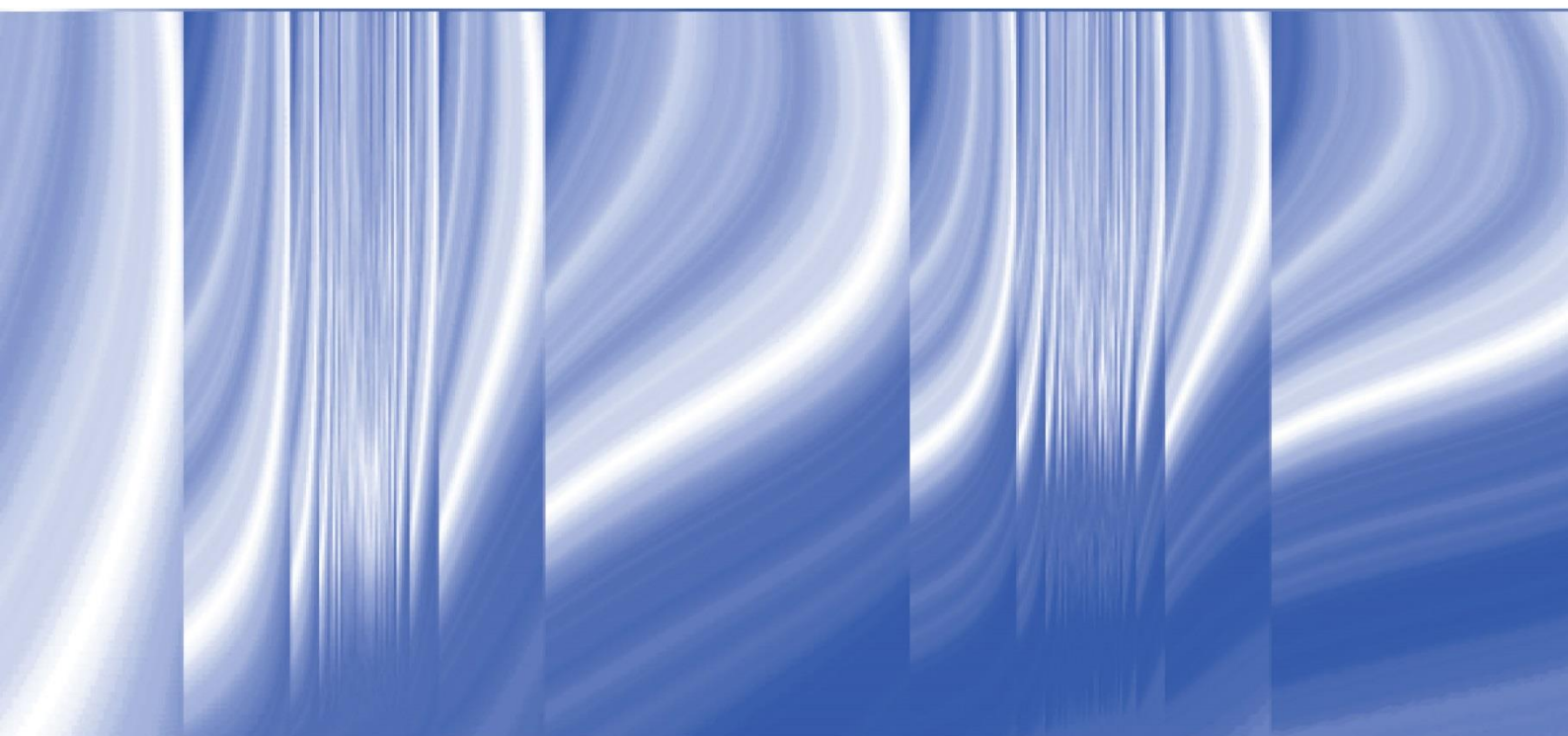




# **FINANCIAL STABILITY REVIEW**



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**Abbreviations:**

AJPES	Agency of the Republic of Slovenia for Public Legal Records and Related Services
AUP	Average unit price of a mutual fund
BAMC	Bank Assets Management Company
BLS	Bank Lending Survey
BoS	Bank of Slovenia
CCB	Countercyclical capital buffer
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DSTI	Debt service-to-income ratio
EBA	European Banking Authority
ECB	European Central Bank
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
GDP	Gross domestic product
GSIIIs	Global systemically important institutions
HICP	Harmonised Index of Consumer Prices
IFs	Investment funds
IMF	International Monetary Fund
ISA	Insurance Supervision Agency
KDD	Central Securities Clearing Corporation
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
MF	Mutual fund
MTS Slovenia	Part of the Euro MTS electronic trading platform for euro-denominated government and para-government benchmark bonds
NFCs	Non-financial corporations
OIFs	Other financial institutions
O-SIIIs:	Other systemically important institutions
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
SMA	Securities Market Agency
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
SMEs	Small and medium-size enterprises
SORS	Statistical Office of the Republic of Slovenia
SRB	Systemic risk buffer
SSM	Single Supervisory Mechanism
TARS	Tax Administration of the Republic of Slovenia
TLTRO	Targeted longer-term refinancing operation
TR	Turnover ratio
VLTRO	Very long-term refinancing operation
ZBan-2	Banking Act



## EXECUTIVE SUMMARY

*The Financial Stability Review provides an overview of the systemic risks to financial stability in Slovenia in the recent period. The Bank of Slovenia's assessment is that the majority of risks to financial stability remain low or medium, but the risks are increasing. Here we highlight that the risks to the banking system inherent in the real estate market and the macroeconomic environment increased in the final quarter of 2018 and the first quarter of 2019, and were assessed as elevated and medium respectively. There were no changes in other types of systemic risk in the recent period. The systemic risks to financial stability are illustrated in the table.*

*There were four key risks to financial stability present in the banking system in 2018 and the first quarter of 2019. The first is the risk inherent in the real estate market, which has been elevated by a lengthy period of fast growth in residential real estate prices. The second is income risk, which continues to be assessed as medium: generating stable income while interest rates are low and growth in loans varies from segment to segment is a challenge facing the banking system in the future. The third is credit risk, which has diminished in recent years, and is assessed as modest, although it is still material in respect of exposure to the corporate sector. The fourth is funding risk, which is increasing as maturity gaps open between assets and liabilities as a result of the lengthening of average loan maturity periods and the shortening of average deposit maturity. A future reversal in the economic cycle could see an increase most notably in income risk and credit risk, with a particular increase in the banks' vulnerability from consumer loans.*

*The risks to financial stability inherent in the macroeconomic situation are assessed as medium, but rising, on account of uncertainties in the international environment. The economic situation in Slovenia remains favourable, with economic growth outpacing the euro area average, but the forecasts for future economic growth in Slovenia have been lowered: the rate will be around 3% over the next two years. Uncertainty in the international environment remains high, on account of rising geopolitical tensions and additional protectionist measures. Global economic growth and growth in trade slowed in 2018, and economic growth is expected to slow further. A deterioration in the global economy and slower economic growth in key trading partners can be expected to have an adverse impact on the domestic economy. The Slovenian financial system's exposure to the UK is relatively low, and the potential direct effects of a no-deal Brexit are therefore low. The risks to the financial system from the international environment could slow economic growth in Slovenia, and could also reduce corporate and household demand for loans. This would increase income risk at the banks, while the probability of default would also increase, and with it credit risk.*

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

Systemic risk	Ocena tveganja				Trend in risk	Risk assess Q1 2019	Trend in risk
	Q1 2018	Q2 2018	Q3 2018	Q4 2018			
Macroeconomic risk					↑		↑
Credit risk					→		→
Real estate market					→		→
Funding risk					→		→
Interest rate risk					→		→
Contagion risk and large exposure					→		→
Solvency risk					→		→
Income risk					→		→
Leasing companies					→		→

Colour code:

high	elevated	medium	modest	low
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Source: Bank of Slovenia

*The risks to the banking system inherent in the real estate market are assessed as elevated, on account of surging residential real estate prices.* Growth in residential real estate prices picked up pace in 2018, particularly in Ljubljana and Koper, and was the highest of all euro area countries. There is not yet any confirmation of overvaluation from the indicators and model assessments of price developments, but the growth dynamic is unfavourable. In the final quarter of 2018 prices exceeded their nominal peak from ten years earlier for the first time, although they are still down in real terms. Housing affordability as measured by the ratio of house prices to wages is better than in 2008. The model analysis presents a similar picture: the price rises have followed a period of undervaluation, and constitute a recovery phase. However, further rises in residential real estate prices will lead to overvaluation. A large fall in prices on the residential real estate market would reduce the value of real estate collateral at the banks, while a simultaneous deterioration in the economic situation would raise unemployment, and with it probability of default.

*The banking system is less exposed to risks from the real estate market than during the last financial crisis.* Demand for real estate has increased in recent years, thanks to the strong economy, the buoyant labour market and favourable loan terms. Our assessment is that the supply of residential real estate has failed to track demand, which was evident in the small number of new-build units and issued building permits. The imbalance between supply and demand was a significant factor in the price rises. In the future the imbalance is expected to diminish as the supply of new-build housing increases, which could help to slow price growth. The increase in demand for real estate also brought an increase in demand for housing loans, but growth in housing loans remained moderate in 2018 and the first quarter of 2019, and to date has not been the most important factor in rising real estate prices. The banking sector also has low exposure to the construction sector, in contrast to the last financial crisis.

*The Bank of Slovenia introduced a macroprudential recommendation for the housing loans market in 2016.* According to analysis of the impact of the recommendation, the level of deviations from the LTV and DSTI recommendations is high at the level of the banking system, albeit stable over the last three years. The Bank of Slovenia recommends that the banks uphold the macroprudential recommendation in the area of household lending to a greater extent. The measure was introduced to prevent excessive growth in lending and the relaxation of credit standards, and thus the build-up of systemic risks to financial stability. Given the favourable macroeconomic situation, the Bank of Slovenia's assessment is that it would actually be justifiable to gradually tighten credit standards for new housing loans.

Figure: Profitability indicators in the banking system

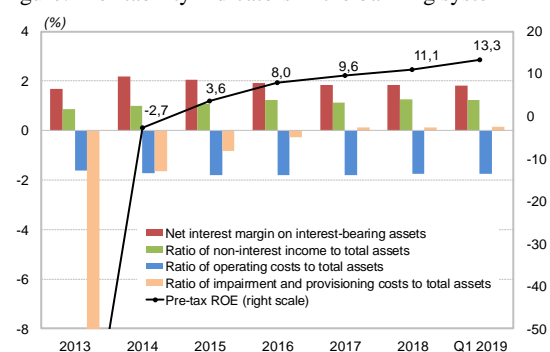
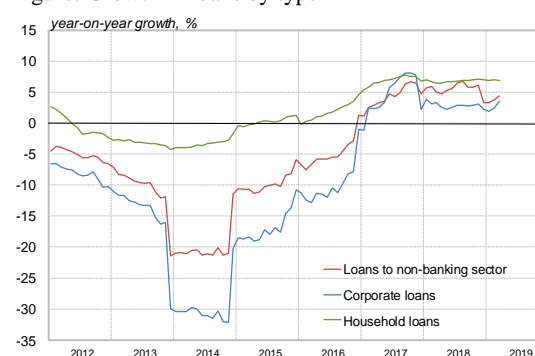


Figure: Growth in loans by type



Source: Bank of Slovenia

*Income risk continues to be assessed as medium, although it is one of the key systemic risks over the medium term.* Generating stable income while interest rates are low and growth in loans varies from segment to segment is a future challenge for the banking system. The banking system generated high profits in 2018 and the first quarter of 2019, although the net interest margin and growth in net interest income were low. For the second consecutive year the dominant factor in the profitability was a net release of impairments and provisions. Had the ratio of impairment and provisioning costs to gross income been at its long-term average, the pre-tax profit in 2018 would have been just a third of that actually recorded.

*In the low interest rate environment, bank profitability is even more dependent on the scale of lending activity than it would otherwise be.* Lending activity increased last year, and was focused primarily on household loans. The strong economy brought a sharp increase in household disposable income in 2018, and also in household creditworthiness; household indebtedness in Slovenia is among the lowest in the euro area. With funding costs low, the increase in lending activity began to have a favourable impact in increasing the



banks' interest income. The Bank of Slovenia points out that growth in net interest income could decline rapidly in the event of a slowdown in economic growth, and with it bank profitability.

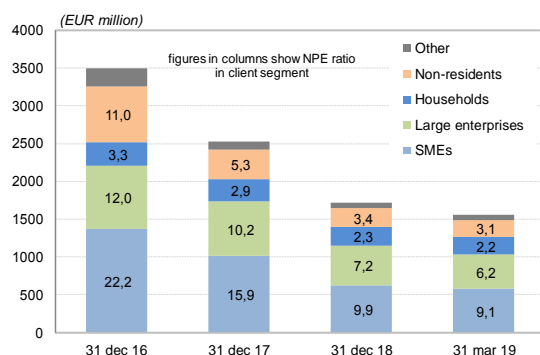
**In contrast to household lending, corporate lending remains weak.** Growth in bank loans to corporates is significantly lower than growth in household loans, and began increasing later, despite the favourable borrowing terms, firms' relatively low indebtedness, and the improvement in their creditworthiness compared with previous years. On this basis it can be concluded that firms have sufficient internal resources, while they also have more financing obtained in the rest of the world, and in recent years firms and the economy have undergone a change in structure. The corporate sector's demand for bank loans thus has a lag in following the business cycle, despite the improved financial position and the relatively high economic growth. The high proportion of corporate financing in the rest of the world entails greater sensitivity on the part of firms to potential shocks in the international environment than during the last great financial crisis, when it was mainly domestic banks that were exposed to a financing shock from the rest of the world.

**Credit risk at the banks has declined in recent years as non-performing exposures (NPEs) have been reduced, but remains significant in respect of exposure to the corporate sector. The rapid growth in consumer lending is a potential source of risk.** The banks have seen their NPEs decline by more than a half over the last two years, and in March 2019 they amounted to 3.6% of total exposure. The majority of NPEs remain in the corporate segment, where the NPE ratio is 8.4%, although portfolio quality is improving even in this segment. The estimated probability of default has declined to its level of the pre-crisis years, and is expected to remain low in 2019. A reversal in the economic cycle could stall or even reverse the process of the improvement in credit portfolio quality, and the Bank of Slovenia therefore believes that the banks should continue actively resolving their remaining NPEs.

Credit risk in the household segment is relatively low: the NPE ratio stood at 2.7% for consumer loans and 2.2% for housing loans in March 2019. The banks are planning to continue reducing NPEs in the future, but are also forecasting that they will increase in the household portfolio as a result of strengthened long-term household lending. The banks' awareness of the increase in risks owing to fast-growing consumer loans is also being reflected in increased creation of impairments in this portfolio segment.

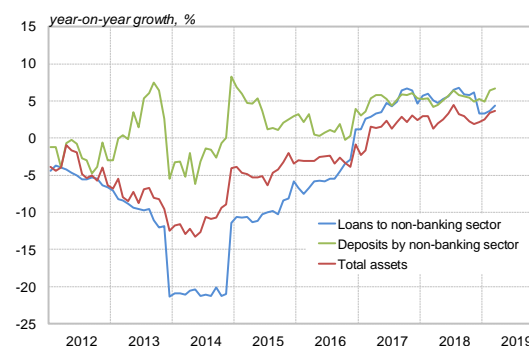
**Funding risk is increasing as the maturity gap between assets and liabilities widens, owing to the lengthening of the average maturity of new loans and the shortening of average deposit maturity. The banks' sensitivity to the potential realisation of the funding risk inherent in the maturity gap is nevertheless low, thanks to their large holdings of liquid assets.** The banks are primarily funded by deposits by the non-banking sector, while there has been a sharp decline in their funding on the financial markets. Household deposits in particular are increasing. The largest increase has been in sight deposits by the non-banking sector, which in March 2019 accounted for 73% of the total stock, the highest figure of the last 15 years. The proportion of total deposits accounted for by sight deposits is continuing to increase, albeit more and more slowly in the last year. Although the increase in sight deposits entails specific risks, the Bank of Slovenia's analysis suggests that the probability of large-scale deposit switching between banks or even deposit flight from the banking system is low over the short term.

Figure: Non-performing exposures by principal client segment



Source: Bank of Slovenia

Figure: Growth in total assets, loans to the non-banking sector and deposits by the non-banking sector





*There were also other risks to financial stability present in the banking system in 2018 and the first quarter of 2019, although they are assessed as low and do not present any threat to financial stability. Insolvency risk remains low, although there is great variation between the banks in terms of capital position. The Bank of Slovenia's assessment is that retained earnings will be the most important source of an increase in bank capital, and accordingly we feel that the key over the long term is ensuring the right level of profitability, which can also ensure capital adequacy at the banks. In 2018 and the first quarter of 2019 there was no significant change in interest rate risk, which remained medium. The difference between the average repricing periods for asset and liability interest rates narrowed slightly at the end of 2018.*

*The systemic risks inherent in the performance of leasing companies remain low. After several years of increase, leasing companies saw a decline in new leasing business, primarily as a result of a decline in the leasing of commercial and goods vehicles, while new car leasing business continued to grow. The trend in new leasing business at banks that provide finance leasing services is similar to that at leasing companies. Leasing companies saw an improvement in their profitability and in their portfolio quality in 2018 and the first quarter of 2019.*

*The risks in the insurance sector remain modest. Gross written premium is increasing, and general insurance remains its main source. Good performance is also being reflected in growth in total assets and profit. The breakdown of the risks calculated on the basis of the standard formula is broadly unchanged. Underwriting risk and market risk account for the largest proportion of the unallocated capital requirements. Asset structure remains conservative: the majority consists of investments in debt securities. Capital adequacy is sufficient. The low interest rate environment means that insurance corporations run the risk of failing to achieve the returns guaranteed in insurance contracts.*

*Liquidity remains low on the Ljubljana Stock Exchange. The high concentration of trading in certain shares and the low volume of trading in shares are being reflected in increasing volatility in the SBI TOP share index, and in the reduced transparency of the domestic share market. The market capitalisation of shares increased in 2018, as a result of new share issuance by Nova Ljubljanska banka d.d. (ticker symbol NLBR), but this did not have a significant impact on the volume of trading in shares as the trend of delisting continued.*

*Market risk remains the key risk at mutual funds: investments in equities account for more than half of their assets. Mutual funds recorded net withdrawals in 2018, which was attributable to the increased uncertainty on stock markets in the second half of the year. Given the large proportion of debt securities in their asset structure, the low interest rate environment is reducing pension funds' income from investments. In the quest for higher returns, pension fund operators have been gradually reducing their exposure to debt securities issued in the euro area in recent years.*

\* \* \*

*The banks are less sensitive to the identified systemic risks than was the case during the last financial crisis, thanks to their greater robustness to the potential realisation of risks. This increased robustness on the part of the banks is examined below. The banks are protected against an increase in credit risk by high coverage of non-performing exposures by impairments and provisions, and by capital. Coverage of non-performing exposures by impairments and collateral stood at 86% in March 2019, while regulatory capital was more than six times higher than the unimpaired portion of non-performing exposures. The banks' sensitivity to the risks inherent in maturity mismatch between investments and funding is low, thanks to their high liquidity, which could mitigate any deposit flight or deposit switching between individual banks. The banking system's vulnerability to the risks inherent in the fast growth in residential real estate prices is relatively low, while income risk is material over the medium term, as the banks' profitability is currently high.*

*Macroprudential policy has also made contributions of varying importance to the increase in the banks' robustness and the maintenance of the relatively low level of systemic risks, other than those associated with the rises in residential real estate prices, over which the Bank of Slovenia can exert only very limited influence. The direct impact of macroprudential policy was already limited by the banks' relatively high capital adequacy and the very nature of the recommendations adopted, but its indirect signalling effects were also significant. The Bank of Slovenia augmented the macroprudential recommendation for household lending in 2018, which until last year was limited to loans secured by residential real estate collateral, and*

related to caps on LTV and DSTI. Since autumn 2018 the recommendation for DSTI has been expanded to consumer loans, which now also have a recommended maximum maturity of ten years. The macroprudential measure in the form of a recommendation is precautionary in nature, and is pitched at preventing excessive growth in loans and preventing an over-relaxation of credit standards in the supply of consumer and housing loans. An additional effect of the measure is encouraging consumers to be cautious in their borrowing.

**The countercyclical capital buffer remained unchanged last year at zero:** the indicators did not support active tightening, partly on account of the low credit growth with regard to the business cycle.

**The Bank of Slovenia first identified other systemically important institutions (O-SIIs) in 2015, and at the same time defined a transition period in which the banks would have to build up an O-SII buffer.** This macroprudential instrument aims to limit the systemic impact of misaligned incentives with a view to reducing moral hazard. The identified banks have had to meet the aforementioned capital buffer requirement as of the beginning of this year. In a review in 2018 the Bank of Slovenia identified one less systemically important bank, while a higher buffer than in the previous year was stipulated for one bank. The O-SII buffer ranges from 0.25% to 1.00% for the six banks.

Table: Macroprudential instruments introduced

MACROPRUDENTIAL INSTRUMENT	YEAR OF INTRODUCTION	OBJECTIVE
Instruments for consumer loans: - DSTI - Maturity cap	2018	- 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 - DSTI	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

Source: Bank of Slovenia

*Given the level of the systemic risks identified, the banks' robustness, and the additional contribution made by macroprudential instruments in mitigating systemic risks and increasing the banking system's robustness, it is our assessment that the residual systemic risks in the banking system are at an acceptable level.*

# 1 MACROECONOMIC ENVIRONMENT

## Summary

Economic growth in the euro area and in Slovenia's most important trading partners slowed in 2018, while the uncertainties in the international environment further increased. Risks in connection with slower growth in global trade as a result of potential additional protectionist measures by the US are to the fore. There is still Brexit-related uncertainty present, and the euro area economy is expected to cool further. There was not yet any sign of a major adverse impact on economic growth in Slovenia from the external environment in 2018, but growth slowed in the first quarter of 2019. The forecasts for future economic growth in Slovenia have also been lowered: the rate will be around 3% over the next two years. However, economic growth remains among the highest in the euro area, while the labour market remains buoyant, and Slovenia's fiscal position is also gradually improving. The risks to financial stability from the macroeconomic environment increased in the second half of 2018 and in early 2019, and are assessed as medium. The Slovenian financial system's exposure to the UK is relatively low, which limits the direct adverse impact of a potential no-deal Brexit. The risks to the financial system from the international environment could slow economic growth in Slovenia, which could be evidenced in reduced demand for loans from creditworthy firms and households and could increase income risk at the banks. Firms could see a decline in revenues and profits, and thus a rise in the probability of default, which could increase credit risk. A deterioration in the labour market could see an increase in the risks to the banking system from the household sector.

## 1.1 International environment

**Global economic growth and growth in trade slowed in 2018, while the uncertainty regarding further growth increased.** According to the IMF, global GDP growth stood at 3.7% in 2018, down slightly on the previous year, but above the average over the last decade. International institutions are forecasting a further slowdown in economic growth this year, particularly in the euro area, where there are still numerous risks present, which increased further in the second half of 2018. Economic growth in the euro area slowed to 1.9% in 2018, down from 2.4% in 2017, and is forecast to be just over 1% in 2019 and slightly higher in 2020. The main factors in the slowdown in growth and the downward revisions in forecasts are the uncertainty surrounding global trade as a result of potential additional protectionist measures by the US, the risk of the imposition of tariffs on European cars and car parts by the US, and a sharper-than-expected slowdown in economic growth in China. In Europe there is still uncertainty surrounding Brexit, while individual euro area countries are facing unfavourable macroeconomic indicators. The adverse developments in the international environment could be manifested in Slovenia in a slowdown in economic growth and a slowdown in credit growth in the Slovenian banking system, which is already modest. This would increase income risk in the banking system, while the probability of default at borrowers would also increase as the economic environment deteriorates.

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

(%)	Real GDP				Unemployment rate				Inflation (HICP)				Government deficit / GDP			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
EU (28)	2,4	2,0	1,4	1,6	7,6	6,8	6,5	6,2	1,7	1,9	1,6	1,7	-1,0	-0,6	-1,0	-1,0
Euro area	2,4	1,9	1,2	1,5	9,1	8,2	7,7	7,3	1,5	1,8	1,4	1,4	-1,0	-0,5	-0,9	-0,9
Germany	2,2	1,4	0,5	1,5	3,8	3,4	3,1	2,7	1,7	1,9	1,5	1,5	1,0	1,7	1,0	0,8
Italy	1,7	0,9	0,1	0,7	11,2	10,6	10,9	11,0	1,3	1,2	0,9	1,1	-2,4	-2,1	-2,5	-3,5
Austria	2,6	2,7	1,5	1,6	5,5	4,9	4,7	4,7	2,2	2,1	1,8	1,9	-0,8	0,1	0,3	0,2
France	2,2	1,6	1,3	1,5	9,4	9,1	8,8	8,5	1,2	2,1	1,3	1,4	-2,8	-2,5	-3,1	-2,2
Croatia	2,9	2,6	2,6	2,5	11,0	8,5	7,8	6,9	1,3	1,6	1,0	1,2	0,8	0,2	0,1	0,5
Slovenia	4,9	4,5	3,1	2,8	6,6	5,1	4,8	4,6	1,6	1,9	1,8	2,1	0,0	0,7	0,7	0,9

Note: The grey area signifies European Commission forecast.

Source: European Commission spring forecast

**Slovenia's major economic partners saw a sharp slowdown in economic growth in 2018, while there was also a significant decline in the confidence indicators in the euro area.** Economic growth declined sharply in 2018 in Slovenia's most important trading partner, Germany (to 1.4%), and also in Italy (to 0.9%) and France (to 1.6%), while further slowdowns are expected in 2019. Confidence declined in all sectors other than construction in 2018, most notably in manufacturing. This is attributable to weaker foreign demand caused by uncertainty in international trade, and difficulties in the car industry. The manufacturing

confidence indicators declined again in the early part of 2019. The pessimistic assessment of expectations for future orders in manufacturing has also been reflected in a decline in the PMI<sup>1</sup>. Construction confidence remains high, and is strengthening in light of the expectations for new orders during a period of expansive growth in the real estate market in the majority of the euro area.

Figure 1.1: GDP in selected countries by quarter

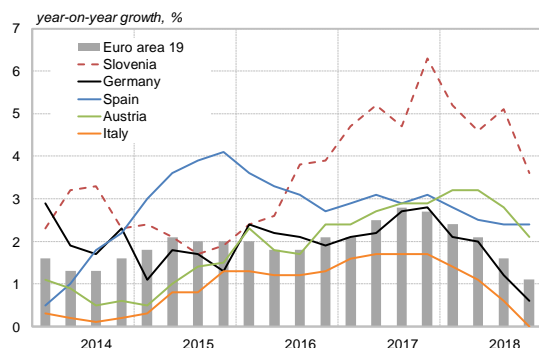
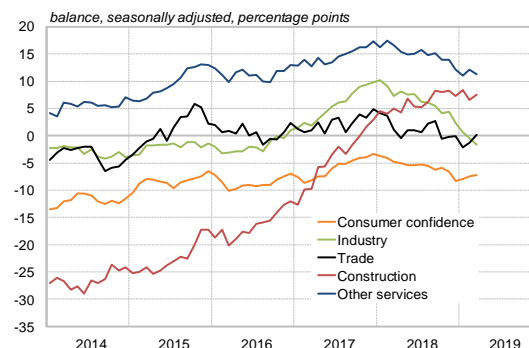


Figure 1.2: Confidence indicators in the euro area



Note: GDP figures are seasonally adjusted. Confidence indicators are expressed in the form of an average balance. The balance is the difference between the proportions of positive answers and negative answers.

Sources: Eurostat, European Commission

**The exposure of the Slovenian economy and financial system to the UK is relatively low.** The share of Slovenia's total exports going to the UK has gradually declined since the Brexit referendum, and fell below 1.9% in 2018. The Slovenian financial system's exposure to debt securities issued in the UK remains stable and relatively low at EUR 400 million, of which the banks account for EUR 178 million. Exposure to the UK accounts for 3.9% of the Slovenian financial system's total exposure to foreign debt securities. A no-deal Brexit would only have a small direct adverse impact on Slovenia, but larger indirect adverse effects can be anticipated, primarily via Slovenia's major trading partners.

**The required yield on government bonds again fell slightly in 2018 and early 2019 in the majority of euro area countries.** The exception was Italy, which is still facing economic difficulties. There was no sign of any substantial transmission of risks from Italy in the other countries, while the ECB's expansionary measures also exerted downward pressure on yields on government bonds. The ECB responded to the increased risks in the euro area and to the less favourable outlook by announcing a new TLTRO in September 2019, and issuing forward guidance to hold interest rates at low levels at least until the end of 2019.

Figure 1.3: Slovenia's imports from and exports to the UK

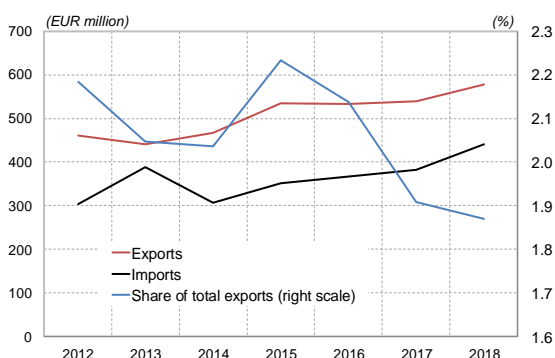
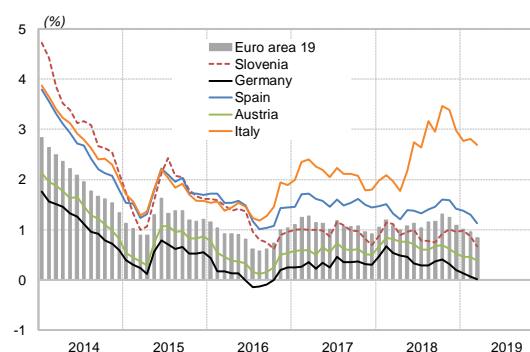


Figure 1.4: Required yield on 10-year government bonds



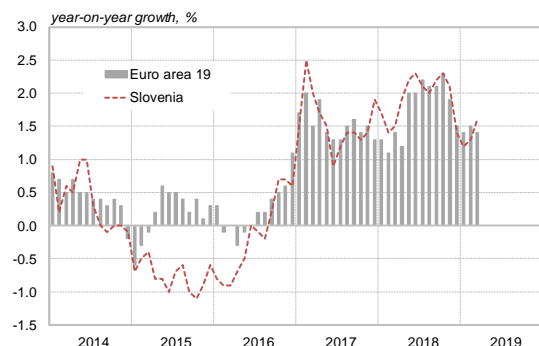
Sources: SORS, Eurostat

**Inflation strengthened overall in 2018, and remained highly dependent on oil prices.** Inflation averaged 1.9% in Slovenia in 2018, 0.1 percentage points more than the euro area average. External factors had a large impact on inflation in late 2018 (primarily as a result of the fall in oil prices), and brought a sharp fall in the rate. It strengthened again slightly in early 2019 as a result of renewed growth in oil prices and stronger pressures from the external environment, reaching 1.6% in March. It is forecast at around 2% over the next two years, in the wake of rises in services prices and prices of non-energy industrial goods.

<sup>1</sup> Purchasing managers' index.

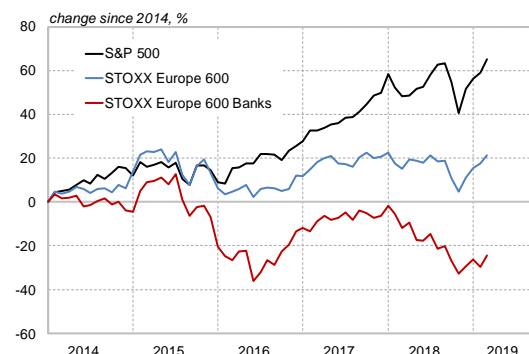
After a sharp downward correction in late 2018, stock market indices began rising again in early 2019, making up most of the ground previously lost. The bank share index also began strengthening in early 2019, but remains at a low level, comparable to that in 2012, an indication of low valuations in the banking sector.

Figure 1.5: Inflation (HICP)



Sources: Eurostat, SNL Financial

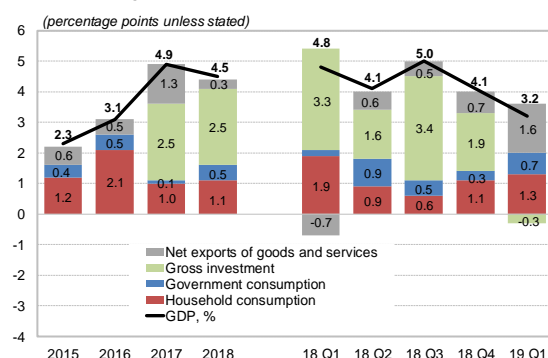
Figure 1.6: Change in stock market indices



## 1.2 Economic situation in Slovenia

**Economic growth slowed in 2018, but remained relatively high and significantly above the euro area average.** GDP growth stood at 4.5% in 2018, outpacing overall growth in the euro area by 2.6 percentage points. Slovenia continued to record year-on-year GDP growth in the first quarter of 2019, at 3.2%. Economic growth was broadly based in 2018, although the slowdown in growth in the euro area brought a decline in the contribution by net exports. The contribution to GDP growth by net exports of goods and services strengthened significantly in the first quarter of 2019. The largest contribution to GDP growth was from gross fixed capital formation, which increased by 10.6% in 2018, but slowed slightly in the final quarter of the year, resulting in a slightly negative contribution to GDP growth in the first quarter of 2019. Growth in investment in buildings and structures increased significantly, while growth in investment in machinery and equipment was also high. The buoyant labour market meant that the contribution to economic growth by household consumption was slightly higher than in the previous year, although it remained moderate because of the high saving rate. According to forecasts by domestic and international institutions, economic growth will gradually slow over the next two years, and will stand at around 3%. Slower economic growth in Slovenia's major trading partners is expected to bring a smaller contribution by net exports and a larger contribution by domestic demand in the future. Future growth in household consumption will depend on the situation on the labour market.

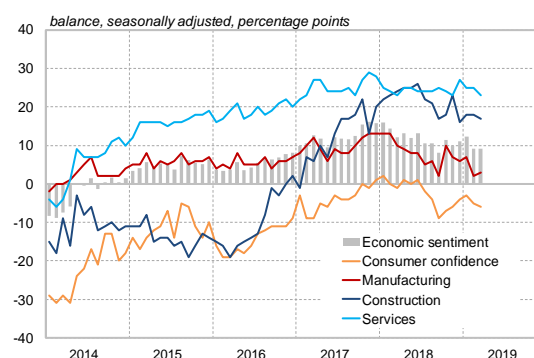
Figure 1.7: GDP growth and contributions to GDP growth



Note: Confidence indicators are expressed in the form of an average balance. The balance is the difference between the proportions of positive answers and negative answers.

Source: SORS

Figure 1.8: Confidence indicators and economic sentiment indicator



**The economic sentiment declined in 2018 and early 2019, primarily as a result of a decline in confidence at manufacturing firms, but nevertheless remains well above its long-term average.** Construction confidence and services confidence remain high: these two sectors are primarily dependent on



the domestic market, where the situation is favourable. Manufacturing is already seeing increased caution on the part of firms, given the expectation of lower growth in foreign demand. Construction confidence remains elevated as expected, given the high growth in residential real estate prices and the consequent expansion of construction activity. Consumer confidence again declined in early 2019, and remained below its average of 2018.

**The ratio of saving to GDP increased further in 2018, while there was also a significant increase in investment.** The strong economy and buoyant labour market brought an increase in disposable income, which is still primarily being directed into saving, despite the low interest rates on deposits. The saving rate increased sharply in 2018 to 29.8%, and the ratio of saving to GDP increased more than did the ratio of investment to GDP. In favourable conditions for investing, the ratio of investment to GDP has also strengthened as expected in the last two years, most notably construction investment, given the fast growth in real estate prices. The surveyed unemployment rate declined to 5.1% in 2018, while employment growth remained relatively high, at 3.0%. However, structural imbalances on the labour market remain, as many firms face labour shortages, which they are addressing by hiring foreign nationals, often in sectors with below-average pay. Growth in the average gross wage is gradually increasing: the rate reached 3.4% in 2018. Given the strength of the economy, higher wage growth is to be expected, and could have a positive impact in the form of an increase in disposable income and a consequent rise in creditworthiness. In the event of a slowdown in economic growth and low productivity, high wage growth could however lead to a deterioration in the cost competitiveness of the Slovenian economy.

Figure 1.9: Saving and investment

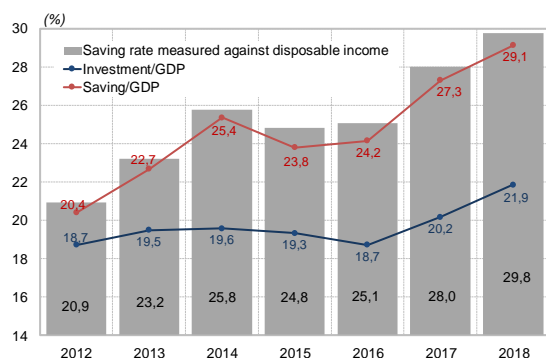
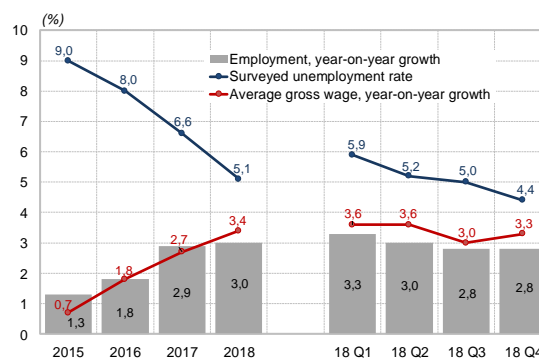


Figure 1.10: Employment, unemployment rate and gross wages



Source: SORS

**In the strong economy and given the improved fiscal position, the outlook for Slovenia's credit rating is also improving.** Standard & Poor's raised the outlook for Slovenia from stable to positive in the summer of 2018, followed by Moody's in April 2019. The main argument for the improved outlook was structural progress in the Slovenian economy, and consequently growth potential, partly encouraged by growth in investment and productivity. Standard & Poor's highlights Slovenia's improving fiscal position, as evidenced by the decline in the ratio of debt to GDP. In the opinion of the rating agency, great progress was also identified in the recovery of the banking sector, particularly in the improvement in the quality of the credit portfolio and the ongoing process of privatising the state-owned banks.

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

Agency	Rating	Outlook	Last change
Standard and Poor's	A+	positive	15 Jun 2018
Moody's	Baa1	positive	26 Apr 2019
Fitch Ratings	A-	stable	23 sep 2016

Source: Ministry of Finance

**The state budget recorded a surplus in 2018, while the public debt declined to 70.1% of GDP.** The state budget surplus stood at 0.7% of GDP in 2018, and was primarily attributable to high growth in revenues in the strong economy, and a decline in the interest payment burden. Slovenia's ever-improving fiscal position and the continuation of the monetary policy stimulus brought a reduction in the required yield on government bonds. It stood at 0.8% in March 2019, when the spread over the German benchmark stood at around 70 basis points. The relatively low risk premium is also reducing debt funding costs for the banks, although their high liquidity and the scale of deposit funding mean that the banks have little need for such funding.

## 2 CORPORATES AND HOUSEHOLDS

### 2.1 Corporates

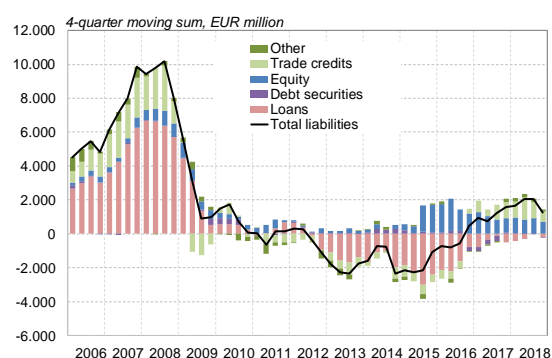
#### Summary

After increasing for two years, non-financial corporations' flows of debt and equity financing slowed in 2018. Corporates remain relatively unindebted, and with better creditworthiness than in previous years, while financing at banks is modest despite the favourable borrowing terms and mainly due to sufficient internal resources. The rest of the world is continuing to play a significant role in financing via equity and trade credits, while loan financing has been declining in recent years, with the exception of financing at parent undertakings. The high level of financing from the rest of the world entails greater sensitivity on the part of non-financial corporations to potential shocks in the external environment than was the case in the last financial crisis, when it was primarily domestic banks that were exposed to a funding shock. The structure of the corporate sector has also changed in the post-crisis period with certain large enterprises being sold to foreign investors, while other exited the market due to overindebtedness. The corporate sector's demand for bank loans thus declined, despite the improved financial position and the relatively high economic growth. Corporates' high profits in 2018 and their relatively low levels of leverage are further reducing the probability of default in the sector. In these conditions, and given the favourable outlook for economic growth in the following years, the risks to financial stability from the corporate sector are low.

#### Structure of corporate financing

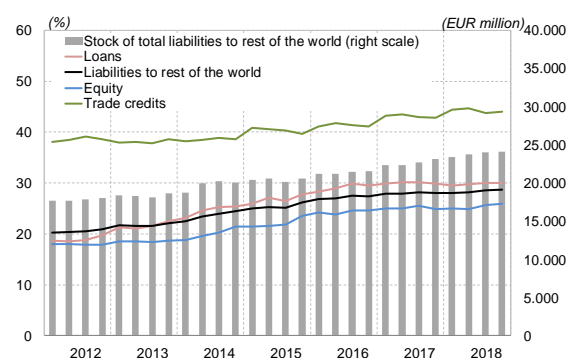
**After increasing for three years, non-financial corporations' financing flows<sup>2</sup> began to decline in the second half of 2018.** The total annual flow of financing of all types declined from almost EUR 2 billion in the second and third quarters to EUR 1.2 billion in the final quarter of 2018. The decline in financing was evident in financing via equity and trade credits, while loan financing (from all creditor sectors) continued to record net debt repayments. The slowdown in corporate borrowing could be attributed to two factors: the further increase in internal resources from 2018 profits, and the simultaneous decline in confidence in those parts of the economy that are more dependent on foreign demand, and the situation in foreign markets, than on domestic demand.

Figure 2.1: Non-financial corporations' flows of financial liabilities by instrument



Note: Total loans to non-financial corporations 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

Figure 2.2: Stock of non-financial corporations' liabilities to the rest of the world and breakdown by instrument



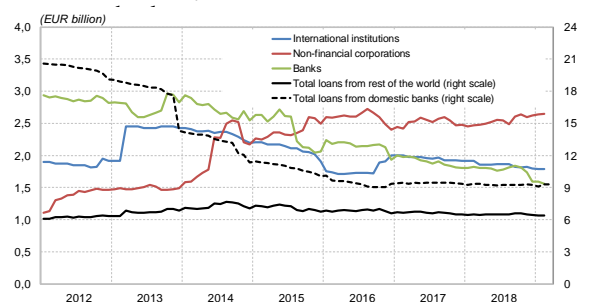
**Non-financial corporations' financing in the rest of the world has gained in importance since the financial crisis.** The proportion of non-financial corporations' liabilities accounted for by the rest of the world has increased from 17.5% to 28.7% over the last decade, as the stock of liabilities to the rest of the world in each instrument has also increased. This trend has persisted over the last three years in equity and trade credits, while debt from loans raised in the rest of the world declined in absolute terms.

<sup>2</sup> Total financing according to the financial accounts methodology encompasses financing via debt and equity instruments, excluding non-financial corporations' internal resources.



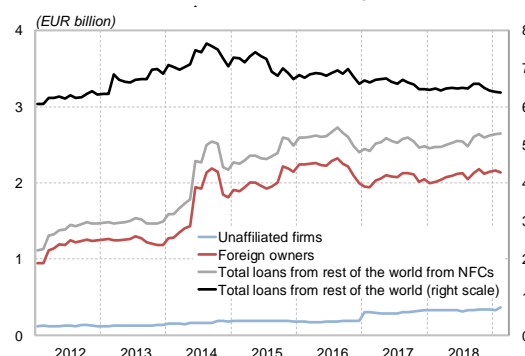
The majority of foreign loans were raised at foreign non-financial corporations, which is also the only non-resident creditor sector vis-à-vis which Slovenian non-financial corporations are increasing or maintaining their level of debt. Non-financial corporations have been making net repayments to international institutions and foreign banks since 2013. Financing via loans from foreign non-financial corporations was more volatile, but displayed a renewed growth trend in 2018, primarily a result of borrowing from affiliates. Acquisitions of Slovenian non-financial corporations caused a redirection of a part of their financing from domestic to foreign sources, which may have acted to reduce demand for loans in the Slovenian banking system.

Figure 2.3: Stock of corporate loans from the rest of the world by creditor sector, and loans at domestic



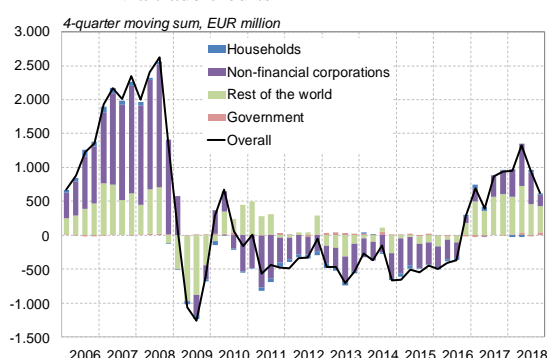
Source: Bank of Slovenia

Figure 2.4: Stock of corporate loans from the rest of the world received from foreign non-financial



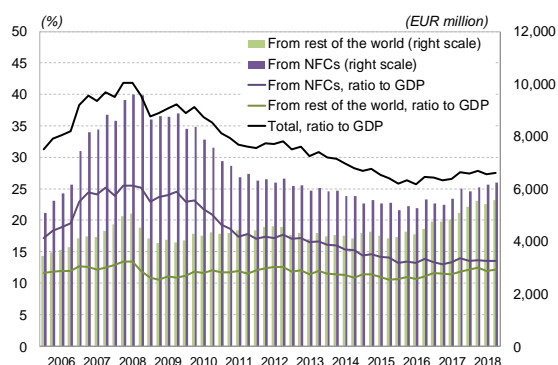
After recording high growth in 2017 and the first half of 2018, the flow of trade credits declined in the second half of 2018. Financing via trade credits was the largest contributor to the pace of total corporate financing flows over the last two years. The trend of increase in trade credits has coincided with a period of economic growth, which has seen growth in trade credits received both from the rest of the world and within the domestic non-financial corporations sector. Despite the faster growth, there was no change in the stock of trade credits as a proportion of GDP during this period, which remains at 27%.<sup>3</sup> Given their faster growth compared with other forms of financing, trade credits are gaining in prominence among non-financial corporations' external resources. This is evident from the debt financing segment, which could partly be captured by the banking sector were it to put together the right offer.

Figure 2.5: Non-financial corporations' financing flows via trade credits



Source: Bank of Slovenia

Figure 2.6: Stock of trade credits received

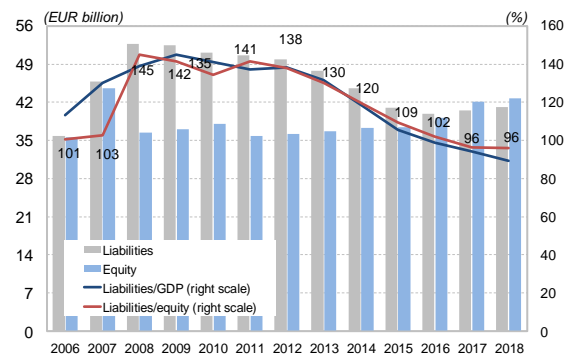


After declining for several years, leverage remained unchanged in 2018, at 96%. Non-financial corporations' total liabilities have increased over the last three years. Their debt and equity liabilities increased by 1.5% in 2018. The increase in equity was significantly lower, compared to previous years, which was attributable to revaluations and changes in the market value of equity in the second half of 2018. Equity inflows (excluding the impact of revaluations) have declined over the last two years, but have reached a relatively high EUR 4.4 billion over the last four years, almost entirely a contribution of the rest of the world. Net repayments of (primarily bank) debt before 2016, and the strengthening of their capital base, were driving factors in Slovenian corporates' fast deleveraging. According to the data from the third quarter of

<sup>3</sup> As a percentage of GDP, trade credits received from Slovenian non-financial corporations were significantly lower than a decade ago, but the rapid increase in business-to-business financing at that time was a reflection of non-financial corporations' quick adaptation to their limited access to bank loans.

2018, this puts them in a significantly better position compared with non-financial corporations in many other euro area countries, in particular regarding creditworthiness<sup>4</sup> for new borrowing for investment purposes.

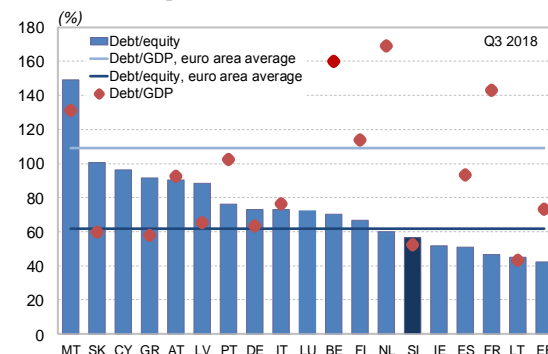
Figure 2.7: Corporate debt indicators



Note: The left figure illustrates non-financial corporations' total financial liabilities excluding equity. In the right figure, where a comparison is made with the euro area, financial debt solely includes loans and debt securities. The figures for the ratio of financial debt to GDP for Cyprus, Luxembourg and Ireland lie outside the scale of the graph.

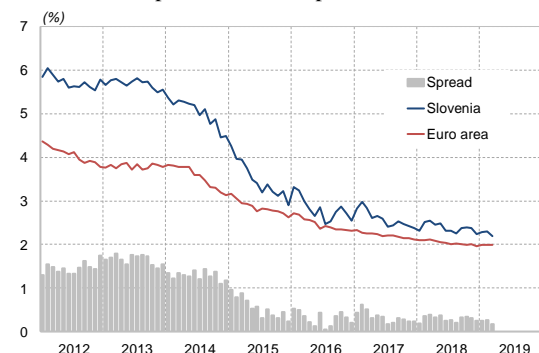
Sources: Bank of Slovenia, ECB

Figure 2.8: Slovenian non-financial corporations' indebtedness via loans and debt securities, comparison with the euro area



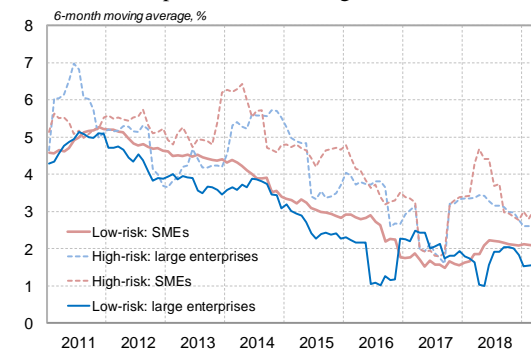
**Interest rates on corporate loans remain at historically low levels, while credit standards have been maintained at their previous levels.** Average interest rates on new long-term loans are still slightly above the euro area average for the prevailing variable-rate loans. The average interest rate on loans approved by banks in Slovenia stood at 2.4% in 2018, 0.4 percentage points higher than the euro area average. Interest rates on loans to SMEs were higher overall than interest rates on loans to large enterprises, but the spread has declined, and occasionally they were lower, partly on account of the greater variability in loans to large enterprises. According to the Bank Lending Survey (BLS), banks' credit standards for corporate loans have been relaxed slightly over the last three years, but have remained unchanged since the second half of 2018, which is at a higher level than in 2003 and 2010 (ibid).

Figure 2.9: Interest rates on new long-term variable-rate corporate loans of up to EUR 1 million



Source: Bank of Slovenia

Figure 2.10: Interest rates on new long-term loans by corporate size with regard to risk level



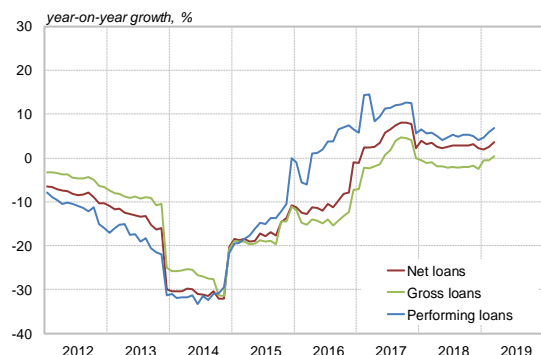
**Despite favourable borrowing terms, growth in loans from domestic banks in 2018 was relatively slow, given the economic growth.**<sup>5</sup> Year-on-year growth in corporate loans reached almost 3% in 2018, and had increased to 3.5% by March 2019. In terms of credit risk, it is helpful that the increase is primarily in performing loans, which is partly the result of transitions from non-performing to performing status. Another factor in the reduced corporate demand for borrowing at banks is the increase in non-financial corporations' internal resources. Non-financial corporations' net profits have increased over the last three years, and amounted to EUR 4.6 billion in 2018, up 15% on the previous year and the highest figure since 2002.

<sup>4</sup> For more on non-financial corporations' creditworthiness, see Box 2.1.

<sup>5</sup> Alongside the actual dynamic in lending, other factors in the growth in gross loans and net loans were the reduction in the banks' non-performing loans via sales, write-offs, transfers to other parties, and other methods for removing claims from bank balance sheets, which leads to breaks in the time series data.

Corporate deposits are also continuing to increase as an internal resource. They accounted for 15% of non-financial corporations' total investments at the end of 2018, up 5 percentage points on 2013, and were primarily held at banks.

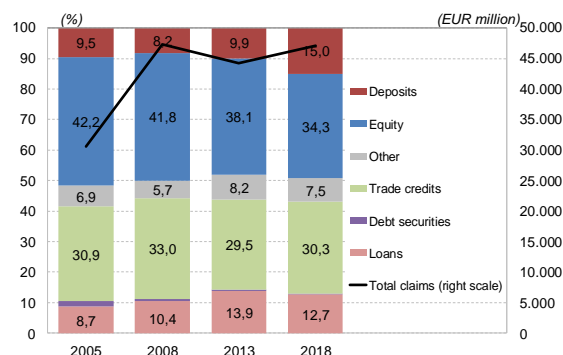
Figure 2.11: Corporate loans at domestic banks



Notes: In the right 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

Figure 2.12: Breakdown of non-financial corporations' financial assets



**Non-financial corporations' total financial assets have increased by 11% over the last two years.** After several years of decline, the stock of financial assets increased to EUR 45 billion, down 5% on its peak of 2008. In addition to deposits, there were also increases in trade credits granted and investments in equity, albeit at slower rates, and with a loss of a few percentage points in the breakdown of financial assets. Non-financial corporations' holdings of investment property (which are classed as non-financial assets) amounted to EUR 4 billion at the end of 2018, up 6.5% on a year earlier. However, over the recent years of low interest rates, there has been no increase in the proportion of non-financial corporations' total assets (they account for 4.4%).

### Box 2.1: Corporate indebtedness

**Corporate creditworthiness has improved in recent years. They were less indebted in 2018, and carried lower risk of default.** Corporate indebtedness as measured by the debt-to-equity ratio<sup>6</sup> declined from its peak of 166% in 2008 to 95% in 2018. The ratio of net financial debt to EBITDA<sup>7</sup> at all non-financial corporations declined from 5.2 in 2009 to 2.1 in 2018, thereby increasing their robustness to any rise in interest rates, and to the corresponding increase in debt servicing costs. Corporates vary greatly in their financial position, depending on their sector. Indebtedness is among the highest in the sectors of construction and real estate activities, where debt servicing capacity is also weakest, while manufacturing firms are among the least-indebted. Corporates reduced their leverage in the years following the crisis, first by reducing debt, then by increasing equity.

<sup>6</sup> The ratio differs slightly from that disclosed in Figure 2.7, which illustrates the ratio of debt to equity in corporate financing on the basis of financial accounts data (the differences are the result of the differences in the methodology of data capture). In this section leverage is calculated as the debt-to-equity ratio from closing corporate balance sheet figures collated by AJPEs.

<sup>7</sup> The net financial debt to EBITDA indicator is measured as the ratio of financial liabilities, less cash and cash equivalents, to cash flows from operating activities, and indicates a firm's capacity to regularly service debt (interest and principal). The indicator shows how many years of cash flow the firm needs to repay its debt (assuming no change in net debt and EBITDA). The lower the ratio, the lower is the risk in the repayment of the firm's liabilities.

Figure 2.13: Leverage (debt-to-equity ratio) for selected economic sectors

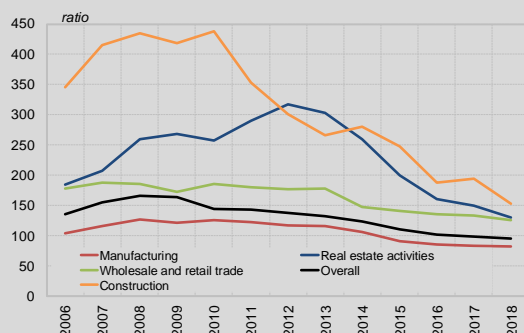
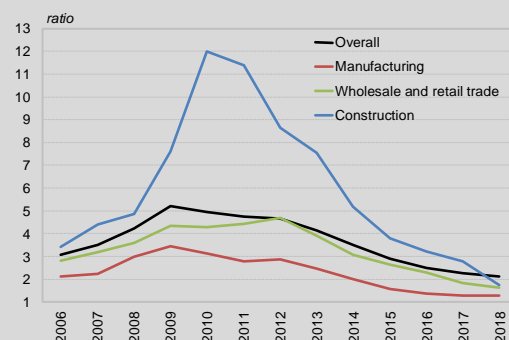


Figure 2.14: Ratio of net financial debt to EBITDA for selected economic sectors



Sources: AJPES, Bank of Slovenia calculations

Figure 2.15: Net financial debt and excessive debt

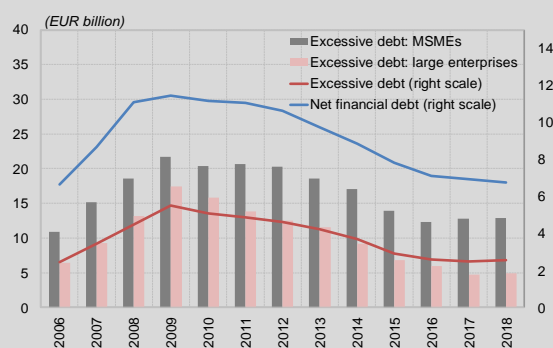
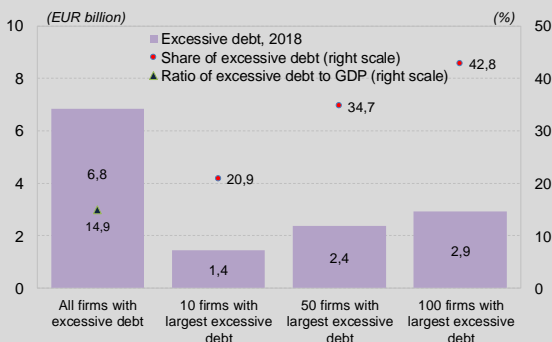


Figure 2.16: Concentration of excessive debt



Notes: Excessive debt is calculated as the sum of total net financial debt of non-financial corporations disclosing a loss (or failing to disclose a profit), and the portion of net financial debt at profitable non-financial corporations in excess of the amount that would give a ratio of net financial debt to EBITDA of five. The figures exclude three large government-owned firms, and firms undergoing bankruptcy and compulsory composition.

Sources: AJPES, Bank of Slovenia calculations

**Corporates reduced indebtedness and increased debt servicing capacity compared with previous years have put in place favourable conditions for a new credit cycle.** Corporate net financial debt and excessive debt<sup>8</sup> have declined sharply since the outbreak of the crisis, and in recent years have been at their pre-crisis levels. Net financial debt is still declining, despite the growth in bank loans, which is admittedly low. Excessive debt accounted for more than a third of net financial debt in 2018, having declined by EUR 8 billion from its peak in 2009 to stand at EUR 6.8 billion.<sup>9</sup> Almost half of all non-financial corporations have net financial debt, of which a third is excessive debt. Excessive debt is concentrated at a small number of firms. The hundred firms with the largest excessive debt accounted for 43% of total excessive debt in 2018, while the ten with the largest excessive debt accounted for 21% of the total.

**Corporate financing via bank loans is down sharply on its peak of 2010, most evidently at construction firms and firms in the real estate activities sector.**<sup>10</sup> These firms saw their financial liabilities to banks decline by 77% and 87% respectively between 2008 and 2018, while manufacturing firms saw a smaller decline of 42%, having been less indebted at the time of the crisis. The proportion of firms with excessive debt is still high in the sectors of construction and real estate activities, at 80% and 60% respectively, which given their high debt-to-equity ratios and weaker debt servicing capacity means that at a time when supply on the real estate market is outstripped by demand, thus driving high growth in real estate prices, construction firms' capacity to raise bank loans is relatively low. Growth in bank loans to these firms is unlikely to increase significantly in the future, given their weaker financial position.

<sup>8</sup> Excessive debt is calculated as the sum of total net financial debt of non-financial corporations disclosing a loss (or failing to disclose a profit), and the portion of net financial debt at profitable non-financial corporations in excess of the amount that would give a ratio of net financial debt to EBITDA of five. The calculation excludes three large enterprises under government ownership.

<sup>9</sup> The ratio of excessive debt to net financial debt at non-financial corporations has declined to its pre-crisis level in the majority of sectors, but remains high in the sectors of construction and real estate activities.

<sup>10</sup> The proportion of total bank loans accounted for by construction firms has declined from 10% in 2008 to 4% now.

The structure of the corporate sector has changed radically since the crisis, which has reduced corporate demand for bank loans, while at the same time the increase in equity and profits in recent years means that corporates are financing themselves with internal resources more than in previous years. The number of large enterprises has fallen since the crisis, thereby reducing corporate demand for bank loans, as large enterprises account for 60% of all bank loans. The decline in financial liabilities to banks since their peak in 2010 has been larger at large enterprises, at more than a half, than at SMEs. Non-financial corporations' indebtedness at banks, as measured by the median ratio of financial liabilities to banks to assets, has also declined more sharply at large enterprises than at SMEs. Another major factor in the decline in bank financing at large enterprises in recent years has been the sale of large enterprises in Slovenia to new foreign owners, who after acquiring the firms often redirect their financing from bank loans to other banks in the rest of the world or to resources inside the corporate group. In the last three years the banks have thus focused more on financing SMEs than previously.

Figure 2.17: Non-financial corporations' financial liabilities to banks

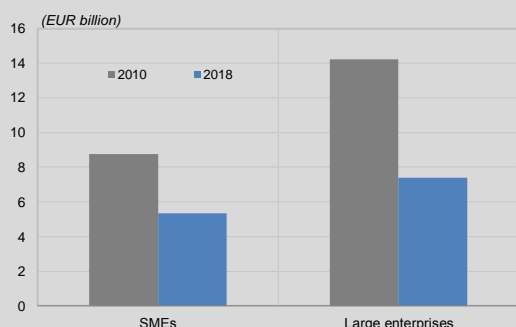
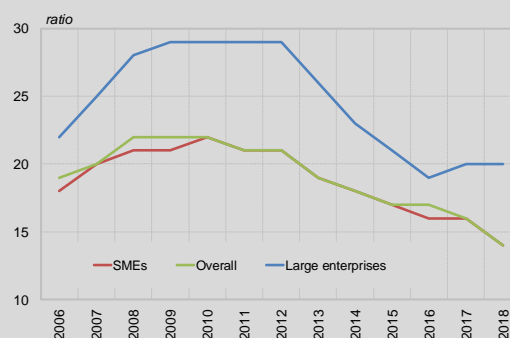


Figure 2.18: Ratio of financial liabilities to banks to assets



Note: Non-financial corporations' financial liabilities to banks include liabilities to banks in Slovenia and in the rest of the world. In the right figure non-financial corporations' indebtedness at banks in terms of financial liabilities is measured as the median ratio of financial liabilities to banks to the assets of the particular non-financial corporation in a particular year.

Sources: AJPES, Bank of Slovenia calculations

Figure 2.19: Change in non-financial corporations' status between 2008 and 2017

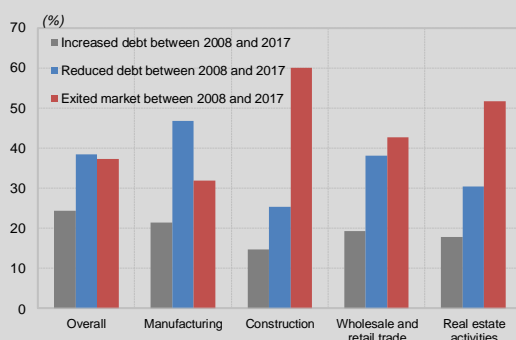
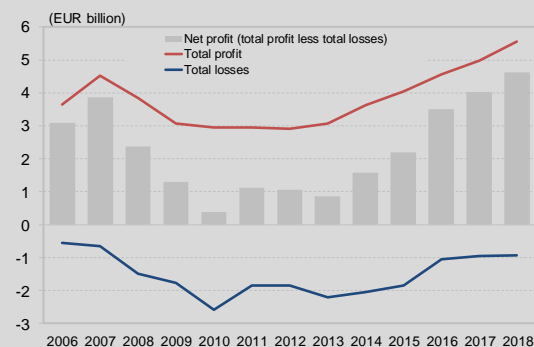


Figure 2.20: Non-financial corporations' total net profit



Note: The left figure illustrates the data as a percentage of total number of firms in 2008.

Sources: AJPES, Bank of Slovenia calculations

**A decade ago Slovenian banks lent primarily to corporates, and less to households.** Corporates then accounted for 60% of total loans, compared with less than 40% in 2018. The stock of corporate loans declined from EUR 20 billion in 2008 to EUR 9 billion in 2018. In the deleveraging process over the last decade, excessive indebtedness meant that some firms had to deleverage and limit their turnover, or even to exit the market. Other less-indebted firms increased their indebtedness despite the weaker economic situation, while new firms entered the market. More than a third of the firms deleveraged over the period in question, and more than a third of the firms trading in 2008 exited the market. The crisis hit the sectors of construction and real estate activities hardest: 60% and 52% of firms respectively in these sectors exited the market. Today more than half of all firms have entered the market in the last decade, although they are mostly small and less creditworthy. This altered the structure of the non-financial corporations sector, which was also reflected in reduced demand for loans despite the relatively high economic growth. In 2018 the financial position of firms holding loans from Slovenian banks was more favourable than in previous years, when the banks also lent heavily to less creditworthy firms.

Table 2.1: Indebtedness indicators at firms holding bank loans in 2018, selected sectors

Sector	Debt / equity , %	Financial debt / equity , %	Net financial debt / EBITDA	Interest coverage, %	Interest rates, % <sup>1</sup>
Manufacturing	117	64	2,4	22	1,9
Construction	172	78	2,5	29	2,3
Wholesale and retail trade	150	76	3,2	15	2,2
Transportation and storage	85	69	3,6	69	1,7
Accommodation / food service	105	81	4,0	18	2,4
Real estate activities	217	193	8,8	10	2,1
Professional, scientific and technical	130	91	5,2	12	2,2
Overall	113	71	3,3	24	1,9

Note: Interest rate denotes average interest rate on new long-term variable-rate corporate loans. Interest coverage is defined as the ratio of EBITDA to finance expenses for interest.

Sources: AJPES, Bank of Slovenia

#### Box 2.2: Financial analysis of Slovenian fintech firms using distributed ledger technology<sup>11</sup>

The analysis of fintech<sup>12</sup> firms includes identification of activities which refer to trading in virtual currencies and cryptoassets in Slovenia (the analysis include firms which are registered in Slovenia). The analysis included fintech firms involved in trading, analytical data processing, or management of cryptoassets. The fintech sector includes the following areas: intermediaries of services for exchanging cryptocurrencies into fiat currencies and vice-versa, operating cryptocurrencies through ATMs and sale of tokens for purchasing cryptocurrencies via third parties. To make it easier to understand the activities of fintech firms, they are divided into different segments as follows: analytics, asset management, distributed ledger technology (DLT) and payment system transactions.

##### *Overview of current situation*

Firms in the fintech sector are typically micro enterprises, which means a headcount of less than ten. In 2018 it was found that most fintech firms are engaged in either distributed ledger technology (46%) or analytics (36%) to facilitate trading in cryptoassets. A smaller proportion (12%) are also engaged in cryptoasset management. The number of these firms has been rising since 2015: there were 33 in the sector in 2018.<sup>13</sup> The fintech sector is service-oriented, which means that it primarily covers services related to management consultancy, software and monetary intermediation. Fintech firms are also typically seeing a trend of rising employment: the total headcount has risen from 111 in 2015 to 308 in 2018. It should be noted that a certain number of firms have registered or moved abroad because of more favourable taxation regimes, which is slowing the rise in the number of firms in the sector in Slovenia. Under the Payment Services, Electronic Money Issuance Services and Payment Systems Act, the Bank of Slovenia administers and maintains a register of electronic money institutions that issue electronic money for firms. With this permission, the Bank of Slovenia allows firms to issue electronic money.<sup>14</sup> There are also three organisations<sup>15</sup> operating in Slovenia whose membership includes fintech firms. The organisations also include foreign-registered firms that do business in Slovenia. In organisational terms, businesses in the fintech sector are set up as limited liability companies (d.o.o. in Slovene; 85% of the total), sole traders (s.p.; 12%) and public limited companies (d.d.; 3%).

<sup>11</sup> Distributed ledger technology can be defined as a method of recording and exchanging data between different data warehouses which include the same data, are collectively maintained and overseen by a distributed network of computer servers, which are called network hubs.

<sup>12</sup> The fintech sector consists of various firms that aim to use technology and innovation to improve the implementation of financial services.

<sup>13</sup> The list of firms engaged in fintech was obtained on the basis of internal lists at the Bank of Slovenia and the membership of blockchain organisations.

<sup>14</sup> Available online at <https://www.bsi.si/en/financial-stability/institutions-under-supervision/electronic-money-institutions>.

<sup>15</sup> In Slovenia there are three organisations in the field of fintech: BlockChain Alliance, Lemurlegal and BlockChain Think Tank Slovenia.



Figure 2.21: Segmentation of fintech sector

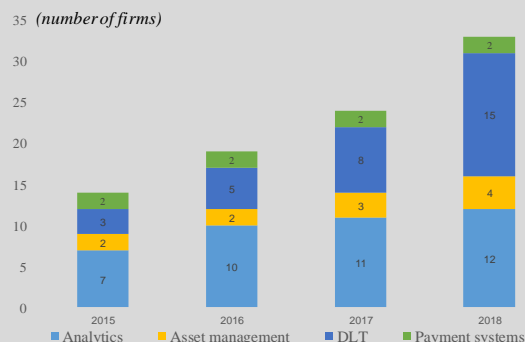
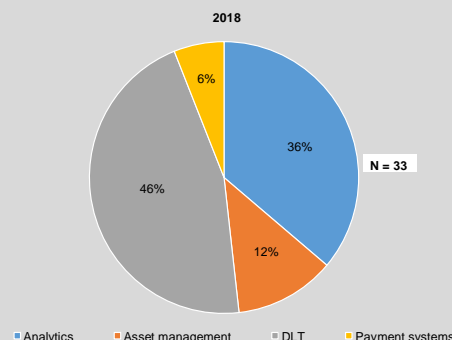


Figure 2.22: Breakdown of fintech sector by principal business activity, 2018



Source: Bank of Slovenia

### Method of financing and performance of fintech firms

Fintech firms had more short-term loans (68% of the total) than long-term loans in 2018. The stock of short-term loans amounted to EUR 31.8 million, while long-term loans amounted to approximately EUR 14.7 million. The long-term loans increased notably in 2018, when they were up 22% in year-on-year terms. The domestic banks' exposure to fintech firms amounted to EUR 4.8 million in 2018. A significant exposure to fintech firms can be identified at four banks (accounting for around 90% of the total exposure to the sector), but the majority consists of performing loans. There are three foreign banks with a significant exposure to firms with non-performing loans. Non-performing loans amounted to around EUR 0.2 million in 2018, or 4.8% of the total loans to firms in the sector. Given the firms' high indebtedness levels and the stagnation of the crypto market, the coming years could bring an increase in the NPL ratio, for which reason the banks should be cautious in approving loans to firms engaged in the trading of cryptoassets. Nevertheless, the firms included in this analysis currently do not represent a credit risk to the banking system, or the risk of an increase in non-performing loans. The firms included in this analysis do not disclose any exposures to foreign banks trading in the rest of the world.

Figure 2.23: Breakdown of stock of loans to fintech firms by maturity

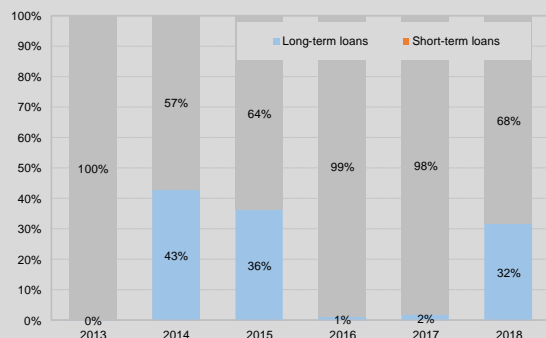
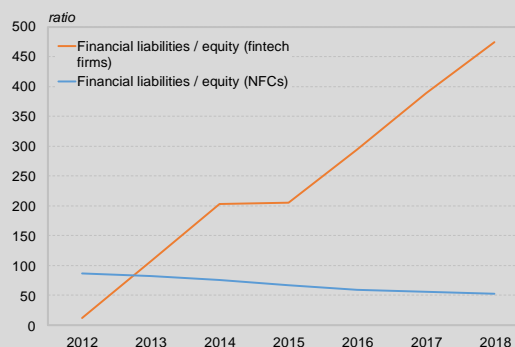


Figure 2.24: Corporate debt indicators



Sources: AJPES, Bank of Slovenia calculations

Fintech firms recorded a net loss of EUR 0.3 million in 2018. Their revenues amounted to EUR 5.2 million, while their expenditure amounted to EUR 5.5 million. Some 27% of them made a loss in 2018, while 73% were profitable. They had generally been profitable in previous years, but the situation changed in 2018. Their equity has not changed in recent years, and has stagnated at EUR 9.8 million. Their total assets are increasing, and amounted to EUR 70 million in 2018 (up 35% in year-on-year terms). Their long term financial liabilities increased to EUR 14 million last year (long term liabilities had still amounted to just EUR 0.7 million in 2017). Their net revenues amounted to EUR 28 million, up 49% in year-on-year terms. Total financial liabilities have been increasing since 2013 (up 24% in year-on-year terms), while leverage stood at 21% in 2018. There is now a situation where fintech firms are borrowing heavily, but contrastingly their equity is stagnating, thus widening the gap between financial debt and equity.

When the ratio of net financial debt to EBITDA is compared with that of non-financial corporations overall, it can be seen that the latter has been improving since 2009, while for fintech firms there is extreme volatility, which reduces their debt servicing capacity and increases their debt servicing costs. In the long term this leads to increased credit risk as a result of the potential increase in the NPL ratio. The fintech firms' net financial debt



increased to approximately EUR 1.7 million in 2018, while their EBITDA is declining, which is further raising the ratio of net financial debt to EBITDA.

Figure 2.25: Ratio of net financial debt to EBITDA for fintech firms

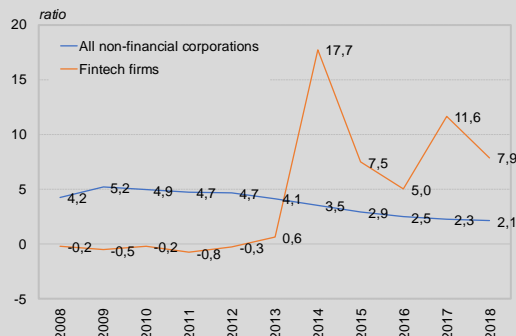
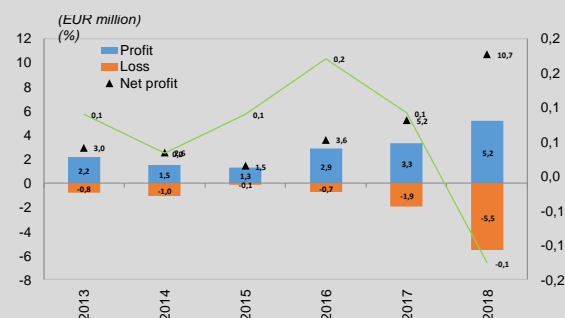


Figure 2.26: Profitability of fintech firms



Sources: AJPES, Bank of Slovenia calculations

Fintech firms face a fast-changing business environment, which also impacts their performance. The main issue is that they are increasing their long term financial liabilities to banks, but are simultaneously seeing a decline in net profit. Pre-tax ROE also deteriorated sharply in 2018 to -0.1%, which means they are operating at a slight loss. The fintech firms' performance indicators have deteriorated especially in recent years, which can be tied to the decline in trading in cryptoassets and the fall in cryptocurrencies (e.g. bitcoin), which more recently are being replaced by new cryptocurrencies (e.g. stablecoin). The trading in new cryptocurrencies and the strong economy could improve profitability of the fintech firms' in the coming years, although it should be noted that the sector has seen extreme volatility in performance, which also brings some risks. In addition, it can be seen that fintech firms performed solidly in 2016 and 2017, when the crypto bubble was at its peak (high EBITDA, low losses, low borrowing), but this was soon followed by the crash of 2017 and 2018, which was also reflected in their performance.

Fintech firms also have the option of financing themselves from non-banking sector and alternative resources, which also include fintech credit. For Fintech credit, we can use definition from the BIS Quarterly Review<sup>16</sup>: FinTech loans are all loans provided by electronic (online) platforms that are not operated by commercial banks. On the basis of the European Alternative Finance Report,<sup>17</sup> issued by the Cambridge Centre for Alternative Finance, fintech credit for Slovenia amounted to around EUR 14.6 million in 2017. The size of the fintech market was EUR 7.1 per person. Year-on-year growth in fintech credit was around 208%, the highest figure in south-eastern Europe. There are six platforms in Slovenia that provide alternative financing via fintech credit (two local and four foreign). The breakdown of the lending in 2017 was as follows: EUR 13.6 million in trading accounts, and EUR 0.99 million in business loans. There were also consumer loans in the amount of EUR 0.22 million, which are not treated as fintech credit in the report. The fintech platforms in Slovenia face a particular difficulty in that they do not have sufficient defences against cyber attacks to be able to protect consumers from fraud. The amount of fintech credit in Slovenia is increasing, which means that alternative financing is becoming an acceptable source of financing for fintech firms.

Fintech firms using distributed ledger technology typically trade in cryptocurrencies via online platforms. On this basis Slovenia's own Financial Stability Board (FSB) issued a warning on 9 October 2017 in connection with purchasing, storing and investing in virtual currencies (the highest-profile cryptocurrency at that time was bitcoin).<sup>18</sup> The warning emphasised that virtual currencies, including cryptocurrencies, are not backed by a central bank or a public authority. A second warning in connection with trading in cryptoassets was issued by the Bank of Slovenia on 15 June 2018, and emphasised that cryptoassets are neither currency nor money, which means that they do not comply with EU legislation and the right to a refund is not protected.<sup>19</sup> The FSB warned that crowdfunding via tokens and ICOs is not systemically regulated or supervised, and recommended to consumers that the amount of funds that they invest should not constitute an excessive exposure. The Bank of Slovenia's assessment is that there were no activities related to trading in cryptoassets at any of Slovenia's major credit institutions or payment institutions. In addition, a report<sup>20</sup> by the FSB emphasises that cryptoassets currently do not represent a risk that could impact financial stability, but that developments need to be monitored.

<sup>16</sup> Available online at [https://www.bis.org/publ/qtrpdf/r\\_qt1809.pdf](https://www.bis.org/publ/qtrpdf/r_qt1809.pdf).

<sup>17</sup> Available online at [https://www.jbs.cam.ac.uk/fileadmin/user\\_upload/research/centres/alternative-finance/downloads/2019-04-4th-european-alternative-finance-benchmarking-industry-report-shifting-paradigms.pdf](https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2019-04-4th-european-alternative-finance-benchmarking-industry-report-shifting-paradigms.pdf).

<sup>18</sup> Available online at <https://www.bsi.si/en/media/1138/opozorilo-glede-virtualnih-valut>.

<sup>19</sup> Available online at <https://www.bsi.si/en/media/1245/pojasnilo-kripto-imetja-niso-ne-valute-in-ne-denar>.

<sup>20</sup> Available online (in Slovene) at [https://bankaslovenije.blob.core.windows.net/publication-files/gdghVgegbwhfiq\\_letno\\_porocilo\\_ofs\\_junij\\_2018.pdf](https://bankaslovenije.blob.core.windows.net/publication-files/gdghVgegbwhfiq_letno_porocilo_ofs_junij_2018.pdf).

## 2.2 Households

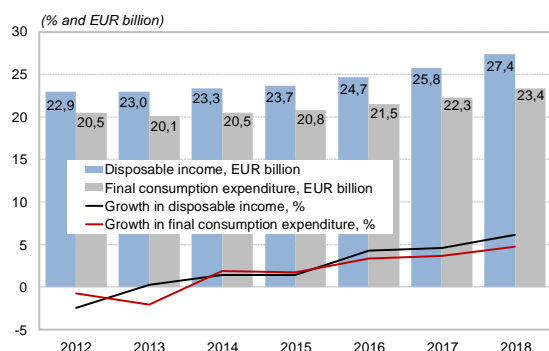
### Summary

The household sector's financial liabilities as ratios to GDP and to disposable income are low, and among the lowest in the euro area. Disposable income increased sharply in 2018 in the buoyant labour market, as did consumption expenditure and gross saving, while gross investment has stagnated. Credit growth is bringing an increase in household financial liabilities, while at the same time household financial assets are increasing. The high growth in household lending in the form of consumer loans continued in 2018 and the first quarter of 2019, and they remain an important segment of banking, thanks to the relatively high returns. The risk inherent in the high growth in consumer loans, particularly unsecured loans of longer maturities, persists and could be realised in the banking system in the event of a deterioration in the economic situation and the labour market.

### Household assets and debt

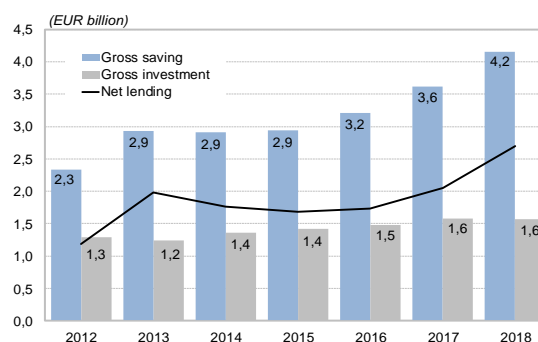
**Household disposable income increased sharply in 2018 in the buoyant labour market, while consumption expenditure also increased significantly.** Disposable income increased by 6.1% in 2018 to reach a new high of EUR 27.4 billion, while consumption expenditure was up 4.7% at EUR 23.4 billion. The low unemployment rate and relatively high wage growth may have brought the expected increase in household consumption, but did not bring an increase in gross investment, which remained unchanged at EUR 1.6 billion. Despite high employment and the booming residential real estate market, households remain more inclined to saving: gross saving increased sharply again, to EUR 4.2 billion, despite the low interest rates on deposits. While the labour market remains buoyant, household disposable income and consumption expenditure can be expected to continue growing. The increased optimism may also see growth in investment.

Figure 2.27: Disposable income and final consumption expenditure



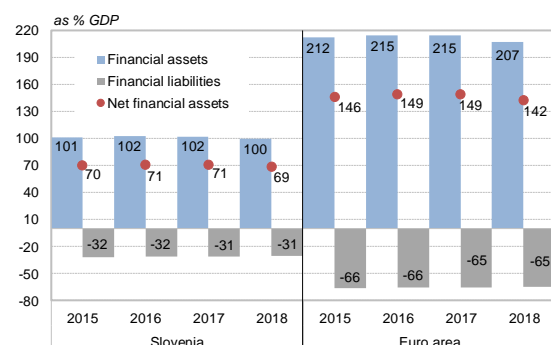
Source: SORS

Figure 2.28: Household saving and investment



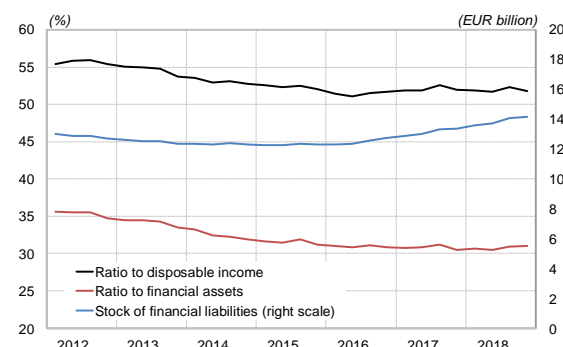
**Credit growth is gradually increasing household financial liabilities, while at the same time household financial assets are also increasing.** Household financial liabilities increased by EUR 791 million in 2018, while household financial assets increased by EUR 1.85 billion, which brought an increase in the sector's net financial assets to EUR 31.6 billion. There was no increase in household indebtedness as measured by the ratio of financial liabilities to GDP and to disposable income: the figures remained at 30.9% and 51.8% respectively. There was also little change in the comparison of the ratio of households' financial liabilities and assets to GDP with the average in the euro area, where the variation between countries is substantial. The ratio of household financial liabilities to GDP in Slovenia is among the lowest in the euro area. The risks to the banking system from the household sector are not increasing, despite the increase in household financial liabilities, as household financial assets are also increasing in the strong economy.

Figure 2.29: Household financial assets and liabilities



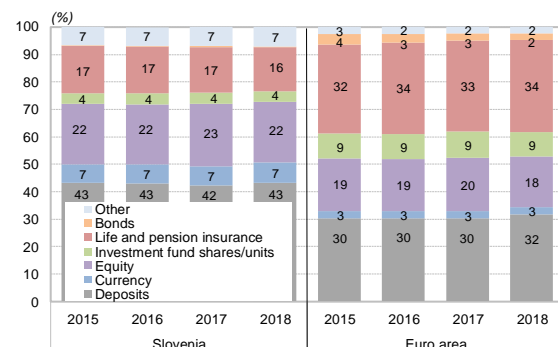
Source: ECB (SDW)

Figure 2.30: Household financial liabilities



**Slovenian households hold half of their financial assets in the form of currency and deposits, compared with just over a third in the euro area overall.** The breakdown of Slovenian households' financial assets reflects their risk aversion: they hold only half of their assets in higher-risk investments. Households in the euro area overall hold more financial assets in equity and in life insurance and pension insurance, which can bring faster growth in their assets. The caution of Slovenian households is also evident in the transactions figures: they recorded almost EUR 1.2 billion of transactions in deposits in 2018, and less than EUR 180 million in transactions in other assets. That Slovenian households are less willing to undertake long-term saving in various forms of assets might also be attributable to the relatively low returns in the low interest rate environment, particularly on life insurance and pension insurance. Consequently households are increasingly opting for more liquid forms of investment, even while interest rates on deposits are low.

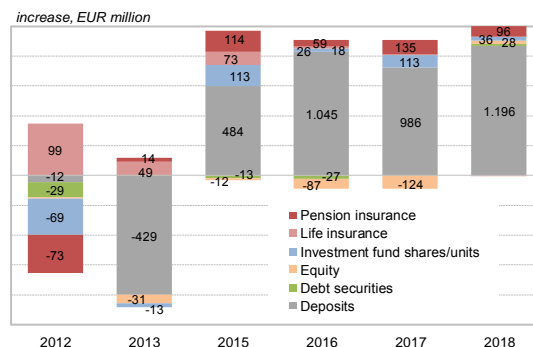
Figure 2.31: Breakdown of household financial assets, stocks



Note: Equity is a financial asset, and consists of quoted shares, unquoted 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

Figure 2.32: Breakdown of household financial assets, transactions

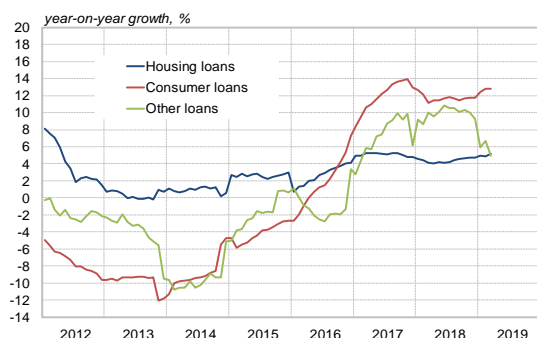


### Household borrowing at banks

**Consumer loans remain the most dynamic component of household loans.** Given the reduced corporate demand for loans, households remain a vital segment of banking. Year-on-year growth in housing loans remained moderate and stable in the first quarter of 2019, the rate exceeding 5% in March, taking the stock of housing loans to EUR 6.31 billion at the end of the first quarter.<sup>21</sup> Year-on-year growth in consumer loans remained pronounced, at more than 12%, while at EUR 2.76 billion the stock is fast approaching its pre-crisis level. The stock of consumer loans is now down only 6% or EUR 172 million on its pre-crisis level. The banks' exposure to consumer loans remains low compared with total exposure: consumer loans account for just 7% of the Slovenian banking system's balance sheet total, and this figure has not changed significantly over time. Following imprudent lending by banks, or a reversal in the economic cycle and a consequent deterioration in the situation on the labour market, the systemic risks to the banking system inherent in consumer loans could increase.

<sup>21</sup> For more on housing loans, see the *Real estate market* section.

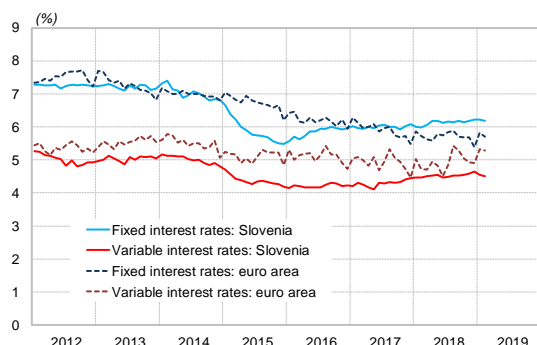
Figure 2.33: New household loans by type



Source: Bank of Slovenia

**Consumer loans, which entail higher returns for banks than housing loans, and also higher risk, make up a smaller proportion of the total credit portfolio, but are increasing in importance.** It is evident that certain banks have adjusted their business models in the last three years, and have focused on consumer lending by tailoring their offer, simplifying the approval process and allowing longer maturities. The average size of individual consumer loans is increasing, and maturities are lengthening, while many loans are not purpose-specific, which is increasing the risk level. Exposure to consumer loans varies substantially from bank to bank: at some banks they account for more than 10% of the balance sheet total. The proportion of total household loans accounted for by consumer loans is more than 40% at certain banks, while the average figure for the banking system is 30%. The increased risk of consumer loans means that the banks are demanding relatively high interest rates: fixed interest rates averaged just over 6% in the first quarter of 2019, while variable interest rates averaged 4.5%. Fixed-rate consumer loans in Slovenia are slightly more expensive than the euro area average, while variable-rate loans are slightly cheaper.

Figure 2.35: Interest rates on new consumer loans



Source: Bank of Slovenia

**The average maturity of consumer loans at approval has lengthened markedly over the last three years.** The original maturity of new consumer loans averaged 7 years in the first quarter of 2019, and actually exceeded 9 years at certain banks. Consumer loans with a maturity of 7 to 10 years account for 37% of the total stock, while the proportion accounted for by loans with a maturity of more than 10 years has increased sharply over the last three years. Compared with the euro area overall, Slovenia is also notable for its level of long-term consumer loans. While consumer loans with a maturity of more than 5 years account for less than 50% of all consumer loans on average across the euro area, the corresponding figure in Slovenia is almost 80%. Consumer loans with such long maturities are higher risk, as during this time there could be a reversal in the economic cycle that could adversely affect borrowers' ability to repay the loan. The NPL ratio could significantly increase, particularly at banks with a large proportion of consumer loans with higher loan values and longer maturities, and loans approved to client segments with lower income.

Figure 2.34: Growth in and stock of consumer loans

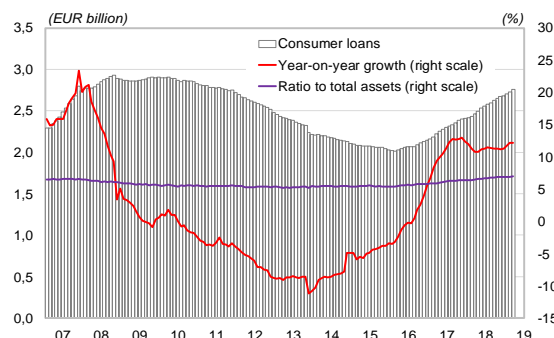


Figure 2.36: Average original maturity of new consumer loans

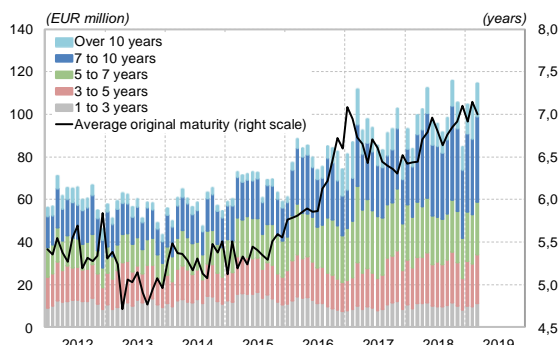
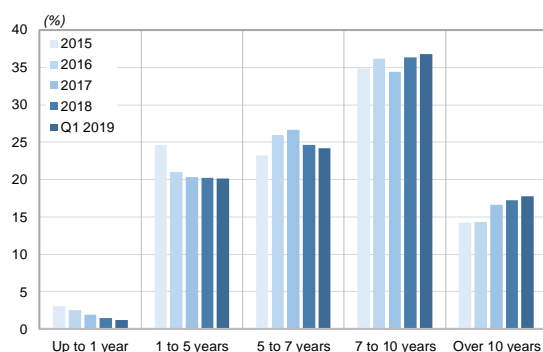
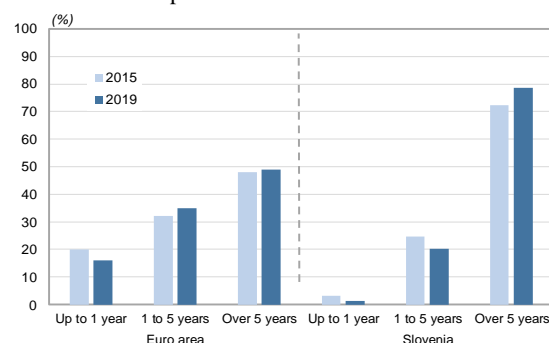


Figure 2.37: Maturity of stock of consumer loans



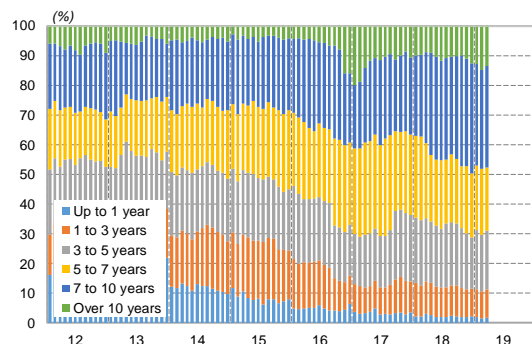
Source: Bank of Slovenia

Figure 2.38: Maturity breakdown of consumer loans, comparison with euro area



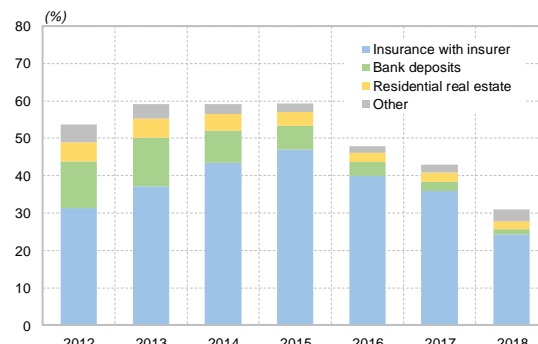
**The proportion of new consumer loans with a maturity of more than 10 years remains high.** In early 2017 some 20% of all new consumer loans were being approved with a maturity of more than 10 years. The figure has declined slightly over the last two years, but loans of this type still accounted for more than 12% of the total in the first quarter of 2019, or approximately EUR 12 million to EUR 14 million each month. Some 70% of consumer loans with an original maturity of more than 1 year carry a fixed interest rate, which slightly reduces repricing risk and the risk of an increase in debt servicing costs, but 48% of all consumer loans across the banking system still carry a variable interest rate at approval. It is also a cause for concern that the proportion of secured consumer loans has undergone a sustained decline since 2015. Because the average original maturity of consumer loans is significantly longer than in the past, it might have been expected that the proportion of secured loans would have risen. By 2018 only a third of consumer loans were secured. Credit insurance with an insurer remains the most common form of security for consumer loans, accounting for 78% of the total.

Figure 2.39: Breakdown of new consumer loans by maturity



Source: Bank of Slovenia

Figure 2.40: Proportion and type of secured consumer loans



**Several factors have driven the rise in consumer lending in recent years; they are partly related to the financial crisis and the recovery.** The most important factor is certainly the economic recovery and the improvement in the macroeconomic situation, which brought a fall in the unemployment rate and a rise in the number of jobs. This led to an increase in disposable income and private consumption, while low interest rates further encouraged borrowing. Alongside low interest rates, the growth in consumer loans was mainly attributable to purchases of consumer durables and increased consumer confidence. The rise in income and in net worth, and the low household indebtedness, together with the ongoing favourable financing terms, have supported the debt servicing capacity of households. The macroeconomic situation remains favourable, although a slowdown in economic growth that could weaken the labour market and bring more moderate wage growth, followed by a potential correction on the real estate market, could jeopardise households' income and net worth, thus reducing debt servicing capacity. Major issues could arise primarily at the banks that have heavily approved variable-rate loans to customer segments with weaker income.

**Box 2.3: Macroprudential measure for consumer loans**

The Bank of Slovenia's assessment is that the risks in the consumer loans market remain medium and manageable, on account of the low default rate. The long loan maturities nevertheless mean that consumer loans will remain on bank balance sheets even during a reversal of the economic cycle, which in the event of the materialisation of macroeconomic risks could quickly lead to a rise in default rates. With the aim of preventing the easing of credit standards, the Bank of Slovenia extended the macroprudential recommendation from housing loans to consumer loans in October 2018. The macroprudential recommendation sets a cap on the ratio between the annual total debt servicing costs and the annual net income of the borrower when the loan agreement is concluded (DSTI), and also recommends a maximum loan maturity. The maximum recommended maturity for a consumer loan is 10 years, while the DSTI cap recommends that the ratio of total annual debt servicing costs at all banks<sup>22</sup> to the borrower's net annual income should be between zero and 67% (depending on income). When there are multiple borrowers, the DSTI is calculated for each separately. The macroprudential measure is precautionary in nature, and encourages consumers to be cautious in their borrowing. The Bank of Slovenia will regularly assess compliance with the recommendation via annual surveys on the structure of new household lending, via regular bank reporting, and during regular supervisory activities. If the circumstances on the market change and systemic risk increases, the Bank of Slovenia may tighten the parameters of the recommendation, modify its content, or issue a binding macroprudential measure. For more information, see the Bank of Slovenia website.<sup>23</sup>

<sup>22</sup> Other liabilities, such as leasing payments and liabilities from credit cards and charge cards, are not taken into account.

<sup>23</sup> <https://www.bsi.si/en/financial-stability/macprudential-supervision/macprudential-instruments/macprudential-recommendation-for-household-lending>



### 3 REAL ESTATE MARKET

#### Summary

*With strong growth in prices, the risks to the banking system derived from the real estate market remain elevated, but at the same time the banking sector remains robust and relatively low exposed to the risks, thanks in part to the banks' high capital adequacy. The elevated risks could be realised in the event of a reversal in the economic cycle and the real estate market cycle, and a substantial fall in real estate prices, although the likelihood of a major downward correction is assessed as low for now. Any major fall in prices on the residential real estate market would reduce the collateral values at the banks, while a simultaneous deterioration in the economic situation would weaken the labour market, and thus worsen probability of default. Residential real estate prices rose sharply in 2018, and in the final quarter passed their peak of 2008 in nominal terms for the first time since the decrease in the crisis. Prices remain below their peak of 2008 in real terms, while housing affordability according to the price-to-income ratio is better than before the crisis. Following pronounced growth in Ljubljana and on the coast in 2018, price rises have now spread to a greater extent to other major towns in Slovenia, but the differences in average prices between towns remain significant.*

*Demand for real estate increased in previous years, thanks to the strong economy, the buoyant labour market and the relatively high affordability brought by price falls at the time of the crisis, while favourable loan terms were also a factor. The supply of residential real estate failed to track demand, which was evident in the small number of new-build units and issued building permits. In previous years the imbalance between supply and demand was a major factor in price rises, but growth in demand is slowing now, and supply will gradually increase as the number of new-build flats rises, which could lead to a slowdown in price growth in the future. The anticipated slowdown in price growth would mitigate the current elevated risks to the financial system, as the likelihood of a major fall in real estate prices during a reversal of the cycle would be reduced. Developments on the commercial real estate market differ from those on the residential real estate market: prices fell again in 2018, and the number of transactions remained relatively low.*

#### Prices and transactions on the real estate market<sup>24</sup>

**Year-on-year growth in residential real estate prices strengthened again in 2018 to 18.2%,<sup>25</sup> the highest figure in all euro area countries.** Growth was particularly high in prices of used flats (10.9%) and houses (38.6%). New-build flats and houses saw significant price volatility owing to shortages on the market and the low number of transactions. The euro area continued to record growth in residential real estate prices in 2018, the rate averaging 4.2%. Price growth in Slovenia outpaced the euro area average by 14 percentage points, mostly because of the sharper fall in prices during the crisis, and the current strength of the economy. In recent years price rises have also been driven by the recovery of the real estate market, having crashed by a quarter during the crisis. Purchasing power and market optimism are also being lifted by high economic growth and the buoyant labour market, which is driving high demand for real estate and consequently price growth. In the final quarter of 2018 residential real estate prices were up 6.1% in nominal terms on their average in 2008, while in real terms they were still down 5.9% on their peak from 2008.<sup>26</sup>

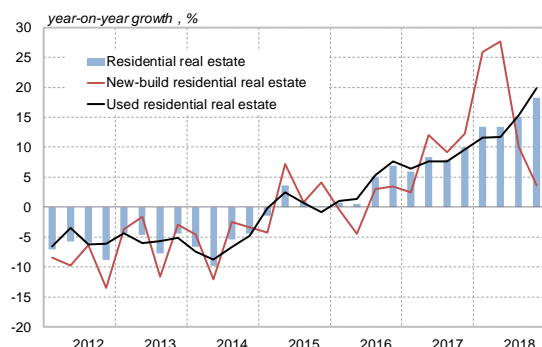
<sup>24</sup> The SORS announced the discovery of a technical error in the procedure for calculating the residential real estate price index. The statistical data has been temporarily withdrawn, and there might be revisions when it is republished.

<sup>25</sup> Growth in residential real estate prices stood at 18.2% in the final quarter of 2018, while the rate averaged 15.1% over the whole of the year.

<sup>26</sup> For more on residential real estate prices and an assessment of whether prices are misaligned with the fundamentals, see the thematic section in this FSR.



Figure 3.1: Residential real estate prices



Sources: SORS, Eurostat

**Ljubljana and Koper are notable for high price growth, but prices in other major towns are also increasingly rising.** Price growth remained particularly high in Ljubljana in the first half of 2018, before slowing in the second half of the year. As a place to live, and from the perspective of job opportunities, tourism and investment, Ljubljana is one of the most attractive towns in Slovenia, therefore prices are significantly higher than elsewhere. Price growth in the second half of the year was more pronounced in other major towns, where price growth to date had been lower than in Ljubljana. A major factor in the price growth is the imbalance between supply and demand, which is expected to ease in Ljubljana as the construction cycle picks up.

Figure 3.2: Residential real estate prices, international comparison

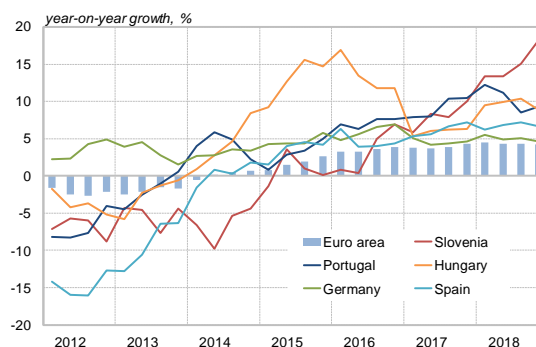
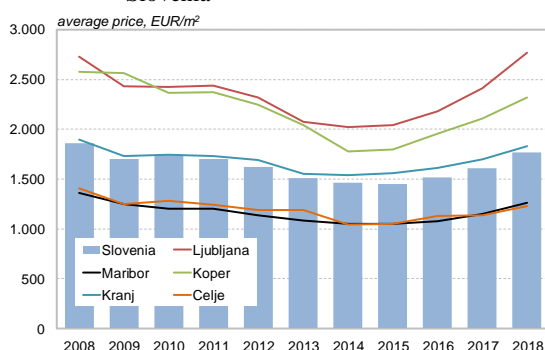
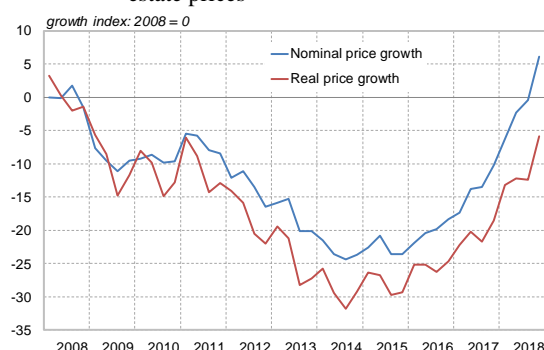


Figure 3.3: Average prices of used flats in major towns in Slovenia



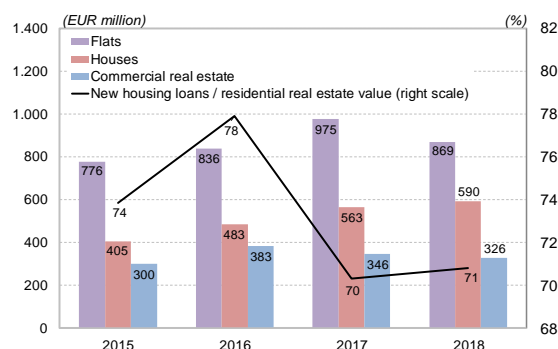
Sources: SMARS, Eurostat

Figure 3.4: Nominal and real growth in residential real estate prices



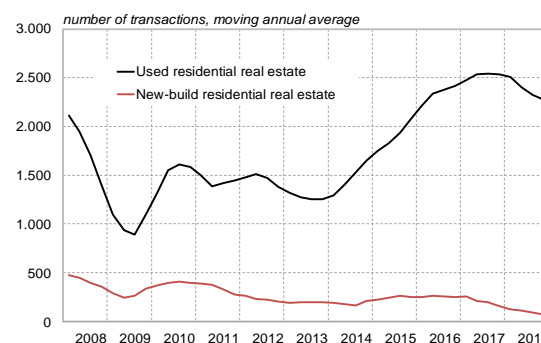
**The ratio of new housing loans to the volume of transactions in residential real estate stood at 71% in 2018, similar to the previous year, but less than in the years before.** After peaking in 2017, the number of real estate transactions fell by 9% in 2018 to 33,000 contract completions. Total volume in real estate amounted to EUR 2.3 billion in 2018, down on the previous year's total of EUR 2.4 billion, but comparable to 2007. The Bank of Slovenia's assessment is that banks are an important source of financing for residential real estate purchases, also due to favourable loan terms, but that borrowers' own resources also continued to account for a relatively large proportion of their financing in 2018. Similar developments can be expected in the future, while the labour market remains buoyant and loan terms remain favourable.

Figure 3.5: Volume by type of real estate



Sources: SMARS, SORS, Bank of Slovenia

Figure 3.6: Number of transactions in residential real estate



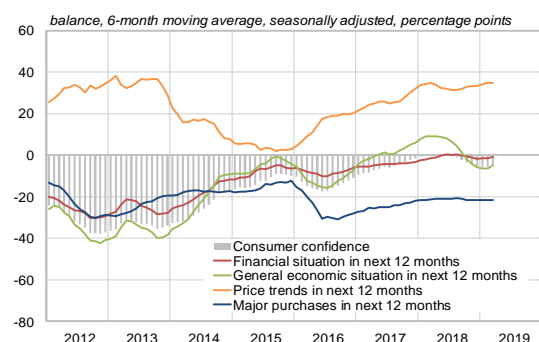
**After peaking in 2017, the number of transactions in residential real estate fell in 2018.** There were 9,382 recorded transactions in residential real estate in 2018, down 13% on 2017. Used and new-build flats and houses alike recorded a fall in the number of transactions. There were only 275 transactions in new-build residential real estate recorded in 2018, the lowest figure since the SORS began collecting this data, primarily as a result of the shortage of new-build flats on the market. The number of transactions in new-build residential real estate can be expected to rise in the coming years as a number of construction projects are completed. The number of transactions also fell in Ljubljana, which could be attributable to the high residential real estate prices, and to the numerous housing projects that are still under construction and will come on line in the years ahead. Non-residents' appetite for purchasing real estate in Slovenia remained low in 2018: non-residents accounted for just 2.4% of total real estate purchases in value terms.

### Supply of and demand for residential real estate

#### Demand-side factors

**The imbalance between supply and demand remains high, but at the same time there is a discernible gradual slowdown in demand, while supply is expected to grow.** The slowdown in demand in 2018 compared with previous years is evidenced in the fall in the number of transactions in residential real estate, which could also be attributable to a shortage of real estate on the market. At the same time, data from the BLS shows that there was no increase in demand for housing loans for the first time since 2015 (see Figure 3.8). Demand actually fell in individual quarters of 2018, primarily as a result of the use of savings to finance housing purchases. Another factor in the reduced demand for housing loans in the first quarter of 2019 was the decline in consumer confidence, as evidenced by the consumer confidence indicator since the end of 2018. According to a survey of consumer opinion, expectations of the future economic situation in Slovenia have declined. Consumers are not expecting a significant improvement in their financial position in the next 12 months, and at the same time remain reluctant to make major purchases in the year ahead. Demand could be further reduced by the increased uncertainty in the international environment and the slowdown in growth in Slovenia's major trading partners, which will also be reflected in the domestic economy and consequently in demand for real estate.

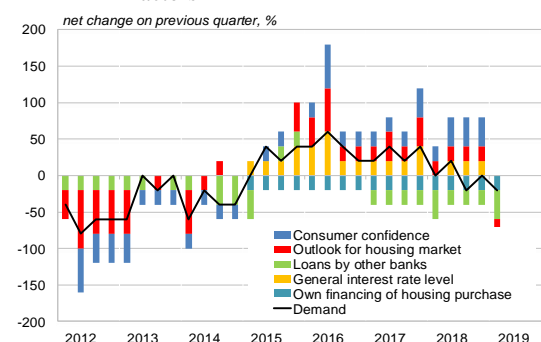
Figure 3.7: Consumer confidence



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.

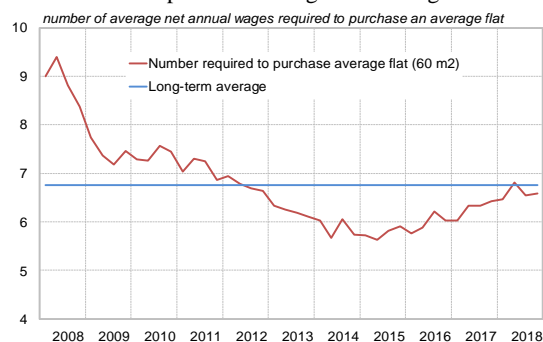
Sources: SORS, Bank of Slovenia (ECB SDW)

Figure 3.8: Demand for housing loans and demand factors



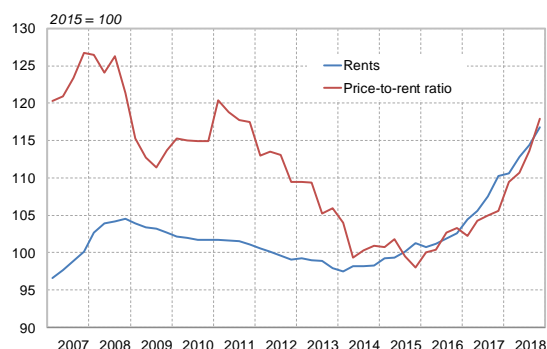
**Demand for residential real estate is also slowing as a result of diminishing affordability, and because rents are rising more slowly than prices.** Average wages and household purchasing power are rising in the strong economy and the buoyant labour market, but growth in residential real estate prices continues to outpace wage growth. The number of net monthly wages required to make a housing purchase is increasing for all types of housing, and is reducing affordability. Even allowing for the fact that loan terms remain favourable, housing affordability is diminishing, and is contributing to the declining demand for real estate, as real estate becomes harder for households to afford. The slower growth in rents than in prices could also be a factor in the anticipated lower demand for residential real estate. Rents have been rising since 2016, but more slowly than prices, which is evident from the rise in the price-to-rent ratio. Rental demand could increase as a result, slowing demand for real estate for purchase.

Figure 3.9: Ratio of housing prices to wages in Slovenia compared with long-term average



Sources: Bank of Slovenia, SMARS, SORS, OECD

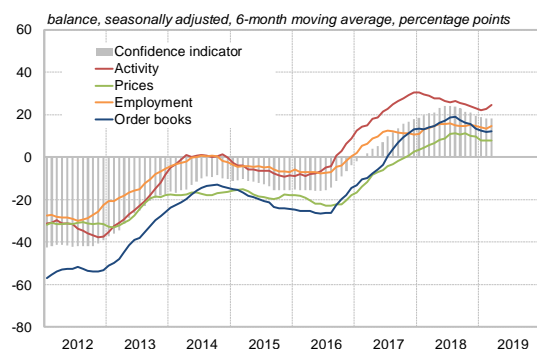
Figure 3.10: Rents and price-to-rent ratio



### Supply-side factors

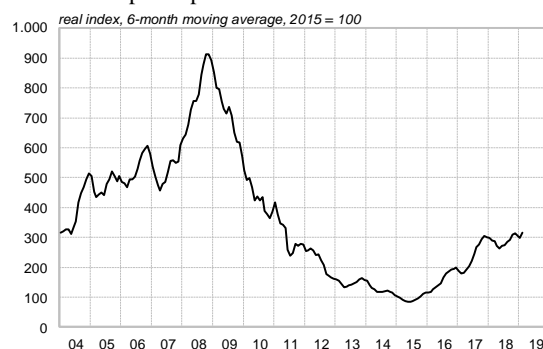
**Confidence in the construction sector remains high, and the amount of construction put in place is also increasing.** The construction confidence indicators strengthened notably in the first half of 2018 and in the first quarter of 2019. Construction firms are expecting a rise in total orders in the future, price rises, and growth in employment and work volumes. The amount of construction put in place has been rising sharply again since the second half of 2018, which is raising expectations of a greater supply of housing in the future. Since 2015, the amount of construction put in place has increased sharply, but remains low compared with the pre-crisis years. The supply of housing in Ljubljana can be expected to increase from the second half of 2019 and in the following years, while numerous construction projects are underway in other major towns in Slovenia. A significant number of new projects have also been announced in recent months. The rising supply of new-built residential real estate is expected to slow growth in real estate prices, which will also be highly dependent on affordability. The completion of the construction projects that have been announced could be slowed by a shortage of skilled labour in the construction sector, which construction firms are addressing by hiring foreign workers, but the hiring process can be lengthy.

Figure 3.11: Business trends in construction



Source: SORS

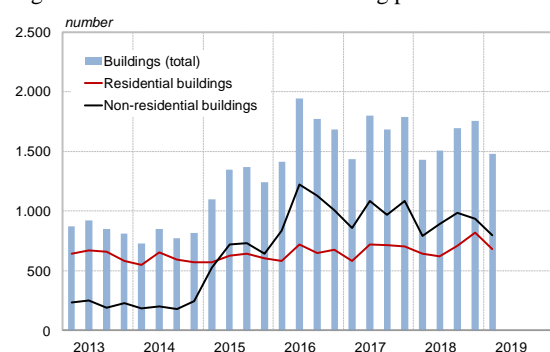
Figure 3.12: Index of amount of residential construction put in place



**The rise in the number of building permits for residential buildings is also indicative of an increase in construction activity in the coming years.** Time is needed for the completion of construction projects, but the rising number of building permits will gradually be reflected in a rise in the number of housing units on the market. The increase in construction activity is also being reflected in a rise in construction costs.

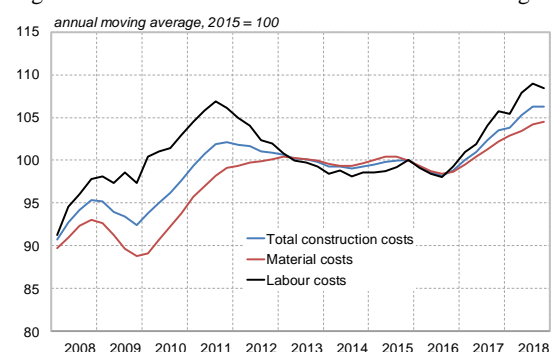
Construction material and labour costs rose sharply in 2017 and 2018, as a consequence of the strong economy and the increase in work. Alongside private investors, the Housing Fund of the Republic of Slovenia (HFRS) will be an important player in the real estate market in the coming years, and it is expected to build more than a hundred rental flats in Ljubljana, Maribor and Kranj. The rents for these flats are expected to be more affordable and easier for households to manage, which could lead to reduced demand for real estate for purchase, particularly if prices continue to rise. After several years of stagnation, the supply of housing can be expected to increase from the second half of 2019, with further gradual increases in following years.

Figure 3.13: Number of issued building permits



Source: SORS

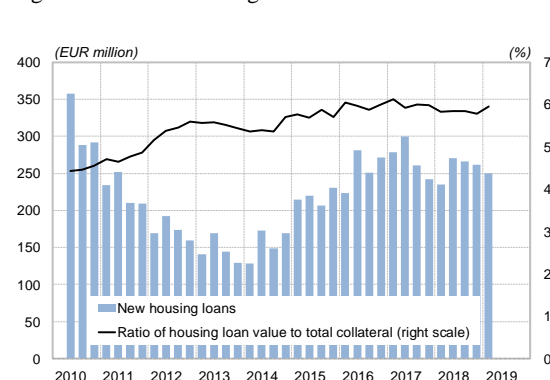
Figure 3.14: Construction costs for new-build housing



### *Real estate market and related risks to the banking sector*

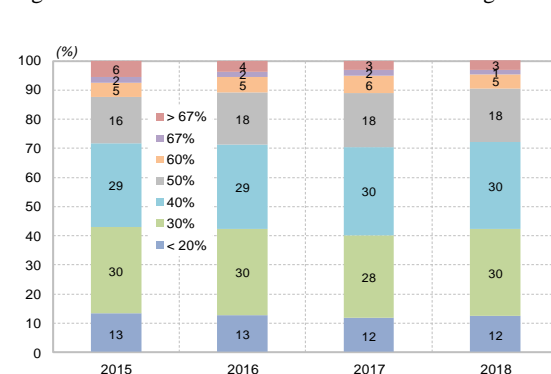
**Strong growth in prices means that the risks to the banking system derived from the real estate market remain elevated, but at the same time the banking sector remains robust and low exposed to the risks.** The average ratio of the value of the housing loan to the value of all forms of collateral for new housing loans remained stable in 2018 and the first quarter of 2019, at below 60%. Given the high growth in real estate prices, and the increased chance of excessive risk take-up, the average coverage of new housing loans by collateral at approval remains high. The ratio of the value of the housing loan to the value of all forms of collateral for the stock of housing loans is stable at 51%. The LTV<sup>27</sup> averaged 75% in 2018, while the DSTI<sup>28</sup> averaged 33%.

Figure 3.15: New housing loans and LTV



Source: Bank of Slovenia

Figure 3.16: Distribution of DSTI for new housing loans



<sup>27</sup> The LTV or loan-to-value is the ratio of the value of a housing loan to the value of the residential real estate pledged as collateral.

<sup>28</sup> The DSTI or 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.

### Box 3.1: Impact of the macroprudential recommendation for housing loans (analysis for 2018)

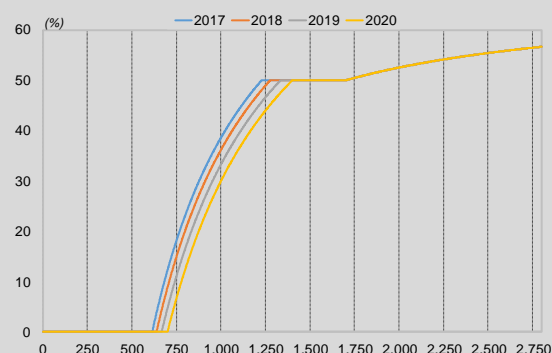
The Bank of Slovenia introduced a (non-binding) macroprudential recommendation for housing loans in 2016. The measure was introduced a year after residential real estate prices have started to rebound following several years of decline. Household indebtedness was low, economic growth had risen, and the banks were well-capitalised. This situation could have led to a relaxation of credit standards and a rise in household indebtedness. With the aim of preventing the build-up of systemic risks, and with the intermediate objective of mitigating and preventing excessive credit growth and leverage, the Bank of Slovenia introduced two non-binding macroprudential instruments.

#### LTV and DSTI instruments

The first instrument (a cap on loan-to-value or LTV) recommends that the ratio of the loan value to the value of the residential real estate collateral should not exceed 80%. The second instrument (a cap on debt-service-to-income or DSTI) recommends that the ratio of total annual debt servicing costs at all banks<sup>29</sup> to the borrower's net annual income should be between 0% and 67% (depending on the income). When there are multiple borrowers, the DSTI is calculated for each one separately. The 0% DSTI cap comes from the limitations on the attachment of a debtor's financial assets set out in the Enforcement and Securing of Claims Act (ZIZ<sup>30</sup>) and the Tax Procedure Act (ZDavP-2<sup>31</sup>), i.e. earnings that are exempt from attachment and limitations on the attachment of a debtor's financial earnings. In practice this means that the borrower should be left with at least the net minimum wage after deducting debt servicing costs, irrespective of the DSTI.

The recommendation applies to all new housing loans, i.e. to all loans for the purchase, construction or renovation of residential real estate. Since October 2018 the recommendation has also been expanded to include consumer loans secured by residential real estate. These are often used for housing purposes, and in practice the line between a housing loan and a consumer loan secured by real estate is fuzzy.

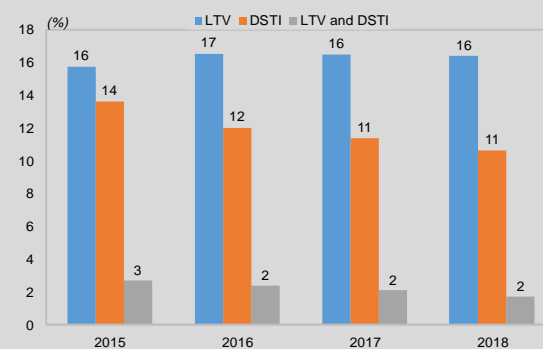
Figure 3.17: Cap on DSTI relative to borrower's income and minimum wage



Note: In the left figure the x-axis shows the borrower's net monthly income, while the y-axis shows the cap on DSTI. The right figure illustrates all loans where the income is reported (approximately 96% of total loans). The proportion of deviations from the LTV recommendation is calculated with regard to all loans (including those to which the instrument does not apply, because they are not secured by residential real estate). Taking account solely of loans to which the LTV recommendation applies, the proportion of deviations would be greater: it would stand at 27.6% in 2018 compared with 28.4% in 2017 and 29.5% in 2016.<sup>32</sup>

Source: Survey 2019

Figure 3.18: Proportion of deviations from the LTV and DSTI recommendations at system level



In early 2019 a survey was sent to banks, savings banks and bank branches to gather data on housing loans and consumer loans secured by residential real estate at the level of individual transactions.<sup>33</sup> Data was obtained on loans approved in 2015, 2016, 2017 and 2018. The analysis includes all loans where the

<sup>29</sup> Other liabilities, such as leasing payments and liabilities from credit cards and charge cards, are not taken into account.

<sup>30</sup> Official Gazette of the Republic of Slovenia, Nos. 3/07 (official consolidated version), 93/07, 37/08 (ZST-1), 45/08 (ZArbit), 28/09, 51/10, 26/11, 17/13 (constitutional court ruling), 45/14 (constitutional court ruling), 53/14, 58/14 (constitutional court ruling), 54/15 and 76/15 (constitutional court ruling).

<sup>31</sup> Official Gazette of the Republic of Slovenia, Nos. 13/11 (official consolidated version), 32/12, 94/12, 101/13 (ZDavNepr), 25/14 (ZFU), 40/14 (ZIN-B), 90/14 and 91/15.

<sup>32</sup> Some of the deviations can be attributed to difficulties in reporting LTV for real estate under construction. In these cases the high LTVs are a consequence of reporting the current (low) value of the real estate and the total (mostly as yet undrawn) amount of the loan.

<sup>33</sup> The finding is that residential real estate collateral remains the most common form, and accounts for 78.2% of total collateral value in 2018 (compared with 79.5% in 2017).

borrower's income is reported (approximately 96% of total loans). The data for 2015, 2016 and 2017 may differ from that disclosed in last year's Financial Stability Review. A direct comparison of this year's and last year's assessment of the impact of the macroprudential measures is thus not possible.<sup>34</sup>

### *Criteria for determining the impact of the recommendation*

The main indicators for assessing the impact of the macroprudential recommendation at level of the banking system are the share and trend of deviations from the recommended values. Some other indicators are also monitored, including: the growth of housing loan stock, average LTV and DSTI, and their distribution in combination with other parameters, such as maturity and the share of loans with a variable interest rate. The analysis also covers consumer loans secured by residential real estate collateral (approximately 3.4% of total loans secured by residential real estate), although the macroprudential instruments have only applied to these loans since October 2018.<sup>35</sup> The share of deviations in DSTI and LTV from the recommended values is also shown for years in which the macroprudential recommendation was not yet in force.<sup>36</sup> This provides a reference point based on which the impact of the measure can be assessed.

The macroprudential recommendation was introduced as a precautionary measure in 2016. Its aim was to prevent the relaxation of credit standards, for example a rise in average LTV and DSTI. It is assessed that a moderate share of transactions in residential real estate is financed by borrowers' own resources. Macroprudential therefore does not have a direct impact on residential real estate prices. This means, that an assessment of the measure's impact cannot be based on the changes in residential real estate prices.<sup>37</sup>

### *Impact of the recommendation*

The share of loans deviating from the macroprudential recommendation at the level of the banking system was broadly unchanged from 2017, at 28.7% in 2018 (compared with 30.0% in 2017). The share of deviations was also stable in terms of the individual instruments. Some 16.4% of loans deviated from the LTV recommendation (16.4% in 2017), while 10.6% of loans deviated from the DSTI recommendation (11.4% in 2017). About 1.7% of loans deviated from both recommendations (2.1% in 2017). The average LTV and DSTI are also stable: LTV averaged 75% in 2018 (76% in 2017), while DSTI averaged 33% (34% in 2017).

The lack of change in the share of deviations from the recommendation and the stable average values for LTV and DSTI do not necessarily signal that risk remained the same. LTV is cyclical, which means that the same share of deviations in 2018 entails a higher risk than in 2015, when residential real estate prices were approximately 20% lower. The same is true of the average LTV. DSTI is tied to the level of the minimum wage. When the minimum wage rises, the DSTI instrument tightens. The minimum wage usually rises when the economy is strong, which makes DSTI a countercyclical instrument.

Figure 3.19: Distribution of DSTI

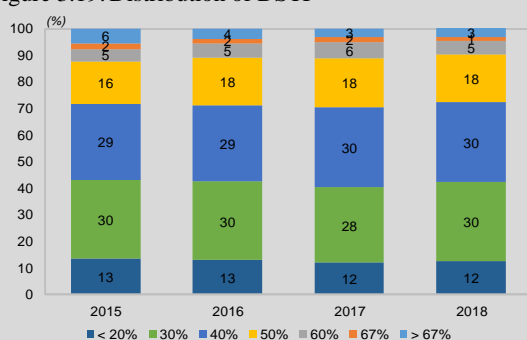
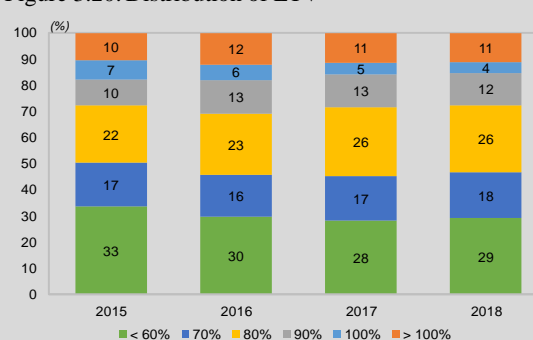


Figure 3.20: Distribution of LTV



Note: The left figure is based on all loans where the income is reported (approximately 96% of total loans). The right figure is based on all loans secured by residential real estate where the income is reported (approximately 62% of total loans). Outliers have been excluded from the calculation of average LTV and DSTI.

Source: Survey 2019

<sup>34</sup> Last year's analysis of the impact of the macroprudential measures is presented in the June 2018 Financial Stability Review, on pages 58 to 61.

<sup>35</sup> This provides a more realistic picture of changes in credit standards.

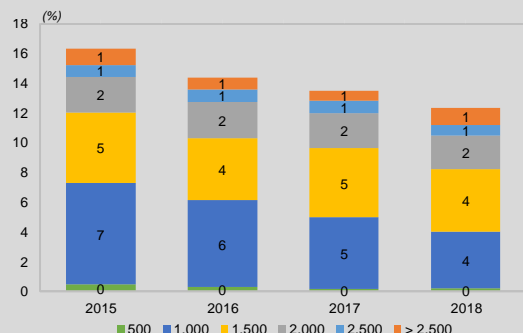
<sup>36</sup> Namely for 2015 and most of 2016.

<sup>37</sup> See Fáykiss, P, Nagy, M and Szombati, A (2017). Regionally-differentiated debt cap rules: a Hungarian perspective. published in *Macroprudential frameworks, implementation and relationship with other policies*, BIS Paper (94).



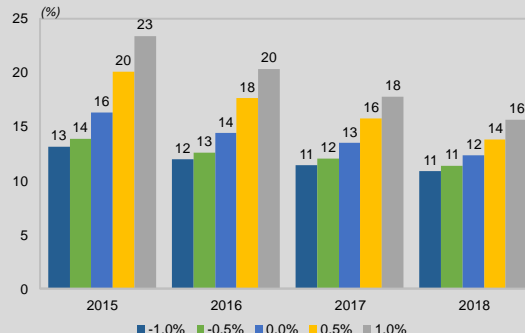
Detailed analysis of the deviations from the DSTI recommendation reveals its share to have declined for borrowers earning less than EUR 1,500. This indicates an improvement in credit standards, as it is these very borrowers whose access to loans is most restricted by rises in the minimum wage. It is also observed that deviations from the DSTI recommendation are becoming less sensitive to changes in interest rates. This can primarily be attributed to the increasing prevalence of fixed-rate loans.

Figure 3.21: Deviations from the DSTI recommendation by income bracket



Source: Bank of Slovenia

Figure 3.22: Simulation of impact of changes in interest rates on deviations from the DSTI recommendation



The share of deviations from the recommendation varies a lot among banks. Generally, the deviations from the LTV recommendation are much larger than those from the DSTI recommendation. If the share of deviations from the recommendation does not diminish (both for individual banks and for the banking system), or if there is a relaxation of credit standards, the Bank of Slovenia may adopt microprudential (supervisory) measures or introduce a binding macroprudential measure. Given the favourable macroeconomic situation, a gradual tightening of the credit standards for new housing loans would be justified.

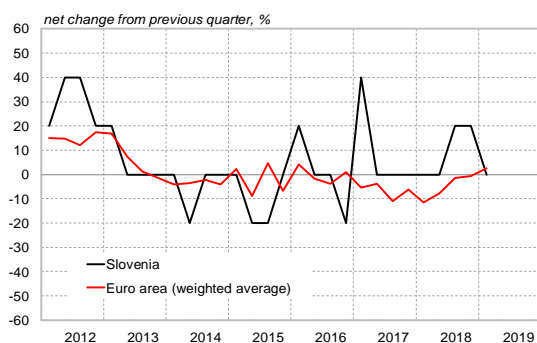
**According to the BLS, credit standards for housing loans have mostly remained unchanged in recent years, and are more stringent than at the outbreak of the crisis.** Credit standards<sup>38</sup> and loan terms for housing loans have mostly remained unchanged over the last three years, with the occasional tightening, primarily as a result of the new construction law, which has been in force since June 2018. In the current situation on the real estate market, and given the high growth in prices, it is particularly important that the banks do not ease their credit standards for housing loans, thereby reducing any adverse consequences for the banking system in the event of a reversal in prices on the real estate market. After two years of easing credit standards for housing loans, the euro area is seeing a shift into a period of tightening.

<sup>38</sup> 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.



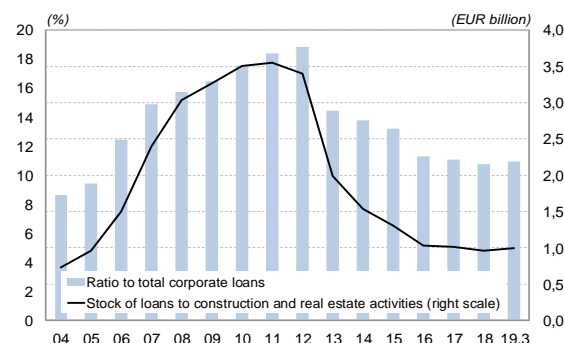
Figure 3.23: Credit standards for housing loans



Note: The data in the left figure illustrates the net percentage change in the 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)

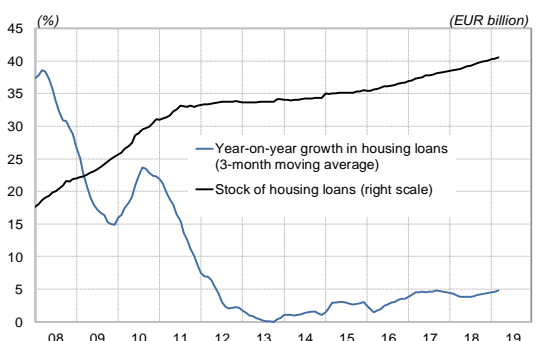
Figure 3.24: Stock of loans to the construction and real estate activities sectors



**The banking sector's exposure to the construction sector remains low.** The stock of loans to the sectors of construction and real estate activities amounted to EUR 3.5 billion in 2012, but to just EUR 1.0 billion between 2016 and early 2019. The proportion of total corporate loans accounted for by loans to the sectors of construction and real estate activities thus declined from 18.8% in 2012 to 11% in March 2019. This significantly reduced the banking system's exposure to construction, and also reduced the risk inherent in an economic downturn. Like other firms, construction firms saw a rise in their financing via non-bank resources, which has been reflected in falling year-on-year growth in new loans to the construction sector. The construction sector in Slovenia now typically consists of smaller firms with lower exposure to banks than during the crisis, while more construction firms are foreign-owned than in the pre-crisis years. These firms are able to make use of financing outside the Slovenian banking system, which reduces the credit risk for Slovenian banks.

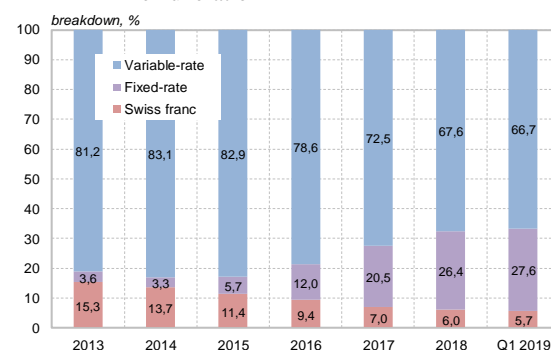
**Growth in housing loans remains stable, while the proportion of fixed-rate loans continues to increase.** Housing loans amounted to EUR 6.3 billion in March 2019, while year-on-year growth remained stable at 5% in 2018 and early 2019. The banks approved EUR 1.0 billion of new housing loans in 2018, equivalent to 17.3% of the stock of loans at the beginning of 2018. The moderate growth in housing loans suggests that they are not a major factor in the rise in real estate prices. Growth in housing loans is expected to remain stable in the future, particularly in the event of further rises in disposable income, and the consequent rise in households' ability to finance real estate purchases with their own resources. The cut in the interest rate on main refinancing operations to zero and the narrowing of the spread between fixed and variable interest rates are gradually raising the proportion of housing loans with a fixed interest rate. This stands at 27.6% of the stock, and is reducing default risk in the household sector in the event of a rise in interest rates. Loans tied to the EURIBOR account for two-thirds of total housing loans.

Figure 3.25: Stock of and growth in housing loans



Source: Bank of Slovenia

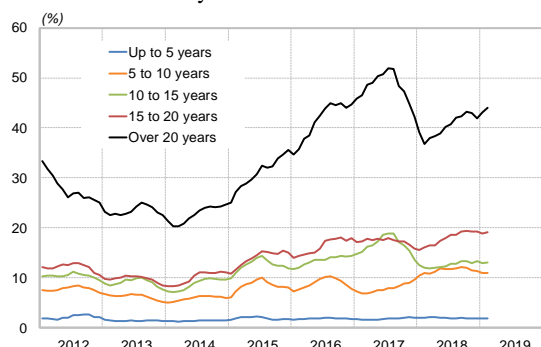
Figure 3.26: Stock of housing loans by type of remuneration



**The average maturity of new housing loans lengthened to 19 years in 2018, while the spread between fixed and variable interest rates remained stable.** New housing loans averaged EUR 86 million per month, approximately half of which carried a maturity of more than 20 years at approval. There was no significant change in the spread between the average fixed interest rate and the average variable interest rate on housing loans in 2018, which remained close to 1 percentage point. The average fixed rate stood at 2.9% in March

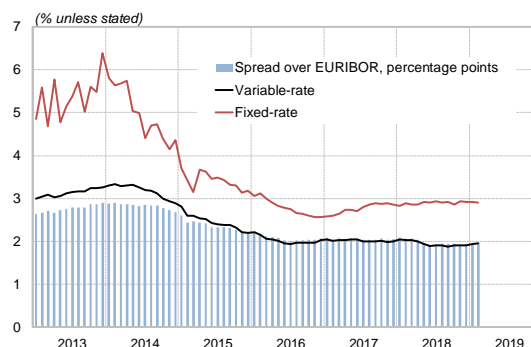
2019, while the average variable rate stood at 2.0%. In light of the interest rate policy announced by the ECB, there can be no expectation in the near future of any major changes in interest rates on housing loans.

Figure 3.27: Breakdown of new housing loans by maturity



Source: Bank of Slovenia

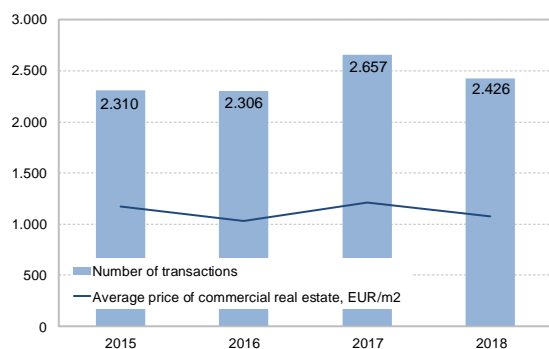
Figure 3.28: Interest rates on new housing loans by type of remuneration



### Commercial real estate

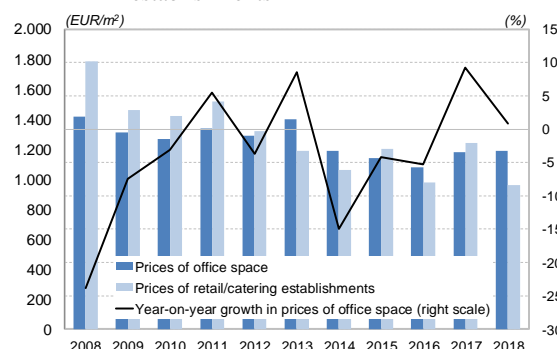
**Developments on the commercial real estate market differ from those on the residential real estate market: prices have fallen again, and volume remains low.** There were signs of growth on the commercial real estate market in 2017: the number of transactions rose by 15.2%, while average prices rose by 17.5%. This growth did not continue in 2018: average prices declined by 11.2% to reach a similar level to 2016. The number of transactions in commercial real estate also declined, by 8.7% to 2,426. The commercial real estate market remains small and concentrated in the central parts of the largest towns and in major retail centres. It is typified by high price volatility and fierce competition from the rental market, while in the current strong economy more businesses are constructing their own premises. In 2018 there was not yet any sign of much appetite from investors for the construction of commercial premises.

Figure 3.29: Commercial real estate prices and transactions



Source: SMARS

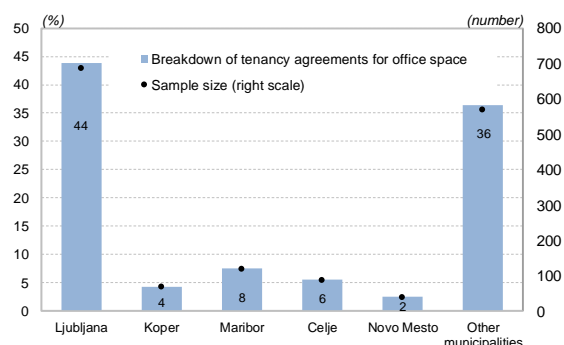
Figure 3.30: Prices of office space and retail/catering establishments



**The commercial real estate rental market also saw a slowdown in 2018, with a significant fall in the number of new tenancy agreements and price stagnation.** The fall in the number of new tenancy agreements is mostly attributable to tenancy extensions and changes in rents for office space and retail/catering establishments. Rents were unchanged at national level in 2018, but rose in Ljubljana in Maribor in particular. According to SMARS figures, the rising rents in the two aforementioned cities are attributable to rises in rents for modern office space with parking spaces, namely in newer office buildings in good locations. According to sample size,<sup>39</sup> some 44% of all tenancies were agreed in the City of Ljubljana, where rents are higher due to the development of the local economy and high demand for rental premises.

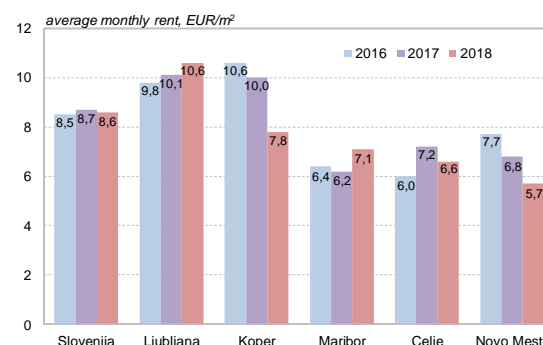
<sup>39</sup> According to the SMARS, the relationship between sample sizes credibly reflects the relationship in the number of tenancies agreed.

Figure 3.31: Breakdown of tenancies by municipality



Source: SMARS

Figure 3.32: Commercial real estate rents in major towns in Slovenia



**Having fallen sharply in previous years, bank loans for commercial real estate remained low.** The stock of loans for commercial real estate fell from EUR 1 billion in 2011 to EUR 100 million in 2016, and remained at a similar level in early 2019. New loans for commercial real estate are low, and depend significantly on individual transactions; new loans have averaged just EUR 5 million per month since 2016. That the commercial real estate market is less active than the residential real estate market is also reflected in the lower demand for bank financing, and the resulting lower exposure to the segment at the banks. The banks' exposure can be expected to remain low in the future, at least until the commercial real estate market starts growing and investment picks up.

Figure 3.33: New loans for commercial real estate

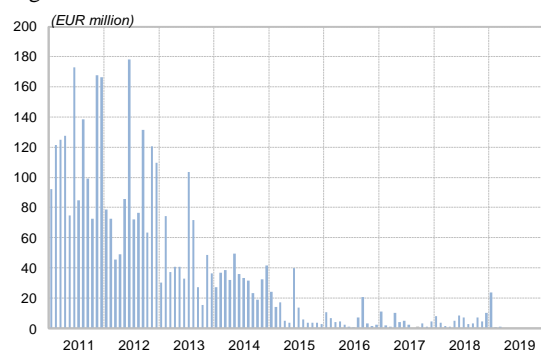
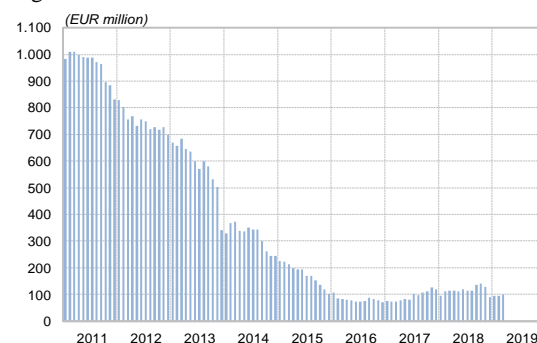


Figure 3.34: Stock of loans for commercial real estate



Source: Bank of Slovenia

**The majority of loans for commercial real estate are variable-rate with short maturity.** In early 2019 approximately half of all loans for commercial real estate had been approved with an original maturity of less than 3 years. Some 95% of all loans for commercial real estate are variable-rate, and in March 2019 all loans were euro-denominated.

Figure 3.35: Breakdown of stock of loans for commercial real estate by maturity

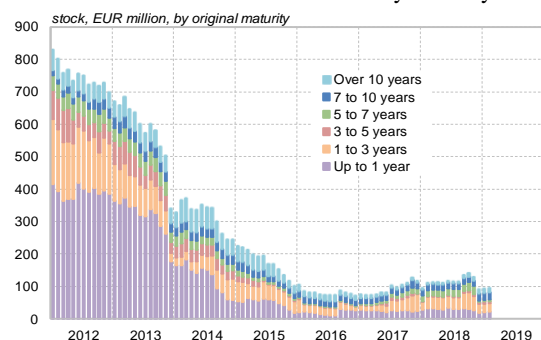
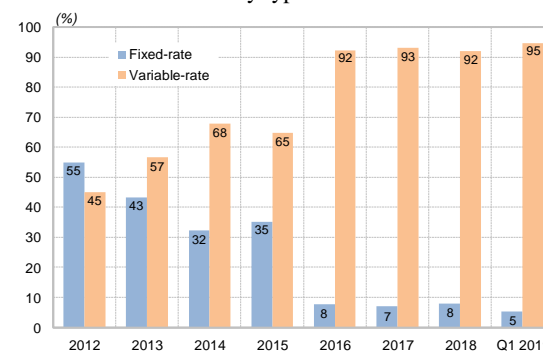


Figure 3.36: Breakdown of stock of loans for commercial real estate by type of remuneration



Source: Bank of Slovenia

## 4 BANKING SYSTEM

The banks' performance in the strong economy saw their principal risks maintained at the same levels in 2018 and the early part of 2019, ranging from low to medium. Despite an increase in profits, income risk is still material, on account of the relatively low growth in lending primarily based on consumer loans, and the low net interest margin. The growth, which is based mainly on household lending, entails an increased source of credit risk for the banks, which in previous years had declined sharply. According to the banks' own forecasts, non-performing exposures will be reduced in the coming years to a level comparable to the majority of euro area countries, although there is also an awareness of the increased risks presented by a potential slowdown in economic growth.

The growth in lending is putting pressure on capital adequacy via an increase in capital requirements, but the banks have succeeded in holding it at the level attained previously, by adjusting regulatory capital. Capital adequacy remains high at the system level, albeit with significant variations from bank to bank. The improving quality of bank assets is also having a favourable impact on capital adequacy via a reduction in the capital requirements for exposures in default and exposures associated with particularly high risk. Generating sufficient profit in the future will also be vital in maintaining capital adequacy at the attained levels.

One benefit of the banks primarily funding themselves via rising deposits by the non-banking sector is their reduced dependence on the financial markets, although as asset maturities lengthen there is an increasing maturity mismatch between assets and liabilities. The banks' good liquidity position is also maintaining their robustness.

### 4.1 Bank profitability

#### *Summary*

*The profitability of banks in the Slovenian banking system has been increasing in recent years, but income risk remains important: in the low interest rate environment bank profitability is heavily dependent on the amount of lending activity. Any slowdown in credit growth in the future could lead quickly to a decline in net interest income and profitability. The banks' pre-tax profit increased in 2018, as a result of growth in net interest income, an increase in non-interest income, and unchanged operating costs. However, the high profit of the banking system was also still attributable to the net release of impairments and provisions. Having mainly focused on household loans in 2018, before the first quarter of 2019 brought a slight increase in growth in loans to non-financial corporations, lending activity began to drive a gradual increase in the banks' net interest income as funding costs remained low. The period of net release of impairments and provisions will likely come to an end, which could reduce profits in the future, or make them more volatile.*

#### *Net interest margin and non-interest margin*

**The net interest margin stabilised at a low level in 2018, and is down on its long-term average.<sup>40</sup>** The net interest margin on interest-bearing assets stabilised in the second quarter of 2018, and stood at 1.84% at the end of the year. After narrowing for several years, the distribution of net interest margin across the banks widened in 2018. The gradual rise in the net interest margin was attributable to an increase in net interest income. While the increase in net interest in 2018 was primarily attributable to a decline in interest expenses, the main factor in the first quarter of 2019 was interest income from loans. This is indicative of the renewed growth in lending and its impact in raising net interest income, while the banks have highly favourable funding costs, as a result of the persistence of the low interest rate environment and the high levels of sight deposits.

<sup>40</sup> The net interest margin on interest-bearing assets in the Slovenian banking system averaged 2.70% over the 20 years between 1998 and 2018, compared with 2.39% between 2001 and 2018, and 1.96% between 2014 and 2018.

Figure 4.1: Net interest margin and commission margin in the banking system

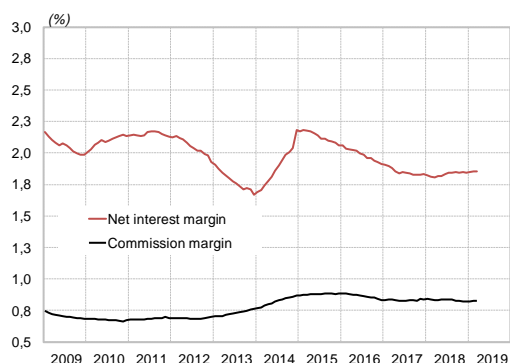
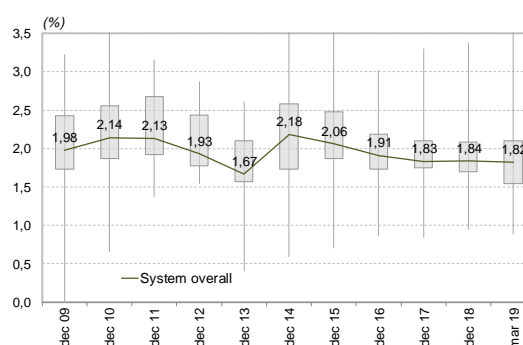


Figure 4.2: Distribution of net interest margin



Note: In the left figure both margins are calculated for a moving 12-month period. In the right figure the net interest margin for March 2019 is calculated for the first quarter of 2019 alone. The right figure illustrates the first and last quartiles, and the middle two quartiles.

Source: Bank of Slovenia

**The net non-interest margin increased in 2018, although the net commission margin was comparable to the previous year.** The net non-interest margin increased by 0.13 percentage points to 1.26%. The banking system has seen significant fluctuation in the non-interest margin in recent years, as a result of the high volatility in non-interest income, which is often attributable to one-off factors. There were several factors in the increase in non-interest income and thus in the non-interest margin in 2018, such as income from the sale of assets, dividend payments, and asset revaluations. Net fees and commission, which is the largest and most stable component of non-interest income,<sup>41</sup> was up just 0.6% in 2018, but the rate of growth had increased to 6% by the first quarter of 2019. The increase in net fees and commission is also a reflection of the banks' more active policies in introducing new services (e.g. the introduction of various packages of banking services), and thus in growing net non-interest income. The banks' net commission margin has been relatively stable for the last two years, and stood at 0.84% in March 2019.

**The net interest margin in the Slovenian banking system is lower than in comparable central European countries, with the exceptions of Austria and the Czech Republic, but higher than in most euro area countries.** Between 2015 and 2017<sup>42</sup> the net interest margin declined in Slovenia, and also in certain other European countries. In 2017 the net interest margin in Slovenia surpassed the average in the EU28 (the median stood at 1.68%). The weighted average net interest margin in the euro area stood at 1.2% in 2017. Here it should be noted that the net interest margin in the euro area reflects all banks, not only those with a universal banking model. A better comparison with the Slovenian banking system comes from the net interest margin at small banks (1.80%) and medium-size banks (1.41%) in the euro area, although the figures are still lower. There is a slightly smaller gap between the non-interest margin in Slovenia and in other countries in 2017 (the median stood at 0.90%).

Figure 4.3: Net interest margin in Slovenia and in the EU28, 2017

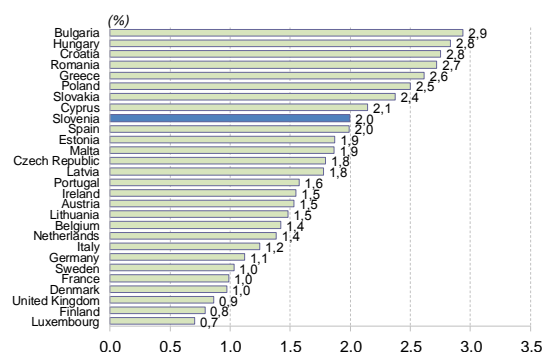
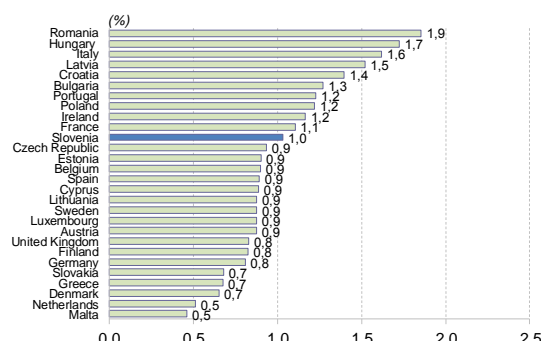


Figure 4.4: Net non-interest margin in Slovenia and the EU28, 2017



Note: The net interest margin in Slovenia according to the ECB's consolidated banking data differs slightly from the margin based on the individual data disclosed and commented on in other figures.

<sup>41</sup> Net fees and commission accounted for between 65% and 82% of total non-interest income between 2015 and 2018.

<sup>42</sup> The ECB data (SDW) for 2018 was not available at the time of writing.

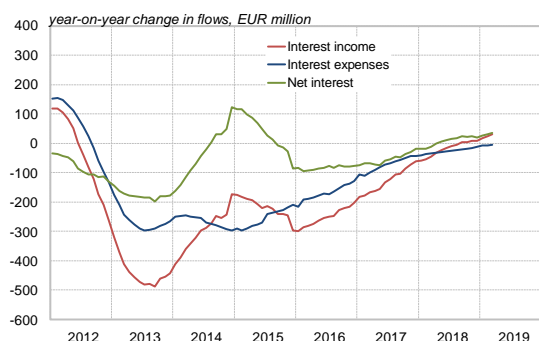
Source: ECB (SDW [consolidated banking data])

### Net interest income

After declining for several years, net interest income began to increase in 2018, but remains low. The previous years saw declines in both interest income and interest expenses, the former as a result of the fall in interest rates, the decline in loans and the maturing of higher-yielding securities in the past, the latter as a result of the increase in sight deposits, the fall in interest rates, and the shift in bank funding to deposits, which are the cheapest source of funding. Net interest income continued to grow in the first quarter of 2019.

**Quantity effects were already prevailing over price effects in 2018, and produced positive growth in net interest income.** The factors affecting the change in net interest income can be divided into price effects (e.g. changes in effective interest rates) and quantity effects (e.g. an increase in loans or other forms of interest-bearing assets).<sup>43</sup> Price effects prevailed over quantity effects for a long period (between 2009 and 2017), but in 2018 the situation reversed.

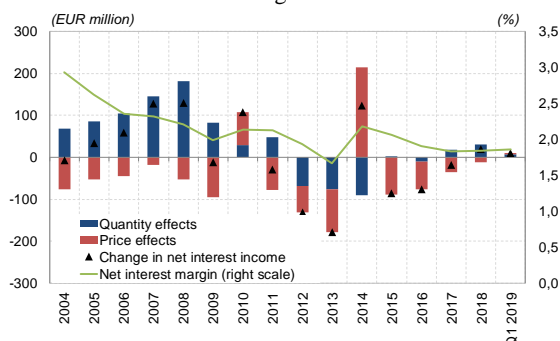
Figure 4.5: Changes in interest income, interest expenses and net interest



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

Figure 4.6: Contribution made by quantity effects and price effects to the change in net interest income, and net interest margin



**The increase in net interest income is increasingly attributable to effects on the income side, while effects on the expense side are having a diminishing impact on net interest income.** The largest factor on the income/asset side in the increase in net interest in 2018 was positive quantity effects from loans. The price effects were still negative in 2018, largely as a result of price effects from falling returns on securities, and also from loans. On the expense/liability side, the quantity effects were small, while the price effects (lower effective interest rates caused by the increase in the proportion of sight deposits and the further fall in liability interest rates) were still contributing to the increase in net interest income.

**In the first quarter of 2019 the increase in net interest income was also attributable to price effects, alongside quantity effects.** The banks' strengthening lending activity is increasingly driving growth in net interest income. Low interest expenses at the same time are driving the increase in net interest income. There are several factors: low funding costs thanks to historically low interest rates and an increase in the cheapest form of funding, namely deposits, and an increase in loans, which are the highest-yielding form of investment for banks, in particular including loans with high interest rates such as consumer loans.

<sup>43</sup> The decomposition of net interest income allows for the measurement of the relative importance of changes in individual components of the banks' interest income and expenses to the overall change in net interest, i.e. via quantity effects and price effects. While the changes in net interest income can be illustrated in nominal terms, they can similarly be illustrated in relative terms (net interest margin). For more, see previous issues of the Financial Stability Review.



Figure 4.7: Changes in the banks' net interest income, decomposed into asset-side and liability-side quantity effects and price effects

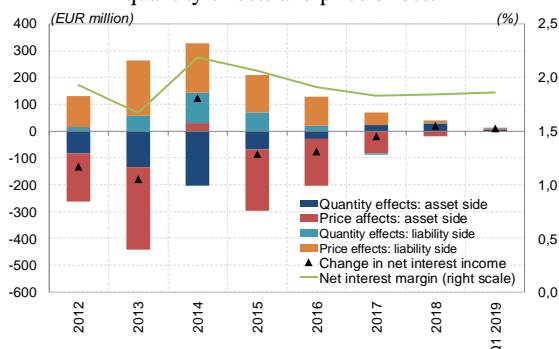
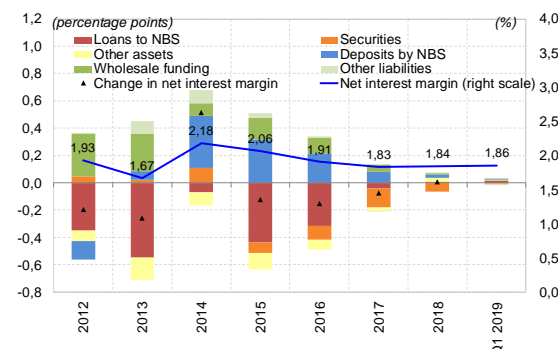


Figure 4.8: Contributions via interest-bearing assets and liabilities to change in net interest margin

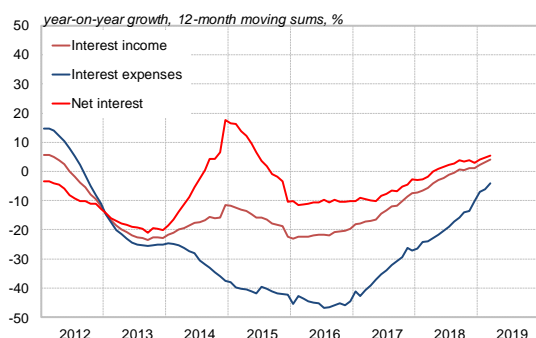


Note: The left figure illustrates the effects from the previous figure in detail. The right figure takes account of the 12-month moving total of interest income/expenses, while the net interest margin is calculated for the same period.

Source: Bank of Slovenia

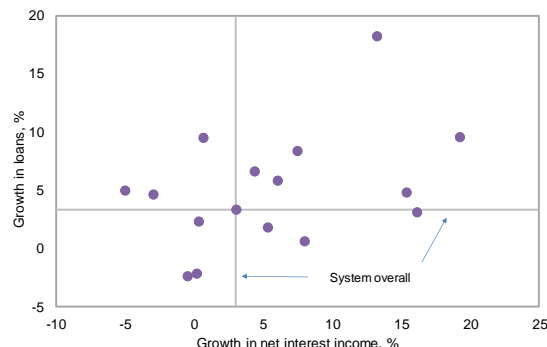
**Interest income from loans to the non-banking sector is having a growing impact on the banks' income.** The positive growth in net interest income in 2018 was attributable more to the decline in interest expenses than to the increase in interest income. Net interest income in 2018 was up EUR 19.8 million on the previous year, of which EUR 8.2 million was the result of the increase in interest income, and EUR 11.6 million was the result of the decline in interest expenses. By the first quarter of 2019 the contribution by the decline in interest expenses was very small, and the increase in net interest income was increasingly attributable to the asset side of the balance sheet: lending activity was the key to the increase, and thus to the increase in the net interest margin. Should the banks have to replace maturing high-yielding investments from the past with lower-yielding securities or other liquid assets with lower returns, e.g. claims on demand against banks or excess reserves at the central bank, they could quickly face a renewed decline in net interest income. Year-on-year growth in interest income is increasing, and reached 5.8% in the first quarter of 2019, while growth in interest income from loans to the non-banking sector stood at 7.5%.<sup>44</sup> The maintenance of lending activity and low funding costs<sup>45</sup> will continue to have a favourable impact on the banks' income position.

Figure 4.9: Growth in interest income, interest expenses and net interest



Source: Bank of Slovenia

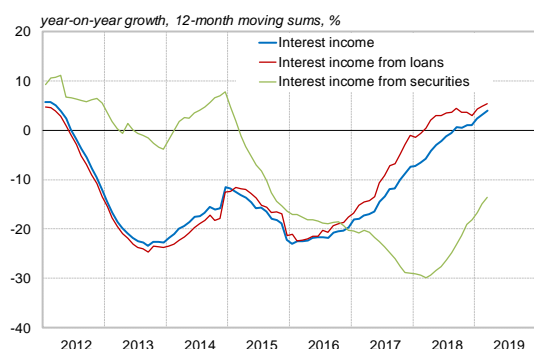
Figure 4.10: Growth in loans to the non-banking sector versus growth in net interest income at individual banks, 2018



<sup>44</sup> The latest increase in interest income (12-month moving total) had risen to 4% by the end of March 2019, while the increase in interest income from loans had risen to 5.4%.

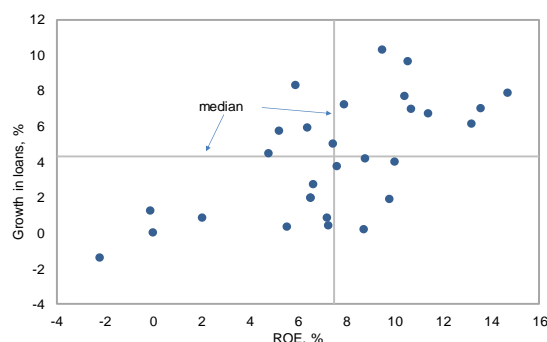
<sup>45</sup> The year-on-year decline in the 12-month moving total of interest expenses had slowed to 4% by March, as interest expenses increased by 3.5% in the first quarter of 2019. Interest income is now more than 7.5 times of interest expenses, which are at historically low levels; they amounted merely to just over EUR 100 million in the 12 months to March 2019, on the banks' interest-bearing liabilities of EUR 33 billion.

Figure 4.11: Growth in interest income by type



Sources: Bank of Slovenia, ECB

Figure 4.12: Growth in loans versus ROE in euro area countries, Q2 2018

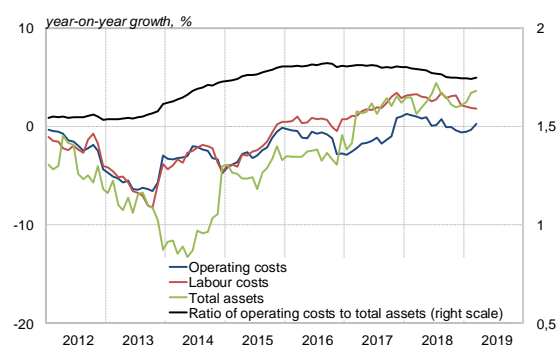


### Operating costs, net income, and impairment and provisioning costs

Operating costs in 2018 were similar to the previous year. The banks' cost effectiveness indicators improved as gross income increased and the balance sheet expanded. Growth in labour costs was positive in the amount of 2.2%, which led to a slight increase of 1.6 percentage points in the proportion of operating costs accounted for by labour costs to 58.3%. The CIR declined to 58% in 2018, as a result of an increase in gross income.

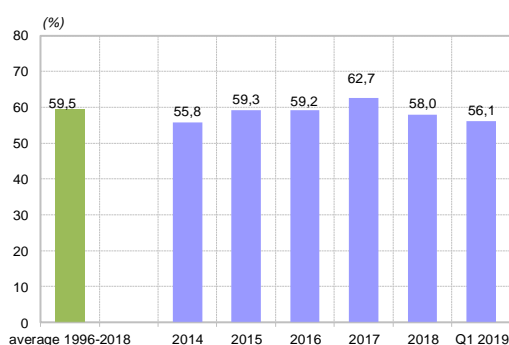
The banks' net income also increased by 21%, in the wake of positive growth in gross income and a decline in operating costs. This was attributable to growth in net interest and net non-interest income, and to a decline of 0.6% in operating costs. The banks' net income declined in the first quarter of 2019, as a result of a decline in non-interest income caused by a strong base effect, and growth in operating costs. In the post-crisis period the banks have been too slow in reducing their operating costs relative to the sharp contraction in the balance sheet and the stock of loans to non-financial corporations over the same period.

Figure 4.13: Operating costs, labour costs and total assets in the banking system



Source: Bank of Slovenia

Figure 4.14: CIR in the banking system

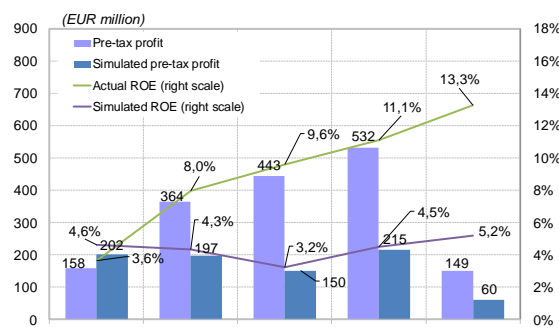


For the second consecutive year the banking system recorded a net release of impairments and provisions, which generated almost 10% of its pre-tax profit in 2018. The net release of impairments and provisions amounted to EUR 47 million in 2018. Had the ratio of impairment and provisioning costs to gross income been at its long-term average,<sup>46</sup> the banks would have been significantly less profitable in recent years, and would have recorded lower ROE. This is a temporary phenomenon, an exception in the long-term view, and will gradually disappear. The banks had expected to see the trend come to an end in 2018, but the net release of impairments and provisions continued into the first quarter of 2019.

Low impairment and provisioning costs and the net release of impairments and provisions also had a favourable impact on bank profitability in most other European countries. ROE in the Slovenian banking system, which stood at 9.1% in 2017 according to the ECB's consolidated banking data, exceeded the euro area average of 5.6% in 2017, and also the EU28 average of 8.2%.

<sup>46</sup> As stated in the December 2018 Financial Stability Review, banks in Slovenia disposed of 23% of their gross income on impairment and provisioning costs on average between 1996 and 2016. 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.

Figure 4.15: Comparison of observed and simulated bank profitability



Note: In the left figure the calculation of simulated profit and ROE takes account of the long-term average of impairment and provisioning costs to gross income between 1996 and 2016, excluding outlying above-average years and years in which the banks recorded a net release of impairments and provisions.

Source: Bank of Slovenia

Figure 4.16: Pre-tax profit and impact of changes in components of generation and disposal of gross income in 2018, in EUR million

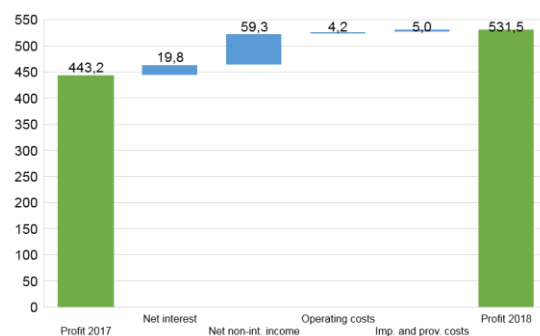
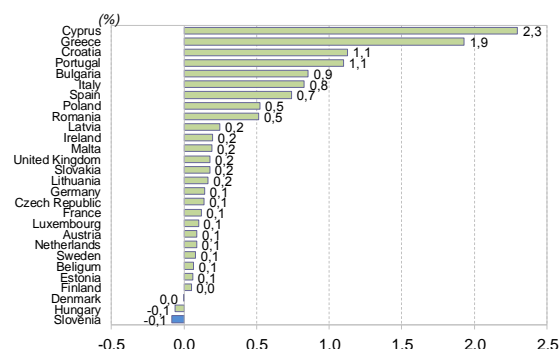


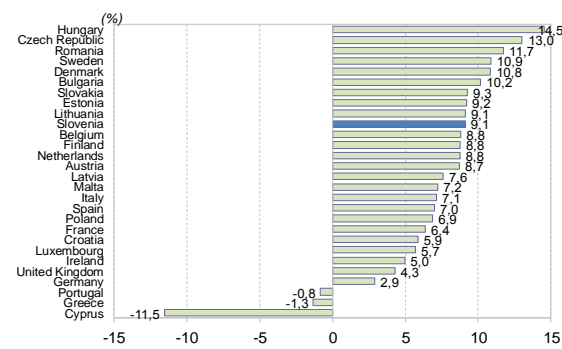
Figure 4.17: Ratio of impairment and provisioning costs to total assets in the EU28, 2017



Note: Negative values in the left figure represent the net release of impairments and provisions.

Source: ECB (SDW [consolidated banking data])

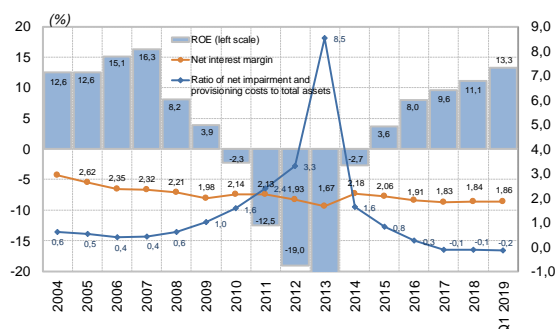
Figure 4.18: ROE in the EU28, 2017



### Profitability of the banking system

**The profitability of the banking system increased to 11.1% in 2018.** Pre-tax profit at the level of the banking system amounted to EUR 531 million in 2018, up 20% on the previous year. The decomposition of ROE into four components, namely profit margin, risk-weighted income, leverage and risk level, is presented below. Bank profitability has been positive since 2015, but the largest factor in the increase in profitability in 2018 was a rise in the profit margin, i.e. the ratio of profit to gross income, which was positive for the fourth consecutive year. Risk-weighted income, the ratio of the banks' gross income to risk-weighted assets, increased only slightly in 2018, as gross income and risk-weighted assets both increased. Risk level, the ratio of risk-weighted assets to total assets, has increased slightly in recent years, as growth in loans has outpaced growth in total assets. Should growth in loans be maintained in the future, risk-weighted income could be expected to have a positive impact on profitability, as a result of an increase in gross income and in risk level. Growth in loans to the non-banking sector, and thus in risk-weighted assets, is also acting to raise bank profitability. Leverage declined slightly in 2018, as equity accounted for a slightly higher share of bank balance sheets on average than in the previous year, despite declining in the final quarter.

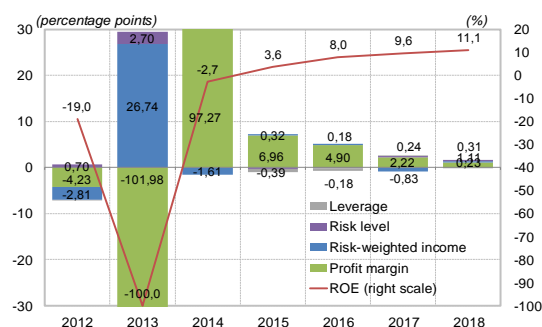
Figure 4.19: ROE, net interest margin, and ratio of impairment and provisioning costs to total



Note: In the left figure the March 2019 figures for net interest margin on interest-bearing assets and the ratio of impairment and provisioning costs to total assets are calculated over the preceding 12 months. The March 2019 figure for ROE is calculated for the first three months of the year.

Source: Bank of Slovenia

Figure 4.20: Impact of four factors on changes in ROE; decomposition of ROE



## 4.2 Banking system's credit portfolio

### Summary

There was a further improvement in the quality of the banking system's credit portfolio in 2018 as measured by the NPE ratio, which was slightly more evident at SMEs, whose NPE ratios are still high. The proportion of NPEs accounted for by forborne exposures that are not more than 90 days in arrears and remain in observation status is increasing. The banks are planning to continue reducing NPEs, but are anticipating that NPEs will increase in the household portfolio. The awareness of the rising risks in the segment of fast-growing lending to households, most notably consumer loans, is also being reflected in the increased creation of credit risk allowances in this part of the portfolio. With economic growth expected to continue and household indebtedness expected to remain low, overall credit risk is assessed as low, despite the rise in lending at banks. The future evolution of credit risk is largely dependent on the maintenance of credit standards in the area of household lending, and also in other parts of the portfolio.

### Credit portfolio quality

The trend of declining credit risk continued at the banks in 2018 and in early 2019. NPEs<sup>47</sup> had declined to EUR 1.6 billion by March 2019, or 3.6% of the banks' total exposure. Non-performing loans (NPLs), the largest component of NPEs, amounted to EUR 1.4 billion, or 5.0% of the banking system's total loans. The banks have made major progress in recent years in reducing NPEs in all parts of the portfolio, including the corporate segment, where NPEs amounted to just over EUR 1 billion in March 2019, and the NPE ratio stood at 7.5%. There was a sharp decline in the proportion of classified claims more than 90 days in arrears, a narrower indicator of portfolio quality, to just 2.0% in the total portfolio and 2.9% in the corporate segment.

<sup>47</sup> In addition to exposures in arrears of more than 90 days, the EBA definition of NPEs includes those satisfying the criterion of "unlikely to pay". NPEs thus include forborne exposures, i.e. exposures for which the banks have modified the terms and conditions of repayment owing to the customer's financial difficulties. The stock of NPEs is thus significantly increased by forborne exposures that are not more than 90 days in arrears. Although forbearance is one of the approaches taken by banks to reducing or resolving the problem of non-performing claims, under the EBA definition they remain non-performing for a certain period after the debtors have begun repaying the debt. A more detailed explanation is given in Box 2.1 of the January 2016 Financial Stability Review. Unless explicitly stated otherwise, NPEs are disclosed on an individual basis in the FSR, and not on a consolidated basis.

Figure 4.21: NPEs, NPLs and claims more than 90 days in arrears, stocks and ratios

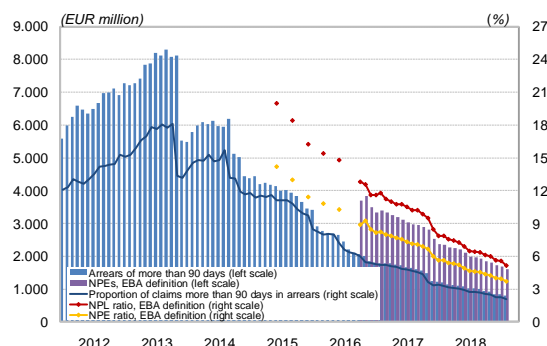
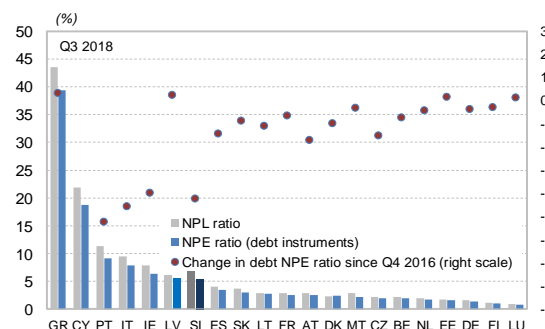


Figure 4.22: NPE and NPL ratios in euro area countries



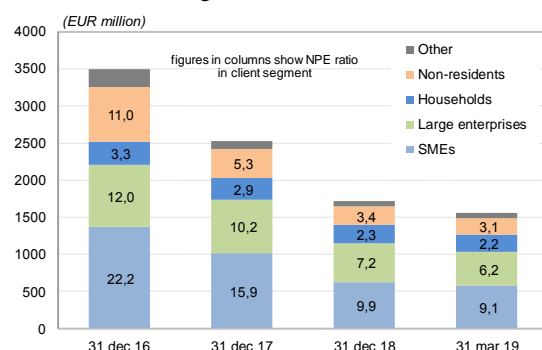
Note: The right figure illustrates consolidated data. NPE ratios are available solely for the debt instruments portfolio, and not for total exposure.

Sources: Bank of Slovenia, ECB (consolidated banking data)

### Corporate portfolio

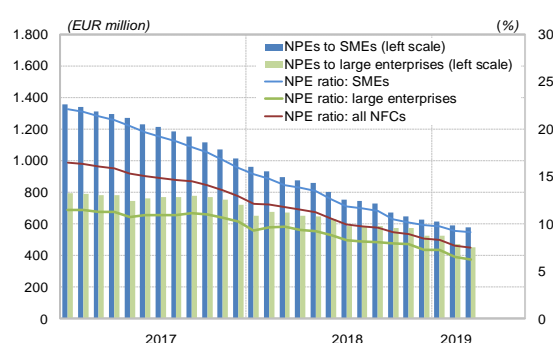
The SMEs segment continues to see the most intensive reduction in NPEs<sup>48</sup>. There has been particularly notable progress in reducing NPEs in the SMEs segment in the last two years, and the Bank of Slovenia's supervisory activities have also played a part in this.<sup>49</sup> Almost half of the overall reduction in NPEs in 2018 was in the SMEs segment. Despite the improvement, NPEs to SMEs still amounted to EUR 578 million in March 2019, equivalent to 37% of total NPEs in the banking system, and a still-high NPE ratio of 9.1%.

Figure 4.23: Non-performing exposures by principal client segment



Source: Bank of Slovenia

Figure 4.24: Non-performing exposures by corporate size

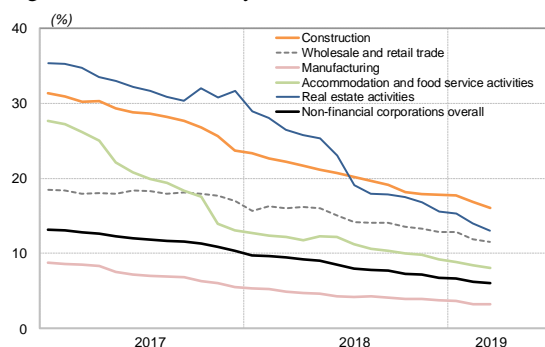


NPEs are more evenly distributed across economic sectors in the SMEs segment than in the large enterprises segment. The sectors of wholesale and retail trade and construction, where portfolio quality is improving more slowly than in other sectors, accounted for 79% of total NPEs to large enterprises in March 2019. In the SMEs segment, portfolio quality is weakest in the sectors of real estate activities (an NPE ratio of 20.4%), information and communication (15.7%), and construction (13.6%), while the other sectors have NPE ratios of less than 10%. Given that the risk remains higher in lending to SMEs, which account for more than 90% of new loans by the banks (in terms of the number of loan agreements), it is vital to maintain credit standards when increasing exposure to this client segment.

<sup>48</sup> The finding applies not only to the absolute changes in NPEs, which were larger in the SMEs segment than in any other client segment, but also to the relative changes. The only segment where the year-on-year reduction in NPEs and the NPE ratio in March 2019 was faster than in the SMEs segment was OFIs, where the stock and the ratio are very low (NPEs of EUR 13 million, an NPE ratio of 1.0%).

<sup>49</sup> In recent years the Bank of Slovenia has introduced supervisory measures and requirements targeting bank behaviour and their reporting in connection with NPEs, including the Guidelines for the restructuring of micro, small and medium-size enterprises (issued by the BAS in conjunction with the Bank of Slovenia on 9 December 2015), and the Handbook for Effective Management and Workout of MSME NPLs (13 March 2017). See also Box 1.4.

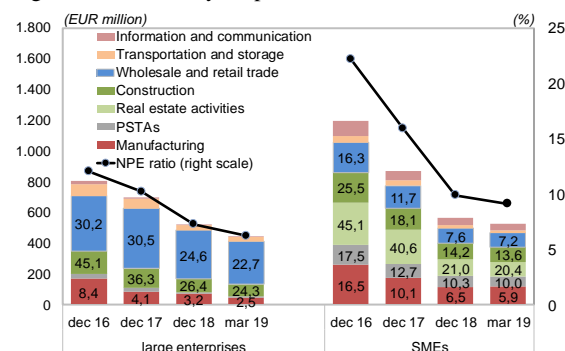
Figure 4.25: NPE ratio by economic sector



Note: The figures in the right figure are the NPE ratios in the individual sectors, while the height of the columns gives the stock of NPEs.

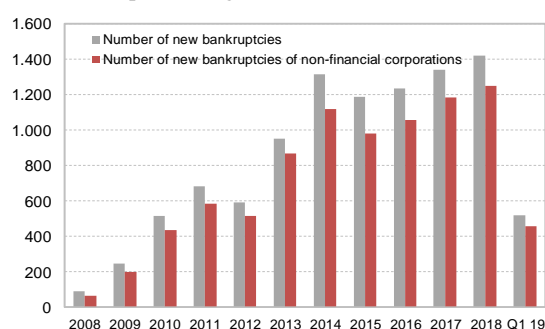
Source: Bank of Slovenia

Figure 4.26: NPEs by corporate size and economic sector



**Firms in bankruptcy proceedings account for a quarter of total NPEs to corporates, although the stock of NPEs is declining.** Exposures to firms in bankruptcy proceedings amounted to EUR 260 million in March 2019, but this is just a fifth of the figure from the end of 2013. Although the number of corporate bankruptcies rose sharply in previous years, and last year stood at its highest level for a decade, there was no significant increase in the banks' exposure to firms in bankruptcy proceedings. The banks' average exposure to newly initiated bankruptcy proceedings was significantly lower in 2018 than in 2012, when it hit its peak of the last decade.

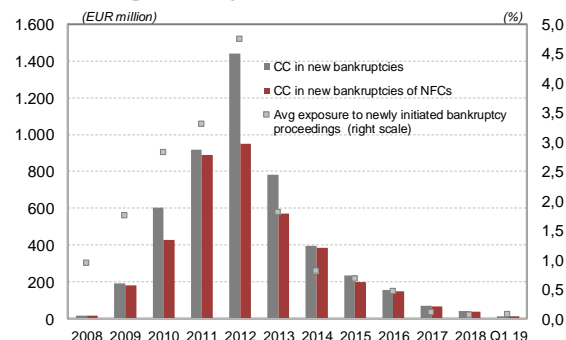
Figure 4.27: Number of new corporate bankruptcy proceedings



Note: In the right figure CC stands for banks' classified claims.

Sources: Bank of Slovenia, Supreme Court

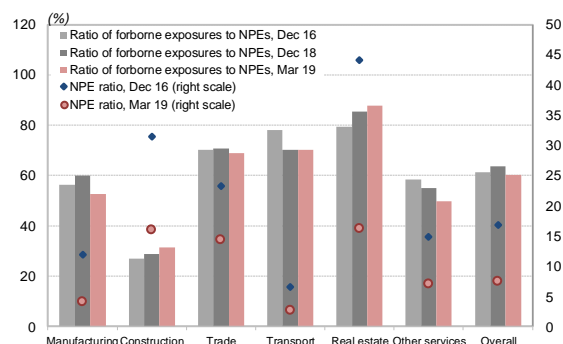
Figure 4.28: Exposure to corporates in new bankruptcy proceedings



**The stock of forbore exposures is declining, but they still account for a significant proportion of NPEs to corporates.** The proportion of forbore exposures is higher in the sectors of real estate activities and wholesale and retail trade, which had higher NPE ratios in the past, although this is not a rule. There is no such correlation in the construction sector, largely on account of the very high proportion of firms in the sector undergoing bankruptcy proceedings, which generally are not subject to forbearance. At the level of the corporate sector as a whole, forbore NPEs have declined by more than a half since the end of 2016 to EUR 604 million, which accounts for a stable 60% of total NPEs. The proportion of forbore exposures that have again fallen more than 90 days in arrears is declining. This important indicator of forbearance performance and effectiveness ranged from 27% to 30% at the beginning of 2017, but had declined to 21% by March 2019. This is increasing the proportion of forbore exposures that remain non-performing in observation status before reclassification as performing exposures.

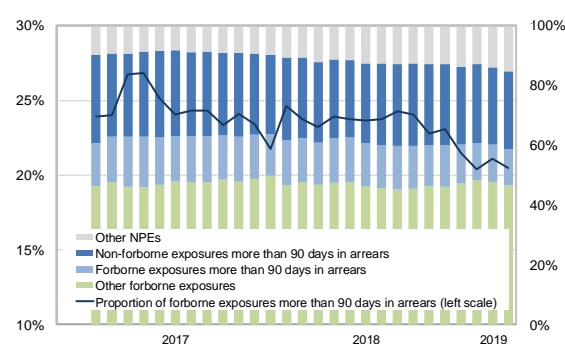


Figure 4.29: Ratio of forbome exposures to NPEs by economic sector



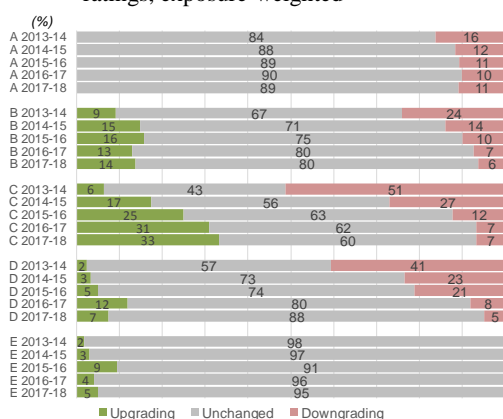
Source: Bank of Slovenia

Figure 4.30: Breakdown of NPEs in corporate sector



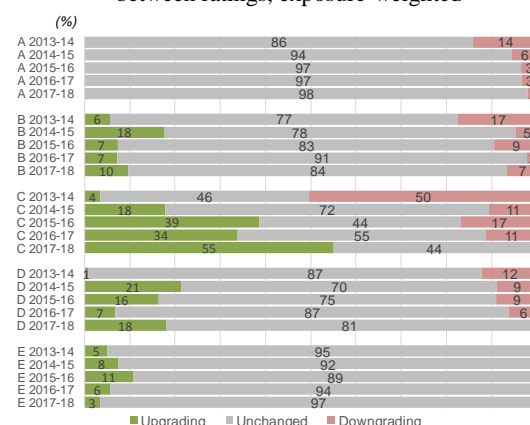
The transition matrices confirm that portfolio quality is improving in both the SMEs and large enterprises segments. In the SMEs segment there has been a discernible increase in upgradings, and a decline in downgradings. The smaller number of firms in the large enterprises segment means that there is greater variation in transitions from year to year, but the trend is evidently favourable. There was a sharp decline in downgradings in the large enterprises segment in 2018, and an increase in upgradings. The same trends are also seen if the transitions are measured in terms of the number of firms, and not in terms of exposure as here. The net change (the difference between the proportion of upgradings and the proportion of downgradings) is also increasing, and has been positive since 2014 in terms of the number of transitions.

Figure 4.31: Breakdown of SMEs' transitions between ratings, exposure-weighted



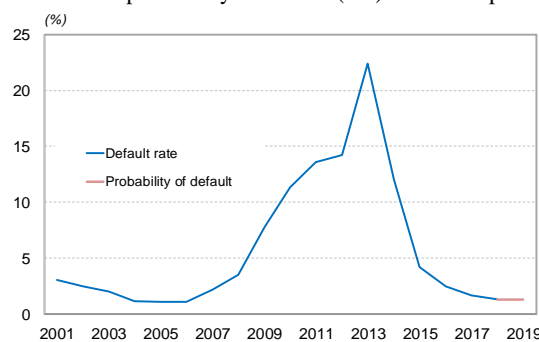
Source: Bank of Slovenia

Figure 4.32: Breakdown of large enterprises' transitions between ratings, exposure-weighted



The default rate in the corporate sector has declined in recent years, and probability of default remains low going forward. The default rate stood at 1.3% in 2018, having approached its level in the pre-crisis years of 2004 to 2006, while the estimated probability of default for the corporate sector remains at that level in 2019.

Figure 4.33: Exposure-weighted one-year default rate (DR) and probability of default (PD) for the corporate sector



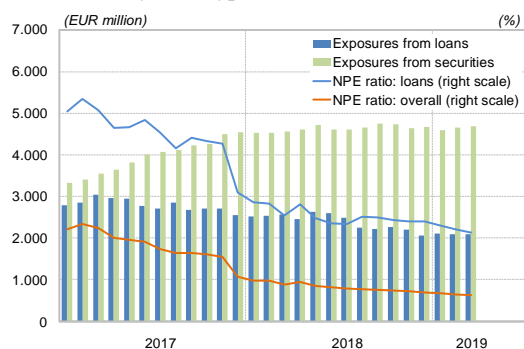
Source: Bank of Slovenia

### *Portfolio quality for non-residents and households*

**The NPE ratios remain low in the non-residents and household portfolios.** The non-residents portfolio accounted for 16.7% of the banks' total exposure at the beginning of 2019, and the household portfolio for just over 25.1%. NPEs in the two segments are similar in size (EUR 224 million in the non-residents portfolio, and EUR 236 million in the household portfolio), and there is a trend of gentle decline in the stock and ratio of NPEs in both.

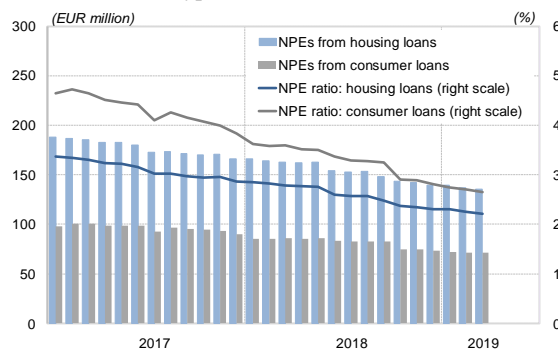
**After a significant decline at the end of 2017, the NPE ratio in the non-residents segment is lower than the overall NPE ratio.<sup>50</sup>** There has been an increase in investments in securities, which by March 2019 accounted for two-thirds of exposures to non-residents, compared with just under a half at the end of 2016. No investments in securities were classed as non-performing assets as at March 2019. All the non-performing exposures in the non-residents segment consist of loans to non-residents, and there has been a significant decline in NPEs and NPLs, from 23% at the end of 2016 to 10.7% in March 2019. The overall NPE ratio in the non-residents segment stood at just 3.1% in March 2019, as a result of the decline in NPEs and the prevalence of investments in securities.

Figure 4.34: NPE ratio for non-residents and breakdown by asset type



Source: Bank of Slovenia

Figure 4.35: NPE ratio for households and breakdown by loan type



**While exposures to households have been growing fast, the quality of these assets remains relatively high.** The NPE ratio in the household segment had declined to 2.2% by March 2019, and was slightly higher for consumer loans (2.7%) than for housing loans (2.2%).<sup>51</sup> Given that economic growth is forecast to remain good, albeit slightly lower, in the coming years, and household indebtedness is expected to remain low despite growth in lending at banks, there is no expectation of a significant deterioration in the quality of the household portfolio in the medium term. The macroprudential recommendation for household lending<sup>52</sup> is expected to help prevent any relaxation in the banks' credit standards.

### *Banks' approaches to reducing NPEs*

**The banks' approaches to reducing NPEs in 2018 differed according to the type of exposure and the client segment.** The relatively large reduction in NPEs in the last three years via the repayment of claims is likely to be largely a consequence of the strong economic growth. Approximately a third of the reduction in NPEs in the overall portfolio was achieved via the repayment of claims in 2018. Write-offs accounted for just under a quarter of the reduction, while the sale of claims accounted for another quarter. A breakdown by segment is available for the second half of 2018, and this data shows that the sale of claims accounted for 30% of the reduction in NPEs in the household segment and 47% in the large enterprises segment. The corresponding figure for the SMEs segment was significantly lower, at 16%.

<sup>50</sup> NPEs to non-residents are concentrated at three banks, which together account for 80% of the total.

<sup>51</sup> Exposures to households also include credit cards and payment cards, credit facilities, and other exposures, for which the NPE ratio is lower, at 1.4%.

<sup>52</sup> For more on this, see the December 2018 Financial Stability Review.

Figure 4.36: Approaches to reducing NPEs in the overall portfolio in 2018

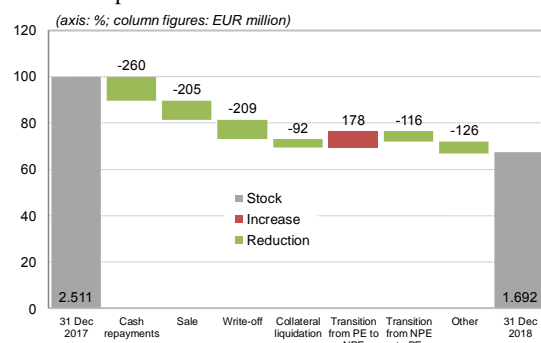
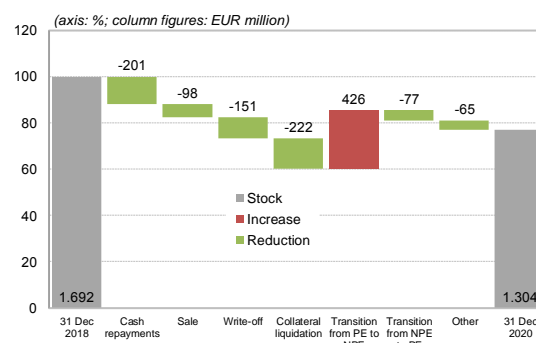


Figure 4.37: Projected changes in NPEs and approaches to reduction in 2019 and 2020



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

Figure 4.38: Projected changes in NPEs and approaches to reduction in the SMEs segment in 2019 and 2020

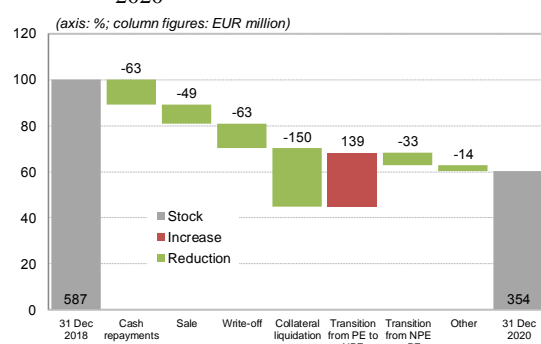
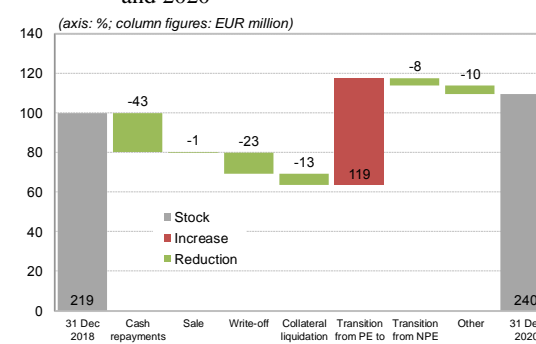


Figure 4.39: Projected changes in NPEs and approaches to reduction in the household segment in 2019 and 2020



Notes: (1) Banks report their projected approaches to reducing NPEs for the next two years. (2) PEs: performing exposures. (3) The reduction in NPEs is illustrated in the figures as a percentage of the stock of NPEs at the beginning of the period. The contributions made by individual approaches in the text are described in terms of the reduction achieved between the beginning and end of the period (excluding the contribution made by the net inflow of new NPEs).

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

**The banks expect to continue reducing total NPEs over the period to the end of 2020, although the stock of NPEs is expected to increase in the household portfolio.** Household lending via consumer loans has been growing fast over the last two years, at year-on-year rates of more than 10%, which the banks expect to be reflected in inflows of new NPEs. The expected inflow of NPEs is relatively high compared with the current stock of NPEs to households, but still low compared with the banks' total exposure to this segment. The banks expect debt repayment to be the primary approach to reducing NPEs to households in the period to the end of 2020, in contrast to the other portfolio segments, where different approaches will account for more of the reduction.

**The banks' expectations of future inflows of NPEs in the corporate portfolio are relatively low, at around 1% of the exposure to the sector at the end of 2018.** According to the banks' forecasts, the reduction in NPEs in the corporate sector over the next two years will largely be achieved via the liquidation of collateral; this is particularly the case in the SMEs segment. In the large enterprises segment the reduction is expected to be achieved to a greater extent via debt repayments.

#### Box 4.1: The way forward after years of successful reduction of NPEs

The banks and savings banks continued to reduce NPEs in 2018. NPEs at system level were reduced from EUR 8.9 billion at the end of 2013 to EUR 1.7 billion at the end of 2018. The reduction in 2018 amounted to EUR 815.2 million, slightly less than the reduction of EUR 909.3 million in 2017. The main factors in the reduction in NPEs over the entire period between 2013 and 2018 (as they were in 2018 alone) were repayments, write-offs and the sale of claims. NPE portfolios are being actively reduced by the largest Slovenian banks, and also by the smaller banks and savings banks.

On the basis of three-year plans,<sup>53</sup> the majority of banks are still planning further reductions in NPEs, although the reduction at system level is slowing compared with previous years. Some institutions are forecasting NPE/NPL levels in 2021 that are actually slightly higher than those at the end of 2018. The majority of institutions have reached their minimum NPE levels in the last two years, where their portfolios still contain legacy NPEs with an extremely low probability of repayment. Here it should be emphasised that the plans for the majority of banks forecast an NPL ratio of less than 5% in 2021, which is the threshold set by the EBA guidelines on management of non-performing and forborne exposures. The guidelines were published on 31 October 2018, and will begin to be applied on 30 June 2019. All banks will be required to apply Sections 6 to 9 of the guidelines, which primarily relate to activities in connection with the monitoring and valuation of banks' loan portfolios. Banks whose gross NPL ratio in the overall portfolio is 5% or more will also be required to follow Sections 4 and 5, which require banks to develop a strategy for the management of non-performing exposures and to design an appropriate internal operating model for conducting processes in the management of NPEs and forborne exposures.

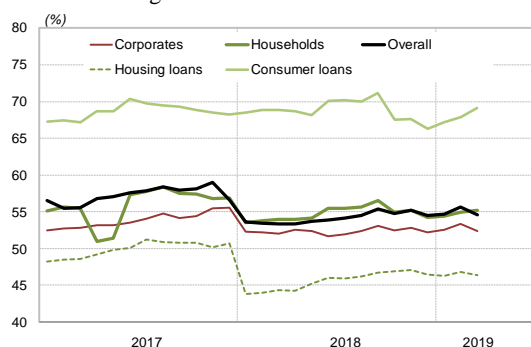
In addition to the EBA guidelines, the ECB guidelines continue to apply with the appropriate revisions and updates; they are designed for use in meeting the supervisory expectations for systemically important institutions in the Single Supervisory Mechanism. Since 26 April 2019 the management of NPEs has also been subject to Regulation (EU) No 2019/630,<sup>54</sup> which aims to prevent the build-up of NPEs in the future. The regulation introduces a prudential backstop and requires a deduction from own funds when NPEs are not sufficiently covered by provisions or other adjustments. The prudential backstop applies solely to new exposures originated on the basis of transactions concluded after the entry into force of the regulation, i.e. after 25 April 2019.

#### *Coverage of non-performing claims by impairments and provisions, and by collateral*

**Coverage of the overall portfolio, performing and non-performing exposures alike, by impairments<sup>55</sup> is declining.** It stood at 2.5% in March, and the declining trend is attributable to a relative rise in performing exposures (as the NPE ratio declines), and to an improvement in the structure of performing assets. Coverage of performing assets by impairments is declining, on account of the improvement in quality in individual segments of the portfolio, corporates in particular, and also shifts in structure towards lower-risk exposures.

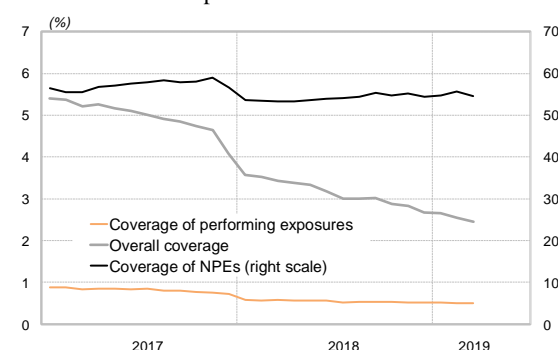
**Coverage of NPEs by impairments is continuing to gently improve.** After declining at the beginning of 2018 as a result of the changeover to IFRS 9<sup>56</sup>, coverage had increased to 54.1% by March 2019. Coverage of NPEs by impairments is increasing even as the stock of impairments in the banking system declines. Impairments for the non-performing segment of the portfolio amounted to EUR 841 million in March 2019, down just over EUR 1 billion on the end of 2016.

Figure 4.40: Coverage of NPEs by impairments by client segment



Source: Bank of Slovenia

Figure 4.41: Coverage of performing, non-performing and total exposures



<sup>53</sup> Banks and savings banks report their plans for reducing NPEs for the next three years, i.e. to the end of 2021, while they report about the planned approaches to reducing NPEs illustrated in the three figures in the same section for the next two years, i.e. to the end of 2020.

<sup>54</sup> Regulation (EU) 2019/630 of the European Parliament and of the Council amending Regulation (EU) No 575/2013 as regards minimum loss coverage for non-performing exposures (OJ L 111 of 25 April 2019).

<sup>55</sup> 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.

<sup>56</sup> Coverage by impairments at the level of the portfolio as a whole declined by 3.4 percentage points solely as a result of the introduction of IFRS 9, as explained in Box 4.1 of the June 2018 Financial Stability Review.

**The main factor in the decline in impairments for NPEs is the reduction in NPEs.** This is particularly the case for claims written-off<sup>57</sup> or sold, where the claims removed from bank balance sheets were impaired to a level well above average, or even fully impaired. The majority of the decline in impairments in 2018 was in the corporate portfolio, while around 8% was in the household portfolio. The decline in impairments for credit losses was more than EUR 0.5 billion, as a result of write-offs of NPEs, repayments and sales to third parties. In both portfolios impairments for credit losses were increased by just over 10% by acquisitions (recognition) of new claims. One major difference between the two portfolios is in the net change in impairments as a result of changes in credit risk. 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 EUR 10 million, while increasing their impairments in the household portfolio by EUR 44 million. The banks' change in focus from corporate lending to household lending is also being reflected in an awareness of the increased credit risk inherent in business models built on the rapid acquisition of large numbers of new customers.

Figure 4.42: Change in impairments for credit losses in the corporate portfolio, 2018

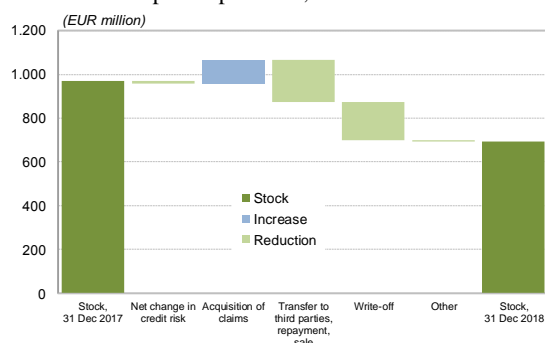
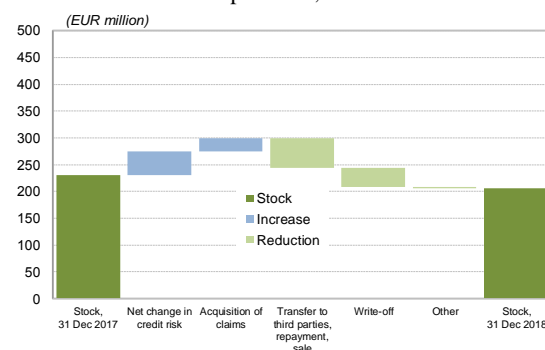


Figure 4.43: Change in impairments for credit losses in the household portfolio, 2018



Source: Bank of Slovenia

#### Coverage of non-performing exposures by impairments and collateral stood at 86% in March 2019.<sup>58</sup>

Compared with the end of 2016, there was no significant change in overall coverage of NPEs by impairments and collateral, despite the decline in coverage by impairments during the changeover to IFRS 9. Coverage by impairments and collateral at the end of 2018 was down slightly more in the corporate portfolio, having declined by 5 percentage points as a result of the simultaneous reduction in NPEs, impairments and collateral. In the household portfolio it is only possible to determine coverage of NPEs by impairments alone:<sup>59</sup> it stood at 46.3% in the housing loans segment, and 69.1% in the consumer loans segment. The difference arises because of the significantly greater use of collateral for housing loans: the value of the pledged collateral had reached 189% of the banks' exposures from housing loans by March 2019. There is a rising trend in this figure, which could be attributable to collateral revaluations on account of rising prices on the real estate market. The ratio between the value of collateral received and the exposure for consumer loans is just 70%, and has declined by 13 percentage points over the last two years. Because of changes to business models and a desire to speed up procedures for granting loans, the banks' collateral costs for consumer loans were passed through into interest rates, thereby reducing the value of the collateral received for this portfolio segment.

<sup>57</sup> In the wake of the write-off of NPEs to non-residents in November 2017, which were almost fully impaired when written off, there was a significant decline in the coverage of the remaining NPEs at the level of the portfolio as a whole.

<sup>58</sup> Exposures to households are not taken into account. See the following footnote.

<sup>59</sup> Because of the reporting methods (aggregated for retail clients), it is impossible to calculate coverage by collateral and impairments without the overspill of collateral between individual loans.

Figure 4.44: Coverage of NPEs by impairments, provisions and collateral<sup>60</sup> by client segment

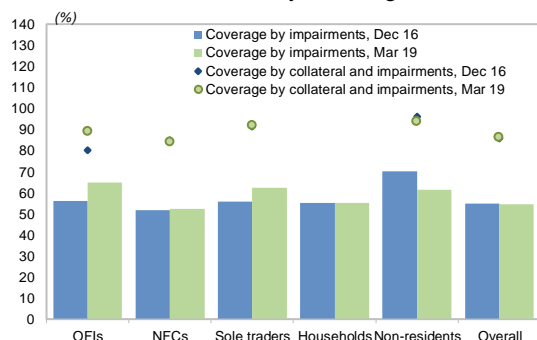
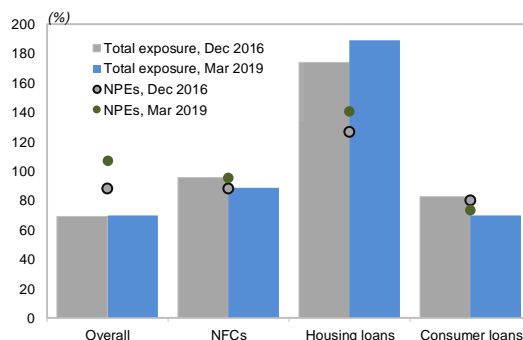


Figure 4.45: LTV



Note: In the left figure, in the calculation of coverage the collateral value is taken into account solely up to the amount of the unimpaired portion of the claim, or the total collateral value if the aforementioned amount is not reached. The right figure illustrates the total value of all collateral.

Sources: ECB (consolidated banking data), Bank of Slovenia

#### Box 4.2: Vintage credit portfolio analysis

Vintage credit portfolio analysis is a tool for credit risk analysis that illustrates the quality of individual parts of the credit portfolio with regard to time, i.e. the period when the transaction was concluded. It determines the proportion of new transactions that transition from performing to non-performing in a future period. A comparison of the curves of NPE ratios for individual portfolios over time reveals the periods in which transactions were concluded under laxer credit standards, or when portfolio quality has deteriorated by more than the average for other reasons. Increased transitioning to default status in specific periods can also be the result of changes in the economic cycle. These can hit any portfolio segment irrespective of the time that they arise, although to a greater or lesser extent there is also a correlation with the credit standards in force at the time.

The analysis for the Slovenian banking system reveals that the proportion of new transactions concluded in the last two and a half years that had transitioned to default status by the beginning of 2019 was relatively small. Certain quarterly portfolios are notable for a higher proportion of new NPEs, but they are again followed by periods when new transactions are of better quality, and it is not possible to draw any conclusion about the systematic relaxation of credit standards over a lengthy period.

The analysis is undertaken on data from the final quarter of 2016, when a change in the way in which credit agreements are reported yielded the detailed data necessary for such analysis. Only long-term transactions are included (with an original maturity of more than 1 year), as transactions of short maturities merely inflate the initial value of the portfolio and disappear long before the majority of the remainder of the portfolio is repaid or closed.

The analysis thus includes transactions concluded over the last two and a half years. The average original maturity of long-term transactions in the Slovenian banking system between 2013 and 2016 was just over 6 years, which means that the banking system's portfolio still contains many loans that were concluded before the final quarter of 2016 and could not be included in the vintage analysis. Around EUR 5 billion of new transactions were included in the corporate portfolio, which were also partly repaid, reducing their outstanding balance to EUR 4.4 billion by the end of March 2019.

According to the portfolio age metric, the vintage analysis of new contracts with corporates shows that the proportion of new NPEs<sup>61</sup> within one year of the conclusion of the contract ( $t + 4Q$  on the x-axis) reached its maximum in the portfolio from the third quarter of 2017, when it stood at 0.87% of the value when the transactions were concluded. The other five portfolios whose quality was monitored for one year (Q4 2016 to Q1 2018) recorded lower NPE ratios during this period. Certain portfolios (Q3 2017 and Q4 2018) recorded NPE ratios of 0.30% within a single quarter.<sup>62</sup> Because these transactions transitioned from performing to non-performing status almost immediately after approval, it is questionable whether the banks were diligent enough in assessing the risk of the transactions and the clients. A small number of individual large-value transactions that would have

<sup>60</sup> Collateral value is taken into account solely up to the amount of the unimpaired portion of the claim, or the total collateral value if the aforementioned amount is not reached.

<sup>61</sup> Any transaction that has become non-performing is treated as non-performing even if it begins to be repaid and exits non-performing status. The exposure amount is left unchanged, even if it begins to be partly repaid. 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.

<sup>62</sup> Although this analysis only captures transactions that were classed as performing upon conclusion, the performance status can change in the same quarter if the transaction was concluded in the first two months of the quarter.



profoundly limited comparability between the quarterly portfolios have been excluded from these figures, although it is well worth checking the criteria by which these loans were approved.

By the end of the first quarter of 2019 the two oldest portfolios in the sample had recorded considerably different figures for the proportion of transactions that had become NPEs: in the portfolio from Q4 2016, 0.86% of the value of new contracts had transitioned to NPE status, while the next portfolio (from Q1 2017) has deteriorated sharply over the last three quarters to reach an NPE ratio of 0.71% in March 2019.

Figure 4.46: Proportion of exposures under new contracts that had become NPEs after a certain number of quarters, corporate portfolio

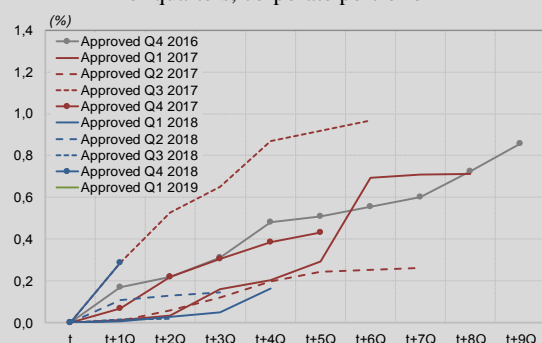
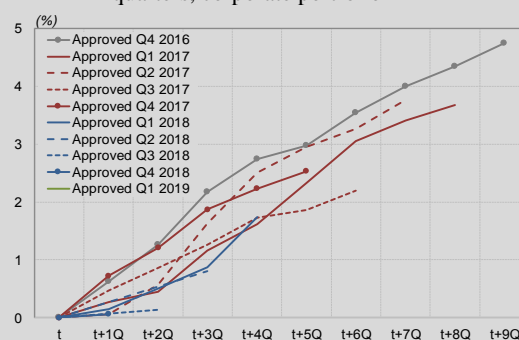


Figure 4.47: Proportion of new contracts that had become NPEs after a certain number of quarters, corporate portfolio



Source: Bank of Slovenia

As expected, the picture of the NPE ratios in terms of the number of contracts is more even, and reflects the gradual transition to non-performing status over time. The figures for the proportion of new contracts that transition to non-performing status are higher than the figures based on value, an indication that a larger number of low-value contracts transition to non-performing status. The most notable figure for the proportion of contracts that transition to non-performing status is the 4.75% recorded by the oldest portfolio. A comparison of the portfolios from Q2 and Q3 2017, which in the two figures above are illustrated entirely differently under the criteria of number of non-performing contracts and non-performing contract value, shows the difference in the average value of contracts that transition to non-performing status.

The following figures confirm the great variability in the quality of individual portfolios. The largest NPE ratios at the end of March 2019 were recorded by the portfolios from 2017 and the oldest portfolio from late 2016. The portfolios from 2018 had lower NPE ratios in March, but their true quality will only be revealed in the future. In the extremely favourable macroeconomic environment, the differences between individual portfolios are primarily indicators of the quality of individual clients and the banks' assessments of their creditworthiness, while the influence of the macroeconomic environment will also be revealed when the economy hits a downturn. At that time all portfolios (in the upper left figure) will see smaller or larger rises in their NPE ratios in these periods.

Figure 4.48: Proportion of exposures under new contracts that had become NPEs, corporate portfolio, quarterly windows

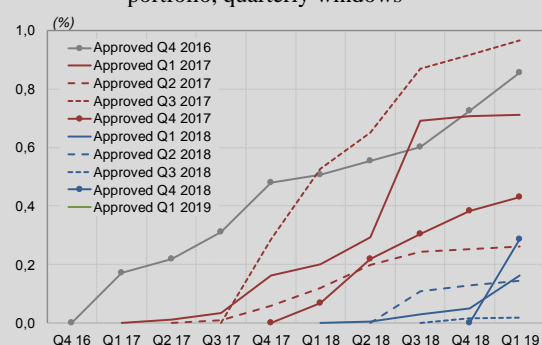
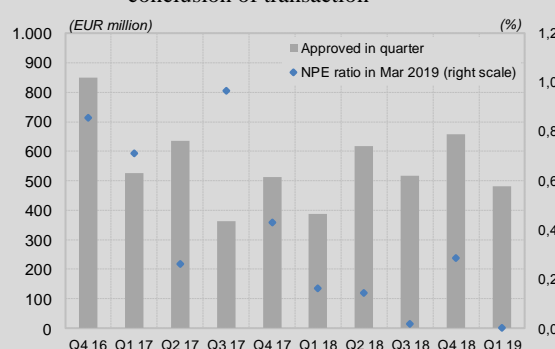


Figure 4.49: New exposure amounts and NPE ratios in March 2019, corporate portfolio, by quarter of conclusion of transaction

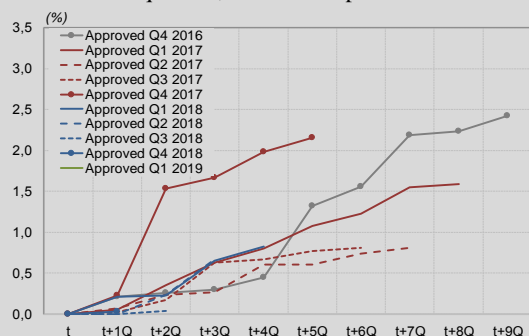


Source: Bank of Slovenia

The sole traders portfolio is a small part of the banking portfolio, but is among the largest in terms of the number of transactions concluded. An average of 820 contracts were concluded across the banking system in each quarter of the last two and a half years, compared with an average of 1,560 in the non-financial corporations portfolio. It is also the sector where the banks record their highest NPE ratios, i.e. it is the highest-risk portfolio. The NPE ratio stood at 8.6% in March 2019 on an exposure amount of EUR 513 million, 1 percentage point higher than in the corporate portfolio.

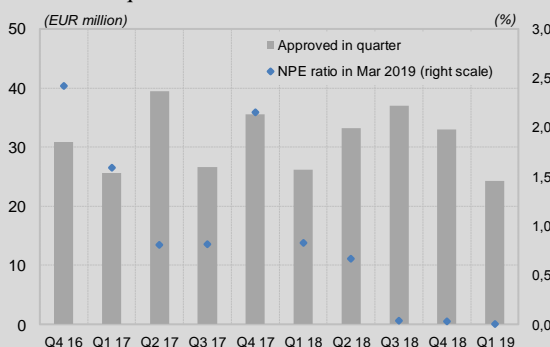
The largest deterioration in new transactions over the period of four quarters since the conclusion of the contract was recorded by the portfolio from Q4 2017, when the NPE ratio reached 2.16% measured against contract value at the time of conclusion. The oldest portfolio (Q4 2016) recorded the smallest deterioration over the period of four quarters, with an NPE ratio of just 0.44%, but transitions to non-performing status then began to increase sharply, the NPE ratio reaching 2.43% by the end of 2018. The other quarterly portfolio segments do not differ significantly, which is to be expected given the large number of low-value transactions. This is also why managing the sole traders portfolio is a demanding task for the banks, and requires good knowledge of individual market segments, which the future macroeconomic situation can have a larger or smaller impact on.

Figure 4.50: Proportion of exposures under new contracts that had become NPEs after a certain number of quarters, sole traders portfolio



Source: Bank of Slovenia

Figure 4.51: New exposure amounts and NPE ratios in March 2019, sole traders portfolio, by quarter of conclusion of transaction



The vintage analysis of the non-residents portfolio approved since the final quarter of 2016 reveals very low NPE ratios, i.e. the majority of the portfolio has retained performing status. The banks have mostly worked to remove non-performing claims from the non-residents portfolio, while their new transactions have mainly been investments in securities, of which only a few for now are non-performing.

Analysis of the household portfolio (when a sufficient quantity of data at the level of the individual contract is available) will show the extent to which the policy of actively switching to consumer lending has upheld the requirement to maintain credit standards. In the household portfolio, and in the corporate portfolio and sole traders portfolio covered by the analysis, the adequacy of credit standards will be revealed in the future when the economic environment deteriorates.

### 4.3 Bank funding, liquidity and interest sensitivity

#### Summary

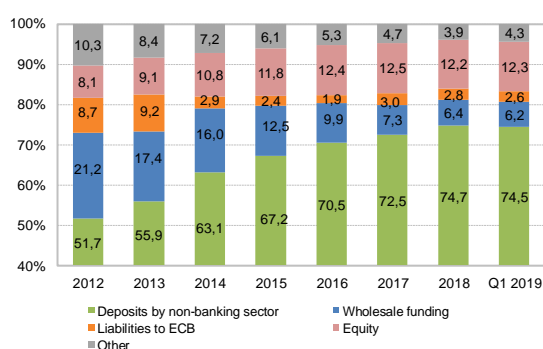
Deposits by the non-banking sector remain the main source of funding for the banks. Growth in deposits by the non-banking sector is being driven by household deposits, while deposits by non-financial corporations are declining. The maturity mismatch between assets and liabilities is a potential source of risk, although the banks' high liquidity and low levels of wholesale funding in the strong economy are reducing their sensitivity to any realisation of this risk.

There was no significant change in interest rate risk in 2018, and it remained medium in the first quarter of 2019. The difference between the average repricing periods for asset and liability interest rates narrowed slightly at the end of 2018. There was no significant change in interest rates on individual types of loan in the first quarter of 2019, and they remain low.

#### Bank funding

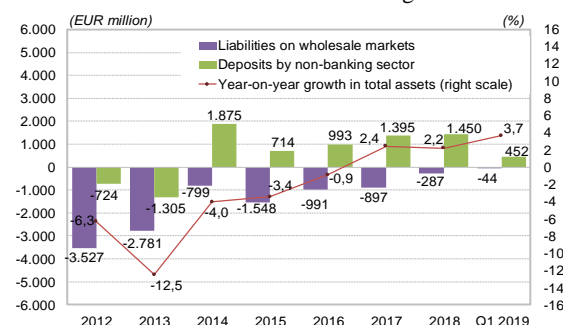
**Deposits by the non-banking sector remain the main source of funding for the banks.** They accounted for three-quarters of total bank funding in the first quarter of 2019, a record high figure.<sup>63</sup> After slowing in the second half of 2018, year-on-year growth in deposits by the non-banking sector strengthened again in early 2019, to 6.7%. Wholesale funding is continuing to decline, albeit more slowly than in previous years, as a large proportion of the debt has already been repaid. The banks replaced debt securities maturing in 2018 with new issuance, albeit a smaller amount. Given the high excess liquidity, there is no demand for additional funding from the Eurosystem, and liabilities to the Eurosystem thus continued to account for a small proportion of funding in 2018. The figure declined even further in the first quarter as debt was partly repaid: Eurosystem funding now accounts for 2.6% of total liabilities.

Figure 4.52: Structure of bank funding



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

Figure 4.53: Changes in deposits by the non-banking sector and wholesale funding

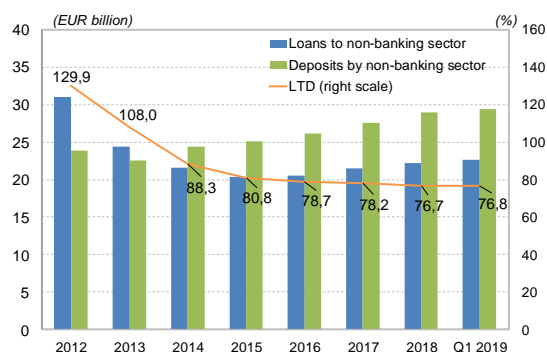


**The increase in deposits by the non-banking sector is outpacing the increase in loans to the non-banking sector.** The annual increase in deposits by the non-banking sector in 2018 was double the increase in loans to the non-banking sector, and the banks were again able to fund their lending activity through this primary source alone in the early part of 2019. With growth in deposits by the non-banking sector outpacing growth in loans to the non-banking sector, the LTD ratio has slowly declined over recent years. It stood at 77% in March 2019, making Slovenia one of the countries with a low LTD. Like in Slovenia, LTD has been declining in the euro area in recent years, and averaged 96% in September 2018.<sup>64</sup> As deposits by the non-banking sector strengthen and wholesale funding declines, the banks' exposure to external risks is diminishing.

<sup>63</sup> Data is available from 1994.

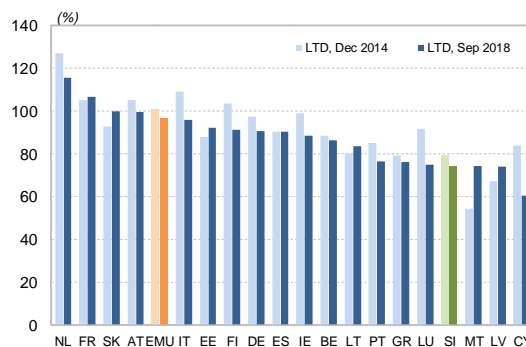
<sup>64</sup> The figure is on a consolidated basis, and was only available up to September 2018 at the time of writing.

Figure 4.54: Loans to the non-banking sector, deposits by the non-banking sector, and LTD



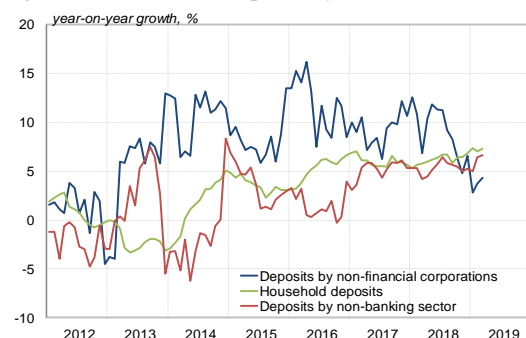
Sources: Bank of Slovenia, ECB (SDW)

Figure 4.55: LTD across the euro area (consolidated figures)



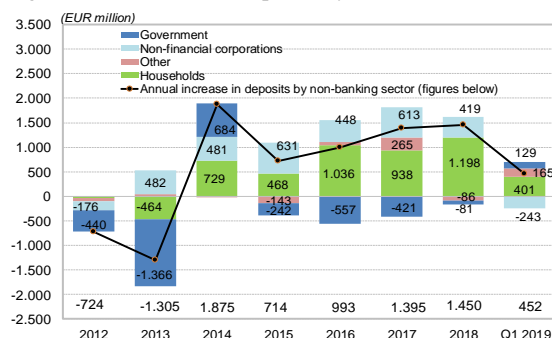
**Household deposits remain the main driver of growth in deposits by the non-banking sector.** Household deposits continued to increase in the first quarter of 2019, as they have done for several years now. Year-on-year growth is gradually increasing, and reached 7.3% in March 2019. They increased by EUR 1.6 billion in 2018 and the first quarter of 2019 to stand at EUR 19 billion, almost half of the banking system's total liabilities. The financial position of the household sector is favourable, and is improving as unemployment falls and the wage bill continues to grow, the latter at a faster rate than private consumption. The increase in household deposits can also be attributed in part to payments made to small shareholders by foreign investors in takeover targets in 2018. Households are favouring security over yield in their savings management: they are not seeking alternative assets, but are keeping their savings at banks. If the labour market remains buoyant, saving at banks can also be expected to strengthen in the future. In contrast to previous years, the first quarter of 2019 also saw an increase in government deposits and deposits by other financial institutions.

Figure 4.56: Growth in deposits by sector



Source: Bank of Slovenia

Figure 4.57: Increase in deposits by sector



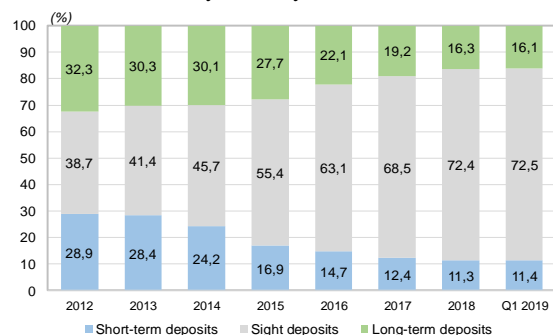
**Growth in deposits by non-financial corporations slowed sharply.** The increase in deposits by non-financial corporations in 2018 was less than in the previous years, and they actually declined in the first quarter of 2019, by EUR 243 million to EUR 6.5 billion. In March 2019 they were up 4.3% in year-on-year terms, significantly less than the average rate of growth over the last five years, which stood at 9.8%. As long as the strong economy is encouraging the expansion of turnover, non-financial corporations can be expected to finance themselves not only via loans, but also with their savings at banks.

#### Maturity of deposits by the non-banking sector

**Growth in sight deposits by the non-banking sector slowed relative to previous years, but nevertheless remains high.** Sight deposits by the non-banking sector in March 2019 were up 11% in year-on-year terms, and accounted for 72.5% of total deposits, up 31 percentage points on the long-term average figure.<sup>65</sup> The proportion of bank funding accounted for by sight deposits is significantly higher than in the past.

<sup>65</sup> The long-term average is calculated from the data for 1998 to 2018.

Figure 4.58: Breakdown of deposits by the non-banking sector by maturity



Source: Bank of Slovenia

**Households are continuing to increase their sight deposits, but in 2018 they also increased their short-term deposits, in contrast to previous years.** Sight deposits increased by EUR 2 billion in 2018 and the first quarter of 2019 to EUR 14.5 billion, and now account for three-quarters of all household deposits. Short-term deposits have been rising in year-on-year terms since August of last year, although the net increase in the first quarter of 2019 was still small, at EUR 47 million. Savers were perhaps encouraged to fix their savings for short-term periods by a slight rise in interest rates on deposits of 3 to 6 months, although they are still extremely low, and are below the average interest rates on short-term household deposits in the euro area. The small spread in returns between sight deposits and short-term deposits is continuing to deter savers from fixing much of their savings for longer periods. Long-term household deposits are therefore continuing to decline, as maturing long-term deposits are often left in bank accounts, thereby further shortening the average maturity of funding.

Figure 4.59: Growth in household deposits by maturity

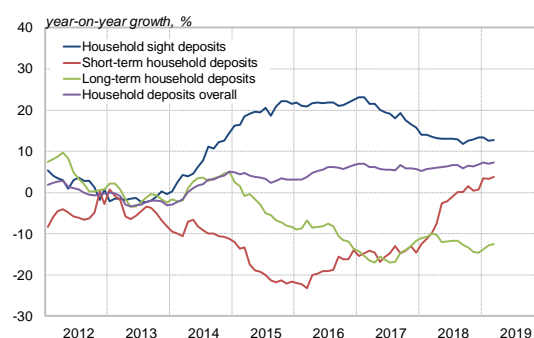
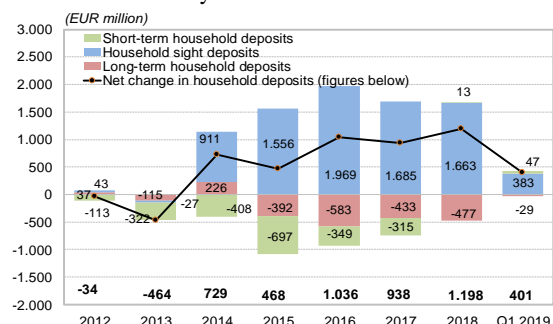
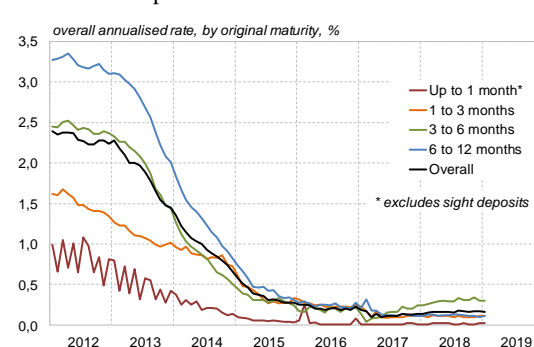


Figure 4.60: Change in stock of household deposits by maturity



Source: Bank of Slovenia

Figure 4.61: Interest rates on new short-term household deposits



**The maturity mismatch between assets and liabilities is a potential source of risk, although the banks' high liquidity is reducing their sensitivity to any realisation of this risk.** The maturity mismatch is widening as sight deposits and long-term loans both increase. The maturity gap amounted to almost 5 years in March 2019, 18 months more than before the beginning of the surge in sight deposits in 2013. In the event of uneven rises in deposit rates at the banks, or sudden extraordinary developments that could cause a loss of confidence in the banking system, there could be major deposit switching between banks or even general deposit flight, although the probability of this occurring in the immediate short term is low.<sup>66</sup>

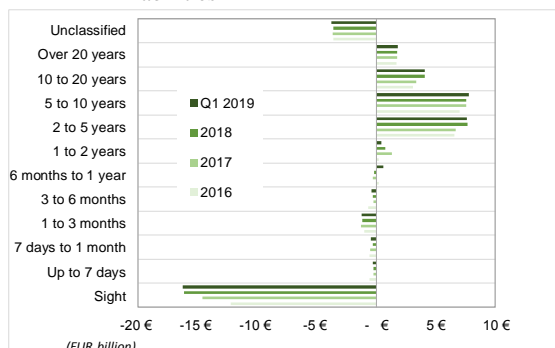
**Savers' confidence in the banking system is growing while the economy is strong and bank profitability is high, and the possibility of sudden deposit switching is reducing at the same time.** According to the markets,<sup>67</sup> there will not be any rise before 2021 in the ECB's key interest rate, which deposit rates track with a slight lag. In these circumstances sight deposits are expected to remain a major part of bank funding in the future. If major short-term liquidity needs arise because of maturity mismatch, the banks have large holdings

<sup>66</sup> For more about the stability of household deposits and deposits by non-financial corporations, see the thematic section of the December 2018 Financial Stability Review.

<sup>67</sup> A Bloomberg survey conducted between 6 and 10 May 2019, and Bank of Slovenia calculations on the basis of EONIA interest rate swaps.

of liquid assets available on their balance sheets. The high liquidity coverage ratio is indicative of the banks' sound ability to cover net liquidity outflows with highly liquid forms of asset in the first 30 days of a stress situation (see below for more on liquidity).

Figure 4.62: Net gap in residual maturity of assets and liabilities



Source: Bank of Slovenia

Figure 4.63: Weighted average of residual maturity of assets and liabilities, and gap

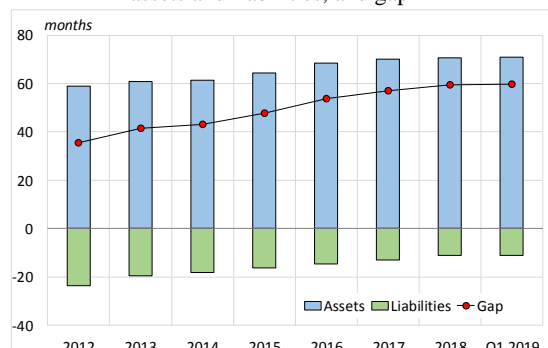
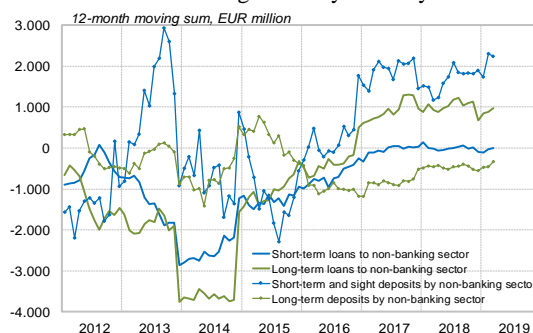


Figure 4.64: Net increases in deposits by and loans to the non-banking sector by maturity



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

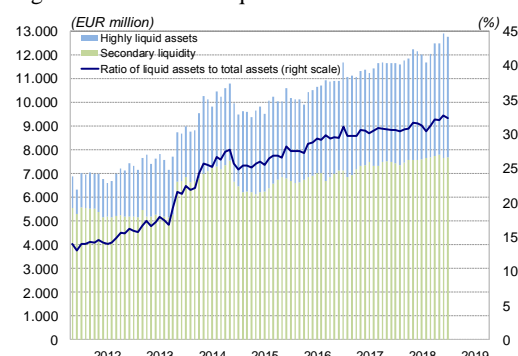
### Bank liquidity

**The liquidity of the banking system increased, while liquidity risk remains low.** Liquid assets<sup>68</sup> increased by EUR 1.1 billion in 2018 and the first quarter of 2019 to EUR 12.8 billion, thereby taking the proportion of total assets that they account for to 32%. The banks invested in highly liquid assets in the form of interbank sight deposits and balances at the central bank, more than in securities. The level of secondary liquidity remained stable, at 20%. The change in the structure of secondary liquidity slowed in the second half of 2018. The majority (57%) consists of foreign marketable securities rated BBB or higher, into which the banks have moved for higher returns and for the sake of increased diversification.

<sup>68</sup> Liquid assets comprise highly liquid assets and secondary liquidity. Highly liquid assets comprise 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.



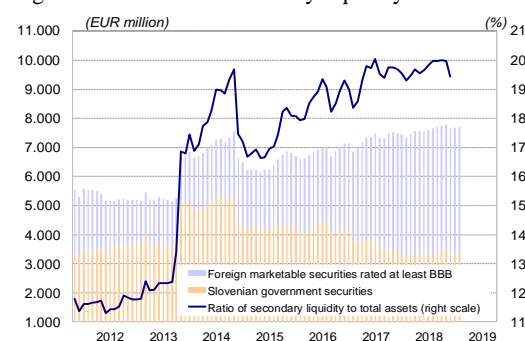
Figure 4.65: Stock of liquid assets



Note: Highly liquid assets comprise 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.

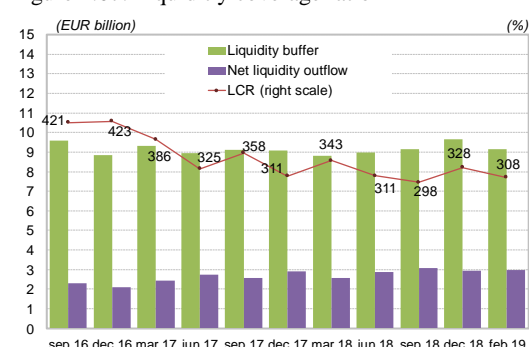
Source: Bank of Slovenia

Figure 4.66: Stock of secondary liquidity



**The high liquidity coverage ratio (LCR) indicates that the banking system's liquidity position is favourable.** It stood at 322% in March 2019, three times more than the regulatory requirement. The build-up of liquid assets on bank balance sheets saw an increase in the liquidity buffer by the end of 2018. Net liquidity outflows increased more than the liquidity buffer in the first quarter of 2019, which acted to slightly reduce the LCR. In addition to household deposits, there were also increases in government deposits and deposits by other financial institutions, which have a higher weight in the calculation of outflows. The indicator varies significantly from bank to bank. The banks under majority foreign ownership have the lowest LCRs, although all of them exceed the minimum requirement of 100%.

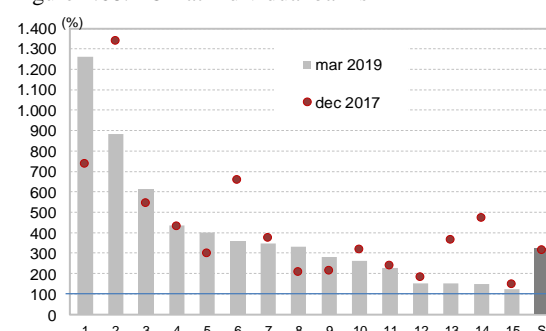
Figure 4.67: Liquidity coverage ratio



Note: In the right figure, the blue line denotes the minimum requirement for the LCR in accordance with the CRR.

Source: Bank of Slovenia

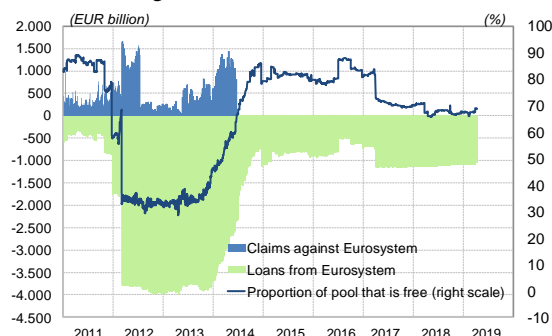
Figure 4.68: LCR at individual banks



**The proportion of the pool of eligible collateral at the Eurosystem that is free remained high.** The pool at system level stood at EUR 3.4 billion at the end of the first quarter of 2019, down EUR 452 million on the beginning of 2018, thereby reducing the free proportion to 67%. High excess liquidity means that the banks are not participating in ordinary refinancing tenders at the ECB, and therefore have no need to keep the pool as large as it was. The proportion of the pool of eligible collateral at the Eurosystem that is free increased to 69% in March 2019, as a result of the partial early repayment of liabilities from the TLTRO-II. Slovenian banks have made early repayments of just 5% of these liabilities to date.

**Slovenian banks have achieved a relatively robust funding structure in recent years.** In the current situation the increase in deposits by the non-banking sector allows the banks to undertake their lending activity without any need for additional funding from the ECB. ECB funding has accounted for a small proportion of total bank funding in Slovenia in recent years. In the five years after the outbreak of the financial crisis, the proportion of total funding in the banking system accounted for by the ECB temporarily increased to stand at more than 9% by the end of 2013, before gradually declining to less than 3% by the end of 2018. While liabilities to the ECB have remained unchanged, and the balance sheet has expanded, the importance of ECB funding has declined. Liabilities to the ECB at banks in Slovenia are concentrated solely within the four-year TLTRO-II. Good liquidity means that the banks are currently not accessing ECB funding via other operations. The funding amounted to EUR 1,045 million at the end of March 2019, equivalent to 2.6% of the banks' total liabilities.

Figure 4.69: Banks' claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free



Source: Bank of Slovenia

#### Box 4.3: Macroprudential policy instruments addressing maturity mismatch and illiquidity

Under a regulation passed by the Governing Board of the Bank of Slovenia in late 2017, two macroprudential measures addressing the risk of excessive maturity mismatch and illiquidity in banking<sup>69</sup> entered into force as recommendations on 1 January 2018, having previously been binding measures.

The instruments set out:

1. the recommended minimum value for the liquidity ratio,<sup>70</sup> which is the ratio of assets and liabilities according to residual maturity:

first bucket: financial assets and liabilities with a residual maturity of up to 30 days, and

second bucket: financial assets and liabilities with a residual maturity of up to 180 days.

Banks are required to calculate the liquidity ratio for each bucket on a daily basis for the previous business day, and to report it to the Bank of Slovenia. The recommendation is to maintain a first-bucket liquidity ratio of at least one. The second-bucket liquidity ratio is merely of an informative nature. At the request of the Bank of Slovenia, a bank that fails to attain the recommended value for the first-bucket liquidity ratio must provide relevant explanations for the failure to attain the recommended value, and must specify other measures by which it mitigates liquidity risk;

2. the recommended minimum value for the ratio of the annual change in the stock of loans to the non-banking sector before impairments,  $\Delta L$ , to the annual change in the stock of deposits by the non-banking sector  $\Delta D$  (gross loans to deposits flows or GLTDF).

A bank with a positive (annual) increase in deposits by the non-banking sector is recommended to have a non-negative (annual) GLTDF at the end of each quarter:

$\Delta D > 0 \Rightarrow GLTDF \equiv \frac{\Delta L}{\Delta D} \geq 0\%$ . When the measure was legally binding, a bank that increased its deposits was expected to increase either its loans or its liquidity reserves. Given the stabilisation of the LTD ratio, the regulation approved in December 2017 converted the GLTDF instrument into a non-binding macroprudential recommendation.

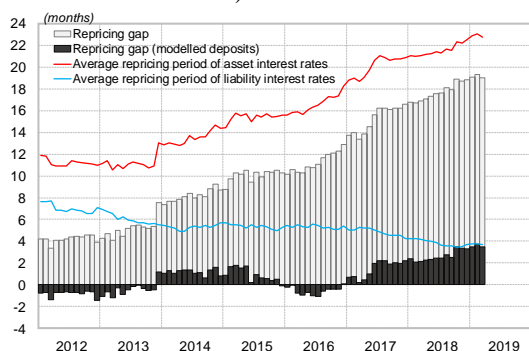
<sup>69</sup> For more on the instruments, see the Bank of Slovenia website at <https://www.bsi.si/en/financial-stability/macroprudential-supervision/macroprudential-instruments/gltdf>.

<sup>70</sup> Before 2018 the instrument was in use as a binding macroprudential measure.

### Interest sensitivity

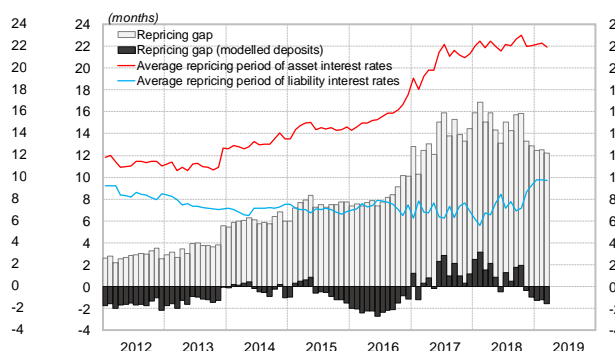
**Banks were exposed to medium interest rate risk in the first quarter of 2019.** In 2018, there was no significant change in interest rate risk as measured by the difference between the average repricing periods for asset and liability interest rates. The repricing gap was stable, and it was only at the very end of the year that it narrowed slightly. The average repricing period for assets remained stable at 21.9 months in March 2019, close to its figure from March 2018, while the average repricing period for liabilities lengthened by 2.9 months over the same period to 9.7 months. The banks primarily manage their interest rate risk by means of off-balance-sheet financial instruments on the liability side, the repricing gap having narrowed when off-balance-sheet items are taken into account, to stand at 12.2 months at the end of the first quarter.

Figure 4.70: Comparison of repricing gaps under the IRRBB approach (excluding off-balance-sheet items)



Source: Bank of Slovenia

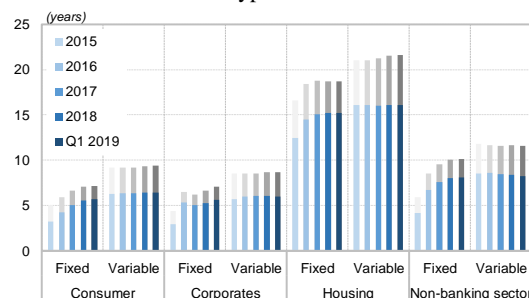
Figure 4.71: Comparison of repricing gaps under the IRRBB approach<sup>71</sup>



**Under the IRRBB methodology, which takes account of amortisation schedules, hedging of interest rate positions and sight deposit stability, the repricing gap becomes negative.** The gap between the average repricing period of asset and liability interest rates had disappeared by the end of 2018, and turned negative in the first quarter of 2019. The gap in the repricing period was negative in the amount of 1.6 months under the IRRBB methodology in March.

**The average maturity of interest-bearing assets is lengthening, as a result of the increase in longer-term loans with a fixed interest rate.** The average maturity of household loans in particular is lengthening. The average maturity of the stock of fixed-rate housing loans (in terms of residual maturity) stood at 15.2 years in March 2019, and is approaching that of variable-rate loans (16.1 years). There is a similar dynamic in consumer loans, where the corresponding figures are 5.7 years and 6.4 years.

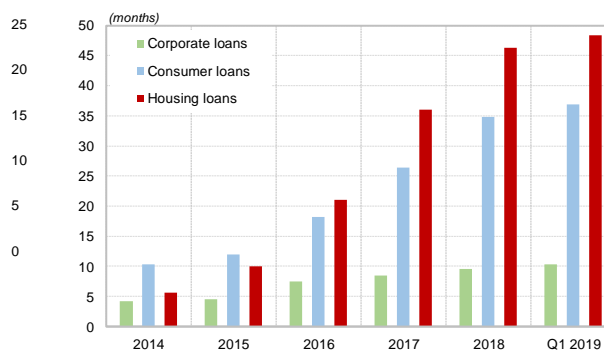
Figure 4.72: Average original and residual maturity for individual types of loan



Note: In the left figure the grey columns represent average original maturity, while the blue columns represent average residual maturity. The figures refer to stocks. In the right figure the monthly average figure is illustrated for the period of the first quarter of 2019.

Source: Bank of Slovenia

Figure 4.73: Average repricing period by loan type

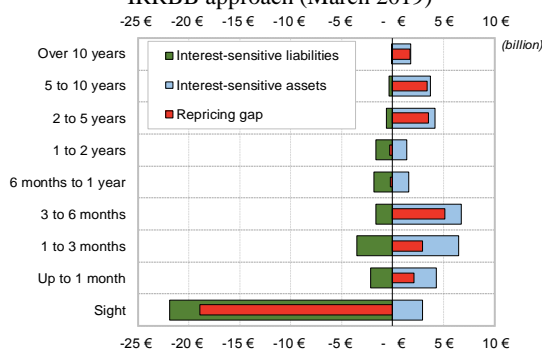


**The one-year repricing gap under the assumption of sight deposit stability was positive in March 2019.** The cumulative one-year repricing gap widened from negative, in the amount of EUR 6.9 billion in March

<sup>71</sup> The IRRBB approach includes off-balance-sheet items, and takes account of hedging with derivatives and amortisation. For the modelled deposits, the gaps take account of 50% stability in sight deposits.

2018, to negative in the amount of EUR 9.0 billion in March 2019. In the event of a rise in market interest rates, the negative repricing gap means that the Slovenian banking system could face a decline in net interest income, as interest expenses would increase by more than interest income. However, a portion of sight deposits should be considered non-interest-sensitive liabilities.<sup>72</sup> Under the assumption that a portion of sight deposits is stable (the effective maturity is more than one year, or the interest rates will not be repriced until after one year), the repricing gap was positive in March 2019. In this case, any rise in market interest rates would have a positive impact on the banks' net interest income.<sup>73</sup>

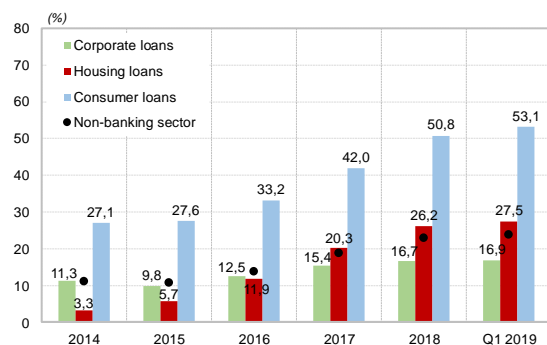
Figure 4.74: Interest-sensitive assets and liabilities by repricing period and repricing gap, excluding IRRBB approach (March 2019)



Source: Bank of Slovenia

**The banks' interest sensitivity is increasing as the average repricing period for loans lengthens.** The proportion of the stock of loans to the non-banking sector that carries a fixed interest rate is continuing to increase, and reached 23.8% in March 2019; the highest figure of 53.1% was recorded by consumer loans. This is lengthening the average repricing period for loans, and entails the risk of net interest income declining during a period of rising market interest rates if banks are not properly covered on the liability side, or have failed to hedge with derivatives. On the other hand, fixed-rate loans allow clients to reduce their exposure to interest rate risk, and to ensure that there is no change in their debt servicing costs.

Figure 4.76: Proportion of loan stock accounted for by fixed-rate loans<sup>74</sup>



Source: Bank of Slovenia

**The proportion of new loans with a fixed interest rate is continuing to increase, but it varies across the different types of loan.** After increasing for several years, the proportion of new housing loans carrying a fixed interest rate declined in 2018, and stood at 53.5% in the first quarter of 2019. Meanwhile the proportion of new consumer loans and corporate loans carrying a fixed interest rate continued to increase. The figures in the first quarter of 2019 stood at 71.5% for consumer loans, and 35.0% for corporate loans. Should the dynamic of increase in the proportion of new loans accounted for by fixed-rate loans continue, the average

Figure 4.75: Repricing gap

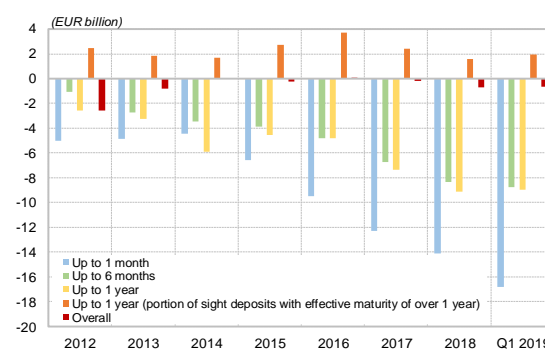
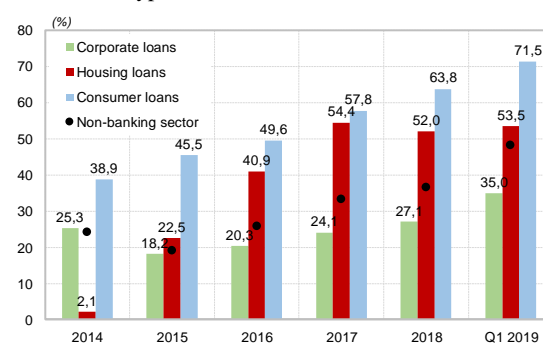


Figure 4.77: Proportion of fixed-rate loans for individual types of new loan



<sup>72</sup> The argument for or against the inclusion of sight deposits as interest-sensitive funding is given in the June 2018 Financial Stability Review.

<sup>73</sup> 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 is the case that it sharply exceeds the contractually determined maturity, and can even amount to several years.

<sup>74</sup> 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 (see Figures 1.7 and 1.8).

repricing period on the asset side will lengthen, thereby widening the repricing gap unless the banks adequately hedge these positions.

**There was no significant change in interest rates on individual types of loan in the first quarter of 2019, and they remain low.** Fixed-rate housing loans were 0.9 percentage points more expensive than variable-rate loans on average in March 2019, while the spread on consumer loans was 1.7 percentage points.<sup>75</sup> Given the relatively small spread, fixed-rate loans remain popular with households for both types of loan, because they do not expose them to potential changes in monthly debt servicing costs. The spread between fixed-rate and variable-rate corporate loans was negligible in March.

Figure 4.78: Average interest rates for individual types of loan, stocks

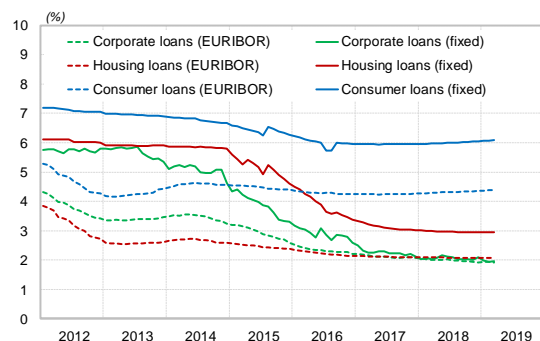
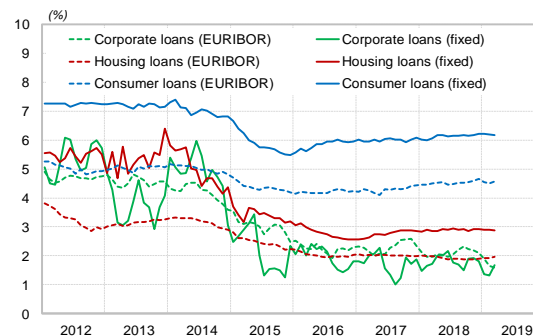


Figure 4.79: Average interest rates for individual types of new loan



Note: The interest rates on corporate loans are those applying to loans of more than EUR 1 million. 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

#### Box 4.4: Reforms to benchmark interest rates

The benchmark interest rates most commonly used for euro-denominated financial contracts are the EONIA and the EURIBOR, which are provided by the European Money Markets Institute (EMMI), which is a non-profit association based in Brussels. Recent years have seen reforms to the benchmark interest rates, as previously it had become clear that the existing benchmarks were no longer reflecting their true values, and there were deficiencies in their provision, which led not least to market manipulation. An EU regulation on benchmarks<sup>76</sup> was adopted in 2016, and entered into force in January 2018. The aim of the regulation is to improve the governance and control of the calculation of benchmarks, to ensure greater quality in input data, to prevent conflicts of interest and to ensure better protection of consumers and investors. In addition, the regulation requires supervised entities that use a benchmark interest rate, including commercial banks, to draw up and maintain reliable written plans of the measures that would be taken if the benchmark changes significantly or ceases to be provided.

The reforms to benchmark interest rates are taking place at three levels: (1) the development of risk-free interest rates, where the central banks are taking a leading role; (2) reforms to existing benchmark interest rates with a more robust methodology; and (3) the development of fallback interest rates that will be needed if the reformed benchmark interest rates are no longer in force. The reform of the EONIA and the EURIBOR is being guided by their provider, the EMMI, but the role of the ECB in the reform of the EONIA became decisive when the EMMI announced that it would not be successful in its own reforms.

On 1 October 2019 the EONIA will be replaced by a new overnight rate, the Euro Short Term Rate (€STR). The €STR will be calculated daily by the ECB on the basis of data from money market statistical reporting (MMSR).<sup>77</sup> The reporting includes the 50 largest banks in the euro area in terms of total assets, from ten different countries,<sup>78</sup> who provide data for transactions concluded on the money market during the previous business day. There are methodological differences between the EONIA and the €STR. The EONIA is an overnight interest rate calculated on the basis of unsecured euro deposits provided to other banks by reporting

<sup>75</sup> The spreads between fixed and variable interest rates are similar across individual maturities; the variability in spreads across individual maturities is small.

<sup>76</sup> Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014.

<sup>77</sup> The collection of MMSR data began in July 2016 on the basis of ECB Regulation (EU) No 1333/2014 concerning statistics on the money markets (ECB/2018/33).

<sup>78</sup> Belgium, Germany, Ireland, Greece, Spain, France, Italy, the Netherlands, Austria and Finland.

banks. By contrast, the €STR is an overnight interest rate calculated on the basis of unsecured euro deposits received from banks and non-banking financial institutions (insurance corporations, investment funds, pension funds, etc.), under the awareness that the interbank market alone is not sufficient for calculating reliable daily interest rates. During the transition period, which will last until the end of 2021, market participants who have not yet moved over to the new interest rate will be able to use an adjusted EONIA, as the EMMI will redefine its methodology to make the EONIA equal to the €STR plus a fixed premium.

The ECB does not have a direct role in the reforms to euro benchmark interest rates of longer maturities. Activities to reform the existing EURIBORs are currently being led by the private sector. At the same time market participants are developing fallback interest rates that will be needed if the publication of the EURIBORs is ceased or if they prove to be unviable in the long term. The EMMI is planning to use a hybrid methodology to calculate the new EURIBOR, which will allow the interest rate to be calculated on the basis of actual transactions, at least in part. The selection of transactions has been expanded to include wholesale funding from other financial institutions that credit institutions obtain on the unsecured money market. The use of a hybrid model is proposed, where transactions would be included in the methodology whenever available, other market prices are used when necessary, and expert judgments are used when no other options are available, and must be substantiated. The aforementioned methodology is expected to be confirmed by the end of the year.

Banks will be required to gradually prepare for changing over to the new benchmark interest rates. Slovenian banks will most likely take account of the recommendations of major European banks, and also of their parent banks in the rest of the world and other financial institutions and associations. They are primarily counselling as follows: (1) the assessment of the exposure class in contracts, and the examination of various clauses tied to benchmark interest rates; (2) the drafting of appropriate provisions with regard to the abolition of the existing benchmarks and their replacement; (3) the use of more flexible provisions in new contracts, to provide for a changeover to the new interest rates without any sudden breaks; and (4) the notification of clients with regard to the envisaged reforms, where greater attention should be given to households in particular, in light of the consumer protection requirements. The loan value of Slovenian banks' loan agreements tied to the EURIBOR was roughly estimated at EUR 17 billion<sup>79</sup> at the end of March of this year, or 65% of the total stock of loans. Household loans accounted for EUR 6 billion, or 35% of this. The value of loan agreements tied to the LIBOR was significantly lower, at EUR 393 million. The majority of this, EUR 383 million, was tied to the Swiss franc LIBOR.

## **4.4 Bank solvency**

### **Summary**

*The banking system remained well-capitalised in 2018, and insolvency risk is therefore low, although there is still great variation in the capital adequacy of individual banks. The main decline in capital adequacy is evident at the banks that are expanding their lending activity without adjusting their regulatory capital. The capital adequacy of the small banks also remains below-average. The sensible allocation of profit is vital to maintaining stable capital adequacy in the future, as the potential to attract new capital on the primary market is limited for some banks.*

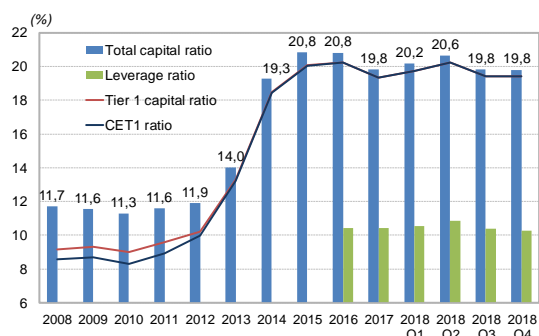
### **Capital adequacy of the banking system**

**The capital adequacy of the banking system remains high.** The banking system's total capital ratio stood at 19.8% at the end of 2018 on an individual basis, unchanged from a year earlier. The year-on-year growth in regulatory capital was the same as the growth in capital requirements. The common equity Tier 1 capital ratio stood at 19.4%, only slightly lower than the total capital ratio, as the banks maintained large holdings of the highest quality form of capital.

<sup>79</sup> Source: Bank of Slovenia, Regulation on reporting by monetary financial institutions



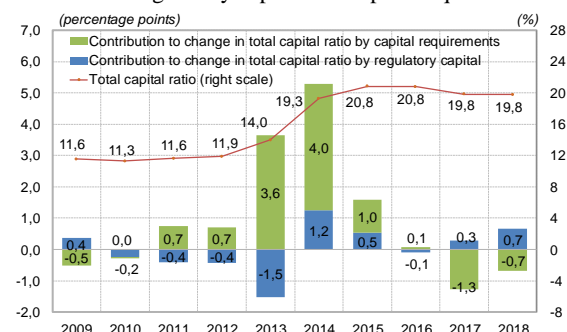
Figure 4.80: Banking system's basic capital ratios on an individual basis



Note: In the right figure the contributions by capital requirements carry a negative sign, which denotes that they increased, thereby having a negative impact on the total capital ratio.

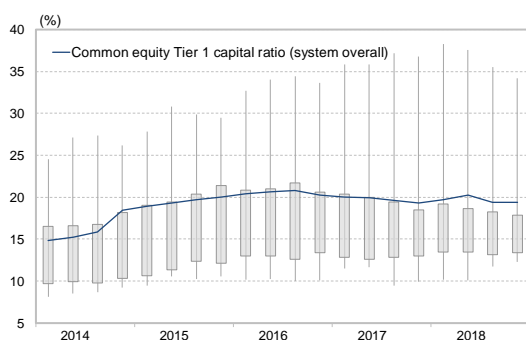
Source: Bank of Slovenia

Figure 4.81: Contribution to change in total capital ratio on an individual basis made by changes in regulatory capital and capital requirements



**Capital adequacy is declining at banks that are strengthening their lending activity to corporates and households, and are failing to adjust their regulatory capital as their capital requirements increase.** These are primarily banks under majority foreign ownership, where the increase in capital requirements as lending was expanded outpaced the increase in regulatory capital. They primarily increased their regulatory capital via retained earnings, but certain banks in this group mostly distributed their profits to shareholders in the form of dividends. By contrast, the capital position at certain small domestic banks and savings banks was improved via recapitalisations, although their CET1 ratio and leverage ratio are still well below the system average.

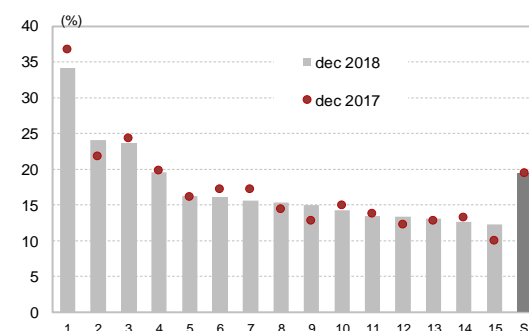
Figure 4.82: Distribution of common equity Tier 1 capital ratio on individual basis



Note: The left figure illustrates the first and last quartiles, and the middle two quartiles.

Source: Bank of Slovenia

Figure 4.83: Common equity Tier 1 capital ratio at individual banks on individual basis

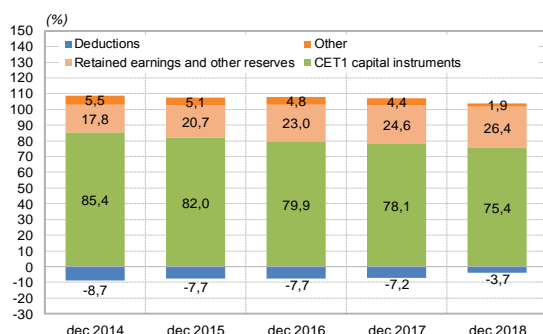


### Capital and capital requirements in the banking system

**Regulatory capital increased by 3.4% in 2018 to EUR 4,256 million.** The increase in regulatory capital was attributable to a change in the calculation of the CET1 ratio<sup>80</sup> and an increase in retained earnings in the wake of good performance, while few banks increased their regulatory capital via recapitalisations. The highest quality form of capital is increasing, while the stock of subordinated debt is continuing to decline, and accounted for just 1.9% of regulatory capital at the end of 2018. Bank profitability will remain an important factor in future capital growth, and this remains a major challenge to the banks as economic growth slows as forecast. A sensible profit distribution policy will therefore help to maintain stable capital adequacy, particularly at the banks that continue to strengthen their credit growth.

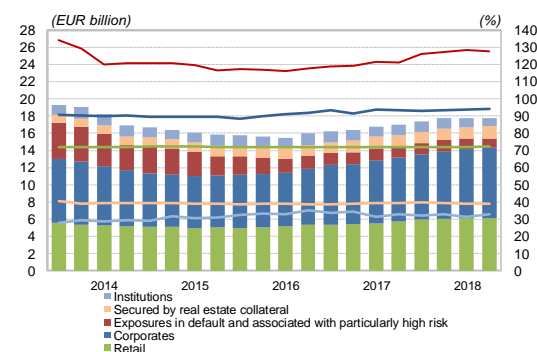
<sup>80</sup> For more, see the December 2018 Financial Stability Review.

Figure 4.84: Breakdown of common equity Tier 1 capital



Source: Bank of Slovenia

Figure 4.85: Principal risk-weighted exposures for credit risk and average risk weight



**Loan growth saw capital requirements increase by 3.6% in 2018 to EUR 1,721 million.** The increase in capital requirements was primarily attributable to an increase in retail exposures and exposures to corporates, which have relatively high risk weights because of the prevailing use of the standardised approach. By contrast, exposures secured by real estate collateral, which allow banks to apply lower risk weights and thus reduce the burden on capital, are increasing more slowly. The proportion of the capital requirements for credit risk that they account for was still just 7.2% at the end of 2018. The increase in capital requirements was slightly mitigated by the improvement in credit portfolio quality, which saw a decline in exposures with the highest risk weights, namely exposures in default and exposures associated with particularly high risk.

In the desire to improve profitability the banks are seeking opportunities in other market segments that might be higher-yielding, but also entail higher risks. The rise in the average risk weight and the corresponding increase in capital requirements could increase the pressure on capital adequacy, if the banks fail to make adjustments in regulatory capital at the same time.

#### *Comparison of the Slovenian banking system's capital adequacy with the euro area (consolidated figures)*

**The overall capital adequacy of the Slovenian banking system on a consolidated basis declined slightly, as did that of the euro area.**<sup>81</sup> The total capital ratio declined by 0.2 percentage points in 2018 to 17.9%, as capital requirements increased by more than regulatory capital. As on an individual basis, the increase in capital requirements was attributable to the growth in loans, which brought an increase in exposures with higher risk weights. The Slovenian banking system's ratio of capital requirements to total assets stood at 4.7%, and exceeded the euro area average, which stood at 3.1% in the third quarter of 2018. The reason lies in the higher risk weights at Slovenian banks caused by the prevailing use of the standardised approach, and differences in investment structure. The average risk weight for credit risk exposures stood at 45.1% in Slovenia in September 2018, compared with 30.2% in the euro area overall.

**In contrast to the total capital ratio, the common equity Tier 1 capital ratio of the Slovenian banking system remained above the euro area average, at 17.6%.** Given the low proportion of Tier 2 capital, the differences between the Slovenian banking system's capital ratios are small. The proportion of Tier 2 capital averaged 12.6% in the euro area in the third quarter of 2018, which is a factor in the gap between the CET1 ratio and the total capital ratio in the euro area.

<sup>81</sup> At the time of writing the latest data available for the euro area was for the third quarter of 2018.

Figure 4.86: Total capital ratio and common equity Tier 1 capital ratio at system level, comparison with the euro area, consolidated figures

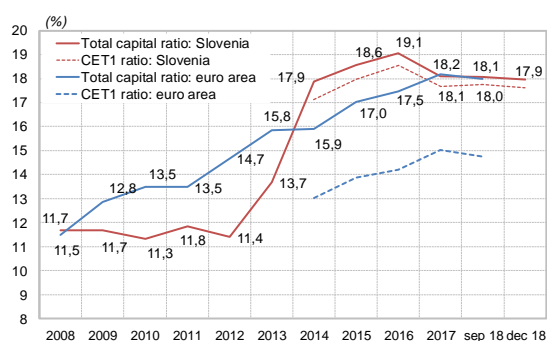
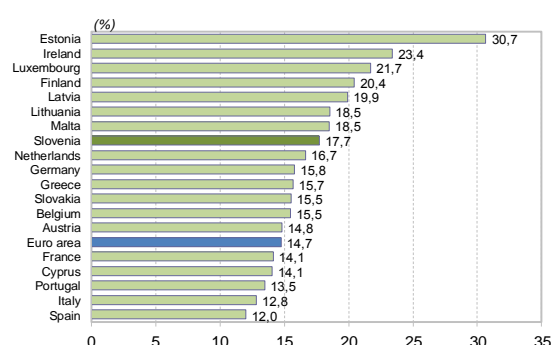


Figure 4.87: Common equity Tier 1 capital ratios by euro area country, September 2018, consolidated basis



Sources: Bank of Slovenia, ECB (SDW)

**In their capital arrangements banks are required to take account of the minimum requirement for own funds and eligible liabilities (MREL).** Some banks have already received their MREL targets, while others will receive them by the end of 2019. All banks falling under the jurisdiction of the Single Resolution Board will receive their binding MREL targets at group level in their resolution plans for 2019, while the individual members of the groups will only receive non-binding MREL targets. The banks falling under Bank of Slovenia jurisdiction are scheduled to receive their MREL notices in the first half of 2019. The MREL target is expected to be equal to the capital requirement<sup>82</sup> for these banks, and will only be higher at banks that are earmarked for resolution and not for compulsory wind-down. Should a shortfall in MREL-eligible instruments be identified, a bank will be allowed to meet the binding MREL target over a maximum period of four years. The banks are likely to issue MREL-eligible instruments to cover their MREL targets, alongside the use of existing capital. The options for issuing new subordinated instruments on the domestic market will be limited, given the shallow capital market and the domestic market's lack of confidence in such instruments. Issuing MREL-eligible instruments or seeking MREL-eligible resources could expose the banks to higher costs. Banks that are part of large groups are expected to receive MREL-eligible instruments from their parent institutions.

#### Box 4.5: Macprudential instruments strengthening the solvency of the banking system

##### Capital buffer for other systemically important institutions

The capital buffer for other systemically important institutions (the O-SII buffer) introduced on the basis of the ZBan-2 aims to limit the systemic impact of misaligned incentives with a view to reducing moral hazard. The reason for the special regulation of systemically important institutions is that their collapse could endanger financial stability and could lead to significantly larger adverse effects on the financial system and the entire economy than could the collapse of a systemically unimportant institution. The objective in special regulation is for the expected loss in the event of the collapse of a systemically important institution to be the same as the expected loss in the event of the collapse of an institution that is not systemically important. To meet this objective, the more systemically important an institution is, the smaller the probability of the collapse of the institution should be (compared with a bank that is not systemically important) by way of compensation. A smaller probability of collapse is achieved by setting additional capital requirements for systemically important banks.

The Bank of Slovenia evaluates Slovenian banks once a year with regard to the criteria of size, importance to the economy of the European Union or of Slovenia, cross-border activity, and the interconnectedness of the bank or group with the financial system.<sup>83</sup>

The Bank of Slovenia first identified O-SIIs in 2015. The Bank of Slovenia identified six systemically important banks in its annual review of criteria in 2018. The identified banks were required to first meet the

<sup>82</sup> The capital requirement is based on Pillar 1 requirements, Pillar 2 requirements and buffers.

<sup>83</sup> The assessment is mostly given in accordance with 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), which were issued by the EBA. The Bank of Slovenia raised the threshold for the identification of O-SIIs from 350 to 500 basis points, in a partial derogation from the EBA guidelines. For more detail on the macroprudential instrument, see online at: <https://www.bsi.si/en/financial-stability/macprudential-supervision/macprudential-instruments/capital-buffer-for-other-systemically-important-institutions-o-sii-buffer>.

capital buffer on 1 January 2019, although this was not challenging, as their voluntary buffers had been relatively high even before 2019.

Table 4.1: O-SIIs, indicator of systemic importance and capital buffer rate

Bank	Value of the indicator of systemic importance	Buffer rate
NLB d.d.	2.817	1,00%
SID banka, d.d., Ljubljana	1.575	0,50%
Nova KBM d.d.	954	0,25%
Abanka d.d.	706	0,25%
SKB d.d.	630	0,25%
UniCredit banka Slovenija d.d.	611	0,25%

Note: SID Bank was given a one-year deadline for building up the buffer: it is required to meet buffer rates of 0.25% from 1 January 2019, and 0.50% from 1 January 2020.

Source: Bank of Slovenia

### Countercyclical capital buffer

The Bank of Slovenia is entitled to introduce an additional capital buffer on the basis of a macroprudential instrument, namely the countercyclical capital buffer, which has been in force 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 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.<sup>84</sup>

<sup>84</sup> <https://www.bsi.si/en/financial-stability/macprudential-supervision/macprudential-instruments/countercyclical-capital-buffer>

## 5 NON-BANKING FINANCIAL INSTITUTIONS

### Summary

*From the perspective of their systemic impact on financial stability, non-banking financial institutions are less important in Slovenia than in the euro area overall: the market lacks the large financial corporations and funds seen in more advanced capital markets. Non-banking financial intermediation is mostly undertaken via leasing companies and insurance corporations, which play an important role in this segment. The Slovenian financial system's exposure to debt securities issued in the euro area has gradually declined in recent years, but remains high at the banks and at other non-banking financial institutions.*

*The systemic risks inherent in the performance of leasing companies remain low. The slowdown in the global automotive industry is also being reflected in the performance of Slovenian leasing companies via slower growth in new equipment leasing business. Car leasing, which accounts for more than a half of new leasing business, is increasing again in 2019, albeit more slowly than in the past, while leasing business in other vehicles is declining. The trend in new leasing business at banks that provide finance leasing services is similar to that at leasing companies. Leasing companies saw their portfolio quality improve in 2018, and their profitability increased.*

*The risks in the insurance sector remain modest. The good performance of the insurance sector is being reflected in growth in gross written premium, and growth in total assets and profit. Capital adequacy remains high at the majority of insurance corporations, and there were no major changes in the structure of their risks. The low interest rate environment means that insurance corporations run the risk of failing to achieve the returns guaranteed in insurance contracts.*

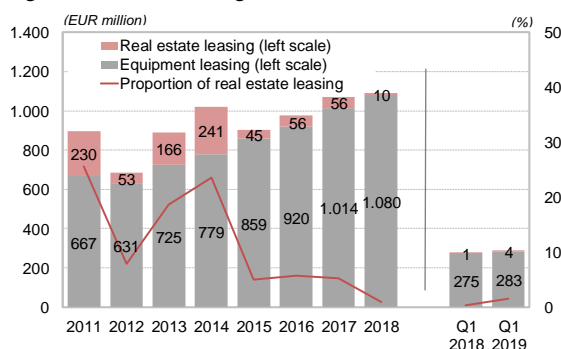
*Liquidity remains low on the Ljubljana Stock Exchange. The high concentration of trading in certain shares and the low volume of trading in shares are being reflected in increasing volatility in the SBI TOP share index, and in the reduced transparency of the domestic share market. The market capitalisation of shares increased in 2018, as a result of new share issuance by Nova Ljubljanska banka d.d. (ticker symbol NLBR), but this did not have a significant impact on the volume of trading in shares as the trend of delisting continued. Higher liquidity on the stock exchange needs a sufficient number of securities to trade, in sufficient volumes. Only when market liquidity is sufficient can price formation reflect the true value of the investment, thus increasing the transparency of the market.*

### 5.1 Leasing companies

**After several years of increasing growth, leasing companies saw a decline in growth in new business<sup>85</sup> in 2018 and the first quarter of 2019.** The slowdown in growth in the first quarter of 2019 was primarily attributable to declining demand for the purchase of commercial and goods vehicles, while other equipment leasing business continued to record moderate growth. Car leasing business accounted for 65% of total new leasing business in the first quarter of 2019, and was up 3% in year-on-year terms at EUR 185 million, while new leasing business in commercial and goods vehicles declined by 11% to EUR 61 million. The Slovenian vehicles market peaked in 2017; the rise in the number of first-time registrations of cars and goods vehicles slowed in 2018, while the number of first-time registrations of other vehicles (camper vans, buses, mopeds, etc.) was down on the previous year. The stock of real estate leasing business remains low. New leasing business in the first quarter of 2019 was up 4.4% in year-on-year terms at EUR 288 million.

<sup>85</sup> 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.

Figure 5.1: New leasing business<sup>86</sup>



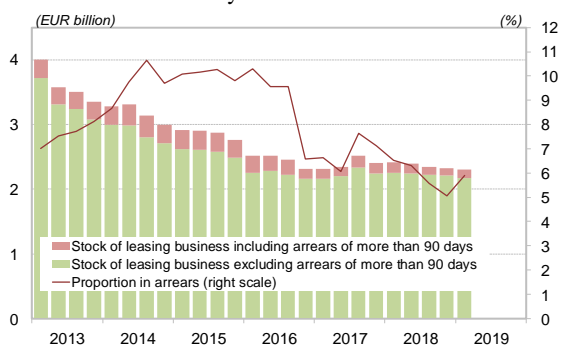
Sources: Bank of Slovenia, SORS

The slowdown in new equipment leasing business is being reflected, with a lag, in the stock of equipment leasing business, which accounts for the majority of leasing business. The stock of equipment leasing business stood at EUR 2 billion at the end of the first quarter of 2019, up 6.5% in year-on-year terms, primarily as a result of high growth in equipment leasing in the second and third quarters of 2018. The total stock of leasing business stood at EUR 2.3 billion in March, down 4.4% in year-on-year terms, primarily as a result of a decline in real estate leasing business caused by leasing companies' diminishing interest in entering into real estate business, and the winding-up of individual leasing companies that had been established solely for the project financing of real estate business.<sup>87</sup> The proportion of claims more than 90 days in arrears also declined in the previous quarters.

The trend in new leasing business at banks that provide finance leasing services remains similar to that at leasing companies.<sup>88</sup> The banks recorded new finance leasing business of EUR 57 million in the first quarter of 2019, down 9% in year-on-year terms, while the stock of leasing business amounted to EUR 402 million, up 21% in year-on-year terms, again because of the strengthening of new business in the second and third quarters of 2018.

The proportion of claims more than 90 days in arrears is continuing to decline at the majority of leasing companies. The proportion of claims more than 90 days in arrears stood at 5.9% in March 2019, down 0.7 percentage points in year-on-year terms, primarily as a result of the winding-up of certain leasing companies. The concentration of claims more than 90 days in arrears remains high: three leasing companies accounted for the majority of the arrears of more than 90 days (86.4%), while the proportion of the total stock of leasing business that they account for was just 11%. Real estate leasing accounts for 59% of leasing business more than 90 days in arrears. The proportion of claims more than 90 days in arrears is likely to decline again in the future, as a result of the completion of judicial proceedings and the winding-up of certain leasing companies.

Figure 5.3: Stock of leasing business and claims more than 90 days in arrears



Note: In the right figure, ROE is calculated on the basis of total profit generated over the preceding 12 months.

Source: Bank of Slovenia

Figure 5.2: Vehicle registrations in Slovenia

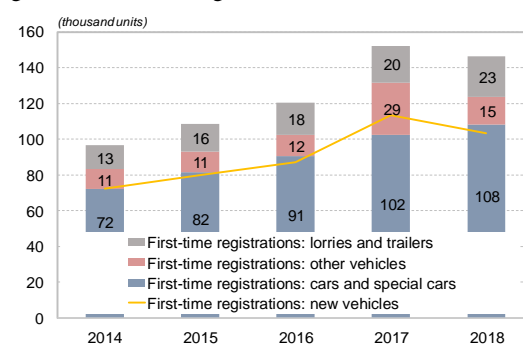
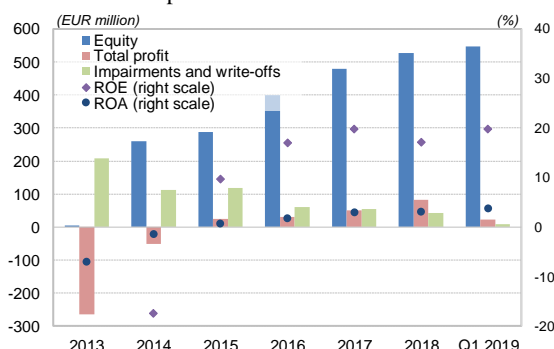


Figure 5.4: Selected performance indicators of leasing companies



<sup>86</sup> Leasing business is disclosed at financed value, excluding the financing of inventories.

<sup>87</sup> Six of the 27 leasing companies ceased reporting to the Bank of Slovenia during the period covered by the analysis.

<sup>88</sup> The analysis does not take account of bank operations from finance leasing.



**Leasing companies are increasing their profits, but their aggregate total assets are declining because of a fall in the number of companies reporting.** Total profit amounted to EUR 23 million in the first quarter of 2019, up 74% in year-on-year terms, primarily on account of a decline in expenses for impairments and revaluations. Leasing companies ended 2018 with a total profit of EUR 87.9 million, the largest figure of the post-crisis period. ROE calculated on the basis of total profit declined slightly in 2018, on account of the increase in equity at the leasing companies. Profit remains a reliable source of capital increase at leasing companies. The exclusion of leasing companies from the reporting population as a result of winding-up had an impact on total assets (particularly in the second half of 2018), which were down 4.8% in year-on-year terms at EUR 2.74 billion. Eliminating this effect, there would have been a year-on-year increase of 3.8% in total assets. The funding structure remains similar to 2018: loans from the rest of the world accounted for 56% of the total financial loans, in keeping with the sector's ownership structure.

## 5.2 Insurers

**Insurance premium continued to grow in 2018 and the first quarter of 2019.<sup>89</sup>** Premiums increased in all three insurance segments. General insurance accounted for 53% of written premium in the first quarter of 2019; general insurance premium amounted to EUR 330 million, up 3.5% in year-on-year terms, while total written premium was up 3.9% in year-on-year terms. The proportion of total written premium accounted for by life insurance and pension insurance in the first quarter of 2019 declined slightly in year-on-year terms, while the proportion accounted for by health insurance increased. Reinsurance corporations and pension companies recorded high growth in written premium in the first quarter, at 14.4% and 24.6% respectively. The high growth in reinsurance premium was primarily attributable to motor vehicle liability insurance and other property insurance.

Figure 5.5: Gross written premium and annual growth by type of insurance

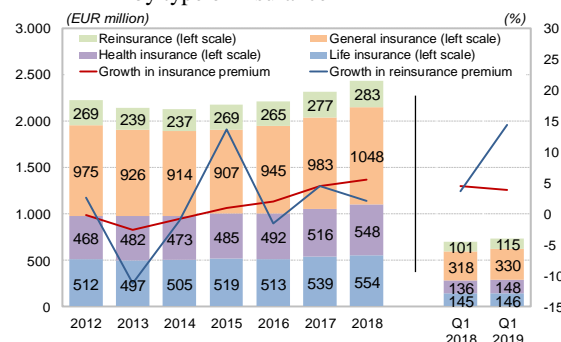
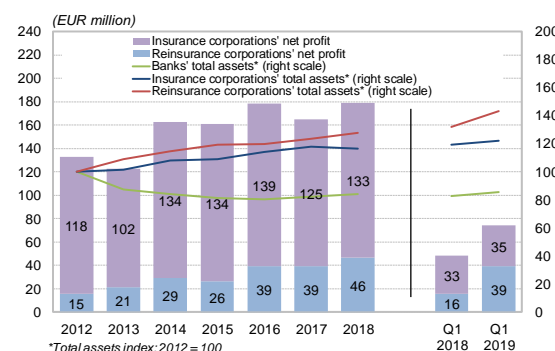


Figure 5.6: Insurers' net profit and total assets



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

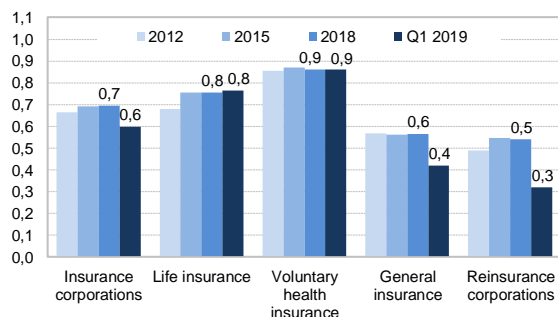
**The total assets of insurance corporations and reinsurance corporations continued to expand in the first quarter of 2019, as they had in 2018.** The increase was attributable to value gains in financial assets and to good performance by the insurance corporations, whose total assets were up 2.6% in the first quarter of 2019 at EUR 7.4 billion, and by the reinsurance corporations, whose total assets were up 8% at EUR 999 million. The year-on-year increase of 7.4% recorded by insurance corporations' net profit in the first quarter of 2019 was attributable to an increase in life insurance underwriting profit and an increase in investment income. The general insurance underwriting profit declined, as a result of an increase in net claims expenses and other net insurance expenses. Three insurance corporations providing supplementary health insurance recorded a year-on-year increase in their net losses in the first quarter of 2019, despite an increase in their income from this source. The two reinsurance corporations more than doubled their net profit by increasing their investment income, while the pension companies increased their net profit in the same period by 33.2% to EUR 870 million by increasing the allocated investment return from life insurance.

**The claims ratio as measured by the ratio of gross claims paid to gross written premium remains stable at insurance corporations.** The claims ratio in general insurance improved in the first quarter of 2019, as a result of seasonal fluctuations, but remains stable in year-on-year terms. The claims ratio at reinsurance corporations in the first quarter of 2019 also remains unchanged in year-on-year terms. The trend of decline in

<sup>89</sup> The analysis of the insurance sector covers 13 insurance corporations and two reinsurance corporations that fall under the supervision of the ISA. The takeover of one insurance corporation was successfully completed in February 2019.

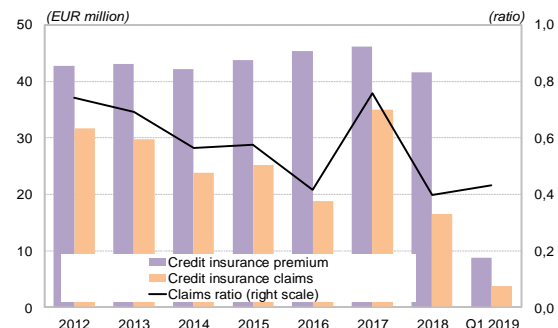
written premium in credit insurance seen in 2018 continued in the first quarter of 2019. The largest increase in claims from credit insurance in the first quarter was in the area of consumer credit, which brought an increase in the claims ratio in year-on-year terms and in quarterly terms.

Figure 5.7: Claims ratio for major types of insurance



Source: ISA

Figure 5.8: Written premium and claims paid in credit insurance



**Capital adequacy<sup>90</sup> remains high at the majority of insurance corporations, despite a slight decline in the second half of 2018 and in early 2019.** Capital adequacy in terms of the solvency capital requirement (SCR) coverage ratio declined in the second half of 2018 at almost all insurance corporations. The decline in the SCR coverage ratio was limited, but the number of insurance corporations with an SCR coverage ratio of less than 200% nevertheless rose from six to seven. The number of insurance corporations with an SCR coverage ratio of less than 200% remained the same in the first quarter of 2019, when the SCR in the insurance segment declined by 0.7% to EUR 873 million. No insurance corporation had an SCR coverage ratio of less than 140%. Capital adequacy in terms of the minimum capital requirement (MCR) coverage ratio also deteriorated, but insurance corporations' aggregate MCR coverage ratio remains high. The SCR and MCR coverage ratios remain high at reinsurance corporations. The SCR coverage ratio at the two reinsurance corporations is well in excess of 200%, while the MCR coverage ratio is more than 600%.

Figure 5.9: Capital adequacy in terms of SCR coverage ratio (insurance corporations)

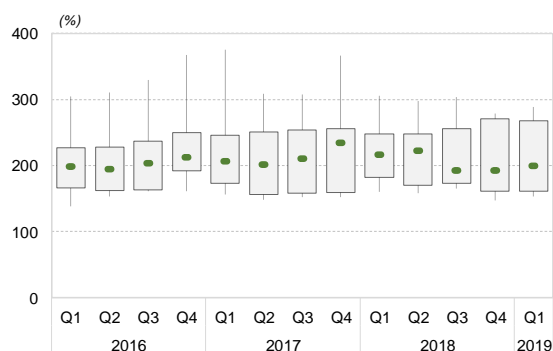
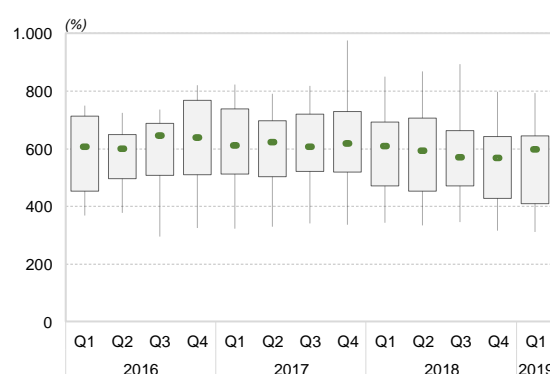


Figure 5.10: Capital adequacy in terms of MCR coverage ratio (insurance corporations)



Note: The 10<sup>th</sup> and 90<sup>th</sup> percentiles are taken as the upper and lower limits.

Sources: ISA (quarterly reporting under Solvency II, data not finalised), Bank of Slovenia

**There was no significant change in the breakdown of the risks calculated on the basis of the standard formula during 2018.<sup>91</sup>** The proportion of the unallocated capital requirement at insurance corporations and reinsurance corporations accounted for by the capital requirement for underwriting risk increased further in 2018, to 46.8%, the largest single component. The increase was attributable to an expansion in turnover and a change in the assumption for mortality risk, while market risk declined as a result of changes in the structure

<sup>90</sup> 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).

<sup>91</sup> The data is based on insurers' annual reports under Solvency II. Insurers calculate the regulatory SCR using a standard formula defined in Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II).

of the financial assets portfolio. The capital requirement for credit risk<sup>92</sup> increased slightly in 2018, but remains low, thanks to good structure and diversification.

Figure 5.11: Risk profile in unallocated capital requirement

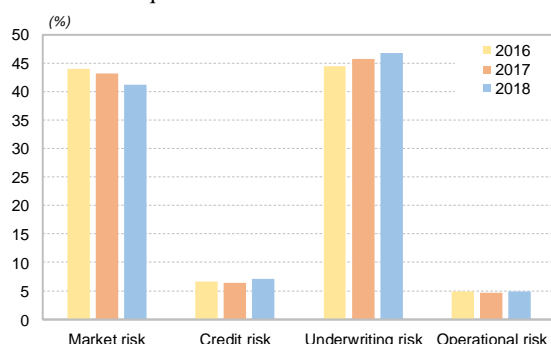
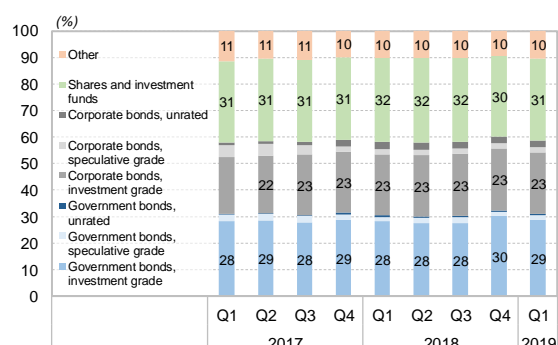


Figure 5.12: Structure of financial assets



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

Sources: ISA (reporting under Solvency II), Bank of Slovenia calculations

**The low interest rate environment is bringing a further decline in interest income from investments in debt securities.** Insurance corporations' interest income<sup>93</sup> was down 7% in year-on-year terms in 2018, and down 9% in the first quarter of 2019. Total investment income was down 6% in year-on-year terms in 2018, but increased in the first quarter of 2019, as a result of an extraordinary increase in disposal gains. The two reinsurance corporations generated increased income over the two aforementioned periods from investments in equity, while their interest income declined in 2018, similarly to the insurance corporations.

#### Box 5.1: Voluntary supplementary pension insurance

**Voluntary supplementary pension insurance assets are gradually increasing.** These assets, which are pooled in pension funds operated by insurance corporations, pension companies and banks, stood at EUR 1.98 billion in March 2019, up 9.1% in year-on-year terms. Annual growth had averaged 5.4% over 2017 and 2018. Since the launch of the first lifecycle fund in 2015, the asset structure of pension funds<sup>94</sup> has not significantly changed: the basic distribution between debt securities and equities remains at a similar level in the majority of investments. Debt securities accounted for 67% of pension funds' total investments in securities at the end of 2018, down just 1 percentage point on 2014.

**Given the large proportion of debt securities in their asset structure, the low interest rate environment is reducing pension funds' income.** Since 2014, in the quest for higher returns, pension fund operators have reduced their exposure to debt securities issued in the euro area by 7.8 percentage points to 72%, and have increased their investments in debt securities issued in the US and in other Member States that joined the EU after 2000 (by 5 percentage points and 2 percentage points respectively).

<sup>92</sup> Takes account of counterparty default risk.

<sup>93</sup> Excludes returns on investments of life insurance policyholders who bear the investment risk.

<sup>94</sup> The figures below include the assets of SODPZ, a pension fund where the holdings of equities are significantly higher than at other pension funds.

Figure 5.13: Breakdown of investments of banks and mutual funds in debt securities

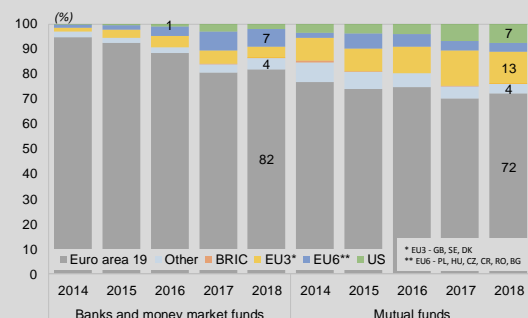
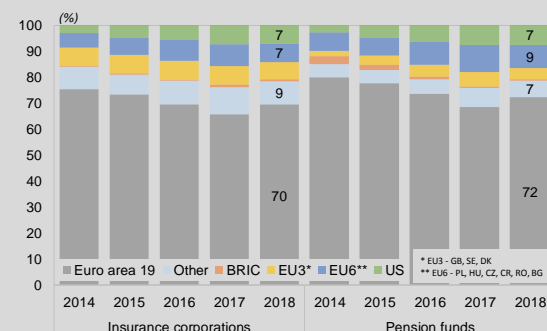


Figure 5.14: Breakdown of investments of insurance corporations and pension funds in debt securities



Sources: ECB, Bank of Slovenia (SHSS)

### 5.3 Capital market and mutual funds

#### Developments on the capital markets

**Low liquidity and the limited range of potential investments remain the key risks on the 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. The listing of shares in Nova Ljubljanska banka d.d. (ticker symbol NLBR) on the Ljubljana Stock Exchange in the final quarter of 2018 did raise the market capitalisation of shares, but did not make a discernible contribution to volume.

The market capitalisation of shares on the Ljubljana Stock Exchange stood at EUR 6.5 billion in March 2019, up 17.5% in year-on-year terms, while the volume of trading in shares amounted to EUR 65 million in the first quarter, down 9.9% in year-on-year terms as a result of a decline in volume in existing shares, and the delisting or low trading volume of shares in firms that were subject to acquisitions in previous years (e.g. Mercator, Gorenje, Pivovarna Laško). The proportion of the market capitalisation of shares on the Ljubljana Stock Exchange accounted for by non-residents stood at 29% in March, having increased from 22.7% a year earlier primarily on account of the listing of NLBR shares. The proportion of the market capitalisation of shares accounted for by non-residents would have declined to 17.6% without the listing of NLBR shares.

Figure 5.15: Market capitalisation on the Ljubljana Stock Exchange and annual turnover ratios

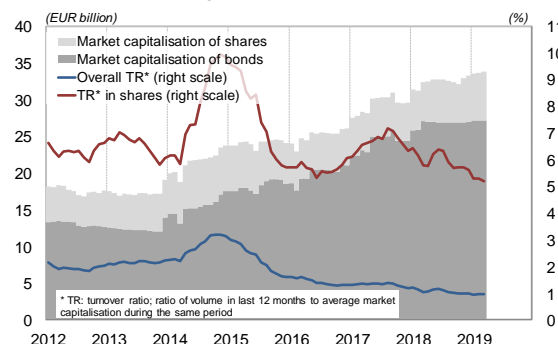
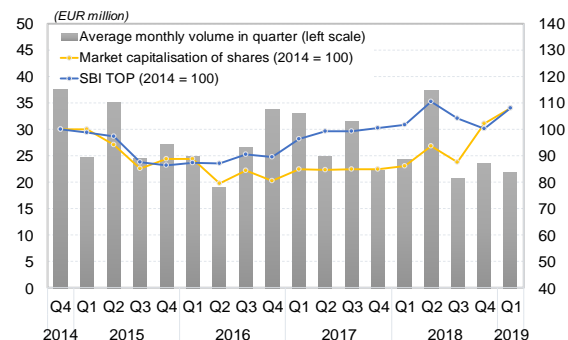


Figure 5.16: Trading volume, market capitalisation of shares, and SBI TOP



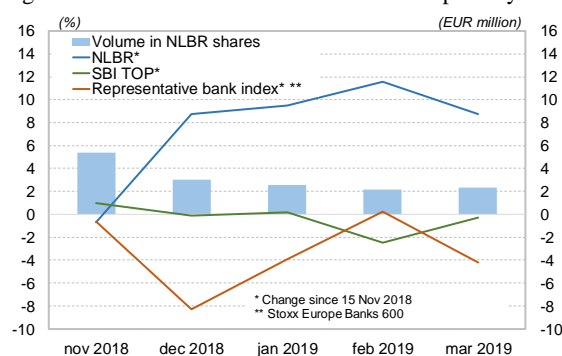
Sources: Ljubljana Stock Exchange, KDD, Bank of Slovenia

**Foreign acquisitions of domestic listed companies are further curtailing the modest volume on the Ljubljana Stock Exchange, thereby strengthening market risk, as the domestic securities market becomes subject to extra volatility in the absence of the requisite depth and breadth.** With the exception of the NLBR shares, there were no new share issues in 2018 and the first quarter of 2019.

The NLBR shares were listed on the official market on 14 November 2018. The shares ended their first day of official trading at EUR 56.7, higher than the final bid price, which was set at EUR 51.50 when the shares

were issued. The price had risen to EUR 62 by the end of March 2019, while the SBI TOP and the representative European bank index both saw falls at that time. The monthly volume of trading in NLBR shares averaged EUR 3 million over this period. The book value of one share at consolidated level stood at EUR 80.8 in December 2018, down from EUR 82.7 in December 2017. The P/B ratio consequently increased from 0.69 in November 2018 to 0.77 in March 2019.

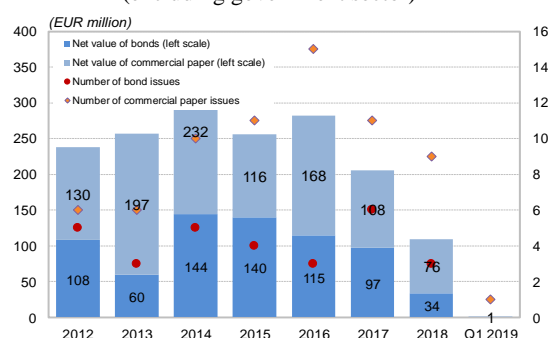
Figure 5.17: Valuation of NLBR shares since primary issue



Sources: LJSE, S&P Global, Bank of Slovenia

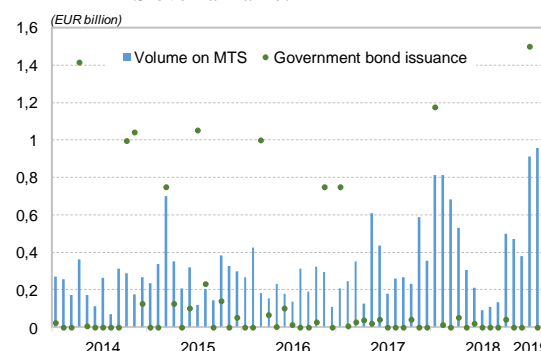
**Corporate financing via issuance of debt securities (excluding the government sector) remains low.** Only one firm opted to issue debt securities in the first quarter of 2019, and it chose commercial paper issuance.<sup>95</sup> Corporate demand for issuance of debt securities remains slow. Another recent factor in firms' declining interest in financing themselves via debt securities has been the influx of foreign capital from the rest of the world, as acquirer companies from the rest of the world often provide the requisite financing to their target companies.

Figure 5.18: Issuance of bonds and commercial paper (excluding government sector)



Sources: Ljubljana Stock Exchange, KDD, MTS Slovenia, Bank of Slovenia

Figure 5.19: Volume of trading in bonds on the MTS Slovenia market



**The government remains the largest issuer of debt securities on the domestic stock exchange, and is active in issuing bonds and treasury bills.** The market capitalisation of bonds remained almost unchanged in year-on-year terms in March 2019 at EUR 27 billion, thanks to the replacement of 10-year bonds maturing in January with new bonds with a nominal value of EUR 1.5 billion. The volume of trading in bonds on the Ljubljana Stock Exchange remained extremely low over the first quarter of 2019, at EUR 1 million, while the volume of trading in government bonds on MTS Slovenia, where most bond trading is generated, increased by 16% to EUR 2.7 billion.

## Box 5.2: SME pre-listing support programme

The European Bank for Reconstruction and Development and Ljubljana Stock Exchange signed an agreement in 2018 on a pilot programme<sup>96</sup> of pre-listing support for SMEs, which is expected to aid in the development of the domestic capital market. The two-year programme is aimed at firms that want to obtain funds on the capital market via an IPO or bond issuance. SMEs based in Slovenia were able to enrol in the programme (by 31 August 2018), whether family firms, private firms in need of additional funds, or start-ups that are already generating income and are in need of extra capital. The EBRD offered the selected firms a

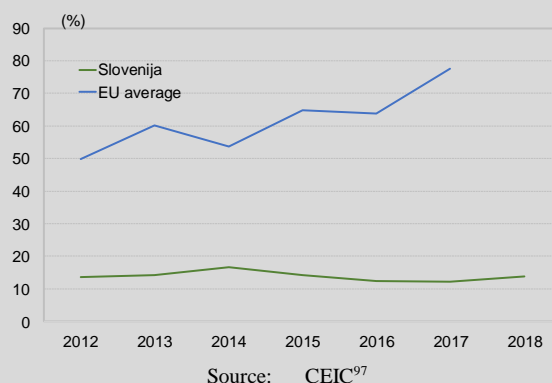
<sup>95</sup> NLB d.d. confirmed the issuance of subordinated bonds with a nominal value of EUR 45 million in May.

<sup>96</sup> For more information (in Slovene), see <http://www.a-tvp.si/novica?newsID=691>.

comprehensive programme of technical assistance and advice tailored to their individual needs for capital market financing. The programme can include operational, technical and managerial advice, and support for raising standards of corporate governance, financial management and reporting.

The lack of development in the domestic capital market is also seen in the ratio of the market capitalisation of shares listed on the stock exchange to GDP. The ratio in Slovenia has ranged between 12% and 15% in recent years, while in the EU it has been increasing in recent years, and exceeded 70% in 2017 measured against nominal GDP.

Figure 5.20: Ratio of market capitalisation of quoted shares to GDP



The selling pressures that swept over stock markets in the late months of 2018 had eased by the end of the year, and stock markets saw positive moves in the first quarter of 2019. The representative share index for western Europe (SXEE) remained down in year-on-year terms at the end of March 2019, despite the return of investor confidence, while the S&P 500 in the US was up 7.3%. Share valuations in western Europe as measured by the P/E ratio are currently below their average over the last 15 years, while American share valuations remain slightly above their 15-year average.

Figure 5.21: Changes in selected stock market indices

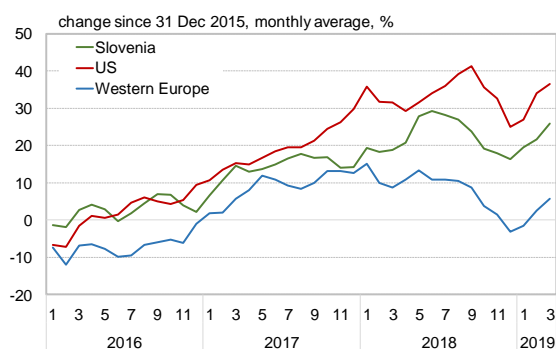
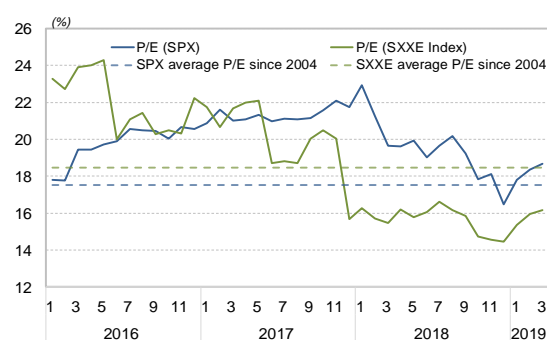


Figure 5.22: P/E ratio for stock market indices



The risks that could adversely hit share prices remain the same as in 2018. The risk of a no-deal Brexit has temporarily diminished with the extension of the deadline, but could increase again over the coming months unless there is progress in passing the withdrawal agreement. The ongoing slowdown in economic growth in the euro area and the uncertainty surrounding global trade caused by potential additional protectionist measures by the US could trigger selling pressures on stock markets in the coming months.

**Low interest rates continue to dictate the situation on the bond market.** The required yield on 10-year German government bonds was again negative in March 2019, while the required yields on other euro area 10-year government bonds also declined. The decline was driven by the slowdown in the euro area economy and the announcement of a new series of TLTROs (TLTRO-III).<sup>98</sup> The required yield on 10-year Italian government bonds remains high, owing to the further deterioration in macroeconomic indicators and the

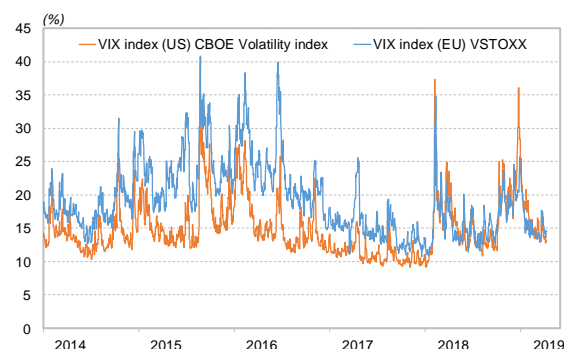
<sup>97</sup> For more information, see <https://www.ceicdata.com/en/indicator/slovenia/market-capitalization--nominal-gdp>

<sup>98</sup> For more, see the *Bank profitability* subsection.



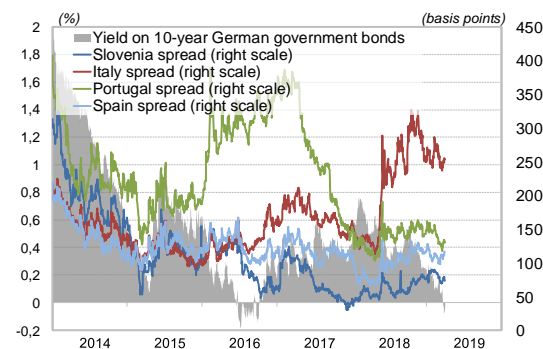
political uncertainties in the country. The spread on the Slovenian benchmark 10-year bonds also remains low, thanks to the favourable macroeconomic situation.

Figure 5.23: Volatility on stock markets



Source: Bloomberg

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



### Net investments by residents and non-residents

**Residents made net sales of foreign shares and net purchases of foreign bonds in the first quarter of 2019, while non-residents recorded a net increase in investments in domestic securities.** All institutional sectors recorded net sales of foreign shares, most notably mutual funds and pension companies (EUR 29 million in total). All domestic institutional sectors purchased foreign bonds, particularly those issued in the euro area (EUR 128 million). The largest net purchases of foreign bonds were made by insurance corporations and pension funds, in the net amount of EUR 125 million. Non-residents' net investments in domestic shares (mainly in unquoted shares) increased to EUR 474 million in the first quarter of 2019, primarily as a result of the transfer of ownership of firms sold in 2018 (an insurance corporation, a bank and a food firm), while the increase in non-residents' net investments in debt securities was primarily driven by the positive net effect of the issuance of a new 10-year government bond as 11-year government bonds matured. Without this effect, non-residents' net investments in domestic debt securities would have declined.

Figure 5.25: Net outward investments by residents

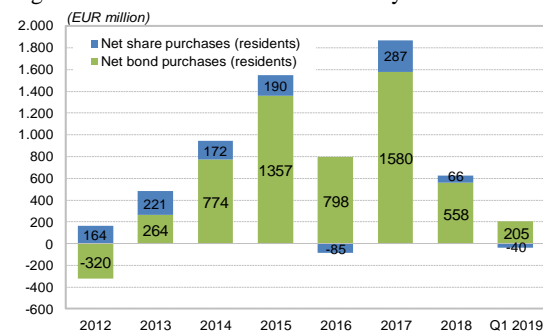
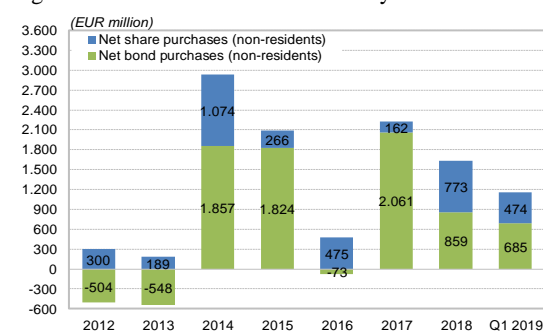


Figure 5.26: Net inward investments by non-residents



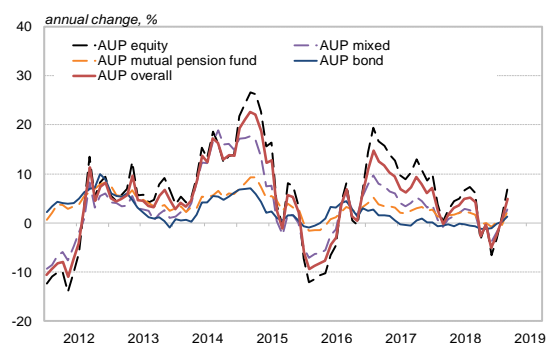
Sources: KDD, Bank of Slovenia

### Mutual funds

**The uncertainty on stock markets is being reflected in a decline in the average unit price, and increased volatility in inflows into funds.**<sup>99</sup> After declining in late 2018, mutual funds' assets under management amounted to EUR 2.7 billion at the end of March 2019, up 3.5% in year-on-year terms, as a result of value gains on the markets. The volatility of net inflows into funds also increased in the rising uncertainty on the markets. Net inflows were negative in 2018, but re-entered positive territory in the first quarter of 2019 thanks to relatively stable net inflows from households. Mixed funds recorded net inflows in the first quarter of 2019, as they had in 2018. Bond funds also had a positive net inflow in the first quarter, having recorded net withdrawals in 2018, like equity funds. Households remain the main source of net inflows into funds, although even they sharply reduced their net inflows in the second half of 2018.

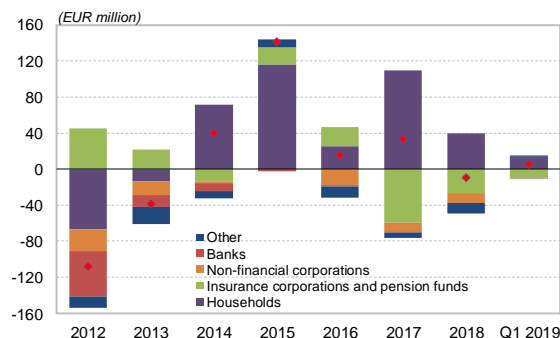
<sup>99</sup> A lack of available data means that only mutual funds are discussed below. According to the Securities Market Agency, investments in alternative investment funds (AIFs) operated by AIF operators established in Slovenia amounted to EUR 130 million as at 31 December 2018, while mutual pension funds' assets under management amounted to EUR 1.2 billion as at 31 March 2019.

Figure 5.27: Growth in average unit price by type of mutual fund



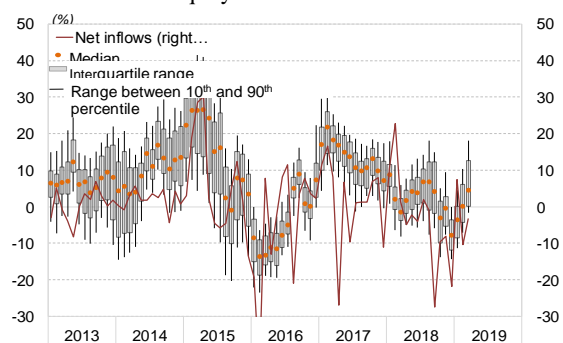
Source: Bank of Slovenia

Figure 5.28: Net inflows into mutual funds by investor sector



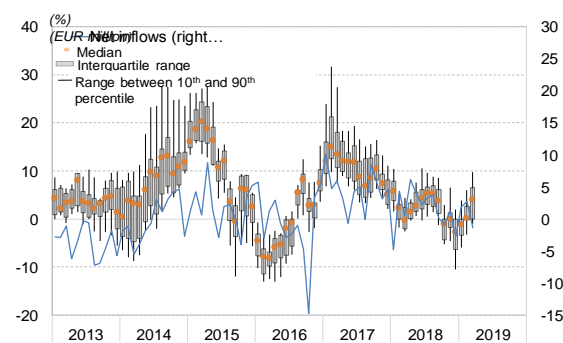
**The breakdown of assets under management by fund type remains stable, despite the increased volatility on the markets.** Equity funds continue to account for fully 62% of mutual funds' total assets under management, followed by mixed funds with 28.8%. This asset breakdown primarily gives rise to market 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. The average unit prices of individual equity funds were down more than 14% in year-on-year terms in December 2018, when the selling pressures were at their peak. Stock markets recovered in the first quarter of 2019, which was also reflected in positive year-on-year changes in the average unit prices of the majority of equity funds.

Figure 5.29: Distribution of annual returns and net inflows into equity funds



Source: Bank of Slovenia

Figure 5.30: Distribution of annual returns and net inflows into mixed funds



## **THEMATIC SECTION**

**1. A MODEL BASED ASSESSMENT: ARE HOUSE PRICES IN SLOVENIA OVERVALUED?**

**2. NEW DEVELOPMENTS IN EUROPEAN LEGISLATION (CRR II AND CRD V) IN THE MACROPRUDENTIAL REALM**

## 6 THEMATIC SECTION

### 6.1 A model based assessment: are house prices in Slovenia overvalued?

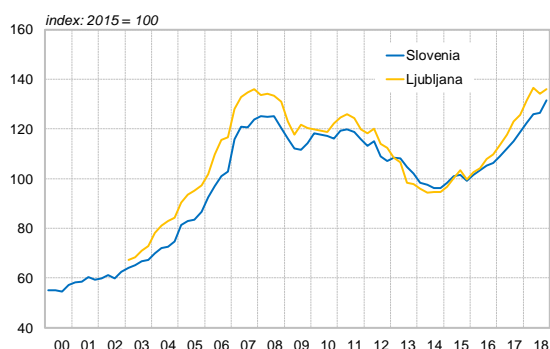
#### Summary

*There has recently been a strong growth trend in residential real estate (RRE) prices in Slovenia. In this thematic section we present an assessment of possible overvaluation with a model-based approach. The empirical model enables us to estimate the “fundamental house price” that results from the interactions of various supply and demand factors, and reflects the long-run equilibrium in the RRE market. Based on this equilibrium price, we are able to obtain a measure of the valuation gap, i.e. the extent of overvaluation or undervaluation. The model allows us to discuss the drivers of the long-term and transitory trends in house prices, and to make an unconditional forecast of house prices and the valuation gap. Our findings indicate that house prices are not misaligned with the fundamentals.*

#### Introduction

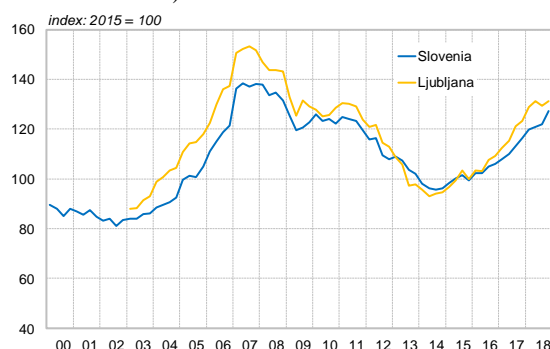
Annual growth in house prices in Slovenia overall, measured by the house price index and including both used and new-build flats, stood at 18.2% in Q4 2018 in nominal terms. This figure is the highest in the euro area, and continues a trend that has been present in Slovenia for the last two and a half years. Considering the importance of house prices to financial and macro stability, such growth necessitates an analysis as to whether house prices are sustainable. By the final quarter of 2018 prices had reached their peak of 2008 in nominal terms, although they are still below their peak value in real terms by 8.8% (and by 16.6% in Ljubljana).<sup>100 101</sup>

Figure 6.1: House price index (2015 = 100)



Note: In the right figure house prices are deflated using CPI with all components.  
Source: SORS

Figure 6.2: Real (deflated) house price index (2015 = 100)



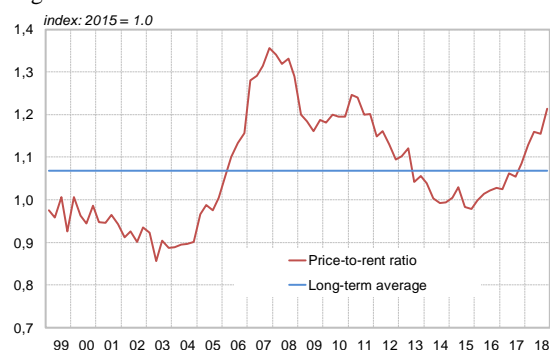
House prices are formed by the interaction of various supply and demand factors. Answering the question whether house prices are sustainable therefore requires identifying the major factors and a framework in which these factors can interact. We thus utilise an empirical macro model that facilitates estimation of the fundamental house price that results from the interaction of the said factors, and reflects the long-run equilibrium. Based on the equilibrium price, we are able to obtain an estimate of the valuation gap in house prices, i.e. the extent of overvaluation or undervaluation as the distance between the long-run equilibrium price and the observed price, where we aim to detect in case a significant overvaluation is present.

<sup>100</sup> The figures refer to used flats. This series is used instead of the data series for all flats, which includes new-build flats but is only available for a shorter period starting in 2007. The two series are similar over the available period.

<sup>101</sup> Whether there should be an upward trend in real house prices and whether we should expect the price to eventually surpass the peak of 2007 to 2008 depends on how costs of production factors (labour, land, capital and materials) evolve in real terms in the long run. For example, where land is scarce (in presence of urbanization, which needs to be considered together with the issue of demographic decline and aging as a balancing factor) and productivity gains in the construction sector are lower than the rest of the economy (which is possible given that the construction sector is labour-intensive and gains from new technologies might be limited), there can be an upward trend in construction costs and in real house prices.

Two simple but useful indicators that can help identify valuation gaps in house prices are the price-to-rent and price-to-income ratios. Rental markets serve as a substitute for housing that is sold, and the price-to-rent ratio appeals to this relationship between the two markets. The price-to-income ratio refers to the assumption that, in the long run, housing should constitute a constant share of household budgets (i.e. neither ever increasing nor decreasing).

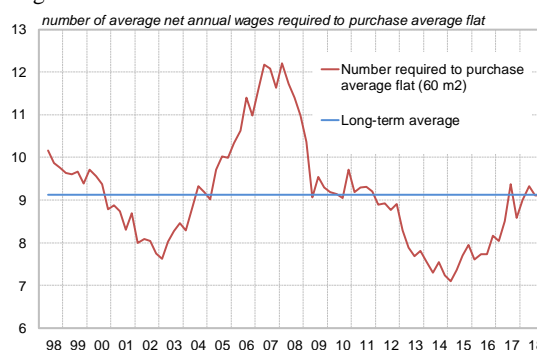
Figure 6.3: Price-to-rent ratio



Note: The figure on the left illustrates the ratio of the house price index to rents for used rental flats in Slovenia. Rents are a CPI component. Figure on the right illustrates the number of net annual wages required to purchase an average housing unit.

Source: SORS

Figure 6.4: Price-to-income ratio



The two indicators suggest house prices were overvalued in 2008, by around 20% and 30% respectively when compared with their long-term averages. They suggest the growth trend since 2014 follows a period of undervaluation after the crisis, when there was a substantial fall in house prices. However, the indicators differ with regard to their implications for the recent period. While the price-to-rent ratio suggests an overvaluation of 9.1%, according to the price-to-income ratio the actual price is not above its long-term average.

There are several drawbacks of these indicators. In the case of the price-to-rent ratio, the validity of this indicator depends on the efficiency of the rental market, and on whether this market constitutes a viable substitute. The rental market in Slovenia is only a small share of the overall housing market, and tenancies are not always rentals whose prices are determined freely by the market.<sup>102</sup> As a simple ratio of two variables, the price-to-rent ratio does not reflect changes in real costs of borrowing, due to trends in interest rates, inflation expectations, changes in banks' credit standards and regulations. In such cases, prices may still be thought to reflect the fundamentals even if the ratio deviates from its long-term average (because they are justified by objective factors). Furthermore, for both ratios the sample period can have a significant impact on the mean value that is taken as the benchmark.

### *A model of house prices in Slovenia, and estimating the valuation gap*

Gaps in house prices, where observed house prices fluctuate around a long-term trend, are not exceptions but the norm, as adjustments happen in the RRE market relatively slowly. The most significant reason is inelasticity in the supply of housing relative to variations in demand.<sup>103</sup> Slow adjustment leads to sustained periods of autocorrelated growth periods in prices, which nevertheless should converge back to equilibrium level as the wedge between construction costs and elevated prices drives construction firms to expand their supply, and attracts new firms to the market.<sup>104</sup>

<sup>102</sup> Tenancy accounts for 24.4% of the population in Slovenia, but the majority is at non-market rates, reduced rents or free, and the share of tenancy at market rent rates is only 5.4% (Source: Eurostat, EU-SILC survey, 2017).

<sup>103</sup> Changes in fundamentals (e.g. interest rates, income) that are not met by a corresponding change in supply are bound to have a large impact on price. In the RRE market, supply is limited to the existing housing stock in the very short run. New production is also limited by existing capacity. In the longer run capacity can adapt, and new projects have time to filter through the planning and approval processes. The more flexible the construction sector is, the faster the reversion to equilibrium would be. However, there are several other frictions that could prevent instantaneous adjustment in the housing market: sellers are prone to postponing sales in a downturn (transactions fall), moving involves substantial transaction costs, and houses are heterogeneous goods and it takes time to find a house that suits your needs and tastes (See Englund [2011] and Sorensen [2013] for a deeper discussion of adjustment in the RRE market).

<sup>104</sup> Slow adjustment and autocorrelated growth may also lead to over-optimism about future prices to the extent that the expectations of market participants are 'adaptive' (i.e. to the extent they extrapolate past developments into the future). Overvaluation is particularly a threat when it exhibits a 'bubble' character, where the belief that the prices will continue to grow becomes the primary reason for purchasing houses and investing in the RRE market and prices deviate from the fundamentals. In this case, the gap between the equilibrium price and the actual price can become even larger than what the supply inelasticity and other frictions would imply.

The main goal of the analysis is to introduce an empirical macro model that estimates the underlying equilibrium price in the RRE market, so that we can measure the size of the deviation between observed prices and prices that reflect the fundamentals in the long run. We employ a methodology proposed in the recent literature, described below, that enables us to distinguish the transitory trends in house prices from the permanent trend that reflects the long-run equilibrium price.

The model-based approach has two significant advantages over indicator-based approaches: First, it enables us to measure and know the uncertainty around the estimate. As such, we can draw 'confidence intervals' and make probabilistic statements. Expressing the valuation gaps in terms of standard deviations allows us to assess (i) how certain we can be about our assessment, and (ii) how normal or extreme the valuation gap is. Second, it provides a framework for forecasting, which can be developed further to run policy exercises and help calibrate policies.

We employ a 'Structural VAR'<sup>105</sup> (SVAR) methodology as proposed in Benati (2018),<sup>106</sup> which enables us to identify long-run equilibrium house prices. It is worth underscoring that we build on a structural approach, a SVAR, which entails identifying causal relationships. In our case, estimating the permanent trend, the long-run equilibrium price implied by the fundamentals to which observed house prices tend to revert, involves identifying in the data what drives house prices in the long run.

Most common approaches in SVARs require employing *a priori* reasoning with respect to how variables react to 'shocks' that are (pre-)defined in the model,<sup>107</sup> and restrictions are imposed accordingly when the model is estimated (so that the number of unknowns is reduced, and the causal relationships can be solved from available information). In our application, the methodology differs, as we aim to identify what drives the permanent trend in house prices without imposing any prior restrictions. Following Benati (2018), we identify the shock that explains the maximum fraction of the (forecast error) variance in house prices in a predetermined horizon (without employing assumptions about the nature and type of the shock).<sup>108</sup> Next, we employ a counterfactual: the permanent trend in real house prices is estimated by this single shock (by shutting the other shocks, as if they were not present in the data). The transitory component is then estimated as the difference between the observed house price and the permanent trend, which represents the extent of the overvaluation/undervaluation.

The variables in the model represent major factors of supply and demand in the RRE market: real house prices (house price index of used flats from the SORS), real net per capita disposable income, number of building permits, mortgage rate (fixed, up to 1 year), real construction costs (index from the SORS), construction employment (person hours) and general price level (measured by the GDP deflator). The selection of the model variables follows the so-called inverted demand approach,<sup>109</sup> which links real house prices to fundamentals such as income and interest rates, and proxy variables for supply and construction activity. The second factor influencing the selection of variables is the need to be parsimonious (as in VARs, where each variable enters estimating other variables in the model with their lags, the number of coefficients to be estimated increasing exponentially).

Data frequency is quarterly. The sample period is from Q1 2000 to Q4 2018, which is determined by data availability. The sample covers a whole cycle, with the pre-crisis build-up, the subsequent collapse in house prices, and the recovery. Variables are not differenced, as the methodology requires estimating the VAR in levels. Nominal variables are deflated by means of the GDP deflator. Except for the mortgage rate, variables enter the estimation in natural logarithms. The VAR is estimated with two lags.

Following the estimation procedure described above, we set the horizons as seven to ten years (the results presented below are estimated with a seven-year horizon, and horizons of up to a decade were used for robustness checks), and judge that this should be adequate for convergence to the long-run equilibrium<sup>110</sup>. In

<sup>105</sup> Vector autoregressions (VARs) constitute one of the most common methodologies employed in empirical macro. In VARs each variable enters with its lags in estimating the other variables in the model by having as many equations as there are variables in the model. Structural VARs are a collection of methodologies that enable us to go beyond correlations found in data from estimating a reduced-form VAR, and we can identify the causal relationships within the model.

<sup>106</sup> Empirical models of house prices and markets date back much earlier. However, these models often aim to forecast actual prices. Efforts to estimate the underlying fundamental price are quite recent, and there are a few examples in the literature.

<sup>107</sup> Structural VARs are essentially about identifying 'shocks', which are exogenous developments to the model (unpredictable within the model and orthogonal to other shocks in the model, but impacting the variables in the model in a systematic manner), so that we can establish causal relationships. We can define and/or identify as many shocks as there are equations in the VAR.

<sup>108</sup> The identification methodology was proposed in Uhlig (2003).

<sup>109</sup> Another approach is the rent-arbitrage approach, which is more often used where rental markets are well-developed and not heavily regulated. Inverted demand is the most common approach in the empirical literature in the EU.

<sup>110</sup> It is necessary to state the differences between short- and long-run equilibrium. For instance, shifts in monetary policy can affect demand in RRE market and house prices. Although the effect would most likely be transitory and imply a deviation from the long-run



addition to references from the literature supporting the choice of seven to ten years as the horizon for convergence,<sup>111</sup> one criterion was to have sensible ‘Impulse Response Functions’ (IRFs) (IRFs represent the responses of the model variables to the shocks in the VAR methodology). In line with the aforementioned hypothesis that house prices should represent a constant share of household income, the IRFs suggest that the identified shock has an initial impact on the income variable (i.e. it is a shock that is related to household income), which over time translates into house prices, and explains around 70% of the variation in house prices over a seven-year horizon.<sup>112</sup> The shock does not have a significant impact on mortgage rates or inflation contemporaneously, and the evolution of the mortgage rate does not suggest that this shock is associated with a relaxation in borrowing costs.

Figure 6.5: Observed and equilibrium house prices, and 8-quarter unconditional forecast

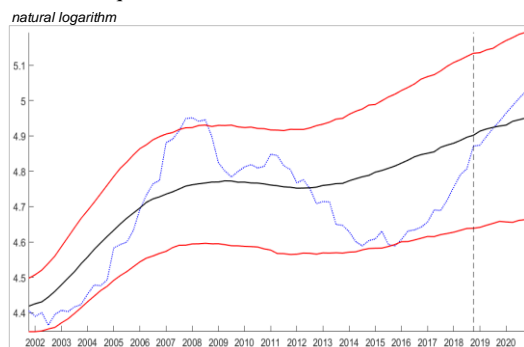
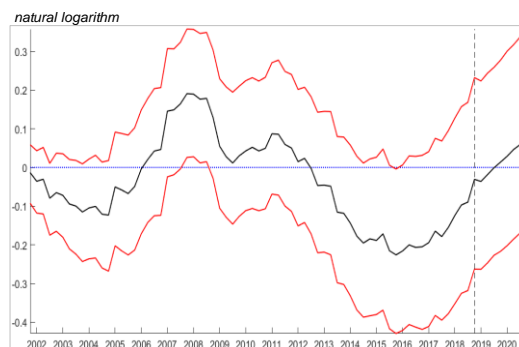


Figure 6.6: Estimated valuation gap and 8-quarter unconditional forecast



Notes: In the figure on the left the y-axis is the natural logarithm of the house price index. The blue line represents the observed price, while the black line gives the estimated equilibrium price. In the figure on the right the y-axis is the difference between the natural logarithms of the observed and estimated equilibrium prices. The black line is the median estimate of the transitory component in house prices. In both figures the red lines illustrate a confidence interval of one standard deviation. The grey line indicates Q4 2018, and the eight-quarter forecast starts in Q1 2019.

Source: Own estimates

The results show that overvaluation had reached its peak by 2008. The periods in which observed house prices fall outside the confidence intervals can be regarded as extreme valuation gaps. At its peak, the median estimate of the overvaluation in real house prices is around 20%. The estimates indicate that the growth seen in Slovenia over the last two and a half years has followed a period of undervaluation, and represents a recovery. Up to the end of Q4 2018, house prices were not misaligned with the fundamentals, although an upward trend is present and we forecast that observed prices will surpass the estimated fundamental price (i.e. the equilibrium price or the permanent trend) during 2019.

Our results suggest that prices are not misaligned with the fundamentals. The growth in house prices constitutes a recovery up until recently. While both the implied equilibrium price and the observed price increased, the latter was faster as it was converging to the trend from an undervalued territory. These trends can be explained by referring to the developments in fundamentals. The evolution of growth in net household disposable income and inflation-adjusted mortgage rates is provided below, and the two variables can help in the understanding of the recent developments in house prices. While there was recently a strong growth in income, there was also a downward trend in borrowing costs that eventually falls in the negative territory. The latter is most associated with the transitory component in house prices, and should help in closing the gap between the transitory component and the permanent trend.

The model forecasts that the observed price will surpass the estimated permanent trend during 2019.<sup>113</sup> Since we should expect house prices to fluctuate around their trend, as discussed earlier, periods of overvaluation cannot be ruled out. Building permits, total employment in construction and RRE investment share in GDP suggest that the supply side is reacting to higher prices, which may lead to lower growth in the coming periods.

trend, outcome is still an equilibrium that can be justified by an objective factor. As such, persistent accommodative monetary policy can lead to sustained periods of deviations from the long-run trend, which would count as overvaluation in our approach. One benefit from this approach is that there may be cases when the fundamental factors themselves are at high-risk levels and require attention.

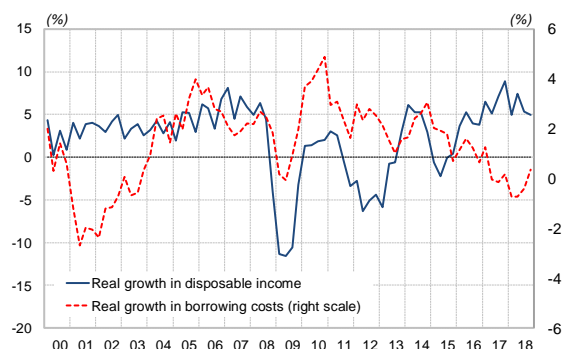
<sup>111</sup> Benati (2018) chooses horizons longer than ten years (15- and 25-year horizons). The fact that US data is available over a much longer period, and in monthly frequencies, is an advantage for studies that focus on the US housing market.

<sup>112</sup> The shock that explains the second largest share in house price variance for the seven-year horizon, around 20%, has its largest effect on house prices on impact, but its effect diminishes over time. This shock may arguably be related to house price expectations (optimism or pessimism).

<sup>113</sup> It is important to take into account the uncertainty around the estimate. Narrower confidence intervals would imply higher precision in estimating the permanent trend.

The strong growth recorded in house prices in Q4 2018, namely nominal annual growth of 18.2%, was the highest rate in the euro area (where the euro area average was 4.2%). This figure should not come as a total surprise, given the strong autocorrelation that is documented in the literature, which is near 0.9 for Slovenia, and taking into account that the annual growth rate in Q3 2018 was 15.1%.

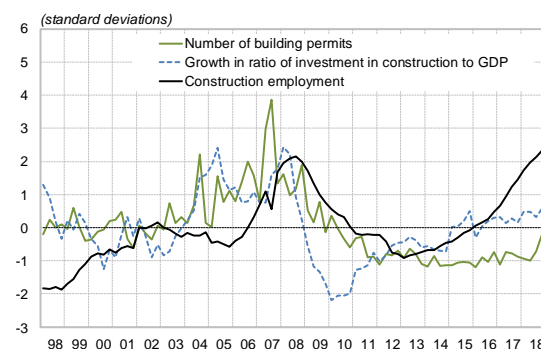
Figure 6.7: Income growth and cost of borrowing



Note: In the figure on the left, income growth is year-on-year growth in real net disposable income (left axis). Net disposable income is deflated by means of the GDP deflator. Real cost of borrowing is a proxy, and is calculated as the difference between the one-year mortgage rate and current annual inflation (right axis). In the figure on the right, construction employment is in person hours. All series are standardised for comparability.

Sources: SORS, Bank of Slovenia calculations

Figure 6.8: Construction activity: number of building permits, total construction employment and ratio of RRE investment to GDP



The empirical model of house prices in Slovenia enables us, in addition to making basic forecasts, to estimate the valuation gap in the RRE market. Our findings support the assessment provided in the section discussing the RRE market. The model-based analysis shows that the RRE market in Slovenia is valued near the long-run trend, while the recent growth trend can be considered a recovery, and could be explained by referring to developments in objective factors. We also estimate that house prices may surpass the long-run trend during 2019. While the mismatch between supply and demand needs to be considered as the primary driver behind the valuation gaps, sustained periods of autocorrelated price developments represent the risk of a bias in expectations. Moreover, the fundamentals themselves, such as interest rates that influence the transitory component of house prices according to our analysis, at times may imply risks that could be realised in the event of an adverse shock.

## 6.2 New developments in European legislation (CRR II and CRD V) in the macroprudential realm

### Introduction

Macroprudential policy in Slovenia is regulated at the top level by the Macroprudential Supervision of the Financial System Act,<sup>114</sup> which also provides the legal basis for the work of the Financial Stability Board. Macroprudential instruments are also set out by the Banking Act,<sup>115</sup> which regulates the legal status and prudential requirements in the Slovenian banking system, and by the CRR<sup>116</sup> and CRD IV<sup>117</sup> at EU level. The CRR applies directly, while the CRD IV was transposed into national law by the ZBan-2. The current legal framework at EU level, which encompasses the CRR and the CRD IV, sets out instruments in the area of macroprudential policy, such as capital buffers (CRD IV) and credit loss parameters, risk weights and national flexibility measures under Article 458 (CRR). The latter are primarily microprudential measures, but they can also be used for macroprudential purposes.

The current European legal framework envisages the use of several types of capital buffers, such as cyclical and structural buffers. The countercyclical capital buffer (CCB) is introduced in the event of increased cyclical risks, for example during an economic boom, to smooth the financial cycle. The structural buffers include the buffers for global systemically important institutions (G-SIIs) and other systemically important institutions (O-SIIs), and the systemic risk buffer (SRB). The main deficiency of the current framework is insufficient distinction between the purpose of individual buffers and Pillar 2 capital requirements, which have also been used for macroprudential purposes.<sup>118</sup> In light of these deficiencies and for the sake of simplification, there will be changes<sup>119</sup> to the EU legal framework, including the CRR and the CRD IV, in 2019.<sup>120</sup>

Table 6.1: Key changes to the regulation (CRR II) and directive (CRD V) in the macroprudential realm

MACROPRUDENTIAL INSTRUMENT/AREA	CURRENT CRR I AND CRD IV	NEW CRR II AND CRD V
<b>O-SII buffer</b>	- Cap: 2% of the individual institution's risk-weighted assets	- Cap: 3% of the individual institution's risk-weighted assets
<b>G-SII buffer / O-SII buffer versus SRB</b>	- The higher of the G-SII/O-SII buffer and the SRB applies to each institution, unless the SRB applies solely to domestic exposures (in which case the buffers are summed)	- The G-SII/O-SII buffer and the SRB are summed
<b>SRB</b>	- The SRB may be used to smooth long-term non-cyclical structural risks, if other measures under the CRD IV or the CRR (except Articles 458 and 459) are insufficient - The SRB cannot be activated on a sectoral basis, and applies to all exposures of all banks or certain banks - The SRB is activated for exposures (domestic or all), therefore only one buffer is activated under reciprocity	- The SRB may be applied to risks that are not addressed by instruments defined in the CRR, the CCB or the G-SII/O-SII buffer - The SRB may be activated for sectoral exposures (four main sectors are defined) - The SRB may be activated for individual risks from various exposure classes at credit institutions. Multiple buffers may be activated under reciprocity
<b>Pillar 2</b>	- Pillar 2 capital requirements may be defined for microprudential or macroprudential purposes	- The purpose is exclusively microprudential
<b>CCB</b>	- The ESRB is informed every quarter of the quarterly setting of the CCB rate	- The ESRB is informed of the quarterly setting of the CCB rate only when the rate changes
<b>Methodology for identifying G-SIIs</b>	- G-SIIs are assessed by a methodology prescribed at EU level, based on which the G-SII buffer rate is also determined	- The methodology for identifying G-SIIs is upgraded - An additional leverage ratio buffer for G-SIIs is introduced. It is set at 50% of the G-SII buffer

Source: Bank of Slovenia

<sup>114</sup> ZMbnFS, Official Gazette of the Republic of Slovenia, No. 100/13.

<sup>115</sup> ZBan-2, Official Gazette of the Republic of Slovenia, No. 25/15, with amendments.

<sup>116</sup> Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176 of 27 June 2013, with revisions and amendments).

<sup>117</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176 of 27 June 2013, with revisions and amendments).

<sup>118</sup> The review of the use of structural macroprudential policy instruments is based on that by the European Systemic Risk Board (ESRB), which is available at [https://www.esrb.europa.eu/pub/pdf/reports/esrb.report180227\\_finalreportmacroprudentialinstruments.en.pdf](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report180227_finalreportmacroprudentialinstruments.en.pdf).

<sup>119</sup> The changes enter into force 20 days after their publication in the Official Journal of the European Union, while the deadline for transposing the directive into national law is 18 months after the entry into force.

<sup>120</sup> The changes are summarised in this year's report on macroprudential policy by the ESRB, which is available at [https://www.esrb.europa.eu/pub/pdf/reports/esrb-32aae4bd95.report190430\\_reviewofmacroprudentialpolicy.pdf](https://www.esrb.europa.eu/pub/pdf/reports/esrb-32aae4bd95.report190430_reviewofmacroprudentialpolicy.pdf).

*Main new features of capital buffer arrangements*

**Several changes are envisaged for the sake of improving the transparency and effectiveness of macroprudential policy.** The main changes are examined below.

The cap for the O-SII buffer is being raised from 2% to 3%<sup>121</sup> of risk-weighted assets, while the cap for subsidiary O-SIIs is also being raised. One deficiency in the existing framework is the insufficient distinction between individual buffers, as a result of which the SRB has also been used to mitigate risks originating from O-SIIs. The higher cap on the O-SII buffer is expected to provide coverage of all of these risks.

It was observed that countries often used multiple buffers (e.g. the O-SII buffer and the SRB), but restrictions in legislation meant that they usually only applied the higher of the prescribed buffers. The updated directive envisages the summation of buffers, the sum being capped at 5% of the individual exposure. Higher buffers are possible in exceptional cases, but need the approval of the European Commission. Of the structural buffers, the O-SII buffer is currently in use in Slovenia.

The cap on the buffer for subsidiary O-SIIs<sup>122</sup> is being raised, which allows for greater flexibility in Slovenia's macroprudential policy. There are a significant number of credit institutions in Slovenia that are subsidiary banks of O-SIIs or G-SIIs from other EU Member States.

The notification system for changes to individual buffers has been simplified, and the role of the ESRB is being expanded to become an information centre. Under the new regulation, it is only necessary to notify the ESRB in the event of a change to the CCB. A reduction in the SRB requires only a notification, while an increase requires compliance with the caps or further consultation if the caps are exceeded. Both changes reduce the administrative burden associated with the use of buffers.

**Most changes under the new directive relate to the use of the SRB.** It will be an independent buffer, which may not be used to mitigate risks that can be covered by the use of the O-SII buffer or the CCB. This is important from the perspective of assessing whether it is reasonable to use the SRB, as under the current arrangements it is necessary to argue why such risks cannot be adequately covered by macroprudential measures such as the CCB or the O-SII buffer, or Pillar 2 capital requirements. This increases the transparency of the entire macroprudential framework.

The changes in the use of the SRB will allow for greater flexibility in mitigating various types of systemic risk. This relates to distinguishing the purposes of the O-SII buffer and the SRB, which can be applied to structural risks that do not originate from O-SIIs. Another key change relates to cyclical risks. To date the SRB has been defined for mitigating long-term non-cyclical risks, but under the new directive the reference to non-cyclical risks has been removed, which allows for its cyclical application, albeit not to risks covered by the CCB. At the same time the new directive envisages the application of the SRB to individual sectors and subsectors, which could allow for the use of the buffer to mitigate cyclical sectoral risks. This is particularly significant for the Slovenian banking system, in light of the importance of particular sectors (e.g. construction) in the previous crisis. This allows macroprudential requirements to be targeted more precisely at higher-risk sectors, and gives banks greater flexibility in lending to lower-risk segments.

As stated, it is possible to apply the SRB to aggregate exposures, and various buffers to sectoral exposures. Currently there are four sectors envisaged: non-financial corporations and households with no link to real estate (commercial or residential), and the two sectors linked to commercial real estate and residential real estate. Further segmentation of the sectors is envisaged, which will be drawn up by the EBA for the purpose of facilitating the setting of buffers for individual exposures.

The SRB will be able to refer to an individual risk. A single exposure may be subject to multiple buffers, if they address different risks, which also simplifies the reciprocation of measures. The transparency of the macroprudential framework will be increased, and the possibility of regulatory arbitrage will be reduced, as the risks and the buffers designed to address them will be clearly identified and announced publicly. All structural buffers will be published on the Bank of Slovenia website, together with a clarification of the institutions and risks that they address, unless to do so would threaten the financial stability of the system.

<sup>121</sup> The European Commission may also allow the use of a higher buffer rate.

<sup>122</sup> A buffer that does not exceed the higher of (a) 1% of the total risk exposure amount and (b) the G-SII or O-SII buffer rate at group level may currently be set for a subsidiary O-SII. Under the new arrangements, the buffer should not exceed the lower of (a) the sum of the G-SII or O-SII buffer (higher of the two) at group level and 1% of the total risk exposure amount, and (b) 3% of the total risk exposure amount or the higher buffer if approved by the European Commission.

In cases of reciprocity, the foreign buffer is only added to the domestic SRB if different risks are being mitigated. When two buffers are addressing the same risks, the higher of the buffers applies. The maximum period for the application of reciprocal measures has been extended, from one year to two years.

***Other new features and further evolution***

The additional changes relate to microprudential measures for exposures to the real estate market (e.g. risk weights), where modification for macroprudential purposes is possible. The demarcation of powers and responsibilities between domestic competent and designated authorities is envisaged.

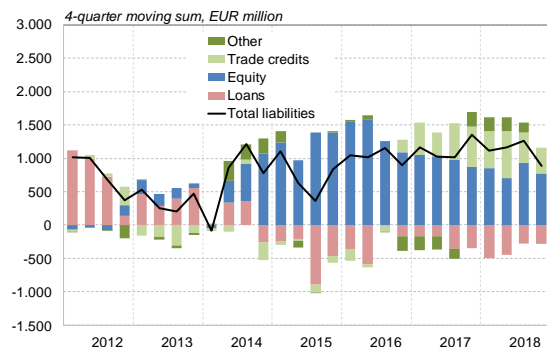
The changes also relate to macroprudential measures and the methodology for G-SIIs. The methodology for identifying G-SIIs has been upgraded. This represents an upgrade on the existing framework for G-SIIs, which follows the progress in the bank resolution framework. An additional assessment will be introduced, and will take account of the importance and size of cross-border banking activities outside EU Member States participating in the Single Supervisory Mechanism, which means that the integrity of the Banking Union is taken into account. An additional macroprudential leverage ratio in the amount of 50% of the applicable G-SII buffer is being introduced. If the G-SII buffer for an institution stands at 4%, the minimum prescribed leverage ratio is thus 5% (3% minimum leverage ratio plus 50% of the G-SII buffer).

The revisions to the CRD and CRR were primarily undertaken with the aim of making changes in the microprudential realm. The macroprudential changes described occurred in order to compensate for changes made in the microprudential realm (e.g. the abolition of Pillar 2 measures for microprudential purposes). A review of the current macroprudential policy framework at EU level and the further evolution of macroprudential instruments can be expected. A formal review of the macroprudential framework should be undertaken by 2022, and then again every five years. In addition to the potential expansion of the aforementioned requirement to maintain an additional leverage ratio for G-SIIs to O-SIIs, developments can also be expected in the reciprocity of national macroprudential instruments and the creation of new macroprudential instruments for the non-banking sector.

## 7 APPENDIX

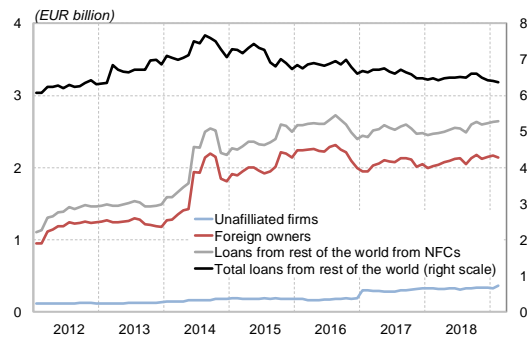
### NON-FINANCIAL CORPORATIONS

Figure 7.1: Non-financial corporations' financing flows from the rest of the world by instrument



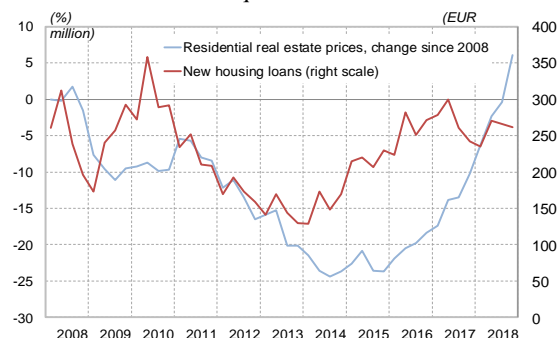
Source: Bank of Slovenia

Figure 7.2: Corporate loans from foreign non-financial corporations by ownership link



### REAL ESTATE MARKET

Figure 7.3: Residential real estate prices and new housing loans in the quarter



Sources: SORS, Bank of Slovenia

### PROFITABILITY

Table 7.2: Selected bank performance indicators, system overall

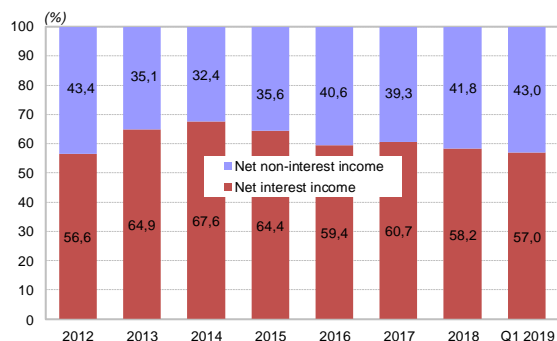
(%)	2011	2012	2013	2014	2015	2016	2017	2018	Q1 2018	Q1 2019
ROA	-1,06	-1,60	-7,70	-0,27	0,42	0,99	1,19	1,39	1,53	1,56
ROE	-12,54	-19,04	-97,30	-2,69	3,63	7,96	9,60	11,07	12,68	13,27
Cost-to-income ratio (CIR)	53,68	47,43	66,04	55,80	59,26	59,19	62,68	58,05	54,01	56,06
Net interest margin on interest-bearing assets	2,13	1,93	1,68	2,18	2,06	1,91	1,83	1,84	1,76	1,82
Net interest margin on total assets	2,02	1,83	1,59	2,09	1,96	1,82	1,75	1,75	1,67	1,73
Net non-interest margin on total assets	0,85	1,40	0,85	1,01	1,09	1,23	1,13	1,26	1,47	1,31
Gross income / average total assets (FIM)	2,87	3,23	2,44	3,10	3,05	3,05	2,88	3,01	3,14	3,04

Note: The figures for the first quarter in both years are calculated cumulatively, i.e. for a period of three months. FIM: financial intermediation margin.

Source: Bank of Slovenia



Figure 7.4: Breakdown of the banks' gross income into net interest income and net non-interest income



Source: Bank of Slovenia

Figure 7.5: Interest income, interest expenses and ratio of interest income to interest expenses

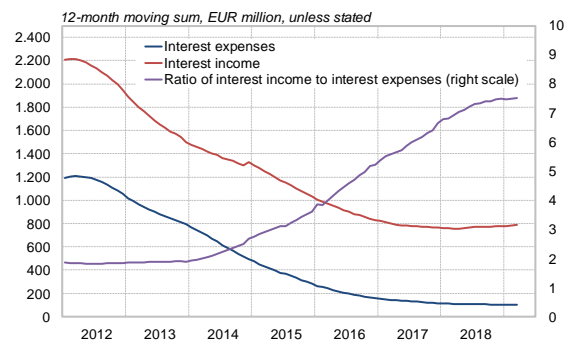
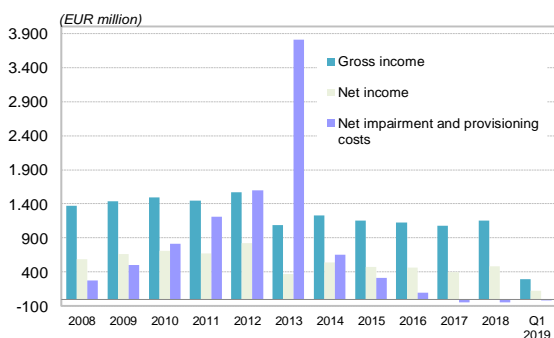
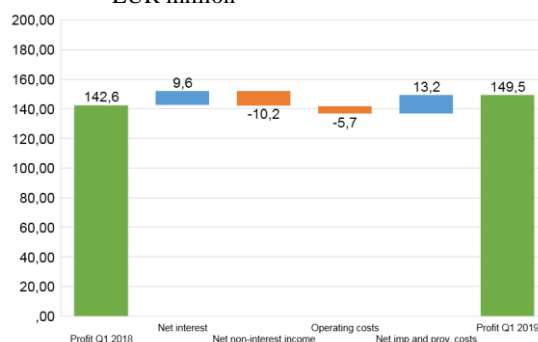


Figure 7.6: Gross income, net income, and impairment and provisioning costs, nominal amounts



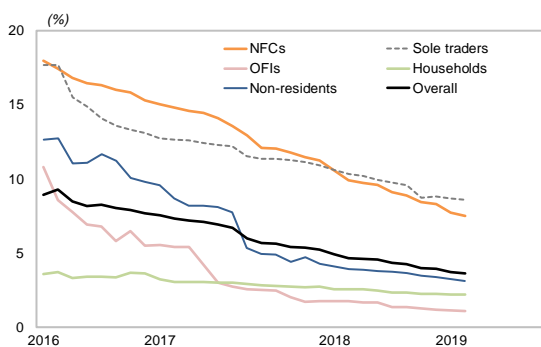
Source: Bank of Slovenia

Figure 7.7: Pre-tax profit and impact of changes in components of generation and disposal of gross income (Q1 2018 and Q1 2019), in EUR million



## CREDIT PORTFOLIO

Figure 7.8: NPE ratio by client segment



Source: Bank of Slovenia

Figure 7.9: Coverage of NPEs by impairments, provisions and collateral, by economic sector

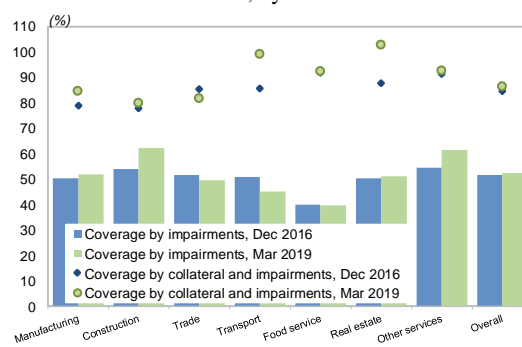
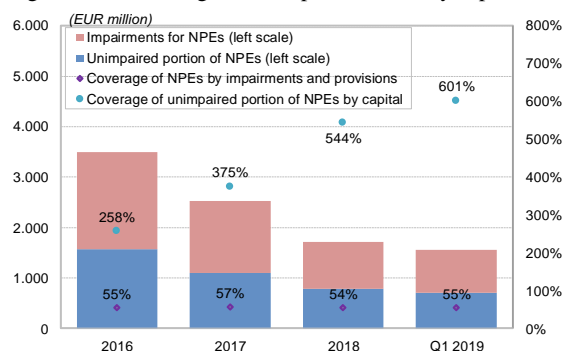


Figure 7.10: Coverage of unimpaired NPEs by capital



Source: Bank of Slovenia

Figure 7.11: Credit standards at banks

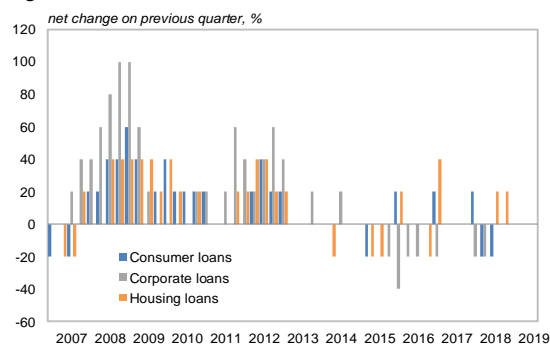
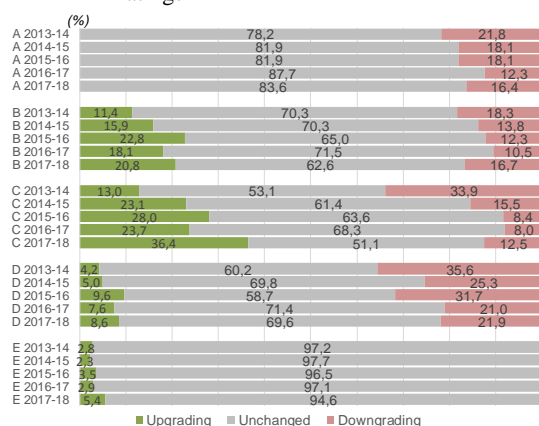


Figure 7.12: Breakdown of SMEs' transitions between ratings



Source: Bank of Slovenia

Figure 7.13: Breakdown of large enterprises' transitions between ratings

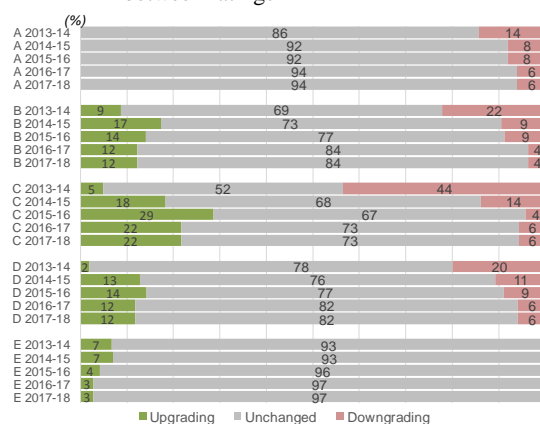


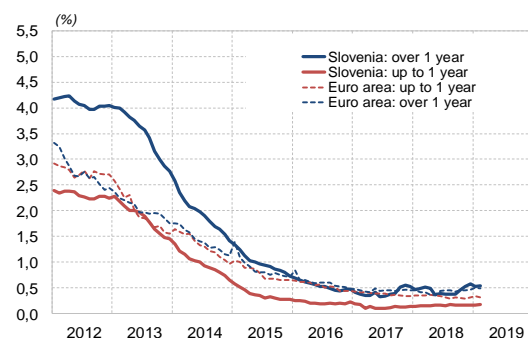
Table 7.3: Proportion of exposures under new contracts that had become NPEs after a certain number of quarters

Approved in	NPE ratio in subsequent quarters, %									
	t	t+1Q	t+2Q	t+3Q	t+4Q	t+5Q	t+6Q	t+7Q	t+8Q	t+9Q
Q4 2016	0,0	0,2	0,2	0,3	0,5	0,5	0,6	0,6	0,7	0,9
Q1 2017	0,0	0,0	0,0	0,2	0,2	0,3	0,7	0,7	0,7	
Q2 2017	0,0	0,0	0,1	0,1	0,2	0,2	0,3	0,3		
Q3 2017	0,0	0,3	0,5	0,7	0,9	0,9	1,0			
Q4 2017	0,0	0,1	0,2	0,3	0,4	0,4				
Q1 2018	0,0	0,0	0,0	0,0	0,2					
Q2 2018	0,0	0,1	0,1	0,1						
Q3 2018	0,0	0,0	0,0							
Q4 2018	0,0	0,3								
Q1 2019	0,0									

Source: Bank of Slovenia

## FUNDING, BANK LIQUIDITY AND INTEREST SENSITIVITY

Figure 7.14: Interest rates on new household deposits



Source: Bank of Slovenia

Figure 7.15: Change in stock of deposits by non-financial corporations by maturity

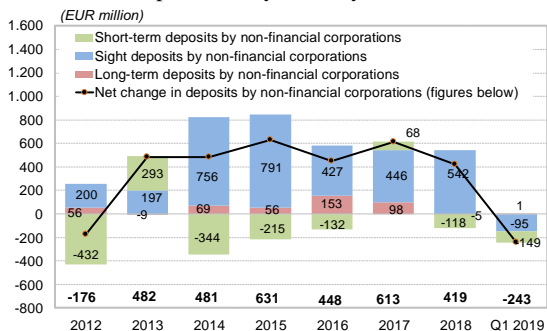
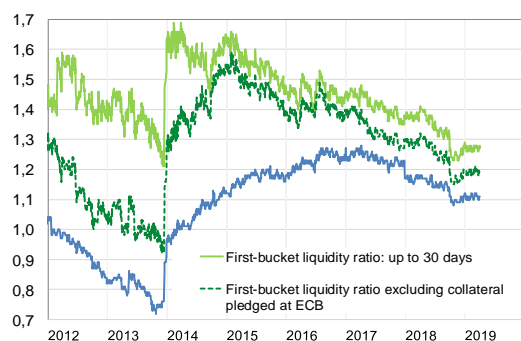
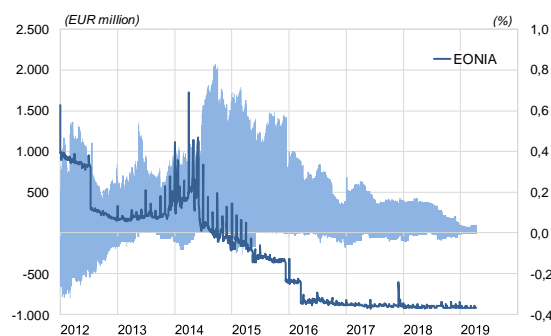


Figure 7.16: Daily liquidity ratios for the first and second buckets of the liquidity ladder



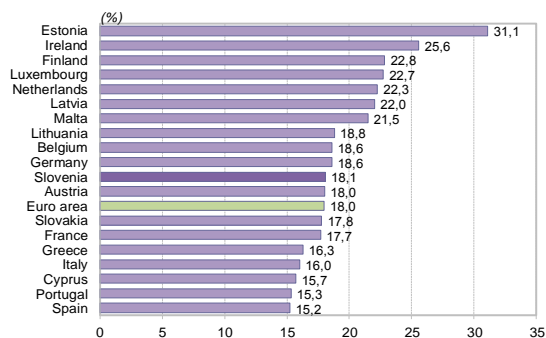
Source: Bank of Slovenia

Figure 7.17: Stock of unsecured loans of Slovenian banks placed and received on the euro area money market



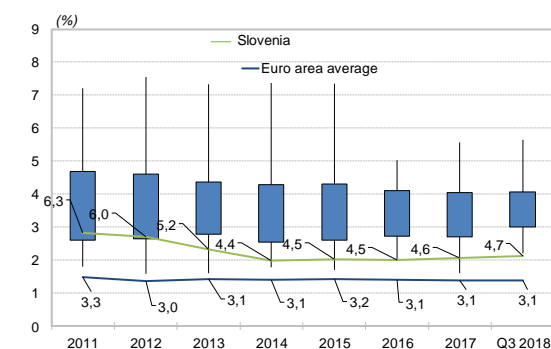
## BANK SOLVENCY

Figure 7.18: Total capital ratios by euro area country, September 2018, consolidated basis



Source: ECB (SDW)

Figure 7.19: Distribution of the ratio of capital requirements to total assets across euro area countries, consolidated basis



## NON-BANKING FINANCIAL INSTITUTIONS (FINANCIAL SYSTEM)

Table 7.4: Financial assets of the Slovenian financial sector

	Financial assets, EUR million			Breakdown, %			Ratio to GDP, %			Growth, %		
	2008	2017	2018	2008	2017	2018	2008	2017	2018	2008	2017	2018
Monetary financial institutions	48.776	39.547	39.926	66,2	54,5	53,2	128,5	92,0	86,9	12,3	1,2	1,0
Central bank	9.323	14.850	16.668	12,6	20,5	22,2	24,6	34,5	36,3	10,6	15,5	12,2
Non-monetary financial institutions	15.611	18.151	18.419	21,2	25,0	24,6	41,1	42,2	40,1	-12,7	3,4	1,5
insurance corporations	4.550	7.691	7.667	6,2	10,6	10,2	12,0	17,9	16,7	-3,3	3,7	-0,3
pension funds	1.358	2.685	2.741	1,8	3,7	3,7	3,6	6,2	6,0	4,8	4,7	2,1
investment funds other than MMFs	2.044	2.699	2.515	2,8	3,7	3,4	5,4	6,3	5,5	-52,5	8,8	-6,8
other financial institutions	7.659	5.077	5.496	10,4	7,0	7,3	20,2	11,8	12,0	1,1	-0,2	8,2
Total	73.711	72.548	75.013	100,0	100,0	100,0	194,2	168,7	163,3	5,7	4,4	3,4

Source: Bank of Slovenia

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