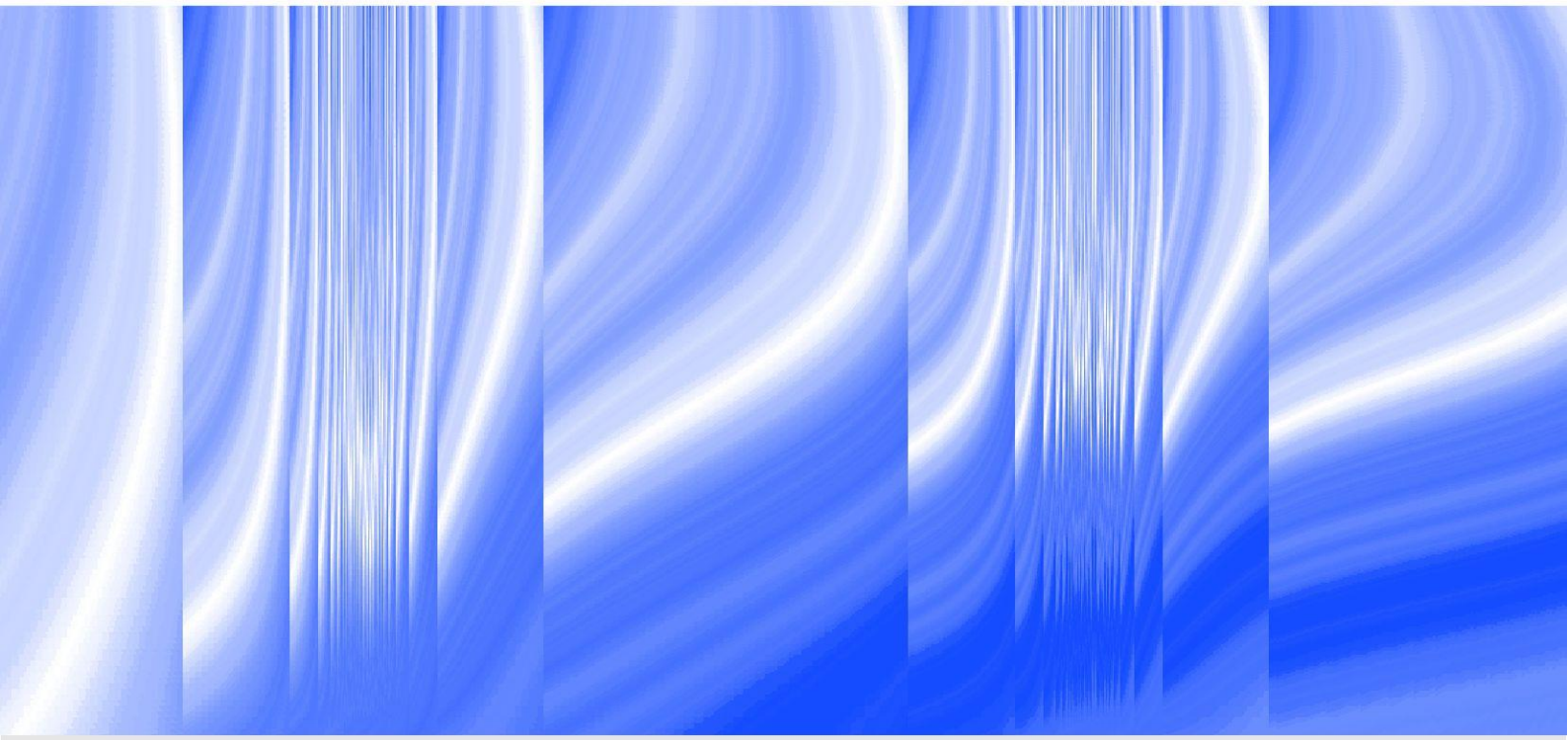
BANKA SLOVENIJE

BANK OF SLOVENIA

EUROSYSTEM

FINANCIAL STABILITY REVIEW



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Bank of Slovenia
Slovenska 35

1505 Ljubljana

Tel: +386 1 4719000
Fax: +386 1 2515516

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Contents

Boxes:

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 Asset Management Company
BLS	Bank Lending Survey
BoS	Bank of Slovenia
DSTI	Debt service-to-income ratio
ECB	European Central Bank
EMU	Economic and Monetary Union
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
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
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
OFIs	Other financial institutions
ROE	Return on equity
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
SSM	Single Supervisory Mechanism
SURS	Statistical Office of the Republic of Slovenia
TARS	Tax Administration of the Republic of Slovenia
TLTRO	Targeted Longer-Term Refinancing Operation
TR	Turnover ratio
VLTRO	Very Long-Term Refinancing Operation

EXECUTIVE SUMMARY

The Financial Stability Review at the end of 2018 highlights the key systemic risks to financial stability in Slovenia. Despite the profitability of the banking sector, income risk remains among the most significant risks over the medium term, primarily on account of slower growth in net interest income, while there remains a net release in impairments and provisions. The quality of the banks' credit portfolio has improved significantly in recent years. Individual banks with a large proportion of legacy non-performing exposures need to be more active in reducing their non-performing loans. The increase in deposits by the non-banking sector and also long-term loans to the non-banking sector is increasing the maturity mismatch between assets and liabilities, albeit at diminishing pace. The banks' favourable liquidity position means that the risk of maturity mismatch remains moderate. Analysis of the stability of deposits by the non-financial sector indicates that the recent growth in deposits by the non-financial sector is sustainable, and that the risk that the normalisation of interest rates will trigger the withdrawal of deposits from the banking system is very small, unless other developments occur simultaneously.

In the favourable economic situation and due to an imbalance between supply and demand, residential real estate prices have risen sharply over the last two years, particularly in Ljubljana, Koper and certain tourist destinations. Given the current price developments and the outstripping of supply by demand, the price-elastic demand and diminishing housing affordability, the imbalances on the real estate market could increase further in the future. However, high capital adequacy means that the banking system is today more resilient to potential shocks on the real estate market than during the last financial crisis. Growth in housing loans to households was moderate and stable in 2018. The credit standards for new housing loans are also relatively high according to the BLS: the average ratio of loan value to all forms of collateral or to the borrower's income at approval is low. It is recommended that banks maintain high credit standards for housing loans in the future, thereby reducing risks and the potential adverse consequences for the banking system in the event of a price reversal on the real estate market.

Table: Overview of risks in the Slovenian banking system

Systemic risk	Risk assessment							
	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Trend in risk	Risk assessme v Q4 2018	Trend in risk
Macroeconomic risk						⇨		⇨
Credit risk						⇨		⇨
Real estate market						⇧		⇧
Refinancing risk						⇨		⇨
Interest rate risk						⇨		⇨
Contagion risk and large exposure						⇨		⇨
Solvency risk						⇨		⇨
Income risk						⇨		⇨
Leasing companies						⇨		⇨

Colour code:

Source: Bank of Slovenia

In 2018 the banks continued to strengthen household lending, particularly consumer loans. The Financial Stability Review also highlights the measure adopted by the Bank of Slovenia in October 2018 under which the macroprudential recommendation for housing loans was extended to consumer loans. The aim of the measure is preventing an easing of credit standards in the area of consumer loans, and a large influx of new non-performing loans in this asset segment. The risks in the consumer loans market are moderate and manageable for now, but in the event of a reversal in the economic cycle and a consequent deterioration in the situation on the labour market, the risks to banks and households could increase, which could lead to a rise in the default rate among households.

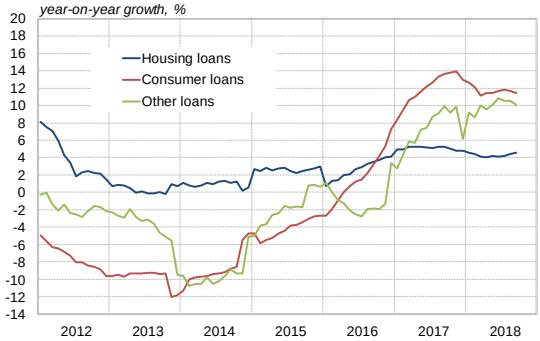
The financial position of households and firms remains good in 2018. The favourable macroeconomic environment and the positive outlook are expected to strengthen credit demand in the context of persistently low interest rates. The banking system's pre-tax profit is nevertheless expected to be smaller in the coming years than in 2017 and 2018. The fall in profit will be attributable to the need for additional impairments, which is a consequence of growth in turnover and the slowdown in economic growth. Borrowers' probability of default will therefore gradually increase over the coming years. Credit growth has recently been rather uneven between individual segments; the banks' exposures to households are increasing rapidly, which could increase the stock of high-risk assets at banks over the medium term. The macroeconomic environment remains stable, despite the expectation of a slowdown in economic growth. There is greater uncertainty in the international environment, but it is hard to predict adverse consequences to financial stability from the international environment.

1 BRIEF OVERVIEW

The **macroeconomic environment** in Slovenia is stable, and the risks to financial stability are relatively low, despite the expectation of a slowdown in economic growth in the coming period. The rise in protectionism and the approach of Brexit brought an increase in uncertainties in the international environment in the first half of 2018. Economic growth in the euro area and in Slovenia's most important trading partners is slowing, but remains stable. The current economic situation in Slovenia is favourable: GDP growth is broadly based, and remains significantly above the euro area average.

The indebtedness of Slovenian **households** remains low; the ratios of financial debt to GDP and to disposable income are among the lowest in euro area countries. The situation on the labour market is favourable, which is additionally improving the financial position of households. The risks to banks from the household sector currently remain low. In 2018 the banks continued to strengthen household lending, particularly consumer loans. Given the high growth in increasingly riskier consumer loans, which is being reflected in the approval of unsecured loans with very long maturities, in the event of a reversal in the economic cycle these risks could be realised.

Figure: Growth in household loans by type



Source: Bank of Slovenia

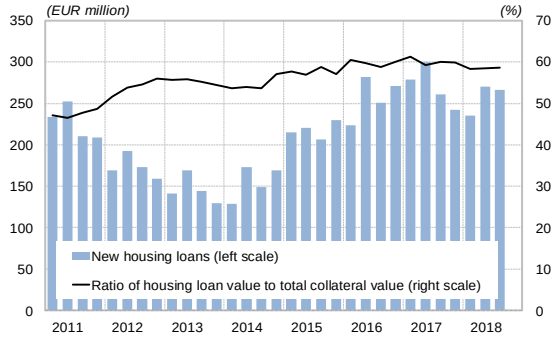
Growth in **housing loans** to households was stable in 2018, at 4.5%, down slightly on last year. The stock of housing loans amounted to EUR 6.2 billion in the third quarter of 2018. Demand for residential real estate and growth in the number of transactions are at a high level, although they slowed in the first half of 2018 as a result of a lack of supply on the real estate market, price-elastic demand in which potential buyers are no longer willing to track price levels, and diminishing housing affordability. In a period of rapid growth in real estate prices, for banks and households there is an increasing possibility of excessive take-up of risks that could be realised in the event of a price reversal. Despite the favourable economic situation and the positive outlook on the market, according to the BLS, banks are maintaining relatively high credit standards and loan terms for new housing loans, while credit standards for housing loans have gradually been eased since 2017 in the euro area overall. Credit standards are now tighter than during the last financial crisis.

The **risks to the banking system from the real estate market** remain moderate, owing to the banking sector's reduced exposure and the increased robustness of the banking system. The credit standards for new housing loans remain high, according to the LTV and DSTI indicators. The average LTV for new housing loans is relatively low: it stood at 58.6% in the third quarter of 2018. The Bank of Slovenia issued two recommendations for housing loans in September 2016, with caps on LTV and DSTI, and upgraded them further in late 2018. According to the latest assessment of compliance with the macroprudential recommendations for the residential real estate market, the average LTV and DSTI have not changed significantly over time and remain within the bounds of the Bank of Slovenia recommendation. The rate of owner occupation is high, while the proportion of real estate owners with a mortgage is among the lowest in the euro area.

The **risks on the real estate market are nevertheless increasing, residential real estate prices having risen** by 10% in 2017 and by 13.4% in year-on-year terms in the first half of 2018, the largest rise in the whole of the euro area. Growth was particularly pronounced in Ljubljana, Koper and certain tourist destinations. Residential real estate prices are already comparable to those of 2008, although housing affordability is still better than before the crisis, as household purchasing power has now increased, and lending terms are also better. Despite the more favourable lending terms, the ratio of new housing loans to annual transactions on the real estate market is declining. An assessment of the overvaluation or

undervaluation of residential real estate prices on the basis of the number of annual wages required for the purchase of an average housing unit compared with its long-term average suggests that residential real estate prices are still in balance, or have already become slightly overvalued in Ljubljana, and the overvaluation will increase as prices rise. Should price developments remain unchanged, the imbalances and uncertainties on the market will increase further.

Figure: New housing loans and LTV

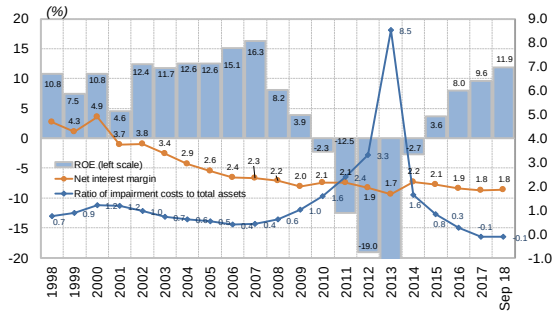


Source: Bank of Slovenia

After several years of deleveraging, **corporate** borrowing is increasing again, albeit on a healthier basis than in the pre-crisis period. Corporate financing flows, both debt and equity, have been positive since 2016, and are strengthening. Loans at domestic banks are growing, while net repayments of loans are continuing to be made to other major creditor sectors. Despite firms' favourable access to financing at banks, and the significant improvement in their financial position compared with several years ago, growth in bank loans remains low. The reduced demand for loans is primarily the result of a change in corporate financing methods, where other instruments have gained in importance, namely internal resources and trade credits. Corporate equity financing is increasing more than debt financing, which is contributing to a further reduction in leverage. The growth in trade credits over the last year is indicative of the still-existent need for corporate debt financing, and of a highly specific segment of the credit market that the banking sector could also approach with the right offer.

Bank profitability is improving, but the risk that the banks will not be able to generate stable income in the future remains relatively high. The recent growth in pre-tax profit has been attributable to the release of impairments and provisions, which has slowed since the summer of 2018, and growth in interest income on loans, which remains low for now. The stability of this growth is uncertain in the current conditions. Lending activity is focusing on households, particularly on fast-growing consumer loans. Corporate loans are still increasing, but at rates that remain outpaced by economic growth. In contrast to previous years, when the main limits on financing via bank loans came from the supply side (tighter credit standards in the years following the crisis, which curbed lending to heavily indebted and less creditworthy firms), it is now demand-side factors that are to the fore. The low corporate demand for bank loans despite low interest rates is primarily attributable to a change in the methods of corporate financing, and a shift in corporate ownership to foreign investors, who are changing the methods of financing at acquired firms.

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



Source: Bank of Slovenia

The **quality of the banks' credit portfolio** is much better than several years ago, and given the stable macroeconomic environment and the current forecasts for the coming years the inflow of new non-performing exposures (NPEs) does not entail increased risk to the banking system. The NPE ratio at the level

of the banking system stood at 4.5% in September 2018. Asset quality remains lowest in the corporate segment, despite a significant improvement in recent years. The further reduction of existing NPEs is mainly important at individual banks, particularly those that have a larger stock of legacy NPEs. The potential inflow of new non-performing claims as a result of increased lending will also require greater attention in the future, particularly in the event of a decline in credit standards for fast-growing consumer loans. The Bank of Slovenia extended the macroprudential recommendation to consumer loans in October 2018. However, given the favourable financial position and low default rate of households, these risks are currently assessed as manageable.

Deposits by the non-banking sector are continuing to increase, primarily on account of sight deposits by households. The extremely low deposit rates remain the reason for the increase in sight deposits. As a result of the simultaneous growth in long-term loans to the non-banking sector, the maturity mismatch between assets and liabilities is increasing, which is introducing potential instability in bank funding in the event of a sudden withdrawal of savers' assets from the system or switching between banks. The banks' favourable liquidity position means that funding risk remains moderate; given the high proportion of liquid assets, the banks' vulnerability to the potential adverse effects of maturity mismatch is low.

The **banking system remained well-capitalised** in the first half of 2018, although there are considerable variations from bank to bank. The banking system's capital adequacy improved as a result of growth in regulatory capital, and is higher than the euro area average. The banks are generating internal capital through good performance, which is important to the maintenance of stable capital adequacy, particularly at banks with higher credit activity.

Leasing companies are continuing to increase their equipment leasing business, while the value of new real estate lease agreements remains low. Portfolio quality is further improving, and profitability is continuing to increase. The systemic risks inherent in the performance of leasing companies remain at a low level.

Insurance corporations are continuing to record growth in gross written premium in all three insurance segments, while profitability has been affected by the presence of mass loss events and lower returns on financial assets. The nature of the insurance business means that underwriting risks and market risks constitute the majority of their capital requirements.

The cash surplus that arose in the corporate and household sectors as a result of high economic activity has not been transferred to the **capital markets**, but instead has remained in the most liquid forms of saving in 2018, such as sight deposits. This is attributable to the poorly developed domestic capital market, with low liquidity even when the stock market index has been rising.

2 INTERNATIONAL ENVIRONMENT AND ECONOMIC SITUATION IN SLOVENIA

Summary

Uncertainties in the international environment increased significantly in the first half of 2018, but economic growth remained solid. Economic growth in the euro area and in Slovenia's most important trading partners was stable in the first half of the year, while slightly slower growth can be expected in the second half of the year and in the upcoming period. For now the euro area remains robust with regard to the increased risks, to the fore among which are rising protectionism and the resulting increase in tariffs and other trade barriers, and the increasing likelihood of a no-deal Brexit. The economic situation in Slovenia remains good: GDP growth is broadly based, and remains significantly above the euro area average. Headline inflation in Slovenia remains above 2%, and the situation on the labour market is continuing to improve, which is evident in the fall in unemployment and in the gradual rise in gross wages. The macroeconomic environment in Slovenia remains stable, and is not increasing the risks to financial stability.

2.1 International environment

The relatively high growth in the global economy continued in the first half of 2018, although the risks to further growth increased. This has been reflected in forecasts of lower economic growth, primarily on account of the increase in tariffs and other trade barriers. Rising trade tensions meant that growth in global trade slowed in 2018, having increased sharply in 2017. The differences in economic growth between countries are also widening. Year-on-year economic growth in the euro area slowed slightly to 2.1% in the second quarter, but remains at a relatively high level. The main factor in the slowdown in economic growth is a smaller contribution from trade, while growth in investment was also slower in the second quarter than in the first quarter. Private consumption made the largest contribution to economic growth (0.7 percentage points), but its rate of growth slowed in the wake of a decline in consumer confidence. The confidence indicators suggest that economic growth in the euro area will slow in the second half of 2018, although it will remain close to 2% in the coming years according to forecasts by international institutions.

Table 2.1: European Commission forecasts of selected macroeconomic indicators for Slovenia's main trading partners

(%)	Real GDP				Unemployment rate				Inflation				Government deficit / GDP			
	2017	**2018**	**2019**	**2020**	**2017**	**2018**	**2019**	**2020**	**2017**	**2018**	**2019**	**2020**	**2017**	**2018**	**2019**	**2020**
EU	2.4	2.1	1.9	1.8	7.6	6.9	6.6	6.3	1.7	2.0	2.0	1.8	-1.0	-0.7	-0.8	-0.7
Euro area	2.4	2.1	1.9	1.7	9.1	8.4	7.9	7.5	1.5	1.8	1.8	1.6	-1.0	-0.6	-0.8	-0.7
Germany	2.2	1.7	1.8	1.7	3.8	3.5	3.2	3.0	1.7	1.8	1.9	1.6	1.0	1.6	1.2	1.1
Italy	1.6	1.1	1.2	1.3	11.2	10.7	10.4	10.0	1.3	1.3	1.5	1.4	-2.4	-1.9	-2.9	-3.1
Austria	2.6	2.7	2.0	1.8	5.5	4.8	4.6	4.4	2.2	2.1	2.1	2.0	-0.8	-0.3	0.0	0.1
France	2.2	1.7	1.6	1.6	9.4	9.0	8.8	8.4	1.2	2.1	1.7	1.6	-2.7	-2.6	-2.8	-1.7
Croatia	2.9	2.8	2.8	2.6	11.1	9.1	7.6	6.6	1.3	1.6	1.5	1.4	0.9	0.2	0.4	0.1
Slovenia	4.9	4.3	3.3	3.0	6.6	5.6	5.3	5.1	1.6	2.0	2.3	2.2	0.1	0.5	0.4	0.2

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

Slovenia's most important trading partners continued to record relatively high economic growth in the first half of 2018, although it is gradually slowing in the wake of an increase in risks. The increased risks and uncertainty are already being reflected in a decline in confidence indicators, most notably in industry and among consumers. The exception is construction, where confidence is continuing to strengthen in the wake of high expectations of new orders and employment. Confidence in industry declined as a result of a decline in output expectations and the consequent decline in estimated stocks of finished products, while the decline in consumer confidence was more broadly based, and included weaker expectations of the future financial situation, employment, the economic situation and savings. According to European Commission forecasts, economic growth will remain stable, albeit slightly lower, over the next two years in the majority of the most important trading partners. Continuing economic growth at a slightly lower rate can also be expected in the western Balkans and Russia.

Figure 2.1: GDP in selected countries

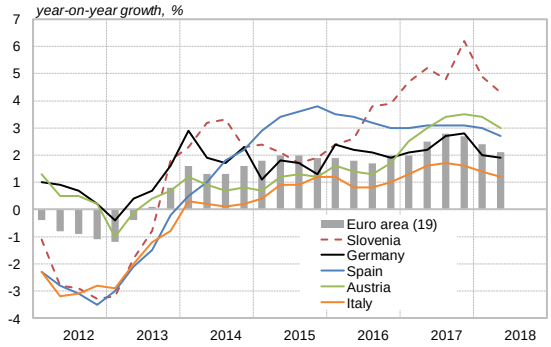
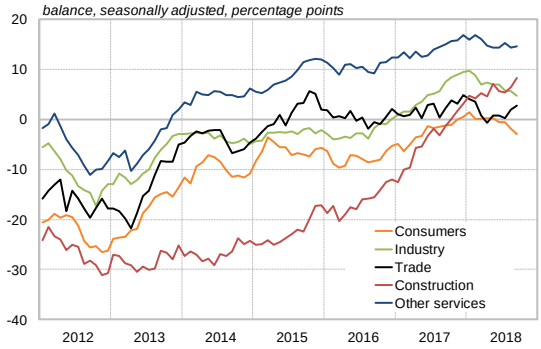


Figure 2.2: Confidence indicators in the euro area



Note: GDP figures are seasonally adjusted.
Sources: Eurostat, European Commission

With the exception of Italy, there has been no significant change in the required yield on government bonds in the majority of euro area countries, and it remains low, while the ratio of government debt to GDP declined in the favourable economic situation. Investors often require greater returns in countries with a higher government debt level, as the amount of debt has a significant impact on the country's ability to take appropriate measures and on debt servicing capacity. Yields on government bonds increased in Italy, on account of the failure of the state budget to comply with commitments previously given. The rise in required yields was also driven by the difficulties of the Italian banking sector and the high government debt. For now there is no sign in other euro area countries of any major transmission of risks from Italy in the form of a rise in required yields. Slovenian banks' exposure to Italy amounts to just over 6% of total foreign debt securities, and does not entail a major risk to the banking system. Another possible factor in the developments in required yields is the increasing divergence between the monetary policies of the Fed and the ECB. The Fed is continuing to tighten monetary policy by raising its key interest rate, while the ECB has indicated its intent to act similarly in the future, but for now is merely reducing the monthly purchases of securities. According to forecasts, the key interest rate in the euro area is expected to remain at zero at least until the summer of 2019, and its trajectory will depend on the convergence on the medium-term inflation target. Further divergence between the central bank interest rates in the US and the euro area could lead to increased migration of capital to the US.

Figure 2.3: Government debt

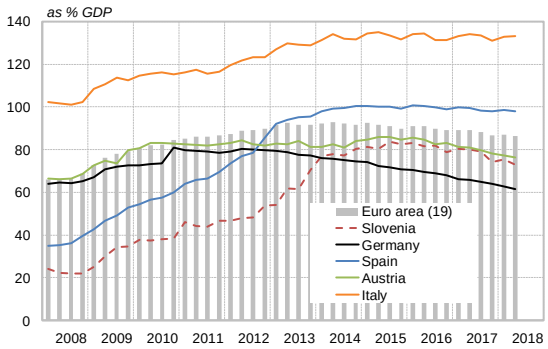
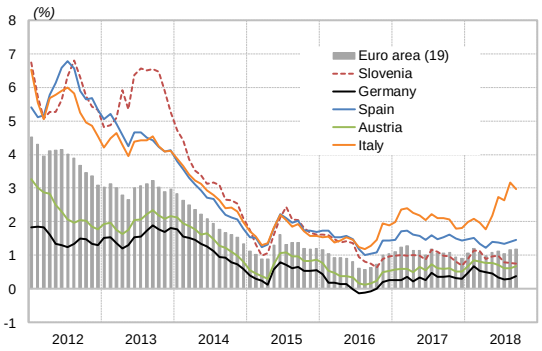


Figure 2.4: Required yield on 10-year government bonds



Source: Eurostat

Headline inflation in Slovenia has remained above 2% for two consecutive quarters, and was comparable to inflation in the euro area overall in the third quarter. Despite the favourable economic situation, core inflation in Slovenia remains low, and averaged 1.1% in the third quarter. The main factors in price developments were the rise in oil prices and, domestically, rises in services prices. Domestic and international institutions are also forecasting inflation of close to 2% over the next two years. The increased risks are already being reflected in stock market indices, as is evident in the developments in the STOXX Europe 600 and the S&P 500 in the US. There are still a number of risks present in Europe, which are increasing uncertainty and are being reflected in share indices. In addition to the aforementioned risks in Italy, the approach of the date for the UK's exit from the EU is increasing the risk of a no-deal Brexit, which could have a direct impact on Slovenia's most important trading partners, and an indirect impact on Slovenia. A no-deal Brexit could also bring an increase in other risks. Brexit's direct impact on Slovenia is negligible, given the relatively small trade between the two countries, and Slovenian banks' exposure of less than 4% of

total foreign debt securities. The euro area continues to see low valuations in the banking sector, and the broader bank index fell sharply in 2018.

Figure 2.5: Inflation (HICP)

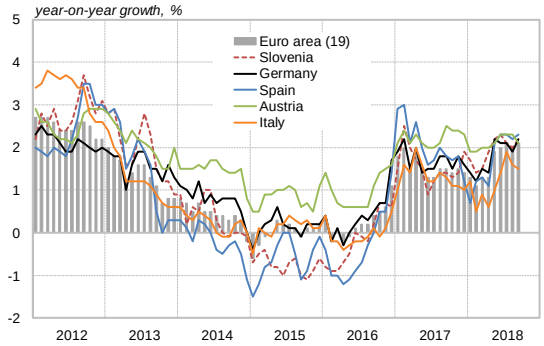
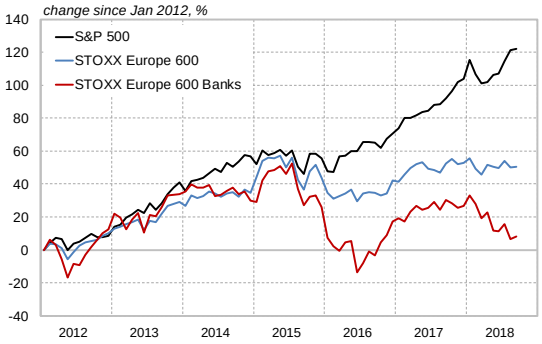


Figure 2.6: Change in stock market indices



Source: Eurostat

2.2 Economic situation in Slovenia

Economic growth in Slovenia was high over the first three quarters of 2018, and remained among the highest in the euro area. GDP over the first three quarters of 2018 was up 4.5% on the same period of 2017, and the growth was broadly based. The largest contributions to economic growth came from gross investment, net exports of goods and services, and household consumption. Growth in household consumption nevertheless remains moderate, despite the favourable situation on the labour market, including growth in gross wages, while consumer confidence has declined in recent months. Growth in gross fixed capital formation was high, and was attributable to investment in buildings and infrastructure, and investment in machinery and equipment. Despite the deteriorating situation in the international environment, foreign demand remained high in the first three quarters of 2018, and was a factor in stronger growth in exports. The contribution made to GDP growth by net exports of goods and services reached 1.7 percentage points in the third quarter, and remained a major factor in economic growth, although slightly slower growth in exports was evident in the third quarter. The economic sentiment saw a decline in optimism over the first nine months of the year, which was followed by a significant upward correction in October. Economic growth in 2018 is expected to exceed 4%, according to forecasts by domestic and foreign institutions.

Figure 2.7: GDP and contributions to GDP growth

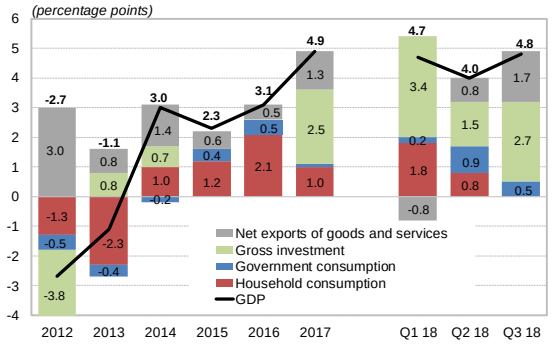
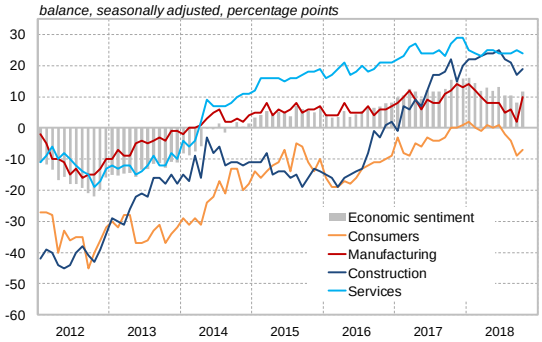


Figure 2.8: Confidence indicators



Source: SURS

The high economic growth is also bringing an improvement in the public finances, which is being reflected in Slovenia's stable credit ratings. In the summer of 2018 Standard and Poor's raised the outlook for Slovenia from stable to positive, and could raise the credit rating in the future in the wake of sustained economic growth. The rating agencies judge Slovenia's economic growth to be stable and robust, and at the same time do not see any major macroeconomic imbalances. The agencies also highlight the visible progress made towards greater fiscal sustainability in Slovenia, and the decline in the ratio of government debt to GDP in the wake of high economic growth.

Table 2.2: 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	stable	8 Sep 2017
Fitch Ratings	A-	stable	23 Sep 2016

Source: Ministry of Finance

The ratio of saving to GDP increased sharply in the first half of 2018, while investment is also gradually increasing. The saving rate increased in the first half of the year in the wake of growth in disposable income, despite the persistently low interest rates on deposits. The ratio of investment to GDP also strengthened gradually, albeit by less than expected in the favourable conditions for investment, as it is mainly investment in construction that is strengthening during the rise of a new government investment cycle. The situation on the labour market again improved sharply in the first half of the year, with high growth in employment and a fall in the surveyed unemployment rate to 5.2%. The unemployment rate is falling fast, and is approaching its pre-crisis level, while in surveys numerous firms are already reporting difficulties in hiring qualified staff. Firms are increasingly compensating for the shortage of domestic labour by importing foreign labour, most often in sectors with below-average wages, which is one of the reasons for the slower growth in the average gross wage. Growth in the average gross wage averaged 3.6% in the first half of the year, while rising inflation means that real wage growth has slowed, reaching 1.7% in August. Higher wage growth can be expected in the future, depending on the limiting factors on the labour market, the outcome of the government's negotiations with public sector trade unions, and the strength of economic growth.

Figure 2.9: Saving and investment

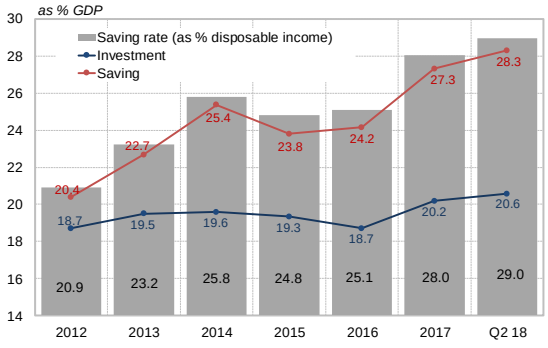
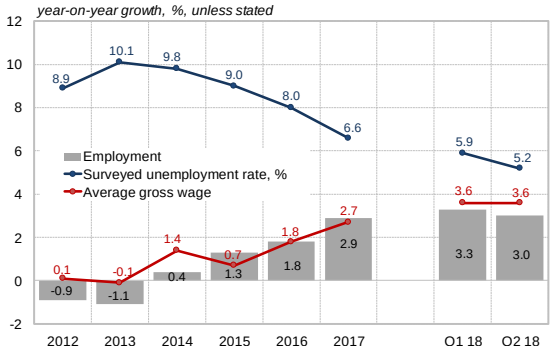


Figure 2.10: Employment, unemployment rate and gross wages



Source: SURS

The net financial position of the institutional sectors expressed as a percentage of GDP is declining, primarily as a result of reduced exposure on the part of the government and non-financial corporations. The net financial position against the rest of the world has been gradually diminishing since 2014 as a result of the improved economic situation, and the impact of fiscal consolidation and the consequent decline in the need for government borrowing. In terms of stock, the net financial position of the financial sector is still gradually diminishing, as a result of ongoing deleveraging. The net creditor position of non-financial corporations in annual transactions declined in the favourable economic environment, partly as a result of the slight increase in investment activity. Despite the ever-improving situation on the labour market and despite the growth in disposable income, households are strengthening their net financial position through high growth in saving, which is more intensive than consumption despite the less-encouraging environment for saving.

Figure 2.11: Net financial position of institutional sectors, stocks

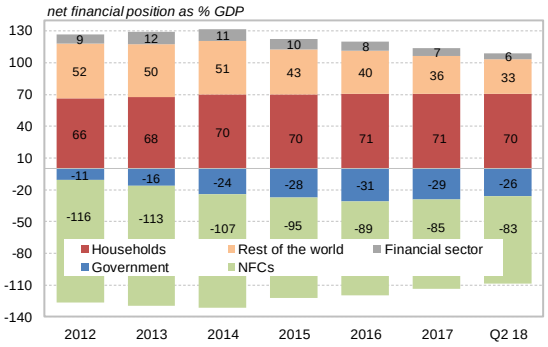
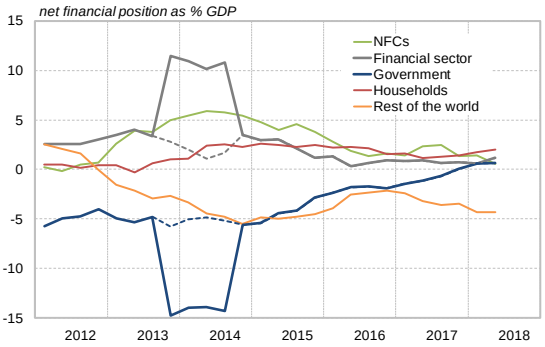


Figure 2.12: Net financial position of institutional sectors, annual transactions



Note: Annual transactions are calculated as four-quarter moving sums. Transactions excluding the effects of the recapitalisations at the end of 2013 are illustrated in dotted lines for the financial sector and the government sector.

Source: Bank of Slovenia

3 HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS

3.1 Households

Summary

The indebtedness of Slovenian households remains low; the ratios of their financial debt to GDP and to disposable income are among the lowest in euro area countries. The situation on the labour market remains favourable, and the household financial position is improving, as a result of which the risks to banks from the household sector remain low. The banks continued to strengthen their household lending activity in 2018, most notably in consumer loans. Owing to longer maturities and a rise in unsecured lending, the high growth in consumer loans could increase the risks to the banking system in the event of a reversal in the economic cycle. The Bank of Slovenia therefore extended the macroprudential recommendations for housing loans to consumer loans.

Household assets and debt

Disposable income and final consumption expenditure increased in the first half of 2018 in the favourable economic situation. Household disposable income amounted to EUR 26.5 billion in the first half of the year, up 5.3% in year-on-year terms, primarily as a result of the improved situation on the labour market. The relatively high growth in disposable income was a factor in growth in final consumption expenditure, which in the first half of the year was up 4.6% in year-on-year terms. After several years of stagnation and low growth, the falling unemployment rate and the gradual wage growth are now being reflected in strengthened growth in final consumption expenditure, but less so in gross investment, which remained at EUR 1.6 billion in the second quarter of 2018. Gross saving again increased sharply, reaching a record level of EUR 3.8 billion, despite the less-encouraging environment for saving. While the situation on the labour market remains favourable, further growth in disposable income and final consumption can be expected in the future, while gross investment can be expected to increase should the optimistic expectations on the real estate market remain.

Figure 3.1: Disposable income and final consumption expenditure

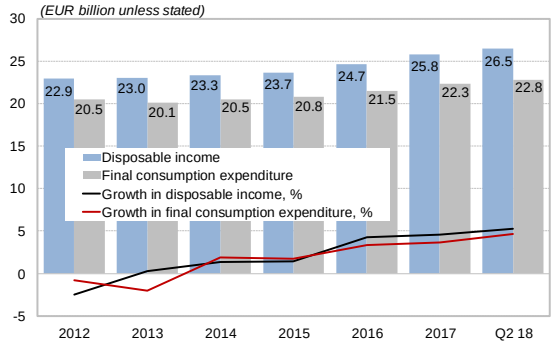
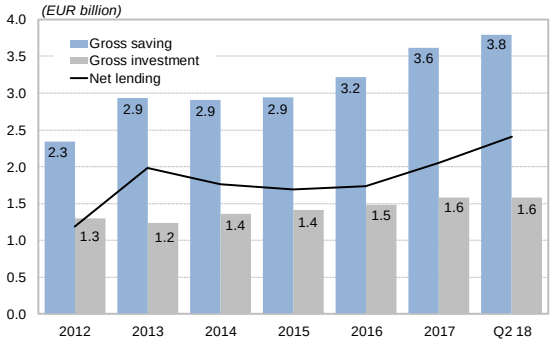


Figure 3.2: Household saving and investment



Source: SURS

Household indebtedness remains relatively low. Slovenian households' financial liabilities increased by EUR 400 million in the first half of 2018 to EUR 13.8 billion, while their financial assets increased by EUR 1.2 billion to EUR 45.1 billion. The household sector's net financial assets thus increased to EUR 31.3 billion at the end of June 2018. In the first half of 2018 the ratios of household financial assets and financial liabilities to GDP in Slovenia remained similar to those from 2017, while the gap with the euro area average also remained similar. Slovenian households' financial liabilities amount to 31% of GDP, less than half of the euro area average figure, while their financial assets amount to 102% of GDP, again less than half of the euro area average. Despite rising, household debt as a proportion of annual disposable income remains at 52.2%, while it is gradually declining as a proportion of financial assets, reaching 30.6% in the second quarter. The relatively low indebtedness of Slovenian households and the faster increase in financial assets relative to liabilities are not increasing the risks to the banking system from the household sector.

Figure 3.3: Household financial assets and liabilities

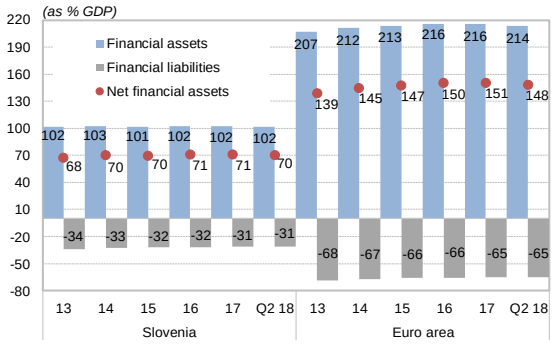
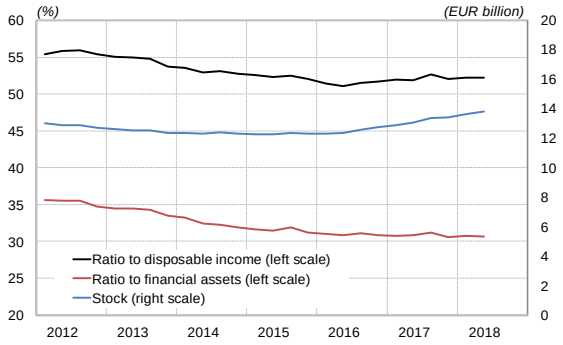


Figure 3.4: Household financial liabilities



Source: ECB (SDW)

The structure of Slovenian households' financial assets was unchanged during the first half of 2018, and is indicative of risk aversion. Interest rates on deposits have been close to zero for three years now, but Slovenian households are nevertheless holding half of their assets in currency and deposits. The average proportion of currency and deposits in the euro area is significantly lower: they account for a third of total financial assets. In the context of low interest rates, and a favourable economic environment and outlook, Slovenian households hold a relatively low proportion of their financial assets in higher-risk investments such as shares and life and pension insurance. The equivalent figures in the euro area overall are higher by more than a half, which reflects Slovenian households' lower appetite for risk and the low willingness to undertake long-term saving in various forms of insurance. Slovenian households' transactions in pension insurance, shares and other equity remain negligible compared with their transactions in deposits, which amounted to almost EUR 570 million in the first half of 2018.

Figure 3.5: Breakdown of stock of household financial assets

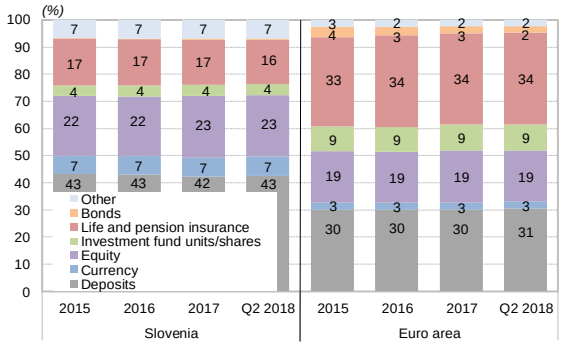
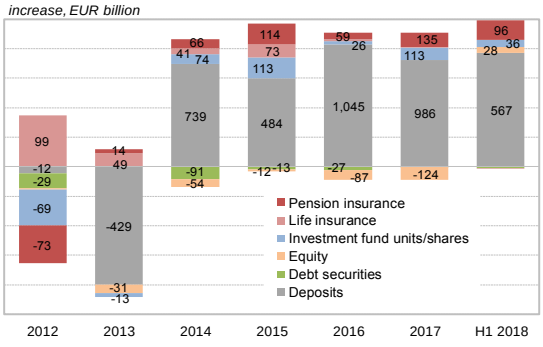


Figure 3.6: Breakdown of transactions in household financial assets



Source: Bank of Slovenia

Household lending

Household lending activity strengthened again in the first three quarters of 2018. In the wake of low corporate demand for loans, households are becoming an increasingly important segment for banks to increase their income, and banks are also addressing their products to them in a greater extent. Year-on-year growth in housing loans remained stable in 2018, at close to 4%, and the stock of housing loans amounted to EUR 6.15 billion at the end of the third quarter.[1] Year-on-year growth in consumer loans remained pronounced, at more than 11%, while at EUR 2.6 billion the stock is approaching its pre-crisis level. Growth in demand for housing loans slowed, and similar developments can be expected in the future. More pronounced growth in housing loans cannot be expected for now, owing to the insufficient supply of housing that is attractive to the market, higher residential real estate prices, and the consequent decline in affordability. Interest rates on housing loans remain relatively low, although a slight increase is evident in average fixed interest rates, alongside the maintenance of relatively low variable interest rates.

[1] For more on housing loans, see the *Real estate market* section.

Figure 3.7: Growth in household loans by type

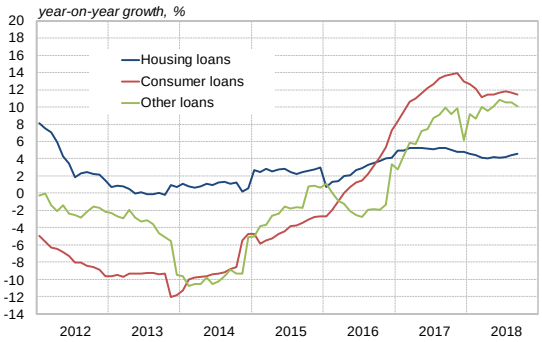
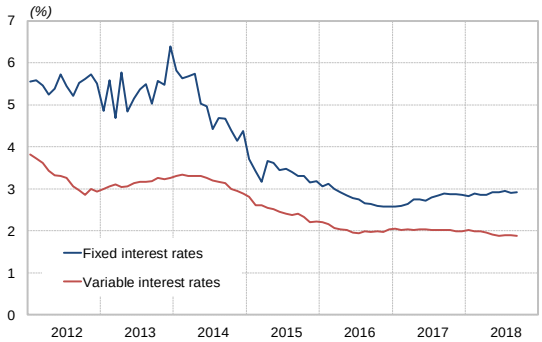


Figure 3.8: Interest rates on new housing loans



Source: Bank of Slovenia

There is a notable strengthening in consumer loans, which can be relatively profitable for banks, but are also riskier. Some banks have adjusted their business models over the last two years with the aim of increasing growth in consumer loans, including a simplified loan approval process and longer maturities. The values of individual consumer loans are increasing, maturities are lengthening, and they are mostly not purpose-specific, which increases the risk level. The increased risk of these loans means that the banks are demanding relatively high interest rates: fixed interest rates averaged close to 6% over the first three quarters of 2018, and variable interest rates averaged 4.5%. The banks' exposure to consumer loans is low compared with total exposure (the proportion of the balance sheet has not changed significantly over time): consumer loans account for just 6.8% of the Slovenian banking system's balance sheet total. In the wake of imprudent lending by banks or a reversal in the economic cycle, and in the wake of the consequent deterioration in the situation on the labour market, the systemic risks to the banking system inherent in consumer loans could increase.

Figure 3.9: Growth in and stock of consumer loans

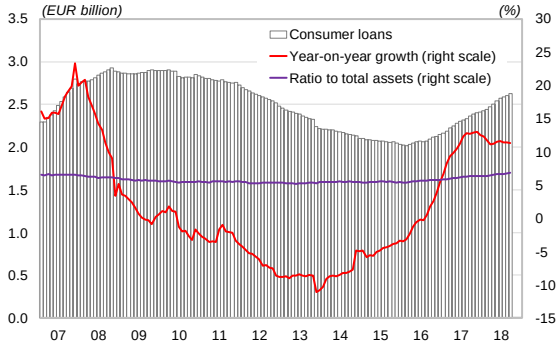
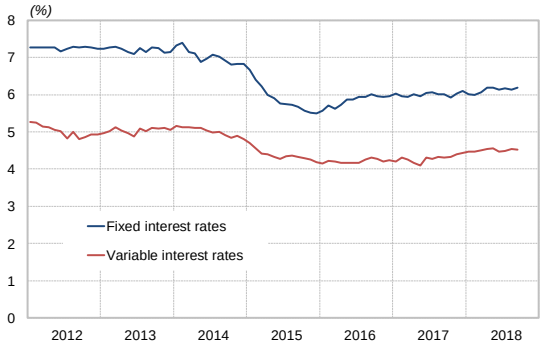


Figure 3.10: Interest rates on new consumer loans



Source: Bank of Slovenia

The average maturity of new consumer loans lengthened markedly in 2016, which was attributable to the increase in the stock of consumer loans with a maturity of more than 10 years. The original maturity of new consumer loans averaged 6.8 years in 2018, and actually exceeded 8 years at individual Slovenian banks. During such a long period there could be a reversal in the economic cycle, and thus a deterioration in the creditworthiness of the debtors. In the event of a reversal in the economic cycle, particularly at banks with a large proportion of consumer loans with higher loan values and longer maturities, and loans approved to client segments with weaker income, the NPL ratio could increase.

Figure 3.11: Average original maturity of new consumer loans

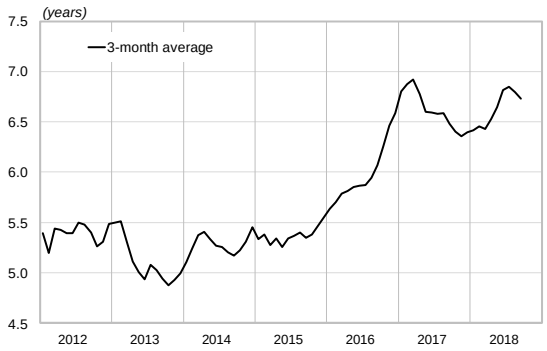
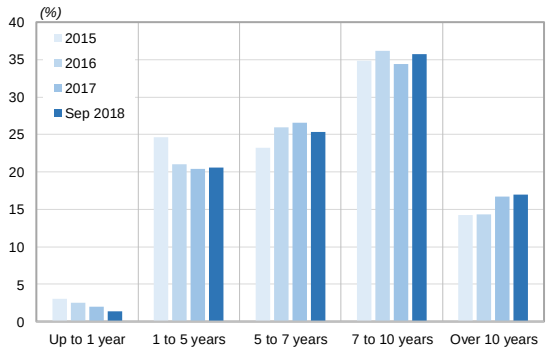


Figure 3.12: Maturity of stock of consumer loans



Source: Bank of Slovenia

Consumer loans with a maturity of more than 7 years are prevalent in the stock of loans. Consumer loans with a maturity of 7 to 10 years account for 35% 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 notable for its proportion 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 80%. The proportion of new consumer loans accounted for by loans with a maturity of more than 10 years increased profoundly in late 2016. Since the beginning of 2017 loans with a maturity of more than 10 years have accounted for around 10% of all new loans, equivalent to approximately EUR 10 million each month. It is a cause for concern that the proportion of secured consumer loans has undergone a sustained decline since 2015. In 2018 only a third of consumer loans were secured.

Figure 3.13: Amount and proportion of new consumer loans with a maturity of more than 10 years

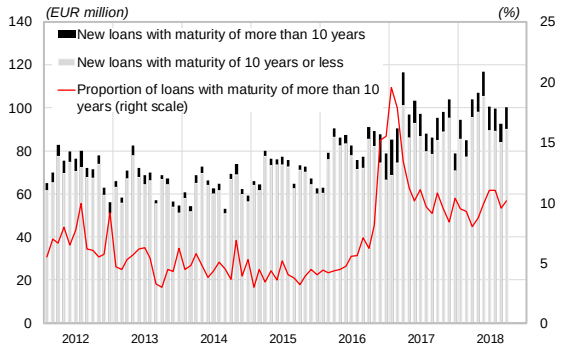
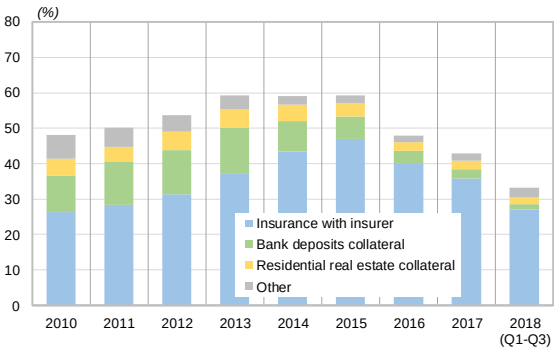


Figure 3.14: Proportion and type of secured consumer loans



Note: The grey areas labelled "Other" in the right figure include collateral in the form of shares and other equity, debt securities, units in CIUs, irrevocable Slovenian government guarantees, commercial real estate, offices and commercial buildings, life insurance policies, financial sureties other than irrevocable Slovenian government guarantees, and miscellaneous forms.
Source: Bank of Slovenia

The Bank of Slovenia assesses the current risks in the consumer loan market as moderate and manageable. This is partly attributable to the favourable economic climate, which is reflected in low default rates. The long loan maturities nevertheless mean that they 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 in the future and improving the banks' resilience, the Bank of Slovenia extended the macroprudential recommendations from housing loans to consumer loans in October 2018.[2] The macroprudential measure is precautionary in nature, and protects banks, while simultaneously encouraging consumers to be cautious in their borrowing. It is described in detail in the section on macroprudential instruments.

[2] For more, see https://www.bsi.si/en/financial-stability/macroprudential-supervision/macroprudential-instruments/macroprudential-recommendation-for-household-lending.

3.2 Non-financial corporations

Summary

Non-financial corporations' total financial liabilities have begun increasing again in the last two years. Equity financing is increasing in particular, which in the context of favourable valuation effects is further reducing non-financial corporations' leverage. Trade credits are also gaining in importance: they account for a higher proportion of corporate financing than the euro area average. Loans are primarily growing with domestic banks, while non-financial corporations are continuing to make net repayments of loans vis-à-vis other major creditor sectors. Given the favourable access to financing at banks and the significant improvement in corporate financial indicators, the decline in loan financing is primarily the result of changes in the approach to corporate financing, as other instruments, particularly internal resources and trade credits, gain in importance. The relatively high and growing proportion of corporate financing accounted for by trade credits is indicative of the existence of the debt financing segment, which the banking sector could also access with the right offer, at least in part.

Structure of corporate financing

Corporate financing flows[3] **have been strengthening consistently since 2016, when they became positive.** Total annual flows (last four quarters) from all external sources of financing reached almost EUR 2 billion in the second quarter of 2018, three times higher than in 2016. The majority of this financing consists of trade credits received, which have been growing in terms of stock and as a proportion of non-financial corporations' liabilities. When all creditor sectors are taken into account, loan financing is still negative; non-financial corporations are continuing to make net repayments of loans.

Figure 3.15: Non-financial corporations' flows of financial liabilities by instrument

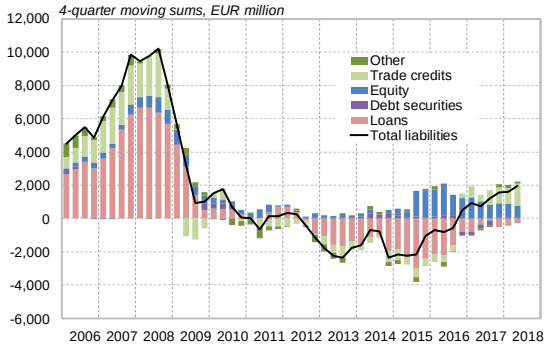
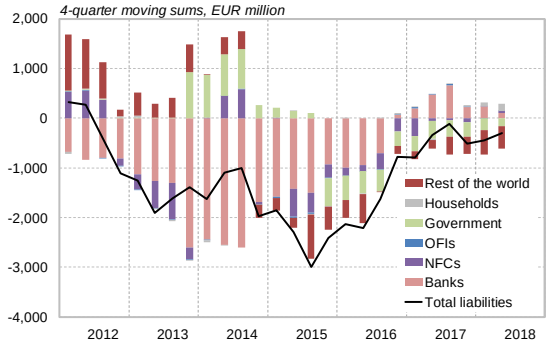


Figure 3.16: Non-financial corporations' flows of loan financing by creditor sector



Note: According to the financial accounts methodology, financial liabilities include trade credits and advances deriving from a supplier's direct crediting of goods and services, and clients' prepayments for goods and services that have not yet been supplied, i.e. liabilities that constitute trade payables. 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

Non-financial corporations are increasing their loan financing at domestic banks, while loan financing with other major creditor sectors is declining. Non-financial corporations' stock of total loan financing declined by 2.8% over the first six months of 2018, but growth in their loans at domestic banks is stable and positive. According to bank balance sheet figures, loans to non-financial corporations recorded year-on-year growth of 2.8% in September. The increase in loans at domestic banks is not compensating for the net repayments vis-à-vis other sectors, most notably the rest of the world. Non-financial corporations are repaying debt in all creditor sectors in the rest of the world, including at parent undertakings in the rest of the world. Non-financial corporations' reduced demand for loan financing is the result of their increased capacity to finance themselves and an increase in financing via other instruments, most notably trade credits.

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

Figure 3.17: Corporate loans from the rest of the world by creditor sector and loans at domestic banks, stock

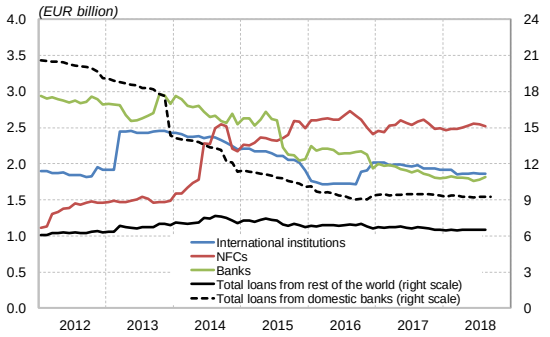
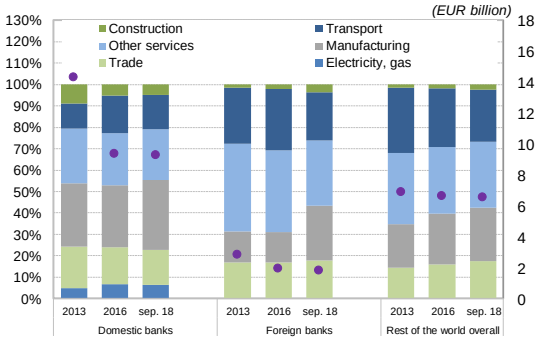


Figure 3.18: Breakdown of corporate loans at domestic banks and in the rest of the world by economic sector, stock



Source: Bank of Slovenia

Loan financing of manufacturing firms increased at domestic banks and at banks in the rest of the world. Manufacturing firms accounted for 32% of the stock of corporate loans at domestic banks. The corresponding figure is slightly lower at foreign banks, although there has been a notable increase in the stock of financing of manufacturing firms at foreign banks. The increase in financing in the rest of the world could also be indicative of more-favourable loan terms in the rest of the world. A survey of demand for loans (see the box in this section) reveals that refusal by the customer is cited in the manufacturing sector more often than in other sectors as a reason for not concluding loan agreements at domestic banks. Foreign banks also have a higher proportion of loans to firms in the transport sector and the electricity, gas and water supply sector, where the non-acceptance of terms by the customer is also cited as one of the main reasons for not concluding loan agreements with domestic banks.

Figure 3.19: Non-financial corporations' flows of trade credits by institutional sector

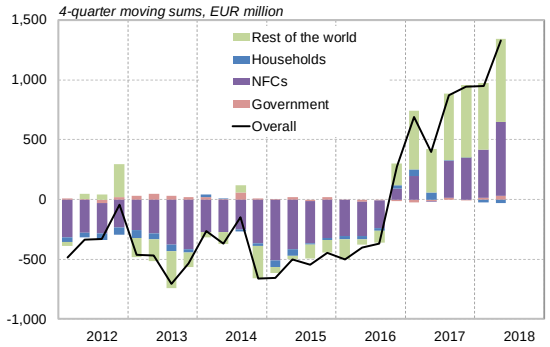
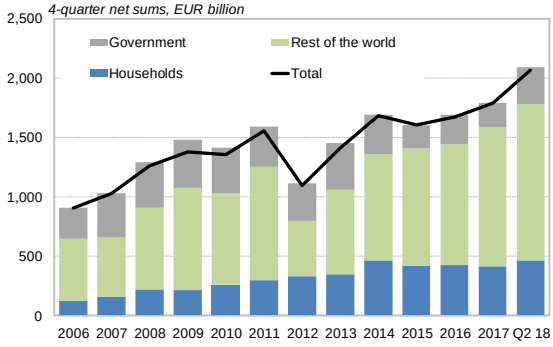


Figure 3.20: Net stock of claims under non-financial corporations' trade credits by institutional sector



Source: Bank of Slovenia

Trade credits are gaining in importance in corporate financing. The flow of trade credits over the 12 months to the second quarter of 2018 was up 133% in year-on-year terms (and by almost three times on 2016), and amounted to EUR 1.3 billion or 68% of non-financial corporations' flows of financing. Part of this increase is probably attributable to changes in the ownership structure at certain firms, where new foreign owners also took over financing within their groups. The trend of increase in trade credits has coincided with the period of economic growth, and there is growth in trade credits received from the rest of the world as well as within the Slovenian non-financial corporations sector.

Trade credits also account for a significant proportion of non-financial corporations' receivables, most notably in export financing. The flow of trade credits granted in this segment strongly exceeds the flow of trade credits received, by EUR 2 billion. The surplus has been increasing in recent years, particularly vis-à-vis the rest of the world. By contrast, trade credits granted to households have remained stable despite the increase in household consumption, which is thus being financed to a greater extent by increasing consumer loans from banks.

Figure 3.21: Breakdown of non-financial corporations' financial liabilities in Slovenia and in the euro area overall

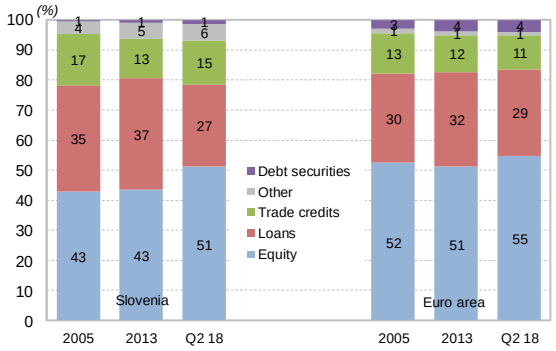
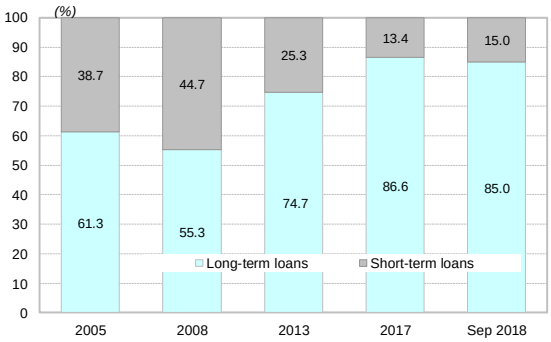


Figure 3.22: Breakdown of stock of corporate loans at banks by maturity



Source: Bank of Slovenia

In contrast to non-financial corporations in the euro area overall, trade credits are gaining in importance in the breakdown of Slovenian non-financial corporations' financial liabilities. In recent years the proportions accounted for by equity and by loans have approached the figures in the euro area, the first by declining and the second by increasing. By contrast, the proportion of financing accounted for by trade credits increased to 15% at Slovenian non-financial corporations, but declined to 11% in the euro area. There has been a sharp decline in corporate financing via short-term loans at banks in recent years, which given the rise in trade credits is an indication of a segment of debt financing that the banking sector could take over to a certain extent.

Figure 3.23: Corporate debt indicators

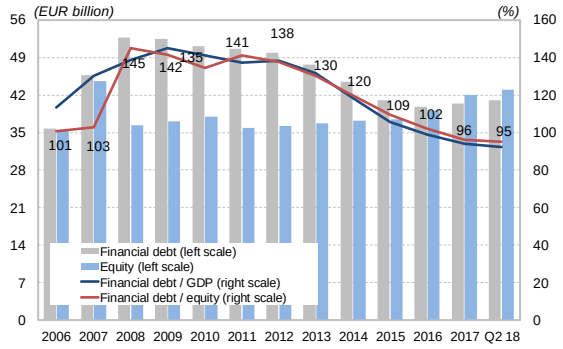
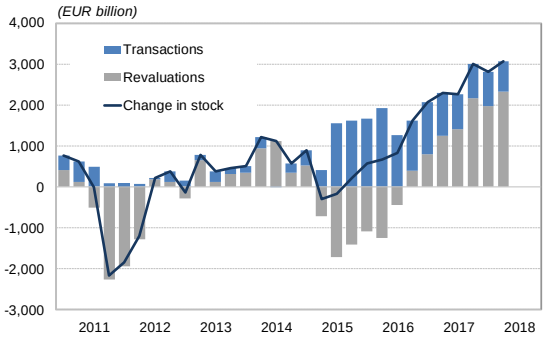


Figure 3.24: Corporate financing via equity



Source: Bank of Slovenia

Non-financial corporations' total financial liabilities have been increasing since 2016, while leverage has continued to decline. As a result of the previous years of deleveraging and growth in financing via equity, corporate debt indicators remain favourable. Corporate financing via the inflow of equity has slowed over the last two years. The stock of equity is nevertheless up 10% on the end of 2016, approximately three-quarters of which is attributable to revaluations, i.e. changes in the market value of equity. The increase in equity has accounted for just over EUR 3 billion of the increase in non-financial corporations' financial liabilities over the last four quarters, and the increase in actual financial liabilities for EUR 1 billion. The debt-to-equity ratio stood at 96% at the end of 2017, but had declined further to 95% by the end of June 2018. Despite the favourable impact of revaluations, it is necessary to emphasise the positive shift in the actual inflow of equity into non-financial corporations, which has amounted to EUR 4 billion in total since 2015.

Figure 3.25: Interest rates on new long-term loans by economic sector

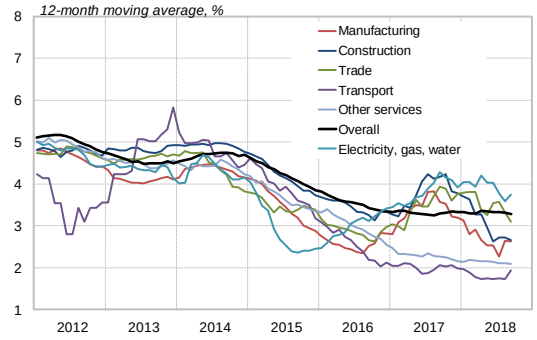
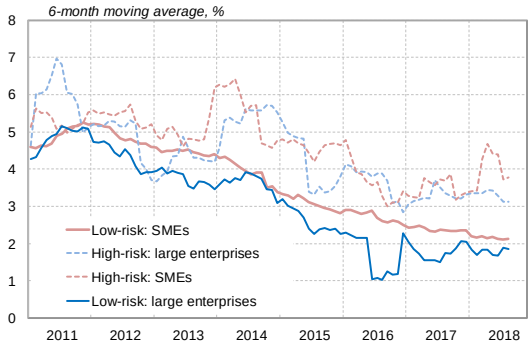


Figure 3.26: Interest rates on new long-term loans by corporate size with regard to risk level



Source: Bank of Slovenia

Non-financial corporations' borrowing terms at Slovenian banks remain favourable. The interest rates on corporate loans remain at historically low levels, for new borrowing and for residual debt, 84% of which was being repaid at a variable interest rate as at September 2018. Interest rates on long-term loans to SMEs remain higher than those to large enterprises, although a trend of decline is narrowing the gap, which is in keeping with the stated increased focus on this customer segment.

Since the beginning of the revival in corporate lending activity, the terms of borrowing at banks have drawn increasing distinctions with regard to the activities of the debtor. New loans to construction firms and trade firms, which are notable for a higher-than-average proportion of non-performing claims, carry higher interest rates than loans to firms in other sectors. Although interest rates are illustrated solely for performing loans, the attributes of the sector as a whole are a significant factor in the determination of the terms of lending to an individual debtor.

Box 3.1 Corporate demand for loans on the basis of the bank survey

Corporate demand for loans was still declining moderately at aggregate level in 2016 and 2017, but recorded a year-on-year increase of 8.0% in the first half of 2018. The banks have reported increases in demand for loans for investment purposes since 2014, and in demand for loans for current operations since 2016. They assess that firms have significant amounts of cash at their disposal, which they are also using for financing their investments and current operations, which is reducing the need for bank financing. Demand for loans for restructuring has declined sharply since 2015, and now accounts for just 5.7% of total demand, compared with just under a quarter in 2013 and 2014. Growth in demand for loans of this type was positive in the first half of 2018, although given its much-reduced volume it did not make a significant contribution to the total demand for loans.

The rate of excess demand[4] declined to 35% in 2017.

Figure 3.27: Growth in demand and excess demand

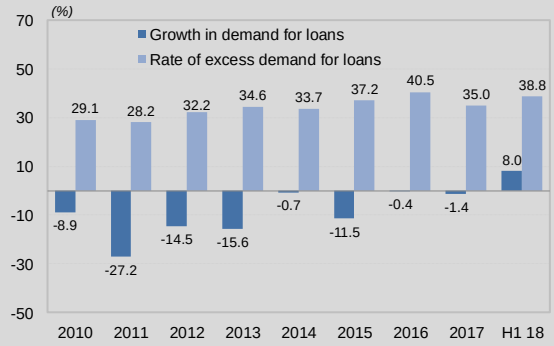
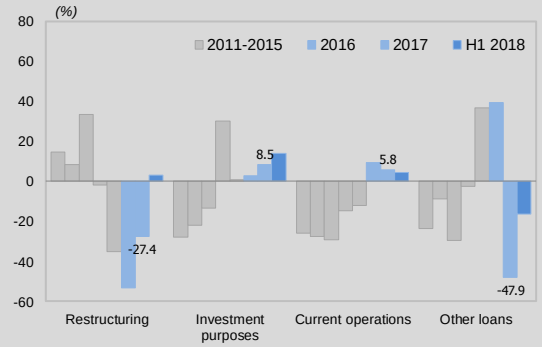


Figure 3.28: Growth in demand for loans by loan type



Source: Bank of Slovenia

In this year's survey the banks are again seeing increasing demand for the refinancing of existing loans,[5] with the replacement of contractual terms with more favourable terms, particularly lower interest rates and longer

[4] Excess demand is the difference between demand for loans and new loans. The rate of excess demand is the ratio of excess demand to total demand.

repayment periods. The funds released in this way are to be redirected by firms into investment, at least partly. Demand for refinancing is also increasing because of firms' efforts to consolidate financial debt through exposure to a smaller number of banks.

Figure 3.29: Breakdown of demand for loans by loan type

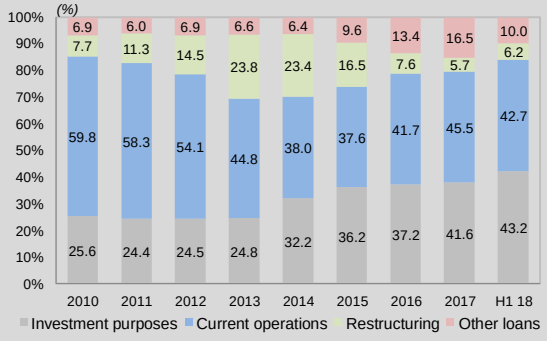
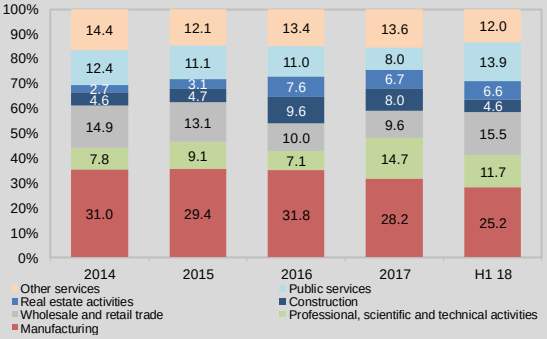


Figure 3.30: Breakdown of demand for loans for investment purposes by economic sector



Source: Bank of Slovenia

The proportion of firms where demand for loans is rising is increasing: in 2016 demand increased in five sectors that accounted for 23% of total corporate demand, in 2017 in seven sectors that accounted for 78% of total demand, while in the first half of 2018 slightly more, at 83% of total demand.

Growth in demand for loans in the manufacturing sector was modest in 2017, while 2018 has seen a notable slowdown in demand for loans for investment purposes, which coincided with weaker growth in investment in machinery and equipment in the second quarter of the year. Demand for loans for current operations also slowed. Demand for loans for investment purposes has been increasing at rapid rates since 2015, while demand for loans for current operations has been increasing at slightly lower rates since 2016.

After recording high growth in 2016, demand for loans for investment purposes in the construction and real estate activities sectors slowed significantly in the following year, and was down in year-on-year terms in the first half of 2018. After the high growth in 2016, the proportion of demand accounted for by these two sectors declined again in 2018 to 11%. Growth in demand for loans for investment purposes has been rather volatile in other sectors, with intermittent positive and negative rates. The main highlight was demand in the sector of professional, scientific and technical activities, with high rates of growth in both years and a sharp increase in the proportion of demand that it accounts for.

Figure 3.31: Breakdown of demand for loans in the manufacturing sector by loan type

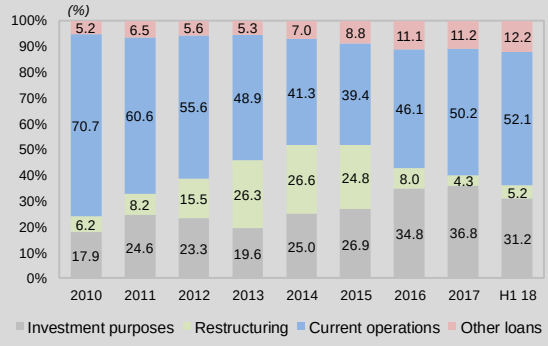
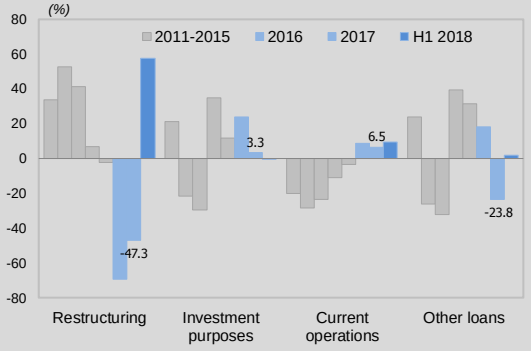


Figure 3.32: Growth in demand for loans in the manufacturing sector by loan type

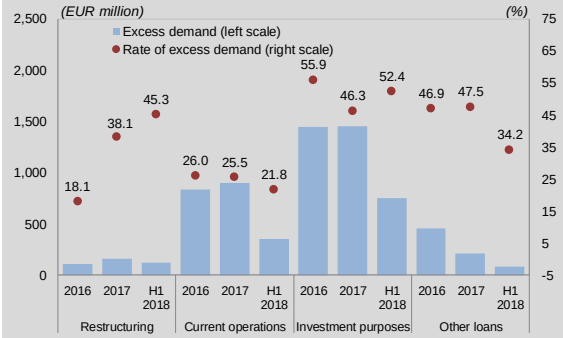


Source: Bank of Slovenia

The rate of excess demand, which was always highest in respect of loans for investment purposes, declined in 2017, falling below 50% for the first time. Banks were significantly more limiting with regard to loans for restructuring, where the low rate of non-conclusion of loan agreements rose to 38% in 2017 and to fully 45% in the first half of 2018.

[5] The banks report on this in the descriptive section of the survey; the actual figures and the breakdown of demand for refinancing were not envisaged by the survey.

Figure 3.33: Excess demand by loan type



Source: Bank of Slovenia

As in previous years, the most important reason for the non-conclusion of a loan agreement was the customer's rejection of the loan terms, which further increased in importance in 2017. In 2018 firms rejected 75% of their demand for loans for investment purposes because of their refusal to accept the banks' offered loan terms, while the corresponding figure for loans for current operations reached 77%.

Figure 3.34: Breakdown of reasons for loan refusal by loan type

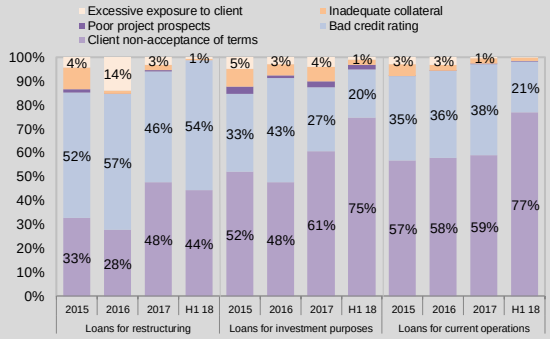
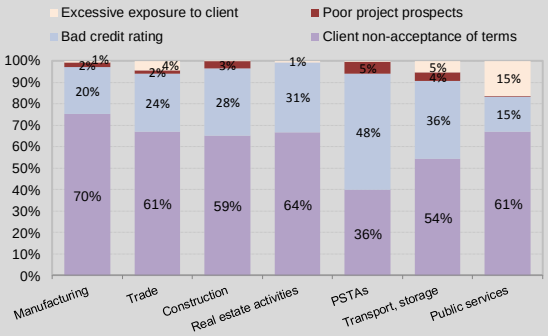


Figure 3.35: Breakdown of reasons for refusal of loans for investment purposes in 2017 by economic sector



Source: Bank of Slovenia

4 REAL ESTATE MARKET

Summary

After 2017, growth in residential real estate prices remained high in the first half of 2018, as Slovenia recorded the highest growth of all euro area countries. Despite already-high prices, growth in prices was particularly high in Ljubljana and Koper, owing to an imbalance between supply of and demand for real estate; demand is high because of the attractiveness of the two cities as places to live and for tourism. Compared with 2017, volume in terms of the number of transactions in the first half of 2018 slowed slightly, but remains at a high level. With regard to new-build residential real estate in particular, the slowdown in volume is indicative of the shortage of housing on the market, but the slowdown could also be a consequence of ever-increasing real estate prices and reduced affordability. Given the high and long-lasting growth in real estate prices, the risks on the real estate market are assessed as elevated, and could increase further in the wake of continued price rises, which together with increased optimism is increasing the likelihood of the excessive take-up of risks that could be realised in the event of a price reversal. In the context of the increased risk, the banking system remains less exposed to the real estate market, and is more resilient to potential shocks on the real estate market than during the last financial crisis.

Prices and transactions on the real estate market

Growth in residential real estate prices remained high in the first half of 2018. Residential real estate prices rose by 10% in 2017, and were up 13.4% in year-on-year terms in the first half of 2018.[6] Growth was most pronounced in prices of new-build residential real estate, primarily as a result of a shortage on the market and a small number of transactions. Compared with the peak in 2008, residential real estate prices are now down only 2.3%. Prices of new-build residential real estate had exceeded their previous peak by 4.7% by the second quarter of 2018. Prices of used flats were up 1.6% on the previous peak, while prices of used houses are still 7.8% down.

Figure 4.1: Residential real estate prices

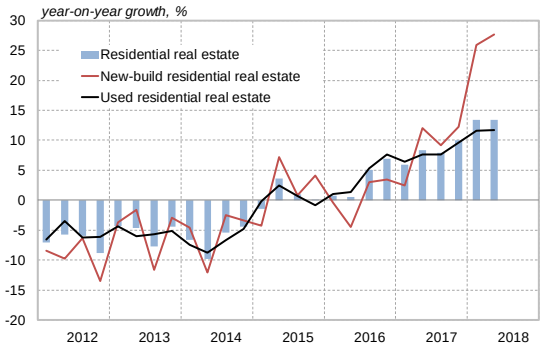
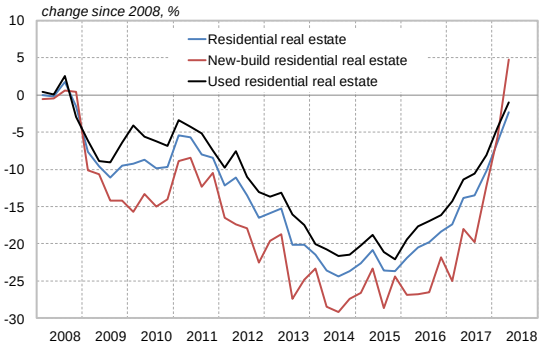


Figure 4.2: Change in residential real estate prices since 2008



Source: SURS

There has been a general rise in prices in major Slovenian towns and cities, although there are considerable variations between towns. Although prices are already relatively high, growth in real estate prices in Ljubljana has been higher than in the rest of Slovenia: year-on-year growth in prices of used flats in Ljubljana stood at 16% in the second quarter of 2018, compared with 9.8% in the rest of Slovenia. Real estate prices in Ljubljana exceeded the peak of 2008 by 2.6% in the second quarter of 2018, having fallen more than prices in the rest of Slovenia during the crisis (29%), before beginning to rise in 2015. Prices of used flats are also rising fast in Koper, and are gradually being tracked by prices in other major towns and cities. A major factor in the price growth is increased optimism on the real estate market in the favourable economic situation, while the variations between towns are attributable to their differing levels of attractiveness as places to live and as investments, and imbalances between supply and demand in individual areas. According to a consumer survey, households are expecting prices to remain at a relatively high level over the next 12 months, while in the good economic situation and the favourable situation on the labour market there is still a reluctance to make major purchases, which include residential real estate.

[6] Residential real estate prices in the second quarter of 2018 were up 4.2% on the first quarter, when they were up 4.4% on the previous quarter.

Figure 4.3: Average prices of used flats in major towns in Slovenia

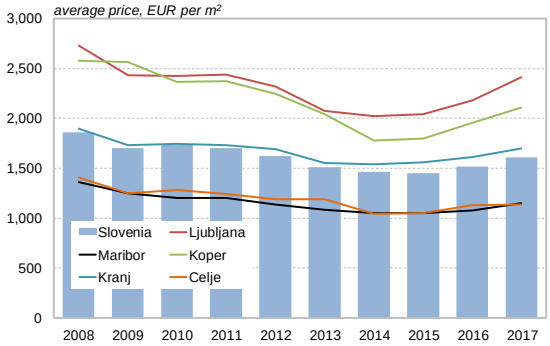
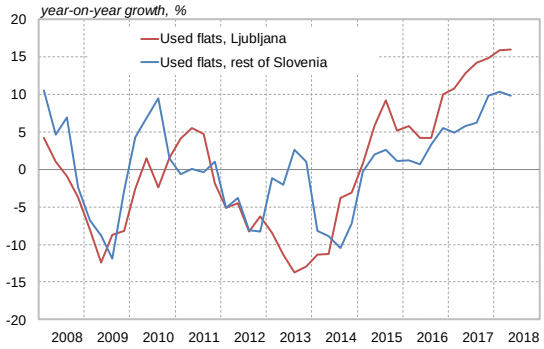


Figure 4.4: Prices of used flats in Ljubljana and the rest of Slovenia



Sources: SMARS, SURS

Slovenia recorded the highest growth in residential real estate prices of all euro area countries in the first half of 2018. The majority of euro area countries continued to record growth in real estate prices in 2018, as four countries recorded double-digit year-on-year growth in the second quarter: Ireland (12.6%), Hungary (10.4%), Portugal (11.2%) and Slovenia (13.4%, the highest figure). The only euro area country to record a fall in real estate prices in the first half of 2018 was Italy, which is still facing economic difficulties. Year-on-year growth in real estate prices in Slovenia in the second quarter was 9.1 percentage points higher than the euro area average, which was attributable to the larger fall in real estate prices in Slovenia in the crisis period, and the relatively good current economic situation, which is increasing purchasing power and optimism on the market. Low inflation meant that the developments in nominal and real price growth were similar in previous years, but the gap has been widening since the end of 2017 as inflation rises. According to OECD figures, real estate prices in Slovenia in the second quarter were down 3.5% on 2008 in nominal terms, and down 13.3% in real terms.

Figure 4.5: Residential real estate prices, international comparison

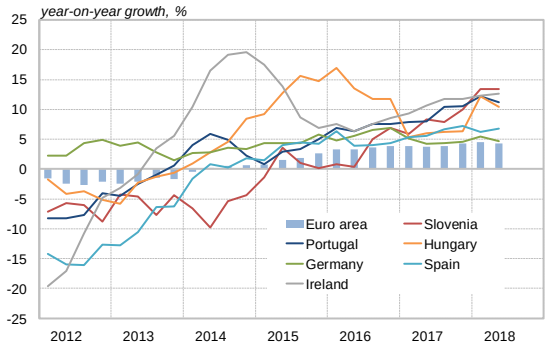
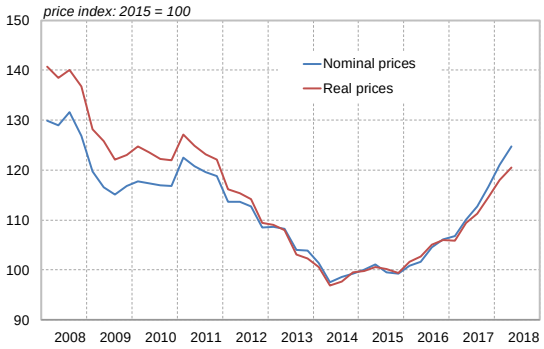


Figure 4.6: Nominal and real growth in real estate prices



Note: Figures in the OECD database are seasonally adjusted.
Sources: Eurostat, OECD

There was a record number of real estate sale transactions in 2017, and a record volume in terms of value. The year saw 36,000 transactions in real estate, two-thirds of which were in residential real estate (more than 11,000 in flats, and 6,000 in houses). The number of transactions in commercial real estate is also gradually increasing, although growth is significantly lower than the corresponding rate for residential real estate. The volume of transactions in real estate reached EUR 2.3 billion in 2017, similar to 2007. Fast price rises brought the largest increase in volume in flats, which reached almost EUR 1 billion. The ratio of new housing loans to the volume of transactions in residential real estate declined to 70% in 2017, as a result of a slower increase in new housing loans than in volume in residential real estate. The financing of housing purchases with non-bank resources thus increased in 2017, although given the favourable loan terms, debt financing remains prevalent in the purchase of housing.

Figure 4.7: Recorded sales by type of real estate

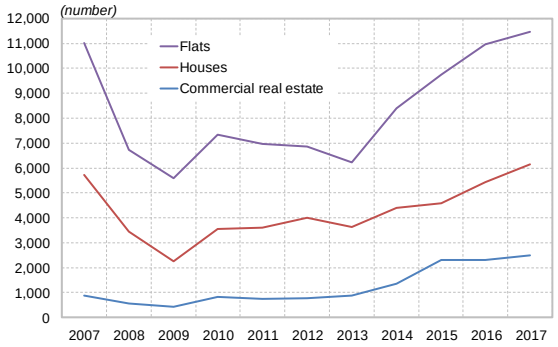
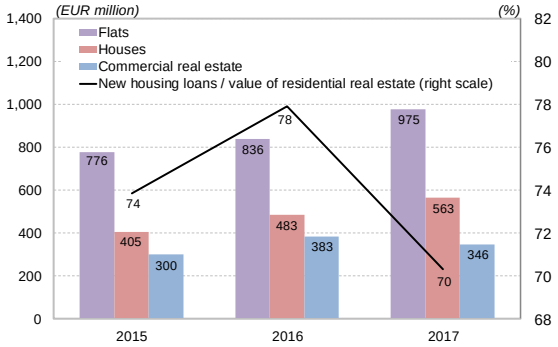


Figure 4.8: Volume by type of real estate



Source: SMARS

The number of transactions fell in the first half of 2018, but remained at a high level. A record number of transactions was recorded in 2017 (10,788), while there was 4,917 transactions in the first half of 2018 . Despite the fall, the number of transactions remains at a high level, comparable to that of 2007. A slowdown in real estate transactions is evident in used and new-build residential real estate alike, although the decline is sharper for the latter. There were only 150 transactions in new-build residential real estate recorded in the first half of 2018, the lowest figure since the SURS began collecting this data, and an indication of the shortage of supply on the market. The number of transactions in Ljubljana is also slowing, which in addition to the shortage of supply could also be attributable to the high real estate prices in the capital. The number of transactions might not rise further in the future, but it will remain at a relatively high level given the favourable economic situation, the low interest rates on loans and the positive expectations. Additional impetus could come from the new housing projects that have been announced.

Figure 4.9: Number of transactions in residential real estate

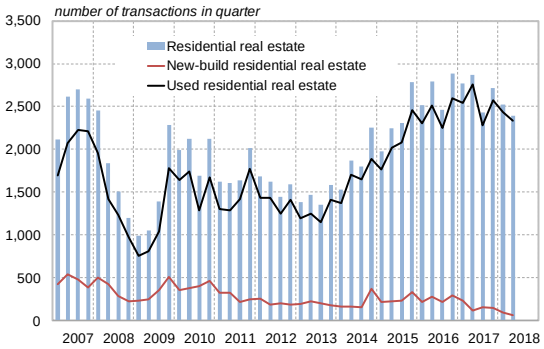
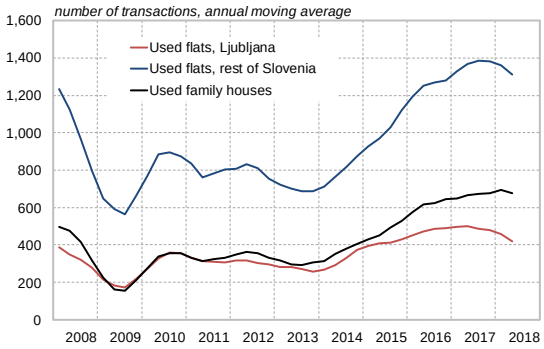


Figure 4.10: Number of transactions in used real estate



Source: SURS

Supply of and demand for residential real estate

Demand-side factors

Demand for residential real estate is slowing as a result of insufficient supply of marketable housing and diminishing affordability. That demand for real estate is no longer as high as in the previous two years is also indicated by the lower growth in demand for housing loans identified in the euro area's bank lending survey (BLS[7]). The most important factors acting to raise demand for housing loans remain consumer confidence, the favourable outlook for the housing market, and low interest rates. According to the BLS, the main factor reducing the demand for housing loans is the financing of real estate purchases with savings and loans from other banks. Compared with 2017, consumer confidence has continued to strengthen according to the survey of consumer opinion. Consumers are more optimistic in particular with regard to the financial and economic situation in Slovenia, although consumer optimism with regard to the latter declined slightly in the second half of 2018.

[7] Bank Lending Survey.

Figure 4.11: Consumer confidence

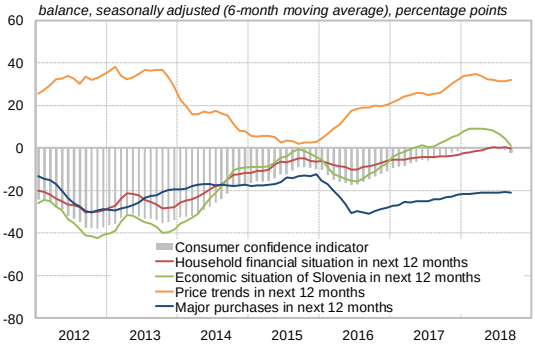
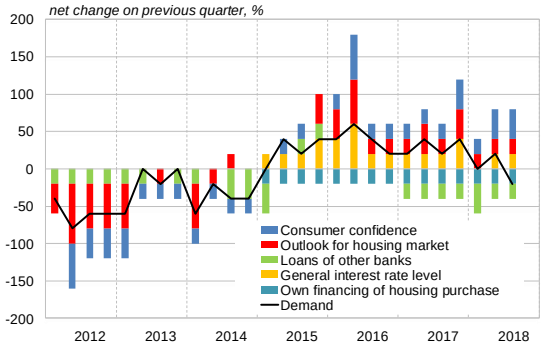


Figure 4.12: Demand for housing loans and demand factors



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

Housing affordability is still significantly better than before the crisis, even though residential real estate prices are now comparable to those of 2008. This is primarily the result of growth in household purchasing power and better loan terms. The ratio of net wages to housing prices in Slovenia deteriorated in the first half of 2018, as growth in residential real estate prices outpaced wage growth. A rise in the number of monthly wages required for the purchase of housing was recorded by all types of housing; the rise was slightly more pronounced for three-room flats, which could be attributable to a rise in the number of above-average standard flats in this category, which is raising prices. Housing affordability in Slovenia is also deteriorating even when loan terms are taken into account (average interest rates and maturities in a specific period),[8] which remain relatively favourable for now and are thus slowing the decline in housing affordability. A further deterioration in housing affordability can be expected in the second half of 2018, as it will be difficult for wage growth to keep pace with growth in real estate prices, and no major changes in loan terms can be expected at this time.

Figure 4.13: Ratio of net wage to housing prices in Slovenia

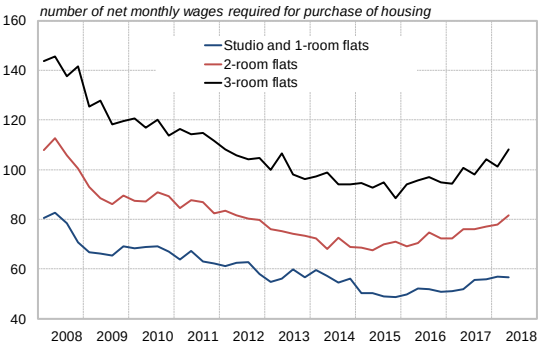
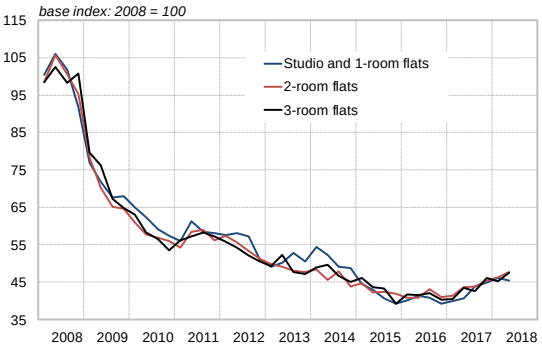


Figure 4.14: Housing affordability index



Note: The left figure illustrates the ratio of prices of used flats to the annual moving average of net monthly wages in Slovenia. Owing to a break in the SMARS data series for transactions in residential real estate, average prices in the period since 2015 are lower than in the prior period. The housing affordability index (right figure) shows whether housing affordability has improved or deteriorated for households. It is calculated with a PMT function (loan payment on the basis of fixed payments and an unchanged interest rate), and takes account of prices of used flats, the annual moving averages of monthly wages, and loan terms (interest rates and maturities).
Sources: Bank of Slovenia, SMARS, SURS

Prices in the housing market are close to equilibrium according to certain indicators. The previously illustrated indicators of real estate prices relative to household income and rents do not indicate overheating of the real estate market. Another assessment of equilibrium real estate prices and overheating of the market can be obtained from a comparison of the number of annual wages required for the purchase of an average housing unit with its long-term average. The purchase of housing in Slovenia required 6.8 annual net wages in the second quarter of 2018, the same as its long-term average. There are similar findings for Ljubljana, where longer time series are available: an average of 9.3 annual net wages were required for the purchase of

[8] The assumption is that the purchase of the housing is financed entirely by a loan, subject to terms of approval calculated as an average for the banking system.

housing at the end of the first half of 2018, which is comparable to its long-term average (9.1 annual net wages). This indicator also suggests that prices in the housing market are close to equilibrium, and that the real estate market is not overheating. Overheating of the market could occur in the event of further high growth in real estate prices, particularly if it persists at a higher level than wage growth or growth in disposable income.

Figure 4.15: Ratio of housing prices to wages in Slovenia compared with long-term average

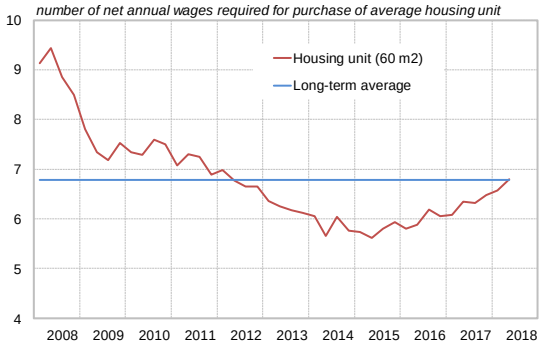
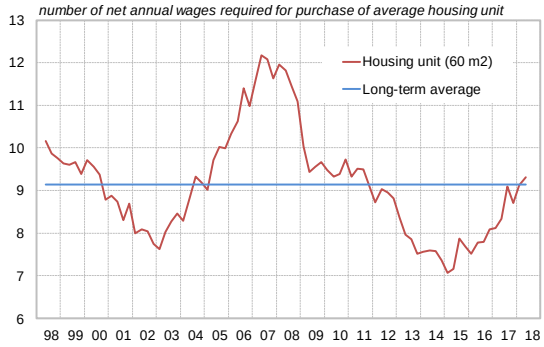


Figure 4.16: Ratio of housing prices to wages in Ljubljana compared with long-term average



Sources: Bank of Slovenia, SMARS, SURS

The price-to-rent and price-to-income ratios have been increasing since 2016, primarily as a result of fast growth in real estate prices. Household income is increasing, and so are real estate rents, but their growth has been outpaced by growth in real estate prices since 2016. Growth in income and growth in rents can further encourage growth in real estate prices, as they increase demand, not only for occupancy, but also for investment purposes. Higher real estate prices are raising the initial costs of investment for investors, but on the other hand rents are also rising, particularly in towns that are tourist destinations. Rents in Slovenia did not change significantly during the crisis, but in the wake of the improved economic situation began rising in 2016 significantly faster than the euro area average. In the event of further growth in real estate prices, investors can expect yields to rise, along with the capital gains brought by the rise in prices. There is considerable uncertainty with regard to future growth in rents and real estate prices. Prices could rise on account of the ongoing favourable economic environment, including the good situation on the labour market, and a shortage of marketable real estate, but a limiting factor in price growth could be the already-high real estate prices in certain towns and cities, and the consequent decline in housing affordability for households, and also a deterioration in loan terms, particularly in the form of the expected rises in loan interest rates.

Figure 4.17: Price-to-rent and price-to-income ratios

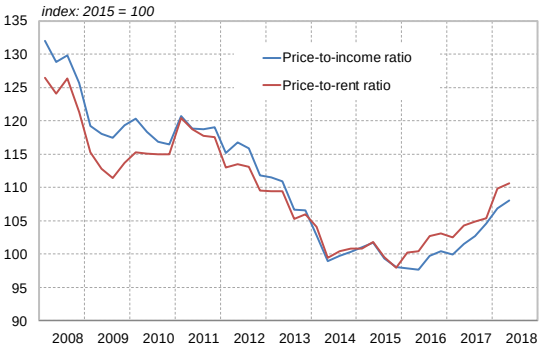
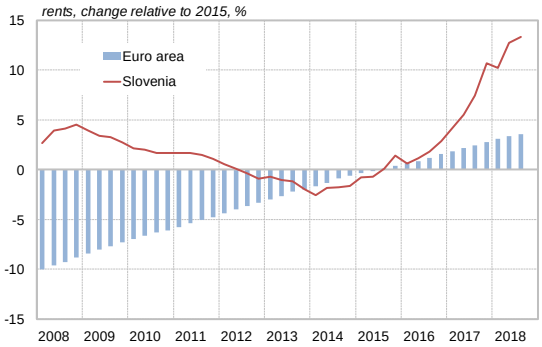


Figure 4.18: Real estate rents



Note: Figures in the OECD database are seasonally adjusted.
Source: OECD

The proportion of housing in the rental sector remains below the euro area average, which is partly attributable to the under-development of the rental market across Slovenia. The largest and most developed rental market is Ljubljana, where average rental prices are also highest, but there are also active markets in the largest towns, particularly those with student populations. This is partly the result of legal arrangements from the past, which led to high owner-occupancy, and the propensity to ownership on the part of Slovenian households. The level of owner-occupancy has gradually declined over the years, but remains high, particularly compared with euro area countries in western Europe. According to statistical research by the SILC, there was a notable increase in housing costs for households in 2017; the proportion of households for which housing costs are a heavy burden increased to 36%, while only 12% of households stated that housing costs are not a burden. After declining for two years, the housing cost burden rose again, despite the

further improvement in the situation on the labour market, which could be attributable to the gradual rise in interest rates on housing loans, and growth in rents and other costs related to housing.

Figure 4.19: Breakdown of owner-occupiers and tenants, 2017

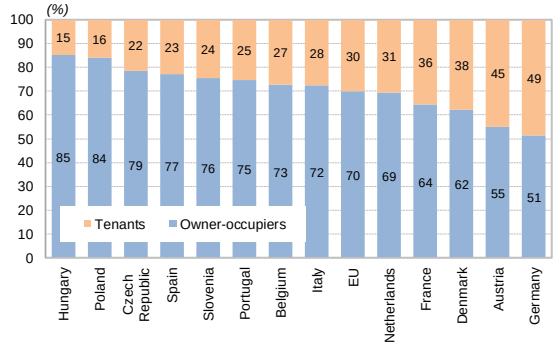
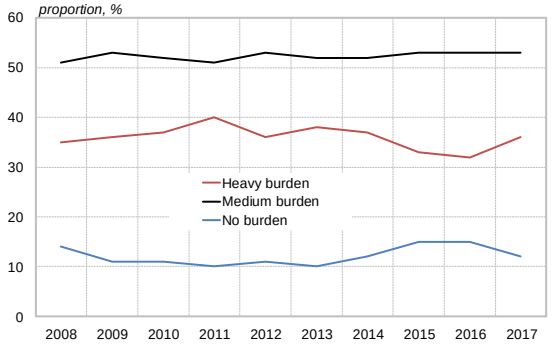


Figure 4.20: Housing cost burden



Sources: Eurostat, SURS

Real estate prices are also affected by the natural and migratory increase in population, which is highest in Koper and Ljubljana of the large towns and cities. A number of large towns in Slovenia, particularly in the central region, are already densely populated and built-up, which limits further housebuilding and is gradually raising prices. The natural and migratory increase is raising demand, which in conjunction with limited supply is additionally pushing up prices. A high migratory increase is particularly evident in Ljubljana and Koper, where real estate prices are already relatively high and are continuing to record above-average growth. This is attributable to the better employment opportunities and business opportunities, including tourism, which is contributing to faster urbanisation. The growth in tourism in popular destinations is being accompanied by the rise in rentals via online platforms (e.g. Airbnb), which on account of the opportunity for large yields is increasing purchases of real estate for investment purposes, and is consequently contributing to price rises. According to SMARS figures, non-residents' interest in purchasing real estate in Slovenia remains low: non-residents accounted for just over 2% of real estate purchases in value terms in 2017 and the first half of 2018, and the corresponding figure for Ljubljana was even lower, at around 1%.

Figure 4.21: Natural increase in population in Slovenia and in major towns

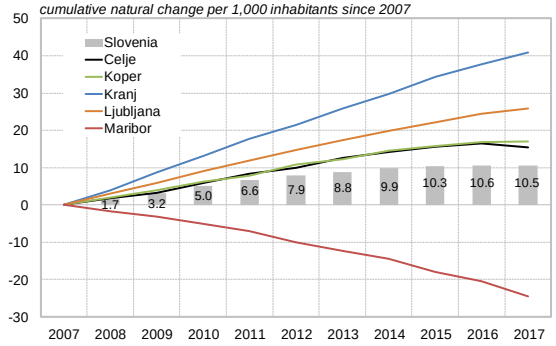
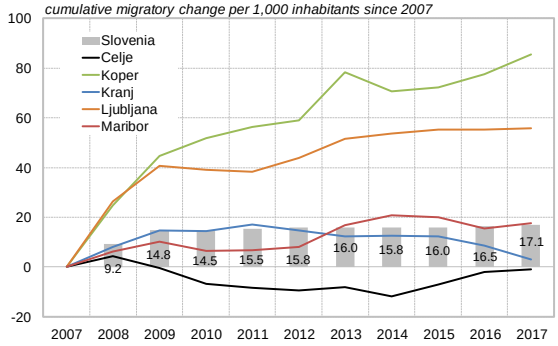


Figure 4.22: Migratory increase in population in Slovenia and in major towns



Source: SURS

Supply-side factors

Confidence remains high in the construction sector, and gross investment in housing increased in the first half of 2018. The construction confidence indicators strengthened in 2018, and construction firms are expecting an increase in the amount of construction put in place, growth in total orders and increased employment. However, in their hiring some construction firms are facing a shortage of qualified labour, which could slow the growth in the amount of construction put in place, and consequently the supply of housing on the market. Gross investment in housing has been gradually increasing in 2018, although the level of investment remains relatively low. The supply of new-build housing on the market is still not keeping pace with demand, which is an additional factor in the rise in residential real estate prices. Several investments have been made in smaller real estate projects across Slovenia, but other than in Ljubljana there are no major housing projects yet on the horizon. A number of projects are already in progress in Ljubljana, and will be

completed in the next year or two, which could slow growth in prices in the future, although this will also depend on the selling price of the housing and consequently on its affordability.

Figure 4.23: Business trends in construction

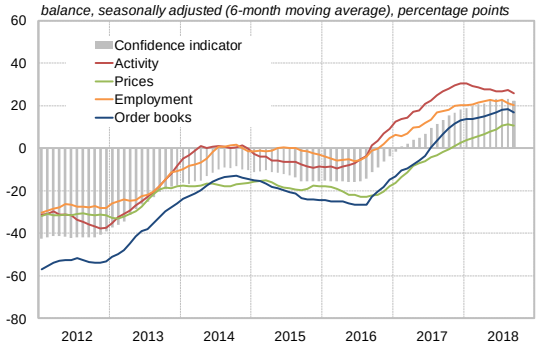
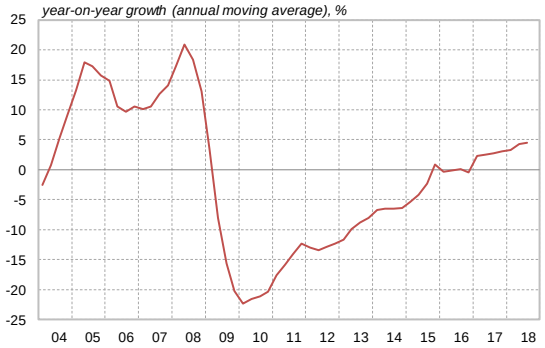


Figure 4.24: Gross investment in housing



Source: SURS

The rising number of building permits suggests an increase in the supply of new-build real estate in the future, which in 2017 was not yet evident in a more pronounced rise in the number of completed housing units and housing units under construction. The execution of new investment projects needs time, which is also reflected in the low growth in the number of completed housing units in 2017, despite the shortage on the market and the anticipated quick sale of the new housing built. Given the increased interest in real estate purchases, the Housing Fund of the Republic of Slovenia (SSRS)[9] will build 500 housing units in the neighbourhood of Novo Brdo in Ljubljana (by 2020), and 110 units in the new neighbourhood of Skupnost za Mlade Gerbičeva (for young people). In the coming years the SSRS is planning the construction of around 370 housing units in Maribor (by 2020) and 240 units in Kranj (construction begins in 2019). It is also anticipated that the SSRS's new housing will have a favourable impact on the real estate market, and will meet a significant part of the demand, particularly in light of the projected increase in the price affordability of housing of this type compared with private investors, who are often opting to build above-standard and more expensive housing in the anticipation of higher returns.

Figure 4.25: Issued building permits

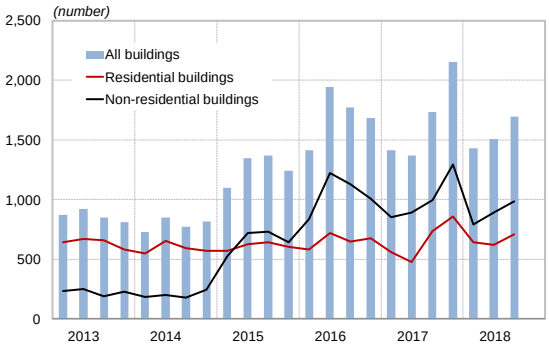
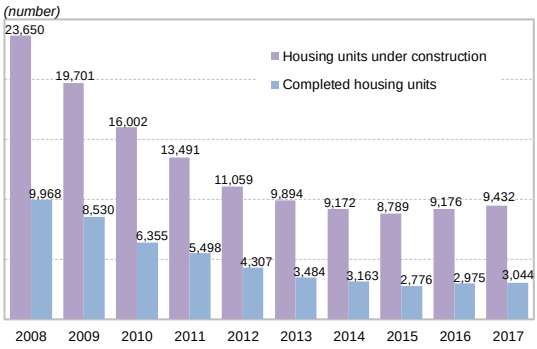


Figure 4.26: Completed housing units and housing units under construction



Source: SURS

Real estate market and related risks to the banking sector

Despite the high growth in prices on the real estate market, the average coverage of new housing loans by collateral at approval remains high. The average ratio of the value of the housing loan to the value of all forms of collateral for new housing loans declined to 58.6% in 2018 (Q3), the LTV[10] having averaged around 69% in 2017. In a period of rapid growth in real estate prices, for banks and households there is an increasing possibility of excessive take-up of risks that could be realised in the event of a price reversal. Consequently the Bank of Slovenia issued a recommendation for housing loans in late 2016 that encompassed two instruments, namely a cap on LTV and DSTI.[11] The Bank of Slovenia modified certain

[9] See http://ssrs.si/projekti/
[10] 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.
[11] 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.

definitions in the recommendation[12] in 2018. According to the latest assessment of compliance with the macroprudential recommendations for the residential real estate market in the June 2018 Financial Stability Review,[13] the average LTV and DSTI have not changed significantly over time and remain within the bounds of the Bank of Slovenia recommendation. The average ratio of the value of the housing loan to all forms of collateral for the stock of housing loans remains close to 50%, and is gradually declining as prices rise.

Figure 4.27: New housing loans and collateral

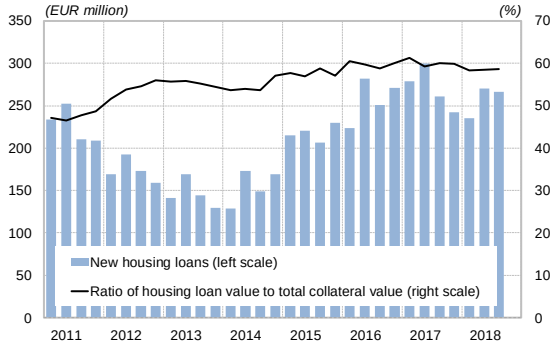
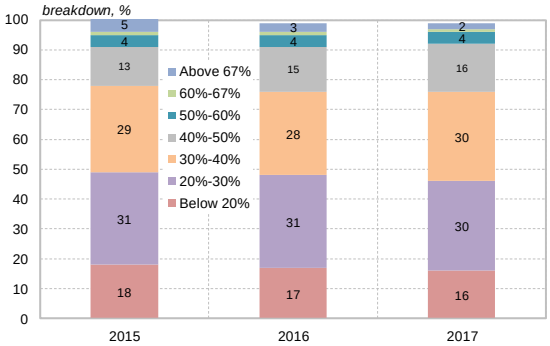


Figure 4.28: Distribution of DSTI for new housing loans



Source: Bank of Slovenia

According to the BLS, banks are maintaining high credit standards on new housing loans. During the period of high growth in real estate prices since 2017 credit standards[14] have remained unchanged (with occasional tightening), i.e. slightly tighter than during the last financial crisis. In the favourable economic situation and in the context of the increased optimism on the real estate market, according to the BLS banks are maintaining relatively high credit standards and loan terms. It is recommended that banks maintain high credit standards in the future, thereby reducing risks and the potential adverse consequences for the banking system in the event of a price reversal on the real estate market. By contrast, credit standards for housing loans have been gradually easing since 2017 in the euro area overall, which is attributable to the pressures of competition, the reduced risk perception in the favourable economic environment, and the positive outlook for the housing market. The easing of credit standards was smaller in 2018, which could be attributable to the increasing risks as real estate prices rise. The ECB identified several euro area countries as having elevated risks in the real estate market, and they have been subject to detailed analysis of the increasing risks. Slovenia is not defined as a euro area country with elevated risks, the ECB having identified risks in the real estate market in Slovenia as low on the basis of multiple indicators.

Figure 4.29: Credit standards for housing loans

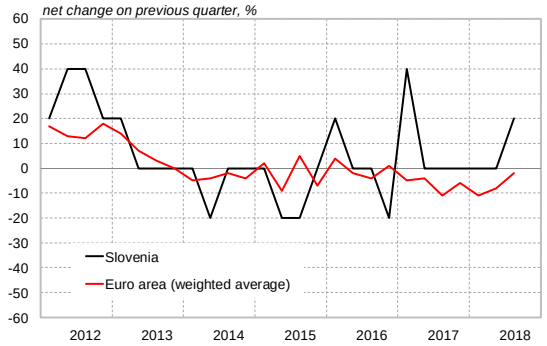
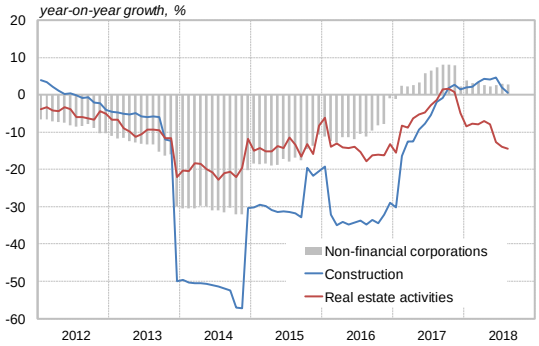


Figure 4.30: Growth in loans by selected economic sector



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)

[12] For more, see https://www.bsi.si/en/financial-stability/macroprudential-supervision/macroprudential-instruments/instruments-for-the-real-estate-market.
[13] For more, see https://www.bsi.si/en/publications/financial-stability-review.
[14] 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.

Growth in loans to construction firms strengthened slightly in the first half of 2018, but growth slowed again in the remainder of the year. Despite the increase in construction activity, loans to the construction sector are not increasing, while year-on-year growth in loans to firms in the real estate activities sector is continuing to decline. It could be concluded that construction firms are financing new projects to a greater extent with non-bank funds, and less with debt financing, which is also evident at firms in other sectors, as lending activity to non-financial corporations is still relatively low given the high economic growth and strengthened investment.

The risks to the banking system inherent in the construction sector are relatively low for now, but it is important that banks maintain the proper assessment of creditworthiness, particularly in the wake of the further high growth in real estate prices. The construction sector in Slovenia now typically consists of smaller construction firms, and the banks' exposure to the construction sector is also much smaller. Construction firms are still heavily involved in new investments in the real estate market, as both investors and contractors, which could entail major risk to banks. In contrast to investors, loans are the prevalent form of financing in the construction sector, which has increased their sensitivity to changes in the construction sector, and consequently could have an impact on banks. Construction activity can be expected to further strengthen in the future, encouraged by rises in prices and a shortage of new residential real estate. Despite the current favourable situation and the positive outlook for the real estate market, construction firms must ensure that they properly assess the financial viability and structuring of individual projects.

The rate of owner occupation remains high in Slovenia, while the proportion of real estate owners with a mortgage is among the lowest in the euro area. According to Eurostat figures, 24% of housing was rented in 2017, while 76% was owner-occupied. The gradual development of the real estate market in Slovenia over the years has seen a gradual decline in the rate of owner occupation, which nevertheless remains 10 percentage points above the euro area average of 66%. The proportion of owner-occupiers with a mortgage is gradually increasing, but remains low (12%) and below the euro area average (27%). The indebtedness of Slovenian households also remains relatively low: their financial liabilities are equivalent to 31% of GDP. The aforementioned financial indicators therefore do not indicate any increased risks to the banking system inherent in the household sector, but the risks could increase in the wake of further excessive optimism and rises in prices on the real estate market. When purchasing real estate via a loan, construction firms and households alike need to properly assess their financial position in the event of a deterioration in the situation on the labour market or a price reversal on the real estate market.

Figure 4.31: Breakdown of owner-occupiers and tenants in Slovenia

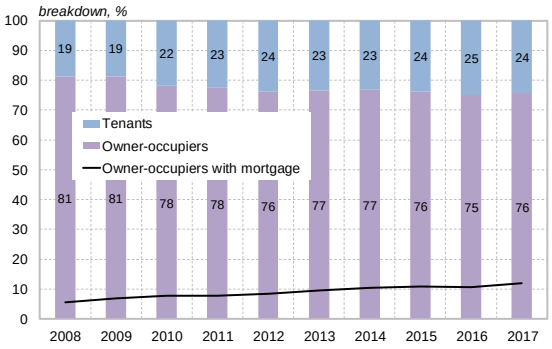
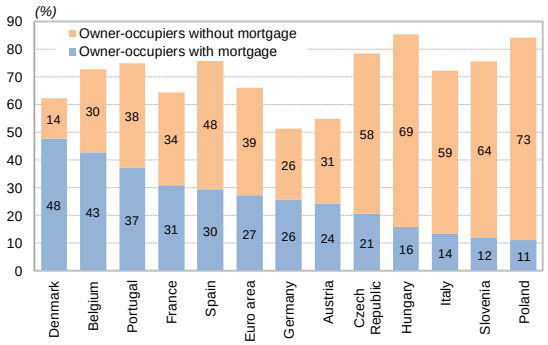


Figure 4.32: Owner-occupiers with and without a mortgage as proportion of total population, 2017



Source: Eurostat

Growth in housing loans declined slightly in 2018, but remains stable. Housing loans to households amounted to EUR 6.18 billion in the third quarter of 2018, as the year-on-year rate of growth remained around 4%. Despite the high growth in real estate prices and the positive outlook, there is no expectation of more significant growth in housing loans in the future. The shortage of marketable real estate is already being reflected in a fall in transactions in real estate and the consequent decline in demand for loans. Another factor in the decline in growth in housing loans is the continual rise in real estate prices, which is reducing households' capacity to purchase real estate. The improved situation on the labour market and growth in disposable income are increasing households' capacity to finance purchases with their own resources, and are additionally reducing the need to raise loans. June 2018 saw the entry into force of a new construction law, which tightens the conditions for obtaining a loan through additional documentation requirements, and could also lengthen the loan approval process.

In the context of relatively low interest rates, the proportion of housing loans with a fixed interest rate is continuing to increase. More than half of new housing loans during the first nine months of 2018 were approved with a fixed interest rate, and fixed-rate loans account for an increasing proportion of the loan stock: the figure had approached a quarter by September. Another factor in the increase in the proportion of fixed-rate loans is the persistence of low interest rates, which are gradually rising. Fixed-rate loans reduce the risk of an inability to pay on the part of households, as they reduce their exposure to interest rate risk. More than two-thirds of the stock of housing loans still have a variable interest rate tied to the EURIBOR, which could have an impact on loan repayment capacity in the future. The proportion of Swiss-franc loans is gradually declining: they accounted for 6.4% of the loan stock in September 2018, equivalent to an amount of close to EUR 390 million.

Figure 4.33: Stock of and growth in housing loans

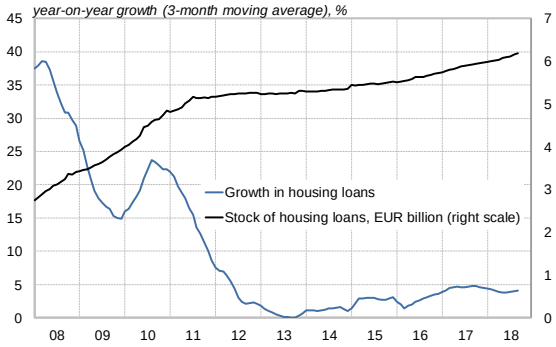
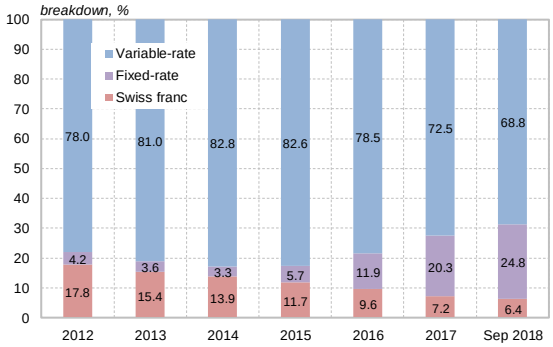


Figure 4.34: Stock of housing loans by type of remuneration



Source: Bank of Slovenia

The average maturity of new housing loans is no longer increasing, but the average fixed interest rate on housing loans is gradually rising. The average maturity of housing loans in 2018 was 18.7 years, down from just over 19 years in 2017. Another reason that the average maturity of housing loans is no longer lengthening is the constraints put in place by the banks, particularly on fixed-rate loans. A monthly average of EUR 86 million of new loans were approved over the first nine months of 2018, still the most prevalent among which are loans with a maturity of more than 20 years. In the wake of the anticipated rise in the EURIBOR, the average fixed interest rate on housing loans is increasing (2.9% in September), while the average variable interest rate is 1 percentage point lower. Similar developments in interest rates can also be expected in the future, particularly with the further tightening of monetary policy by the ECB and a rise in the main refinancing rate.

Figure 4.35: Distribution of maturities of new housing loans

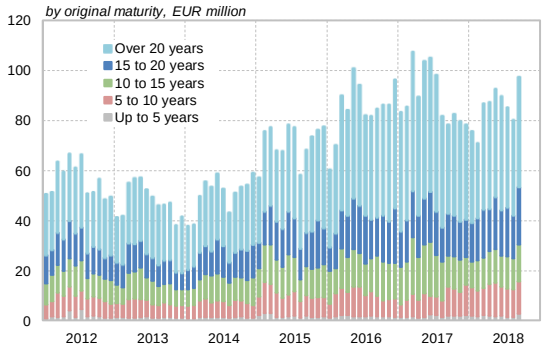
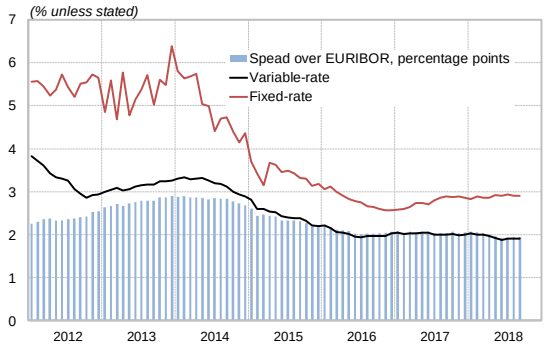


Figure 4.36: Interest rates on new housing loans by type of remuneration



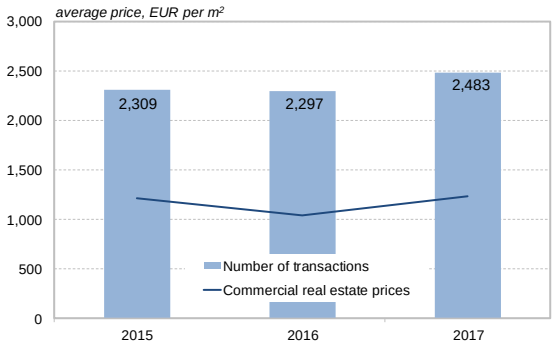
Source: Bank of Slovenia

Commercial real estate

The commercial real estate market saw a discernible rise in prices and transactions in 2017. Average prices on the commercial real estate sales market rose by 18.2% in 2017 to just over EUR 1,200 per m^2. The number of transactions also rose in 2017, which could be a sign of the gradual recovery of the commercial real estate market. According to SMARS figures, only Ljubljana has seen a rise in prices of office space over the last three years, in the amount of around 25%, while elsewhere prices remained unchanged. The commercial real estate sales market remains much smaller than the housing market, and consequently price volatility is greater. Some features of the Slovenian commercial real estate market are its concentration in

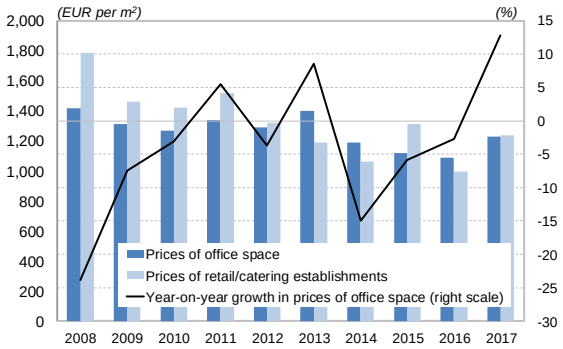
larger towns and cities, and urban areas in particular, and the high competition in the rental market. Price rises can be expected in the future in the favourable economic situation, and they are likely to be gradual, with occasional volatility, owing to the popularity of the rental market and the still relatively high supply of commercial real estate.

Figure 4.37: Commercial real estate prices and transactions



Source: SMARS

Figure 4.38: Prices of office space and retail/catering establishments



5 BANKING SYSTEM

The banking system has remained stable in the second half of 2018, with low or medium levels of risk in individual segments. Bank profitability is gradually increasing, partly on account of awakening credit activity, in addition to other short-term factors. The sustainability of this growth is however becoming uncertain, as in many parts of the banking system it is based on financing household consumption, and less and less on supporting business and corporate investment. There are signals coming from the macro environment with regard to slower growth in consumption, which is an indication of its limitations as a source of income. Should credit standards be relaxed, competition in the household segment could see a reversal in the favourable trend of a reduction in non-performing exposures (NPEs). These have recently been declining rapidly in all parts of the credit portfolio. A major impact at system level will come from the faster reduction of legacy claims at banks with the largest NPEs.

The banks' ongoing repayments of debt in the rest of the world and the increasing proportion of total liabilities accounted for by deposits are increasing funding stability, with less dependence on the situation on foreign markets. The banks' sensitivity to the risks inherent in the increasing proportion of sight deposits and the maturity mismatch between funding and investments is being mitigated by their large stock of liquid assets and the access to funding at the Eurosystem. In addition to its adverse impact on the widening repricing gap, the rise in fixed-rate lending is also having a favourable impact by reducing interest rate risk in respect of the debtors who participate in this financing. Capital adequacy remains good, and the banks are generating extra regulatory capital from earnings. Individual areas of risk at banks from a systemic perspective are examined below.

5.1 Bank profitability

Summary

The banks are operating profitably and are recording solid profitability. However, this is not sustainable over the longer term, as the profitability has partly been achieved through a net release of impairments and provisions, and with very low growth in net interest income. The banking system's pre-tax profit again increased slightly over the first three quarters of 2018, which was attributable to several favourable factors. After a long period of decline, net interest income resumed positive year-on-year growth, while non-interest income also increased. Operating costs are not rising, despite moderate growth in labour costs. The banks have continued to record a net release of impairments and provisions at system level, although it has been slowing since the summer. The increase in lending activity, which gradually began to bring a rise in net interest income in 2018, is currently limited primarily to the household segment. Despite satisfactory profitability over the first nine months of the year, income risk remains moderate at Slovenian banks on account of the ongoing release of impairments and provisions, and the very low growth in net interest income. The subsequent evolution of profitability depends strongly on developments in growth in lending to non-financial corporations, which is now very low. The stock of loans to non-financial corporations on the balance sheet of the Slovenian banking system at the end of the third quarter of 2018 was EUR 1.4 billion less than the stock of household loans.

Pre-tax profit at the level of the banking system amounted to EUR 422 million over the first three quarters of 2018. It was up 14% in year-on-year terms, having almost reached the figure generated in the whole of the previous year (EUR 444 million). The decline in net interest income came to an end in May after a long period, and year-on-year growth has been gradually strengthening since. The banks are also generating solid growth in non-interest income, which has resulted in an increase in gross income.

Net interest income, net non-interest income and margins

The net interest margin stabilised in 2018. The net interest margin on interest-bearing assets during the first nine months of the year stood at 1.84%, up 0.02 percentage points on the same period of the previous year. Having narrowed between 2014 and 2017, the distribution of the margin across banks increased slightly in 2018.[15] The gradual improvement in the net interest margin is attributable to the banks' increased lending activity and their very low funding costs. The latter is a result of the high proportion of sight deposits, and the

[15] The median net interest margin, which is not illustrated in the figure, was 1.93% in September 2018, close to the margin for the banking system overall.

low interest rates. Given the expected recovery in lending growth, in spring 2018 the banks were predicting the net interest margin to stabilise or even increase. The net non-interest margin stood at 1.17% over the first nine months of the year, up slightly on the figure of 1.13% recorded in 2017. There has been considerable volatility in recent years: it has often depended on one-off factors, such as dividend payments, and one-off income from the sale of investments.

Figure 5.1: Net interest margin and commission margin in the banking system

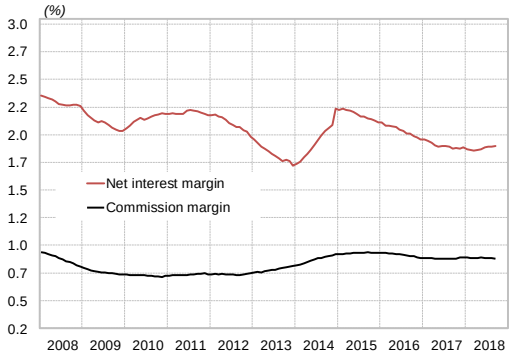
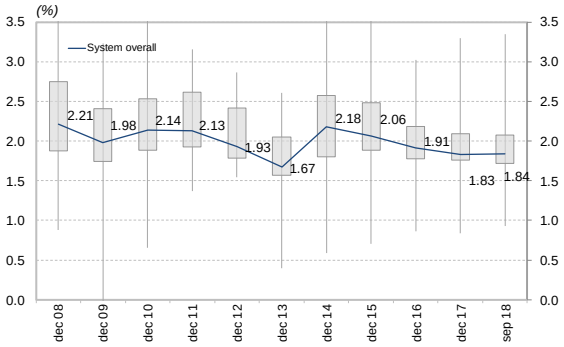


Figure 5.2: Net interest margin for the Slovenian banking system, December 2008 to September 2018, and distribution of net interest margin across banks by quartile at end of period



Source: Bank of Slovenia

Growth in non-interest income over the first three quarters of 2018 made a positive contribution to growth in the banks' gross income. Growth in net fees and commission was positive. Given the persistent low interest rate environment and the decline in net interest income, in recent years the banks have focused more on generating net non-interest income. Net fees and commission, which are the most important source of the banks' non-interest income, have been recording positive growth since the final quarter of 2017. Net fees and commission over the first nine months of 2018 were up 0.9% on the same period of the previous year. The banks' commission margin calculated over the preceding 12 months stood at 0.83% in September.[16] The remainder of net non-interest income is relatively volatile, and is the result of one-off events (dividend payments, income from the sale of assets, etc.).

The decline in the banks' net interest income, which had been evident since 2015, came to an end in May 2018. Year-on-year growth in net interest income had increased to 3.6% by September. Interest income declined by less than interest expenses in the Slovenian banking system overall. The ratio of interest income to interest expenses increased sharply: the banks' interest income is now more than seven times their interest expenses.[17] The decline in interest income in recent years was attributable to the fall in interest rates, the decline in loans and the maturing of higher-yielding securities in the past. By contrast, the rapid decline in interest expenses has been attributable to the increase in sight deposits and the fall in interest rates. Growth in the banks' net interest income is gradually strengthening. Until May 2018 the nominal decline in interest income exceeded the decline in interest expenses, which resulted in a decline in the bank's net interest income. In May and June growth in net interest re-entered positive territory as a result of a decline in interest expenses. Since July the increase in net interest has been attributable to a decline in interest expenses and also to an increase in interest income.

Box 5.1 Net interest income

Net interest income accounts for the majority of the banks' income. Net interest income has accounted for an average of two-thirds of the banks' annual gross income since 1996, but in the first three quarters of 2018 it accounted for 58% of gross income (compared with 61% in 2017). Net interest income accounts for the majority of gross income in all the bank groups, most notably at the banks under majority foreign ownership (65% in 2018, 66% in 2017) and at the small domestic banks and savings banks (58% in 2018 and 65% in 2017). The figure has temporarily declined slightly at the large domestic banks (51% in 2018, compared with 55% in 2017), largely as a result of an increase in non-interest income caused by one-off factors.

[16] Only the most important and least volatile component of non-interest income is illustrated in the figure, namely net fees and commission. The commission margin illustrates the banks' net income from fees and commission relative to average total assets.
[17] See Figure 5.5 below.

Figure 5.3: Breakdown of the banks' gross income into net interest income and net non-interest income

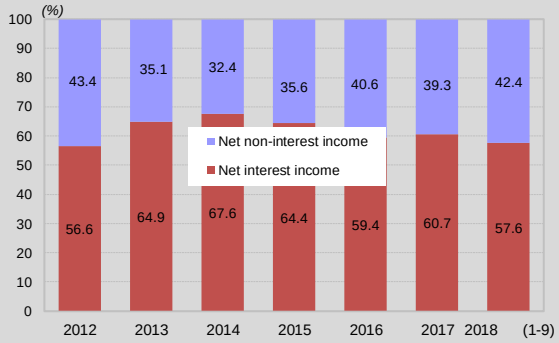
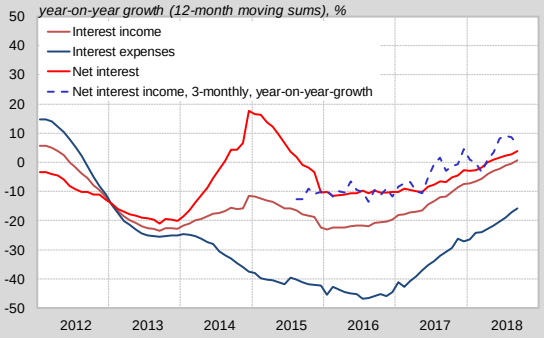


Figure 5.4: Growth in interest income, interest expenses and net interest



Note: The year-on-year growth rates in the right figure are calculated on the basis of the 12-month moving totals.
Source: Bank of Slovenia

Interest income, interest expenses and net interest all declined sharply in the years following the outbreak of the financial crisis. As a result of the decline in turnover, the fall in interest rates and the restructuring of funding, there was a sharp decline in the banks' interest income and interest expenses. Interest income reached its low[18] at the end of the first quarter of 2018. Year-on-year growth had been negative for a long period, but has been in positive territory since July. Interest expenses also declined until September 2018; the banking system's total interest expenses over the preceding 12 months were slightly in excess of EUR 100 million. The banks thereby reached the level where further reductions in interest expenses could only have a minimal impact on net interest income. It should be emphasised that the positive growth in net interest in May and June was nevertheless attributable in part to a decline in interest expenses. Similarly, the year-on-year increase in net interest over the first nine months of the year was still attributable to a decline in interest expenses (of EUR 10.5 million), in addition to an increase in interest income (of EUR 6.6 million).

Figure 5.5: Interest income, interest expenses and ratio of interest income to interest expenses

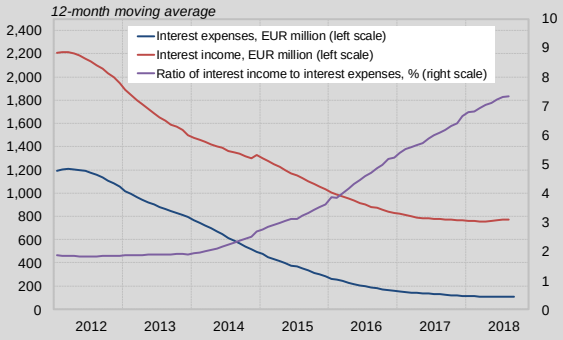
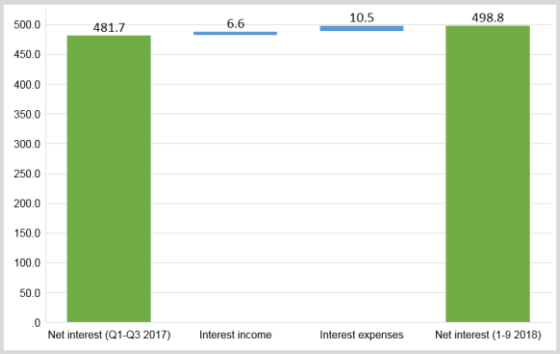


Figure 5.6: Net interest and changes in interest income and interest expenses (Jan to Sep 2018 vs. Jan to Sep 2017)



Source: Bank of Slovenia

Quantity effects (i.e. growth in various forms of assets and liabilities) are now prevailing over price effects (i.e. changes in interest rates) in 2018, and are producing positive growth in net interest income.[19] The factors affecting the change in net interest income can be divided into price effects (e.g. a change in the effective interest rate/rates) and quantity effects (e.g. an increase in loans or other forms of

[18] The commentary with regard to interest income, interest expenses and net interest relates in each case to the preceding 12 months, which allows for a comparison of the flows in value terms on an annual basis.

[19] 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, Figure 5.6). For more, see the December 2016, June 2017, January 2018 and June 2018 issues of the Financial Stability Review.

interest-bearing assets). While the contribution made to the change in net interest income by price effects prevailed over quantity effects between 2009 and 2017, this trend reversed in 2018. Quantity effects have been contributing to an increase in net interest income since 2017 on account of the increase in loans, but began to prevail over the price effects in 2018. It is estimated that bank lending activity will increasingly contribute to a gradual increase in positive growth in the banks' net interest income, despite a decline in interest income from securities and an increase in liquid forms of asset.

Figure 5.7: Changes in interest income, interest expenses and net interest

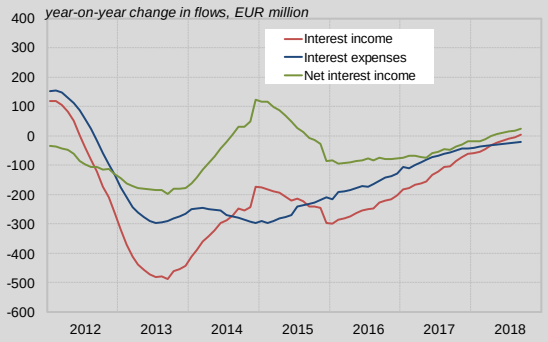
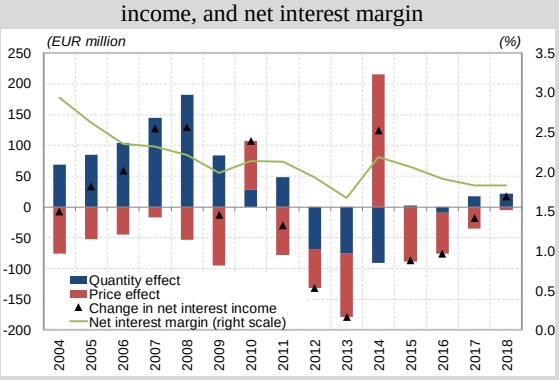


Figure 5.8: Contribution made by quantity effects and price effects to the change in net interest income, and net interest margin



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

The reversal in the trajectory of net interest income has been attributable to effects on the asset side, i.e. income, and on the liability side, i.e. expenses. The most pronounced factor in the increase in net interest in 2018 came from positive quantity effects from loans. The price effects on the asset side were still negative in 2018, largely as a result of price effects from the decline in returns on securities. On the liability side (interest expenses), the quantity effects were minimal, 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.

Figure 5.9: Changes in the banks' net interest income, decomposed into asset-side and liability-side quantity effects and price effects

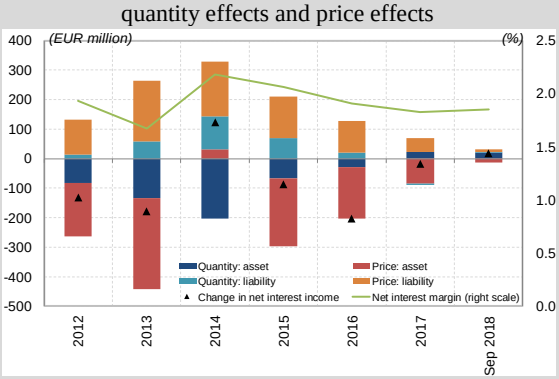
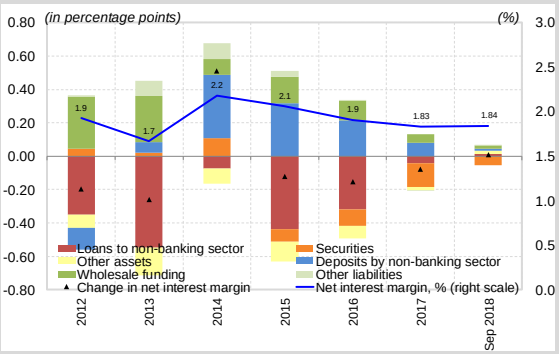


Figure 5.10: Contributions via interest-bearing assets and liabilities to change in net interest margin



Note: The left figure illustrates the effects from the previous figure (Figure 5.8) in detail.
Note: The left 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 is again increasingly determining the banks' income position. Growth in loans to the non-banking sector has been positive again over the last two years. Given that the banks have seen their previously higher-yielding securities mature, this is now the key to raising their (net) interest income. Should the banks fail to increase lending activity sufficiently, they could only replace the maturing assets with lower-yielding securities or by building up other very low-yielding liquid assets.[20] Interest income from loans is

[20] The figures for September 2018 show that the banks had increased their investments in loans by EUR 1.2 billion compared with a year earlier, had reduced their investments in securities by EUR 0.4 billion, and had increased their most-liquid assets in the form of claims against the central bank and sight deposits by EUR 0.3 billion.

becoming the key to future developments in the net interest margin.[21] The current pace of lending, which is limited mainly to households, is bringing a gradual improvement in the net interest margin. Year-on-year growth in interest income was positive in September for the third consecutive month, at 1.2%. There has been a notable increase in growth in interest income from loans to the non-banking sector, which stood at 3.5% in September.[22] It should be emphasised that growth in the banks' loans to non-financial corporations is low, standing at 2.8% in September,[23] while the stock of loans to non-financial corporations on bank balance sheets stood at EUR 8,536 million, almost EUR 1,380 million less than the stock of household loans. Alongside weak lending, there were other factors in the historically low proportion and stock of loans to non-financial corporations, such as the resolution of NPLs (sale of claims).

Figure 5.11: Growth in interest income from individual asset types

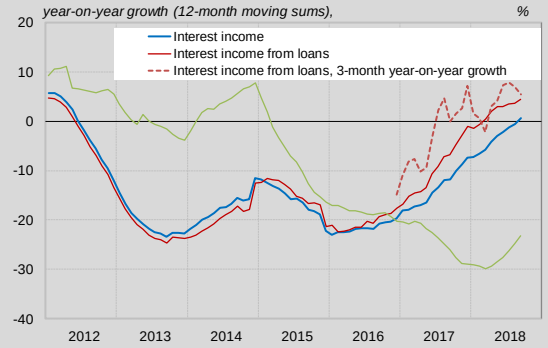
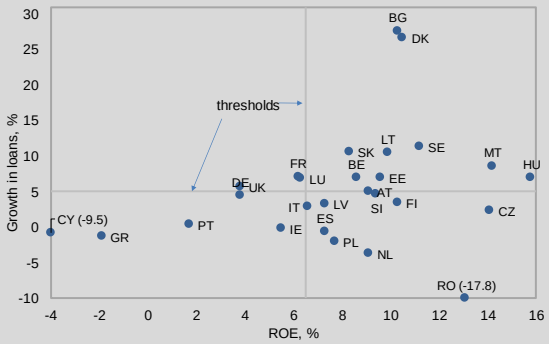


Figure 5.12: Growth in loans and the value of ROE in euro area countries, December 2017



Note: In the left figure the year-on-year growth rates are calculated on the basis of the 12-month moving totals.
Source: Bank of Slovenia

Growth in turnover and lending activity is expected to bring an increase in net interest income. Growth in interest income is expected to be positive this year, and is forecast to increase over the medium term as a result of the anticipated rise in interest rates on international financial markets (EURIBOR) and growth in loans, particularly to households. By contrast, interest income from securities will keep acting to reduce aggregate interest income.[24] However, the pace of the decline in interest income from securities is slowing. Net interest income is expected to have increased by the end of 2018, as a result of a further decline in interest expenses. The decline in interest expenses has slowed markedly compared with previous years, and is expected to come to an end in 2019, after which interest income will begin to increase. A favourable impact on net interest expenses will come from the decline in wholesale funding and the increase in deposits by the non-banking sector, as it is forecast that the banks will continue to restructure their liabilities, even though wholesale funding now accounts for a small proportion of bank funding.

Operating costs, net income, and impairment and provisioning costs

The banks maintained relatively good control of operating costs in 2018. Operating costs in the Slovenian banking system over the first three quarters of the year were down 1.3% on the previous year. Of the major costs, only labour costs recorded positive growth: they were up 2.3% in year-on-year terms in September. Other costs declined, despite the demanding situation and the other challenges faced by banks in the recent period, such as digitalisation and regulatory requirements. The CIR declined sharply in 2018, to 56%, comparable to the figures for 2014 to 2016. This was attributable to a decline in operating costs, and to positive growth in the banks' gross income.

[21] The net interest margin on interest-bearing assets calculated for the preceding three months improved in late spring, and averaged 1.93% between May and September.
[22] The largest factor in the increase was interest income from loans, year-on-year growth in which increased to 4.4% when 12-monthly flows are taken into account. The year-on-year figures based on 3-monthly flows are even higher: in September they stood at 4.2% for net interest income, 6.6% for interest income and 5.4% for interest income from loans.
[23] The amount of new corporate loans is also recording relatively low growth. New corporate loans over the first nine months of the year were up 3.5%.
[24] The banks generate by far the largest part of their interest income from loans: more than 80%, compared with less than 15% from securities. Income from securities is declining as a result of lower returns compared with the past, and because the banks are reducing the proportion of investments held in securities (divestment).

Figure 5.13: Operating costs, labour costs and total assets in the banking system

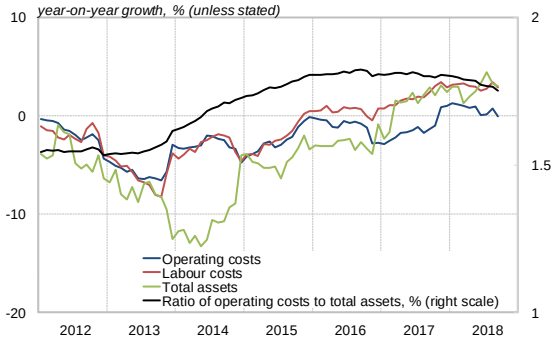
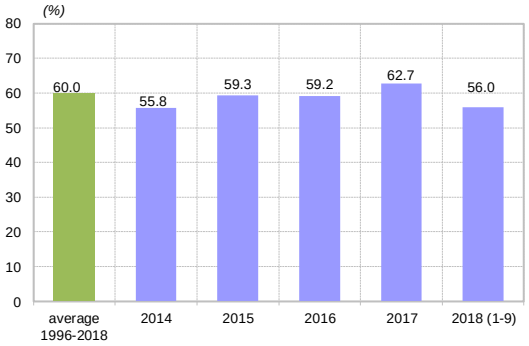


Figure 5.14: CIR in the Slovenian banking system[25]



Source: Bank of Slovenia

The banks' net income[26] is also increasing in the wake of positive growth in gross income and a decline in operating costs. After two consecutive years of decline, net income over the first three quarters of 2018 was up 15% in year-on-year terms. In contrast to previous years, this was attributable to growth in both major types of bank income, net interest and net non-interest income, and to a decline in operating costs.

The net release of impairments and provisions amounted to EUR 41 million over the first nine months of the year, and remained a favourable factor in the profitability of the banking system. This is a temporary phenomenon, which is the result of the improvement in the quality of the credit portfolio and the good economic situation, and is currently also contributing to an increase in bank profitability in certain other euro area countries. Under normal conditions banks would always dispose of a certain portion of their gross income on impairment and provisioning costs.[27] Since 2015, during which time the banks have been profitable, it was only in the aforementioned year that they disposed of part of their income on impairment and provisioning costs at a level corresponding to the long-term average. In 2016 the figure was much lower, while in 2017 and the first three quarters of 2018 they actually generated a net income from impairments and provisions.

Figure 5.15: Comparison of actual profit and actual ROE with profit and ROE generated had impairment and provisioning costs been at their long-term average

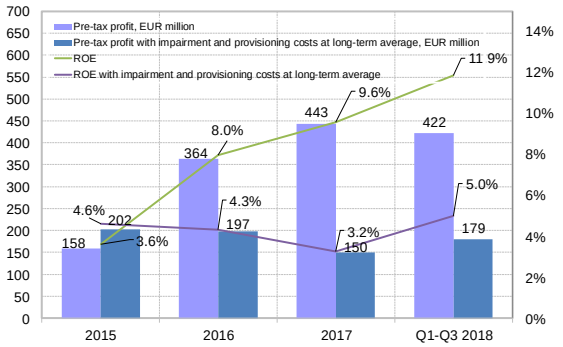
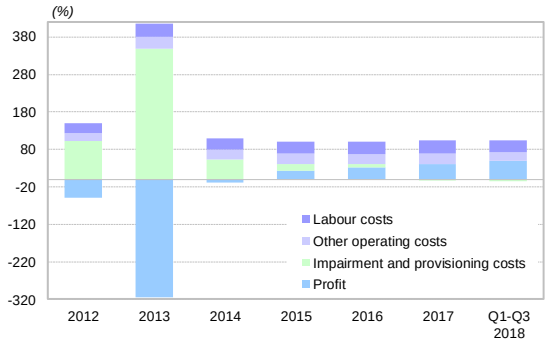


Figure 5.16: Disposal of banks' gross income



Source: Bank of Slovenia

Despite the banks' expectations[28] of a gradual end to this trend, impairment and provisioning costs can be expected to be relatively small again in 2019, which will have a favourable impact on bank profitability.

[25] The figure intentionally does not illustrate the indicator for 2012 and 2013, when there was volatility in gross income at banks.
[26] Net income is the banks' gross income less operating costs.
[27] Between 1996 and 2016 inclusive, banks in Slovenia disposed of 23% of their gross income on impairment and provisioning costs. 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 overall.
[28] Bank Survey, April 2018.

Figure 5.17: Pre-tax profit and ratio of impairment and provisioning costs to gross income

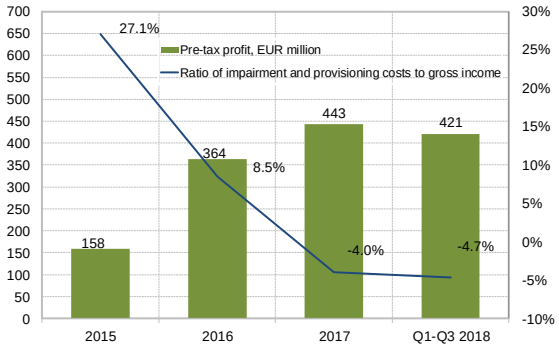
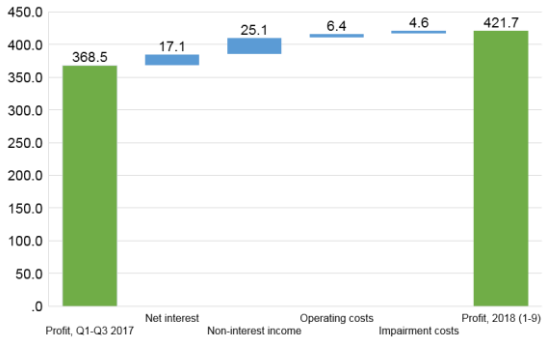


Figure 5.18: Pre-tax profit and impact of changes in components of generation and disposal of gross income (Jan to Sep 2017 and Jan to Sep 2018)



Note: A negative figure in the ratio of impairment and provisioning costs to gross income denotes net release. Figure 5.18 illustrates how much an individual component of the generation or disposal of gross income contributed to the change in pre-tax profit relative to the same period of the previous year.
Source: Bank of Slovenia

Profitability of the Slovenian banking system

The banking system's ROE over the first half of 2018 stood at 14%.[29] Decomposing ROE into the four components of profit margin, risk-weighted income, risk level and leverage reveals that increased profit margin was the main factor in the increase in profitability in the first half of the 2018, as it had been in the previous years, alongside, to a lesser extent, risk-weighted income and risk level. The impact of leverage was minimal and negative.

Figure 5.19: ROE, net interest margin on interest-bearing assets, and ratio of impairment and provisioning costs to total assets

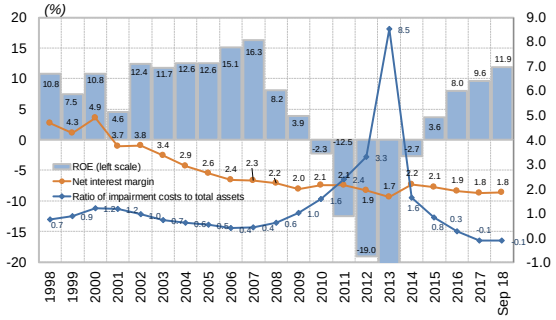
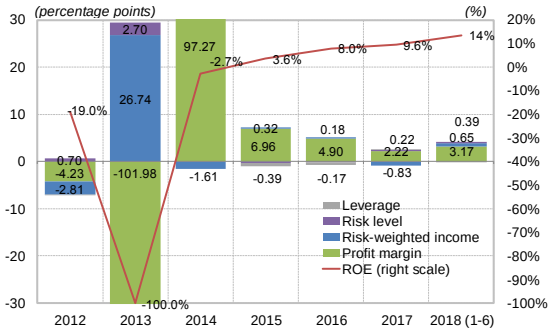


Figure 5.20: Impact of four factors on changes in ROE; decomposition of ROE



Note: The September 2018 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. In the left figure the September 2018 figure for ROE is calculated for the first nine months of the year.
Source: Bank of Slovenia

The Slovenian banking system's profitability improved in the first half of 2018, for the fifth consecutive year. Profit margin was the largest factor in the increase in profitability. Profit margin, the ratio of profit to gross income, was positive in the first half of the 2018, for the fourth consecutive year. Risk-weighted income, the ratio of the banks' gross income to risk-weighted assets, increased in 2018 as a result of the increase in the banks' gross income exceeding the increase in risk-weighted assets. Risk level, the ratio of risk-weighted assets to total assets, increased slightly, as growth in loans outpaced growth in low-risk forms of asset. Loans are increasing in importance on bank balance sheets. Should growth in loans remain as it was in 2017 and the first half of 2018, these two components could be expected to continue having a positive impact on profitability (risk-weighted income as a result of an increase in gross income, and risk level as a result of an increase in risk-weighted assets in the wake of growth in loans to the non-banking sector).

[29] The decomposition of ROE is only illustrated for the first six months of 2018, given the availability of certain data solely for that period.

5.2 Banking system's credit portfolio

Summary

The improvement in the quality of the banking system's credit portfolio continued in 2018 in all asset segments, with faster reduction of NPEs in the SMEs segment. Certain parts of the portfolio are still burdened by large NPE ratios, but the continuing improvement at the level of the banking system depends primarily on the activities of individual banks, particularly those whose size means that they are a heavier burden on the average across the system. Macroprudential measures aimed at preventing excessive credit growth and an increase in household indebtedness could result in a smaller inflow of new NPEs, while reducing existing NPEs requires greater activity on the part of individual banks. The recent uneven credit growth in individual segments has brought a rapid increase in exposures to households, and could increase the stock of high-risk assets at banks over the medium term.

Quality of the banking system's credit portfolio

The reduction in non-performing exposures (NPEs) in the banking system picked up pace in 2018. The year-on-year decline in NPEs accelerated from 22% in December 2017 to 34% in August 2018. This corresponded to a decline in NPEs to EUR 1.96 billion, taking the NPE ratio down to 4.5%. Although NPEs are down significantly on previous years, these claims are still a burden on bank balance sheets, and are not contributing to the generation of income. A period of economic growth is also better suited to the reduction of non-performing claims and the creation of a sound basis before a reversal in the business cycle, in which the probability of renewed growth in non-performing claims increases.

In international comparisons the Slovenian banking system is ranked among the countries that have seen the largest reduction in the NPE ratio, but it is still in the top third. In terms of the NPE ratio, five euro area countries have lower portfolio quality than Slovenia (as at June 2018), while across the EU Bulgaria and Croatia are also in a worse position. Only Cyprus, Portugal and Italy recorded a larger reduction in the NPE ratio between the end of 2016 and June 2018, but their NPE ratios are still higher than Slovenia's. Slovenia ranks similarly in terms of the narrower indicator of portfolio quality, the NPL ratio. The NPL ratio in the Slovenian banking system stood at 6.3% in September, equivalent to non-performing loans of EUR 1.8 billion.

Figure 5.21: NPEs, NPLs and claims more than 90 days in arrears, stocks and ratios

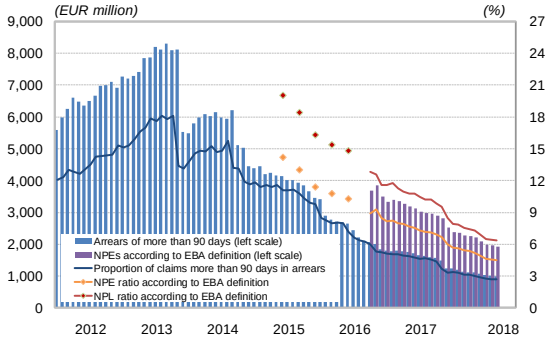
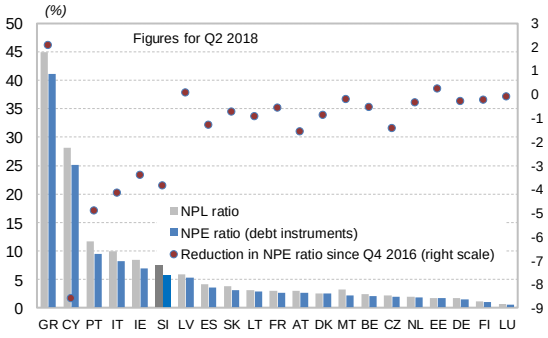


Figure 5.22: NPE and NPL ratios in euro area countries

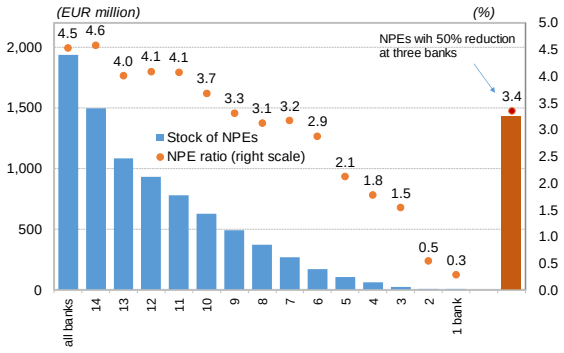


Note: The right figure illustrates consolidated data. NPE ratios are available solely for the debt instruments portfolio, and not for total exposure.
Sources: Bank of Slovenia, ECB (consolidated banking data)

Although the trend of improvement in the quality of the credit portfolio is favourable at the level of the banking system overall, at certain banks NPEs and the NPE ratio are still relatively high, and the reduction is slow. The banks with the highest NPEs are having a profound impact on the average quality of the credit portfolio of the banking system: excluding the two banks with the largest NPEs would have lowered the NPE ratio at system level to 4.0% in September. Put another way, were the three banks with the largest NPEs of just over EUR 1 billion[30] in September to reduce their NPEs by half, the NPE ratio at system level would decline to just 3.4%.

[30] The figure is given on an individual basis, as are all others in this section (unless explicitly stated otherwise).

Figure 5.23: NPE ratio for banking system excluding banks with largest NPEs



Note: The figure illustrates the NPE stocks and ratios calculated for a subsample of banks composed by excluding the banks with largest NPEs. The last column on the right illustrates a reduction of 50% in NPEs at three banks, their exposures then being included in the denominator of the indicator.
Source: Bank of Slovenia

The effectiveness of macroprudential policy in reducing existing NPEs is limited, but there is greater scope in the prevention of new NPEs. Further reduction in NPEs, which are mostly legacy NPEs from the crisis period, is in the domain of individual banks. In light of the trends to date in the reduction of NPEs, and the banks' plans for their further reduction, a smaller NPE ratio in the banking system is attainable if the inflow of new NPEs is limited by the maintenance of the credit standards now attained. In the prevention of the creation of new NPEs, all macroprudential policy instruments intended to prevent excessive credit growth, to limit imbalances on the real estate market and to limit excessive household indebtedness (see the *Macroprudential instruments* section) also have an indirect favourable impact in reducing the inflow of new NPEs at banks.

Figure 5.24: NPE ratio by client segment

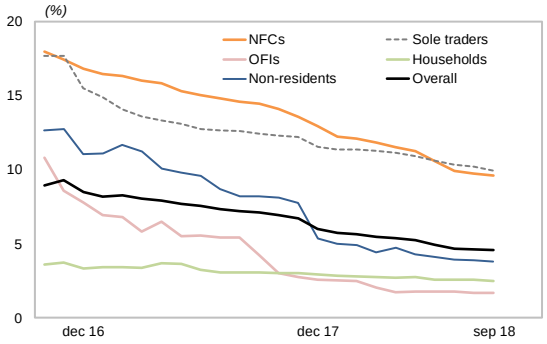
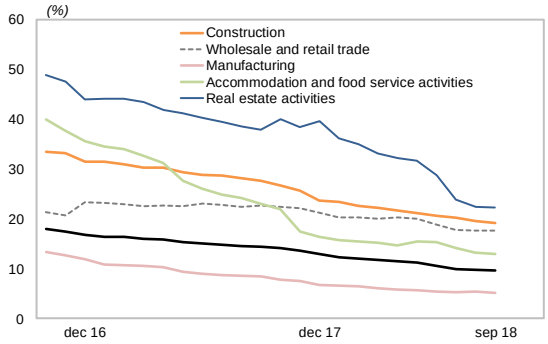


Figure 5.25: NPE ratio by economic sector



Source: Bank of Slovenia

The reduction in NPEs in 2018 was fastest in the non-financial corporations sector, although the quality of this segment of the portfolio remains lowest. NPEs to non-financial corporations declined by EUR 426 million over the first nine months of 2018, almost as much as in the whole of 2017. The NPE ratio nevertheless remains high at 9.6%, and the NPEs of EUR 1.3 billion account for two-thirds of the banking system's total stock. The NPE ratios in real estate activities and construction (22.3% and 19.1% respectively) and in wholesale and retail trade and accommodation and food service activities (17.6% and 13.0% respectively) are significantly above the average for the non-financial corporations sector. These four economic sectors account for almost two-thirds of total NPEs to non-financial corporations.

Forborne exposures account for a significant proportion of NPEs to non-financial corporations. The proportion of NPEs accounted for by forborne exposures is gradually declining. Forborne exposures accounted for 60% of NPEs to non-financial corporations in September, compared with 64% at the end of 2017. A quarter of these claims (15% of total NPEs) comprise claims that since forbearance have again fallen more than 90 days in arrears; this figure is relatively stable. The remaining forborne exposures are in observation status; this figure has declined slightly over the last six months, to 46% of NPEs. The decline in the ratio of forborne exposures to NPEs entails a gradual emergence from non-performing status or successful restructuring, which is to be expected given the favourable economic environment and the ever-improving financial position of non-financial corporations.

Figure 5.26: Stock of forborne exposures and ratio to NPEs in corporate sector

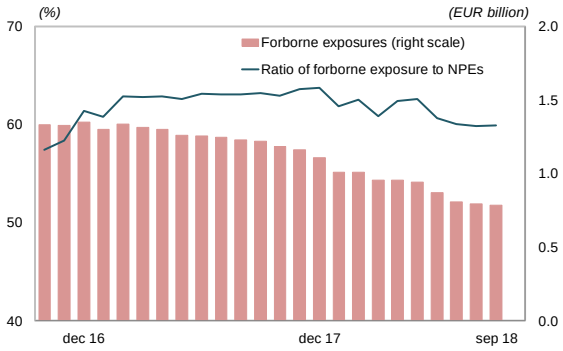
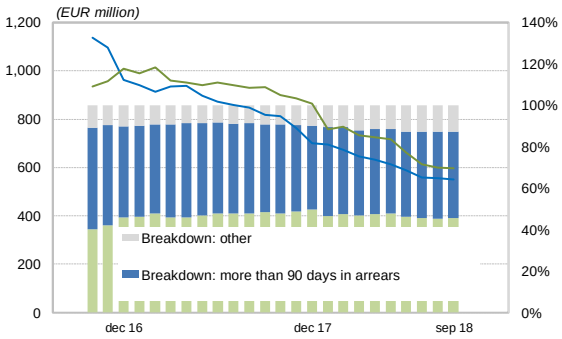


Figure 5.27: Breakdown of NPEs in corporate sector



Source: Bank of Slovenia

The banks have intensified the reduction of non-performing claims against SMEs, but they nevertheless continue to account for a large proportion of NPEs. NPEs to SMEs declined by 26% in 2017 and by a further 28% over the first nine months of 2018, to EUR 719 million. They account for 55% of total NPEs to non-financial corporations, down 6 percentage points on the end of 2016. The quality of exposures to SMEs is below-average: the NPE ratio is 11.5%, although this figure has halved since the end of 2016. The NPE ratio for large enterprises is 8.0%, while the pace of reduction is similar to that of SMEs.

Figure 5.28: NPEs by corporate size

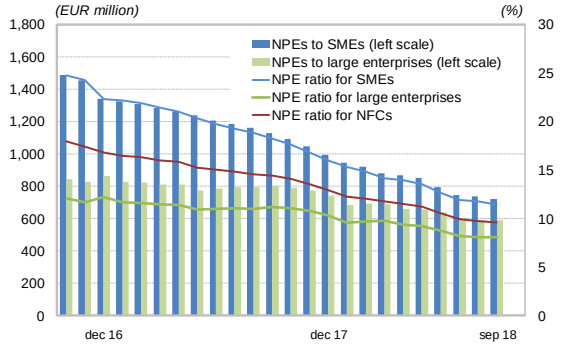
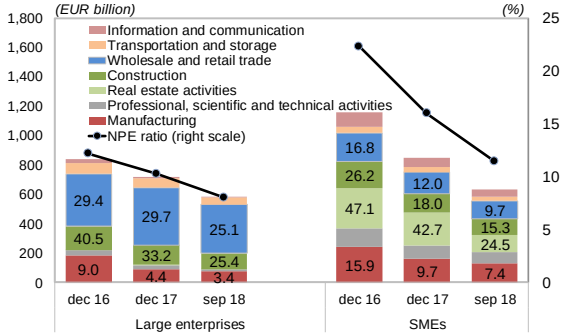


Figure 5.29: NPEs by corporate size and economic sector



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

In wholesale and retail trade and in construction, portfolio quality is significantly worse at large enterprises than at SMEs. The largest proportion of NPEs to large enterprises is concentrated in these two economic sectors. The quality of the banks' exposure to large enterprises in the wholesale and retail trade sector has not improved significantly over the last year and a half: the NPE ratio was still 25.1% in September 2018. The NPE ratio at large enterprises in the construction sector declined faster than in the wholesale and retail trade sector, but was still high at 25.4%. In other sectors portfolio quality is worse at SMEs than at large enterprises. The real estate activities sector (where there are virtually no large enterprises) is notable for the poor portfolio quality of its SMEs: their NPE ratio stood at 24.5%. In all economic sectors the stock of NPEs to SMEs has declined sharply, by at least 30% compared with the end of 2016. In addition to the banks' efforts to speed up the reduction of non-performing claims, this was also attributable to the stronger financial position of firms with increased debt servicing capacity.[31]

The transition matrices confirm that the improvement of the quality of the SMEs portfolio has continued in 2018. In the breakdown of transitions, the proportion of upgradings is increasing, while the proportion of downgradings is declining (see figure in appendix). There are more downgradings in the SMEs segment than in the large enterprises segment, although there is significantly greater variation from year to year at large enterprises than at SMEs because of individual large exposures.

[31] For more, see the *Non-Financial Corporations* section of the June 2018 Financial Stability Review.

Factors in increased credit risk

The banks' redirection towards increased household lending is bringing to the banking system the risk of an increased inflow of NPEs in this segment in the future. Over the last two years the banks have seen uneven credit growth in individual sectors, and a pronounced increase in exposures to one client segment alone. Some banks are reducing their corporate lending or even withdrawing from it altogether, and are redirecting their business models to household lending, while within the household segment there is a shift from housing lending to consumer lending. The aggressive focus of individual banks on one particular client segment could be a competitive advantage in the short term, but at the same time it is increasing the risk at banks that enter this competitive struggle later, when there is a higher probability that they will increase their exposure to weaker client groups.

Figure 5.30: Growth in loans to non-financial corporations versus growth in loans to households at individual banks

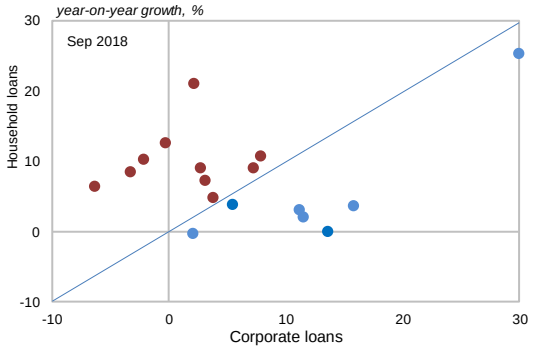
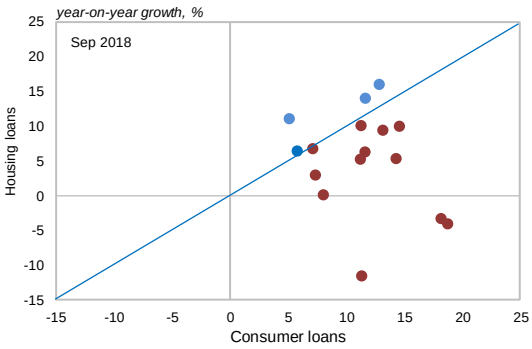


Figure 5.31: Growth in housing loans versus growth in consumer loans at individual banks



Source: Bank of Slovenia

Despite the increase in exposure to households, the quality of these assets remains relatively high. The NPE ratio is 2.5% across the household portfolio as a whole; the NPE ratio is 2.5% for housing loans, but is higher for consumer loans at 3.3%. All the figures are down on the end of 2017. Given the anticipation of relatively high economic growth and the maintenance of a favourable financial position by households, in the short term there is no expectation of an increase in non-performing loans to households. Risks are present over the medium term, in the event of a reversal in the economic cycle and a corresponding rise in unemployment.

To keep credit risk low, particularly in the household segment, it is vital to maintain adequate credit standards. According to the BLS, banks are maintaining credit standards at the elevated levels attained, although the survey does not include the banks that are most active in consumer lending.[32]

Figure 5.32: NPE ratios for households by loan type

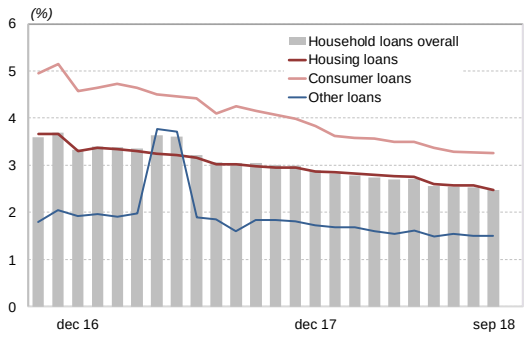
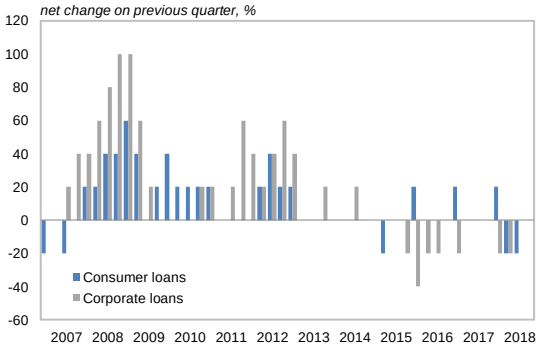


Figure 5.33: Credit standards for corporate loans and consumer loans



Note: Under other loans (left figure), there was a temporary increase in off-balance-sheet exposures at one bank in April and May 2017.
Source: Bank of Slovenia

[32] For more, see Section 3.1.

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

Coverage of NPEs by impairments[33] is continuing to improve. Coverage[34] at the level of the banking system stood at 55.4% in September 2018. The stock of impairments declined in parallel with the reduction in NPEs; in the wake of larger write-offs of NPEs in certain segments of the portfolio, there was also a decline in average coverage by impairments. Thus in the wake of the write-off of NPEs to non-residents, which were almost fully impaired when written off, in November 2017 there was a significant decline in the coverage of the remaining NPEs at the level of the portfolio as a whole. Coverage of NPEs to non-residents by impairments was significantly lower in September 2018 than at the end of 2016 because of these extensive write-offs, while coverage increased in other client segments (despite a decline caused by IFRS 9).[35]

In the household segment, coverage of NPEs by impairments remains slightly higher for consumer loans than for housing loans. Coverage of non-performing consumer loans by impairments stands at 71%, while coverage of non-performing housing loans stands at 47%. Coverage of housing loans by impairments is lower because of higher coverage by collateral.[36]

Figure 5.34: Coverage of NPEs by impairments by client segment

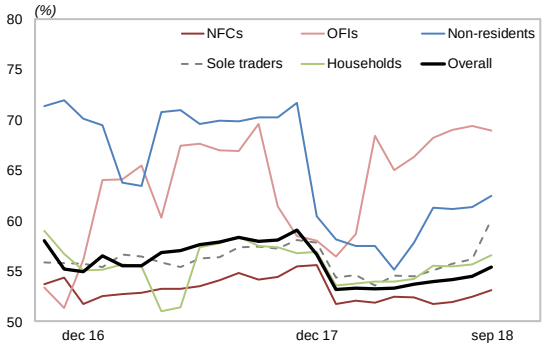
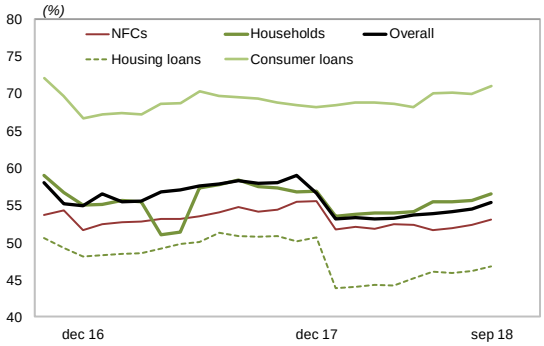


Figure 5.35: Coverage of NPEs to households by impairments



Source: Bank of Slovenia

The increase in capital adequacy and the decline in NPEs means that the banking system's resilience to increased credit risk has strengthened further. Total NPEs had declined below EUR 2.0 billion by September 2018, while the unimpaired portion stood at just under EUR 0.9 billion. By June the banks' regulatory capital had exceeded five times the unimpaired portion of NPEs, double the coverage at the end of 2016. The Slovenian banking system already stands out in comparison with other euro area countries for its coverage by impairments, while the high coverage by capital ensures extra robustness in the event of an increase in credit risk.

[33] 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. Allowances for credit losses relate to financial assets measured at amortised cost and financial assets measured at fair value through other comprehensive income. Value adjustments for credit losses relate to financial assets measured at fair value through profit or loss that are not held for trading. Provisions for credit losses relate to commitments given and contingent liabilities on banks' off-balance-sheet records (i.e. off-balance-sheet exposures).

[34] A significant decline in impairments (and in NPEs) was seen in exposures to all client segments in January 2018, as a result of the introduction of IFRS 9. 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.

[35] After eliminating the impact of IFRS 9, coverage of NPEs was up 4.6 percentage points on the end of 2016 in respect of non-financial corporations, 4 percentage points in respect of sole traders and households, and 3 percentage points at the level of the portfolio as a whole.

[36] 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 5.36: Coverage of NPEs in euro area countries

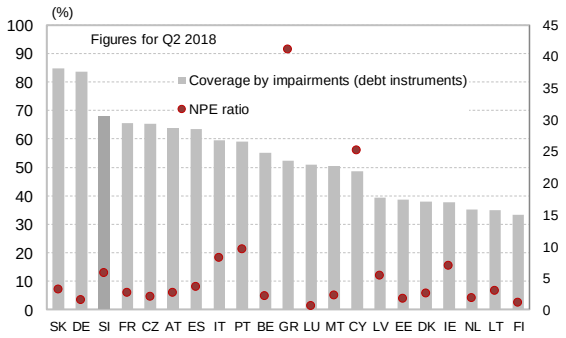
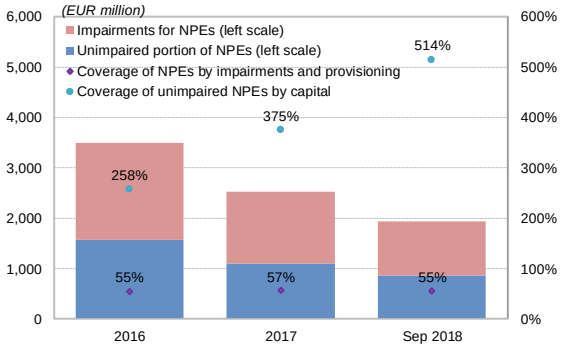


Figure 5.37: Coverage of unimpaired NPEs by capital



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

Coverage of NPEs by impairments and collateral at the level of the banking system averages 86%.[37] Coverage of NPEs to non-residents and sole traders has reached 92%, while coverage of NPEs to non-financial corporations is lower, at 84%. The changes compared with the end of 2016 are small. Coverage of NPEs by impairments in the accommodation and food service activities sector is relatively poor, although coverage in combination with collateral is significantly higher, and above-average compared with other economic sectors, at 96%. The professional, scientific and technical activities sector is also notable for similarly high coverage by impairments and collateral. Overall coverage of NPEs in the construction sector in the amount of 76% reflects the relatively poor coverage by collateral, while coverage by impairments is above-average compared with the non-financial corporations sector overall (at 59% versus 53%).

Figure 5.38: Coverage of NPEs by impairments, provisions and collateral[38] by client segment

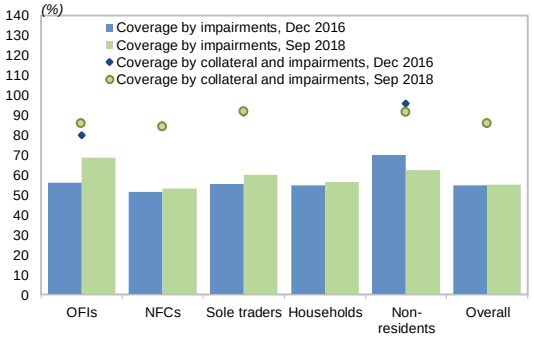
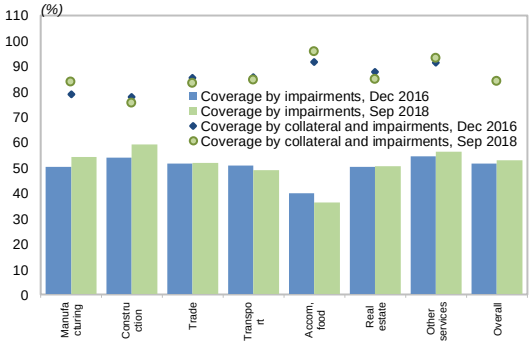


Figure 5.39: Coverage of NPEs by impairments, provisions and collateral by economic sector



Source: Bank of Slovenia

Box 5.2 One-off impact of the introduction of IFRS 9 on the calculation of impairments and provisions

The introduction of IFRS 9 brought changes to the calculation of credit parameters and credit losses. In light of the changeover in the calculation of credit losses from the incurred losses model under IAS 39 to the expected credit losses model under IFRS 9, banks have changed their methodology for calculating credit losses. The introduction of IFRS 9 reduced the coverage of gross exposure by allowances, value adjustments and provisions for credit losses (hereinafter: impairments), as a result of the reclassification of financial assets between accounting portfolios and the consequent revaluation from amortised cost to fair value or vice-versa,[39] and a decline in impairments from recalculation according to the expected credit losses model in

[37] Only calculation of coverage by impairments is possible for the household segment, as stated previously in the footnotes.

[38] 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.

[39] The net value of financial assets that were measured at amortised cost as at 31 December 2017 but were reclassified to other accounting portfolios as of 1 January 2018 was approximately EUR 0.2 billion. The majority of these financial assets were in default status at the end of the year, for which reason the assets had a very high level of coverage by impairments, and therefore their exclusion contributed to the decline in coverage after the effective date of IFRS 9. Another factor in the decline in coverage by impairments was the reclassification of financial assets that have been measured at amortised cost as of 1 January 2018, having previously not been. These are primarily debt securities that the banks do not need for managing daily liquidity, and before the introduction of IFRS 9 were measured at fair value through other comprehensive income. The gross value of these financial assets was approximately EUR 2 billion as at 1 January 2018. Because they mostly comprise exposures to banks and governments, their

accordance with IFRS 9. The analysis in this section covers the impact on the new calculation of impairments in accordance with IFRS 9 in reducing the coverage of exposures[40] by impairments. The analysis builds on that given in the June 2018 Financial Stability Review.[41]

The impact of the introduction of IFRS 9 on the calculation of impairments, more precisely on allowances and provisions for credit losses was estimated by a comparison of the on-balance-sheet and off-balance-sheet exposures that were measured at amortised cost both before and after the introduction of IFRS 9. For the purposes of this analysis, records of the stocks of individual exposures as at 1 January 2018 were linked with records of the stocks of these exposures as at 31 December 2017. The household sector was excluded from the analysis, as it is reported at the aggregate level, and a unique link therefore cannot be established between the figures for the two different dates. The analysis solely takes account of financial assets that were measured at amortised cost on the two dates, and off-balance-sheet exposures. Only in this way can the impact on coverage from the reclassification between accounting portfolios under IFRS 9 be eliminated, and the impact of the new calculation of impairments under IFRS 9 alone be analysed. On the basis of merging the stocks of individual exposures on the two dates, for the purposes of this analysis the exposures were classified into three stages that in accordance with IFRS 9 are the basis for the calculation of impairments under the expected credit losses model, and comparative analysis of the coverage of exposures by impairments was carried out for each stage of exposures between the two dates. The analysis covers approximately 93% of the exposures reported at contractual level. The remaining exposures reported at contractual level were excluded from the analysis because they were not measured at amortised cost on both dates.

The **results of the analysis** reveal that there was a decline in coverage by impairments, most notably in Stage 1 and in Stage 3, while there was a significant increase in coverage in Stage 2, for which it has been necessary to calculate impairments on the basis of expected credit losses over the lifetime since 1 January 2018. The overall release of impairments is the result of the favourable macroeconomic situation and outlook. The table illustrates coverage by impairments for each of the three Stages on two reporting dates. In the calculations we exclude financial assets that were defined as purchased or originated credit-impaired (POCI) financial assets during the changeover to IFRS 9, as owing to the different approach to valuation at their recognition (i.e. at fair value) they could distort the calculation of the impact of IFRS 9 on impairments. This applies in particular to Stage 3, where coverage by impairments after the exclusion of POCI assets is higher.

Table 5.1: Percentage coverage of exposure measured at amortised cost and off-balance-sheet exposures by impairments and provisions before and after the introduction of IFRS 9

Stage	Coverage by impairments (1 Jan)	Coverage by impairments (31 Dec)	Relative change
	(1)	*(2)*	*100*((1)/(2) -1)*
1	0.4	0.8	-54.6
2	6.7	5.4	23.8
3	56.0	57.1	-2.0
Overall	4.8	5.2	-7.4

Note: (1) The analysis solely takes account of financial assets that were measured at amortised cost on both dates, and off-balance-sheet exposures. The household segment has been excluded. Financial assets that were classified as POCI assets as at 1 January 2018 have also been excluded. POCI assets have a modified approach to valuation, and a modified approach to the disclosure of impairments.
Source: Bank of Slovenia

5.3 Funding, bank liquidity and interest-sensitivity

Summary

Deposits by the non-banking sector are continuing to increase, primarily as a result of growth in household deposits. The extremely low interest rates on deposits remain the reason for the increase in sight deposits, which given the simultaneous growth in long-term loans to the non-banking sector is increasing the maturity mismatch between assets and liabilities. This is introducing potential instability into bank funding in the

coverage by impairments was very low, and their inclusion thus contributed to the decline in coverage after the effective date of IFRS 9.

[40] The analysis relates exclusively to exposures for which it is necessary to take account of the IFRS 9 with regard to the calculation of impairments and provisions, and does not include exposures that in accordance with IFRS 9 are measured at fair value through profit or loss (and consequently adjustments to the fair value of these exposures for reason of credit risk).

[41] Box 4.1 in the aforementioned report addressed the evaluation of the impact of the changeover to IFRS 9.

event of a sudden withdrawal of savers' funds from the system or their switching between banks. The banks' favourable liquidity position means that funding risk remains moderate. The high proportion of liquid assets is reducing the banks' vulnerability to the potential adverse effects of maturity mismatch.

Bank funding

The structure of the banking system's funding is changing more slowly than in previous years. Deposits by the non-banking sector are an increasingly important primary funding source: they accounted for 73.8% of total bank funding in September 2018. Wholesale funding is diminishing in importance: it was mainly debt securities that declined over the first nine months of the year, while debt repayments to banks in the rest of the world slowed. Liabilities to the Eurosystem continue to account for a small proportion of funding, as their favourable liquidity position means that the banks do not need these resources.

Figure 5.40: Structure of bank funding

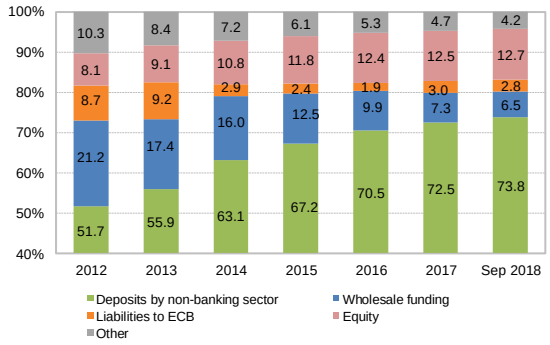
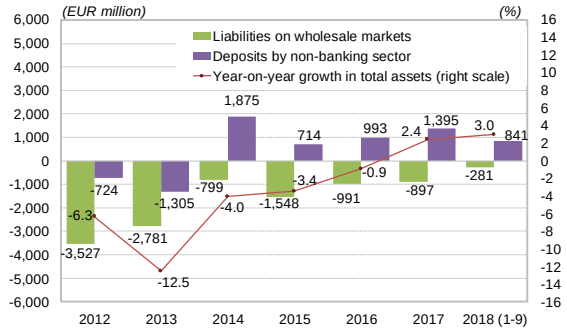


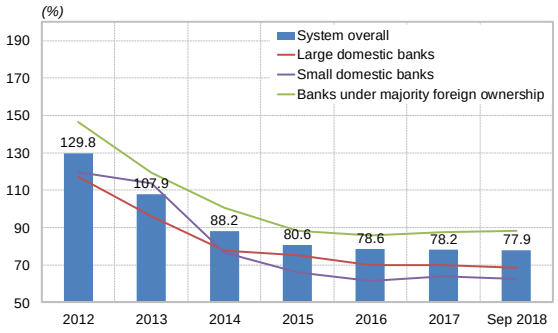
Figure 5.41: Changes in deposits by the non-banking sector and wholesale funding



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

Deposits by the non-banking sector are continuing to increase. After strengthening in the second quarter of 2018, year-on-year growth in deposits by the non-banking sector slowed, reaching 5.7% in September. In contrast to previous years, the increase in deposits by the non-banking sector over the first nine months of 2018 was primarily the result of an increase in household deposits; the increase in deposits by non-financial corporations was small. The banks are still able to fund the net increase in loans to the non-banking sector from the net increase in deposits by the non-banking sector. The ratio of loans to the non-banking sector to deposits by the non-banking sector (LTD) stabilised at 78%. The change in funding structure in the direction of increased deposits by the non-banking sector is reducing the banks' dependence on funding on the wholesale markets, thereby reducing exposure to potential external risks.

Figure 5.42: Loan to deposit ratio for the non-banking sector by bank group



Source: Bank of Slovenia

Households are increasing their savings at banks. Rising wages and disposable income and falling unemployment are improving the financial position of households, although they nevertheless remain cautious. They are diverting their gains into bank saving, rather than consumption or alternative forms of investment. Household deposits increased by EUR 811 million over the first nine months of 2018 to EUR 18.3 billion, equivalent to 48% of total assets. Year-on-year growth in deposits increased gradually in the first half of 2018, then slowed owing to a seasonal effect, reaching 5.8% in September. Household

deposits are also expected to strengthen in the future, given the favourable economic situation and household propensity to save.

Figure 5.43: Growth in deposits by sector

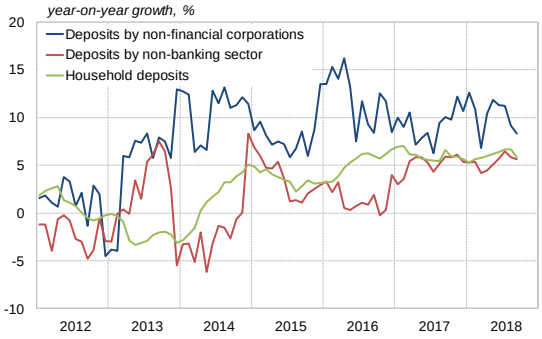
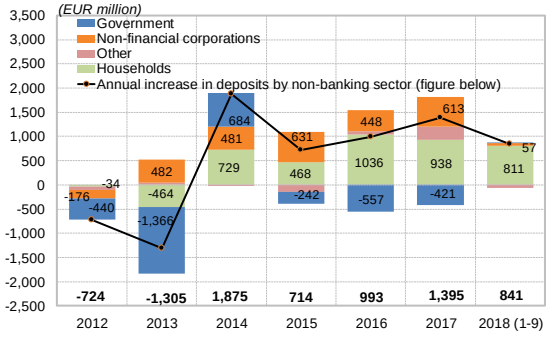


Figure 5.44: Increase in deposits by sector



Source: Bank of Slovenia

The increase in deposits by non-financial corporations over the first nine months of 2018 was significantly less than in previous years. In the favourable economic situation non-financial corporations generated profits, which they earmarked for consumption, financial restructuring and investments. The stock of deposits by non-financial corporations increased by EUR 57 million to EUR 6.4 billion. Deposits by non-financial corporations nevertheless remain the second most important source of bank funding, accounting for almost 17% of total liabilities. Growth remained relatively high, despite a gradual decline in the third quarter of 2018, the year-on-year rate reaching 8.3% in September.

Maturity of deposits by the non-banking sector

The proportion of total deposits by the non-banking sector accounted for by sight deposits increased further in 2018, albeit more slowly than in previous years. In September sight deposits accounted for 72% of total deposits by the non-banking sector, and 53% of total liabilities. Short-term and long-term fixed-term deposits by the non-banking sector are both declining. Because some of these funds remain in accounts at banks, this is additionally increasing the stock of deposits.

Figure 5.45: Breakdown of deposits by the non-banking sector by maturity

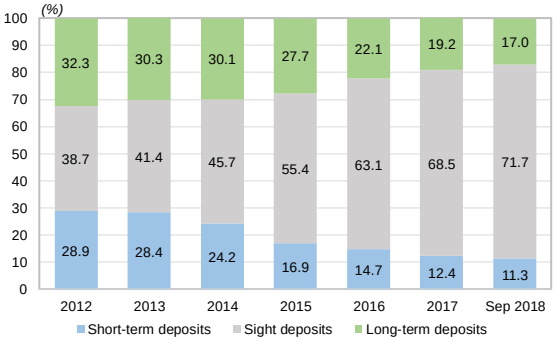
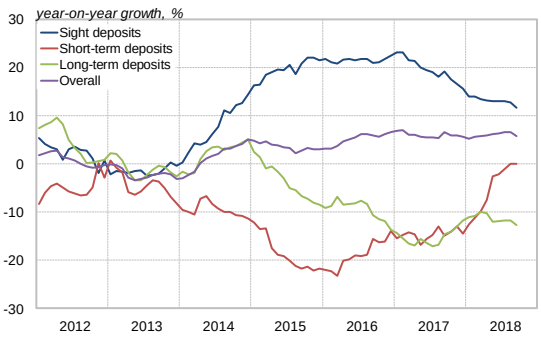


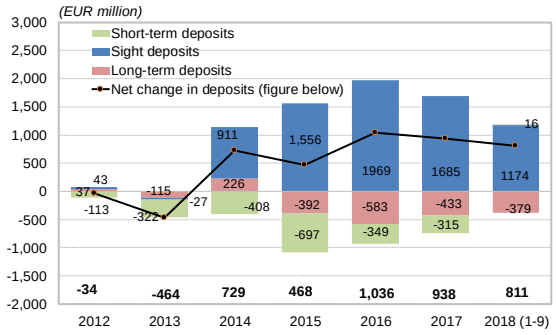
Figure 5.46: Growth in household deposits by maturity



Source: Bank of Slovenia

The increase in household deposits is mostly in the form of sight deposits. The stock of sight deposits increased by EUR 1.2 billion over the first nine months of the year to EUR 13.6 billion, equivalent to 74% of total household deposits. Despite a slowdown, growth remains high: the year-on-year rate stood at 11.7% in September 2018. Despite the extremely low interest rates, the contraction in short-term household deposits, which had been seen for several years, came to an end; the net increase over the first nine months of 2018 was however low, at EUR 16 million. In light of the extremely low returns, savers are still unwilling to tie up their savings for longer periods. The stock of long-term household deposits is therefore continuing to decline, which is another factor in the shortening of average funding maturities. Interest rates on long-term household deposits declined to 0.4% in mid-2018, slightly below the euro area average. In the majority of euro area countries sight deposits are prevalent in the maturity breakdown of household deposits. Slovenia is one of the top five countries in the euro area in terms of the ratio of household sight deposits to total liabilities, and the importance of household deposits in the funding structure.

Figure 5.47: Change in stock of household deposits by maturity



Source: Bank of Slovenia

Figure 5.48: Interest rates on new household deposits

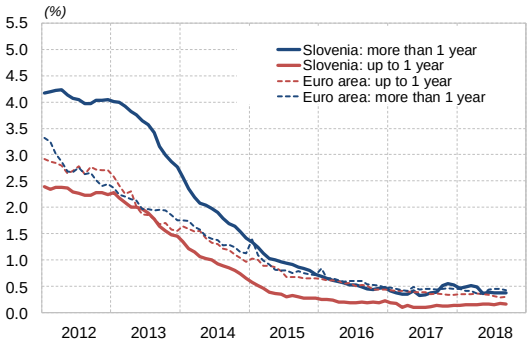
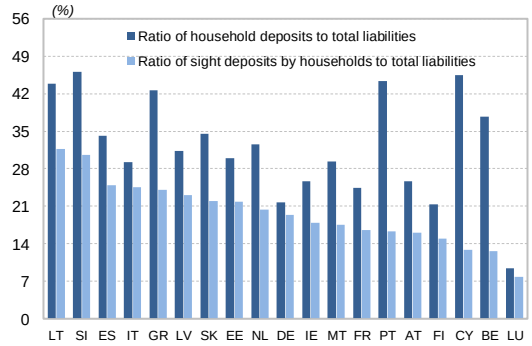


Figure 5.49: Ratio of household deposits to total liabilities in euro area countries, year-end 2017



Note: Figures are on a consolidated basis.
Sources: ECB (SDW), own calculations

Growth in sight deposits by non-financial corporations slowed in 2017, but began increasing again in 2018. The proportion of total deposits by non-financial corporations accounted for by sight deposits increased by 3 percentage points over the first nine months of the year to 74%, mainly as a result of a net decline in short-term deposits. Interest rates on new deposits by non-financial corporations remain minimal, and below the euro area average. Because non-financial corporations are not financing their investment solely through loans, but also with internal resources, the availability of these funds is important. Because the banks are maintaining high credit standards for non-financial corporations and because the terms of loan agreements are often unacceptable for non-financial corporations,[42] non-financial corporations can be expected to continue maintaining a high level of sight deposits.

Figure 5.50: Change in stock of deposits by non-financial corporations by maturity

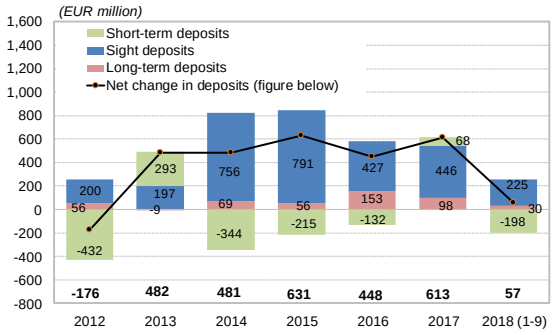
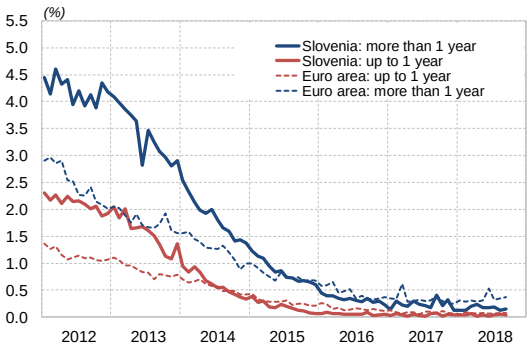


Figure 5.51: Interest rates on new deposits by non-financial corporations



Source: Bank of Slovenia

The potential instability in the funding structure comes from the maturity mismatch between assets and liabilities. Long-term loans to the non-banking sector are increasing, and average maturity is

[42] Survey of demand for loans from non-financial corporations, October 2018.

lengthening. Because there is a simultaneous increase in sight deposits, which are the main source of funding for lending activity, the maturity gap between assets and liabilities is widening. To quickly bridge any liquidity difficulties, the banks have EUR 4.4 billion or 12% of their total assets available in the form of highly liquid assets.[43] The banking system's favourable liquidity position is also reflected in a high liquidity coverage ratio (LCR), which illustrates banks' capacity to cover net liquidity outflows over a 30-day stress period. More on the banks' liquidity position is provided later in this report.

Figure 5.52: Net gap between total assets and total liabilities by residual maturity

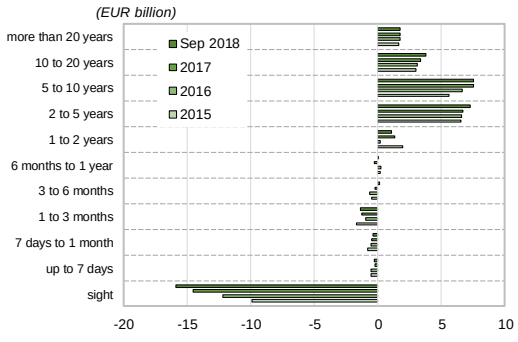
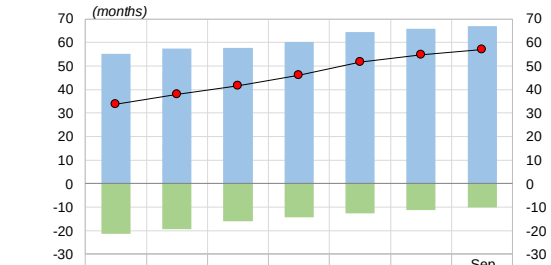


Figure 5.53: Weighted average of residual maturity of assets and liabilities, and gap



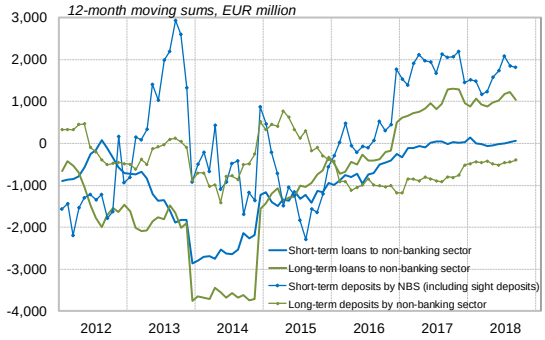
	2012	2013	2014	2015	2016	2017	Sep 2018
Assets	55.1	57.4	57.7	60.2	64.3	66.0	67.1
Liabilities	-21.5	-19.4	-16.0	-14.2	-12.6	-11.2	-10.1
Gap	33.6	37.9	41.7	46.0	51.7	54.8	56.9

Source: Bank of Slovenia

There is a low probability of the realisation of the risks inherent in maturity mismatch over the short term. Funding instability could be caused by two factors, among others. The first is a rise in deposit interest rates, which is likely to track the rise in the ECB's key interest rate with a significant lag. This would result in a switch in bank deposits from sight deposits to fixed-term deposits. A rise in interest rates within the banking system could also lead to the switching of savers' deposits between banks, thereby causing funding instability at individual banks. Although market participants are not expecting a rise in the ECB's key interest rate until the end of 2019, the monitoring of competitive pricing policy and the banks' prompt responsiveness to changes will be important to deposit stability.

Second, in the event of extraordinary developments there could be a withdrawal of deposits from the banking system, although this is less likely given the favourable economic environment and profitability of the banks, which mean that savers are retaining their confidence in the banking system. For more on the probability of the realisation of funding risk owing to the high proportion of deposits, see the thematic section.

Figure 5.54: 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

[43] Highly liquid assets comprise cash on hand, balances at the central bank and sight deposits at banks.

Bank liquidity

The banking system's liquidity remains high, and the risk of illiquidity is low. The banks' increased their stock of liquid assets[44] by EUR 346 million over the first nine months of 2018 to EUR 12.0 billion, raising their ratio to total assets to 31%. The ratio of secondary liquidity to total assets remained relatively stable, at just under 20%. The stock of secondary liquidity increased by an average of EUR 120 million over the first nine months of 2018 to stand at EUR 7.6 billion. The concentration of Slovenian government securities in secondary liquidity is continuing to diminish. In the quest for better returns on assets, as Slovenian government securities mature the banks are focusing on purchases of foreign marketable securities rated BBB or higher. The proportion of secondary liquidity that they account for became the majority in October of the previous year, and reached 57% in September 2018.

Figure 5.55: Stock of liquid assets

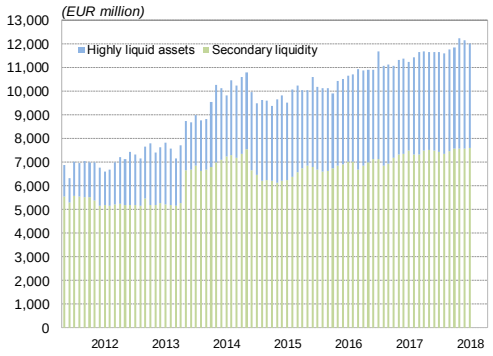
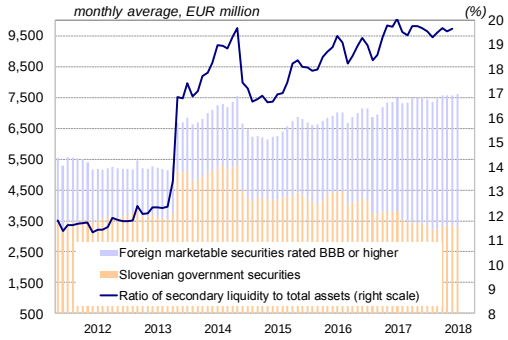


Figure 5.56: Stock of secondary liquidity



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

The liquidity coverage ratio (LCR) indicates that the banking system's liquidity position is favourable. Despite a moderate decline in 2018, it remains high at 298%. Net liquidity outflows increased more than the liquidity buffer over the first nine months of the year, which reduced the LCR. Compared with other EU Member States, the Slovenian banking system is notable for the highest LCR.[45]

Regulatory changes are expected to result in a reduction in the LCR, albeit only at certain banks. Two provisions of the General terms and conditions of the implementation of the monetary policy framework relating to the valuation of bank loans and their eligibility for inclusion in the pool of eligible collateral at the Eurosystem entered into force in October 2018.[46] As a result of the aforementioned changes, according to estimates[47] the LCR will decline at certain banks, albeit not below the regulatory level at any bank.

Figure 5.57: Liquidity coverage ratio

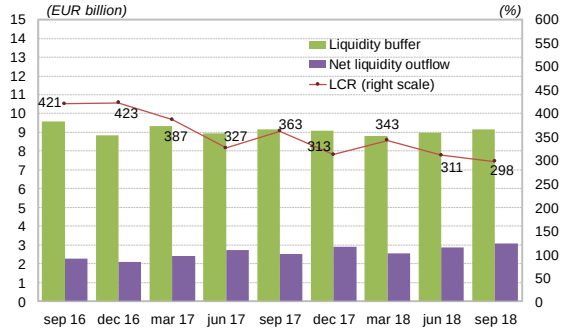
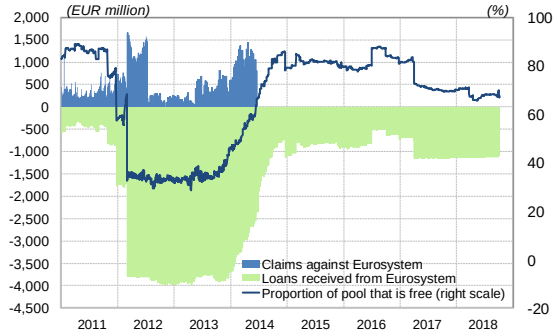


Figure 5.58: Banks' claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free



[44] 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.
[45] Figures are available for March 2018, on a consolidated basis. The data source is the ECB (SDW).
[46] Under the new criterion, loans whose minimum and maximum interest rate are defined at issue or vary over time in accordance with a plan defined at issue are eligible. In addition, the haircuts for variable-rate loans with an non-zero or maximum interest rate will increase, as these loans will be valued as fixed-rate loans.
[47] The figures for October were not available when the review was bring written, and so the change is merely estimated.

Source: Bank of Slovenia

The proportion of the pool of eligible collateral at the Eurosystem that is free remains high, which allows banks to obtain additional funds in the event of major liquidity needs. It declined by 2.3 percentage points over the first nine months of 2018 to stand at 68%, as a result of a decline in the pool of EUR 417 million to EUR 3.4 billion. Given the surplus liquidity, the banks are not participating in refinancing tenders at the ECB, and accordingly they have no need to maintain such a large pool of collateral, and have removed assets from it. The aforementioned regulatory change was less of a factor in the reduction of the pool of collateral, as by September the banks had already compensated for the anticipated exclusion of ineligible loans with other eligible collateral.

Interest sensitivity

The trend of a widening gap in repricing periods is slowing. Excluding regulatory assumptions, the gap remains large, but under the IRRBB methodology, which takes account of amortisation schedules, and hedging of interest rate positions with derivatives, and assumes sight deposit stability, the gap in repricing periods is almost zero. The final impact of a rise in market interest rates on the banks' net interest income is expected to be positive. Given the large maturity mismatch between assets and liabilities, a sudden jump in market interest rates could reduce the economic value of equity.

Gap in repricing periods

Interest rate risk as measured by the difference between the average repricing periods for asset and liability interest rates (the gap in repricing periods) illustrates the exposure of the banks' operations to the risk of a rise in market interest rates. The lengthening of the average repricing period on investments is exposing the banks to the lengthening of the period of adjustment in interest income during a period of rising interest rates. At the same time the average repricing period for funding, which entails interest expenses for banks, is shortening or holding steady, and at just under 6.6 months was around 15.5 months shorter than the corresponding period for investments in September 2018.

The final impact of a rise in market interest rates on the banks' interest income and interest expenses will depend primarily on the pace of the adjustment in liability interest rates relative to asset interest rates. The pace of the pass-through of market interest rates into deposit rates will be particularly important, as the banks are funding the majority of their investments through sight deposits. Here it is also important how quickly sight deposits will be switched back to fixed-term deposits with longer maturities and higher interest rates. Given the anticipated slower adjustment in deposit rates,[48] the impact of a rise in market interest rates on the net interest income of Slovenian banks is expected to be positive.

Figure 5.59: Comparison of gaps in repricing period under the IRRBB approach[49]

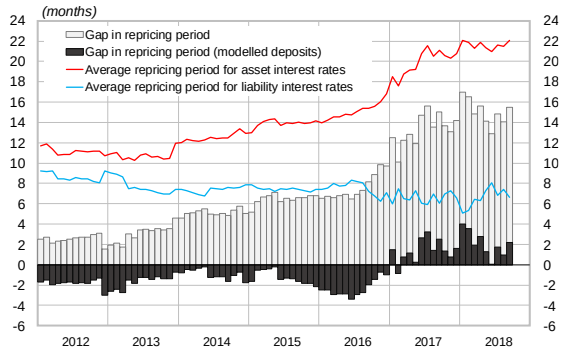
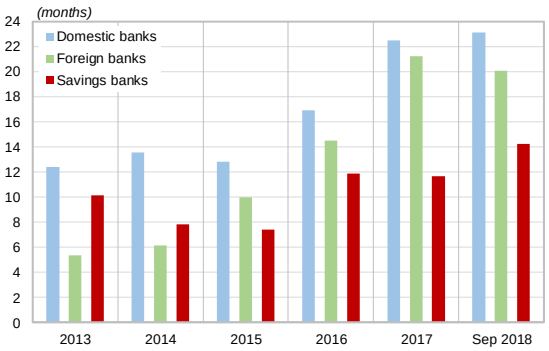


Figure 5.60: Comparison of gaps in repricing period without consideration of the IRRBB approach, by bank group[50]



Source: Bank of Slovenia

Under the IRRBB methodology,[51] which takes account of amortisation schedules, hedging of interest rate positions and sight deposit stability, the gap in repricing period has virtually reached zero. The gap in the average repricing periods for asset and liability interest rates stood at 2.2 months in September

[48] During a period of rising market interest rates, deposit rates are generally raised only gradually, or with a lag.

[49] 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.

[50] Domestic banks: NLB, Deželna banka Slovenije, Abanka and Gorenjska banka; foreign banks: Addiko, SKB, Intesa San Paolo, UniCredit, Sberbank, Sparkasse and NKBM; savings banks: Delavska hranilnica, Lon and Vipava. The same applies below.

[51] For more on the IRRBB methodology, see the June 2018 Financial Stability Review.

2018. The average repricing period for asset interest rates lengthened by 1.1 months in the third quarter of 2018, while the average repricing period for liability interest rates shortened by 1.2 months. Without consideration of the IRRBB approach, the gap in repricing periods stands at 15.5 months.

Without consideration of the IRRBB approach, the gap in repricing periods is largest at the small domestic banks. The average repricing period for deposits and wholesale funding shortened at the domestic banks in 2018, while that for loans lengthened slightly. The lengthening of the average repricing period for loans at the domestic banks was primarily attributable to consumer loans and housing loans with fixed interest rates and longer maturities. The narrowing of the gap at the foreign banks was attributable to a shortening of the average repricing period for asset interest rates as a result of a shorter repricing period for securities and housing loans. The widening of the gap at the savings banks was primarily attributable to a lengthening of the average repricing period for asset interest rates as a result of a longer repricing period for consumer loans and corporate loans.

Figure 5.61: Average original and residual maturity for individual types of loan

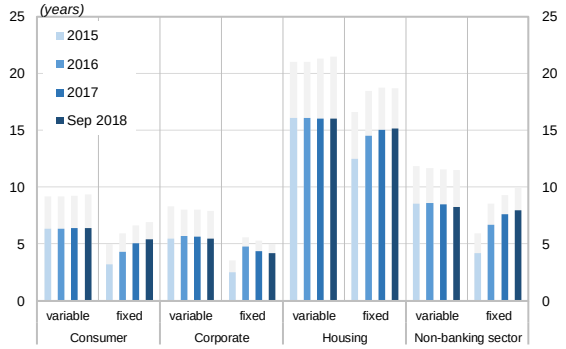
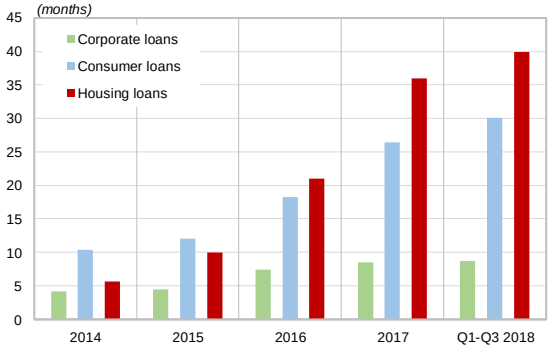


Figure 5.62: Average repricing period by loan type



Note: In the left figure the grey columns represent average original maturity, while the coloured columns represent average residual maturity. The figures refer to stocks.
In the right figure the monthly average figure is illustrated for the period of January to September 2018.
Source: Bank of Slovenia

Repricing gap

The negative repricing gap between interest-sensitive assets and interest-sensitive liabilities is exposing the Slovenian banking system to rollover risk. The one-year cumulative repricing gap was negative in the amount of EUR 8 billion at the end of the third quarter of 2018, having been negative in the amount of EUR 7.3 billion in December 2017. In the event of a rise in market interest rates, the negative repricing gap means that the Slovenian banking system would be faced with a decline in net interest income, as interest expenses would increase by more than interest income.

Figure 5.63: Repricing gap

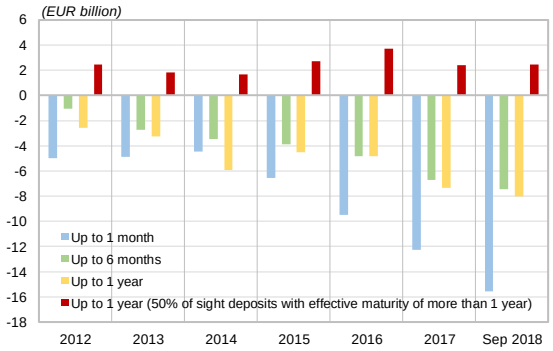
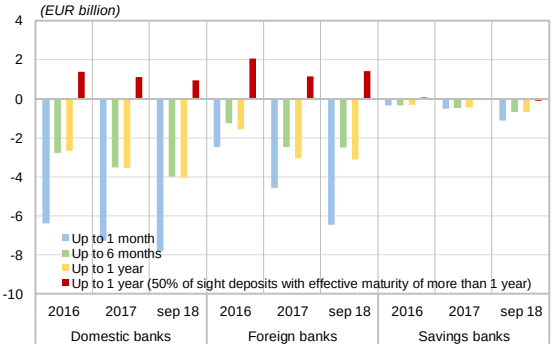


Figure 5.64: Repricing gap by bank group



Source: Bank of Slovenia

As stated previously, the one-year cumulative repricing gap was negative because of the treatment of sight deposits as interest-sensitive liabilities.[52] Under the assumption that 50% of sight deposits are stable (they have an effective maturity of more than 1 year or are only repriced after 1 year), the Slovenian banking

[52] The argument for or against the inclusion of sight deposits as interest-sensitive funding is given in the June 2018 Financial Stability Review.

system has a positive one-year repricing gap in the amount of EUR 2.4 billion, which means that a rise in interest rates would have a positive impact on the banks' net interest income.[53]

When the banks' activities for hedging against interest rate risk and the stability of sight deposits are not taken into account, all the bank groups have a negative one-year cumulative repricing gap. In September 2018, the one-year cumulative repricing gap was negative in the amount of EUR 4 billion at the domestic banks and negative in the amount of EUR 3.1 billion at the foreign banks. The one-year cumulative repricing gap at the savings banks was negative in the amount of EUR 0.6 billion. If the stable portion of sight deposits is allocated across maturity buckets, the cumulative repricing gap turns positive, which means that a rise in interest rates would have a positive impact on net interest income. The banks' interest rate risk is manageable from this perspective.[54]

Type of remuneration

The proportion of fixed-rate loans is increasing in the stocks of all types of loan, which is lengthening the average repricing period of loans. The proportion of loans to the non-banking sector accounted for by fixed-rate loans had increased to 21.6% by September 2018. Almost half of the stock of consumer loans consists of fixed-rate loans, followed by housing loans with 25% and corporate loans with 16%. Investments with interest rates that are fixed for a long time expose banks to the risk of a decline in net interest income in a period of rising market interest rates, unless they are adequately covered on the liability side or hedged via derivatives. At the same time fixed-rate remuneration also reduces the exposure to interest rate risk on the part of banks' clients, as there is no change in debt servicing costs.

Figure 5.65: Proportion of loan stock accounted for by fixed-rate loans[55]

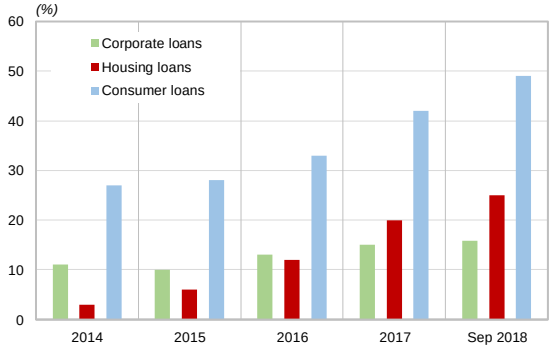
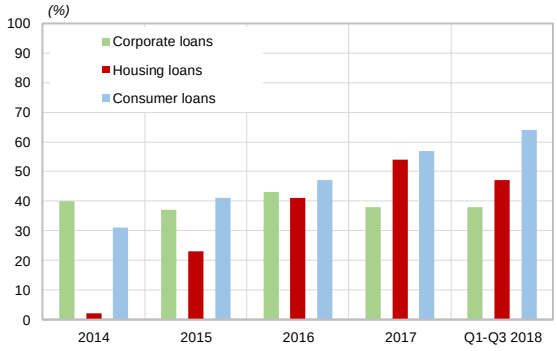


Figure 5.66: Proportion of fixed-rate loans for individual types of new loan



Note: In the right figure the figures for consumer loans relate to long-term loans.
Source: Bank of Slovenia

The proportion of new loans with a fixed interest rate is increasing. The proportion of housing loans with a fixed interest rate has increased significantly over the last three years. Almost half of housing loans approved during the first nine months of 2018 had a fixed interest rate. The proportion of consumer loans with a fixed interest rate is also increasing. Some 64% of long-term consumer loans approved during the first nine months of 2018 had a fixed interest rate. In the wake of the repayment of existing debt with a variable interest rate and the maintenance or increase in the proportion of new loans with a fixed interest rate, the average repricing period for loans will continue to lengthen.

There has been no significant change in interest rates on individual types of loan in 2018, and they remain low. The first two quarters of 2018 saw a slight increase in average interest rates on fixed-rate and variable-rate consumer loans and fixed-rate housing loans, and a slight decline in average interest rates on variable-rate housing loans and on corporate loans, irrespective of the type of remuneration. Fixed-rate housing loans are 1 percentage point more expensive than variable-rate loans on average, and are therefore

[53] 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.

[54] The banks have several options for managing interest rate risk with regard to the individual strategies adopted. Banks close their exposure to interest rate risk by means of active management of the securities portfolio. Certain banks, larger banks in particular, also close their exposure to interest rate risk by means of derivatives (e.g. interest rate swaps). The banks that are part of international banking groups enter into derivative contracts with their parent banks.

[55] 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 5.61 and 5.62).

very popular with households. Fixed-rate consumer loans are 1.6 percentage points more expensive than variable-rate loans on average, and are also popular with households, as households thereby avoid exposure to a potential change in monthly debt servicing costs.

Figure 5.67: Average interest rates for individual types of loan, stocks

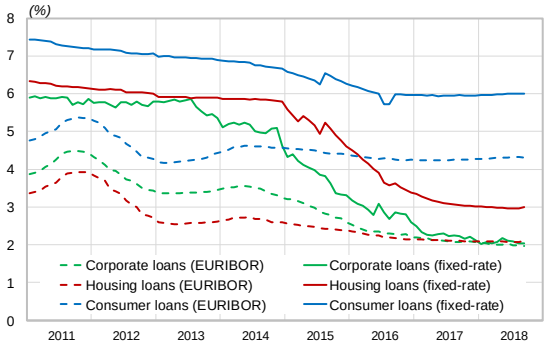
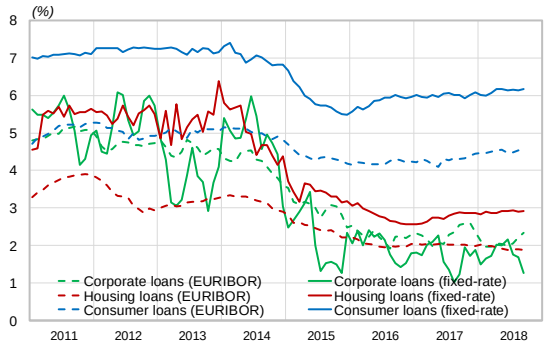


Figure 5.68: Average interest rates for individual types of new loan



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

5.4 Bank solvency

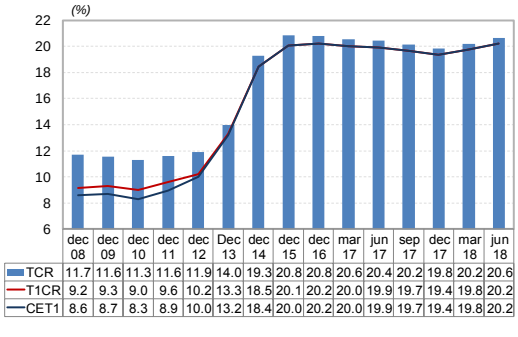
Summary

The banking system remained well-capitalised in the first half of 2018, although there are considerable variations from bank to bank. The banking system's capital adequacy improved as a result of growth in regulatory capital, and is higher than the euro area average. The banks are generating internal capital through good performance, which is important to the maintenance of stable capital adequacy, particularly at banks with higher credit activity.

Capital adequacy of the banking system

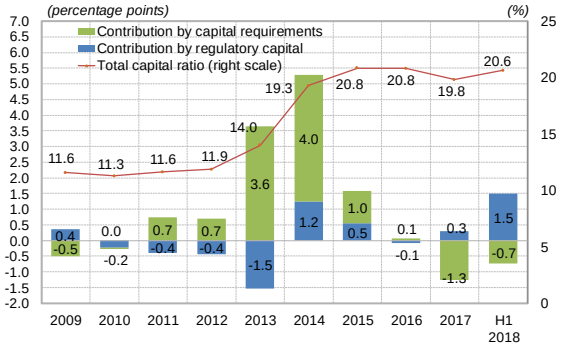
After declining in 2017, the banking system's total capital ratio on an individual basis increased by 0.8 percentage points in the first half of 2018 to stand at 20.6%. The strengthening was due to good performance, as regulatory capital increased by more than capital requirements. The Tier 1 capital ratio and the common equity Tier 1 capital ratio (hereinafter: the CET1 ratio) each increased by 0.9 percentage points in the first half of 2018 to 20.2%.

Figure 5.69: Banking system's basic capital ratios on an individual basis



	dec 08	dec 09	dec 10	dec 11	dec 12	Dec 13	dec 14	dec 15	dec 16	mar 17	jun 17	sep 17	dec 17	mar 18	jun 18
TCR	11.7	11.6	11.3	11.6	11.9	14.0	19.3	20.8	20.8	20.6	20.4	20.2	19.8	20.2	20.6
T1CR	9.2	9.3	9.0	9.6	10.2	13.3	18.5	20.1	20.2	20.0	19.9	19.7	19.4	19.8	20.2
CET1	8.6	8.7	8.3	8.9	10.0	13.2	18.4	20.0	20.2	20.0	19.9	19.7	19.4	19.8	20.2

Figure 5.70: Contribution to change in total capital ratio on an individual basis made by changes in regulatory capital and capital requirements



Note: In the right figure a negative sign for capital requirements denotes that they increased, thereby having a negative impact on the total capital ratio.
Source: Bank of Slovenia

The capital position varies considerably across the bank groups. Capital adequacy is high at the large domestic banks, primarily as a result of recapitalisations during the resolution and recovery period. It has improved further since then (the CET1 ratio reached 25.6% on an individual basis in June 2018), as a result

of good performance and weak growth in loans. By contrast, capital adequacy has been gradually declining at the banks under majority foreign ownership in recent years (the CET1 ratio stood at 16.2% on an individual basis in June 2018), as increased lending activity at certain banks has seen capital requirements increase more than regulatory capital. The CET1 ratio at the small domestic banks and savings banks improved in the first half of 2018 as a result of recapitalisations, but remains significantly below the banking system average at 12.9%. Another indication of the weaker capital position of the small domestic banks is their low leverage, which stood at 4.7% in June 2018.

Figure 5.71: Common equity Tier 1 capital ratio on an individual basis by bank group

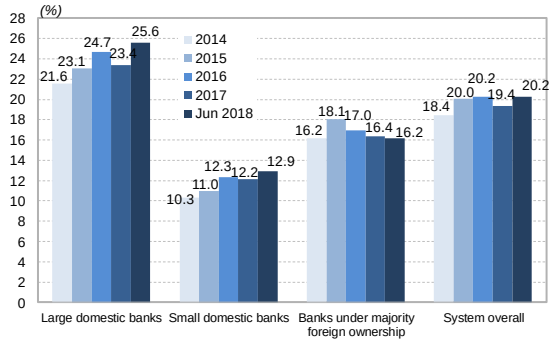
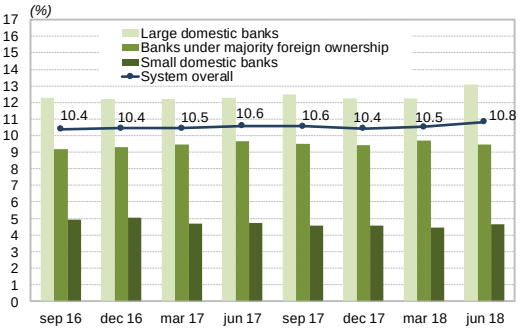


Figure 5.72: Leverage by bank group



Source: Bank of Slovenia

Capital and capital requirements in the banking system

The banks' regulatory capital increased in the first half of 2018, primarily as a result of an increase in retained earnings and a change in the calculation of the CET1 ratio.[56] It amounted to EUR 4,441 million at the end of the first half of the year, up EUR 324 million or 7.9% on the end of 2017. Tier 2 capital is continuing to decline: it declined by EUR 9 million over the first half of the year to EUR 89 million, equivalent to just 2% of the banking system's total regulatory capital. The banks' profitability will also have a significant impact on the maintenance of stable capital adequacy in the future. This will be particularly important at banks that are more active in lending, where the increase in capital requirements will put greater pressure on capital adequacy.

Figure 5.73: Breakdown of common equity Tier 1 capital

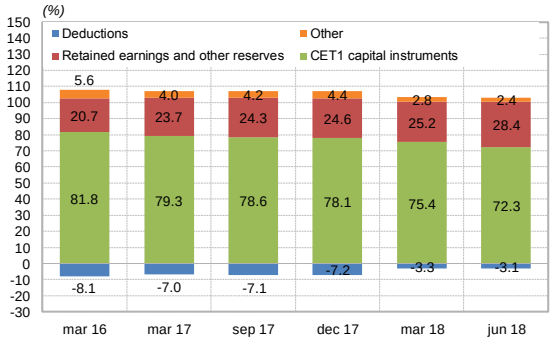
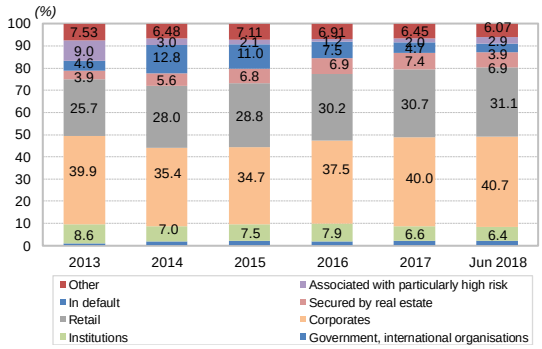


Figure 5.74: Breakdown of capital requirements for credit risk



Note: In the right figure the figures are for capital requirements for credit risk under the standardised approach.
Source: Bank of Slovenia

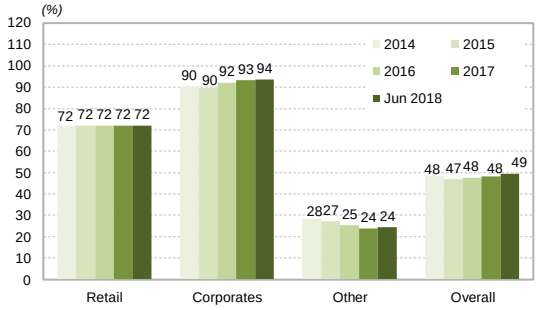
Capital requirements are continuing to increase as a result of growth in loans: they increased by EUR 59 in the first half of 2018 to EUR 1,721 million. Corporate and retail banking exposures accounted for almost two-thirds of capital requirements in June 2018. Future growth will be influenced by the banks'

[56] The application to own funds of the transitional provisions deriving from Regulation (EU) No 575/2013 and regulated in detail by the Regulation on the exercise of options and discretions under European Union law (Official Gazette of the Republic of Slovenia, No. 28/16) came to an end on 1 January 2018. Their largest impact on the calculation of regulatory capital came from unrealised gains on exposures to central governments classified in the available-for-sale category. Banks were able to exclude these effects from the calculation of regulatory capital until the end of 2017, but as of 1 January 2018 and the entry into force of IFRS 9 they recognise them in full (i.e. in the amount of 100%) under items of common equity Tier 1 capital.

potential redirection towards higher-yielding investments; given the higher risk levels of these investments the banks' average risk weight will increase, which will thereby increase capital requirements.

The banks could slow the growth in capital requirements by applying lower risk weights to individual exposures and by continuing the improvement of the quality of the credit portfolio. For exposures secured by real estate, the burden on capital is lower because of the lower risk weight, but the increase in these exposures seen in the previous years came to an end in the first half of 2018. The already modest proportion of capital requirements for credit risk that they account for declined to less than 7%. The decline in capital requirements for exposures in default and for exposures associated with particularly high risk, to which the highest weights are assigned, came to an end: they accounted for 6.8% of the banks' capital requirements for credit risk in June 2018. By optimising their business processes banks are reducing their capital requirements for operational risk, which accounted for 8.3% of total capital requirements at the end of June 2018.

Figure 5.75: Average risk weight by type of investment exposure



Source: Bank of Slovenia

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

After improving in the first half of 2018, the capital adequacy of the Slovenian banking system on a consolidated basis is again above the average in the euro area overall. The total capital ratio increased by 0.8 percentage points over the aforementioned period to stand at 18.9%, as the increase in regulatory capital outpaced the increase in capital requirements. By contrast, after several years of improvement, average capital adequacy in the euro area declined in the first quarter of 2018 as a result of a decline in regulatory capital. As there is on an individual basis, there are considerable variations in the capital positions of Slovenian banks. According to the CET1 ratio, the small domestic banks and the banks under majority foreign ownership are in a weaker capital position than the comparable bank groups in the euro area overall.

Slovenian banks' capital requirements are larger because of the use of the standardised approach to the assessment of assets. The ratio of capital requirements to total assets stood at 4.7%, higher than the overall euro area figure of 3.1% in March 2018. The majority of Slovenian banks use the standardised approach to estimate credit losses, where higher risk weights are applied than in the use of IRB approaches. Some 84% of capital requirements are estimated using this approach, which ranks Slovenia third among euro area countries (see figure in appendix).

Figure 5.76: Total capital ratio compared with euro area, consolidated figures

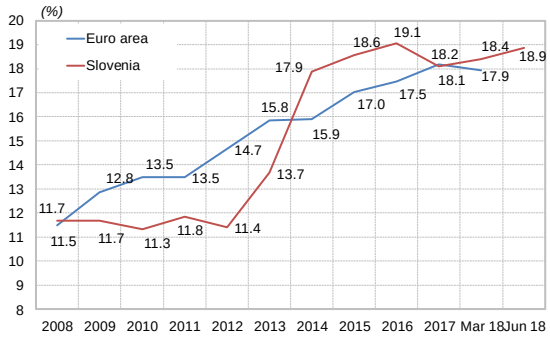
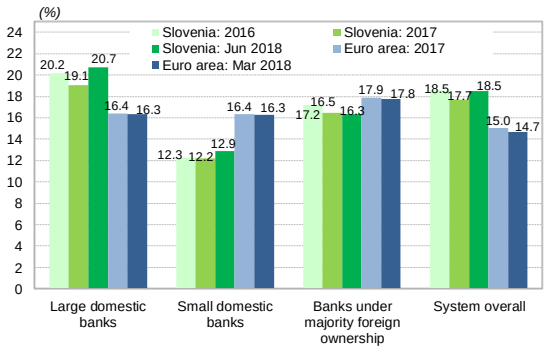


Figure 5.77: Common equity Tier 1 capital ratio (CET1) by bank group, comparison with euro area, consolidated figures



Note: For the sake of comparability, medium-size euro area banks are included under large domestic banks.
Sources: Bank of Slovenia, ECB (SDW)

6 NON-BANKING FINANCIAL INSTITUTIONS

Summary

Leasing companies are continuing to increase their equipment leasing business, while the value of new real estate lease agreements remains low. Portfolio quality is further improving, and profitability is increasing. The systemic risks inherent in the performance of leasing companies remain low.

Insurance corporations are continuing to record growth in gross written premium in all three insurance segments, while profitability has been affected by the presence of mass loss events and lower returns on financial assets. The nature of the insurance business means that underwriting risks and market risks constitute the majority of their capital requirements.

The cash surplus has not been transferred to the capital markets, but instead has remained in the most liquid forms of saving in 2018, such as sight deposits. This is attributable to the poorly developed domestic capital market, the high indebtedness of individual euro area countries, and the slowdown in global economic growth. There are new risks to the financial stability of the euro area from Italy's large public debt, although they currently remain limited to Italy and its banking system.

6.1 Leasing companies

The increase in leasing companies' turnover[57] continued in the first nine months of 2018, based on growth in equipment leasing business. This was up 9.1% in year-on-year terms at EUR 803 million, because of increased demand for leasing of cars, and commercial and goods vehicles. The good economic climate means that there is also a gradual increase in demand for production plant and equipment, which accounted for just 7% of new equipment leasing business, or EUR 57 million. New real estate leasing business fell to its lowest level to date, which was a factor in the decline in year-on-year growth in aggregate new leasing business to 3.8%.

Figure 6.1: New leasing business[58]

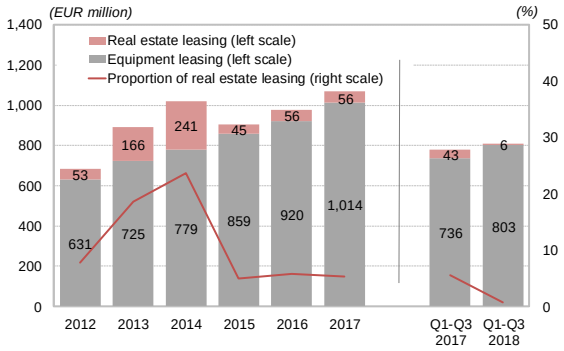
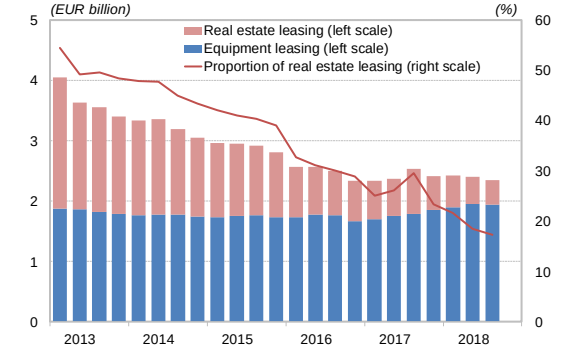


Figure 6.2: Stock of leasing business



Source: Bank of Slovenia

The trend of increase in new equipment leasing business is continuing to be reflected in growth in the stock of equipment leasing business. Growth in the stock equipment leasing business slowed in the third quarter of 2018, but nevertheless remained high at 8.6%. The total stock of leasing business stood at EUR 2.4 billion in September, down 7.4% in year-on-year terms as a result of a decline in real estate leasing business[59] 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. This also had a positive impact in the form of a decline in the proportion of claims more than 90 days in arrears.

[57] 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.
[58] Leasing business is disclosed at financed value, excluding the financing of inventories.
[59] A one-off effect resulted in an increase in the stock of real estate leasing business in September 2017, which is additionally increasing the year-on-year change.

The trend with regard to new leasing business at banks that provide finance leasing services is similar to that at leasing companies.[60] The banks recorded new finance leasing business of EUR 167 million in the first nine months of 2018, up 14% in year-on-year terms, taking the stock of leasing business to EUR 370 million, up 21.2% in year-on-year terms.

Leasing companies are continuing to reduce the proportion of claims more than 90 days in arrears. The proportion of claims more than 90 days in arrears stood at 5.6% in September 2018, down 2 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 reporters accounted for 80% of all arrears of more than 90 days, while the proportion of the total stock of leasing business that they account for was just 17%. The highest level of arrears is in real estate leasing, where 71.7% of all business is more than 90 days in arrears, equivalent to EUR 72 million. The proportion of claims more than 90 days in arrears can also be expected to decline in the future, as a result of the completion of judicial proceedings and the winding-up of certain leasing companies.

Figure 6.3: Stock of leasing business and claims more than 90 days in arrears

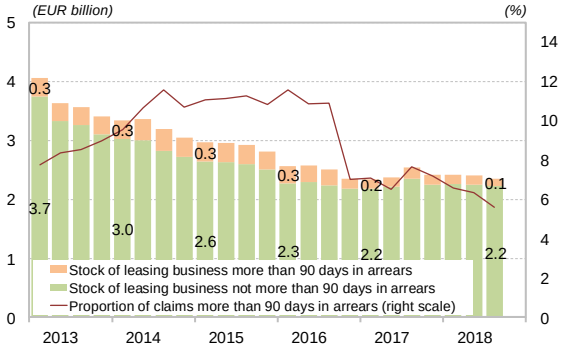
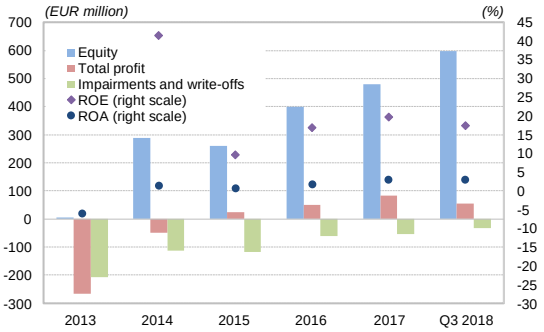


Figure 6.4: Selected performance indicators of leasing companies



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

Leasing companies are continuing to increase their profitability, while there was a decline in total assets as a result of a fall in the number of reporters. Total profit was up 7.8% in year-on-year terms, on account of an increase in income, and, primarily, a decline in expenses for impairments and revaluations. The exclusion of leasing companies from the reporting population as a result of winding-up had an impact on total assets, which were down 0.8% in year-on-year terms at EUR 2.82 billion. Eliminating this effect, there would have been a year-on-year increase of 3.7% in total assets. The funding structure of the leasing sector remains similar to the previous year: foreign loans account for 56.9% of all loan funding, while funding via internal resources increased as a result of the profitable performance in 2017 and the consequent increase in equity on leasing company balance sheets in 2018.

6.2 Insurers

Insurance corporations are continuing to perform well.[61] Premiums increased in all three insurance segments. The largest increases in gross premium over the first nine months of the year were recorded by general insurance and health insurance, which were both up more than 5% in year-on-year terms. The latter increase was attributable to a rise in supplementary health insurance premiums, while gross life insurance premiums increased by just 2%. Uncertainty on the stock markets meant that the largest decline in growth in gross written premium in this segment was recorded by unit-linked life insurance. Aggregate gross premium was nevertheless up 4.5% in year-on-year terms, the same as in 2017. Reinsurance corporations saw their year-on-year growth in gross written premium decline to 1.6%.

[60] The analysis does not take account of banking business from finance leasing.
[61] The analysis of the insurance sector covers 13 insurance corporations and two reinsurance corporations that fall under the supervision of the ISA. After the completion of an announced takeover, 12 insurance corporations will remain, three of which will have total assets of more than EUR 1 billion and will account for 70% of the total assets of the sector.

Figure 6.5: Gross written premium and annual growth by type of insurance

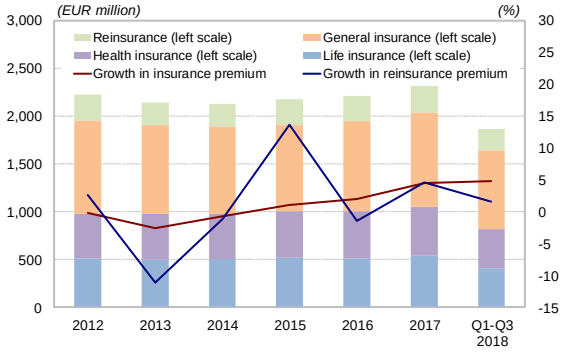
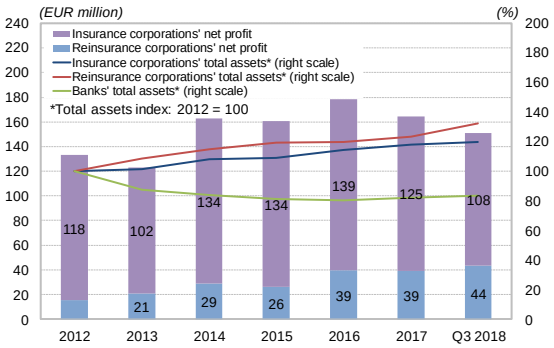


Figure 6.6: Insurers' net profit and total assets



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

Insurers' total assets in September 2018 were up in year-on-year terms. The increase was attributable to value gains in financial assets and to good performance by the insurance corporations, whose total assets were up 1.8% at EUR 7.3 billion, and by the reinsurance corporations, whose total assets were up 5.9% at EUR 922 million. The favourable economic situation is being reflected in the general insurance segment, where insurance corporations increased their net income from insurance premiums and net profit, while net income and net profit declined in the health insurance and life insurance segments as a result of a year-on-year increase in unrealised losses on the assets of life insurance policyholders who take up investment risk. The insurance corporations' aggregate net profit was up 17.9% in year-on-year terms at EUR 107.9 million, despite the poorer results in health insurance and life insurance. The reinsurance corporations saw an increase in net profit of 40% to EUR 44 million, as a result of an increase in the result from general insurance and income on investments.

The claims ratio as measured by the ratio of gross claims paid to gross written premium in the first three quarters of 2018 deteriorated by 0.3% in year-on-year terms at the insurance corporations, and by 8.8% at the reinsurance corporations. The slight deterioration in the claims ratio at the insurance corporations was attributable to an increase in the claims ratio in life insurance and general insurance, where claims paid increased more than gross written premium. The sole improvement in the claims ratio was in the voluntary health insurance segment, where gross written premium increased as a result of a rise in premiums over the last 12 months. The claims ratio at the reinsurance corporations deteriorated by 8.8%, as a result of a larger increase in claims paid for fires and natural disasters and for freight transport. After increasing for three years, gross written premium for credit insurance, which is part of the general insurance segment, was down 8.5% in year-on-year terms in the first three quarters of 2018 at EUR 32 million. The claims ratio for credit insurance nevertheless declined in year-on-year terms as a result of a one-off event in 2017, when claims paid for credit insurance[62] increased by more than 200%.

Figure 6.7: Claims ratio for major types of insurance

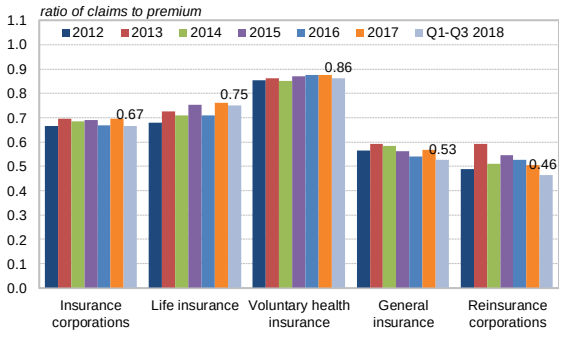
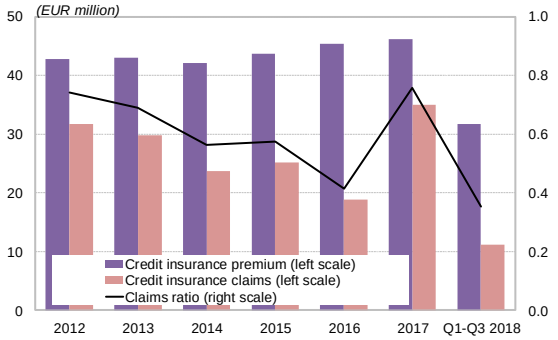


Figure 6.8: Written premium and claims paid in credit insurance



Source: ISA

The capital adequacy of insurance corporations and reinsurance corporations in Slovenia mostly remains at a high level.[63] The solvency capital requirement (SCR) expresses the level of capital that allows

[62] The increase in claims paid was attributable to an increase in loss events in international and domestic trade.
[63] The data on capital adequacy is obtained on the basis of insurers' reporting in accordance with Solvency II. The figures for the third quarter of 2018 had not been finalised when the FSR was being drafted. The comparison of capital adequacy and minimum capital

an institution to cover losses and provides a reasonable assurance to policyholders, insurers and beneficiaries. The insurance corporations' SCR stood at EUR 881 million in September 2018, up 7.1% in year-on-year terms. The ratio of eligible own funds to SCR was below 200% at seven insurance corporations, having deteriorated in year-on-year terms at four of them, and improved at the remainder. The SCR coverage ratio deteriorated slightly at the two reinsurance corporations, but is still above 250%.

The minimum capital requirement (MCR) of insurance corporations and reinsurance corporations, which sets an insurer's minimum internal capital requirement within the framework of Solvency II, remains at a high level. The MCR at the insurance corporations increased by 4.7% to EUR 294 million, while the MCR at the reinsurance corporations increased by 8.2% to EUR 55 million. All of the insurance corporations and reinsurance corporations succeeded in improving the ratio of eligible own funds to the MCR in the first half of 2018.

Figure 6.9: Aggregate SCR coverage ratio (quartiles with median)

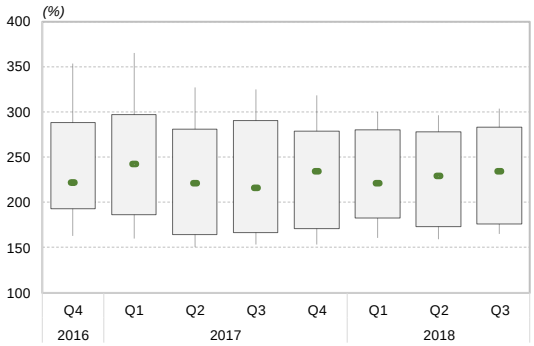
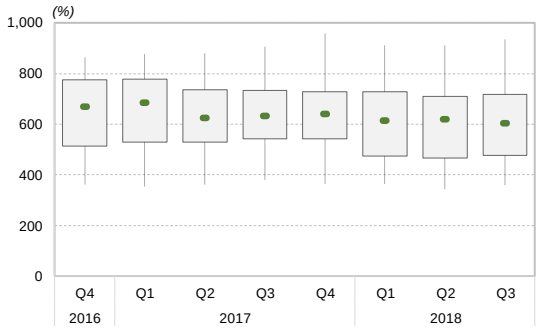


Figure 6.10: Aggregate MCR coverage ratio (quartiles with median)



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

The breakdown of the risks calculated on the basis of the standard formula changed in 2017.[64] The capital requirement for underwriting risk increased relative to 2016 by 45.1% of the unallocated capital requirement for risks, the largest proportion. Underwriting risk relates to the risks that an insurance corporation takes up from the policyholder, and derives from the commitments under the insurance policy in connection with the hazards covered and the procedures used in executing operations. The capital requirement for market risks declined relative to 2016 to 43.8% of the unallocated capital requirement for risks. Given the low interest rate environment and the increased uncertainty on share markets, market risk remains one of the largest risks.

Figure 6.11: Risk profile

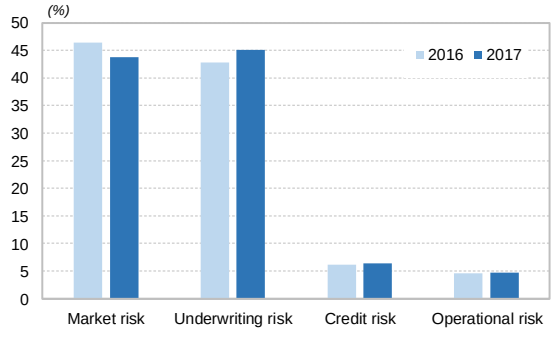
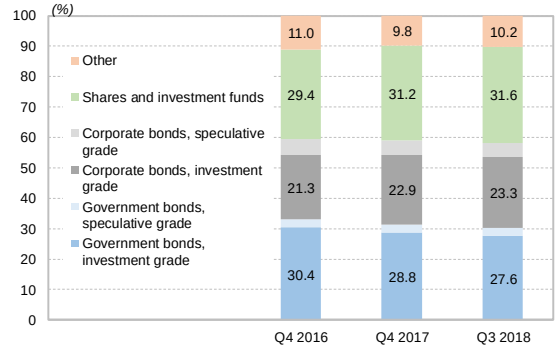


Figure 6.12: Breakdown of assets



Note: In the risk profile the data is based on the annual reports of insurance corporations and reinsurance corporations in accordance with Solvency II, while the capital requirement in the calculation does not take account of risk interaction effects (i.e. diversification). The data for the breakdown of assets is based on individual quarterly reports under Solvency II (the data is not finalised).

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

includes the insurance corporations and reinsurance corporations that reported over the entire period (13 insurance corporations and two reinsurance corporations).

[64] The data is based on insurers' annual reports in accordance with Solvency II. The data for 2017 was available when the FSR was being drafted. 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).

As expected, the low interest rate environment is bringing a further decline in interest income from investments in debt securities. Interest income from debt securities during the first nine months of the year was down 8% in year-on-year terms at EUR 22 million at the insurance corporations, and down 9% at EUR 5 million at the reinsurance corporations. There has been no significant change in the structure of the insurance sector's portfolio, although in the quest for higher returns some funds have been shifted to higher-risk forms of asset, such as corporate bonds, albeit investment grade,[65] and other forms of asset. A similar trend is also evident at pension companies, where interest income on debt securities over the same period was down 19% in year-on-year terms at EUR 843 million.

6.3 Capital market and mutual funds

Developments on the capital markets

The uniform growth in share indices came to an end in 2018. After February's correction on global exchanges, US shares continued to rise, while European shares fell overall during the first nine months of 2018. Owing to the positive effects of high economic growth and the recent tax reforms, the S&P 500 in the US rose by 9.3% over the first nine months of the year, while the required yield on US 10-year treasury bonds exceeded 3% owing to inflationary pressures and the ongoing normalisation of monetary policy. The representative index for western Europe fell by 2.2% over this period. The fall was attributable to several factors, most notably uncertainty with regard to the indebtedness of individual Member States and a renewed increase in risks related to the Brexit negotiations. The largest losses were suffered by shares in developing countries, which fell by 7.7% overall during the first nine months of the year.

Figure 6.13: Changes in selected stock market indices

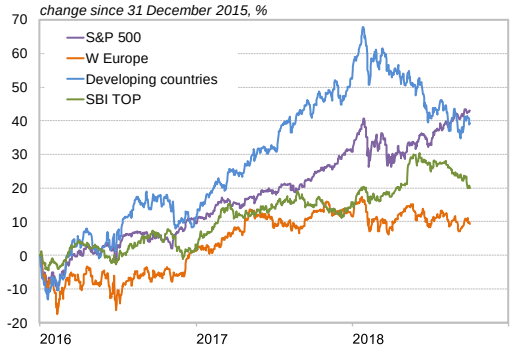
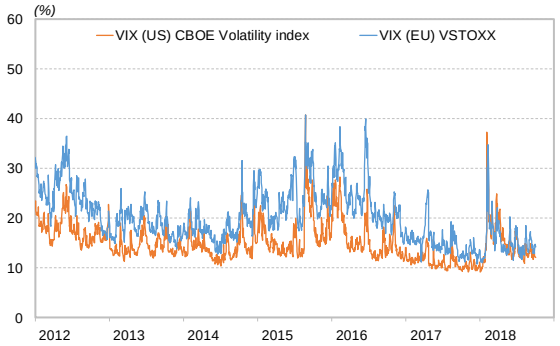


Figure 6.14: Volatility on share markets



Sources: Bloomberg, Stoxx.com, MSCI.com

The situation on the bond market remains stable, despite a rise in the spread on Italian 10-year government bonds; in the summer it again exceeded 250 basis points over the required yield on the benchmark German government bonds. The rise in the spread on Italian bonds because of Italy's difficulties with the level of public debt and the future funding of the budget deficit has not yet produced a rise in the required yields on bonds of similar maturity in other euro area countries. There is increased awareness that high indebtedness, together with exogenous effects such as a rise in interest rates in the US and the devaluation of developing countries' currencies, could have an adverse impact on the financial stability of the whole region.

[65] Investment-grade bonds are those rated AAA to BBB- or Baa3, while speculative-grade bonds are those rated BBB- or Baa3 and those that are unrated.

Figure 6.15: Spreads of 10-year government bonds over German benchmark

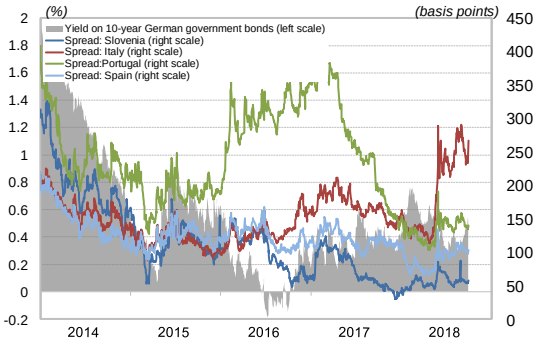
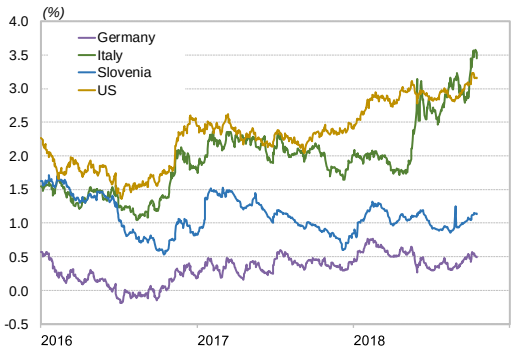


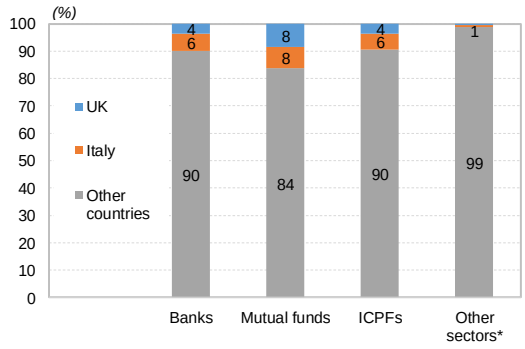
Figure 6.16: Yields on selected 10-year government bonds



Source: Bloomberg

Slovenia's direct exposure to debt securities issued in Italy and the UK remains low. Consequently, the risk of direct contagion also remains low. These assets accounted for 7.6% of the total investments in debt securities by domestic institutional sectors in September 2018, equivalent to EUR 1.04 billion (excluding assets held by the central bank sector). The banking sector held 6% of its investments in debt securities in Italian debt securities, equivalent to EUR 308 million, the majority of which consisted of government securities, and 4% in debt securities issued in the UK. The insurance corporations and pension funds sector had a very similar asset structure, while the proportion at mutual funds was slightly higher.

Figure 6.17: Slovenia's exposure to debt securities issued in Italy and the UK



Note: *Other sectors includes all other sectors except the central bank.
Source: Bank of Slovenia

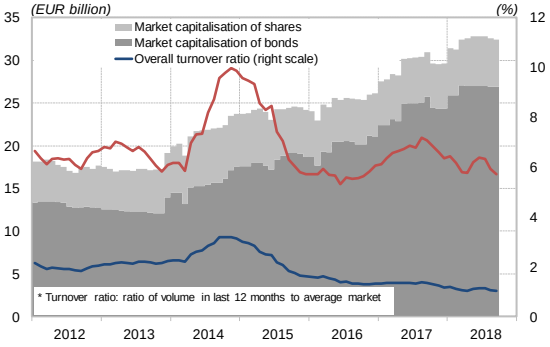
Corporate acquisitions brought a short-term increase in share prices on the Ljubljana Stock Exchange during the first nine months of 2018, while the volume of trading in shares declined. The market capitalisation of shares stood at EUR 5.4 billion at the end of September 2018, up 3.3% in year-on-year terms. The monthly volume of trading in shares averaged EUR 27 million over the first nine months of the year, down 7.9% in year-on-year terms. Concentration remains high: shares in five issuers accounted for 79.8% of total volume. The proportion of the market capitalisation in shares accounted for by non-residents rose again to over 25%, because of a takeover of a Slovenian firm. As in the previous year, there were no new share issues during the first nine months of the year, which is also increasing market risk and liquidity risk. Acquisition targets that remain listed on the exchange are maintaining total market capitalisation at a higher level than it would otherwise be, but the depth and breadth of market have been reduced, which in the development of a capital market is of equal significance to the level of market capitalisation.

The sale of shares in Nova Ljubljanska banka d.d. was approved in October, and the bank's shares were listed for trading on Ljubljana Stock Exchange's regulated market in November. A positive effect has already been evidenced in an increase of EUR 1 billion in the market capitalisation of shares on the Ljubljana Stock Exchange, and the volume of trading is expected to increase.

Corporate financing via issuance of debt securities remains low. New issuance of marketable and non-marketable debt securities by non-financial corporations over the first nine months of the year amounted to EUR 79 million, compared with EUR 177 million in the same period of the previous year. This is the lowest

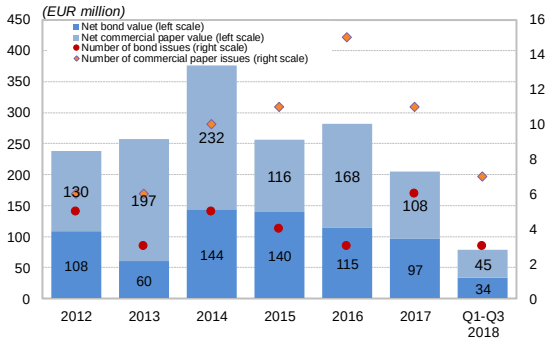
figure for the same period of the last ten years. The market capitalisation of bonds on the Ljubljana Stock Exchange stood at EUR 27 billion at the end of September, up 4.8% in year-on-year terms, primarily as a result of new issues of government bonds in the first half of the year, while the volume of trading in bonds over this period did not exceed EUR 9 million. The terms of financing via bond issuance remain favourable for Slovenia and for the majority of other euro area countries, despite the recent rise in spreads on Italian 10-year government bonds.

Figure 6.18: Market capitalisation on the Ljubljana Stock Exchange and annual turnover ratios



Sources: Ljubljana Stock Exchange, KDD, Bank of Slovenia

Figure 6.19: Issuance of bonds and commercial paper (excluding government sector)



Net investments by residents and non-residents

The increased uncertainty on stock exchanges during the first nine months of 2018 was reflected in a year-on-year decline in residents' net outward investments, while the reduced issuance of domestic government bonds led to a year-on-year decline in non-residents' net inward investments in Slovenian securities. Pension companies, non-financial corporations and other financial corporations (excluding the insurance sector and investment funds) recorded a year-on-year increase in their investments in foreign securities in 2018. The last more than doubled their net outward investments in year-on-year terms to EUR 63 million. As the largest net purchasers of foreign securities in 2017, the banks reduced their net investments from EUR 957 million in 2017 to EUR 261 million in 2018. Given the lack of new issues of domestic government bonds, non-residents' net inward investments[66] over the first nine months of the year were down 67% in year-on-year terms at EUR 1.2 billion. Non-residents' net investments in domestic shares over this period amounted to EUR 113 million, up 17.7% in year-on-year terms, as a result of the foreign acquisition of a domestic white goods manufacturer in the summer.[67]

Figure 6.20: Net outward investments by residents

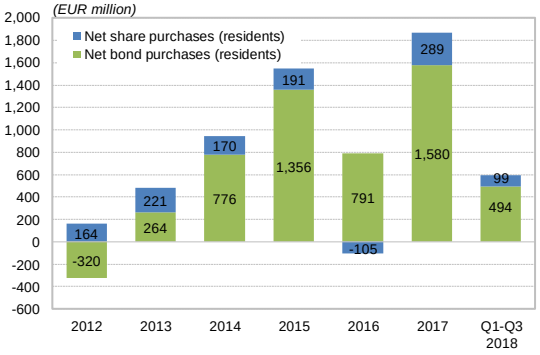
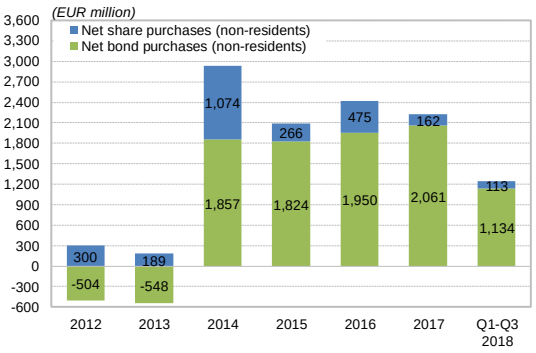


Figure 6.21: Net inward investments by non-residents



Sources: KDD, Bank of Slovenia

[66] The largest purchases were made via Belgium and Luxembourg, where two international clearing houses that provide for the registration and settlement of government bonds and that allow bond ownership via fiduciary accounts at KDD are registered.

[67] A further increase in non-residents' net investments in Slovenian shares is expected in the summer, as a result of the completion of the acquisition of one insurance corporation and financial corporation.

Investment funds

The uncertainty on the exchanges is being reflected in restrained growth in unit prices, and reduced appetite for mutual funds on the part of investors.[68] Net investments in mutual funds amounted to EUR 9 million over the first nine months of the year, down 78.3% in year-on-year terms. As the largest net contributors to mutual funds, households decreased their net investments almost by half to EUR 49 million, while insurance corporations made the largest net withdrawals in the amount of EUR 21 million. Mutual funds' assets under management amounted to EUR 2.7 billion at the end of September, up 3.72% in year-on-year terms, solely as a result of value gains on the exchanges. The proportion of mutual funds' net value accounted for by households is slowly increasing, and exceeded 62% in September, while the proportion accounted for by non-financial corporations is declining, and remains less than 2%. The proportion of mutual funds' net value accounted for by insurance corporations and pension funds remains over 30%, despite a decline over the last two years.

Figure 6.22: Growth in average unit price by type of mutual fund

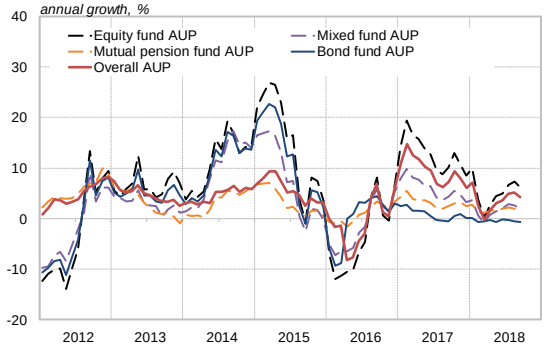
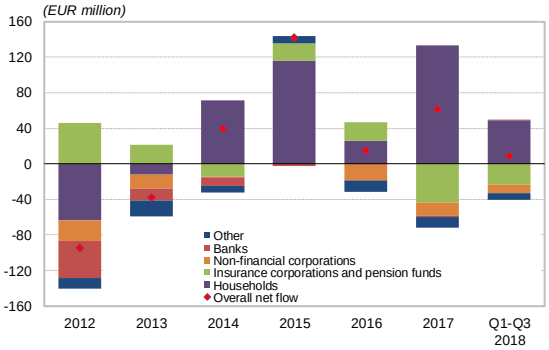


Figure 6.23: Net inflows into mutual funds by investor sector



Source: Bank of Slovenia

The breakdown of assets by fund type remains unchanged, despite the increase in risks to global economic growth. Equity funds account for more than 62% of mutual funds' total assets under management, followed by mixed funds with 28.8%, which is increasing market risk in particular. In other euro area countries, where the proportion accounted for by bond funds is greater, interest rate risk and liquidity risk are also present.The increased uncertainty on the exchanges meant that returns on the most important forms of saving in mutual funds in Slovenia declined, while the distribution of annual returns increased slightly, particularly on equity funds.

Figure 6.24: Distribution of annual returns and net inflows into equity funds

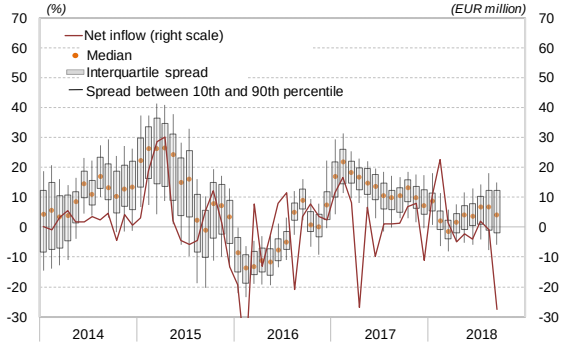
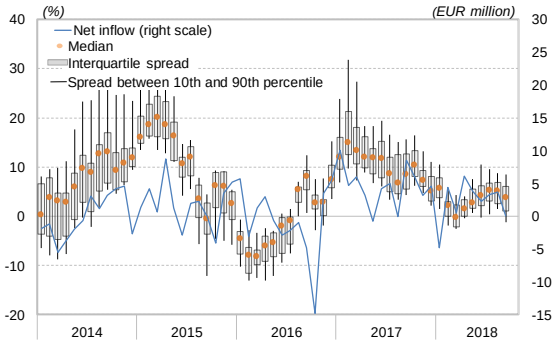


Figure 6.25: Distribution of annual returns and net inflows into mixed funds



Source: Bank of Slovenia

[68] 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 62 million as at 31 December 2017.

7 MACROPRUDENTIAL INSTRUMENTS

Summary

The most important new developments in the area of macroprudential instruments are the extension of the recommendation for household lending from housing to consumer loans, and the beginning of mandatory compliance with the O-SII buffer on 1 January 2019.

The modified macroprudential recommendation for household lending has been in force since November 2018. It encompasses a maximum recommended LTV for loans secured by residential real estate, a maximum recommended DSTI for all loans to households, and a maximum recommended maturity for consumer loans.

The Bank of Slovenia first identified other systemically important banks (O-SIIs) in 2015. It defined a transitional period during which they were required to build the O-SII capital buffer. The banks must meet the buffer requirement as of 1 January 2019. In a 2018 review, the Bank of Slovenia identified one less systemically important bank, while a higher buffer than in the previous year was stipulated for one bank.

In addition to the above, there are three other categories of macroprudential instrument: the countercyclical capital buffer, which has been kept at zero since its introduction in January 2016, the macroprudential policy instrument to limit the risk of maturity mismatch and illiquidity (LR1 and GLTDF), which was made into a recommendation in 2017, and limits on deposit interest rates, which are not binding for banks in the current situation.

7.1 Macroprudential recommendation for household lending

Macroprudential recommendation for housing loans

The Bank of Slovenia introduced the macroprudential recommendation for housing loans in August 2016.[69] The measure is precautionary in nature, and aims to **prevent excessive credit growth** and **excessive leverage**.[70] The recommendation sets the maximum recommended LTV and the DSTI for new housing loans. The maximum recommended LTV stands at 80%. The cap on DSTI depends on the borrower's income, and ranges from 0% to 67% of the net monthly wage.[71] To better illustrate the recommended caps put in place by the macroprudential recommendation, let us examine the case of a borrower with a monthly income of EUR 1,500 who buys a house worth EUR 100,000. The macroprudential recommendation recommends that the loan value should not exceed EUR 80,000[72] and the monthly instalment should be less than EUR 750.[73] The impact of the recommendation was first assessed in 2017. It was found that the credit standards for housing loans had remained stable in recent years. It is our assessment that this illustrates the effectiveness of the macroprudential recommendations in preventing the development of systemic risks.[74]

Reasons for extension of recommendation

In October 2018 the Bank of Slovenia extended and augmented the macroprudential recommendation, effective as of November 2018. It now also applies to consumer loans. Consumer loans have been growing fast for some time now.[75] The Bank of Slovenia currently assesses the risks inherent in consumer loans as moderate and manageable. The factors on the supply side (low interest rates, high capital adequacy of banks, etc.) and the demand side (low household indebtedness, good economic climate, high employment, etc.) remain favourable, for which reason relatively high growth in consumer lending is also expected in the future. There is however a risk of reduced credit standards as a result of competition on the banking market. Maturities of consumer loans were found to be lengthening, and often exceed the expected lifetime of consumer goods. The long maturities of new loans mean that they will remain on bank balance sheets after the reversal of the economic cycle. If macroeconomic risks are realised, default rates could rise quickly. In the majority of cases consumer loans do not have a stated purpose (i.e. they are non-purpose specific), which

[69] The definitions of certain terms in the recommendation were modified in June 2018, which extended the recommendation to all loans secured by residential real estate, irrespective of purpose.
[70] The background to its introduction is described in detail on the Bank of Slovenia website.
[71] The instrument for DSTI is presented in detail at the end of this section.
[72] LTV = loan value / value of residential real estate = 80,000 / 100,000 = 80%.
[73] The recommended cap on DSTI for a person earning EUR 1,500 is 50%. DSTI = debt servicing costs / net wage.
[74] More-detailed analysis of the effectiveness of the macroprudential recommendation for the housing market is given in the July 2018 Financial Stability Review.
[75] A consumer loan is any retail loan that is not a housing loan.

increases the risk of improper use of funds. Detailed analysis of the risks inherent in consumer lending is given in previous sections of the FSR.[76]

Objective of measure and selection of instruments

With the aim of preventing the relaxation of credit standards and improving the resilience of banks, the Governing Board of the Bank of Slovenia decided to introduce macroprudential measures for consumer loans.[77] An additional effect of the measure is to encourage consumers to be cautious in their borrowing. The Bank of Slovenia opted to use caps on DSTI and on maturity. A cap on DSTI had previously been used in the macroprudential recommendation for housing loans. It makes sense to use the same instrument for consumer loans, as this ensures the regulation is uniform. It also eliminates the possibility of arbitrage.[78] The Bank of Slovenia also opted to introduce limits on the maturity of consumer loans, which is recommended as a parallel measure by the ESRB guidelines, as this reduces the likelihood of circumnavigating the DSTI recommendation by intentionally lengthening maturities.[79]

Table 7.1: Potential macroprudential instruments for household lending

Macroprudential instrument	Application	Effect	Type of constraint	Legal basis	Use in Slovenia
LTV (caps on loan-to-value)	New loans	To limit the increase in risk	Limit on collateral	ZMbNFS	Applies to loans secured by real estate
DSTI (caps on debt-service-to-income)	New loans	To limit the increase in risk	Limit on debt servicing costs relative to borrower's income	ZMbNFS	Applies to all household loans
LSTI (caps on loan-service-to-income)	New loans	To limit the increase in risk	Limit on loan servicing costs relative to borrower's income	ZMbNFS	/
LTI (caps on loan-to-income)	New loans	To limit the increase in risk	Limit on amount of loan relative to client's income	ZMbNFS	/
DTI (caps on debt-to-income)	New loans	To limit the increase in risk	Limit on amount of total debt relative to client's income	ZMbNFS	/
Requirement on amortisation / loan maturity	New loans	To limit the increase in risk	Limit on loan maturity	ZMbNFS	Applies to consumer loans
Sectoral capital requirements, risk weights and minimum requirements for loss given default (LGD)	New and existing loans	To reduce existing risks (increase the resilience of banks), and to limit the increase in risk	Sectoral capital requirement	CRR	Applies to loans secured by real estate
Countercyclical capital buffer (CCyB)	New and existing loans	To increase the resilience of banks, and to mitigate the credit cycle	Capital requirement based on aggregate risk exposure	ZBan-2	Current rate is 0 %
Systemic risk buffer (SRB)	New and existing loans	To increase the resilience of banks	Capital requirement based on aggregate risk exposure	ZBan-2	/

Calibration of instrument

The recommended DSTI for consumer loans is the same as for housing loans. This prevents the possibility of the arbitrage described previously. Additionally, it ensures that credit standards remain high. The maximum recommended maturity for consumer loans is 10 years. The instrument was calibrated on the basis of an assessment of its impact on credit growth. Ten years is also felt to be the upper limit of the useful life of consumer goods. Approving consumer loans with a maturity longer than the useful life of consumer goods is potentially a greater risk, and banks are therefore recommended not to approve such loans. Banks

[76] In Section 3.1

[77] An intermediate macroprudential policy objective is preventing excessive credit growth and excessive leverage.

[78] The situation is illustrated by the following example: two identical borrowers each take one consumer loan and one housing loan. Let us assume that the cap on DSTI for a borrower is 50%, and the housing loan increases DSTI by 50 percentage points, while the consumer loans increases it by 10 percentage points. The first borrower takes a consumer loan, followed by a housing loan. The first borrower's DSTI at approval of the housing loans is 60%, and thus fails to comply with the recommendation. The second borrower takes the loans in the reverse order. The second borrower's DSTI at approval of the housing loans is 50%, and thus complies with the recommendation. The final DSTI is the same for both borrowers, at 60%. In economic terms the two transactions are identical, and it therefore does not make sense for them to be treated differently.

[79] Source: *The ESRB Handbook on Operationalising Macroprudential Policy in the Banking Sector:* https://publications.europa.eu/en/publication-detail/-/publication/f0f7175d-3dff-11e8-b5fe-01aa75ed71a1/language-en

must still assess the creditworthiness of the borrower, and are responsible for the risks inherent in newly approved loans.

Macroprudential recommendation for household lending

The Bank of Slovenia extended the macroprudential recommendation for housing loans in October 2018.[80] The extension introduces caps on maturity and DSTI for consumer loans. The recommendations for housing loans remain unchanged. The existing macroprudential recommendation has been renamed the macroprudential recommendation for household lending. It consists of three parts:[81]

A:

Limitations on the LTV ratio when the credit agreement is concluded for new housing loans [82]

It is recommended that the LTV (loan-to-value) ratio does not exceed 80% when the credit agreement is concluded for new housing loans secured by residential real estate.

B:

Limitations on the DSTI ratio when the credit agreement is concluded for new consumer and housing loans

1) It is recommended that the DSTI (debt service-to-income) ratio does not exceed the following values when the credit agreement is concluded for new household loans:

a) for borrowers with monthly income of EUR 1,700 or less: 50%; and

b) for borrowers with monthly income of more than EUR 1,700 50% for the portion of income up to EUR 1,700 inclusive, and 67% for the portion of income exceeding EUR 1,700.

In the case of multiple borrowers, this provision applies to each borrower separately.

2) In the loan approval process (when assessing creditworthiness) it is recommended that banks apply, *mutatis mutandis*, the limitations on the attachment of a debtor's financial assets set out in the Enforcement and Securing of Claims Act (ZIZ)[83] and the Tax Procedure Act (ZDavP-2),[84] i.e. earnings that are exempt from attachment and limitations on the attachment of a debtor's financial earnings.

C:

Maturity limits for new consumer loans

It is recommended that the repayment period or maturity for new consumer loans does not exceed 120 months when the credit agreement is concluded.

The Bank of Slovenia will monitor compliance with the extended macroprudential recommendation through surveys and regular reporting, and during regular supervisory activities. The first assessment of its effects is expected in 2020. Until then the Bank of Slovenia will continue to diligently monitor lending to households. If the risks to financial stability increase, it will introduce binding macroprudential measures, adjust the instrument selection or modify the instrument parameters.

[80] The recommendation entered into force in November 2018.

[81] The full wording of the recommendation is available on the Bank of Slovenia website at https://www.bsi.si/ckfinder/connector?command=Proxy&lang=sl&type=Files&currentFolder=%2FFinan%C4%8Dna%20stabilnost%2FMakrobonitetni%20nadzor%2F&hash=6ce6c512ea433a7fc5c8841628e7696cd0ff7f2b&fileName=Makrobonitetno_priporocilo_za_podrocje_kreditiranj_SLO_02.pdf.

[82] The terms credit and loan are used interchangeably.

[83] 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).

[84] 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.

7.2 Capital buffer for other systemically important banks

The buffer for other systemically important banks (the O-SII buffer) introduced pursuant to the ZBan-2 aims to limit the systemic impact of misaligned incentives with a view to reducing moral hazard. This is one of the intermediate macroprudential policy objectives set out by the Guidelines for the macroprudential policy of the Bank of Slovenia. In identifying O-SIIs the Bank of Slovenia mainly follows the Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs). Under the aforementioned guidelines banks are evaluated 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.

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

Table 7.2: Mandatory indicators of systemic importance of banks

CATEGORY	WEIGHT	CRITERION	WEIGHT
Size	0.25%	Total assets	25%
Importance (including substitutability / financial system infrastructure)	0.25%	Value of domestic payment transactions	8.33%
		Private sector deposits from depositors in the EU	8.33%
		Private sector loans to recipients in the EU	8.33%
Complexity / cross-border activity	0.25%	Value of OTC derivatives (notional)	8.33%
		Cross-jurisdictional liabilities	8.33%
		Cross-jurisdictional claims	8.33%
Interconnectedness	0.25%	Intra financial system liabilities	8.33%
		Intra financial system assets	8.33%
		Debt securities outstanding	8.33%

Source: EBA Guidelines

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

a) by dividing the indicator value[85] of each individual relevant entity by the aggregate amount of the respective indicator values summed across all institutions in the Member State (the "denominators");

b) by multiplying the resulting percentages by 10000 (to express the indicator scores in terms of basis points);

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

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

Point 9 of the EBA Guidelines further stipulates that the "relevant authorities should designate relevant entities with a total score equal to or higher than 350 basis points as O-SIIs. Relevant authorities may raise this threshold up to 425 basis points as a maximum or decrease it to 275 basis points as a minimum to take into account the specificities of the Member State's banking sector and the resulting statistical distribution of the scores, thereby ensuring the homogeneity of the group of O-SIIs designated in this way based on the O-SIIs' systemic importance." The Bank of Slovenia retained the EBA methodology, but derogated from the application of point 9 of the EBA Guidelines in 2017, and raised the threshold for identification as an O-SII from 350 to 500 basis points, adjusting the scale linking the points score and the O-SII buffer rate. The thresholds for brackets set out in the Regulation on the determination of the capital buffer for other

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

systemically important institutions (Official Gazette of the Republic of Slovenia, Nos. 96/15 and 68/17) are illustrated in Table 7.3.

Table 7.3: Thresholds of brackets and capital buffer rate

SCORE	CAPITAL BUFFER
5400 +	2%
4,700 - 5,399	1.75%
4,000 - 4,699	1.50%
3,300 - 3,999	1.25%
2,600 - 3,299	1.00%
1,900 - 2,599	0.75%
1,200 - 1,899	0.50%
500 - 1,199	0.25%

Source: Regulation on the determination of the buffer for other systemically important institutions

The Bank of Slovenia identified six systemically important banks in 2018, one less than in the previous year. Sberbank d.d. disappeared from the list. The buffer rate for SID banka d.d. was raised again to 0.5%. The buffer remained unchanged at the other banks. The banks are required to meet the buffer as of 1 January 2019; SID banka is required to meet the buffer stipulated in last year's decision (0.25%) as of 1 January 2019, and the full buffer (0.50%) as of 1 January 2020. Each bank must meet the buffer at the highest level of consolidation in Slovenia, through common equity Tier 1 capital.

Table 7.4: Indicator of systemic importance and capital buffer rate for O-SIIs

BANK	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%

Source: Bank of Slovenia

7.3 Countercyclical capital buffer

The countercyclical capital buffer introduced pursuant to the ZBan-2 pursues the intermediate macroprudential policy objective of "mitigating and preventing excessive credit growth and excessive leverage".

The purpose of the instrument is to protect the banking system against potential losses when excessive growth in lending is linked to an increase in risks in the system as a whole, which directly increases the resilience of the banking system.

Furthermore the countercyclical capital buffer indirectly contributes to a constraint on the expansive phase of the credit cycle by reducing the supply of loans or increasing the cost of lending. At the reversal of the credit cycle the Bank of Slovenia would relax the buffer, thereby mitigating the risk of the supply of loans being limited by regulatory capital requirements. This would increase the stability of the credit supply to the real economy over the entire financial cycle.

The countercyclical capital buffer rate may range from 0% to 2.5% of risk-weighted assets, and may exceptionally be higher.

The basic criterion for determining the buffer rate is the gap between the credit-to-GDP ratio and its long-term trend, but in light of the specific attributes of the Slovenian economy other indicators are significant, such as annual growth in real estate prices, annual growth in loans to the domestic private non-financial sector, the LTD ratio for the private non-banking sector, ROE and the ratio of credit to gross operating surplus.

The Bank of Slovenia reviews these indicators on a quarterly basis, and decides on any change in the buffer rate on this basis. Table 7.5 gives the current values of the risk indicators and the corresponding historical averages.

Table 7.5: Indicators for setting the countercyclical capital buffer rate

Indicator	Average value (Q1 2000-Q8 2018)*	Vaule of indicator taken into account in decision on buffer adopted in third quarter of 2018**
Credit-to-GDP gap	-6.1%	-35.6%
Annual growth in real estate prices (available since 2001)	4.9%	12.2%
Annual growth in lending to domestic private non-financial sector	9.6%	1.6%
LTD ratio for private non-banking sector	1.2	0.8
Return on equity	-0.1%	10.7%
Ratio of credit to gross operating surplus	4.0	2.2

Notes: *The value is only used for orientation. Owing to data availability, the average value of the indicator of annual growth in real estate prices is calculated for the period of Q1 2001 to Q2 2018.
**The latest available indicator value is used (Q2 2018).
Sources: SURS, own calculations

The table shows that the credit-to-GDP gap is negative (in the amount of 35.6%), whereby the ratio of credit to GDP stands at 69.4%. It reflects the low level of lending to the private non-banking sector compared with past levels. The low level of lending means that systemic risks are not originating in excessive credit growth. Annual growth in lending to the domestic private non-financial sector stood at 1.6%. Annual growth in prices of used flats stood at 12.2% in the second quarter of 2018, more than double the average over the period of Q1 2001 to Q2 2018. The growth in real estate prices does not yet imply the occurrence of new risks from excessive lending activity by banks. The LTD ratio for the private non-banking sector is lower than it has been in the past (at 0.8). This indicates that lending is primarily being financed by customer deposits, which are purportedly a stable source of bank funding. ROE stands at 10.7%. The ratio of credit to gross operating surplus, which is a measure of private-sector indebtedness and reflects the corporate sector's capacity to finance debts, is also low.

On the basis of the indicators of imbalances in the banking system that originate in excessive lending to the real economy, and expert judgements and analysis, it is assessed that at present there are no risks in the banking system that derive from excessive lending, and thus the buffer rate can remain at zero, as it has been since its introduction in January 2016.

7.4 Macroprudential policy instruments addressing maturity mismatch and illiquidity

Two macroprudential measures addressing the risk of excessive maturity mismatch and illiquidity in banking as recommendations entered into force on 1 January 2018, in accordance with a regulation adopted by the Governing Board of the Bank of Slovenia on 12 December 2017.

The aforementioned Governing Board regulation sets a minimum recommended value for the liquidity ratio, which is the ratio of the sum of financial assets to the sum of liabilities with regard to residual maturity, and the minimum recommended value for the ratio of the annual change in the stock of loans to the non-banking sector before impairments to the annual change in the stock of deposits by the non-banking sector (gross loans to deposits flows or GLTDF). Moreover, it prescribes banks to communicate to the Bank of Slovenia the value of the liquidity ratio on a daily basis.

Liquidity ratio

Banks operating in Slovenia are required to regularly compute and monitor the liquidity ratio, which is the ratio of assets to liabilities (in domestic and foreign currency) with regard to residual maturity. To this end, banks must classify financial assets and liabilities by residual maturity into two buckets as follows:

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

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

The liquidity ratio for each bucket must be calculated on a daily basis for the previous business day. The recommended minimum value of the first-bucket liquidity ratio is 1, while the second-bucket liquidity ratio is merely of 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 limits liquidity risk.

The liquidity ratio (first-bucket and second-bucket) was introduced in the Nineties as a monetary policy tool and was converted into a supervisory instrument in September 2006, since when it has undergone several modifications.[86] With the introduction of harmonised liquidity standards, namely the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), national liquidity measures had to be abolished as of 1 January 2018, unless they serve as macroprudential measures. The Governing Board's regulation of 12 December 2017 *de facto* recognises the need for a recommendation to banks to monitor their liquidity position more frequently than is prescribed for the calculation of the LCR. Even if a particular bank has an acceptable level of maturity mismatch and adopts a suitable risk management strategy in connection with funding and liquidity, systemic liquidity risk might originate from other parts of the financial system (such as other financial institutions or financial markets) and spread to the bank with a speed that requires daily monitoring and the immediate adoption of emergency measures.

The need for daily monitoring of the liquidity position of banks is exacerbated by the current high bank dependence on sight deposits If a bank is called to settle a large amount of liabilities without notice, there is an increase in its exposure to the materialisation of funding risk that is triggered by unpredictable factors (such as exogenous liquidity shocks simultaneously hitting many depositors). In such circumstances, given the lack of a contractual maturity on sight deposits, the banks' liquidity needs might grow exponentially in one day. There is thus a need for daily monitoring of the liquidity position. Moreover, the emphasis on cash inflows in the LCR makes this microprudential measure, which mainly focuses on liquidity risk inherent in stress market conditions, less suited to enforce an acceptable level of maturity mismatch. This is another reason for retaining the liquidity ratio arrangements, albeit merely as a recommendation. In fact, the measure helps to attain one of the intermediate objectives of macroprudential policy,[87] namely mitigating and preventing excessive maturity mismatch and illiquidity.

Gross loans to deposits flows

The GLTDF instrument (the ratio of the annual change in the stock of loans to the non-banking sector before impairments to the annual change in the stock of deposits by the non-banking sector, or gross loans to deposits flows) is a macroprudential measure (introduced in June 2014, and applied as a recommendation since January 2018) whose purpose is to slow the pace of the decline in the LTD ratio in the banking system, thereby improving the (impaired) intermediation of financial assets to the non-banking sector.

It is recommended for a bank with a positive (annual) increase in deposits by the non-banking sector that the (annual) GLTDF at the end of each quarter be zero or positive:

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

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

The measure was introduced in June 2014 as a macroprudential measure whose purpose was to mitigate and prevent excessive maturity mismatch and illiquidity, which is one of the intermediate objectives of macroprudential policy defined by the Guidelines for the macroprudential policy of the Bank of Slovenia. In

[86] The changes in the liquidity ratio requirement primarily concerned its relaxation, either in the form of a reduction in the risk weight for sight deposits (having regard for their observed stability) or the expansion of the category of financial assets that can be used in the calculation of the numerator in the liquidity ratio. The Governing Board thus resolved in December 2008 that financial assets pledged as collateral for ECB funding would be eligible for inclusion in the numerator of the liquidity ratio, thereby reducing the liquidity requirement's potential adverse impact on lending, which had already been adversely impacted by the financial crisis.

87 The intermediate objectives of macroprudential policy are described in detail in the Guidelines for the macroprudential policy of the Bank of Slovenia originally approved by the Governing Board of the Bank of Slovenia at its meeting of 6 January 2015, and modified in January 2017.

fact, initially the measure required banks that were raising deposits but reducing lending to the non-banking sector (i.e. failing to meet the GLTDF requirements) to raise their liquidity ratio. Given its evident positive effects, the measure has never been tightened, but one of the prescribed corrective measures, namely a minimum value that must be met on a quarterly basis (GLTDFq) for a bank that is failing to meet the annual GLTDF requirement, was relaxed in 2016.[88] The measure was converted into a recommendation in December 2017.

On the basis of an assessment of the GLTDF instrument, and the favourable developments in key indicators such as the stabilisation of the LTD ratio, in December 2017 the Governing Board adopted a regulation to retain GLTDF as a non-binding macroprudential recommendation, which entered into force on 1 January 2018. By maintaining the GLTDF as well as the KL instruments as recommended measures, the Bank of Slovenia signals to the credit institutions the need for monitoring funding stability, prudent management of liquidity risk and gradual resources transformation.

7.5 Limits on deposit rates

The Bank of Slovenia introduced the instrument with the aim of mitigating income risk in the context of an excessive increase in interest rates on deposits by the non-banking sector. It is linked to the intermediate objective to limit the systemic impact of misaligned incentives with a view to reducing moral hazard.

It was introduced in March 2012. The reason for its introduction was the rise in banks competing for deposits by the non-banking sector by raising interest rates on deposits, which was related to the difficulties in accessing financial markets on the part of the banks under majority domestic ownership, and the tendency to reduce the LTD ratio at the banks under majority foreign ownership. The raising of deposit rates was not reflected in an increase in the stock of deposits, but merely in the switching of deposits between banks and an increase in funding costs.

The instrument remains in force, but is inactive for the moment, as banks have no need to compete for deposits given the sufficient amount of funding available. The aforementioned measure is part of the ICAAP-SREP process and defines an add-on to capital requirements for new deposits by the private non-banking sector when the realised deposit rate exceeds the cap set by the instrument.

Box 7.1 FAVAR model for assessment of capital buffers

Financial Stability department of Bank of Slovenia has added an empirical-macro model to its toolbox for the assessment of the capital based macroprudential policies. The model, aka the FAVAR model for the assessment of the capital buffers, is product of the work by the Task Force for Operationalising Macroprudential Research[89] that was mandated to design tools for macroprudential policy implementation building on state-of-the-art methodologies and to be shared in SSM to ensure consistent methodological approaches across the member states. It aims to serve to the macroprudential policy in choosing, calibrating and assessing instruments basing on a quantitative cost-benefit assessment.

This framework enables us to monitor the effects of macro-financial shocks on bank credit and economic activity and estimate to what degree the transmission is affected by the regulatory capital buffers. Assessments of capital requirements include structural capital buffers (capital conservation buffer, systemic risk buffer and O-SII buffers) as well as the countercyclical capital buffer. Importantly, resting on the methodology factor-augmented vector autoregressions (FAVAR)[90], the model makes it possible to relate the

[88] Banks first had to meet the requirement of $GLTDF\ ratio \geq 0\%$ between June 2014 and March 2015. The gradual tightening of the measure was envisaged in June 2014, whereby as of April 2015 banks would have to meet the requirement of $GLTDF\ ratio \geq 40\%$. Corrective measures in event of the failure to meet the GLTDF requirements were initially set out. Under the first corrective measure, banks with a positive quarterly increase in deposits by the non-banking sector would have to meet a higher GLTDF requirement calculated on quarterly changes in stock (GLTDFq), namely ≥ 40% or ≥ 60% depending on the original requirement. Under the second corrective measure, banks that failed to meet the GLTDF and GLTDFq requirements would have to meet a higher liquidity ratio.
Because the LTD ratio began to stabilise after the introduction of GLTDF, the macroprudential measure was not tightened in 2015, even though this had previously been envisaged. The corrective measure was relaxed in 2016, and now the requirement is for a GLTDFq ≥ 0%.

[89] Eleven euro area national banks participated in the work stream of Task Force that developed the "FAVAR model": **Belgium, Cyprus, Finland, France, Italy, Ireland, Lithuania, Netherlands, Portugal, Spain and Slovenia.**

[90] Vector augmented autoregressions (VARs) constitute one of the most common methodologies that are employed in empirical macro. Our FAVAR condense high dimensional data from large number of bank level variables in fewer 'factors' that are then incorporated in a VAR alongside variables that capture the main macro dynamics.

evolution of bank level credit, capitalisation or profits[91] with the dynamics of key macroeconomic aggregates, such as GDP, inflation and residential property prices. Incorporating micro and bank level variables with macro variables in a single framework the FAVAR approach presents a methodological improvement and advances over the existing literature by addressing the structural component (the distribution of the risk in the cross section of banks) of the systemic risk in a macro model. Thereby, it provides us more than system-wide insights, and helps identifying and possibly addressing the vulnerabilities of single institutions depending on their business models, ownership or exposure structure.

In the cost-benefit analysis of capital-based instruments, we balance long-term benefits against short-term credit and output losses. The notion of benefits relates to the impact of capital on banks' resilience, which we define as the ability to withstand shocks originating outside the banking system and limiting the pass-through to the supply of credit to private sector in an adverse circumstance. Our definition of the benefits reflect the gains due to capitalisation at 'normal times' and at adverse events such as recessions. On the other hand, the short-term credit and output losses during the transition towards higher capital requirements present the costs.

The results from estimating the model, with the cross-country sample and in Slovenia, show that raising capital buffers is costly in the short-run in terms of credit and GDP losses, but it limits shrinking of economic activity and drying of credit in the bad times. In a historical and comparative perspective for the countries that participated in the project, Slovenia stands out as one the countries that have improved the resilience of its banking sector the most as the result of the increases in bank capital ratios since the crisis (as presented in OMRTF, 2018)[92]. On the other hand, our results suggest that further increases in the capital ratios, over the levels that prevail today, are not warranted in Slovenia. The model can also provide us insights occasionally, in an ad-hoc manner, and guide discussions and our research on other policy issues. When applied to Slovenia data, the model provides us plausible results and insights on a range policy issues.

The main results of the cost and benefit analysis on bank capitalisation in Slovenia are presented below.

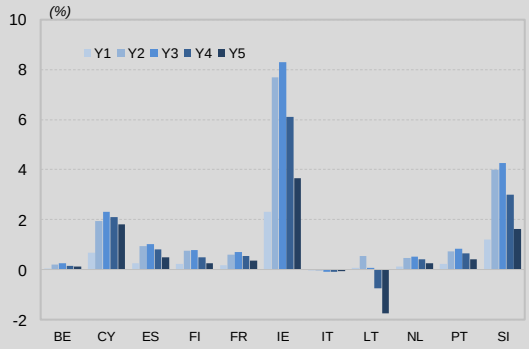
Costs and benefits from capital based policies

We conduct the benefit analysis in two steps: At the first step, the cumulated 'impulse response functions (IRFs)'[93] in response to the shocks'[94] in bank-level credit variables are regressed for each forecast horizon separately on the banks' initial level capitalisation (measured by Tier 1 capital ratio over risk weighted assets). This step has revealed, running the regressions on a pulled sample (pulled from the participating countries in the task force to have large enough number of observations), that there is a negative relationship between bank capitalisation and the credit response to the shocks (i.e. the banks that are better-capitalised are less sensitive to shocks and would contract their credit by less following an adverse shock). This points that the higher bank capitalisation prevents sudden cuts in credit and the triggering of negative second-round effects on the economy in adverse conditions. Yet, the regressions suggest the relation is non-linear: for capital ratios up to around 25%-30%, bank capitalisation adds to banks' resilience and beyond the relation breaks. The benefits from higher capital buffers are quantified at the second step against an adverse yet plausible adverse scenario involving a sequence of negative shocks to aggregate demand. The benefit from higher bank capital is equal to the unrealized losses in credit resulting from an increase in capital buffer above an existing capitalisation level.

Figure 7.1 presents a historical and comparative perspective for the countries that participated in the project. The bars stand for the effect of the increase in capital buffers from the levels that prevailed across banks in 2010 to the levels by the end of 2015 on the outstanding credit to NFCs under the scenario[95]. Slovenia stands out as the second country in the sample that has improved the resilience of its banking sector the most according to this analysis.

[91] The model include the bank level variables: long and short term cooperate credit, credit to households, total assets, Tier 1 capital and Tier 1 ratio, return on assets, a liquidity proxy, provisions, NPLs, deposit and lending margins and a proxy for funding costs of banks.
[92] OMRTF (2018), "The benefits and costs of adjusting bank capitalisation: evidence from euro area countries," ECB working paper, February 2018.
[93] We talk of "shocks" in empirical macro as the unexpected disturbances enable us to estimate the causal relations (otherwise, we only have correlations in quarterly macro data). These shocks are identified employing a set of assumptions on the responses of the variables in the model to the shocks (following the so-called Structural VAR literature).
[94] IRFs trace the path followed by the endogenous variables of the model in response to structural shocks (to a one-off increase, in the structural shock of interest, which is then set to zero again at all future dates/periods while all other structural shocks of the model are set equal to zero on impact and going forward). Cumulative IRFs represent the accumulated responses over each horizon.
[95] The scenario defined is as follows: As a result of a six-quarter series of adverse aggregate demand shocks the GDP falls sharply in the first two years, reaching 3.5% below the initial level (average across the sample countries) and slowly rebounds thereafter.

Figure 7.1: Effect of an increase in Tier1 capital buffers from the levels prevalent in 2010 to the levels at the end of 2015 on loans to non-financial corporations under the adverse scenario



Note: The figure illustrates the difference between the simulated credit responses for the bank capital levels in 2010 and 2015 in percentages (vertical axis) over five different horizons of up to five years. Source: OMRTF (2018)

On the other hand, as iterated above, there is an optimal level for bank capitalisation. Overall bank capitalisations in Slovenia, in terms of Tier 1 ratios, currently stand almost at ≈ 20% and our results do not suggest further increases in the capital ratios are warranted. However, the 'benefits', as defined here, refer to reduced volatility at 'normal times' and do not incorporate the additional benefits the bank capitalisation may provide in a crisis. It is also worth noting that the benefit analysis relies on coefficients that represent the average effects across eleven Euro Area countries and projecting the results to Slovenia requires caution.

The costs of additional capital requirements are linked to the transitory declines in macro variables such as credit growth or GDP, which would materialize if capital requirements are raised over a limited time window[96] and if they are binding. The framework enables us to identify the regulatory capital shocks at aggregate and bank level[97], where the latter allows to target a subset of banks akin to the application of the targeted structural buffers (systemic risk buffer and O-SII buffers). We can also distinguish the strategies the banks can adapt in reaching higher ratios, as adjustment by reducing assets, adding new capital or following a mixed strategy.

Figure 7.2 presents the responses in macro variables to a higher capital requirement and banks adjust by reducing their assets (most contractionary adjustment). The IRFs suggest that a one standard deviation[98] higher capital requirement shock leads to reduction in credit supply by 50 basis points and GDP would contract by 0.5% by the end of the first year following the shock. However, the literature suggests the adverse impact on economy should be transitory and our estimates confirm that the output tends to converge back to its initial level.

Figure 7.2: Bank-level model, responses in macro variables following the capital shock and bank adjustment by reducing assets

Note: The IRFs are cumulative responses with 50% confidence intervals. The horizontal axis shows the horizon in quarters, while the vertical axis is the cumulative change in percentages.

[96] It is also possible to simulate the effects of a gradual increase in the average system-wide bank capital, with a certain phasing-in period. Responses to this sort of implementation suggest lower costs.
[97] Capital shock is *identified*, referring to evidence from earlier studies in the literature, as a shock that leads to an increase in capital ratios, to a reduction in credit and to an increase in the lending margins and the funding cost of banks reduce (due to lower default risk).
[98] One standard deviation shock can be viewed as a shock of typical magnitude. Such normalization is common as it increases comparability and the task force states they preferred this to facilitate comparability of results pooled from different country models. However, we could also associate them with a particular variable in the model, e.g. we can define the capital shock as a shock that leads to a certain increase in the capital ratio (e.g. 1% or 50 bps increase in Tier1 ratio).

THEMATIC SECTION

ANALYSIS OF THE STABILITY OF NON-FINANCIAL SECTOR DEPOSITS IN SLOVENIA

8 ANALYSIS OF THE STABILITY OF NON-FINANCIAL SECTOR DEPOSITS IN SLOVENIA

8.1 Analysis of deposit sustainability

Non-financial sector sight deposits in Slovenia have been increasing at a very fast pace over the last four years, as well as the banks' dependence on non-financial sector sight deposits[99] (see Section 5.3 and Figure 8.1). Non-financial sector fixed-term deposits have been decreasing over the same period. Similar observations can be made in the subsamples of household deposits and deposits by non-financial corporations. These empirical facts can be explained by the low interest rate environment, a factor that has strengthened depositors' preferences for sight deposits and weakened their preference for fixed-term deposits. However, the total amount of non-financial sector deposits has also increased at a faster pace over the last four years than between 2008 and 2014 (the period between the start of the great financial crisis and the fall in interest rates to record low levels).

Deeper analysis is therefore needed in order to understand whether the recently observed developments in non-financial sector deposits (see Figure 8.1-8.2) are sustainable, i.e. whether they are justified by economic fundamentals. Looking at a longer time series (Figure 8.2), the first thing to notice is that, in the aftermath of the European and domestic sovereign debt crisis and banking crisis, the stock of non-financial sector deposits fell below its long-term linear trend. In recent years the stock of the aforementioned deposits has converged to its long-term trend, and is currently aligned with it. Similarly, the stock of non-financial sector deposits relative to GDP is consistent with its long-term trend, or even below the trend estimated using data from January 1999 (see Figure 8.3).

Figure 8.1: Non-financial sector deposits

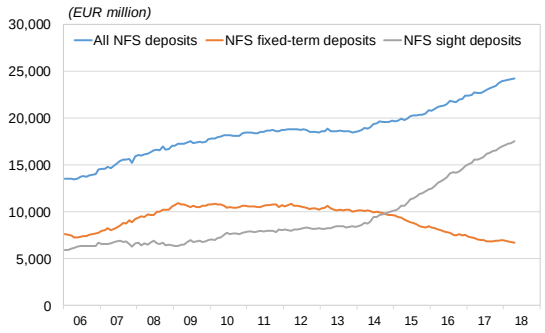
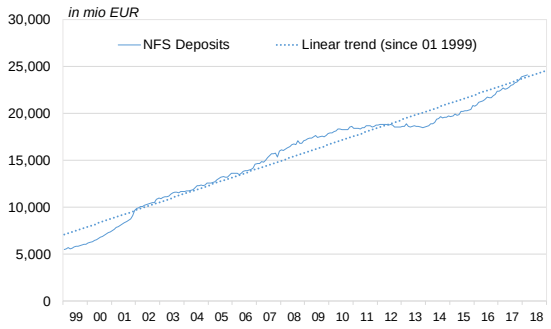


Figure 8.2: Non-financial sector deposits and trend



Source: Bank of Slovenia

Although GDP can be a factor driving depositors' decisions about deposit supply, other variables might also affect this decision. More precisely, the supply of deposits is the outcome of a dual decision problem (for savers and investors): a) how much to consume and how much to save, and b) portfolio allocation. The fundamental variables influencing depositors' decisions thus include certain indicators of their income (e.g. GDP), inflation, unemployment and a reference interest rate (e.g. 1-month EURIBOR).

The aforementioned variables are integrated stochastic processes, and are also cointegrated. The cointegration relationship was estimated on the basis of data for the period of April 2002 to June 2018. The cointegrated relationship can be interpreted as a long-run equilibrium relationship between the cointegrated variables. This relationship can be exploited to infer the long-run equilibrium path of non-financial sector deposits, i.e. the path that is explained by the fundamentals and can be considered sustainable (see Figure 8.4). Figure 8.4 shows that the observed growth in non-financial sector deposits did indeed outpace the predicted equilibrium level between June 2014 and March 2017, but the divergence was later corrected.

Similar analysis was conducted for the subsamples of household deposits and deposits by non-financial corporations. Figures 8.5 and 8.6 illustrate (as in the case of non-financial sector deposits) the observed and predicted equilibrium level of (year-on-year) growth in household deposits and deposits by non-financial corporations. The subsamples of household deposits and deposits by non-financial corporations also reveal (as in the case of non-financial sector deposits) that recently observed growth is aligned with the

[99] The non-financial sector includes the household sector and the non-financial corporations sector.

corresponding estimated equilibrium level. However, short-term variations in deposits by non-financial corporations are more volatile than those of household deposits.

Figure 8.3: Non-financial sector deposits relative to GDP

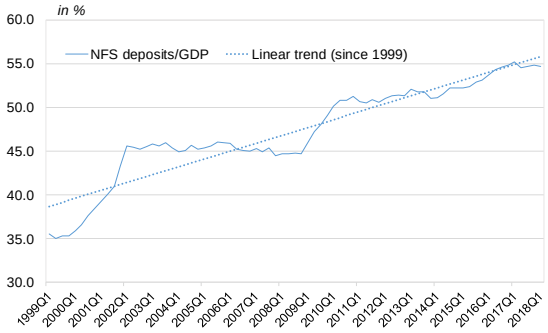


Figure 8.4: Non-financial sector deposits and their long-run equilibrium level, corresponding to a cointegration relationship between deposits and macroeconomic fundamentals

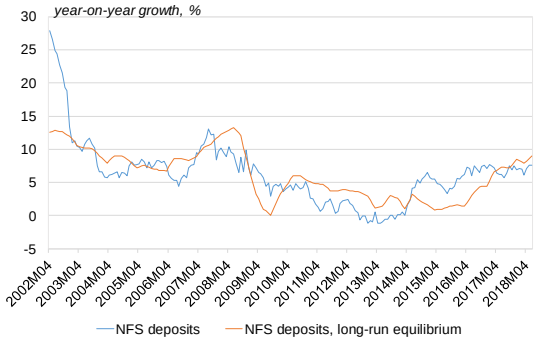


Figure 8.5: Household deposits and their long-run equilibrium level, corresponding to a cointegration relationship between deposits and macroeconomic fundamentals

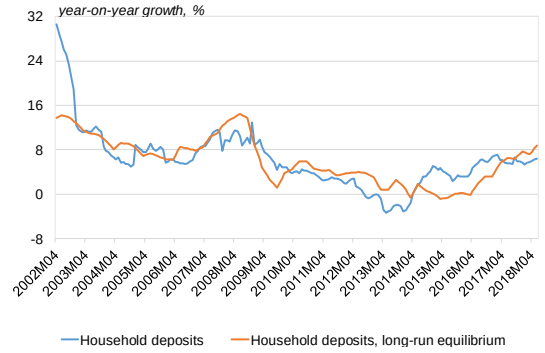
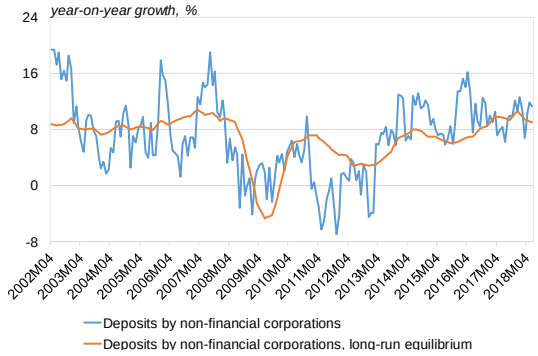


Figure 8.6: Deposits by non-financial corporations and their long-run equilibrium level, corresponding to a cointegration relationship between deposits and macroeconomic fundamentals



Sources: Bank of Slovenia, own calculations

To sum up, the aim of the described analysis is to divide the current stock of deposits into sustainable and unsustainable levels. The sustainable level is defined as the stock of deposits justified by the fundamentals. Although this definition does not take into account the maturity structure of deposits, it is useful in the assessment of liquidity risk in bank funding. If the funding provided to banks by depositors is abnormal with respect to an equilibrium level (the sustainable level) in a certain period and owing to certain (temporary) factors, then a reversal can be expected sooner or later, most likely when the temporary factors responsible for the abnormal developments disappear.

It should be emphasised that the described analysis does not consider events such as systemic liquidity shocks hitting depositors, or a bank run triggered by bank solvency issues. The factors that could trigger such events are unpredictable or unforeseen at present. Therefore no conclusions on the exposure of the Slovenian banking system and individual banks to the realisation of funding risk in either of these events can be inferred from the described analysis of deposit sustainability. However, *ad-hoc* analysis was conducted to estimate, based on experience, the potential run-off rates from deposits in the event of more general stress scenarios.

It is worth to make two remarks. First, according to the results of the described analysis, the current stock of non-financial sector deposits is considered sustainable, i.e. justified by the (macro) fundamentals. The second remark relates to the empirical association between a) growth in sight deposits, b) the decline in fixed-term deposits and c) the low interest rate environment. These observations lead to the conclusion that the (apparently abnormal) growth in sight deposits over the last four years is mainly due to switching from fixed-term deposits to sight deposits, given the flat maturity structure of interest rates.

On the basis of the current information, there is an expectation of a reallocation from sight deposits to fixed-term deposits at system level, following the normalisation of interest rates. The analysis suggests that there is a very low probability that the normalisation of interest rates would trigger an outflow of deposits from the banking system, unless other events occur simultaneously. These include a (currently unpredictable) significant change in saver/investor preferences, and other events not covered by this analysis, like the aforementioned cases of systemic liquidity shock hitting depositors or concerns over bank solvency.

8.2 Analysis of deposit elasticity with respect to interest rate differentials between banks

Another relevant question is what will happen at bank level with the normalisation of interest rates. One of the consequences could be a predatory deposit rate policy on the part of banks, aimed at attracting depositors. In fact, when interest rates return to higher values, banks will face a rise in both asset and liability interest rates. However, greater divergence between asset and liability interest rates can still be expected when the economy is far from the zero lower bound. This divergence could encourage banks to expand their activity, and thus to compete to attract funding, including funds from depositors.

Slovenian banks have pursued predatory deposit rate policies in the past. On that occasion a cap on deposit interest rates was introduced, to curb this behaviour by banks and to mitigate its adverse consequences, particularly in terms of income risk.[100] The first signs of such a phenomenon have recently been observed in the US, where deposit rate normalisation is underway.[101]

A predatory deposit interest rate policy on the part of banks might trigger deposit reallocation across banks, if they are unable to adjust their interest rates at the same pace. This phenomenon, in turn, exposes the weaker banks to deposit outflow, as deposits will move to banks offering higher remuneration. The weaker banks might thus be exposed to the realisation of funding risk in connection with potential deposit reallocation across banks, unless they are able to raise alternative funds to deposits, such as wholesale funding.

In particular, the banks' current high dependence on sight deposits and other deposits of short maturity would make this phenomenon and its consequences in terms of liquidity risk more severe, given the absence of contractual maturity (in contrast to higher dependence on fixed-term deposits). The existence of a contractual maturity and of a contractual penalty in the event of early withdrawal of fixed-term deposits would help banks buy time, so that banks would need to meet liabilities to depositors gradually over time.

The phenomenon of deposit reallocation across banks could expose certain banks to the materialisation of funding risk. In the event of consequences relevant at system level, for example because of the number (or market share) of the individual banks adversely affected in first place, or because of contagion effects,[102] it might also trigger the materialisation of systemic liquidity risk. To assess how severe the aforementioned phenomenon of deposit reallocation across banks could be, the elasticity of deposits with respect to interest rate differentials between banks was estimated.

Analysis was conducted for the subsamples of household deposits and deposits by non-financial corporations. The main variable is the spread ($spread^{x}_{i,t}$), which is defined for each category of deposits x (sight deposits and fixed-term deposits) as the difference between the interest rate paid by the bank offering the highest interest rate on deposits of type x at time t, and the interest rate paid by bank i on deposits of the same type. The regression model correlates monthly growth in sight deposits and fixed-term deposits with the corresponding spread as defined above, and control variables, including lags in the dependent variable, interest rates on both types of deposits, non-performing loans, and other variables, all expressed as growth rates.

The estimated coefficient of the spread variable represents the elasticity of deposits with respect to the interest rate differentials across banks. The estimate of this parameter can be used to simulate the effects of a change in market interest rates in terms of deposit reallocation across banks. The simulation relies on some assumptions. First, an assumption was made about the future evolution of the reference interest rate (the 3-month EURIBOR in this analysis) over a specified horizon. Second, assumptions were made (based on estimated *ad hoc* models) on how banks will adjust the deposit rates in response to the assumed change in the

[100] See Section 7.5.
[101] See, for example, *Bank competition heats up for US customer deposits*, Alistair Gray, Financial Times (8 April 2018), at: https://www.ft.com/content/846ebaa0-38fd-11e8-8b98-2f31af407cc8.
[102] Liquidity risk might spread between banks, for instance through interbank market freeze, asset fire sales, and panic among depositors.

reference interest rate (taking account of the attributes of the individual banks, such as profitability indicators).

Several variants of the basic model were estimated. The estimated parameters of the spread variable, i.e. the estimated elasticity of deposits with respect to the interest rate differential between banks, are statistically significant (at standard levels of significance), with the expected negative sign, and no larger than 20% (in absolute value), in all estimated models and for the different subsamples of deposits.

Growth in deposits at an individual bank is negatively correlated with the spread between the bank paying the highest interest rate and the bank in question. However, the magnitude of the effect of the spread on growth in deposits at bank level is small. The result suggests that an increase of 1 percentage point in the spread (for a specific deposit type) reduces growth in deposits of the same type at the bank in question by 20 basis points over a one-month horizon.

In general, it can be concluded that fixed-term deposits are less sensitive to interest rate differentials between banks than sight deposits. This is attributable to the penalty that is usually imposed in the event of the termination of a fixed-term deposit before contractual maturity. The penalty acts as a deterrent against the termination of the fixed-term deposit before maturity, even when early termination could be induced by yield-seeking behaviour.

The econometric models were estimated for various periods, in order to take account of the potential heterogeneity in the behaviour of depositors in normal and low interest rate environments. It turns out that households and non-financial corporations are more sensitive to the interest rate differential between banks when the general level of interest rates is higher. This applies to sight deposits and also to fixed-term deposits.

Overall it seems that household deposits are more prone to switch between banks in the search for yield than deposits by non-financial corporations. This is slightly surprising, given that one would expect firms to monitor the interest rates on deposits offered by the different banks more diligently than households could do. A possible explanation for this result could be that banks invest more in a client retention policy when the clients are non-financial corporations. Such a bank strategy would be reasonable if the services and products that the bank can offer non-financial corporations make it more profitable for banks to retain clients of this type rather than households. Consequently, non-financial corporations might exhibit greater loyalty to their bank than households.

A further reason why the estimated elasticity of deposits with respect to the interest rate spread between banks is smaller for non-financial corporations than for households (and is generally smaller than expected) might be that there are multiple relationships between the bank and the depositor. It might well be the case that a client raises a loan with a bank and at the same time is a depositor with the same bank. Whether it is worth keeping a deposit at a bank could depend on the overall portfolio of products and services offered by the bank, and not just on the contractual terms and conditions applying to the given deposit.

Given the small magnitude of the estimated elasticity of deposits with respect to interest rate differentials between banks, the assessment is that banks do not have material exposure to the risk of deposit reallocation and its adverse consequences for funding risk. It should nevertheless be noted that factors other than contractual interest rates influence the effective return to depositors, and whether it is worthwhile keeping a deposit at a particular bank. These factors include fees, and the possibility of obtaining other bank services under more favourable terms if the client is a depositor with the bank. The described analysis does not take account of these factors, because of a lack of data.

8.3 Conclusions

The analysis of deposit sustainability suggests that the growth in non-financial sector deposits is sustainable, i.e. justified by the (macro) fundamentals. An abrupt reversal in non-financial sector deposits therefore cannot be expected in the near future. However, factors like structural changes in the preferences of savers/investors, or systemic liquidity shocks that hit depositors, could trigger an outflow of deposits from the banking system. Such factors are not included in this analysis, since they are unpredictable or unforeseen. *Ad-hoc* analysis was conducted to assess banks' exposure to funding risk inherent in deposits in circumstances that are more general and are not necessarily related to those described in Sections 8.1 and 8.2. On the basis of this *ad-hoc* analysis, the risk of the outflow of deposits from the banking system and at the

level of individual banks is currently assessed as being adequately mitigated by the applicable liquidity measures (most notably the LCR and the first-bucket liquidity ratio).

The estimated elasticity of deposits with respect to interest rate differentials between banks is not high. Even if banks are unable to adjust interest rates on deposits at the same pace, deposit reallocation across banks is not expected to occur at a level that would compromise the weaker banks' capacity to meet their liabilities to depositors. Should deposit reallocation across banks materialize to a greater extent and with worse consequences than currently forecast, the previously applied cap on interest rates on deposits could be reactivated. This measure has been in force since 2012 (see Section 7.5 for details), but is not active in the current low interest rate environment. A cap on interest rates on deposits would mitigate any predatory deposit interest rate policy, and its adverse consequences in terms of deposit outflow from the less aggressive banks.

9 APPENDIX

NON-FINANCIAL CORPORATIONS

Figure 9.1: Stock of non-financial corporations' financial liabilities by creditor sector

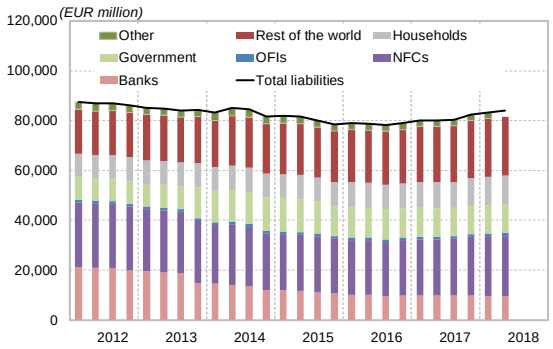


Figure 9.2: Stock of non-financial corporations' financial liabilities by instrument

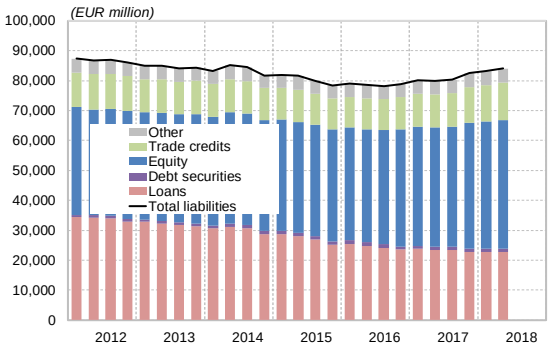


Figure 9.3: Stock of trade credits by creditor sector

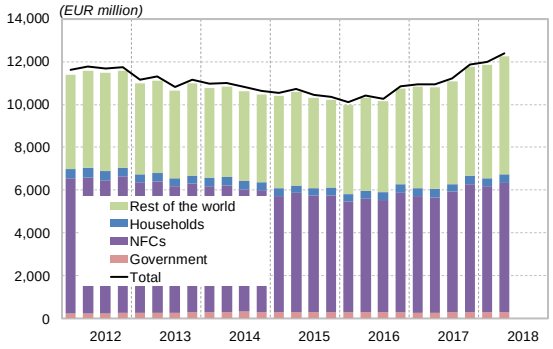


Figure 9.4: Non-financial corporations' financing flows by instrument

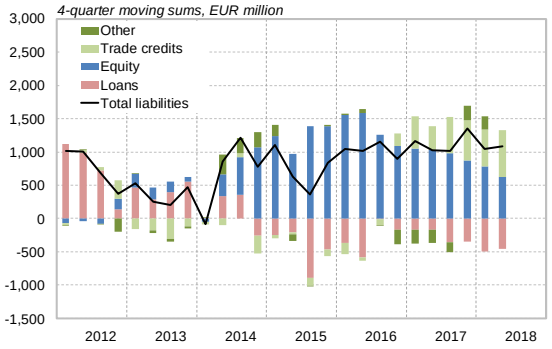


Figure 9.5: Corporate loans from the rest of the world by ownership link

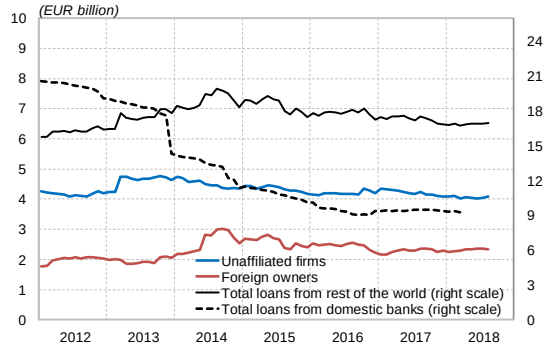


Figure 9.6: Corporate loans from foreign non-financial corporations by ownership link

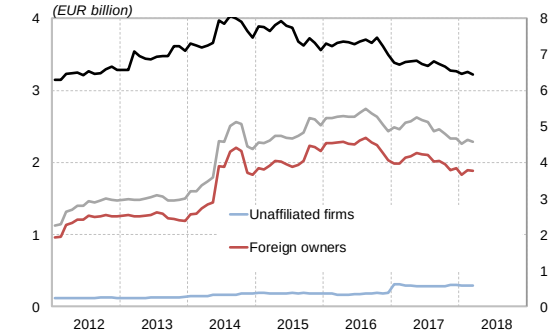
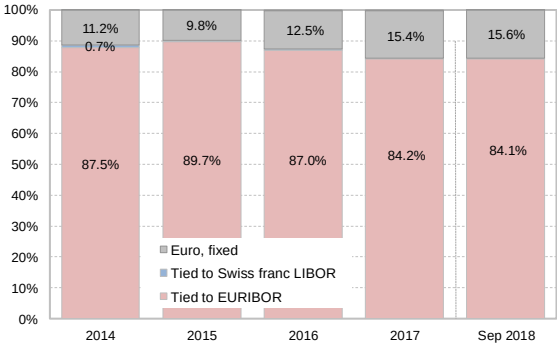


Figure 9.7: Long-term corporate loans by type of remuneration, stock



PROFITABILITY

Table 9.1: Slovenian banking system balance sheet for selected time snapshots

(EUR million unless stated)	2004		2008		2013		2017		Sep 2018		Increase in 2017	Increase in 1-9 2018	Y-o-y growth Sep 2018
	Stock	Breakdown	Stock	Breakdown	Stock	Breakdown	Stock	Breakdown	Stock	Breakdown			
		(%)		(%)		(%)		(%)		(%)			(%)
Assets													
Cash on hand and balance at central bank	592	2.5	1,250	2.6	2,452	6.1	4,187	11.0	4,413	11.5	154	226	17.5
Loans to banks	2,156	9.1	4,101	8.6	3,986	9.9	2,085	5.5	1,817	4.7	-75	-268	-11.7
Loans to non-banking sector	12,947	54.4	33,718	70.3	24,359	60.4	21,523	56.7	22,096	57.5	962	572	5.9
of which to non-financial corporations	8,147	34.2	20,260	42.3	11,508	28.5	8,288	21.8	8,536	22.2	180	248	2.8
of which to households	3,262	13.7	7,558	15.8	8,467	21.0	9,419	24.8	9,916	25.8	600	496	6.9
Financial assets / securities	7,013	29.4	7,307	15.2	8,318	20.6	8,776	23.1	8,740	22.7	-273	-36	-6.1
Other	1,112	4.7	1,572	3.3	1,229	3.0	1,376	3.6	1,395	3.6	128	19	3.5
Liabilities									1				
Financial liabilities to Eurosystem	0	0.0	1,229	2.6	3,727	9.2	1,141	3.0	1,093	2.8	427	-48	-5.8
Liabilities to banks	4,719	19.8	18,168	37.9	7,729	19.2	3,250	8.6	3,310	8.6	-630	61	-3.2
of which to domestic banks	435	1.8	2,065	4.3	2,381	5.9	856	2.3	897	2.3	-152	41	6.1
of which to foreign banks	4,254	17.9	16,098	33.6	5,348	13.3	2,393	6.3	2,413	6.3	-478	20	-6.3
Liabilities to non-banking sector (deposits)	14,906	62.6	20,883	43.6	22,550	55.9	27,528	72.5	28,369	73.8	1,395	841	5.7
of which to non-financial corporations	2,667	11.2	3,728	7.8	4,196	10.4	6,369	16.8	6,426	16.7	613	57	8.3
of which to households	9,904	41.6	13,407	28.0	14,365	35.6	17,535	46.2	18,346	47.7	938	811	5.8
Debt securities	973	4.1	1,276	2.7	1,657	4.1	376	1.0	76	0.2	-419	-301	-80.7
Provisions	0	0.0	176	0.4	306	0.8	236	0.6	207	0.5	-22	-30	-1.9
Shareholder equity	1,896	8.0	4,010	8.4	3,670	9.1	4,737	12.5	4,895	12.7	150	158	5.5
Other	1,326	5.6	2,206	4.6	704	1.7	678	1.8	509	1.3	-4	-168	-23.7
Balance sheet total	23,820		47,947.9		40,343.6		37,946	100.0	38,460	100.0	897	514	3.0

Source: Bank of Slovenia

Table 9.2: Banking sector income statement, 2014, 2015, 2016, 2017, and January to September 2018

	Amount, EUR million				Growth, %				Ratio to gross income, %			
	2015	2016	2017	1-9 2018	2015	2016	2017	1-9 2018	2015	2016	2017	1-9 2018
Net interest	746	670	652	499	-10.4	-10.1	-2.7	3.6	64.4	59.4	60.7	57.6
Non-interest income	412	457	422	367	3.3	11.0	-7.6	7.3	35.6	40.6	39.3	42.4
of which net fees and commission	336	307	313	237	-3.0	-8.4	2.0	0.9	29.0	27.3	29.2	27.4
of which trading gains/losses	-12	11	30	10	…	…	…	…	-1.0	1.0	2.8	1.1
Gross income	1158	1127	1074	865	-6.0	-2.6	-4.7	5.1	100	100	100	100
Operating costs	-686	-667	-674	-484	-0.1	-2.7	1.0	-1.3	-59.3	-59.2	-62.7	-56.0
labour costs	-368	-371	-382	-286	0.5	0.7	2.9	2.3	-31.8	-32.9	-35.5	-33.0
Net income	472	460	400	381	-13.3	-2.5	-12.9	14.6	40.7	40.8	37.3	44.0
net impairments and provisioning	-313	-96	43	41	-51.8	-69.2	-144.4	12.8	-27.1	-8.5	4.0	4.7
of which at amortised cost	-222	-8	0	50	-57.7	-96.5	-100.0		-19.2	-0.7	0.0	5.8
Pre-tax profit	158	364	443	422	249.2	129.7	21.9	14.4	13.7	32.3	41.3	48.7
corporate income tax	-43	-31	-18	-40	439.8	-27.4	-41.0	55.5	-3.7	-2.8	-1.7	-4.6
Net profit	115	332	425	382	201.1	188.3	27.8	11.4	10.0	29.5	39.5	44.2

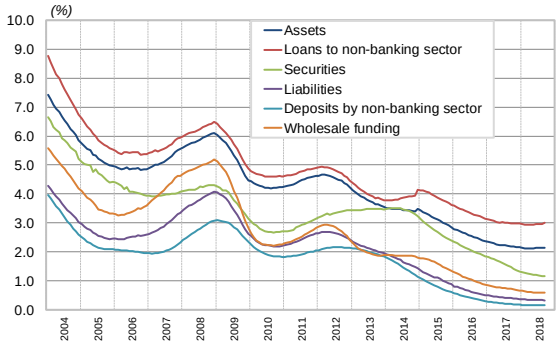
Source: Bank of Slovenia

Table 9.3: Selected bank performance indicators, system overall

(%)	2011	2012	2013	2014	2015	2016	2017	2017 (1-9)	2018 (1-9)
ROA	-1.06	-1.60	-7.70	-0.27	0.42	0.99	1.19	1.33	1.48
ROE	-12.54	-19.04	-97.30	-2.69	3.63	7.96	9.60	10.86	11.86
CIR	53.68	47.43	66.04	55.80	59.26	59.19	62.68	59.60	55.96
Net interest margin on interest-bearing assets	2.13	1.93	1.68	2.18	2.06	1.91	1.83	1.82	1.84
Interest margin on total assets	2.02	1.83	1.59	2.09	1.96	1.82	1.75	1.73	1.75
Non-interest margin	0.85	1.40	0.85	1.01	1.09	1.23	1.13	1.24	1.29
Gross income / average assets (FIM)	2.87	3.23	2.44	3.10	3.05	3.05	2.88	2.97	3.04

Note: The figures for September in both years are calculated cumulatively, i.e. for a period of nine months. FIM: Financial intermediation margin.
Source: Bank of Slovenia

Figure 9.8: Effective interest rates by main instruments of interest-bearing assets and liabilities



Source: Bank of Slovenia

Figure 9.9: Gross income, net income, and impairment and provisioning costs, nominal amounts

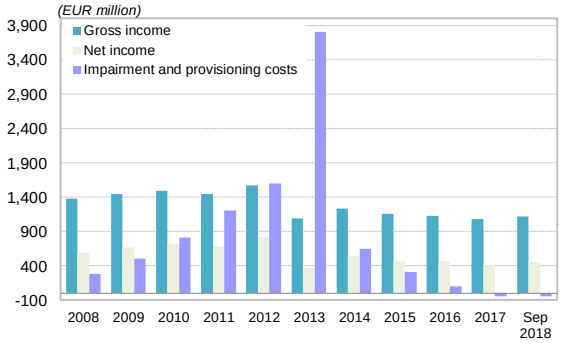


Figure 9.10: Overall contributions via interest-bearing assets and liabilities to change in net interest margin

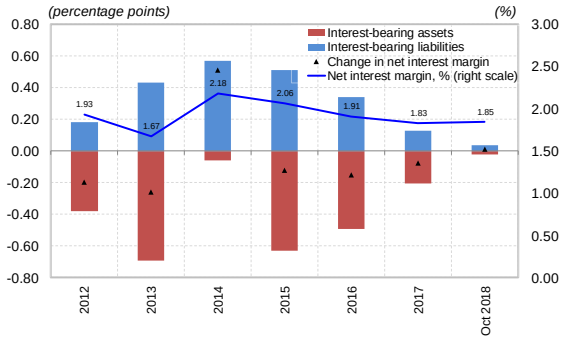
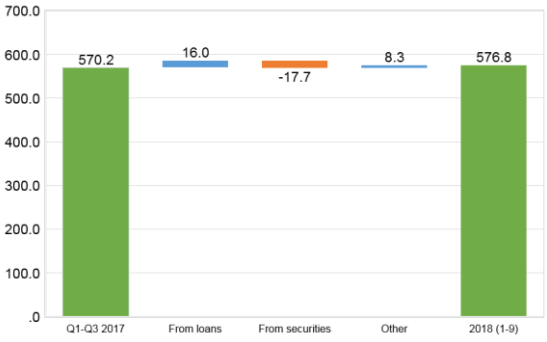


Figure 9.11: Interest income and contributions to overall change by main types of interest income (Jan to Sep 2017 and Jan to Sep 2018)



Note: In the left figure the change in asset items is the sum of the contributions made by loans, securities and other interest-bearing assets, while the change in liability items is the sum of the contributions made by deposits by the non-banking sector, wholesale funding and other interest-bearing liabilities. The change in the effect of liability items is multiplied by -1, as for example a rise in liability interest rates acts to reduce the net interest margin, while a fall acts to raise the net interest margin. The margins for 2018 are calculated for the preceding 12 months.
Source: Bank of Slovenia

CREDIT PORTFOLIO

Figure 9.12: Ratio of forborne exposures to NPEs by economic sector

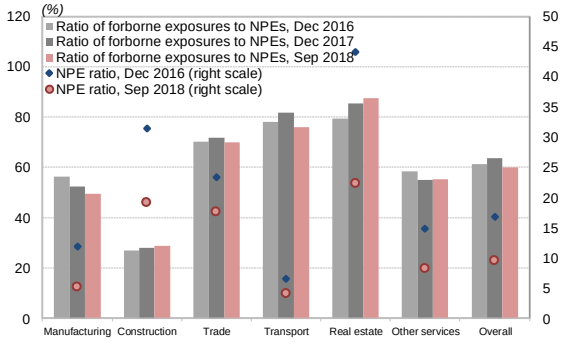
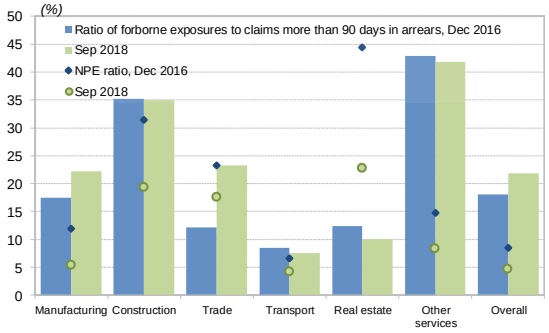


Figure 9.13: Ratio of forborne exposures to NPEs by economic sector



Source: Bank of Slovenia

Figure 9.14: NPEs by economic sector and corporate size

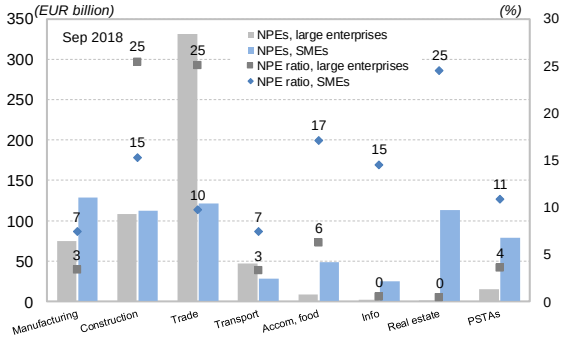


Figure 9.15: Breakdown of SMEs' transitions between ratings

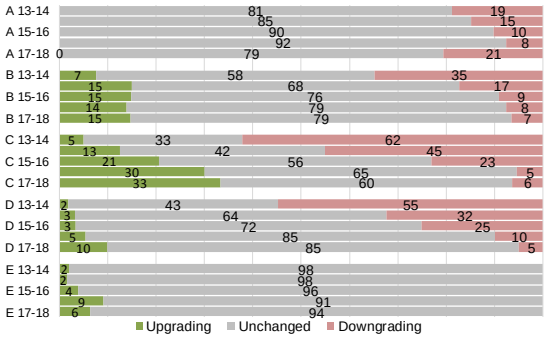
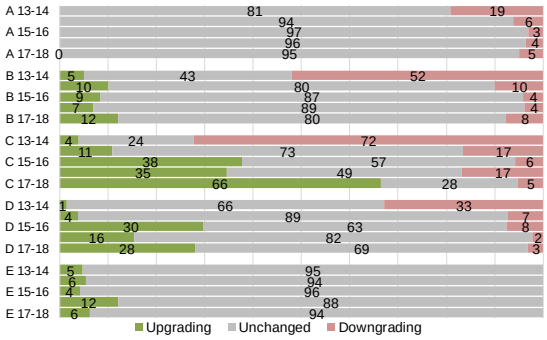


Figure 9.16: Breakdown of large enterprises' transitions between ratings



Source: Bank of Slovenia

Figure 9.17: Credit standards for corporate loans

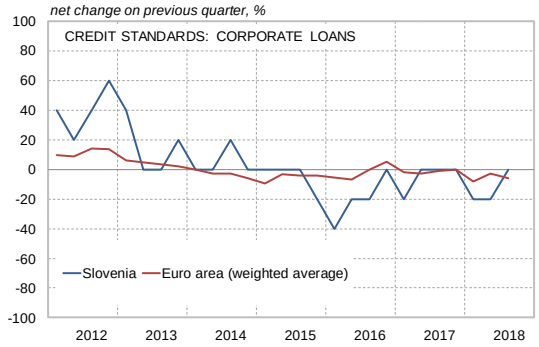
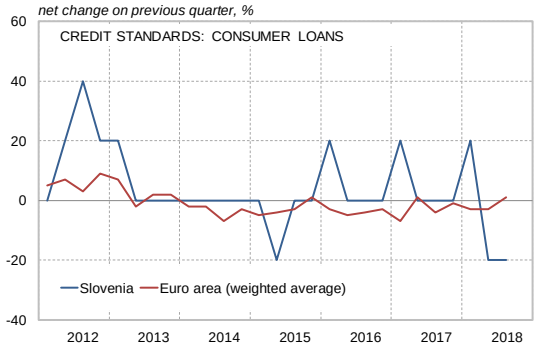


Figure 9.18: Credit standards for consumer loans



Source: Bank of Slovenia

BANK LIQUIDITY

Figure 9.19: Daily liquidity ratios for the first and second buckets of the liquidity ladder

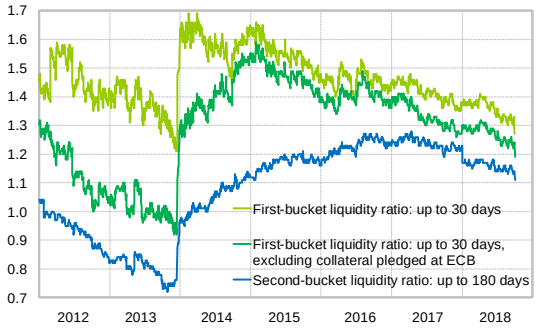
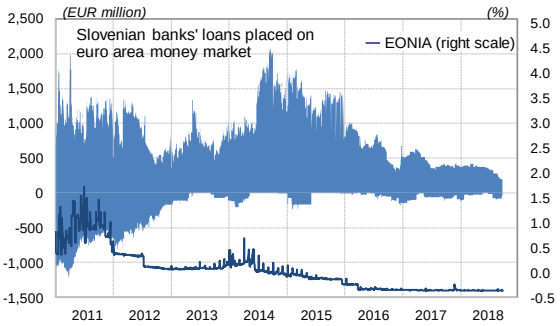


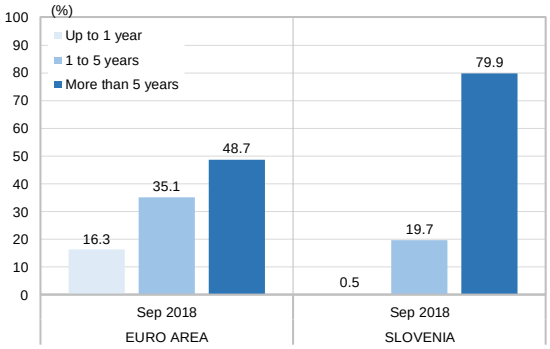
Figure 9.20: Stock of unsecured loans of Slovenian banks placed and received on the euro area money market



Source: Bank of Slovenia

MATURITY OF CONSUMER LOANS

Figure 9.21: Maturity breakdown of consumer loans, comparison with euro area



BANK SOLVENCY

Figure 9.22: Ratio of book capital to total assets on an individual basis by bank group

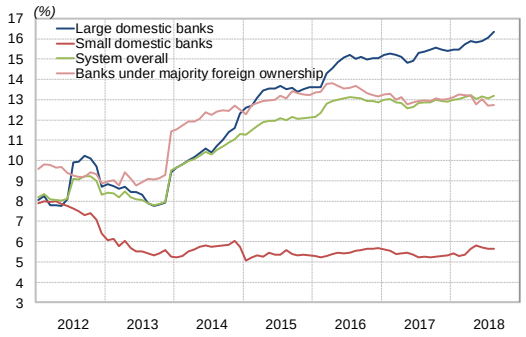
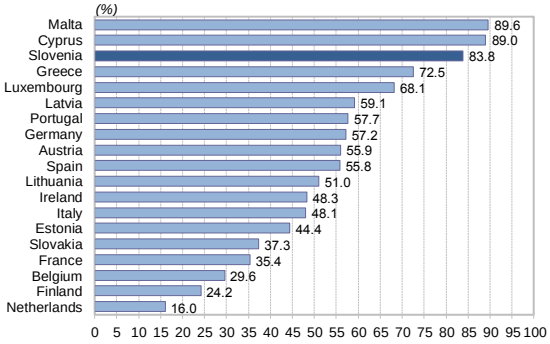


Figure 9.23: Ratio of capital requirements under the standardised approach to total capital requirements by euro area country, March



Sources: Bank of Slovenia, ECB (SDW)

Figure 9.24: Total capital ratios by euro area country, March 2018, consolidated basis

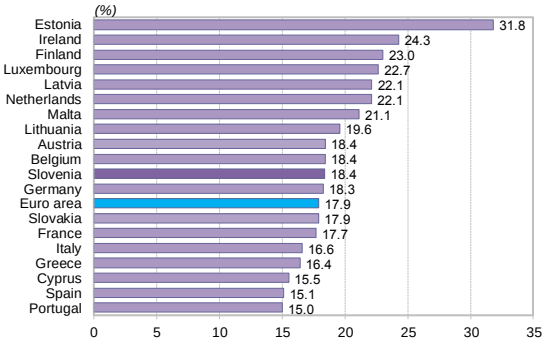
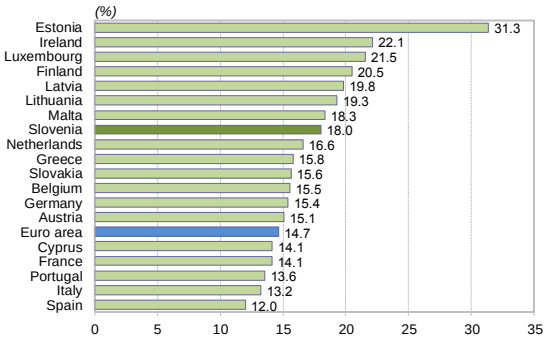


Figure 9.25: Common equity Tier 1 capital ratios by euro area country, March 2018, consolidated basis



Source: ECB (SDW)

Figure 9.26: Distribution of the ratio of book capital to total assets across euro area countries, consolidated basis

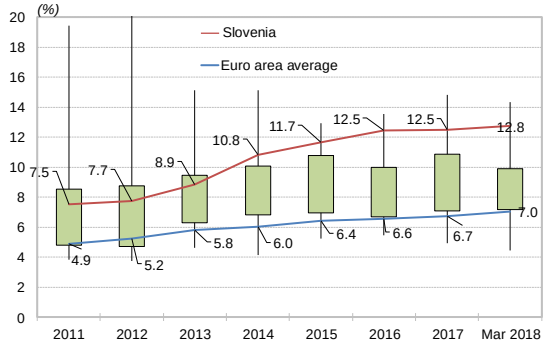
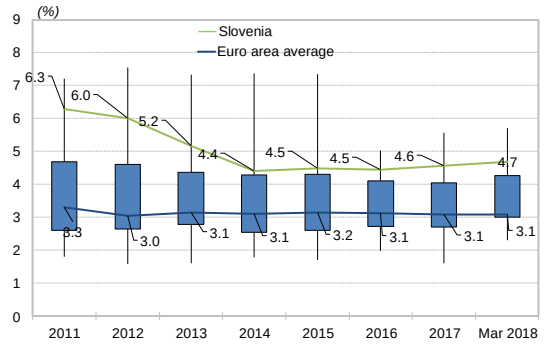


Figure 9.27: Distribution of the ratio of capital requirements to total assets across euro area countries, consolidated basis



Source: ECB (SDW)

INSURANCE CORPORATIONS AND PENSION FUNDS

Figure 9.28: Investment structure of the insurance sector (S. 128) in Slovenia and the euro area

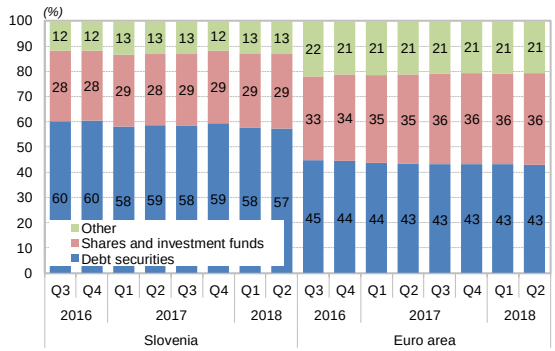
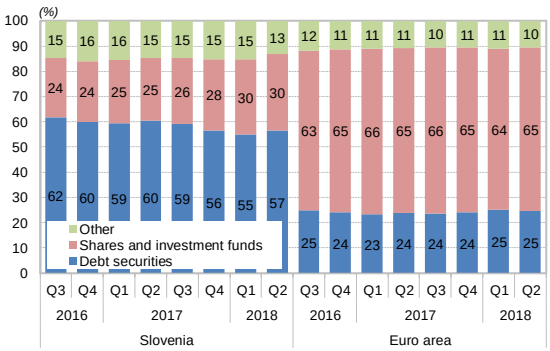


Figure 9.29: Investment structure of the pension funds sector (S. 129) in Slovenia and the euro area



Source: ECB (SDW)

Figures and tables

Tables:

Figures: