. Given their levels of operating profits, the banks should not have any difficulties in covering any MREL shortfalls. 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.

[38] Figure on a consolidated basis.
[39] The capital requirement is the sum of capital requirements under Pillar 1 and Pillar 2, and all buffer requirements.
[40] Resolution measures are applied at banks that meet the conditions in accordance with Article 55 of the ZRPPB (Article 32 of the BRRD, Article 18 of the SRM).

Figure 2.33: Breakdown of common equity Tier 1 capital, individual basis

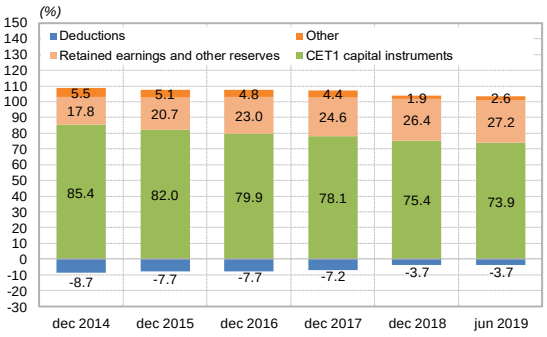
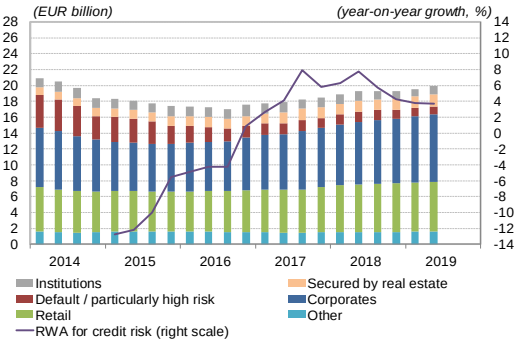


Figure 2.34: Breakdown of risk-weighted assets for credit risk, individual basis



Note: The abbreviation RWA in the key in the right figure stands for risk-weighted assets.
Source: Bank of Slovenia

The stock of risk-weighted assets is still increasing, albeit slightly more slowly than a year ago. Year-on-year growth stood at 3.6% in June 2019. The stock of risk-weighted assets vis-à-vis corporates and retail banking is continuing to increase, in the wake of further growth in lending to the aforementioned sectors. The first half of 2019 also saw an increase in risk-weighted assets secured by mortgages on real estate, which allow banks to apply lower risk weights. Because the conditions for applying lower risk weights are often not met, the proportion of total risk-weighted assets for credit risk accounted for by risk-weighted exposures secured by mortgages on real estate is still relatively low, at 7.6%. The ongoing improvement of the credit portfolio is reducing exposures in default and exposures associated with particularly high risk, which is slowing the growth in risk-weighted assets for credit risk and the average risk weight. This stood at 49.5% on an individual basis in June 2019, down 3.7 percentage points on five years ago. The future developments in risk-weighted assets will be determined by the macroeconomic situation and bank investment policies. The forecast slowdown in economic growth is expected to bring a decline in loans to the non-banking sector, particularly to corporates and households, which account for two-thirds of risk-weighted assets.

The banks will be exposed to changes in European banking legislation in the years ahead. June 2019 saw the introduction of the CRD5 and the CRR2,[41] which introduce risk mitigation measures at banks. Although the changes relate in part to the calculation of capital requirements, there is no expectation of any major change in capital adequacy at the level of the Slovenian banking system. The banks will also have a relatively long period to adapt to these changes, as the majority of the provisions of the CRR2 relating to the calculation of capital requirements only begin to be applied in mid-2021. Major changes in capital requirements are expected with the implementation of the final Basel III framework in EU legislation, as this will make significant changes to the rules for calculating capital requirements for credit risk under the standardised approach, which is used by the majority of Slovenian banks. Although the legislative proposals for these changes are for the moment merely in the process of being drafted, it is important for the banks to be aware of these changes when taking business decisions that could have an impact on their capital position in the future. Banks with lower capital surpluses are likely to find the announced legislative changes more difficult to face.

The resilience of the banking system is also determined via macro stress tests, which take a top-down approach. They assess the impact of baseline and adverse macroeconomic scenarios on bank balance sheet items, profitability and solvency. On the basis of the macro stress tests an assessment can be made of the potential impact and the consequences for the stability of the banking system if the unlikely but plausible systemic risks assumed under the macroeconomic scenario are realised. The Bank of Slovenia covered a period of three years in this year's macro stress tests, i.e. from 2019 to the end of 2021, based on data from the end of 2018. Two macroeconomic scenarios were used. The baseline scenario considers the most likely macroeconomic developments until 2021, and is based on the Bank of Slovenia's macroeconomic projections for Slovenia. The adverse scenario is determined by a deviation from the baseline scenario as defined within the framework of the EBA's EU-wide stress tests of 2018, and entails a potential deterioration in the macroeconomic situation (a cumulative decline in GDP of 2.3% over the three years of the adverse scenario). On the basis of the simulations, the Bank of Slovenia finds the Slovenian banking system to be stable. The banking system discloses sufficient capital adequacy under the baseline scenario and under the adverse

[41] Official Gazette of the Republic of Slovenia of 7 June 2019: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0876&from=BG, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0878&from=EN

scenario alike. These results are a consequence of Slovenian banks being relatively well-capitalised, and of having improved the quality of their credit portfolios, which is the result of the successful reduction of non-performing exposures in recent years.[42]

Bank liquidity

The large stock of primary and secondary liquidity[43] in the banking system is reducing its vulnerability in the event of the realisation of funding risk. The total stock of primary and secondary liquidity amounted to EUR 12.7 billion at the end of September 2019, or 31.3% of the banking system's total assets. The increase in primary liquidity in the form of interbank sight deposits and balances at the central bank seen since 2015 slowed slightly over the first nine months of 2019. The stock of primary liquidity nevertheless remains at a record high, and was equivalent to 11.7% of total assets in September 2019. The ratio of secondary liquidity to total assets remains relatively stable, and has stood at just under 20% since 2017. For the purpose of asset diversification, since 2017 the banks have in particular increased their holdings of foreign marketable securities rated BBB or higher, and in 2019 they also increased their holdings of Slovenian government securities.

Figure 2.35: Primary and secondary liquidity

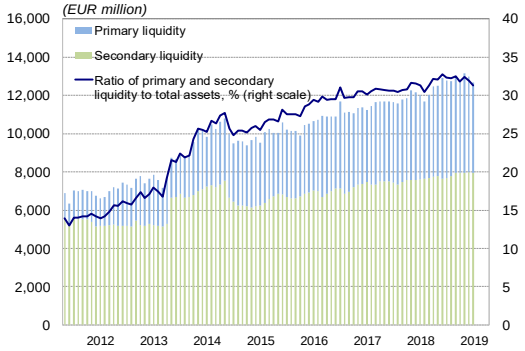
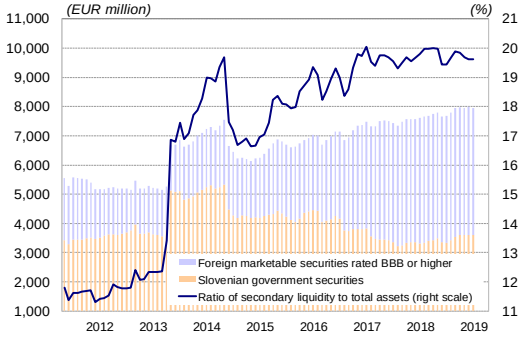


Figure 2.36: Breakdown of secondary liquidity



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

The banking system has high capacity to cover net liquidity outflows over a short-term stress period, although there is significant variation from bank to bank. The liquidity coverage ratio (LCR) stood at a high 321% at system level in September 2019, which ranks Slovenia second-highest in the EU. The LCR exceeds the minimum regulatory level of 100% at all Slovenian banks, and the lowest figures are at subsidiary banks with parent banks in the rest of the world. This could be a reflection of their liquidity management policies, and the expectation that in the event of major liquidity needs they could turn to their parent banks for assistance.

Figure 2.37: Liquidity coverage ratio (LCR)

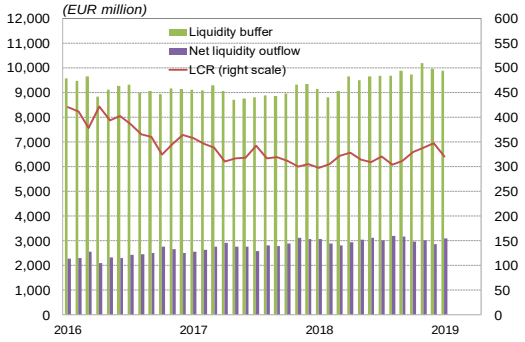
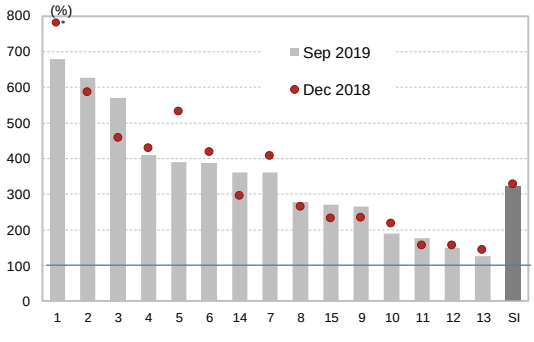


Figure 2.38: LCR at individual banks



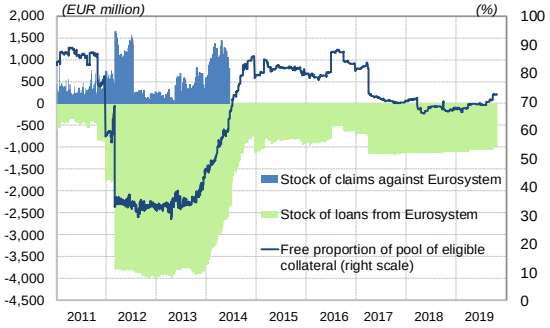
Note: In the right figure the blue line denotes the minimum requirement for the LCR in accordance with the CRR. Bank 1 had an LCR of 1,225% in December 2018 in the right figure.
Source: Bank of Slovenia

[42] https://www.bsi.si/en/media/1382/letosnji-stresni-testi-banke-slovenije-potrdili-stabilnost-slovenskega-bancnega-sistema

[43] Primary liquidity comprises cash on hand, balances at the central bank and sight deposits at banks. 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.

The high proportion of the pool of eligible collateral at the Eurosystem that is free allows the banks to obtain additional funds in the event of major liquidity needs. The aforementioned figure increased by almost 5 percentage points over the first nine months of the year to reach 72%. During this period the banks increased the size of the pool, and simultaneously prepaid part of their liabilities to the Eurosystem from longer-term refinancing operations (the TLTRO II). September 2019 saw the first tender in the third series of targeted longer-term refinancing operations (the TLTRO III), which Slovenian banks did not participate in, given their high excess liquidity. A motive for participating in one of the future tenders is likely to come from the maintenance of the net stable funding ratio (NSFR), as the residual maturity of the funds from the TLTRO II is less than six months, and they will therefore be excluded from meeting this ratio. At the same time the ECB has further improved the terms of this lending, thereby providing cheap long-term funding for banks, particularly those more active in lending.

Figure 2.39: Banks' claims and liabilities vis-à-vis the Eurosystem, and share of the pool of eligible collateral that is free



Source: Bank of Slovenia

Box 1.4: Systemic liquidity risk

The IMF defines systemic liquidity risk as occurring when "multiple financial institutions experience liquidity difficulties at the same time". These difficulties can result in institutions being unable to refinance their debt and/or obtain new funding, which could disrupt the functioning of financial intermediation and limit the supply of credit to the real sector, requiring central bank intervention.

Systemic liquidity is an endogenous concept. This means that a systemic liquidity crisis can not only be triggered by large exogenous liquidity shocks (e.g. a relatively large group of depositors simultaneously increase their need for liquidity), but can also arise endogenously as a result of the behaviour of financial institutions who fail to fully internalise the consequences of taking up liquidity risk into the financial system. Systemic liquidity risk is therefore closely related to the issue of collective moral hazard. Financial institutions have an incentive to collectively take up liquidity risk (herding) because of the explicit or implicit guarantees of the lender of last resort to prevent the collapse of the financial system.

If multiple financial intermediaries take up excessive risk, this could have harmful consequences for financial stability and the whole economy. Over-reliance on short-term wholesale funding and collective (i.e. related) on-balance-sheet exposures could trigger liquidity shocks at one bank, which are then transmitted to other financial institutions and markets, and worsen the liquidity stress of the whole system. The ECB's task force on systemic liquidity[44] has defined two dimensions based on which weak points can arise endogenously in the financial system in connection with systemic liquidity risk: cyclical and cross-sectional.

In connection with the cyclical dimension, systemic liquidity is characterised by the liquidity illusion, which means that during a boom phase there is a general (erroneous) impression that there are sufficient liquid assets in the system. The liquidity illusion affects both sides of the balance sheets of financial institutions, in that in boom times behavioural maturities are longer, while the liquidity of assets is greater than during downturns. The cyclical dimension relates in particular to the fact that in boom times market prices significantly overstate the settlement value of financial assets in the event of sharp deleveraging, when the (negative) impact on prices could be significant.

[44] The ECB's financial stability committee agreed in 2016 to form a dedicated task force on systemic liquidity. The task force was established to examine systemic liquidity risk and potential policy responses.

Therefore the liquidity illusion contributes to the generation of systemic liquidity risk in boom times. The liquidity illusion actually causes increasing "liquidity leverage", as a shrinking share of stable funding (i.e. under stress to the financial system) finances an increasing share of illiquid assets. When the liquidity illusion evaporates, highly indebted institutions are forced to deleverage and to carry out asset fire sales, which give rise to systemic liquidity risk.

The cross-sectional dimension of systemic liquidity risk relates to the direct and indirect interconnectedness of financial institutions, and increases the risk to financial stability from direct and indirect contagion. Direct contagion can occur when institutions are directly connected via loans, liabilities, ownership or other financial transactions. It is usually the result of overdependence on short-term unsecured funding, such as the money markets.

Liquidity hubs play an important role in the cross-sectional dimension of systemic liquidity risk. Markets are often characterised by centralised networks with few liquidity hubs, to which other financial institutions are directly linked. Liquidity shortages in liquidity hubs can disrupt the flow of liquidity throughout the financial system. Their reactions to liquidity problems, such as stops to rollover funding, can have a larger impact than similar actions by smaller, less connected institutions. *In extremis*, the action of these systemic liquidity providers may translate into asset fire sales.

Indirect contagion is also a powerful component of a systemic liquidity crisis. Indirect contagion occurs when the failure of a financial institution triggers financial distress at other financial institutions with no direct linkages. It might thus make it more difficult to assess systemic liquidity risk, as the failure of a small market (e.g. the US sub-prime credit market in 2007) can sometimes develop into a systemic crisis. Several factors explain how indirect contagion might occur: exposure to common assets, fire sale externalities, information spillovers, margin calls and haircuts. Another form of indirect contagion can materialise via asset concentration (e.g. many institutions holding the same assets). When several banks want to simultaneously liquidate (even the most liquid) assets, they might not always be able to do so because the markets might not be deep enough at that point of the liquidity cycle.

The cross-sectional and time dimensions are likely to reinforce each other, making liquidity buffers less effective. The liquidity illusion during boom phases incentivises financial institutions to fund more activities with short-term wholesale funding. Short-term wholesale funding increases the level of interconnectedness and the role of liquidity hubs. Moreover, the build-up of liquidity buffers may fuel systemic liquidity risk when these buffers are insufficiently diversified, giving rise to indirect contagion.

Various indicators capturing the aforementioned cyclical and cross-sectional dimensions have been set out for monitoring the development of systemic liquidity risk. The indicators relating to the (composite) liquidity ratios or market liquidity include the cyclical dimension of systemic liquidity risk in particular. Examples are the leverage ratio, the ratio of the central bank-eligible share of CBC to total assets, the ratio of short-term funding to total assets, and the bid/ask spread of government bonds. Indicators relating to the direct and indirect interconnectedness of financial institutions are better indicative of the cross-sectional dimension of systemic liquidity risk. Examples:

a) self funding, which measures the quantity of securities issued by the financial sector (the banking or non-banking subsectors) and held within the same sector (or subsector), and is an indicator of direct connections between financial institutions;

b) investor base concentration, which measures the ratio of the value of bonds held by the domestic financial sector to the total residual market value of the bonds, and is an indicator of indirect connections between financial institutions via common asset points.

There are also indicators that can warn of potential funding difficulties, such as those that relate to asset encumbrance, and can point to difficulties in obtaining unsecured market funding.

Banks' resilience to credit risk

The banks' activities to reduce legacy NPEs are having a significant impact on coverage of NPEs by impairments.[45] The reduction in NPEs on bank portfolios via sales and write-offs is being reflected more in the decline in impairments, as those removed claims are impaired to an above-average degree or are even fully impaired. Coverage by impairments increased slightly to reach 54.9% by August 2019, before falling to 53.0% in September in the wake of a large reduction in NPEs (in absolute terms, the largest of the first nine

[45] The term "impairments" is used in this section to refer to allowances, value adjustments and provisions for credit losses that were recorded by banks in accordance with IFRS 9.

months of the year). Impairments for the residual non-performing segment of the portfolio amounted to EUR 621 million in September 2019, down a third on the end of 2016.

The breakdown of the decline in impairments in 2019 confirms that the largest factor remains the reduction in non-performing exposures. The majority of the decline in impairments in 2018 and the first half of 2019 was in the corporate portfolio, while around 6% was in the household portfolio. The decline in impairments amounted to more than EUR 0.5 billion in 2018 and an additional EUR 300 million in the first half of 2019, as a result of write-offs of NPEs, repayments and sales to third parties. Other factors that contributed to the change in impairments for credit risk were less important. Given their assessments of a net decline in credit risk in exposures to corporates, the banks reduced impairments in the corporate portfolio by a modest amount in 2018, before increasing them by EUR 12 million in the first half of 2019, most likely in connection with the expectations of a future economic slowdown. In the household portfolio, judging by impairments for changes in credit risk, the banks do not yet see any need for an increase in impairments, despite the forecasts of a deterioration in the macroeconomic environment.

Figure 2.40: Coverage of NPEs by impairments by principal client segment

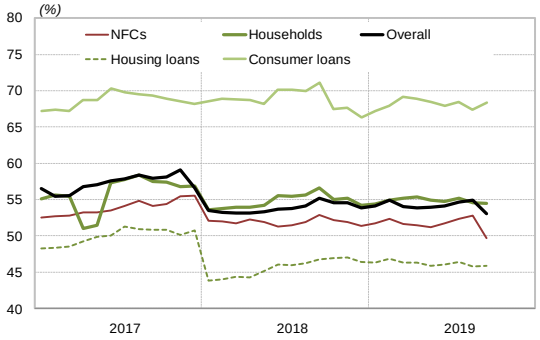
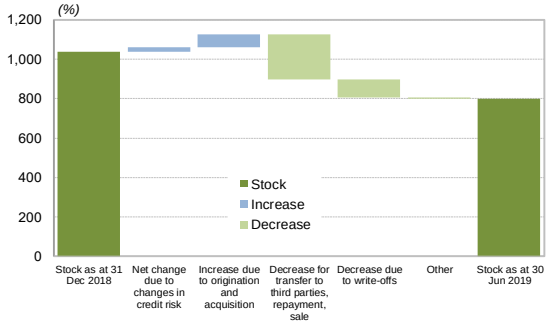


Figure 2.41: Change in impairments for credit losses in the first half of 2019



Source: Bank of Slovenia

Average coverage of NPEs by impairments is relatively good, although there is great variation from bank to bank. The distribution of coverage of NPEs by impairments across the banks is wide. The bottom quartile contains banks with coverage of less than 40%, with the figure approaching just 20% at certain banks. There has also been a discernible trend of declining coverage by impairments at these very banks. The banks with lower coverage include two banks with high NPE ratios of just below 5%. The banks are compensating for their lower coverage by impairments through higher coverage by collateral. Overall coverage of NPEs by impairment and collateral exceeded 90% at the majority of banks, and only one bank with a higher NPE ratio had coverage of less than 80%.

Figure 2.42: Distribution of coverage of NPEs by impairments across banks

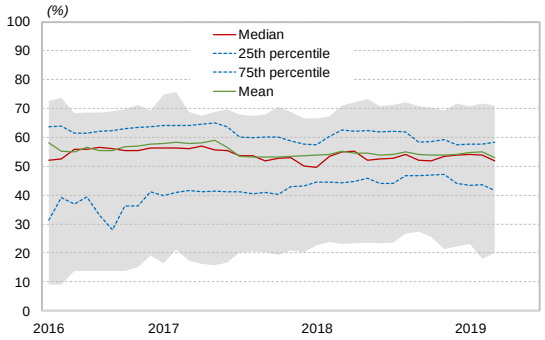
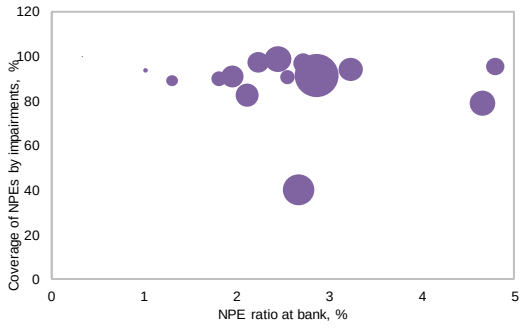


Figure 2.43: NPE ratios and coverage by impairments at individual banks, September 2019



Note: The size of the circles in the right figure reflects the size of the stock of NPEs at the bank in question.
Source: Bank of Slovenia

Total impairments for the performing and non-performing parts of the portfolio are at a record low level relative to total assets. The ratio was comparable, but slightly higher, just before the outbreak of the financial and economic crisis, when the stock of impairments failed to keep pace with the extremely fast growth in the banks' total assets. It was only at the outbreak of the crisis (and the revelation of the low quality of the credit portfolio of that time) that impairments began rising rapidly. The ratio of impairments to

total assets had declined to 1.9% by September 2019, and coverage of the total portfolio was similar.[46] The decline in impairments for total exposures is partly attributable to the improvement in the structure of bank assets (larger shares of performing claims, upgrading of claims), although in the event of a renewed increase in non-performing exposures the failure to create impairments for credit risk in timely fashion could prove to be a weakness. An economic downturn generally leads to worse model assessments of credit risk and simultaneously triggers transitions to lower rating grades and to stages (for the purpose of calculating credit losses) with increased credit risk, which could gradually be reflected in increased creation of impairments.

Figure 2.44: Coverage of performing, non-performing and total exposures by impairments

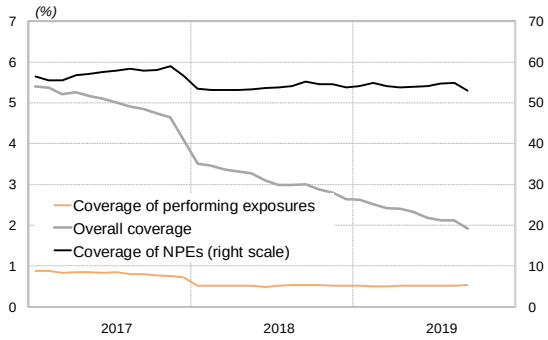
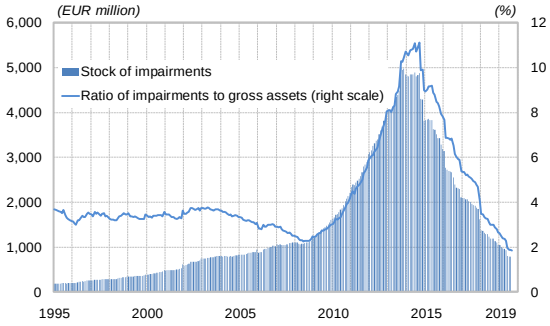


Figure 2.45: Stock of impairments and ratio to gross assets



Source: Bank of Slovenia

The inclusion of collateral and regulatory capital in the indicators of coverage of NPEs shows the banks' increased resilience to credit risk. Coverage on NPEs by impairments and collateral stood at 89.1% in August 2019.[47] The indicator was higher than at the end of 2016 for all customer categories (despite the decline caused by the introduction of IFRS 9 in 2018) other than non-residents, where the highest value is recorded. Coverage of NPEs by capital is extremely high: regulatory capital exceeds the unimpaired portion of NPEs by more than seven times. The distribution of this indicator across the banks is wide, although it exceeds 100% at all of them, including those notable for low coverage of NPEs by impairments.

Figure 2.46: Coverage of NPEs by impairments, provisions and collateral by customer segment

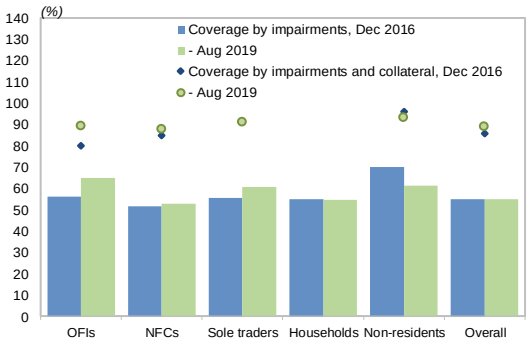
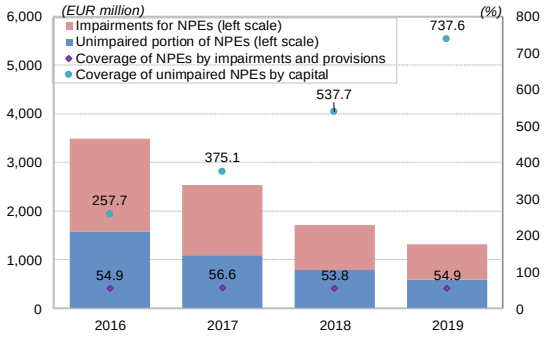


Figure 2.47: Coverage of unimpaired NPEs by capital



Note: In the left figure the calculation of coverage takes into account the collateral value solely up to the amount of the unimpaired portion of the claim, or the total collateral value if the aforementioned amount is not reached.
Source: Bank of Slovenia

Changes in banks' business models and maintenance of profitability

Like banks in the broader European space, Slovenian banks are facing numerous changes in the financial and economic environment, and also modified their business models accordingly in previous years. Other factors in the recent changes in the banks' business models include changes in requirements and customer habits, technological development,[48] and changes in the regulatory environment. The business model that prevails at the majority of banks in Slovenia is based on taking deposits from the non-banking sector on the funding side, and lending to the non-banking sector on the investment side. According to the

[46] Matching is not necessary: the banks' total exposure, which is used to calculate NPE ratios, does not capture all on-balance-sheet items, and includes certain off-balance-sheet items.
[47] Exposures to households are not taken into account.
[48] For more information, see the thematic section entitled *Impact and use of fintech in the banking system*.

classifications of the ECB and the BIS, Slovenian banks could be considered as small market lenders or retail-funded commercial banks, and the majority of banks are universal banks.

Over the last two decades the banks have adjusted their approaches to funding with regard to their investment policies. The financial crisis just over a decade ago was a major factor in the banks modifying their business models in the post-crisis period.[49] From the perspective of the structure of lending, the banks redirected towards households, significantly reducing corporate lending and increasing household lending in relative terms. Other reasons for the decline in corporate loans in the period after 2008 lie in the recovery and resolution process in 2013 and 2014, and the simultaneous transfer of a significant portion of the portfolio of the recovered banks to the BAMC, while other factors included the commitments given to the European Commission by the banks that received state aid, the resolution of non-performing claims in recent years, and smaller corporate demand for loans, partly as a result of financing via internal resources and retained earnings. On the funding side, there was a sharp rise at that time in the importance of deposits by the non-banking sector, while the importance of wholesale funding declined. In addition, there was a significant decline in leverage in the banking system at that time, which was attributable not only to the contraction in the balance sheet, but also to the bank recapitalisations a few years earlier and to profitability.

Figure 2.48: Share of loans and main forms of funding to total assets

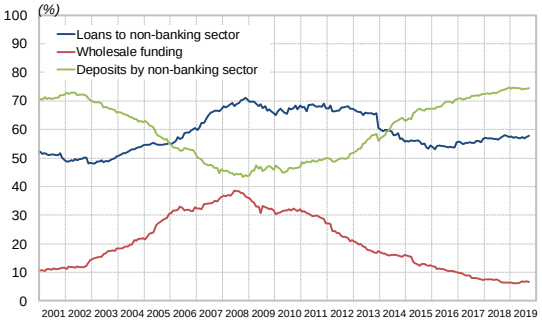
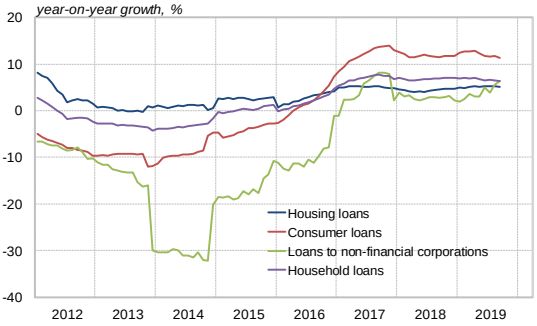


Figure 2.49: Growth in loans to households and corporates



Source: Bank of Slovenia

The resilience of the banking system from the perspective of ensuring adequate profitability will depend on several factors over the medium term: lending and the generation of positive growth in net interest income, a stable increase in non-interest income, credit risk management, and the optimisation of operating costs. The Slovenian banking system is strongly outperforming the euro area average in terms of profitability. Future growth in net interest income will depend on growth in corporate loans. As in other banking systems, there is an expectation that in the low interest rate environment the banks will face smaller returns on loans and securities, which will depress interest income.

Some banks also have above-average holdings of liquid, low-yielding investments in the form of claims against the central bank, sight deposits at banks, and low-yielding securities. In relation to net fees and commission, the most stable component of non-interest income, the trend of moderate increase can be expected to continue, although it is necessary to take account of the fierce competition for services, including from fintech firms.

One-off factors of high non-interest income can also gradually be expected to diminish. On the income disposal side, the net release of impairments and provisions has been the dominant factor in the banks' high profitability over the last three years. Had the ratio of impairment and provisioning costs to gross income been at its long-term average, ROE in 2018 would have only amounted to 40% of the observed value.

Operating costs declined in previous years but recorded moderate growth in 2019. Slovenian banks have a relatively high ratio of operating costs to total assets, which is partly attributable to the relatively shallow banking system. By contrast, the ratio of operating costs to total assets and the CIR are similar or better than

[49] In certain periods the structure of the banks' assets and liabilities also reflected certain institutional characteristics, or their preferences with regard to investment policy and funding approach. Changes over various horizons and periods can be highlighted: 1) from the turn of the millennium to Slovenia joining the EU (2000 to 2004), 2) the years of bank borrowing on international financial markets and Slovenia's convergence in the EMU, until the outbreak of the financial crisis, which coincided with a wave of lending (2004 to 2008), 3) the crisis years until the bank recovery and resolution (2009 to 2013), and 4) the years of gradual stabilisation, which followed and coincided with the deleveraging process in the banking system.

those of comparable large banks in the euro area. Reductions in operating costs are limited in the short term by the high labour cost component, while in recent years the banks have had to focus on overhauling and investing in information technology. Developments can be expected to less favourable in the coming years, which is likely to reduce the banks' profitability, which is currently above-average.

Resilience of the banking system to risks in the real estate market

The realisation of these risks would have a less pronounced impact on the banking sector, as exposure to developments on the real estate market remains relatively low. The banking system's resilience to the risks inherent in the real estate market is also greater than during the last financial crisis. In the event of any downturn on the labour market, risks could arise in households' debt servicing capacity, although housing loans have not seen excessive growth in previous years, and the rate remains moderate and stable, while housing loans are adequately secured overall. The level of financing for real estate purchase that is covered by equity also remains relatively high, both for households and for investors.

Growth in housing loans remains moderate and stable, and the banking system's exposure to construction is low. The banking system's exposure to the real estate market remains relatively low: the ratio of housing loans to GDP is the lowest in the euro area, while year-on-year growth in housing loans remains moderate at close to 5% (September 2019). The banking system's exposure to construction is also relatively low: the stock of loans to the sectors of construction and real estate activities amounts merely to around EUR 1 billion, down significantly on the 2012 figure of EUR 3.6 billion. Loans to the construction sector remain low despite the launch of a new construction cycle over the last two years, which suggests that many construction projects are being financed by internal resources or funds from outside the Slovenian banking system. The risk to the banking system in the event of a downturn in the economy or on the real estate market is thus relatively low, but the risks to firms are greater than during the last crisis.

Figure 2.50: Stock of loans to the construction and real estate activities sectors

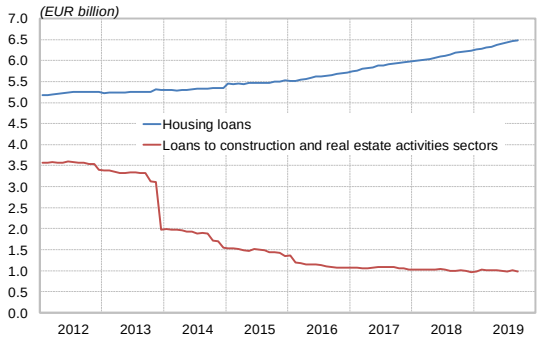
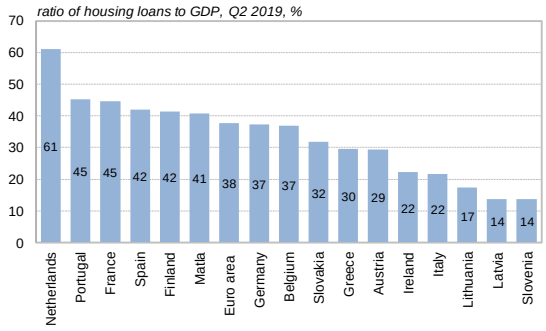


Figure 2.51: Ratio of housing loans to GDP



Sources: Bank of Slovenia, ECB (SDW)

The ratio of new housing loans to the volume of transactions in residential real estate increased slightly in the first half of 2019, but remains relatively low. The buoyant labour market is increasing households' ability to finance real estate purchases with their own resources, which at the same time entails lower credit risk for banks in the event of an economic downturn. Banks nevertheless remain a significant source of financing for real estate purchase, particularly in light of the favourable loan terms.

The average maturity of housing loans is lengthening, which could increase credit risk at banks, as the likelihood of a downturn on the labour market is greater over the long term, as is the probability of default at households. The long-term policy of low interest rates is as expected increasing the maturity of housing loans: approximately half of new housing loans are approved with a maturity of more than 20 years. Amid the current low interest rates on loans, the banks could also see an increase in the risk of a future rise in liability interest rates, and thus a negative impact on the net interest margin, as the proportion of loans carrying a fixed interest rate is increasing at the same time. Approximately two-thirds of the stock of housing loans still have a variable interest rate. In the wake of new stimulus measures by the ECB, the average fixed interest rate remains close to 3%, 1 percentage point higher than average variable interest rate in the euro area.

Figure 2.52: Volume by type of real estate

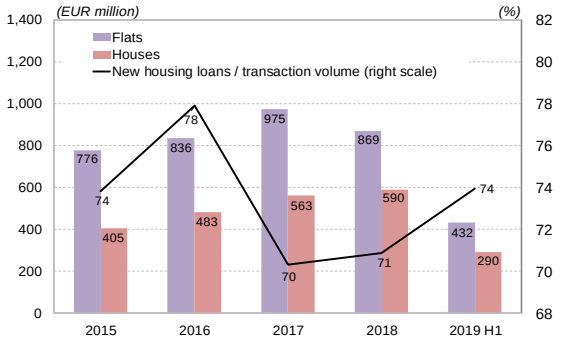
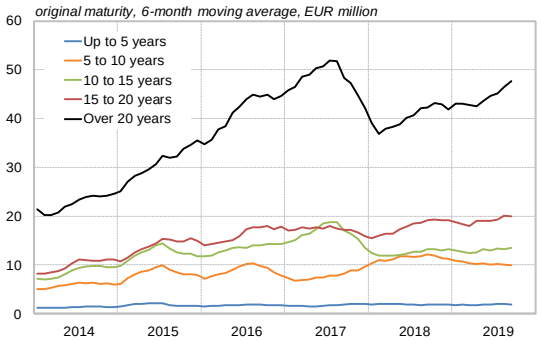


Figure 2.53: Breakdown of new housing loans by maturity



Sources: SMARS, Bank of Slovenia

The robustness of the banking system is also reflected in the falling LTV and the unchanged credit standards,[50] which according to the BLS remain tighter than a decade ago. The average LTC[51] for housing loans declined to 55.2% in the third quarter of 2019. The weighted average LTV[52] stood at 67.6% in the third quarter, while the DSTI[53] stood at 37.7%. According to the BLS, credit standards for housing loans remain unchanged, and tighter than the average in 2010. After a long period of easing, similar developments in credit standards for housing loans were also seen in the euro area in 2019. Slovenian households' financial liabilities are gradually increasing, but are falling in ratio to GDP and disposable income, while the proportion of owner-occupiers with a mortgage remains among the lowest in the euro area (at 12% in 2018). The overall proportion of owner-occupiers in Slovenia also remains among the highest in the euro area, at 75%.

Figure 2.54: New housing loans and collateral

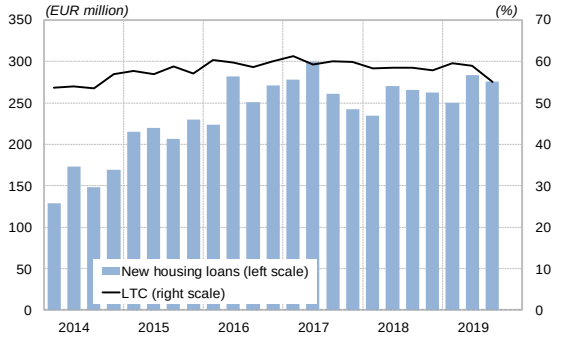
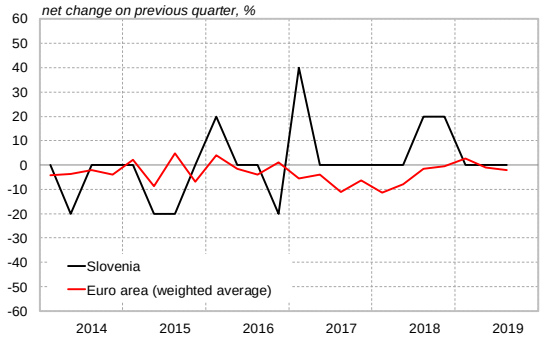


Figure 2.55: Credit standards for housing loans



Note: The data in the right figure illustrates the net percentage change in credit standards on the previous quarter. A positive net change indicates a tightening of credit standards, while a negative net change indicates an easing of credit standards.
Sources: Bank of Slovenia, ECB (SDW)

[50] Credit standards are the internal guidelines and criteria according to which a bank approves a loan. They are established before the actual negotiation of loan terms, and before the actual decision to approve or deny a loan. Credit standards define the required attributes of the borrower (e.g. assets, income situation, age, employment status) based on which a loan can be obtained. Loan terms refer to the terms of a loan that the bank is willing to approve, i.e. to the terms of the loan actually approved, as stated in the loan agreement concluded by the bank (the lender) and the borrower. In general they include an agreed premium over the benchmark interest rate, the value and maturity of the loan, the terms of access and other terms in the form of non-interest charges (fees), and the collateral or sureties that the individual borrower must provide. Loan terms are dependent on the attributes of the borrower, and may be modified in parallel with credit standards, or independently of them.

[51] The loan-to-collateral is the value of of a housing loan to total collateral.

[52] The loan-to-value is the ratio of the value of a housing loan to the value of the residential real estate pledged as collateral. All loans secured by residential real estate are taken into account.

[53] The debt service-to-income is the ratio of the annual debt servicing costs to the borrower's annual income when the loan agreement is concluded. All housing loans and consumer loans secured by residential real estate are taken into account.

2.3 Non-bank financial institutions

Non-bank financial institutions constitute a quarter of the Slovenian financial system. They are divided in terms of their operations into insurance corporations and reinsurance corporations, pension companies and funds, mutual funds, leasing companies, and other non-bank financial institutions. In the current situation the resilience of the non-bank financial system remains relatively high, although risks are strengthening in individual areas, which could have an impact on resilience in the future.

The resilience of the insurance sector remains relatively high. The good performance of the insurance sector is being reflected in growth in gross written premium, and growth in total assets and profit. Insurance corporations are continuing to successfully compensate for the adverse impact of the low interest rate environment with growth in written premium and lower claims, but this environment nevertheless represents a significant risk for them. Capital adequacy in the sector also remains favourable. The low interest rate environment is having an adverse impact on the performance of pension companies and funds, particularly in the guaranteed fund sector, where the investment risk is entirely borne by the fund operators.

Leasing companies' resilience remains good, and this is being reflected in further growth in total profits, in an improvement in the ratio of equity to loans, and in a further decline in the proportion of claims more than 90 days in arrears. The cooling economy is already being reflected in slower growth in new loans. The latter is also attributable to increased competition from banks in the finance leasing sector.

Mutual funds' resilience also remains good: their investment structure guarantees sufficient liquidity. Booming stock markets mean that market risk remains high, while net inflows remain stable.

Insurers

Insurance corporations saw further growth in gross written premium in 2019. Gross premiums increased in all three insurance segments, which was reflected in a year-on-year increase of 7.4%. There was also a year-on-year improvement in the claims ratio, most notably in the general insurance segment, which was a factor in the year-on-year increase in net profit. Insurance corporations recorded their highest growth in gross premium in the non-life insurance segment, while growth in the life insurance segment was moderate, which was attributable to the increased uncertainty surrounding future economic growth and the uncertain situation on the stock markets.

In the reinsurance segment the highlight of the first nine months of the year was the growth in gross written premium in fire and natural disaster insurance and other property insurance, which saw reinsurance corporations' gross premiums increase by 18.2% in year-on-year terms. Claims declined over the same period, most notably in the general insurance segment at insurance corporations, which had a positive impact on claims ratios at insurance corporations and reinsurance corporations.

Supplementary health insurance is provided in Slovenia by three insurance corporations, whose share of insurance corporations' total gross written premium remains stable at around a quarter. Gross written premium for supplementary health insurance over the first nine months of 2019 was up in year-on-year terms, primarily as a result of the recent rise in prices, which also brought an increase in the profit from supplementary health insurance from EUR 3 million to EUR 10 million. The latter accounted for 8% of insurance corporations' total profit. Given its heavy impact on gross written premium and moderate impact on profit, any abolition of supplementary health insurance without appropriate solutions or without the application of a transition period would have a material impact on the resilience of the insurance sector.

Figure 2.56: Gross written premium and annual growth by type of insurance

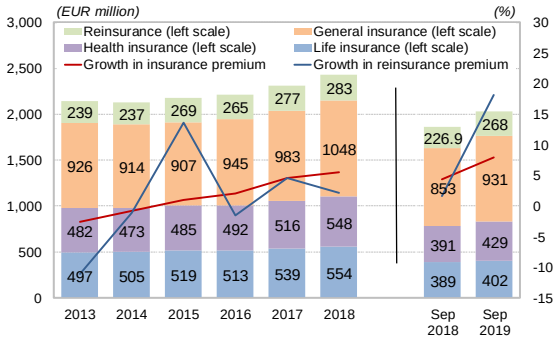
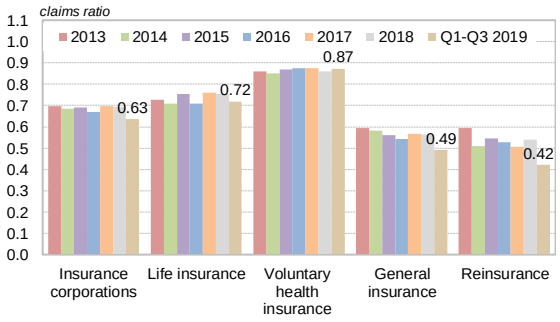


Figure 2.57: Claims ratio for major types of insurance



Note: The figures for growth in insurance premium in the first nine months of 2018 and 2019 are based on a year-on-year comparison.
Sources: ISA, Bank of Slovenia

Insurance corporations are improving their performance on the basis of growth in gross written premium and a simultaneous decline in the claims ratio, as a result of which the adverse effects of the low interest rate environment remain manageable, and the resilience of the insurance sector remains at an appropriate level. Insurance corporations' net profit over the first nine months of 2019 was up 16.4%, while the negative impact of the low interest rate environment has been reflected in declining investment income in recent years. The latter was down an additional 16.7% in year-on-year terms in September, at EUR 42 million, while the proportion of insurance corporations' net profit accounted for by investment income declined by 14 percentage points to 33.6%.[54] Almost half of the investment income consists of interest income (EUR 19 million). Reinsurance corporations' net profit was broadly unchanged from 2018, despite pronounced growth in gross written premium, as they also saw a significant rise in operating costs, while their investment income increased, thanks to a different asset structure from the insurance corporations.

The structure of insurance corporations' investments remains stable, despite the low interest rate environment. The proportion held in bonds of high, medium and low investment grades[55] has increased over the last two years, while the proportions held in shares and investment funds remained at the same level. Insurance corporations will see EUR 1 billion of bonds mature in the next two years, or 20.3% of their total bond holdings. Given the low interest rate environment, insurance corporations have to date primarily increased their exposure to bonds of longer maturities (more than 10 years). In the quest for higher yields, in the future too they can be expected to increase their exposure to bonds of longer maturities and lower ratings.

Figure 2.58: Structure of financial assets

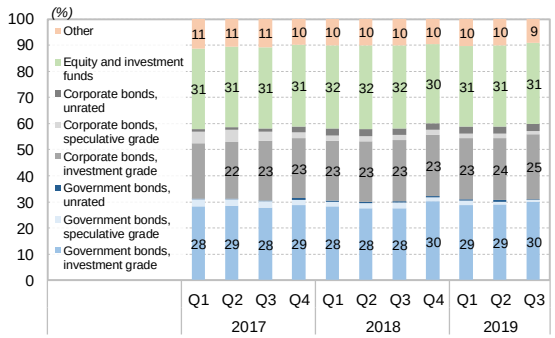
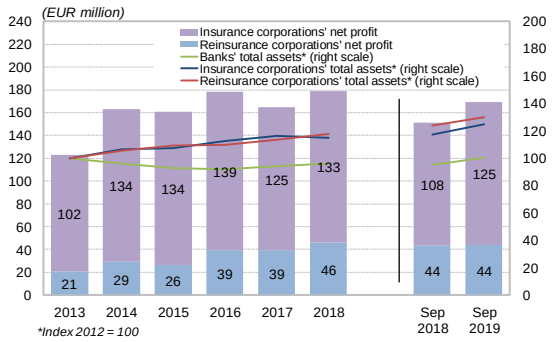


Figure 2.59: Insurers' net profit and total assets



Sources: Quarterly Solvency II figures for insurers, ISA, Bank of Slovenia

Good performance is also being reflected in growth in total assets. Insurance corporations and reinsurance corporations saw their aggregate total assets increase by 5.7% to EUR 8.7 billion. The resilience of the insurance sector remains high from the perspective of performance, although the situation on the insurance market could change if the economy cools significantly in the persistent low interest rate environment, which would have an adverse impact on future gross written premium or could lead to an increase in loss events.

[54] For comparison, the figure was 65.4% in 2016.
[55] Bonds are considered investment grade if they are rated Baa2 or BBB- or higher.

Capital adequacy,[56] which according to Solvency II consists of the ratio of the eligible own funds to the solvency capital requirement, remains relatively high at insurance corporations and reinsurance corporations. Capital adequacy with regard to the solvency capital requirement (SCR coverage ratio) declined slightly at insurance corporations, although the number of insurance corporations with an SCR coverage ratio of less than 200% had fallen to six in September 2019, down in year-on-year terms, while the median value improved at the same time. Capital adequacy in terms of the minimum capital requirement (MCR) coverage ratio also deteriorated slightly at both extremes, but the median improved. Given the slightly different nature of their business, the two reinsurance corporations saw their SCR and MCR coverage ratios increase: the SCR coverage ratio strengthened sharply to more than 250%, while the MCR coverage ratio surged past 600%.

The quality of own funds for capital adequacy valuation purposes also remains appropriate. Own funds consist of the surplus of assets over liabilities, valued under the rules set out by the ZZavar-1, and subordinated liabilities, which together constitute basic own funds, and ancillary own funds. Own funds are divided into three tiers. Own funds eligible for covering the solvency capital requirement are Tier 1 items (no limit), and Tier 2 and Tier 3 items up to a certain limit. Only basic own funds are eligible for covering the minimum capital requirement, including Tier 1 items (no limit), and basic Tier 2 items up to a certain limit. In both cases insurance corporations' assets in the form of unrestricted Tier 1 items make up more than 91% of the total (100% at reinsurance corporations), while Tier 2 assets do not exceed 7% of insurance corporations' eligible basic own funds.

Figure 2.60: Capital adequacy in terms of SCR coverage ratio (insurance corporations)

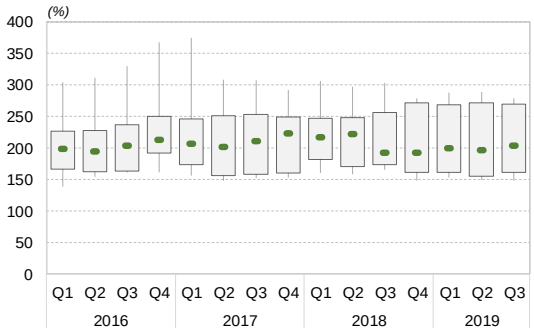
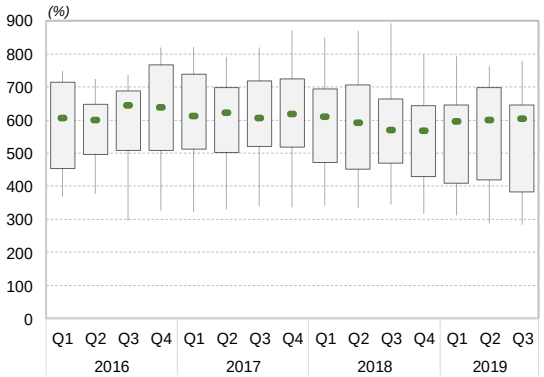


Figure 2.61: Capital adequacy in terms of MCR coverage ratio (insurance corporations)



Note: The 10th and 90th percentiles are taken as the upper and lower limits.
Sources: Quarterly Solvency II figures for insurers, ISA, Bank of Slovenia

Pension companies and pension funds

Pension insurance in Slovenia still relies primarily on the first pillar state pension, which is based on a system of coverage by current contributions, into which employers' and employees' contributions flow, and from which current pensions are financed. Given the large number of retirees, this system has rising outflows, and also diminishing inflows as the workforce shrinks. According to projections by Eurostat, the share of Slovenia's population aged 65 and over will increase from the present level of 19.4% to 28.5% in 2040, while the share of the population aged between 25 and 64 will decline from the present level of 56.2% to 48.5%. This is also being reflected in a continual decline in average pension payments. The average old age pension fell to below 60% of the average wage in 2016, since when it has remained below the aforementioned level, while the OECD sets the lower limit for ensuring a decent standard of living in retirement at 70% of the average wage before retirement. The majority of advanced economies are facing similar challenges.

[56] The data on capital adequacy is obtained on the basis of insurers' quarterly reporting under Solvency II. The graphical comparison of capital adequacy and minimum capital includes only the insurers that reported over the entire period (13 insurance corporations).

Figure 2.62: Ratio of average pension paid to average wage in Slovenia

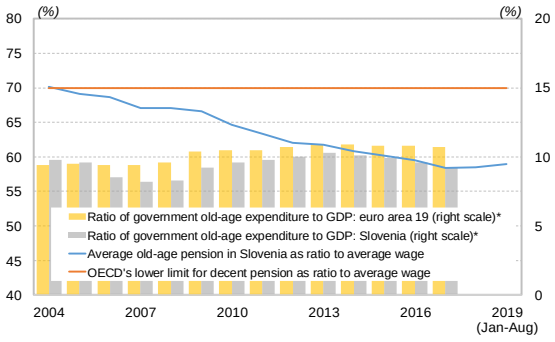
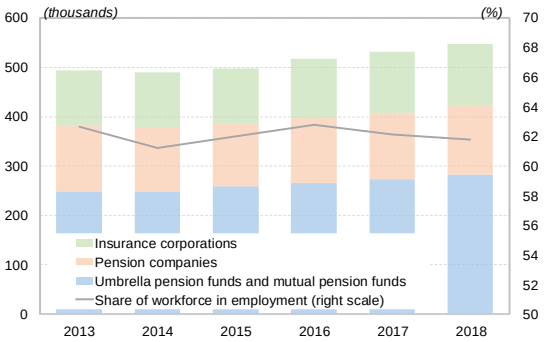


Figure 2.63: Number of people included in voluntary supplementary pension insurance



Note: *Data for the ratio of government expenditure on old age to GDP is available to 2017.
Sources: PDII, Eurostat, gov.si, SORS, Bank of Slovenia

Voluntary supplementary pension insurance is trying to plug the growing gap between the average old-age pension and the decent pension stipulated by the OECD. Voluntary supplementary pension insurance in Slovenia is offered by five mutual pension funds under umbrella pension funds, three pension companies and three insurance corporations. The share of the workforce that is included in voluntary supplementary pension insurance has ranged between 61% and 63% in recent years, while the assets under management in pension funds amounted to EUR 2.3 billion in December 2018.[57] The average monthly premium is EUR 57 at insurance corporations, EUR 74.2 at pension companies, and EUR 38 at mutual pension funds.

Despite the introduction of lifecycle funds in 2015, the majority of policyholders' assets remain in guarantee funds, where investments in debt securities prevail. At guarantee funds all the investment risk is borne by the fund operator, whose own assets back the payment of the principal and the achievement of a guaranteed return. Investments in debt securities therefore constituted the majority (64.5%) of all marketable assets in June 2019, the figure having fallen by 5 percentage points over the last five years.

Investment opportunities that allow funds to achieve at least the guaranteed return are diminishing in the low interest rate environment. Pension fund operators are therefore switching investments into countries and regions that provide for a higher return, albeit at higher investment risk. Exposures to the euro area have gradually been declining in recent years, while exposures to the US and other EU Member States have been increasing. The prevailing investments are in government debt securities (51% of the total) and debt securities issued by non-financial corporations (25%). The investment structure in terms of institutional sector has not changed significantly over time.

Figure 2.64: Breakdown of assets by pension fund investment policy

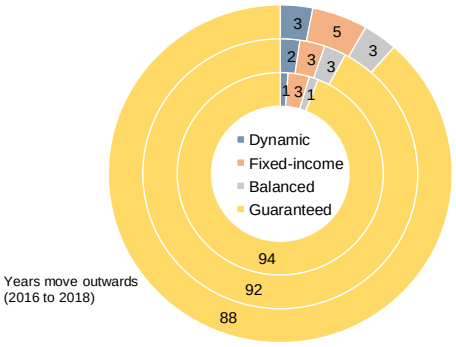
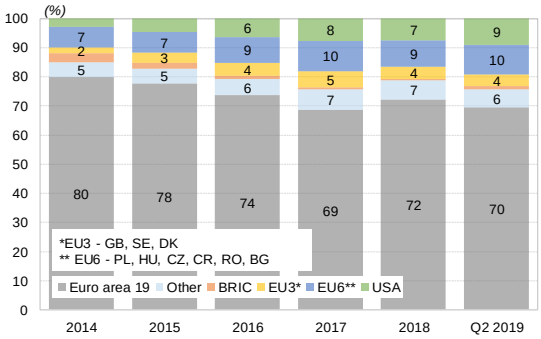


Figure 2.65: Regional breakdown of pension funds' investments in debt securities



Note: The left figure includes data reported to the Bank of Slovenia by legal persons transacting in securities from Section S.129 Pension funds.
Sources: gov.si, Bank of Slovenia (SHSS)

[57] According to data available on the government website at: https://www.gov.si/.

Leasing companies

Leasing business constitutes a small part of the Slovenian financial system, but is nevertheless a significant source of financing for households and corporates in particular. Both use leasing companies' services[58] primarily to finance the purchase of vehicles. Vehicle purchases accounted for 77.5% of the total stock of leasing business at the end of the third quarter of 2019. The global slowdown in the automotive industry has also been reflected in Slovenia, with a fall in the number of first-time vehicle registrations in 2018, and no change in the number during the first seven months of 2019. This brought a continuing decline in new leasing business over the first three quarters of 2019. The systemic risks from the performance of leasing companies nevertheless remain low, although the risks are increasing as the economy cools.

The ongoing decline in growth in new business in 2019 was attributable to the slowdown on the automotive market, and the consolidation process in the leasing sector.[59] New leasing business over the first nine months of 2019 was up slightly in year-on-year terms, although the main segment, equipment leasing for vehicles, declined for the first time in recent years (by 1.8% in year-on-year terms). There was a significant decline in growth in new leasing business in cars, which was based solely on business in used vehicles. Non-financial corporations and households remain the main source of leasing companies' business: the former accounted for 49.5% of total new business, and the latter for 49.3%. The stagnation in new business could be overcome in the future by new trends in vehicle use, such as electromobility and shared ownership. The changes made to Bank of Slovenia measures in the area of household lending that entered into force on 1 November 2019 could also have a positive impact on leasing business. They might lead in particular to a strengthening in the loans offered by leasing companies, although these currently account for less than 10% of leasing companies' new business.

Figure 2.66: New leasing business[60]

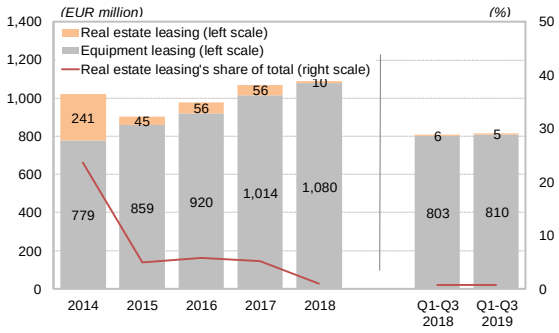
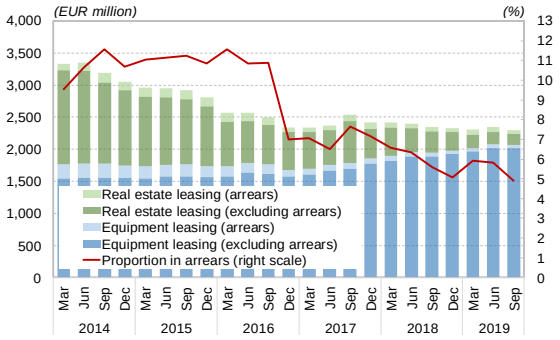


Figure 2.67: Stock of leasing business and proportion



Source: Bank of Slovenia

The breakdown of the stock of leasing business reflects the change in the business model that leasing companies have adopted in the post-crisis period, with a focus on equipment leasing. Equipment leasing has been increasing since 2017, largely as a result of the increase in vehicle leasing business. By contrast, the stock of real estate leasing business has declined as a result of the sale of claims and winding-up of individual companies, which also resulted in a decline in the proportion of claims more than 90 days in arrears. Sales of claims more than 90 days in arrears brought the figure to below the 5% mark in 2019 for the first time. The concentration of claims more than 90 days in arrears remains high: three leasing companies accounted for 86.4% of the arrears of more than 90 days, while the proportion of the total stock of leasing business that they account for was just 12.5%. Further reductions in claims more than 90 days in arrears can be expected in the future, primarily as a result of additional sales of claims, in particular those more than 90 days in arrears.

The stagnation in new business has been reflected in a decline in the main categories of income (revenues from the sale of products and services, and income from operating and finance leasing), while total profit increased again in year-on-year terms in September. Leasing companies' total profit[61] over the first nine months of 2019 was up fully 43.1% in year-on-year terms, at EUR 68 million. This was attributable to an increase in income from the reversal of impairments for finance leasing, and a decline in

[58] The analysis takes account of data from institutions reporting on the basis of the regulation on reporting by institutions providing leasing services, and includes business with residents and non-residents of Slovenia. The number of active leasing companies (subject to the condition of having concluded at least one new transaction in 2019) fell by three, to 15.

[59] Consolidation has seen some business transferred to banks, who are not required to report in line with the regulation on reporting by institutions providing leasing services.

[60] Leasing business is disclosed at financed value, excluding the financing of inventories.

[61] Includes only those leasing companies that reported their stock of leasing business for the most recent available quarter.

revaluation operating expenses. Total assets[62] were down 4.3% in year-on-year terms at EUR 2.5 billion, while the equity to loans ratio improved from 25.6% to 27.3%.

The role of the banks in financing investment and personal consumption on the basis of finance leasing has strengthened sharply in recent years, but remains small. The stock of the banks' finance leasing business stood at EUR 426 million in September 2019, up 16.2% in year-on-year terms. The growth during the year was also based on the transfer/purchase of the leasing business of companies that ceased reporting[63] to the Bank of Slovenia. Three banks in particular remain active in this area.

Figure 2.68: Banks' finance leasing business

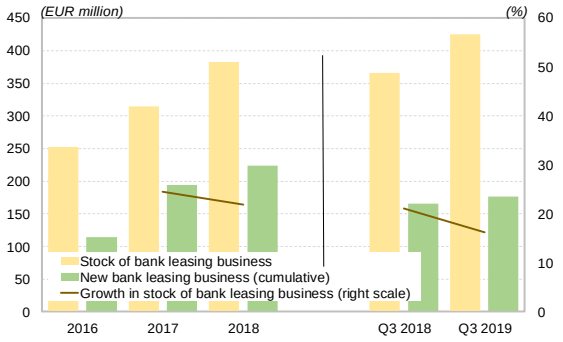
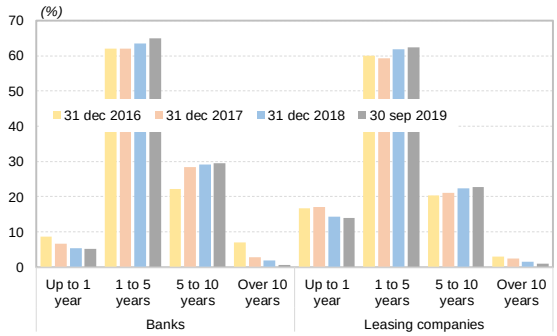


Figure 2.69: Stock of leasing business by maturity



Source: Bank of Slovenia

Similarly to leasing companies, finance leasing provided by banks is primarily used by households and non-financial corporations, households accounting for 64% of the stock of leasing business. Most new business during the first nine months of 2019 was concluded with a maturity of 5 to 10 years; leasing business with a residual maturity of 1 to 5 years and a variable interest rate accounts for the largest proportion of the stock of leasing business. As measures in household lending are tightened, the banks that already offer finance leasing might decide to strengthen this segment, depending on the purpose and type of the loan. Insofar as it is used to finance the purchase of vehicles or other high-value equipment,[64] this will certainly lead to an increase in finance leasing business at banks. If the purpose of the loan is not the purchase of vehicles or other high-value equipment, this could potentially entail the switching of some loans that have to date been financed by banks to leasing companies or other non-bank financial corporations engaged in lending activity, thereby reducing the resilience of leasing companies.

Mutual funds[65]

Savers' appetite for mutual funds remains stable. This is attributable in part to the positive growth in the average unit prices of all types of domestic mutual fund. The increased uncertainty on stock markets saw the year-on-year returns on various categories of funds converge towards 3.5% by September 2019. Year-on-year returns on equity funds remain the highest on average, but the average gap with bond funds has narrowed this year. This has also been reflected in savers' decisions: in the current situation they are opting to invest in lower-risk forms of assets such as bond funds and mixed funds. Assets under management amounted to EUR 2.8 billion, up 4.5% in year-on-year terms, primarily as a result of rising securities prices.

[62] Includes only those companies that reported data on the balance sheet for the third quarter of 2019 to the Bank of Slovenia. Had the companies that ceased reporting during this period not been excluded, total assets would have declined by 9.7% over the period in question.
[63] Under the Regulation on reporting by institutions pursuing leasing activities.
[64] Includes vessels, trains, production equipment and high-value computer equipment.
[65] A lack of available data means that only mutual funds are discussed below. According to the Securities Market Agency, investments in alternative investment funds (AIFs) operated by AIF operators established in Slovenia amounted to EUR 130 million as at 31 December 2018, while mutual pension funds' assets under management amounted to EUR 1.2 billion as at 31 September 2019.

Figure 2.70: Year-on-year change in average unit prices of mutual funds

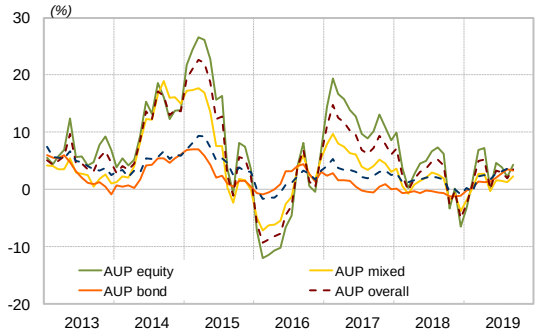
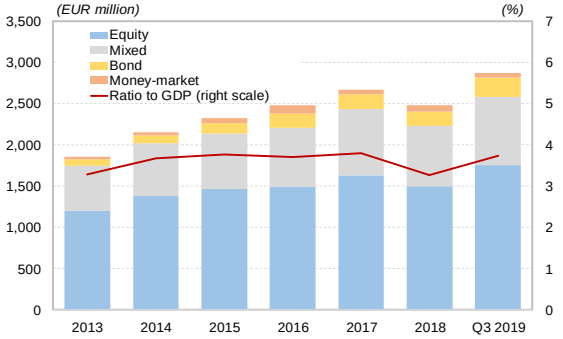


Figure 2.71: Breakdown of assets by fund type and ratio to GDP



Note: The calculation of the ratio to GDP for September 2019 uses the June figure for GDP.
Source: Bank of Slovenia

The breakdown of assets under management by fund type remains stable. Equity funds continue to account for fully 61% of mutual funds' total assets under management, followed by mixed funds with 28.8%. 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. The market risk is seen in the volatility in average unit prices, particularly for equity funds. Shares and units in collective investment undertakings account for more than 74% of mutual funds' assets under management. Of these, more than half are listed on high-liquidity stock markets in the euro area and the US. The resilience of mutual funds remains relatively high, thanks to their high level of liquid assets.

Figure 2.72: Breakdown of mutual funds' assets under management by type

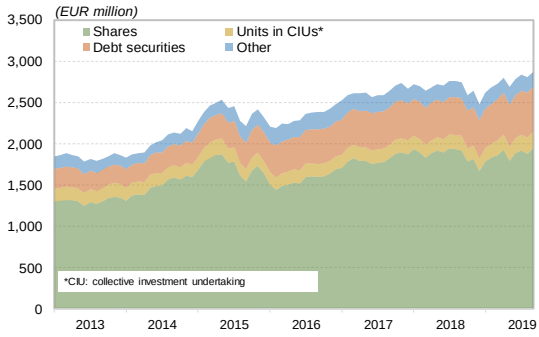
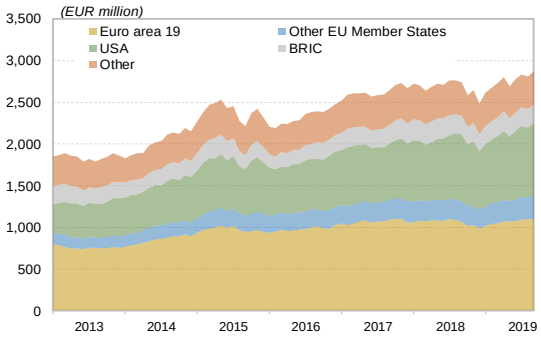


Figure 2.73: Geographical breakdown of mutual fund investments



Sources: Bank of Slovenia

Net inflows into mutual funds are merely a minor factor in the increase in their assets under management. They amounted to EUR 40 million over the first nine months of 2019, taking the total net inflows into domestic mutual funds to EUR 248 million since the beginning of 2014. Households remain the largest net contributors to funds: the proportion of funds' assets under management that they hold has increased by 9.4 percentage points over the last four years to 63.6%. Net inflows into mutual funds remain negligible in absolute terms, particularly when compared with the growth in bank deposits, which increased by more than EUR 1 billion in the first nine months of 2019 alone. The stock of household deposits at banks remains more than ten times the size of households' direct holdings in mutual funds.

Figure 2.74: Net inflows into mutual funds by investor sector

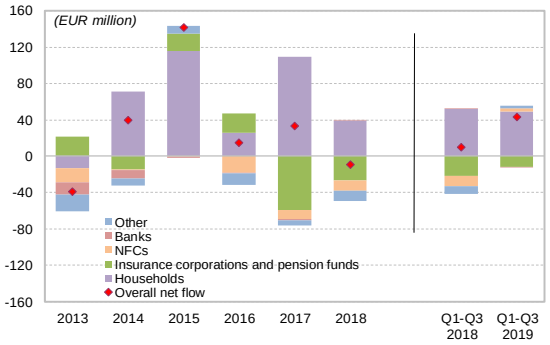
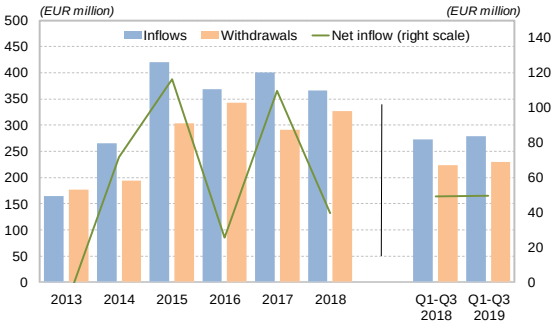


Figure 2.75: Households' inflows into and withdrawals from mutual funds



Source: Bank of Slovenia

As the largest holders of mutual fund units, households continue to have high surpluses of liquid assets and low levels of debt. A negative reversal on the capital markets could lead to the reallocation of assets in mutual funds, not as a result of household liquidity difficulties, but in order to minimise capital losses. In this event there could be switching of assets from high-risk forms (equity funds) into lower-risk forms (bond funds and mixed funds), while net withdrawals from mutual funds would remain limited.

Box 1.5: Situation on the capital markets

Foreign capital market

Share and bond indices rose further in the second and third quarters of 2019. Should the markets rise further, the risks inherent in the macroeconomic environment and geopolitical developments could lead to uncertainty, and thus to potential renewed selling pressure, as at the end of 2018. With positive signals coming in particular from a positive Brexit deal and progress in the area of protectionist measures, financial investors' confidence also strengthened, and in the low interest rate environment they are willing to accept higher investment risks.

Figure 2.76: Changes in selected stock market indices

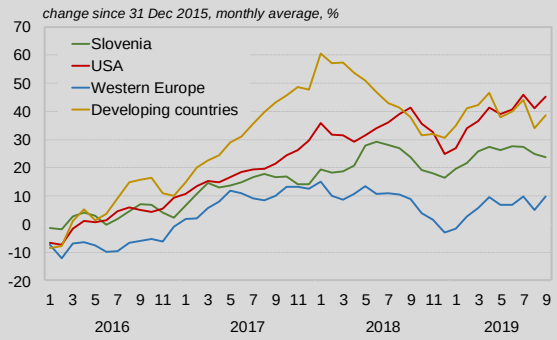
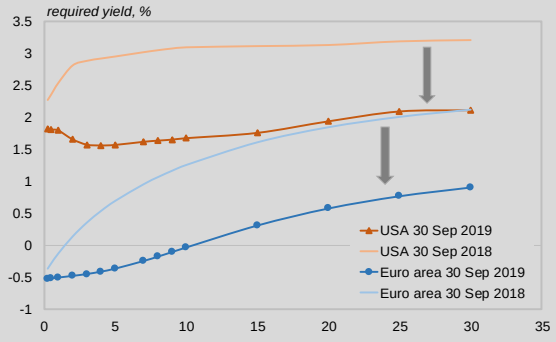


Figure 2.77: Required yields on government bonds by maturity



Sources: Bloomberg, Stoxx.com, Bank of Slovenia

In the quest for higher yields and greater security from potential falls in the value of equity investments, valuations are also rising on the bond markets, reducing the yields on bonds of various maturities. The yield curve for euro area government bonds in September had flattened significantly compared with a year earlier, while the yield curve for US treasury bonds remains inverted[66] at maturities shorter than 10 years. The renewed activation of an expansionary monetary policy further reduced the required yields on 10-year government bonds. The yields on 10-year German government bonds, which had been negative in 2016, slid toward negative territory again in 2019. Germany was one of the few countries that in August and September saw negative yields on bonds of maturities of 2 to 30 years. Negative yields on 10-year government bonds were also recorded by certain other euro area countries, including Slovenia.

[66] An inverted yield curve is usually associated with the increased likelihood of an approaching recession, but of itself is neither a sufficient nor a necessary indicator.

Domestic capital market

Demand from businesses for financing via securities issuance remains very low in Slovenia. Despite the year-on-year rise in the market capitalisation of securities on the Ljubljana Stock Exchange, the volume of trading in shares has been declining for a number of years, and 2019 was no exception. The government remains the main player when it comes to debt securities; it is only rarely that corporations opt to issue debt securities on the organised market.

Low liquidity on the domestic stock market and declining issuance of securities remain the key risks on the domestic capital market. The monthly volume of trading in shares averaged EUR 17 million over the first nine months of the year, down 16.9% in year-on-year terms. The concentration of trading in shares increased further during this period: the three most heavily traded shares accounted for 63% of total volume on the exchange. There is no demand for financing via the issuance of new shares on the organised market: 2019 saw a continuation of the trend of delistings, which two firms opted for, while there were no new issues.[67] In the debt securities area, total corporate bond issuance on the organised and OTC markets (i.e. excluding government bonds) was up in year-on-year terms, but remains low at EUR 49 million.

Figure 2.78: Market capitalisation on the Ljubljana Stock Exchange and annual turnover ratios

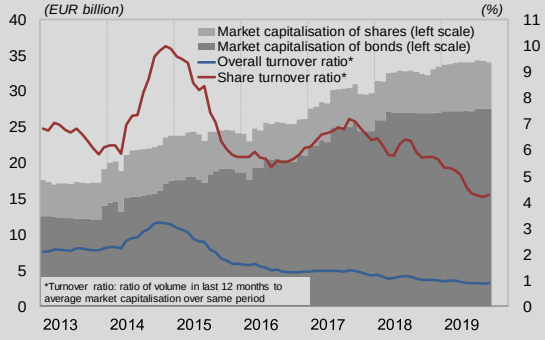
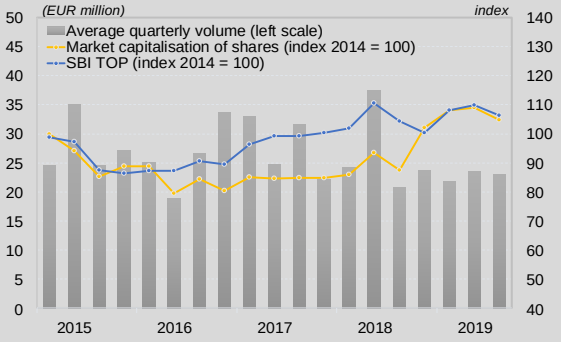


Figure 2.79: Trading volume, market capitalisation of shares, and SBI TOP



Sources: Ljubljana Stock Exchange, KDD, Bank of Slovenia

With the aim of increasing SMEs' access to financing, and also expanding alternative investment opportunities, in 2017 the Ljubljana Stock Exchange launched its multilateral trading facility (MTF), and has been operating it ever since. This should ensure greater robustness in the domestic capital market. The MTF provides for trading in securities that are not listed on the official market, and is better and more transparent than the OTC market when it comes to price formation. Compared with the official market, the required level of transparency is lower, as a result of which securities trading on the MTF brings greater investment risks. There were 59 securities included in the MTF as at September 2019, and the volume of trading in the first nine months of the year was a modest EUR 2 million. Volume was down more than a half in year-on-year terms, an indication of issuers' lack of interest in this market segment at present.

The role of the capital market is to provide additional sources of financing on one hand, and to allow surplus financial assets to generate returns on the other. This increases the diversification of sources of financing and financial assets, which also entails a reduction in risks to financial stability. While holders of surplus financial assets are able to achieve greater diversification by investing in foreign securities and other forms of financial saving, those seeking additional financial resources on the capital market can have significantly greater problems. The announced tax reforms will further reduce the attractiveness of the domestic capital market; a rise in the personal income tax rate on income from capital has been announced, and personal income tax rates on capital gains dependent on the duration of the capital holding are also being raised.

Low liquidity and the limited range of potential investments remain the key risks on the domestic capital market. Without an adequate range of investments, the chances of achieving high liquidity are limited. This is significant from the point of view of market transparency, as it is only in a high-liquidity market that price formation reflects the true value of a particular investment, thus preventing excessive positive or negative feedback.

[67] Corporations have not opted to issue shares via the organised market in recent years; the exception was Nova Ljubljanska banka in the final quarter of 2018.

3 MACROPRUDENTIAL POLICY

The third section of the Financial Stability Review examines macroprudential policy, its purpose and objectives, and its importance to ensuring the stability of the financial system. This section also highlights the macroprudential measures adopted to date by the Bank of Slovenia, including the macroprudential measures for household lending. It also provides an overview of the macroprudential measures in force in other EEA countries.

3.1 Purpose of macroprudential policy

The purpose of macroprudential policy is ensuring stability of the entire financial system. Financial stability can be defined as a state in which the financial system (comprising financial intermediaries, financial markets and market infrastructure) is capable of withstanding shocks and eliminating financial imbalances. Financial stability is a prerequisite for the financial system to ensure that the financial sector makes a sustained contribution to economic growth.

Macroprudential policy pursues two key objectives: strengthening the resilience of the financial system, and limiting the build-up of systemic risks. To this end macroprudential policy identifies, monitors and assesses systemic risks to financial stability, and adopts the requisite measures for the prevention of systemic disruptions and the mitigation of their consequences. The effectiveness of macroprudential policy depends on the creation of a toolkit of macroprudential instruments to prevent or restrict risks that result from external factors and market imperfections. The Financial Stability Board (FSB) is responsible for formulating macroprudential policy in Slovenia. Bank of Slovenia adopts macroprudential measures for the banking segment of the financial system.

The toolkit of macroprudential instruments depends on the types of imbalances and shocks. Depending on the types of imbalances and shocks that need to be managed, macroprudential instruments may target banks' capital requirements (e.g. countercyclical buffers), liquidity requirements (e.g. GLTDF) or customers' debt ratios (e.g. LTV or DSTI). The purpose of building up capital buffers during boom times is to strengthen the banks' resilience and limit losses during the economic downturn. Macroprudential policy focuses particular attention on systemically important financial institutions, to whom stricter prudential requirements apply, as any disruptions to the functioning of such institutions would have serious consequences for the entire financial system and economy. Macroprudential policy is primarily preventive in nature, and should therefore be distinguished from policies for managing and addressing financial crises.

3.2 Bank of Slovenia macroprudential measures

Macroprudential measures in the area of household lending

The Bank of Slovenia has introduced binding macroprudential restrictions on household lending due to the increased risks to financial stability arising from the excessive growth in consumer loans. The aim of the measure is mitigating and preventing excessive credit growth and excessive leverage.

A regulation sets out two binding macroprudential instruments, namely a cap on the ratio of annual total debt servicing costs to the consumer's annual income (DSTI) when the credit agreement is concluded, and a cap on maturity, and one non-binding macroprudential instrument, namely a recommended cap on the ratio of the amount of a credit agreement for residential real estate and the value of the residential real estate used as collateral for the loan (LTV) when the credit agreement is concluded.

Through the macroprudential instruments the Bank of Slovenia has imposed binding minimum credit standards for housing loans and consumer loans, but the banks are still responsible for assessing the creditworthiness of the borrower, and for the risks inherent in newly approved loans.

Cap on DSTI

The cap on DSTI applies to all household loans (consumer loans and housing loans). The DSTI is calculated as the ratio of the annual debt servicing costs to the consumer's annual income. The annual debt servicing costs includes the costs of servicing the loan that is the subject of the new credit agreement, and the amounts of all other outstanding credit agreements, including leasing, with the exception of debts related to credit cards and overdrafts. The consumer's net annual income includes earnings from all sources of income as defined in the law governing personal income tax that are not exempted from attachment, with the exception of one-off and occasional earnings (e.g. jubilee benefits and extraordinary bonuses).

The cap on DSTI sets out the maximum allowed DSTI. This depends on the consumer's income, and on the composition of the consumer's household. When a new credit agreement is concluded, the DSTI (expressed on a monthly basis) may not exceed:

a) 50% for net monthly income that is no more than double the gross minimum wage, and
b) 67% for the portion of net monthly income in excess of double the gross minimum wage.
c) Irrespective of income level, consumers must be left with an income of at least 76% of the gross minimum wage after the substraction of debt servicing costs. A consumer who maintains a dependent family member or another person whose maintenance is required by law must also be left with the amount of income stipulated for the maintenance of the aforementioned person, according to the criteria set out by the law governing social security benefits for the award of cash social assistance.

Each quarter a bank may approve up to 10% of consumer loans and up to 10% of housing loans with DSTIs that exceed the prescribed cap. The DSTI may not exceed 67%, and consumer loans must also comply with the cap on maturity. Exceptions do not apply to loans that fail to comply with point c). Exceptions are calculated relative to the total amount of loans that comply with the caps on DSTI and maturity. When a credit agreement is being concluded by multiple borrowers, the DSTI is calculated for each of them separately.

Cap on maturity

The regulation sets out a cap on maturity for consumer loans that are not secured by residential real estate. It may not exceed 84 months (7 years).

Each quarter a bank may approve up to 15% of consumer loans (relative to the total amount of loans that comply with the caps on DSTI and maturity) with a maturity of more than 7 years. The maturities of these loans may not exceed 120 months (10 years), and they must simultaneously comply with the cap on DSTI.

Recommended cap on LTV

The recommended cap on LTV applies to all loans secured by residential real estate (whether consumer or housing loans). The LTV is calculated as the ratio of the amount of the loan secured by residential real estate to the value of the residential real estate pledged as collateral. If the residential real estate is already encumbered by a mortgage, its value is reduced by the amount of the existing loan. It is recommended that LTV should not exceed 80% when the credit agreement secured by residential real estate is concluded.

Box 1.6: Macroprudential measures in the area of household lending

Despite the introduction of the macroprudential recommendation, risks in the consumer loans segment were not reduced, and so the Bank of Slovenia introduced binding measures. Following the extension of the macroprudential recommendation to consumer loans,[68] risks in the consumer loans segment were not reduced. Growth in consumer loans remains high, and the average contract value is increasing, the maturities of consumer loans are lengthening, and the proportion of secured loans is declining. All of this is happening in a period of slowing economic growth, both in Slovenia and in its main export partners. In response to the increased risks in the consumer loans segment, on 22 October 2018 the Bank of Slovenia extended the macroprudential recommendation for housing loans of 19 June 2018 to consumer loans, and renamed it the macroprudential recommendation for household lending. The aim of the recommendation was mitigating and preventing excessive credit growth and excessive leverage, and setting minimum credit standards. Because the recommendation did not have any impact on growth in consumer loans, on 3 September 2019 the Bank of Slovenia took the decision to modify the recommendation into binding macroprudential restrictions. The

[68] Previous macroprudential restrictions on household lending

measures adopted by the Bank of Slovenia are a response to the increase in consumer lending, which could pose a risk to the financial system. The Regulation on macroprudential restrictions on household lending has been in force since 1 November 2019, and sets a cap on DSTI for housing loans and consumer loans, a cap on maturity for consumer loans, and a maximum level of deviations (exceptions) from these restrictions. The cap on LTV remains a recommendation.

Tabela 3.1: Macroprudential measures in the area of household lending

HOUSING LOANS	CONSUMER LOANS
September 2016:	**November 2018:**
Recommendation with regard to caps on: - the ratio of the loan instalment to the borrower's income (DSTI) - the ratio of the loan amount to the value of the real estate collateral (LTV)	- extension of the recommended cap on DSTI - recommendation that maturity should not exceed 10 years
November 2019:	**November 2019:**
- the measure does not entail significant substantive changes - the cap on DSTI becomes binding - the cap on LTV remains in the form of a recommendation	- the cap on maturity becomes a binding instrument - the maximum allowed loan maturity is 7 years - the cap on DSTI is binding
Allowed deviations: DSTI: 10%	Allowed deviations: Maturity: 15% DSTI: 10%

Source: Bank of Slovenia.

O-SII buffer

The Bank of Slovenia first identified other systemically important banks (O-SIIs) in 2015, when it defined a transition period for meeting the capital buffer, namely from 1 January 2019. During a review of the O-SII criteria in 2019 the Bank of Slovenia identified one more bank as systemically important than in 2018, while the banks that had been identified as O-SIIs in previous years remained classified as such, and maintained buffer rates that correspond to the bracket in which their indicator of systemic importance lies.

The O-SII buffer introduced pursuant to the ZBan-2 aims to limit the systemic impact of misaligned incentives with a view to reducing moral hazard. This is one of the intermediate macroprudential policy objectives set out by the Guidelines for the macroprudential policy of the Bank of Slovenia. In identifying O-SIIs the Bank of Slovenia mainly follows the Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs). Under the aforementioned guidelines banks are assessed on the basis of at least any of the following criteria: size, importance to the economy of the European Union or of Slovenia, significance of cross-border activity, and the interconnectedness of the bank or group with the financial system.

The ZBan-2 stipulates that at least once a year the Bank of Slovenia should verify the fulfilment of O-SII criteria and the appropriateness of O-SII buffer rates. In the identification process the Bank of Slovenia took account of the mandatory indicators prescribed by the EBA, which are illustrated in the table below.

Tabela 3.2: Mandatory indicators of systemic importance of banks

Criterion	Weight	Indicator	Weight
Size	25.0%	Total assets	25.00%
Importance (including substitutability / financial system infrastructure)	25.0%	Value of domestic payment transactions	8.33%
		Private sector deposits from depositors in the EU	8.33%
		Private sector loans to recipients in the EU	8.33%
		Value of OTC derivatives (notional)	8.33%
Complexity / cross-border activity	25.0%	Cross-jurisdictional liabilities	8.33%
		Cross-jurisdictional claims	8.33%
		Intra-financial-system liabilities	8.33%
		Intra-financial-system assets	8.33%
Interconnectedness	25.0%	Debt securities outstanding	8.33%

Source: EBA Guidelines.

The score for each bank in the assessment of systemic importance is calculated in accordance with the guidance set out in point 8 of the EBA Guidelines:

a) by dividing the indicator value[69] of each individual relevant entity by the aggregate amount of the respective indicator values summed across all institutions in the Member State (the "denominators");

b) by multiplying the resulting percentages by 10,000 (to express the indicator scores in terms of basis points);

c) by calculating the category score for each relevant entity by taking a simple average of the indicator scores in that category;

d) by calculating the overall score for each relevant entity by taking a simple average of its four category scores.

Point 9 of the EBA Guidelines further stipulates: "Relevant authorities should designate relevant entities with a total score equal to or higher than 350 basis points as O-SIIs. Relevant authorities may raise this threshold up to 425 basis points as a maximum or decrease it to 275 basis points as a minimum to take into account the specificities of the Member State's banking sector and the resulting statistical distribution of the scores, thereby ensuring the homogeneity of the group of O-SIIs designated in this way based on the O-SIIs' systemic importance." In the process of identifying O-SII institutions, the Bank of Slovenia is chiefly compliant with the EBA methodology, deviating only in the application of point 9 of the EBA Guidelines in 2017, as the identification threshold has been raised from 350 to 500 basis points. Consequently, the number of the buckets to which the O-SIIs are allocated according to their scores (computed on the basis of the EBA O-SII identification framework) and the corresponding buffer increments has been accordingly adjusted. The thresholds of the buckets are set out in the Regulation on the determination of the capital buffer for other systemically important institutions (Official Gazette of the Republic of Slovenia, Nos. 96/15 and 68/17) are illustrated in the table below.

Tabela 3.3: Thresholds of buckets and capital buffer rate

Score	Capital buffer
5400 and higher	2.00%
4700 - 5399	1.75%
4000 - 4699	1.50%
3300 - 3999	1.25%
2600 - 3299	1.00%
1900 - 2599	0.75%
1200 - 1899	0.50%
500 - 1199	0.25%

Source: Regulation on the determination of the capital buffer for other systemically important institutions (Official Gazette of the Republic of Slovenia, Nos. 96/15 and 68/17)

The Bank of Slovenia identified seven systemically important banks in 2019, an additional one compared to the previous year. The O-SII buffer rates for the next year are set out in the table below. This year, Banka Intesa Sanpaolo d.d. has also been identified as an O-SII, with a buffer requirement set at 0.25%, which is to be phased-in by January 2021. Under last year's decision, SID Bank is expected to fully meet their O-SII capital buffer requirement of 0.50% by January 2020 i.e. by the end of the designated phase-in period. Each bank is expected to meet the buffer requirement at the highest level of consolidation in Slovenia, through their common equity Tier 1 capital.

Tabela 3.4: Indicator of systemic importance and capital buffer rate for O-SIIs

Bank	Indicator of systemic importance	Capital buffer
NLB d.d.	2915	1.00%
SID banka, d.d., Ljubljana	1428	0.50 %*
Nova KBM d.d.	940	0.25%
Abanka d.d.	712	0.25%
SKB d.d.	631	0.25%
UniCredit banka Slovenija d.d.	602	0.25%
Banka Intesa Sanpaolo d.d.	512	0.25 %**

Notes: *The bank must meet the higher buffer rate by 1 January 2020.
**The bank must meet the stipulated buffer rate from 1 January 2021.
Source: Bank of Slovenia.

[69] The table uses the term "criterion"; the terms follow the wording of the EBA Guidelines.

Countercyclical capital buffer

Under the Banking Act (ZBan-2), the Bank of Slovenia has been able to introduce a countercyclical capital buffer since 1 January 2016. The purpose of the countercyclical capital buffer is to protect the banking system against potential losses when excessive growth in lending is associated with an increase in risks in the system as a whole. The buffer rate may range from zero to 2.5% of risk-weighted assets, and may exceptionally be higher. Each bank must meet the buffer at the highest level of consolidation in Slovenia, through common equity Tier 1 capital. The buffer is activated when excessive growth in lending is linked to an increase in risks in the system. In light of indicators of imbalances in the banking system originating in excessive corporate lending, and on the basis of expert judgment, the countercyclical capital buffer rate has remained unchanged at zero since its introduction. More information about the basic criterion for setting the buffer rate and the additional indicators used in setting the buffer rate is available on the Bank of Slovenia website.[70]

Macroprudential measures addressing maturity mismatch and illiquidity

There are currently two macroprudential measures in force in Slovenia that address excessive maturity mismatch and illiquidity. The first measure requires banks to calculate two liquidity ratios, and to report them to the Bank of Slovenia on a daily basis:

(a) the first-bucket liquidity ratio: the ratio of assets to liabilities, both with residual maturity up to 30 days; and
(b) the second-bucket liquidity ratio: the ratio of assets to liabilities, both with residual maturity up to 180 days.

The recommended floor for the first-bucket liquidity ratio is a value of one. Under a resolution by the Governing Board of the Bank of Slovenia, part of the Regulation on macroprudential monitoring of liquidity and funding structure, which regulates the liquidity ratios, will cease to be in force as of 1 April 2020.

The second measure stipulates a recommendation for minimum gross loans-to-deposits flows (GLTDF). The GLTDF instrument (the ratio of the annual change in the stock of loans to the non-banking sector before impairments to the annual change in the stock of deposits by the non-banking sector, or gross loans to deposits flows) is a macroprudential measure (introduced in June 2014, and applied as a recommendation since January 2018) whose purpose is to slow the pace of the decline in the LTD ratio in the banking system, thereby improving the (impaired) intermediation of financial assets to the non-banking sector. At the end of each quarter, banks with positive (annual) growth in deposits by the non-banking sector are recommended to fulfil a non-negative (annual) GLTDF ratio:

$$\Delta D > 0 \Rightarrow GLTDF \equiv \frac{\Delta L}{\Delta D} \geq 0\%,$$

where ΔD (ΔL) is the annual inflow of deposits by the non-banking sector (loans to the non-banking sector). This means that banks that are seeing an increase in deposits by the non-banking sector are recommended not to reduce their stock of loans to the non-banking sector. The calculation of GLTDF takes account of gross loans, i.e. before impairments.

The measure was introduced in June 2014 as a macroprudential measure whose purpose was to mitigate and prevent excessive maturity mismatch and illiquidity, which is one of the intermediate objectives of macroprudential policy defined by the Guidelines for the macroprudential policy of the Bank of Slovenia. Initially the measure directed banks that were raising deposits but reducing lending to the non-banking sector (i.e. failing to meet the GLTDF requirements) to raise their liquidity ratio. Given its evident positive effects, the measure has never been tightened, but one of the prescribed corrective measures, namely a minimum value that must be met on a quarterly basis (GLTDFq) for a bank that is failing to meet the annual GLTDF requirement, was relaxed in 2016.[71] The measure was converted into a recommendation in December 2017.

[70] https://www.bsi.si/en/financial-stability/macroprudential-supervision/macroprudential-instruments/countercyclical-capital-buffer
[71] Banks first had to meet the requirement of $GLTDF\ ratio \geq 0\%$ between June 2014 and March 2015. The gradual tightening of the measure was envisaged in June 2014, whereby as of April 2015 banks would have to meet the requirement of $GLTDF\ ratio \geq 40\%$. Corrective measures in event of the failure to meet the GLTDF requirements were initially set out. Under the first corrective measure, banks with a positive quarterly increase in deposits by the non-banking sector would have to meet a higher GLTDF requirement calculated on quarterly changes in stock (GLTDFq), namely ≥ 40% or ≥ 60% depending on the original requirement. Under the second corrective measure, banks that failed to meet the GLTDF and GLTDFq requirements would have to meet a higher liquidity ratio.

On the basis of an assessment of the GLTDF instrument, and the favourable developments in key indicators such as the stabilisation of the LTD ratio, in December 2017 the Governing Board adopted a regulation to retain GLTDF as a non-binding macroprudential recommendation, which entered into force on 1 January 2018. Through the maintenance of the instrument of GLTDF in the form of recommendations, the Bank of Slovenia has communicated to credit institutions that they are required to monitor the stability of funding, to diligently manage liquidity risk and to gradually transform the released liquid assets. In the future consideration should be given to defining a cap or recommended maximum for the LTD ratio.

Limits on deposit rates

The measure addresses the intermediate macroprudential policy objective of limiting the systemic impact of misaligned incentives with a view to reducing moral hazard The objective of the instrument is to limit the excessive raising of liability interest rates on deposits by the private non-banking sector.The Bank of Slovenia introduced an instrument in March 2012 to limit deposit rates. The instrument was introduced in order to limit the income risk for banks in the event of an excessive rise in interest rates on deposits by the non-banking sector. The measure as adopted was supposed to encourage banks to exercise even greater caution in the management of levels of liability interest rates. The instrument remains in force, but is inactive for the moment, as banks have no need to compete for deposits given the sufficient amount of funding available. The aforementioned measure is part of the ICAAP-SREP process and defines an add-on to capital requirements for new deposits by the private non-banking sector should the realised deposit rate exceed the ceiling set by the instrument.

Tabela 3.5: Macroprudential instruments introduced

MACROPRUDENTIAL INSTRUMENT	YEAR OF INTRODUCTION	OBJECTIVE
Macroprudential restrictions on household lending - DSTI - Caps on the maturity of consumer loans	2019	- preventing excessive credit growth and excessive leverage - preventing the easing of credit standards
Countercyclical capital buffer	2016	- preventing excessive credit growth and excessive leverage - increasing the banking system's resilience to shocks - curbing the expansive phase of the credit cycle
O-SII buffer	2016	- increasing the resilience of O-SIIs, and consequently the entire banking system
Instruments for housing loans: - LTV (recommendation)	2016	- preventing excessive credit growth and excessive leverage
GLTDF	2014	- slowing the pace of reduction in the LTD ratio for the non-banking sector - contributing to the stabilisation of funding structure - reducing systemic liquidity risk
Limits on deposit rates	2012	- limiting income risk for banks in connection with an excessive rise in interest rates on deposits by the non-banking sector - encouraging caution in the management of levels of liability interest rates, which should have a positive impact on lending rates

Note: The cap on maturity and the cap on DSTI became binding instruments in 2019. The Bank of Slovenia introduced a macroprudential recommendation for the housing loans market in 2016, which recommended caps on LTV and DSTI for housing loans. The recommendation was renamed the macroprudential recommendation for household lending in 2018. The recommended cap on DSTI was extended to all household loans at that time. A recommended cap on maturity was also introduced for consumer loans.
Source: Bank of Slovenia.

Box 1.7: Macroprudential instruments in other EEA countries

It is becoming increasingly common for the EEA countries to introduce macroprudential instruments for the purpose of mitigating risks and increasing the resilience of financial systems.

Tabela 3.6: Overview of macroprudential measures in EEA countries

MACROPRUDENTIAL INSTRUMENT	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE	IT	LT	LV	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK	IS	LI	NO
Income restrictions: L(S)TI, D(S)TI	■	▨		■	■	■		■					■	■		■			■	■	■	■	■	■	■			■			■
Caps on maturity	■							■	■							■			■	■	■	■	■	■	■						
LTV	■	■			■	■	■	■	■				■	■		■	■		■	■	■	■	■	■	■		■		■	■	■
Countercyclical capital buffer		▨	■			■	■			■	▨			■		■	▨									■	■	■		■	
O-SII buffer, G-SII buffer, Systemic risk buffer	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Note: A shaded area denotes a country that has announced the introduction of a countercyclical capital buffer. LTV is the ratio of the loan amount to the value of the real estate collateral, LSTI (DSTI) is the ratio of the amount required to service the loan

Because the LTD ratio began to stabilise after the introduction of GLTDF, the macroprudential measure was not tightened in 2015, even though this had previously been envisaged. The corrective measure was relaxed in 2016, and now the requirement is for a GLTDFq≥0%.

(debt) to the customer's income, LTI (DTI) is the ratio of the amount of the loan (debt) to the customer's income. G-SIIs stands for global systemically important institutions.
Sources: ECB, ESRB.

The most frequently used is the countercyclical capital buffer (CCyB). Some countries are expected to raise is it further in the following quarters. The purpose of more active use of the CCyB is to address the further increase in cyclical systemic risk, and to create macroprudential space to restrict excessive deleveraging by banks in the event of a decline in economic activity.

Figure 3.1: Countercyclical capital buffer rates

Source: ESRB

Tabela 3.7: Countries with non-zero countercyclical capital buffer rates*

Country	Current CCyB **	Future CCyB ***
Belgium		0.50%
Bulgaria	0.50%	1.00%
Czech Republic	1.50%	1.75% (2.00%)
Denmark	1.00%	1.50% (2.00%)
France	0.25%	0.50%
Germany		0.25%
Iceland	1.75%	2.00%
Ireland	1.00%	1.00%
Lithuania	1.00%	1.00%
Luxembourg		0.25%
Norway	2.00%	2.50%
Slovakia	1.50%	2.00%
Sweden	2.50%	2.50%
UK	1.00%	1.00%

Notes: * Data refers to 7 November 2019.
** Countercyclical capital buffer.
*** Countries that will change their countercyclical capital buffer rate in the following quarters.
Source: ESRB.

Despite the ongoing deterioration in the macroeconomic outlook, real estate markets in almost all EEA countries are continuing to strengthen. Annual growth in residential real estate prices in the euro area slowed from 4.7% in the final quarter of last year to 4.1% in the second quarter of this year, although signs of overvaluation are increased, as growth in residential real estate prices continued to outpace average nominal GDP growth. Given the recent falls in risk-free interest rates, and the anticipated buoyancy of the labour market, residential real estate prices in the euro area can be expected to rise further. Because unemployment is expected to fall further over the next two years, and wage growth will remain strong, demand for residential real estate should remain high. Both factors could act to maintain the growth in mortgage loans, and put even more upward pressure on residential real estate prices. The key vulnerabilities of residential real estate in certain euro area countries that could become urgent therefore relate to high or rising household indebtedness, and the potential further increase in the risk of a revaluation (falling prices) in real estate collateral.

To limit the risks inherent in residential real estate market, this year numerous countries introduced stricter macroprudential instruments addressing borrowers as well as lenders. Examples of them area cap on LTV[72], a cap on DSTI[73], and a cap on maturity and requirements with regard to amortisation. Some countries have also opted to introduce measures targeting banks' exposures to loans for real estate. These measures consist of risk weights for exposures secured by residential real estate and commercial real estate, which result in banks having to hold more capital with regard to the size of the exposure to such claims.

The countries that have introduced macroprudential instruments for household lending for real estate purchase have generally introduced a cap on LTV and a cap on DSTI. They often allow deviations, which may be conditioned by whether the real estate was purchased for the purposes of occupancy (primary residences). In such cases the restrictions on the above ratios may be reduced, but are never fully removed. As far as the cap on LTV is concerned, Austria, Belgium, Portugal and Slovenia have issued macroprudential instruments in the form of recommendations. The other countries have binding macroprudential instruments in force.

To address the risks inherent in residential real estate market, some of the countries will need to use additional targeted macroprudential measures in the future. In 2016 the European Systemic Risk Board (ESRB) identified several EU countries with medium-term vulnerabilities in the residential real estate sector. It issued warnings about the management of risks in the real estate market to eight countries (Belgium, Finland, Luxembourg, the Netherlands, the UK, Sweden, Denmark and Austria). In 2019 the ESRB again identified countries with risks in the real estate market. It issued warnings to manage risks in the real estate market to France, Germany, the Czech Republic, Norway and Iceland, while issuing corresponding recommendations to Belgium, Finland, Luxembourg, the Netherlands, Sweden and Denmark. To date Slovenia has not been identified by the ESRB as a country with risks in the real estate market.

Tabela 3.8: Macroprudential instruments for household lending

Country	Cap on LTV	Income restrictions	Cap on maturity
Austria*	**80%**	**DSTI: 30%-40%**	housing loans: **35 years**
Belgium*	**90%** (first-time buyer) **80%** (buy-to-let)	Maximum of 5% of loans with: **DSTI>50% and LTV>90%** **DTI>9 and LTV>90%**	
Cyprus	**70%** (primary residence: 80%)	**DSTI: 80%** (65% for foreign currency loans)	
Czech Republic	**60%** (primary residence: 80%)	**DSTI: 40%**	
Denmark	**90%**		
Estonia	**85%** (with government guarantee: 90%)	**DSTI: 50%**	housing loans: **30 years**
Finland	**85%** (first-time buyer: 95%)		housing loans: **25 years**
Croatia*		**DSTI: 25%-76%**	
Ireland	**90%** (secondary residence: 80%; buy-to-let: 70%)	**LTI<3.5**	
Iceland	**85%** (first-time buyer: 90%)		
Latvia	**90%** (with government guarantee: 95%)		
Liechtenstein	**80%**		
Lithuania	**85%**	**DSTI: 40%-60%**	housing loans: **30 years**

[72] LTV is the ratio of the amount of the approved loan to the value of the collateral.

[73] DSTI is the ratio of the costs of debt servicing to the borrower's income.

Hungary	**30%** (primary residence: 70%)	**DSTI: 10%-60%**	
Malta	**75%** (first-time buyer: 90%; primary residence: 100%)	**DSTI: 40%**	housing loans: **25 years** (first-time buyer or primary residence: **40 years**)
Netherlands	**100%**	**DSTI: 10%-30%**	housing loans: **30 years**
Norway	85% (secondary residence in Oslo: 60%)		
Poland	**70%** (primary residence: 80%)	**DSTI: 40%-50%**	housing loans: **25 years**
Portugal*	**90%** (secondary residence and non-residents: 80%; real estate owned by banks or under lease agreements: 100%)	**DSTI: 50%-60%**	housing loans: **40 years** consumer loans: **10 years**
Romania	**60%** (primary residence: 90%)	**DSTI: 30%-45%**	consumer loans: **5 years**
Slovakia	**80%** (primary residence: 90%)	**DSTI: 80%-100%** **DTI≤8**	housing loans: **30 years** unsecured loans: 8 years
Slovenia*	**80%**	**DSTI: 0%-67%**	consumer loans: 7 years
Sweden	**80%**		
UK		**LTI<4.5**	

Notes: The countries denoted by an asterisk have (certain) restrictions on lending in the form of non-binding recommendations. In Slovenia this applies to the cap on LTV alone. In Croatia a binding measure applies to housing loans, while a recommendation applies to consumer loans with a maturity of 60 months or more. The restrictions are not directly comparable, particularly those relating to income, as countries define parameters of the measures differently. For example, income may be defined as gross income, net income or even disposable income after the deduction of the cost of living.
Sources: ECB, ESRB.

4 THEMATIC SECTION: CHALLENGES IN THE BANKING SYSTEM TODAY AND GOING FORWARD

The thematic section examines the impact of new financial technologies (fintech), the impact of climate risk and cyber risk as major challenges facing the banking system today and in the future. The analysis is based primarily on the Survey of Future Challenges in the Banking System *conducted by the Bank of Slovenia in October 2019, and this section thus mainly represents banks' views of the subject in question (in the section on climate risk there is also a definition of climate risk and the banking sector's exposure to it). The survey asked banks about the impact of fintech, climate risk and cyber risk, and the responses are examined below. Banks were also questioned on the possible introduction of fees (negative interest rates) for household deposits. These answers will be presented within a broader analysis in early 2020.*

4.1 Impact and use of fintech in the banking system

Digitalisation and the introduction of fintech are bringing progress, but fintech firms are at the same time applying competitive pressure on banks, and are thereby having an impact on their business models. In the survey banks were asked how they are incorporating fintech in their business processes, what impact it is having on their performance, and how they are working with the fintech industry[74] or how they identify competitive pressures.

Cooperation with fintech firms and introduction of fintech[75] at banks

The majority of banks are facing competitive pressure from fintech firms, but some have entered into commercial partnerships to be able to bring new products and services to the market. Banks report that fintech firms currently compete with them over current accounts and payments, where their main competitive advantage is price, since the majority of their services are free. Banks are also aware of the competition in the area of payment services coming from neobanks.[76] Banks are not investing in startups where they might guide the future evolution of fintech. Currently they are merely allowing firms with cryptoassets to open accounts; they are not trading them themselves, nor are they planning to.

Figure 4.1: Cooperation with fintech firms

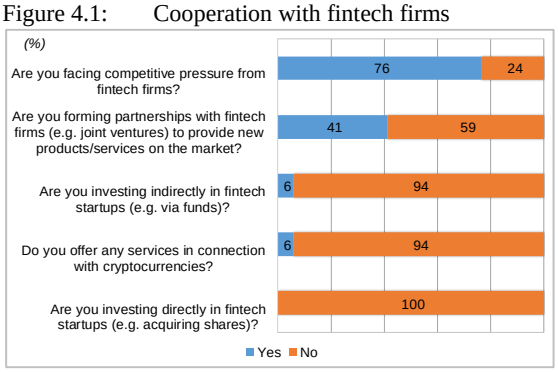
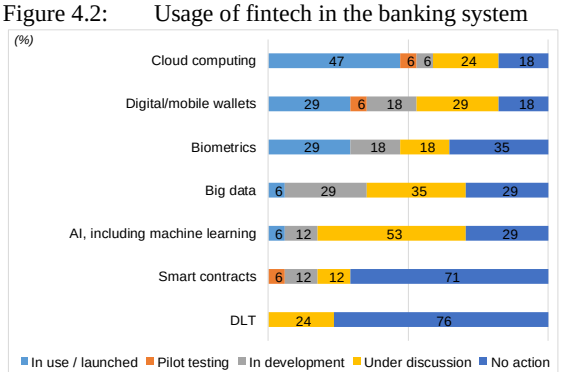


Figure 4.2: Usage of fintech in the banking system



Sources: Bank of Slovenia

Banks are investing more and more to develop new products based on fintech, principally established and tested technologies. Cloud computing, digital/mobile wallets and biometrics all offer added value in the implementation of internal business processes at banks, and can help provide better services for customers.[77]

[74] The fintech industry consists of various firms who are trying to improve on existing financial services by means of information technology and innovations. The firms aim to use technology in the financial sphere in the most innovative way possible. The use of new technologies focuses primarily on areas related to payment systems and transfers, cryptoasset trading, lending, insurance, etc. The fintech industry largely aims to offer firms and consumers better, faster, and more efficient financial services. This is having an impact on the operations of banks and other financial institutions, particularly in the sense of the pressure from new service providers in the financial market.

[75] 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).

[76] Digital online banks or neobanks appeared in 2011; they are digital, which means that they do business with customers exclusively via mobile apps or online platforms. Neobanks have no bricks and mortar branches, and do not do business with customers in any way reminiscent of traditional banking. There are two neobanks operating in Slovenia: N26 and Revolut.

[77] They are mainly investing in the development of authentication for mobile apps (biometrics), digitalisation/automation of business processes (cloud computing), and improved user interfaces (digital/mobile apps).

The competitive advantage is lost with other fintech, such as distributed ledger technology, smart contracts, big data and AI, where they can see the benefit, but are not yet using these technologies in their business models (stress tests, customer management). Banks are extremely conservative in their introduction of fintech, which means that they make a thorough assessment of the benefit of the technology before they decide to implement it (they are currently using fintech that existed on the market more than ten years ago). They are nevertheless considering or at least discussing introducing other fintech, and are monitoring developments on the market.

The banks introducing technological innovations into their business processes and business models are becoming increasingly competitive relative to other banks and also to fintech firms. Banks primarily see value-added in cloud computing, which allows for cost-cutting, while biometrics and digital/mobile wallets present banks with an opportunity to increase their competitiveness. Banks see least value-added in distributed ledger technology (DLT)[78] (and in smart contracts), mainly on account of a lack of confidence and poor understanding. At the same time this is a new technology with a different concept of data processing and storage, and of transacting (decentralised collation of transactions).

The fintech industry is impacting banks' business models, particularly in retail banking, as the free services offered by fintech firms are reducing the number of customers and the income available to banks. Banks are adapting their business models to the new situation on the market, having already incorporated payment services and settlement, which are exposed to greater competition and are based on fintech (online and mobile applications), while simultaneously reducing their branch numbers and workforces. It is mainly in payment services and settlement that banks could have their income reduced by fintech firms. In recent years fintech firms have used new financial technologies to improve the services available to customers in these two segments.

Figure 4.3: Impact of fintech firms on banks' business models

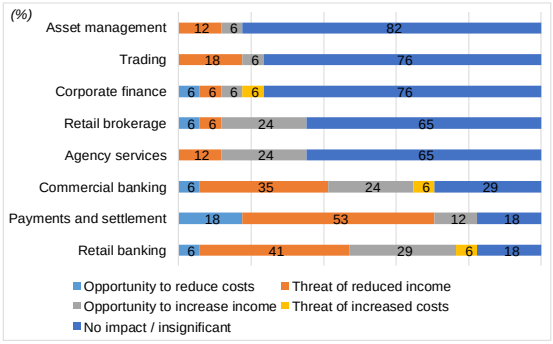
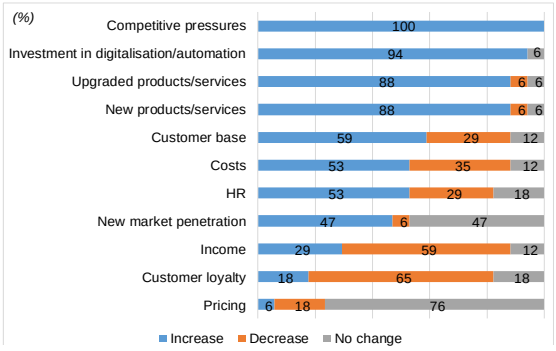


Figure 4.4: Changes to the banking system brought by the development of fintech



Sources: Bank of Slovenia

Banks are primarily introducing new financial technologies related to open banking / APIs.[79] The new payment services directive (the PSD2) expanded the definition of payment service providers to include fintech firms and other stakeholders. Given the greater competitive pressures on banks, they began using and developing fintech to improve their services in the area of open banking. The areas in which banks see further opportunities to introduce fintech primarily relate to business process optimisation (improved data quality and fraud detection), and customer relationships (intelligent systems for customer insight and improvements to the user experience). The results of the survey show that banks are not using fintech enough in their business processes and their services for customers (currently only a fifth of the banks use at least one financial technology in their business processes or services).

[78] Distributed ledger technology is a way of recording and exchanging data between different data storage points who hold the same data, which is collectively maintained and overseen by a distributed network of computer servers named network hubs.

[79] Under the EU's new payment services directive (the PSD2), banks are required to provide their customers with greater oversight of their own data, new services and an improved user experience. The main aim of the directive is to improve the security of payments and to ensure greater security for payment service users, while encouraging payment service providers to compete with one another and to innovate in the financial sector. On this basis banks have embarked on the development of open banking, which enables various stakeholders from the financial industry, such as third-party providers and other financial institutions, to work together. One feature of open banking is its incorporation of fintech.

In making planned changes as part of the digitalisation process, banks face a lack of resources, and legislative restrictions. Banks say that there is a shortage of people with the requisite skills, a lack of qualified contractors (IT firms), a lack of existing high-quality solution providers, and restrictions in existing IT infrastructure. They also say that any technological transformation of complex systems requires a lengthy period of adjustment and learning. The following legislative restrictions are cited: Slovenia's banking regulatory environment is too limiting with regard to the use of fintech, the competition (non-bank entities) have lower standards than banks with regard to the entire credit process (microcredit on fintech platforms), with the majority of products offered on the market the banks encounter outdated AML/CFT laws[80] (in particular there is a difficulty with the use of electronic identification), consumer credit legislation is restrictive, and there are legislative obstacles to the digitalisation of certain business processes (SISBON verification). The majority of banks conduct SWOT analysis more than once a year with regard to digitalisation.

Banks also report that because of legislative restrictions they are still unable to simply offer services that are already being provided in the Slovenian market by certain foreign fintech providers. The continual changes and updates by the regulator are restricting them in dealing with new technologies and new forms of competition on the market.

Impact of fintech on bank profitability and strategies

The new service providers using new fintech are having an impact on banks' profitability, strategic stances and business models, and are putting competitive pressure on them. Fintech firms are quick to adapt their products and services, and fintech firms abroad are already offering free and better services on the market, which is having an impact on bank profitability. Banks say that the development of fintech means that they are investing above all in the digitalisation and automation of business processes, and are updating their products and services for customers or offering new ones. Banks report that they are seeing rising costs caused by the new investment in fintech, increased demand for new human resources (principally outsourcing), a fall in interest income and non-interest income, and a rise in operating costs. This is having an impact on the commission margin, which is thus reducing their income. All of these factors are affecting their profitability and performance. In the near future greater and greater competitive pressure on the banking system can be expected, and banks will therefore have to tailor their business models and strategies to the new situation on the market.

Given the competitive pressures, in 2020 banks are planning to increase their investment in in-house development of fintech by almost a half relative to the previous year. In addition they are considering an increase of more than a third in their direct and indirect investments in fintech firms. At the same time they are further increasing their investments in IT in connection with upgrades and maintenance for existing systems. Banks also report that they are investing in financial technologies related to back-office operations and business with customers. This means that they see added value primarily in improving internal business processes (which entails reductions in labour costs and the workforce), and in interactive banking services and products for customers.

Banks are already working with firms such as Big Tech[81] and see them in the role of business partners as well as competitors. Banks are also expecting the Big Tech firms to enter the realm of banking services in the next few years, which will increase the competitive pressure. In this event they expect competition to increase, and for there to be a need to offer more-innovative products and services and to adjust their business models.

Banks' adaptations to the rise of technological innovations and competition are also being reflected in changes in business strategy. Banks are already incorporating the importance of technological innovation into their strategies and models. They also say that their main advantages over the competition lie in experience and risk management, particularly in connection with the security aspect of the implementation of new technologies.

[80] For more on AML/CFT, see https://www.bsi.si/en/financial-stability/banking-system-supervision/prevention-of-money-laundering-and-terrorist-financing-amlcft.

[81] 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. They are shaping the way our society progresses.

4.2 Evolution of climate risk monitoring in the banking system

The risks to financial stability associated with climate change have increased in recent years, and are characterized by uncertainty above all. The financial system is exposed to climate risk, and will have to adapt to the necessary energy transition to a low-carbon economy.

Climate risk may be physical, stemming from extreme weather conditions, or transition, stemming from changes in environmental policy, consumer preferences, and technology. From the perspective of meeting environmental targets, transition risks in Slovenia are low. Transition risks are also assessed as low in the banking system when accounting solely for the exposures to sectors with a high carbon footprint, but the risks are relatively significant when using a broader definition which includes households as well.

The bank survey reveals a high level of awareness of the importance of sustainability and the existence of climate risk. The increased importance of climate change will require quicker progress in this area, which will bring numerous opportunities as well. These include the growth potential in sustainable finance as part of broader green growth initiatives.

Definition of sustainable development and climate risk

The development of climate risk monitoring will necessitate key term definitions, which are often closely related. Climate risk is a central part of sustainable development conceptually. Sustainable development is defined as development that satisfies the needs of the current generation without endangering the possibility of meeting the needs of future generations. It is based on three dimensions: economic, environmental and social. The closely related term "social responsibility" encompasses the business aspects of sustainable development. Sustainable investment policy refers to ESG investments, which entail three aspects: The environmental (E) aspect covers climate change, resource management and waste management. The social (S) aspect covers development and concern for human capital, product safety and support for socially beneficial projects. The governance (G) aspect covers corporate governance, ethics and anti-corruption. In the OECD's concept of green growth,[82] sustainable development is narrowed down to two dimensions, environmental and economic, in order to operationalise the concepts for economic policymakers. Risk analyses, stemming from the increasing importance of sustainability in general, have focused on climate risks as financial risks to the financial stability of the system.

Climate risks which may affect financial stability are characterized as physical risks related to extreme weather conditions, and transition risks related to changes in environmental policy, consumer preferences, and technology. Physical risks have direct impacts, such as payment of compensation for loss events, or indirect impacts, such as temporary disruption to trading chains or changes in demand. Transition risks encompass the risks related to changes in environmental policy and legislation (increases in green taxes), changes in consumer preferences (demand for environment-friendly products and services), and changes in technology (energy-efficient business and industrial processes). Climate risks affect all economic entities. Banks are exposed to physical risks through the direct impact of renovating their branches, as well as through the indirect impact on their customers' business. The burden from physical risks is most substantial for insurance corporations, due to compensation payouts, and the government, in the event of additional uninsured expenses or the cost of renovations after loss events. Firms are exposed to all three sources of transition risks, whereas households are most exposed to changes in environmental policy and legislation. An indirect impact on households may arise due to the potential transfer of the costs of energy transition from firms to consumers. Banks are therefore exposed to transition risks due to changes in the creditworthiness of firms and households, or changes in the market value of assets during the energy transition.

Energy transition to a low-carbon economy

Energy transition is a term that encompasses the pathway to a low-carbon green economy, with a high level of energy security. The energy transition is defined at the EU level by the Energy Union Strategy. The energy transition also encompasses climate targets in line with the greenhouse gas emissions targets set out by the Paris Agreement.[83] Climate targets at the EU level are defined in detail in the 2020 climate and energy

[82] OECD. (2011). Towards Green Growth: https://www.oecd.org/greengrowth/48012345.pdf
[83] These set out countries' collective efforts to curb the temperature rise relative to the pre-industrial period (less than 2°C, with a target of 1.5°C).

package and in the 2030 climate and energy framework. They include reductions in emissions of 20% by 2020 and 40% by 2030 relative to the base year of 1990. The targets at national level are defined within the framework of the Effort Sharing Regulation,[84] which stipulates targets for 2020 and 2030 relative to 2005 and economic development (per capita GDP). The long-term transition strategy is defined up to 2050, with the objective of climate neutrality (zero net emissions) at the EU level. The energy transition will entail multiple measures, such as environmental measures or market instruments, and the EU is one of the most ambitious regions, having introduced an emissions trading scheme and environmental taxation at the EU level. During the energy transition the largest adjustments will have to be made by the countries that cause the heaviest pollution. In the EU the less-developed countries have lower emissions targets, and minimum energy tax rates.[85] The rationale for differentiating across countries according to the size of the economy is the need for faster economic growth in smaller economies in order to achieve economic convergence within the EU. In general, environmental targets and regulation will still be defined within the framework of national legislation, which can have a significant impact on the economy in terms of the speed and intensity of the energy transition, and represents the direct impact of environmental measures. There is also an indirect impact from the energy transition via its effect on international trade.[86] The energy transition will depend on emissions targets, the structure of emissions and the economy, as well as environmental measures.

Slovenia's CO_2 emissions in 2017 currently meet the targets for 2020 and 2030,[87] which suggests that the risk of failing to meet the targets is low. Future assessments will depend on the development of the economy over the next decade. Emissions at EU level also meet the targets for 2020, while the targets for 2030 (reductions ranging from 40% to 55%) have been adopted, albeit as a non-binding measure. The latter is also strategically defined in the action plan of the new European Commission. Stricter emissions targets would affect countries with higher emissions and sectors with the highest emissions the most.

In Slovenia CO_2 emissions are primarily caused by households and three sectors of the economy: manufacturing, electricity generation and transport. Within the manufacturing sector the largest CO_2 emissions arise from the production of wood, paper and metals, which accounted for 81.3% of all CO_2 emissions in manufacturing in 2017. Emissions are concentrated in land transport within the transport sector. The concentration of CO_2 emissions is high: seven firms in electricity generation accounted for 31.4% of all CO_2 emissions in 2017. The ten largest polluters participating in the emissions trading system accounted for 39.5% of all CO_2 emissions in 2017.

There has been no significant change in the breakdown of CO_2 emissions since the crisis, which implies that transition risks remain concentrated in certain sectors. The Slovenian economy is relatively carbon-intensive: the three most polluting sectors accounted for 27.9% of total value-added in 2018, while the subsectors with the highest emissions in manufacturing and transport accounted for 12.4% of the total. Given the structure of the economy, the risks are assessed as moderate.

Figure 4.5: CO_2 emissions by sector, 2008 and 2017

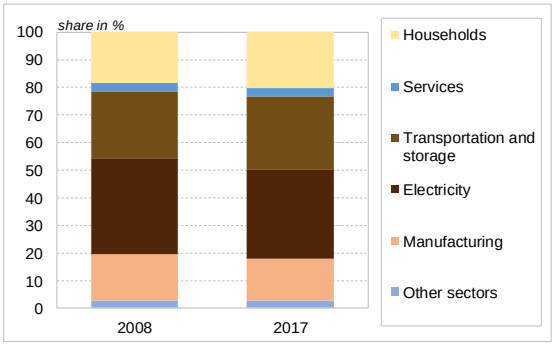
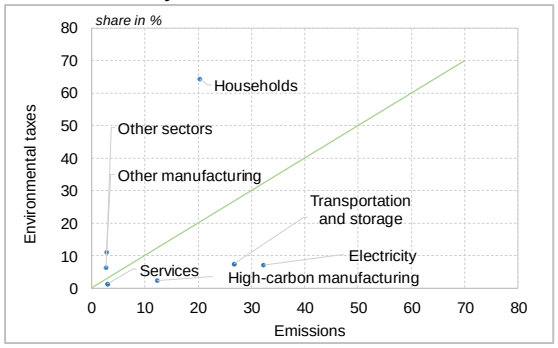


Figure 4.6: CO_2 emissions and environmental taxes by sector, 2017



Note: In the right figure the closer a sector is to the diagonal line, the more its environmental tax burden is proportionate to the emissions that it causes.
Sources: Eurostat, Bank of Slovenia

[84] According to per capita GDP, as set out in the effort sharing legislation, namely Decision 406/2009/EC and Regulation 525/2013.
[85] Energy Taxation Directive (2003/96/EC).
[86] For example, Germany has stricter targets and thus greater adjustments to make.
[87] These were defined as a permitted increase in emissions of 4% by 2020 and a reduction in emissions of 15% by 2030, relative to 2005. Current emission levels are 15% below 2005, and thus meet both targets.

The environmental tax burden is disproportionate to the emissions produced by individual sectors: it is highest for households, and much lower for the three sectors with the highest carbon emissions. Within the manufacturing sector, the burden falls more on subsectors with a lower carbon footprint, while it is below-average in subsectors with the highest carbon footprints.[88] The tax burden is also below-average in the transport sector, where land transport produces the highest emissions.[89] This shows elevated transition risks in these sectors, due to changes in environmental policy such as a reform of environmental tax policy. Households are also highly exposed to transition risks. On the basis of this, carbon-intensive sectors (the non-financial corporations sectors of manufacturing, electricity generation and transport) and climate-sensitive sectors (the three largest polluters at firms and households) can be defined.

Overview of exposure to transition risks in the banking system

Transition risks are relatively significant at the level of the banking system, although the significance varies according to how the sectors exposed to climate risk are defined. According to a broader definition of climate-sensitive sectors, which includes households, transport, electricity generation and manufacturing, transition risks are significant, as exposures to these sectors account for 41.9% of total bank exposure. Including only those sectors that cause the highest emissions, the banks' exposure to transition risks decreases to 34.1% of total exposure. The household sector accounted for 26.3% of total bank exposure in September 2019, while the sectors with the highest emissions accounted for 7.8%. Of these, the largest exposure was to manufacturing, at 4.2% of the total, followed by electricity generation with 2.6% and transport with 1%.

A review of the banks reveals the systemic importance of transition risks, as the so-called brown industriesNapaka! Zaznamek ni definiran. are present at all the banks. The share of the banks' corporate portfolio accounted for by the largest polluter sectors averaged 24.7% in September 2019, which indicates the systemic importance of climate risks. The brown industries account for more than 15% of the corporate portfolio at almost all of the banks.

According to the banks' current exposures, the risks are manageable and do not endanger the resilience of the system. The materialisation of the risks depends on the time horizon of environmental policy, the intensity of the measures, and the interactions between a wide spectrum of measures. In the event of a fast, intensive transition, credit parameters (e.g. probability of default) could deteriorate significantly at the systemic level, which could increase credit risk. An additional risk is market risk from changes in asset valuations, which is not addressed. It should also be noted that although the energy transition is associated primarily with risks, it can also be a source of business opportunities in light of the growing initiatives for green growth.

Figure 4.7: Breakdown of bank exposures by sector, September 2019

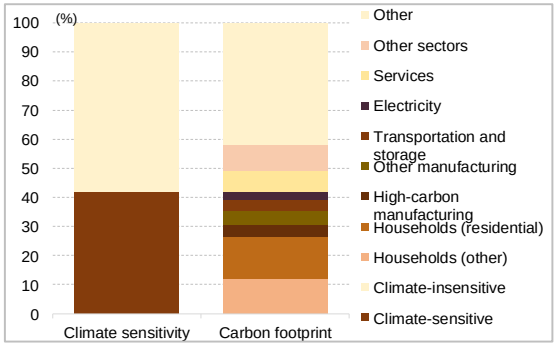
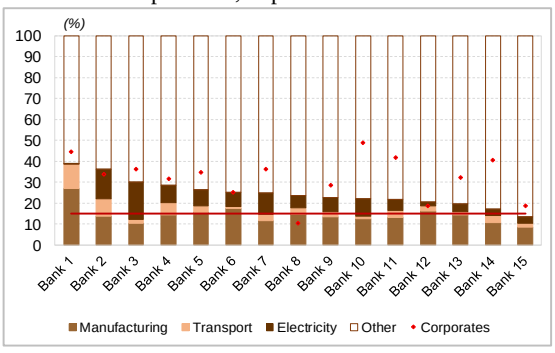


Figure 4.8: Bank exposures to sectors with a high carbon footprint, and share of total exposure accounted for by corporate portfolio, September 2019



Note: In the right figure manufacturing, transport and electricity generation are defined as sectors/subsectors with a high carbon footprint.
Source: Bank of Slovenia

[88] These mainly include the manufacture of paper, wood, rubber and metals, Sectors C16 to C18 and C22 to C25 under the SKD.
[89] The nature of the sector means that the entirety of energy taxes could also be ascribed to it, for which reason all transport is illustrated in the figure.

Sustainability from the perspective of commercial banks

According to a survey, the majority of banks in Slovenia are aware of the importance of sustainability in business, and a considerable number of banks have already adopted definitions of the concept. Four banks have their own definitions of sustainability, six use widely accepted definitions such as the Equator Principles,[90] the principles of the United Nations Environment Programme Finance Initiative (UNEPFI) and the principles of the Global Reporting Initiative. It should be highlighted that climate risk is present in all definitions of sustainability, even if it is not a core dimension. This is indicative of the awareness of the importance of sustainability and climate change within the framework of the business strategy. Of the 17 banks,[91] sustainability forms part of the business strategy at 11 banks, although it is more at a conceptual rather than operational level.

Banks most often include sustainability in their business objectives by defining environmental and sustainability principles, through public support for sustainability principles and, in certain cases, through information publication and staff training. The majority of banks intend to introduce ESG assessments for the credit portfolio in the medium term. The main determinants of a sustainable business strategy are maintaining reputation, and predicting changes in regulation or forecasting changes in risks in timely fashion. The main challenges cited by banks are unclear or insufficient benefits, insufficient demand, and the size of the bank. The latter is indicative of the coverage of sustainability mainly at the conceptual level, and of the banks' difficulties in operationalising the concept of sustainability in their business models.

Figure 4.9: Factors in the creation of sustainability strategy

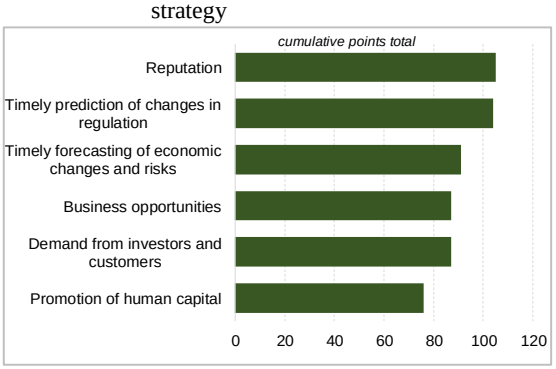
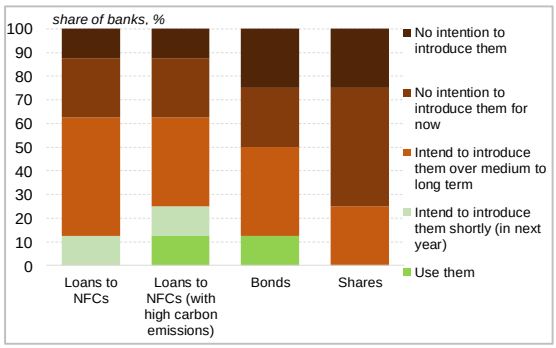


Figure 4.10: Usage of ESG assessment



Note: In the left figure the importance of each factor is calculated as the sum of all banks, where the factor is scored from 1 to 10. In the right figure the share of banks is calculated as the percentage of respondents in each category.
Source: Bank of Slovenia

An overview of banks' activities shows that sustainability is mainly monitored at the conceptual level, despite its inclusion in business strategy. The majority of banks have not formed sustainability task forces, despite the inclusion of sustainability in their business strategies. Sustainability task forces are present at four banks, while sustainability guidance for employees is present at seven of the 17 banks. A review of the business sustainability measures and the statements made in relation to sustainability implies that the consideration of sustainability in business models is at a relatively early stage. The measures include in-house definitions of resources and assets (social, clean or dirty), internal tools for classifying business clients, climate risk management, and the development of in-house definitions and products, which are relatively rare. Some banks cite information about sustainability, but their statements refer to sustainability in general, and not to climate change. An important factor in taking action is the existence of an umbrella strategy at the level of the parent bank, if the bank is under foreign ownership, or the size of the institution, as smaller institutions often cite cost restrictions.

Monitoring sustainability merely at the conceptual level indicates that banks assess the risks inherent in sustainability and climate change as low. Risks related to sustainability are significant to financial stability, particularly in relation to climate change. Both physical and transition risks are significant. Transition risks that can lead to credit or market risk are particularly relevant to banking. The relative importance of more tangible risks which belong to the traditional definition of risks (operational risk, market risk, credit risk, etc.) is often highlighted, which shows the difficulty in identifying climate risks as material

[90] The Equator Principles are principles created by a group of financial institutions that define the sustainability aspects of project financing.
[91] The sample covers 15 banks and two branches of foreign banks.

financial risks for credit or market risk. The majority of the banks state that climate risks (physical or transition) are relevant over the medium to long term (five to ten years). Climate risk monitoring is part of the monitoring of creditworthiness at the individual customer level. Herein, it is not defined at the highest level as part of the business strategy, and it is not included within risk management or scenario analysis. In many cases, banks fail to distinguish between aspects of sustainability and climate change, which is indicative of a low assessment of the relevance of climate change in the current horizon. If banks intend to introduce sustainability assessments for distinguishing between individual dimensions, it is typically expressed over the medium to long term. In the event of a fast transition, the impact of climate risk on credit parameters could be large. The professional literature acknowledges the horizon issue, where the benefits lie far in the future, while the costs appear in the present to near term. In addition to the horizon, there are additional cost restrictions and unclear definitions of the sustainability or social dimensions.[92]

The long-term horizon of sustainability and the definitional issues are reflected in the initial phase of development of products based on sustainability or climate change at the majority of banks. Half of the banks are currently not planning to introduce sustainable products, while the other half have introduced or are intending to introduce them for a variety of reasons (six on environmental grounds, one for social considerations, and two on governance grounds). When it comes to green products and services, there are greater preferences for developing more traditional products which would be tied to an environmental criterion, such as energy-efficient mortgages, green commercial loans and green car loans, rather than alternative forms of green product, such as green consumer loans or green credit cards.

Green finance is in the early stages of development as a core component of sustainable financing. The main determinants driving the development of green products and services are consumer demand, improving business relations, corporate and social responsibility, and new business opportunities. The main obstacles cited by the banks remain low incentives and low demand.

The banks recognise the potential opportunities in green finance, but are cautious in operationalising the concept. On the asset side, green loans are present at six banks in the form of housing loans or consumer loans, where the definition is tied to special funds (e.g. the Eco Fund) or general definitions (e.g. electric vehicles, energy-efficient buildings). Green loans are therefore available at certain banks, although the amounts on the balance sheet are negligible. Smaller banks often highlight cost issues in the development of green products and services. Green household lending is therefore in its early stages, with the potential for growth in the coming years. Investing in green bonds or social impact bonds is generally an underdeveloped area, with only a few examples. It is similar on the liability side: only one bank in Slovenia has issued a green bond. No bank has issued a social impact bond[93] to date. The main obstacles to entering the green bonds market are definitional issues related to the green dimension, insufficient transparency and data quality. Similar considerations are also found with regard to social impact bonds.

4.3 Resilience of the banking system to cyber risks

The number of cyber attacks has risen in recent years, at financial institutions and banks alike, and also at other firms and government institutions, resulting in disruption to services and the leakage of sensitive data. Based on a survey of banks, it is our assessment that the banking system is relatively well prepared for cyber attacks, and is capable of repelling them, although banks will have to be more ready to mitigate in the event of an attack. The banks are improving their cyber-resilience through the regular security testing of business processes. There is nevertheless a recognition that they still have insufficient oversight of outsourcing and IT service providers, and are dealing with outmoded information systems.

The banks report that they are facing down cyber attacks and incidents and successfully resolving them through technical means, such as firewalls, and system software to protect against penetration or malware.[94] The banks are successfully stopping cyber attacks and incidents before they have an impact on their operations and critical business processes, and currently report no financial damage from cyber attacks and incidents that could seriously affect their performance.

[92] This can lead to greenwashing, or the misleading citation of environmental information for marketing purposes.
[93] Bonds with a beneficial social impact.
[94] Cyber attacks mainly come in the form of phishing mail (malevolent email) and distributed denial-of-service (DDoS) attacks. Recent years have mainly seen a rising number of phishing attacks, and a falling number of DDoS attacks. To prevent these attacks the banks are putting security operations centres and dedicated antivirus software such as Sophos and Qradar in place.

The banks are including cyber security in their business strategies, and are aware of the importance of information security. They are conducting intensive assessments of all applications and processes via the information security function. This provides insight into the particular areas where cyber threats could arise. The banks report that they are regularly adapting their strategies, and earmarking the resources to eliminate vulnerabilities. They have embarked on the gradual introduction of integrated systems to prevent advanced cyber attacks, such as ATP systems, and systems to monitor cyber incidents in the information system, such as SIEM systems. In the implementation of SIEM systems, the banks have insufficient oversight of the key cyber events.

The majority of the banks conduct drills in various cyber attack scenarios at least once a year. The banks primarily focus on the implementation of crisis scenarios. They have drawn up policies for reporting incidents and procedures for crisis communication. It is evident from the survey that IT business continuity testing at the banks is incomplete and irregular. It can be surmised that they must improve the testing of various cyber attack scenarios.

The banks are educating their employees and raising their awareness about examples of cyber attacks, by providing training in recognising social engineering, and penetration tests. They are regularly providing training for employees in areas of information security, social engineering and personal data protection. The majority of the banks have not yet put in place a security operations centre, and even those that are in place have generally been outsourced. The banks that do not have a security operations centre run the risk of difficulties in coordinating the resolution of the situation in the event of a cyber attack.

The banks are dealing with outmoded information systems, which is increasing the risk of cyber penetrations. That information systems are outmoded is mainly attributable to the complexity of the information systems used by banks, the interconnectedness of services, and the occasional incompatibility of individual services with newer solutions. The banks are gradually eliminating these issues according to the results of risk analysis. Outmoded information solutions, development tools and software are all being withdrawn. The approach to these changes varies at the banks: some begin with new projects (new information solutions), while others update their existing information systems. From the perspective of cyber risk, the main issue is with information systems that are at the end of their lifecycle but are still supporting critical business processes.

The survey makes it evident that the banks have insufficient oversight of outsourcing and suppliers that manage their information technology. Security requirements are often not clearly defined (only basic proof of information security is required). The banks must embark on introducing stricter criteria in the implementation of their security policies, security audits, and oversight of outsourcing. In addition, the banks are expected to follow the EBA guidelines[95] on outsourcing.

The cyber resilience of the banking system is at a basic level, which means that the banking system is relatively well prepared for cyber attacks, and is capable of repelling them, although banks will have to be more ready to mitigate in the event of an attack. When it comes to the maturity of cyber resilience, there are three levels of expectation: basic, advanced and innovative. Cyber resilience is measured with the help of dimensions such as cyber threats, cyber vulnerability, the response to a cyber attack, and the impact of a cyber threat on the information system. The assessment based on these metrics is that the banking system's cyber resilience is at the basic level, which means that the majority of banks are assured of relatively good resilience, but with moderate ability to mitigate in the event of a cyber attack. The banks must embark on regular testing of the security of their information systems, and must focus on better oversight of outsourcing and improvements to information systems that are critical to business processes.

[95] Available at https://eba.europa.eu/sites/default/documents/files/documents/10180/2551996/38c80601-f5d7-4855-8ba3-702423665479/EBA%20revised%20Guidelines%20on%20outsourcing%20arrangements.pdf?retry=1.

Figure 4.11: Cyber resilience of the banking system

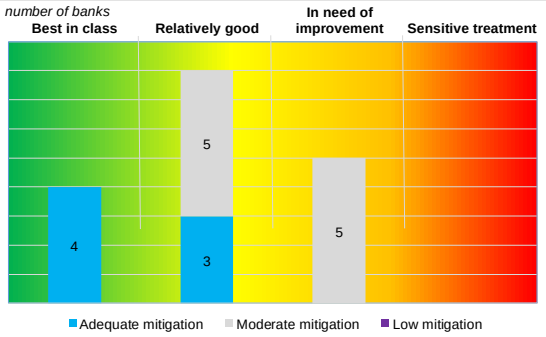
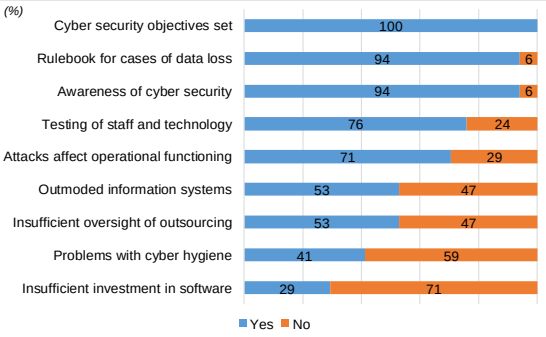


Figure 4.12: Cyber vulnerability of the banking system



Source: Bank of Slovenia

The banks' cyber resilience can be ensured through proper testing of resilience. Testing of cyber resilience is conducted at three levels of expectation: the first (basic) consists of vulnerability scanning and penetration tests, while the second and third (advanced and innovative) consist of TLPT.[96] The banks are mainly meeting the first level of expectation, but not TLPT, although they are planning to do so in the near future. The banks should regularly test their information systems, and the larger systemic banks at least should conduct TLPT.

To eliminate their cyber vulnerabilities the banks are increasing their spending on software to ensure better protection against cyber attacks and incidents. The banks also aim to improve cyber hygiene[97] at the level of business processes and staff training, to improve their oversight of outsourcing and suppliers, and to improve information systems to be more resilient to cyber attacks and properly documented. At present the banks are most exposed to cyber threats that affect the operational functioning of banks and the banking system. To a lesser extent the banks also emphasise that they are exposed to cyber threats in connection with the oversight of outsourcing and suppliers, and issues with outmoded information systems. The likelihood of a cyber threat occurring is particularly high in connection with the provision of adequate cyber security and the proper protection of computer equipment.

Judging by the review and analysis of the cyber resilience of the banking system, the banks are prepared for cyber attacks and incidents to differing degrees. They are mainly vulnerable in areas relating to the adequacy of computer equipment and oversight of outsourcing. The banks are already conducting regular testing to ensure cyber security, but this is still insufficient given the frequency of cyber attacks and incidents.

Figure 4.13: Prioritisation of cyber vulnerabilities in the banking system

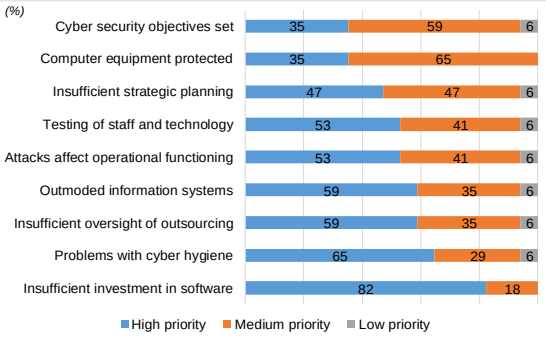
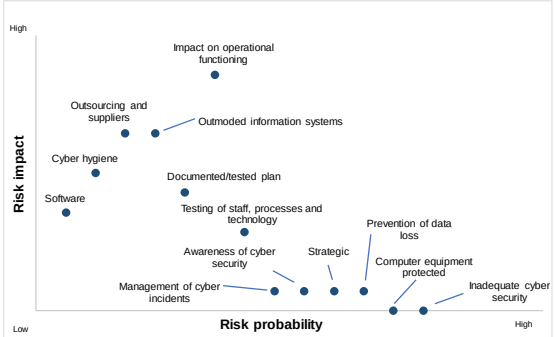


Figure 4.14: Sources of cyber risk



Note: In the right figure the probability of risk is defined as the risk for each dimension that the banks assessed as vulnerable in the event of cyber penetration of the information system. The risk impact is defined as the impact of a cyber attack/incident on the functioning of the banking system (the consequences of a cyber attack).
Sources: Bank of Slovenia

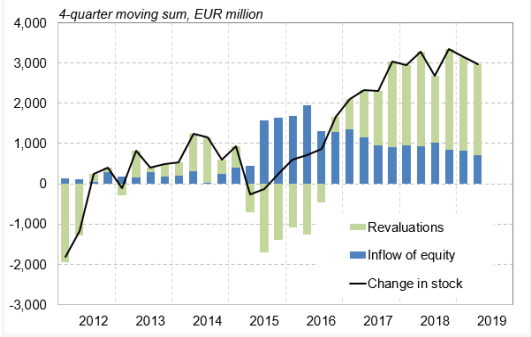
[96] Threat-led penetration testing or red-team testing is based on analysis of insecurities for the financial sector and the individual institution. Specialist third-party providers draw up insecurity analysis and a cyber attack simulation. The employees are unaware that it is merely a test. The objective of the testing is to assess the response of the bank and the employees to cyber attack (testing can take up to six weeks).

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

5 APPENDIX

Corporates

Figure 5.1: Breakdown of change in corporates' equity



Source: Bank of Slovenia

Figure 5.2: Breakdown of corporates' financial assets by instrument

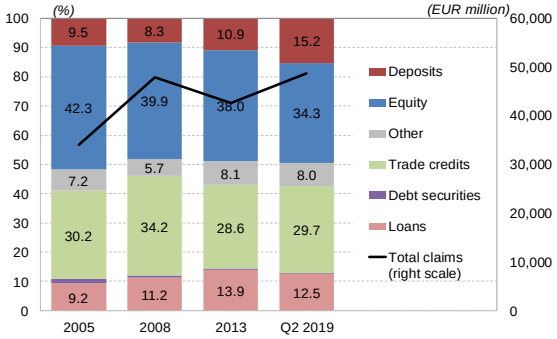
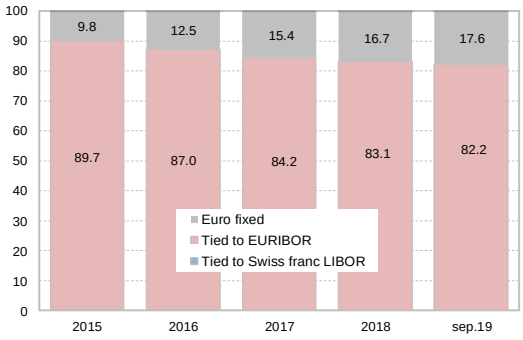
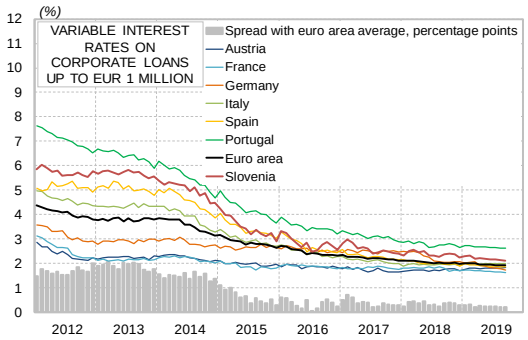


Figure 5.3: Breakdown of corporate loans by remuneration type



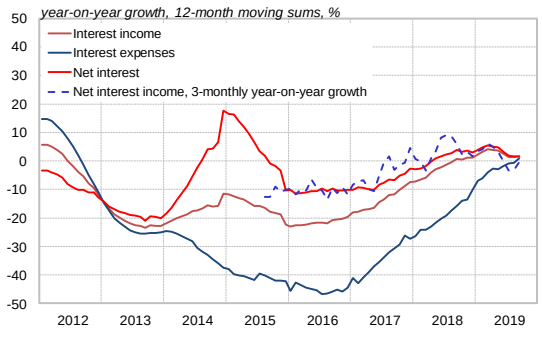
Source: Bank of Slovenia

Figure 5.4: Interest rates on long-term corporate loans, comparison with euro area



Income risk

Figure 5.5: Growth in interest income, interest expenses and net interest



Source: Bank of Slovenia

Figure 5.6: Effective interest rates by main instruments of interest-bearing assets and liabilities

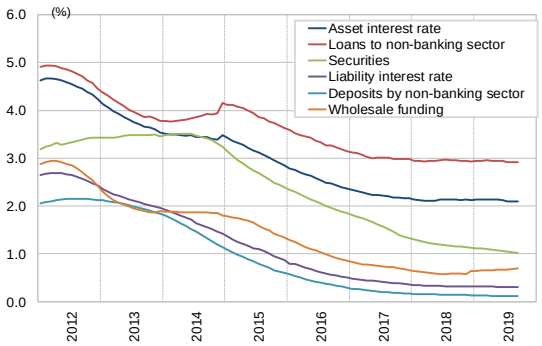
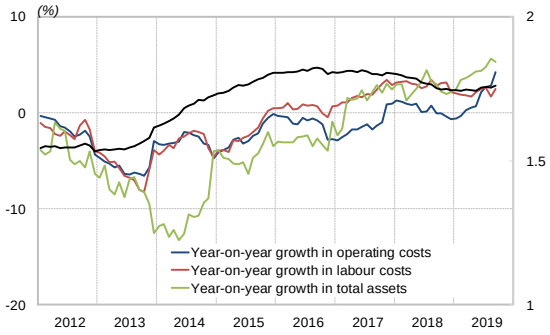


Figure 5.7: Growth in operating costs, labour costs and total assets



Source: Bank of Slovenia

Figure 5.8: Breakdown of operating costs

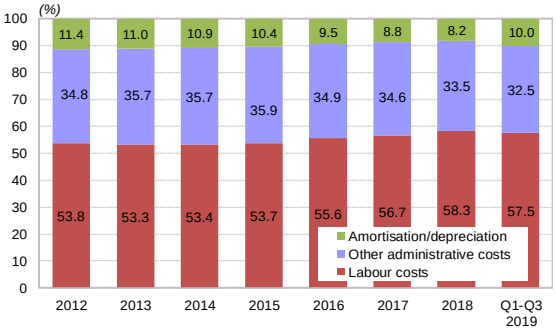


Figure 5.9: Pre-tax profit and ratio of impairment and provisioning costs to gross income

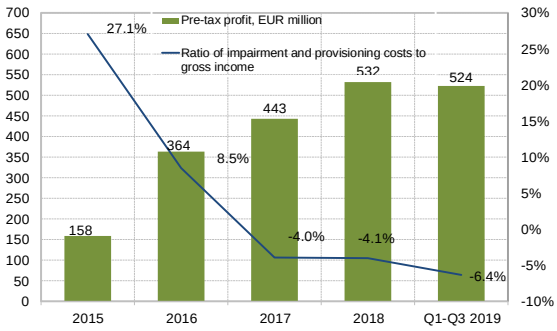
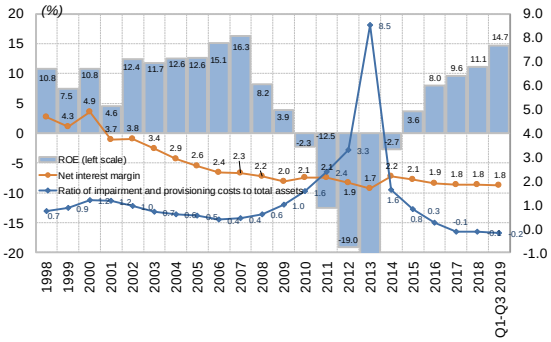


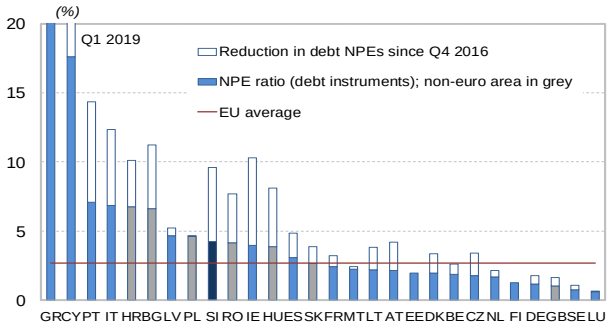
Figure 5.10: ROE, net interest margin, and ratio of impairment and provisioning costs to total assets



Note: Negative values for net impairment and provisioning costs represent a net release.
Source: Bank of Slovenia

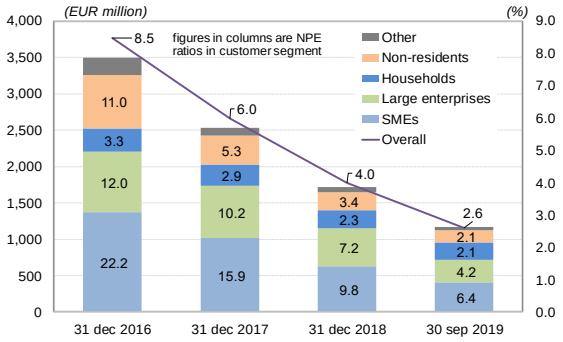
Credit risk

Figure 5.11: NPE and NPL ratios in EU countries



Note: The figure illustrates consolidated data. NPE ratios are available solely for the debt instruments portfolio, and not for total exposure. Values are not shown in full for Greece and Cyprus (Greece: 41.6% in Dec 2016 and 37.0% in Mar 2019; Cyprus: 20.9% in Dec 2016 and 17.6% in Mar 2019).
Source: ECB (consolidated banking data)

Figure 5.12: NPE ratios and breakdown of NPEs by customer segment



Source: Bank of Slovenia

Figure 5.13: NPE ratios and NPEs in the corporate portfolio by corporate size

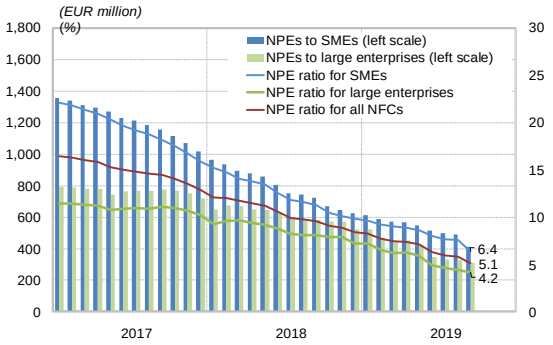
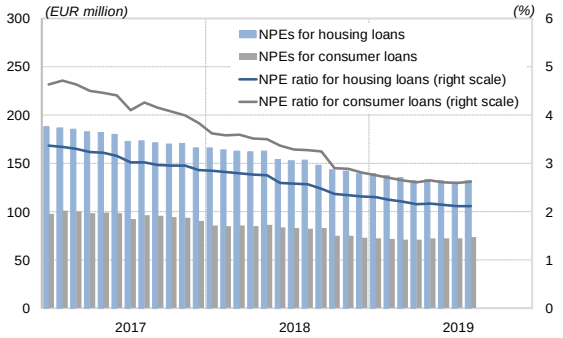


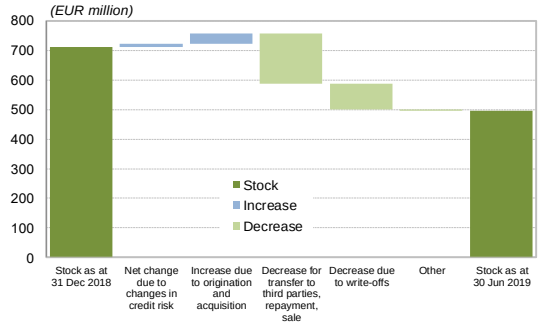
Figure 5.14: NPE ratios and NPEs in the household portfolio by loan type



Source: Bank of Slovenia

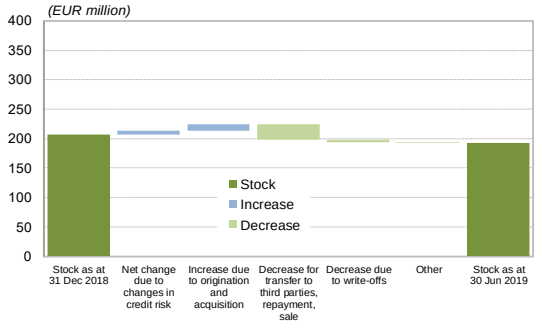
Banking system

Figure 5.15: Change in impairments for credit losses in the corporate portfolio, first half of 2019



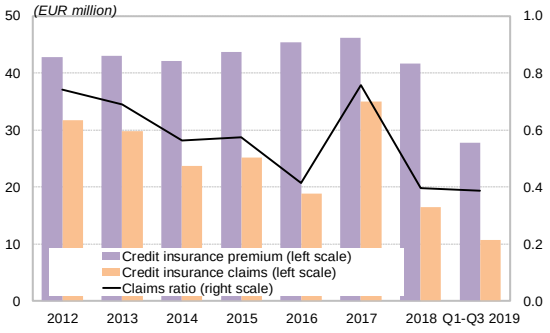
Source: Bank of Slovenia

Figure 5.16: Change in impairments for credit losses in the household portfolio, first half of 2019



Insurance corporations and pension companies/funds

Figure 5.17: Written premium and claims paid in credit insurance



Source: ISA

Figure 5.18: Residual maturity of debt securities in insurance corporations' portfolio

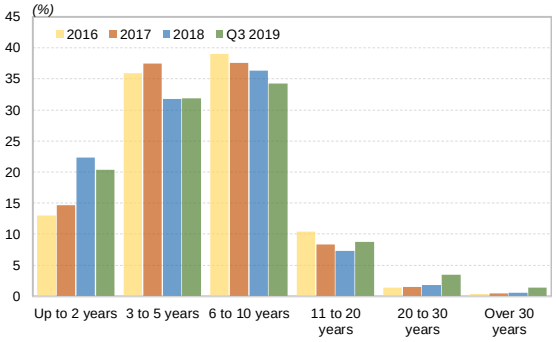
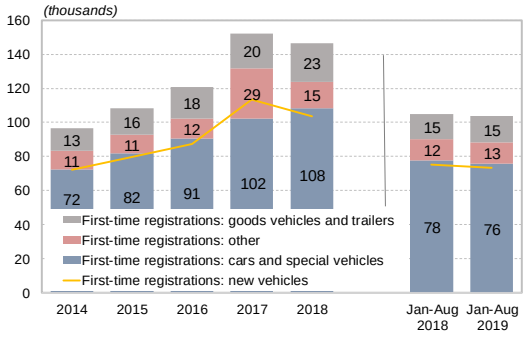


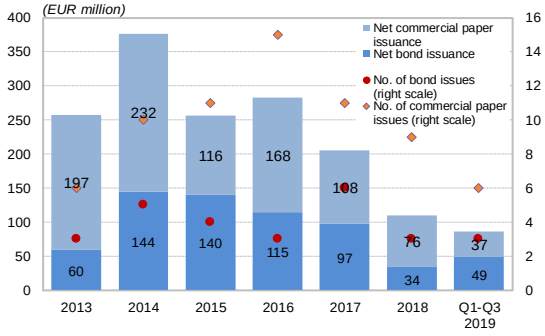
Figure 5.19: Vehicle registrations in Slovenia



Sources: SORS, Bank of Slovenia

Capital markets and mutual funds

Figure 5.20: Issuance of bonds and commercial paper (excluding government sector)



Sources: CSCC, Bloomberg, Bank of Slovenia

Figure 5.21: Volatility on stock markets (monthly and long-term average)

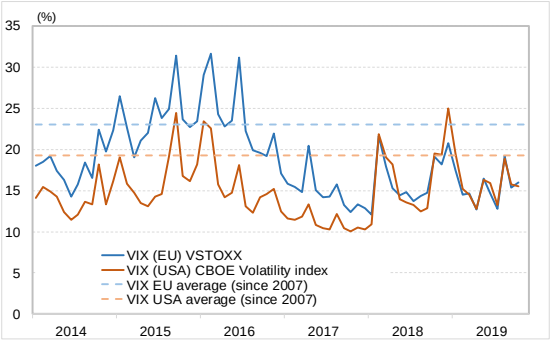


Figure 5.22: Net flows by fund type

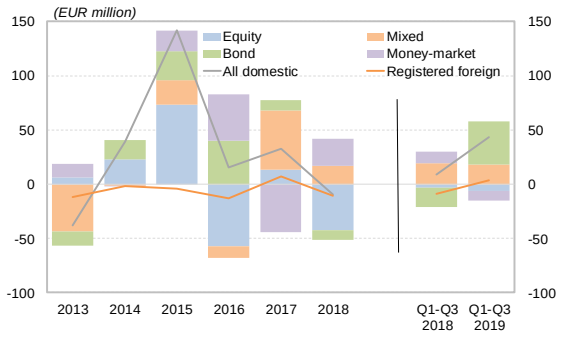
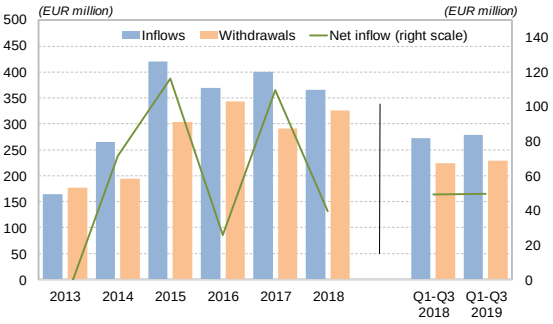
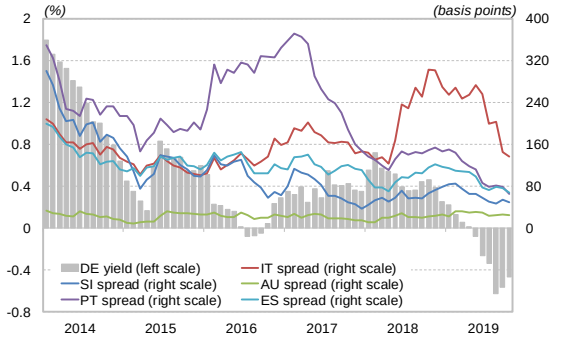


Figure 5.23: Households' inflows into domestic mutual funds



Sources: Bloomberg, Bank of Slovenia

Figure 5.24: Spreads of 10-year government bonds over German benchmark



Sources: Bloomberg, Bank of Slovenia

Figure 5.25: Use of fintech in various processes/activities

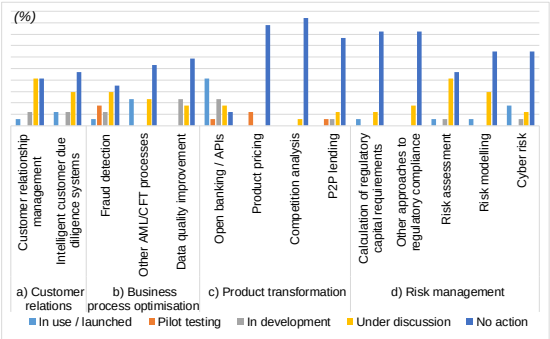
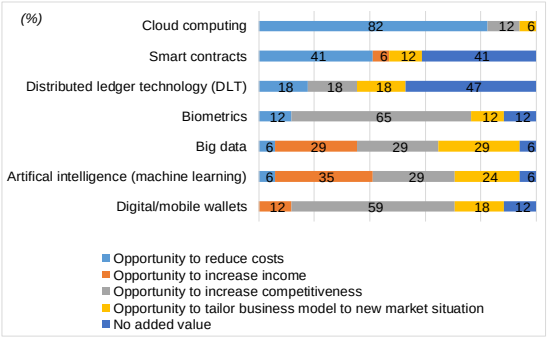


Figure 5.26: Value-added and opportunities for the banking system brought by fintech



Source: Bank of Slovenia

Figure 5.27: Obstacles to the implementation of planned changes in connection with digitalisation

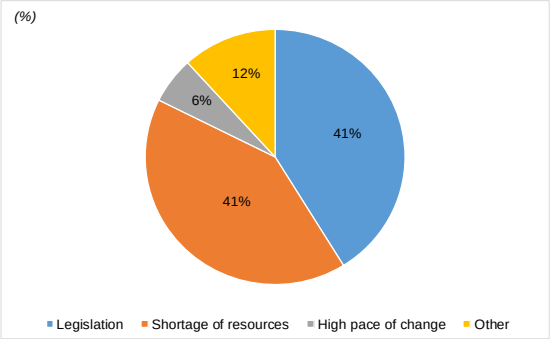
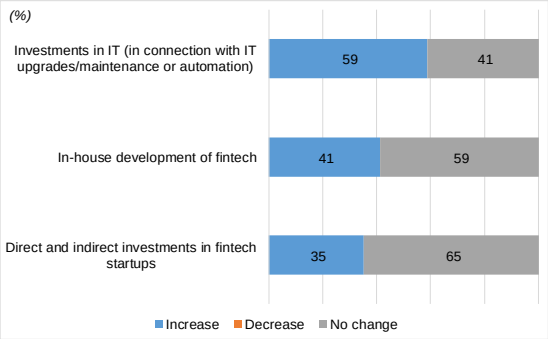


Figure 5.28: Estimated investment for 2020 (IT, fintech development)



Source: Bank of Slovenia

Tabela 5.2: Structure of the Slovenian financial system

	Financial assets, EUR million						Breakdown, %					Ratio to GDP, %						Growth, %				
	2015	2016	2017	2018 Q2	2018	2019 Q2	2015	2016	2017	2018	2019 Q2	2015	2016	2017	2018 Q2	2018	2019 Q2	2015	2016	2017	2018	2019 Q2
Monetary financial institutions	40,382	39,069	39,547	39,853	39,927	41,091	59.6	56.2	54.5	53.2	53.4	103.9	96.8	92.0	89.9	87.3	87.5	-4.5	-3.3	1.2	1.0	3.1
Central bank	10,275	12,860	14,850	15,583	16,668	16,456	15.2	18.5	20.5	22.2	21.4	26.4	31.9	34.5	35.2	36.4	35.0	-5.7	25.2	15.5	12.2	5.6
Non-monetary financial institutions	17,134	17,548	18,151	18,781	18,414	19,436	25.3	25.3	25.0	24.5	25.2	44.1	43.5	42.2	42.4	40.2	41.4	-1.3	2.4	3.4	1.4	3.5
insurance corporations	6,999	7,416	7,691	7,751	7,670	8,142	10.3	10.7	10.6	10.2	10.6	18.0	18.4	17.9	17.5	16.8	17.3	-0.5	6.0	3.7	-0.3	5.0
pension funds	2,487	2,564	2,685	2,734	2,741	2,938	3.7	3.7	3.7	3.7	3.8	6.4	6.4	6.2	6.2	6.0	6.3	6.3	3.1	4.7	2.1	7.4
investment funds other than MMFs	2,393	2,480	2,699	2,741	2,516	2,808	3.5	3.6	3.7	3.4	3.6	6.2	6.1	6.3	6.2	5.5	6.0	6.6	3.6	8.8	-6.8	2.4
other financial institutions	5,255	5,094	5,077	5,554	5,486	5,548	7.8	7.3	7.0	7.3	7.2	13.5	12.6	11.8	12.5	12.0	11.8	-8.7	-3.1	-0.3	8.1	-0.1
Total	67,791	69,477	72,548	74,217	75,009	76,982	100.0	100.0	100.0	100.0	100.0	174.5	172.1	168.8	167.5	163.9	163.9	-3.9	2.5	4.4	3.4	3.7

Source: Bank of Slovenia

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	Bank of Slovenia
CCyB	Countercyclical capital buffer
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	Economic and Monetary Union
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
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
Leaseurope	European Federation of Leasing Company Associations
LGD	Loss given default
LJSE	Ljubljana Stock Exchange
LTRO	Long-term refinancing operation
LTV	Loan-to-value ratio
MCR	Minimum capital requirement
IMF	International Monetary Fund
SMEs	Small and medium-size enterprises
MTS Slovenia	Part of the Euro MTS electronic trading platform for euro-denominated government and para-government benchmark bonds
NFCs	Non-financial corporations
ROE	Return on equity
RW	Risk weight
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
SORS	Statistical Office of the Republic of Slovenia
TLTRO	Targeted Longer-Term Refinancing Operation
AUP	Average unit price of a mutual fund
VLTRO	Very Long-Term Refinancing Operation
MF	Mutual fund
ZBan-2	Banking Act

Figures and tables

Tables

Figures: