BANKA SLOVENIJE

BANK OF SLOVENIA
EUROSYSTEM

FINANCIAL STABILITY REVIEW

JUNE 2017

Published by:
Bank of Slovenia
Slovenska 35

1505 Ljubljana

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

The Financial Stability Review is based on figures and information available in mid-May 2017, unless otherwise explicitly stated.

ISSN 1581-9760 (online version)

Contents

1 EXECUTIVE SUMMARY 1

2 MACROECONOMIC ENVIRONMENT 5
2.1 International environment 5
2.2 Economic developments in Slovenia 7
2.3 Real estate market 11
2.4 Non-financial corporations 15

3 RISKS IN THE BANKING SECTOR 23
3.1 Banking system's balance sheet and investments 23
3.2 Credit risk 28
3.3 Income risk and interest sensitivity 35
3.4 Refinancing risk and bank liquidity 43
3.5 Bank solvency 48

4 NON-BANKING FINANCIAL INSTITUTIONS 53
4.1 Structure of the Slovenian financial system 53
4.2 Leasing companies 54
4.3 Insurers 57
4.4 Capital market 60

THEMATIC SECTION: LOW INTEREST RATE ENVIRONMENT AND INCREASING MATURITY MISMATCH BETWEEN BANK ASSETS AND LIABILITIES 64

List of tables, figures, boxes and abbreviations:

Tables:

Table 1.1:	Overview of risks in the Slovenian banking system	1
Table 2.1:	European Commission forecasts of selected macroeconomic indicators for Slovenia's main trading partners	5
Table 2.2:	Slovenia's sovereign credit ratings at major rating agencies	8
Table 3.1:	Percentage breakdown of transitions of SMEs and large enterprises between credit ratings, in terms of number of clients	35
Table 3.2:	Banking sector's income statement	37
Table 3.3:	Individual components in the calculation of ROE by year	41
Table 3.4:	Selected bank performance indicators	41
Table 4.1:	Financial assets of the Slovenian financial sector	53

Figures:

Figure 2.1:	GDP in selected countries	6
Figure 2.2:	Confidence indicators in the euro area	6
Figure 2.3:	Inflation (HICP)	6
Figure 2.4:	Commodity price indices	6
Figure 2.5:	Required yield on 10-year government bonds	7
Figure 2.6:	Growth in stock market indices	7
Figure 2.7:	GDP and contributions to GDP growth	7
Figure 2.8:	Breakdown of GDP by expenditure	7
Figure 2.9:	Confidence indicators in Slovenia	8
Figure 2.10:	Growth in value-added by sector	8
Figure 2.11:	Saving and investment	8
Figure 2.12:	Employment, unemployment rate and gross wages	8
Figure 2.13:	Net financial position of institutional sectors in terms of stock	9
Figure 2.14:	Net financial position of institutional sectors in terms of annual transactions	9
Figure 2.15:	Net financial position against the rest of the world by institutional sector	9
Figure 2.16:	Net financial position against the rest of the world by instrument	9
Figure 2.17:	Disposable income and final consumption expenditure	10
Figure 2.18:	Household saving and investment	10
Figure 2.19:	Household financial assets and liabilities	10
Figure 2.20:	Breakdown of household financial assets	10
Figure 2.21:	Breakdown of transactions in household financial assets	11
Figure 2.22:	Breakdown of revaluations of household financial assets	11
Figure 2.23:	Growth in residential real estate prices in Slovenia	12
Figure 2.24:	Change in residential real estate prices since 2008	12
Figure 2.25:	Number and value of completed sales	12
Figure 2.26:	Value and breakdown of transactions in real estate	12
Figure 2.27:	Number of transactions in real estate	13
Figure 2.28:	Growth in number of transactions in real estate	13
Figure 2.29:	Amount of construction put in place	13
Figure 2.30:	Number of issued building permits	13
Figure 2.31:	New housing loans and average LTV	14
Figure 2.32:	Maturity of new housing loans	14
Figure 2.33:	Ratio of housing prices to net wages in Ljubljana	14
Figure 2.34:	Housing affordability index	14
Figure 2.35:	Credit standards for housing loans	15
Figure 2.36:	Factors affecting household demand for housing loans	15
Figure 2.37:	Average prices of office space and catering/retail units	15
Figure 2.38:	Transactions in commercial real estate	15
Figure 2.39:	Non-financial corporations' gross investment rate, gross profit ratio, and ratio of currency and deposits to annual gross value-added	16
Figure 2.40:	Economic sentiment and confidence indicators	16
Figure 2.41:	Non-financial corporations' total profit and loss according to financial statements	17
Figure 2.42:	Non-financial corporations' annual transactions in financial assets and liabilities, and net financial position from financial accounts	17
Figure 2.43:	Breakdown of stock of Slovenian non-financial corporations' financial assets by instrument	17
Figure 2.44:	Annual moving flows of Slovenian non-financial corporations' financial assets by instrument	17

Figure 2.45: Non-financial corporations' debt-to-equity ratio 18
Figure 2.46: International comparison of corporate indebtedness in the euro area 18
Figure 2.47: Breakdown of stock of non-financial corporations' financial liabilities by instrument 19
Figure 2.48: Non-financial corporations' financial liabilities by instrument 19
Figure 2.49: Loans to domestic non-financial corporations from the rest of the world by sector 19
Figure 2.50: Domestic bank loans and total foreign loans by corporate size 19
Figure 2.51: Leverage for major economic sectors 20
Figure 2.52: Leverage and equity by corporate size 20
Figure 2.53: Ratio of net financial debt to EBITDA in major economic sectors 20
Figure 2.54: Net financial debt (NFD) and ratio of net financial debt to EBITDA by corporate size 20
Figure 2.55: Proportions of firms with a ratio of net financial debt to EBITDA of more than and less than 5 years, loss-making firms with net financial debt, and firms without debt 21
Figure 2.56: Proportions of firms with a ratio of net financial debt to EBITDA of more than 5 years by corporate size and by major economic sector 21
Figure 2.57: Proportion of total net financial debt and total excessive debt accounted for by the top 10, top 50 and top 100 firms 21
Figure 2.58: Distribution of firms with regard to ratio of excessive debt to equity 21
Figure 2.59: Various types of debt for all firms 22
Figure 2.60: Various types of debt for SMEs 22
Figure 2.61: Proportion of total net financial debt accounted for by excessive debt 22
Figure 2.62: Ratio of excessive debt to equity by economic sector and corporate size 22
Figure 3.1: Breakdown of bank investments 24
Figure 3.2: Breakdown of bank funding 24
Figure 3.3: Growth in main forms of bank investment and funding 25
Figure 3.4: Growth in loans to the non-banking sector, to corporates and to households 25
Figure 3.5: Growth in loans to non-financial corporations by loan maturity 25
Figure 3.6: Credit standards for loans to non-financial corporations by loan maturity 25
Figure 3.7: Growth in household loans by loan type 26
Figure 3.8: Credit standards for housing loans and consumer loans 26
Figure 3.9: Demand for housing loans and consumer loans 26
Figure 3.10: Demand for corporate loans 26
Figure 1.1: Forecasts of year-on-year growth in major balance sheet items 27
Figure 1.2: Forecasts of growth in loans by sector 27
Figure 1.3: Forecast for growth in deposits by sector 27
Figure 1.4: Loan-to-deposit ratio 27
Figure 3.11: Claims more than 90 days in arrears, NPEs and NPLs according to the EBA definition 29
Figure 3.12: NPL ratio according to IMF definition by country 29
Figure 3.13: Consolidated NPEs 29
Figure 3.14: Coverage of claims more than 90 days in arrears by impairments and provisions and by capital in the Slovenian banking system 30
Figure 3.15: Coverage of claims more than 90 days in arrears by impairments and provisions by client segment 30
Figure 3.16: Coverage of claims more than 90 days in arrears by impairments and collateral 31
Figure 3.17: Value of collateral for claims more than 90 days in arrears 31
Figure 3.18: Breakdown of claims more than 90 days in arrears by length of arrears, and distribution of clients by length of arrears 32
Figure 3.19: Proportion of classified claims more than 90 days in arrears by client segment 32
Figure 3.20: Breakdown of NPEs by client segment 32
Figure 3.21: Breakdown of classified claims more than 90 days in arrears by client country of establishment 33
Figure 3.22: Number of bankruptcy proceedings initiated 34
Figure 3.23: Stock and proportion of classified claims more than 90 days in arrears against non-financial corporations in bankruptcy proceedings 34
Figure 3.24: Proportion of claims more than 90 days in arrears and NPE ratio 34
Figure 3.25: Breakdown of NPEs by corporate size 34
Figure 3.26: Stock of NPEs to SMEs and non-financial corporations by economic sector 35
Figure 3.27: Net interest margin by bank group 37
Figure 3.28: Commission margin per total assets 37
Figure 3.29: 37
Figure 3.30: Contribution to change in net interest income made by quantity and price effects, and net interest margin 38
Figure 3.31: Overall contributions made by interest-bearing assets and interest-bearing liabilities to changes in net interest margin in the Slovenian banking system 38
Figure 3.32: Contributions made by individual instruments on asset and liability sides to change in net interest margin 39
Figure 3.33: Effective interest rates by main instruments of interest-bearing assets and liabilities 39

Figure 3.34: Ratio of operating costs to average total assets 39
Figure 3.35: Ratio of impairment and provisioning costs to average total assets 39
Figure 3.36: RROA by bank group 40
Figure 3.37: RROE, net interest margin on interest-bearing assets, and ratio of impairment and provisioning costs to total assets 40
Figure 3.38: Impact of four factors on changes in ROE; decomposition of ROE between 2008 and 2016 40
Figure 3.39: Average repricing period for the Slovenian banking system's assets and liabilities 42
Figure 3.40: Breakdown of deposits by the non-banking sector by repricing period 42
Figure 3.41: Average repricing period of stock by instrument 42
Figure 3.42: Interest rate on stock by instrument 42
Figure 3.43: Average residual maturity for individual types of loans 43
Figure 3.44: Proportion of loan stock accounted for by fixed-rate loans 43
Figure 3.45: Proportion of loans with a fixed interest rate for individual types of new loan 43
Figure 3.46: Average interest rates for individual types of new loan 43
Figure 3.47: Structure of bank funding 44
Figure 3.48: Changes in liabilities to the Eurosystem and wholesale funding 44
Figure 3.49: LTD ratio for the non-banking sector by bank group 44
Figure 3.50: Growth in deposits by sector 45
Figure 3.51: Increase in deposits by sector 45
Figure 3.52: Comparison of interest rates in Slovenia with interest rates across the euro area for new household deposits 45
Figure 3.53: Growth in household deposits by maturity 46
Figure 3.54: Change in stock of household deposits by maturity 46
Figure 3.55: Daily liquidity ratios for the first and second buckets of the liquidity ladder 47
Figure 3.56: Stock of marketable secondary liquidity 47
Figure 3.57: Banks' claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free 47
Figure 3.58: Stock of unsecured loans of Slovenian banks placed and received on the euro area money market 47
Figure 3.59: Banking system's basic capital ratios on an individual basis 48
Figure 3.60: Tier 1 capital ratio on an individual basis by bank group 49
Figure 3.61: Ratio of book capital to total assets on an individual basis by bank group 49
Figure 3.62: Contribution to change in total capital ratio on an individual basis made by changes in capital and capital requirements 49
Figure 3.63: Breakdown of capital requirements for credit risk 50
Figure 3.64: Breakdown of common equity Tier 1 capital 50
Figure 3.65: Total capital ratio compared with euro area, consolidated figures 51
Figure 3.66: Common equity Tier 1 capital ratio (CET1) by bank group, comparison with euro area, consolidated figures 51
Figure 3.67: Total capital ratios by euro area country, September 2016, consolidated basis 51
Figure 3.68: Tier 1 capital ratios by euro area country, September 2016, consolidated figures 51
Figure 3.69: Distribution of the ratio of book capital to total assets across euro area countries, consolidated basis 52
Figure 3.70: Distribution of the ratio of capital requirements to total assets across euro area countries, consolidated basis 52
Figure 4.1: Structure of financial assets of selected sectors in Slovenia and the euro area 54
Figure 4.2: New leasing business 55
Figure 4.3: Stock of leasing business 55
Figure 4.4: Stock and proportion of leasing business more than 90 days in arrears 56
Figure 4.5: Stock of leasing business and bank loans to the non-banking sector 56
Figure 4.6: Selected performance indicators 56
Figure 4.7: Debt funding of leasing companies 56
Figure 4.8: Amount of and growth in gross written premium by insurance class 57
Figure 4.9: Insurers' net profit and total assets 57
Figure 4.10: Claims ratios for the main insurance classes 58
Figure 4.11: Written premium and claims paid 59
Figure 4.12: Claims ratio for credit insurance 59
Figure 4.13: Comparison between Slovenia and euro area of the investment structure of the insurance sector (S.128 59
Figure 4.14: Comparison between Slovenia and euro area of the investment structure of the pension funds sector (S.129) 59
Figure 4.15: Proportion of investments by the insurance sector in shares, investment fund units and debt securities by issuer sector 60
Figure 4.16: Proportion of investments by the pension funds sector in shares, investment fund units and debt securities by issuer sector 60
Figure 4.17: Year-on-year changes in selected stock market indices 60

Figure 4.18: Spreads of selected 10-year government bonds over German benchmark bond 60
Figure 4.19: Market capitalisation on the Ljubljana Stock Exchange and annual turnover ratios 61
Figure 4.20: Issuance of bonds and commercial paper (excluding government sector) 61
Figure 4.21: Net outward investments by residents 62
Figure 4.22: Net inward investments by non-residents 62
Figure 4.23: Mutual funds by type 62
Figure 4.24: Net flows by investor sector 62
Figure 4.25: Ownership structure of domestic mutual fund units 63
Figure 4.26: Breakdown of investments by fund type in Slovenia and the euro area* 63

Boxes:

Box 1: Forecasts of bank performance, 2017 to 2019 27

Abbreviations:

AJPES	Agency of the Republic of Slovenia for Public Legal Records and Related Services
SMA	Securities Market Agency
ISA	Insurance Supervision Agency
GDP	Gross domestic product
BLS	Bank Lending Survey
BoS	Bank of Slovenia
OFIs	Other financial institutions
DSTI	Debt service-to-income ratio
TARS	Tax Administration of the Republic of Slovenia
BAMC	Bank Asset Management Company
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
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
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
HICP	Harmonised Index of Consumer Prices
IFs	Investment funds
KDD	Central Securities Clearing Corporation
TR	Turnover ratio
Leaseurope	European Federation of Leasing Company Associations
LJSE	Ljubljana Stock Exchange
LTRO	Long-Term Refinancing Operation
LTV	Loan-to-value ratio
MCR	Minimum capital requirement
IMF	International Monetary Fund
SMEs	Small and medium-size enterprises
MTS Slovenia	Part of the Euro MTS electronic trading platform for euro-denominated government and para-government benchmark bonds
NFCs	Non-financial corporations
ROE	Return on equity
SBI TOP	Blue-chip index at Ljubljana Stock Exchange
SCR	Solvency capital requirement
SDW	Statistical Data Warehouse
SURS	Statistical Office of the Republic of Slovenia
S&P	Standard and Poor's
TLTRO	Targeted Longer-Term Refinancing Operation
AUP	Average unit price of a mutual fund
VLTRO	Very Long-Term Refinancing Operation
MF	Mutual fund

NOTE: The demarcation of the banking system into homogeneous groups of banks, namely large domestic banks, small domestic banks and banks under majority foreign ownership, used for analytical purposes in this publication does not derive from the prevailing ownership of the banks. The demarcation is instead based on the features of their operations, in particular their funding structure.

1 EXECUTIVE SUMMARY

Banks are operating in a favourable macroeconomic environment, which through stability and forecasts of further growth is increasing the confidence of business entities and households. Growth on the real estate market and in disposable income are encouraging household demand for loans. The improved structure of corporate financing and growth in earnings are increasing household creditworthiness and are having a positive effect on risks deriving from this segment of bank investments. The biggest challenges to bank performance continue to be the challenges of doing business and achieving adequate profitability in a low interest rate environment, to which the banks are also adapting by modifying their business models. Here the main challenges lie in managing other risks, in particular maturity mismatching between assets and liabilities, and increased interest sensitivity. Overall the banks' sensitivity to systemic risks diminished in 2016, which provides a good basis for a revival of lending activity this year.

Table 1.1: Overview of risks in the Slovenian banking system

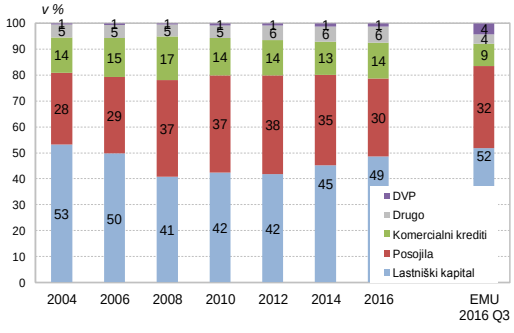
Systemic risk	Risk assessment			
	for Q4 2016	for Q1 2017	for Q2 2017	Trend in risk
Macroeconomic risk				⇨
Credit risk				⇩
Real estate market				⇧
Refinancing risk				⇨
Interest rate risk				⇨
Contagion risk and large exposure				⇨
Solvency risk				⇧
Income risk				⇨
Leasing companies				⇩
Colour code:				

Source: Bank of Slovenia

The continuing economic growth and the outlook for the next few years are having a favourable impact on the financial position of households and businesses. Combined with growing optimism, at the very start of 2017 these factors made a significant contribution to ending the years of declining lending activity by banks. The perception of reduced risk in association with lending is being reflected in less stringent credit standards, and is additionally contributing to more favourable loan terms, which are largely characterised by low lending rates and an expanding supply of favourable fixed-rate loans.

Several factors led to further corporate deleveraging in 2016. The process of reducing indebtedness at banks, which has lasted several years, extended almost to the end of 2016, while corporate borrowing in the rest of the world also came to a halt. For the second consecutive year, non-financial corporations are to a greater extent being financed by an inflow of equity, mainly foreign, which has improved the structure of their financing in the direction of more sustained deleveraging. The proportion of total corporate financial liabilities accounted for by equity reached 49%, which is already very close to the euro

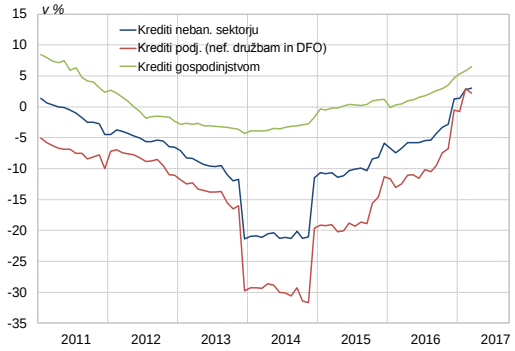
Figure 1: Corporate financial liabilities



area average. The two processes – debt repayment and increased equity financing – have reduced corporate leverage to the euro area median, while the ratio of corporate debt to GDP was not problematic even in the years of considerably higher indebtedness.

Corporate performance in 2016, with greatly increased earnings that approached the pre-crisis level of 2007, brought an additional improvement in creditworthiness. The earnings of non-financial corporations operating in the domestic market increased more than those of exporters, as a result of the greater contribution to economic growth made by domestic demand compared with foreign demand. Earnings grew in all principal economic sectors, with the exception of construction. Continuing forecasts of growth in domestic demand could be a factor in the faster recovery of firms that are more oriented towards the domestic market, which constitute the segment of the banks' portfolio that is otherwise more burdened by non-performing claims.

Figure 2: Growth in loans to the non-banking sector



With the improvement in the financial position of the corporate sector and the favourable economic forecasts, conditions are being established for a new credit cycle capable of supporting the trends that are beginning to be seen in investment. The growth in corporate loans since December 2016 could signify a turnaround in bank lending activity, while numerous supply-side and demand-side indicators provide a foundation for positive expectations. However, the years of contraction in bank lending have produced a corporate financing model that is based on internal resources to a significantly greater extent than in the pre-crisis period.

The increase in earnings and accumulated liquid assets, which now account for 15% of corporate investments, represent a good basis at many firms for internal financing of development. The increase in the supply of loans to this client segment at competitive terms could also contribute significantly to improving the quality of the banks' overall portfolio.

In household lending there is less uncertainty in the short term. Growth in housing loans and, to an even greater extent, consumer loans is supported by the improved household income position, increased consumption and a growing real estate market. Although rates of growth in consumer loans have reached double digits, and there is simultaneous growth in housing loans, household indebtedness remains significantly below the euro area average. The increase in this segment of the credit portfolio with low credit risk has the effect of improving its overall quality. Owing to the past reluctance of households with regard to spending and investment, the level of indebtedness of this sector has been falling for several years. This gives banks a little more room to increase their exposure to this client segment, albeit given an adequate credit risk assessment over the longer debt servicing period. Despite the increasing proportion of fixed-rate loans, the majority of the stock of household debt is still variable-rate, which has an impact on risk on both sides, namely interest rate risk in the case of households and credit risk in the case of banks.

Last year the banks again succeeded in reducing the stock and proportion of non-performing claims through active resolution. Since the bulk of the banks' efforts to date have focused on resolving non-performing claims at large enterprises, the claims remaining in the banks' portfolios are those that require a different approach. SMEs, firms in bankruptcy and non-residents are segments that continue to account for significant proportions of the non-performing portfolio. Claims against firms in bankruptcy still accounted for more than half of all claims against corporates more than 90 days in arrears at the end of 2016. More than half of non-performing claims against non-residents are concentrated in four countries of the former Yugoslavia. Given the low economic growth in these countries, autonomous improvement in these claims is limited. The banking system's balance sheet also includes EUR 0.5 billion of bullet loans, whose ability to repay debt will be unknown until the moment of maturity if the banks fail to determine the debtors' ability to repay from other indicators.

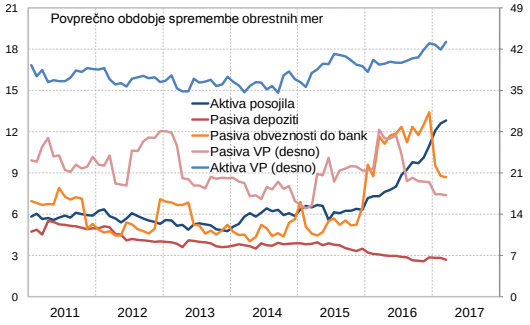
The proportion of bank investments accounted for by government securities and government-backed securities is declining. As they mature, these investments are being partly replaced by bank bonds and corporate bonds. This is reducing the previously high concentration risk at banks, but the stock and proportion of the most liquid assets on bank balance sheets are increasing: they

account for 12% of total claims, several times higher than a few years ago. Despite the low return on these investments, maintaining the adequate liquidity of banks is important from the point of view of reducing the risks inherent in maturity mismatching of assets and liabilities. This gap continues to widen, both because of the continuously increasing proportion of deposits and total assets accounted for by sight deposits, and because of the lengthening maturity of investments. The widening maturity gap in bank assets and liabilities is increasing certain risks in the banking system, where financing risk and liquidity risk in particular are potentially systemic in nature. Notwithstanding the presence of these two risks in the Slovenian banking system, the regulatory safety mechanisms, whether established (deposit guarantee scheme, ELA, liquidity ratios, last-resort liquidity aid, etc.) or emerging (LCR, NSFR, etc.), mean that the current situation is not problematic. A warning to banks to carefully monitor the development of these two risks, both on their own balance sheets and in the banking system as a whole, is nevertheless appropriate. Liquidity adequacy, which is ensured by the banks through adequate primary and secondary liquidity and through access to Eurosystem funds, is a prerequisite for adequate protections against the risks of unpredictable switching of sight deposits between banks.

Income risk remains one of the key risks in the banking system. Net interest income declined further in 2016, as a result of quantity factors and price factors. After a long period of negativity, recent trends in lending seem positive, although the contribution made to interest income by increased lending remains minimal. The increase in non-interest income in the last two years has primarily been a reflection of one-off factors, and does not signify any increased focus by the banks on other activities outside core banking. On the cost side, despite the expected further improvement in the credit portfolio, impairment and provisioning costs are unlikely to remain low, since they are largely a reflection of the release of earlier impairments. Improving cost-efficiency is also a longer-term process.

Modifications to the banks' business models by increasing fixed-rate loans and extending maturities, particularly in household lending, will contribute to growth in interest income through increased lending. In the wake of the simultaneous sustained shortening of deposit maturities, the banks' interest sensitivity is continuing to increase. Supervisory stress tests of interest rate risk (IRRBB) have shown that banks in Slovenia are relatively conservative when it comes to managing their interest-sensitive positions, and that interest rate risk is under control.

Figure 3: Average repricing period for interest rates on individual asset and liability instruments



Capital adequacy remained favourable at system level in 2016, and similar to the previous year. Minor changes in capital adequacy were more the result of changes in capital requirements than changes in capital, although there was a slight decline in both last year. The gradual revival of lending activity is resulting in an increase in capital requirements. The future stability of the capital position will also largely depend on the banks' ability to generate additional capital.

The real estate market is moving from a recovery phase to a growth phase. Residential real estate prices and the volume of transactions are growing more quickly than in previous quarters. Given the increase in demand and the unchanged supply, the gap between the two is widening. Demand is also being increased by favourable loan terms at banks, and the rising dynamic in housing loans. The shortfall in adequate supply could be mitigated by the anticipated investment and construction cycle. For the time being the commercial real estate market is not tracking the housing market: the number of transactions did not rise in 2016, while prices of office space and catering/retail units fell more sharply. In favourable economic conditions, the gradual restoration of a growth phase can nevertheless be expected in the commercial real estate market.

The positive impact of the economic recovery is also apparent in other segments of the financial system. Leasing companies are seeing growth in business, particularly in equipment leasing. In the insurance sector gross written premium is rising, while the low interest rate environment is having a negative impact on current and future income from investments. The impact of the recovery of the European economy on foreign capital markets is also passing through to the domestic market. Positive investor sentiment is being reflected in renewed growth in investments in mutual funds,

an increase in volume on the Ljubljana Stock Exchange, and above-average growth in the domestic stock market index. The increased price volatility is attributable to low liquidity and the shallow nature of the domestic capital market.

2 MACROECONOMIC ENVIRONMENT

Summary

The economic recovery continued in the euro area, with moderate economic growth, falling unemployment and persistently low inflation. To date the euro area has proven to be robust in the face of numerous challenges deriving from international and internal risks. To the fore are geopolitical risks and the uncertainty surrounding the negotiations over Brexit and trade agreements with the US.

Slovenia recorded one of the highest rates of economic growth of all euro area countries in 2016, and the rate has strengthened further this year. Growth in private consumption is strengthening, while government consumption is also increasing as austerity measures are relaxed, and export developments are favourable. As the economic sentiment improves, private-sector investment is gradually strengthening, and growth in investment can be expected in the future as the situation on the labour market and in the corporate sector continues to improve. Growth in investment is being encouraged by declining corporate indebtedness, high earnings, the improvement in the business climate, and increases in the equity ratio.

The situation on the labour market improved sharply in 2016, as unemployment fell at a faster pace and wage growth strengthened after several years. This resulted in an increase in household disposable income in 2016 and final consumption expenditure. For the moment households remain cautious in investment, and are rapidly increasing their savings despite low liability interest rates and rising inflation, which increases negative returns in real terms. The relatively low indebtedness and the rise of disposable income are increasing households' potential for further strengthening of consumption and growth in investment, particularly given the favourable lending rates available. The banks are also focusing more on household lending in the search for interest income, which is being reflected in growth in housing loans, and even more markedly in consumer loans since the second half of 2016.

2.1 International environment

Economic growth in the euro area remained moderate in 2016 at 1.8%, and a similar rate is forecast for this year. In the wake of the further improvement in the situation on the labour market, private consumption remains the most important factor in GDP growth, accounting for 1.1 percentage points of the figure. The contribution made by government consumption increased slightly, while gross fixed capital formation also continued to grow in the favourable economic situation. The contribution made by net trade was negative in 2016, as import growth outpaced export growth, but is expected to be approximately neutral over the next two years as the most important euro area trading partners are forecast to record improved economic growth. The sectors that contributed most to GDP growth were services and industry.

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

(%)	Real GDP			Unemployment rate			Inflation		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
EU	1,9	1,8	1,8	8,5	8,1	7,8	0,3	1,8	1,7
Euro area	1,7	1,6	1,8	10,0	9,6	9,1	0,2	1,7	1,4
Germany	1,9	1,6	1,8	4,1	4,1	4,1	0,4	1,9	1,5
Italy	0,9	0,9	1,1	11,7	11,6	11,4	-0,1	1,4	1,3
Austria	1,5	1,6	1,6	6,0	6,1	6,2	1,0	1,8	1,6
France	1,2	1,4	1,7	10,0	9,9	9,6	0,3	1,5	1,3
Croatia	2,8	3,1	2,5	12,8	10,8	9,3	-0,6	1,7	1,6
Slovenia	2,5	3,0	3,0	7,9	7,0	6,2	-0,2	1,1	2,3

Note: Shaded area signifies European Commission forecasts.
Source: European Commission spring forecast

According to the European Commission forecasts, this year the majority of Slovenia's main trading partners will record similar growth to last year. Of the main trading partners outside the euro area, economic growth is forecast to be relatively high in Croatia, while Russia is gradually emerging from recession, primarily as a result of higher commodity prices. International institutions are forecasting economic growth of around 1.8% in the euro area in 2017 and 2018, although numerous challenges remain in the form of international and internal risks that could entail limits on future growth. To the fore are geopolitical risks and the uncertainties surrounding Brexit and trade agreements with the US. In individual euro area countries there are still risks inherent in problematic banks and the political uncertainty surrounding

the future development of European integration. The euro area has nevertheless proven so far to be robust in the face of the aforementioned challenges, and has continued along the path of economic growth and falling unemployment.

Figure 2.1: GDP in selected countries

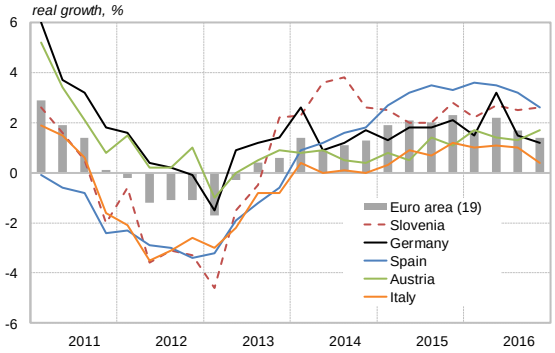
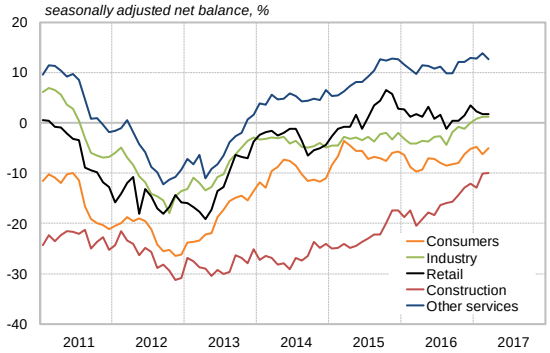


Figure 2.2: Confidence indicators in the euro area



Note: GDP figures are not seasonally adjusted.
Sources: Eurostat, European Commission

Economic growth also brought increased confidence in the euro area in 2016 and the first quarter of 2017. The improvement in expectations of the future economic situation and employment brought a renewed rise in consumer confidence and services confidence, although there is still occasional volatility in individual periods. The overall economic sentiment in the euro area is high and is still gradually improving, despite the uncertainties in the international environment.

Having begun to strengthen in the second half of 2016, inflation rose sharply in the first quarter of 2017. The rise in inflation was the result of base effects from the beginning of last year, and rises in energy prices, oil prices in particular. Oil prices began rising at the end of the previous year, as a result of an agreement between the largest oil producers to freeze pumping quantities. The rise in inflation was also attributable to stronger growth in other commodity prices and food prices, while domestic inflation factors remain less pronounced for the moment. Because inflation remains below the monetary policy target, the ECB is continuing to execute non-standard measures, and is maintaining interest rates at historically low levels. It will thus continue to encourage household and corporate borrowing through favourable credit financing, which will have a positive impact on final consumption and investment.

Figure 2.3: Inflation (HICP)

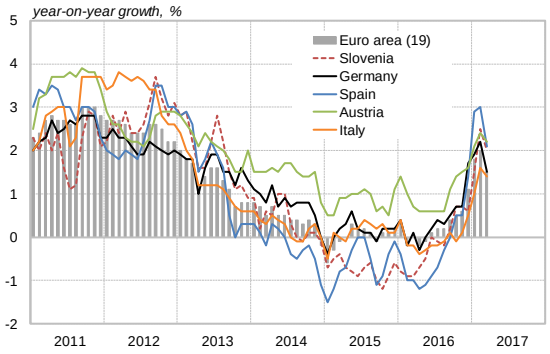
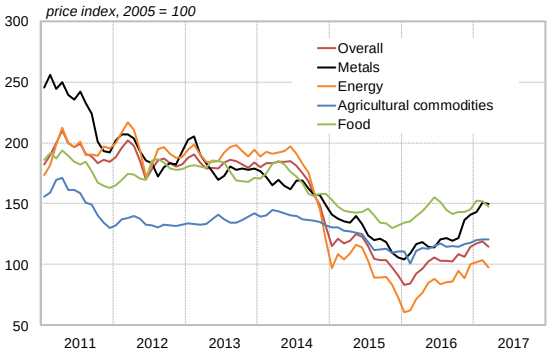


Figure 2.4: Commodity price indices



Sources: Eurostat, IMF

The required yield on government bonds rose slightly in the second half of 2016, but nevertheless remains at relatively low levels. The majority of euro area countries recorded a rise in bond yields, which was attributable to the tightening of monetary policy by the Fed and the less encouraging stance in statements by ECB representatives. The improving economic situation is having a positive impact on growth in the major global share indices, most notably in the US (S&P 500), which reached new record highs, while European share indices are also gradually recovering. In euro area countries the banking sector still faces numerous challenges, and the general share index remains at a level similar to that following its sharp decline of approximately 60% in the aftermath of the outbreak of the crisis eight years ago. Banks remain a less attractive investment for the moment, primarily due to the low interest rate environment and the consequent diminished ability to generate expected returns.

Figure 2.5: Required yield on 10-year government bonds

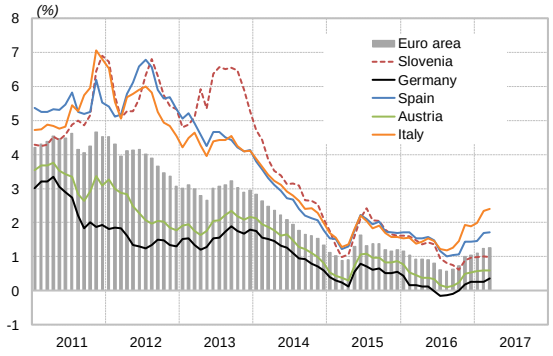
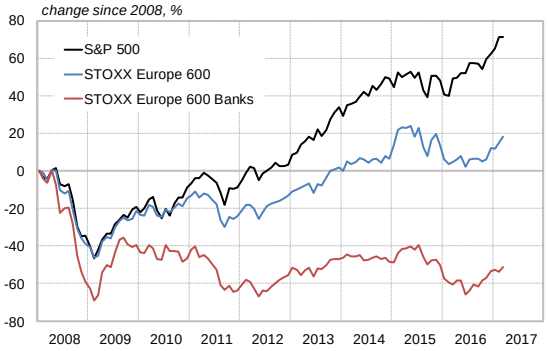


Figure 2.6: Growth in stock market indices



Sources: Eurostat, SNL Financial

2.2 Economic developments in Slovenia

Economic growth in Slovenia strengthened in 2016 and the first quarter of 2017, as it recorded one of the highest rates in the entire euro area. The export sector continued to record high growth, as a result of growth in foreign demand and improvements in competitiveness. The improving situation on the labour market strengthened consumer optimism, and brought a sharp increase in household consumption, whose contribution to GDP growth of 1.5 percentage points in 2016 was the highest since 2008. The relaxation of government austerity measures and increase in consumption caused by the refugee crisis brought a slight increase in the contribution made to GDP growth by government consumption after several years of decline. Investment in machinery and equipment also strengthened significantly, but government investment in construction declined, as a result of the reduced disbursement of EU funds. Economic growth will strengthen further over the medium term.

Figure 2.7: GDP and contributions to GDP growth

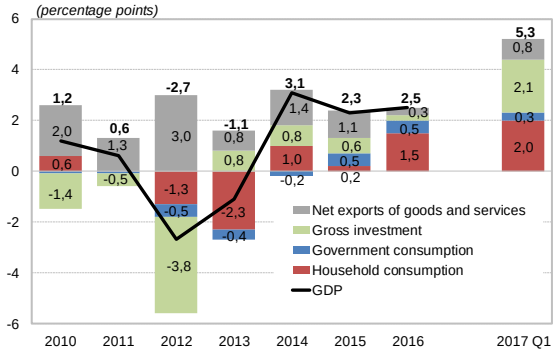
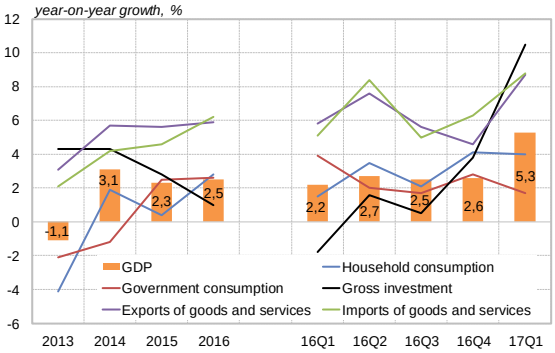


Figure 2.8: Breakdown of GDP by expenditure



Source: SURS

The economic sentiment improved in all sectors in 2016, while value-added increased in all sectors other than construction. The significant decline in government investment brought a decline in civil engineering activity, which resulted in a sharp decline in value-added in construction. By contrast, the recovery of the real estate market brought a sharp increase in confidence in the construction sector, and it is expected to increase further this year. In the expectation of increased demand on the domestic and foreign markets, confidence in the manufacturing and service sectors also increased sharply. Growth in value-added in manufacturing remained relatively high in the wake of growth in foreign demand and expansion of inventories. Value-added also increased in private-sector services, as a result of growth in the domestic market and increased exports, and in public services, as a result of increased employment.

Figure 2.9: Confidence indicators in Slovenia

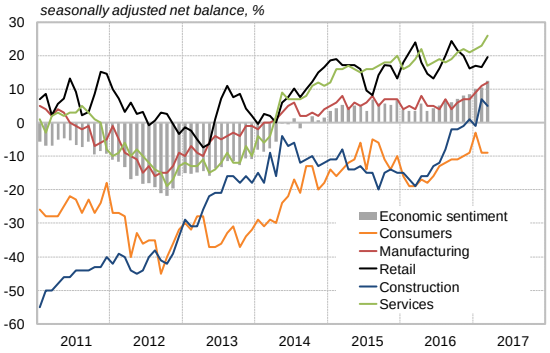
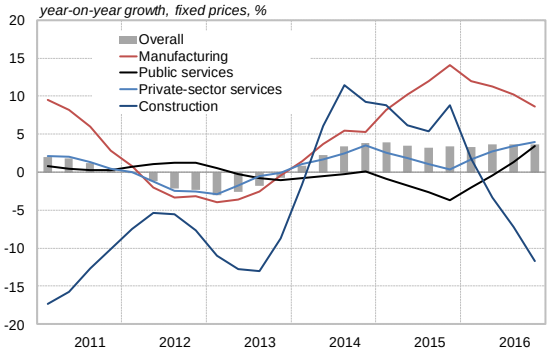


Figure 2.10: Growth in value-added by sector



Note: The figures for retail confidence are 3-month moving averages.
Source: SURS

Together with measures aimed at fiscal consolidation, the robust and relatively high economic growth figures improved the outlook for Slovenia according to the major rating agencies. Fitch upgraded Slovenia credit rating, while S&P and Moody's changed their outlooks to positive. The most important reasons cited by the rating agencies were the improved situation in the banking system after the recovery at the end of 2013 and the adoption of austerity measures aimed at reducing the budget deficit and public debt. The ratio of public debt to GDP fell to slightly below 80% in 2016, while the budget deficit narrowed to 1.8% of GDP. The decline in debt was attributable to the high economic growth, favourable borrowing costs and fiscal consolidation.

Table 2.2: Slovenia's sovereign credit ratings at major rating agencies

Agency	Rating	Outlook	Last change
Standard and Poor's	A	positive	16 dec 2016
Moody's	Baa3	positive	16 sep 2016
Fitch Ratings	A-	stable	23 sep 2016

Source: Ministry of Finance

Saving increased again in 2016, while investment as a proportion of GDP declined, albeit only as a result of a pronounced decline in government investment. The improving economic situation and low interest rates were still not sufficient to reduce the saving-investment gap, as bank deposits increased further despite low liability interest rates, while aggregate growth in investment was relatively weak. The increase in optimism was reflected in household consumption, while the new cycle of private-sector investment can be expected to continue, as the dynamics of the real estate market have a positive impact. Government investment is expected to increase, as increased disbursement of EU funds is planned. In the wake of lower indebtedness and balance sheet improvements, growth in investment can also be expected at firms in favourable economic circumstances. The situation on the labour market again improved sharply in 2016, as unemployment fell at a faster pace and growth in average gross wages strengthened after several years, with pronounced growth in the public sector as a result of the relaxation of austerity measures.

Figure 2.11: Saving and investment

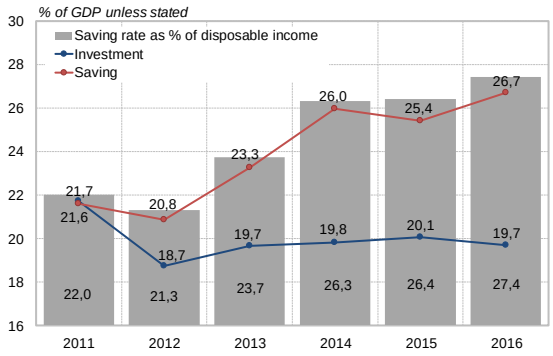
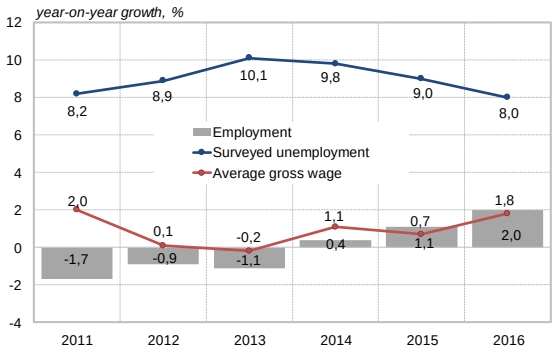


Figure 2.12: Employment, unemployment rate and gross wages



Source: SURS

There were no significant changes in the net financial position of individual institutional sectors in 2016. Non-financial corporations further reduced their net credit position vis-à-vis other sectors, as a result of further deleveraging and corporate investment activity in the wake of economic growth, increased confidence

and persistently low interest rates on loans. The government sector's negative net financial position increased further as a proportion of GDP, despite the decline in government investment and the adoption of austerity measures, as a result of a larger fall in assets than in liabilities. In the wake of growth in disposable income, households increased their consumption, but despite the less-encouraging environment for saving this was less intensive than the increase in saving, which further strengthened the household sector's net financial position.

Figure 2.13: Net financial position of institutional sectors in terms of stock

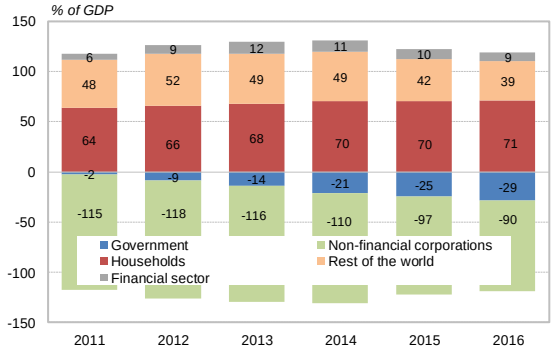
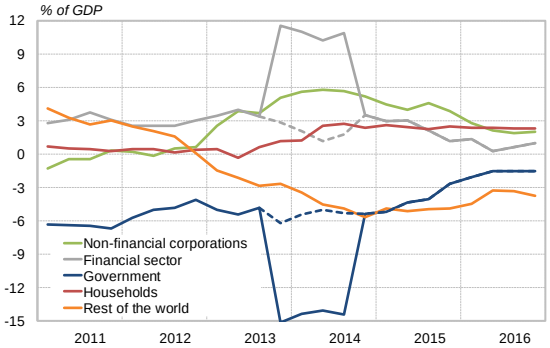


Figure 2.14: Net financial position of institutional sectors in terms of annual transactions



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.
Sources: Bank of Slovenia, SURS

The net financial position against the rest of the world diminished further in 2016 to stand at 39% of GDP. The gradual reduction in the net financial position against the rest of the world continued in all institutional sectors other than the financial sector. The government sector's net debt to the rest of the world as a percentage of GDP declined slightly for the first time since the outbreak of the crisis as a result of the reduced demand for financing caused by austerity measures, a decline in government investment, more favourable terms of borrowing and high economic growth. In 2016 the non-financial corporations sector also reduced its net debt to the rest of the world for the first time since the recovery of the banking system at the end of 2013. The deleveraging of the financial sector continued at a slower pace in 2016, which increased the positive net financial position to 16% of GDP.

Figure 2.15: Net financial position against the rest of the world by institutional sector

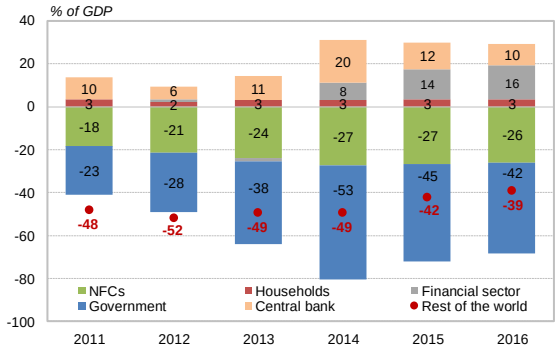
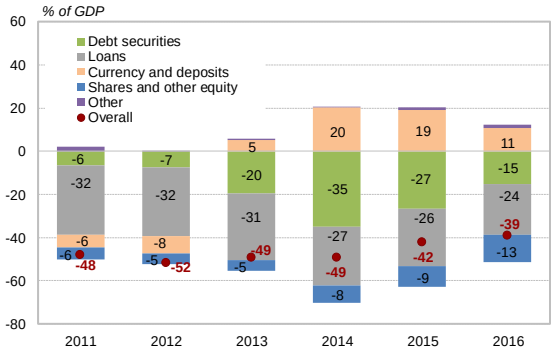


Figure 2.16: Net financial position against the rest of the world by instrument



Sources: Bank of Slovenia, SURS

Acquisitions of banks and non-financial corporations brought a net increase of EUR 1.4 billion in foreign equity in Slovenia in 2016, to 13% of GDP. The favourable economic environment, the continually increasing competitiveness of the Slovenian economy, and the privatisation process increased the attractiveness for foreign investors, and was reflected in a rise in foreign equity, which is becoming an increasingly important source of financing for the economy. The ongoing repayment of debt in the rest of the world reduced the institutional sector's net debt position in loans, while the expansion of liquid assets brought a significant increase in the net credit position in deposits. There was a significant decline in debt to the rest of the world in debt securities in the non-financial corporations sector as a result of the smaller need and interest in financing of this type in the context of favourable interest rates on loans, and in the government sector as a result of the declining need for new borrowing.

Household sector

Household disposable income increased again in 2016. With rising employment and wages, the improved situation on the labour market brought an increase in household disposable income to EUR 24 billion. The record level of disposable income is increasing households' ability to raise consumption and investment, particularly in light of favourable loan terms and their improved creditworthiness. With optimism rising continually, expenditures on final household consumption increased, with spending of consumer durables continuing to grow rapidly and spending on other goods and services also increasing. The favourable situation has so far not been discernibly reflected in an increase in gross investment by households, but in the wake of further growth in disposable income and the recovery of the real estate market, a recovery in investment, housing investment in particular, could also be expected.

Figure 2.17: Disposable income and final consumption expenditure

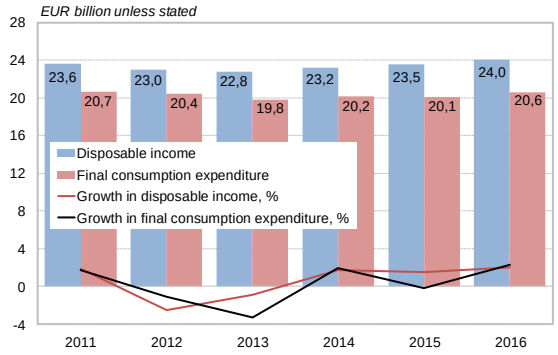
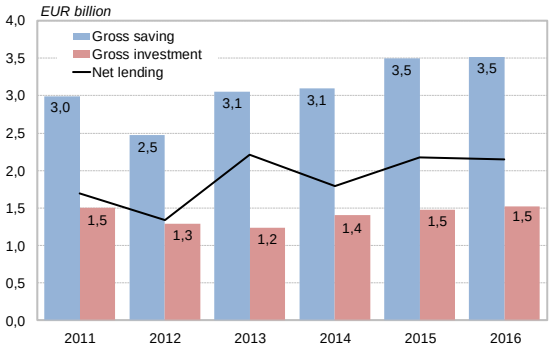


Figure 2.18: Household saving and investment



Source: SURS

The household sector's net financial assets increased to EUR 40.9 billion in 2016, or 103% of GDP. Household liabilities increased in 2016 in the wake of faster growth in borrowing at banks, but the increase in assets, most notably currency and deposits, was significantly greater. Households increased their net financial assets by approximately EUR 1.3 billion in 2016, but in terms of GDP (71%), the figure is still less than a half of the euro area average. Financial liabilities are also approximately half of the euro area average, making Slovenian households among the least-indebted. There were no major changes in the breakdown of household assets in 2016, as Slovenian households continue to hold a large proportion of their assets in currency and deposits. Compared with the euro area overall, they hold fewer financial assets in higher-yielding, higher-risk forms, the main differences being seen in assets held in investment funds and in life and pension insurance.

Figure 2.19: Household financial assets and liabilities

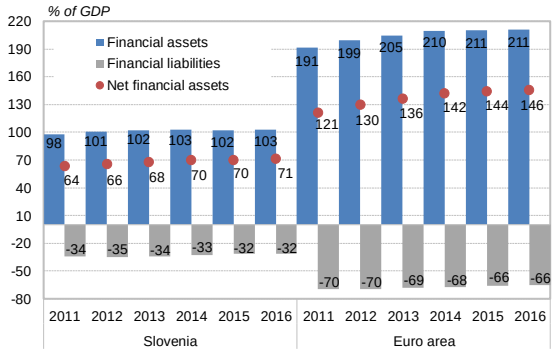
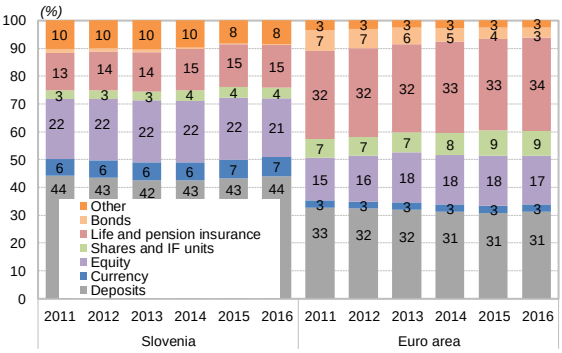


Figure 2.20: Breakdown of household financial assets



Sources: Bank of Slovenia, SURS, ECB

Household deposits continued to grow at a faster pace in 2016 , while investment growthin other forms of financial asset slowed. Despite the less favourable conditions for saving, household deposits recorded their largest increase since 2008, as a result of the improvement in the situation on the labour market and the persistent conservative mindset of Slovenian households. As liability interest rates remain low and inflation rises, investments in other forms of asset can be expected to increase, as the real returns on deposits become increasingly negative. For now expectations of increased investment in life insurance and pension insurance have not yet been realised, which is partly attributable to the modest returns on such investments in the low interest rate environment. With the exception of deposits and equity, the value of most forms of asset increased in 2016, despite lower levels of return. The largest gain in the value of financial assets was

recorded by life insurance, while the largest fall in value was recorded by equity, as a result of uncertainty on the capital markets and the expansion of M&A activity by foreign owners.

Figure 2.21: Breakdown of transactions in household financial assets

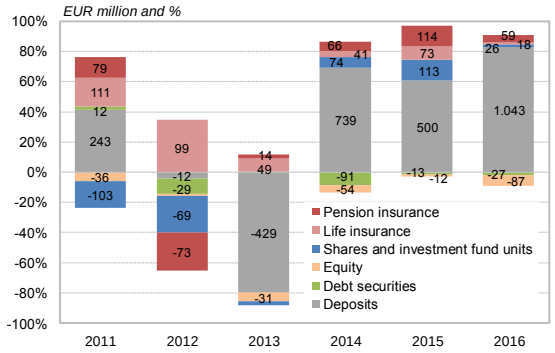
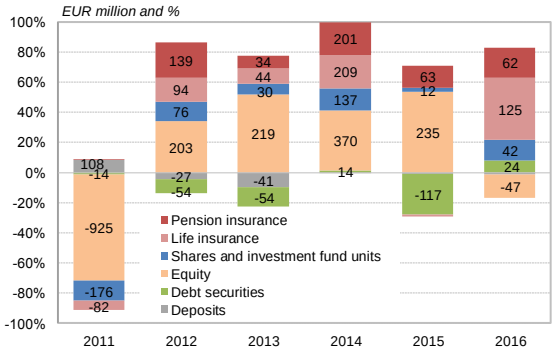


Figure 2.22: Breakdown of revaluations of household financial assets



Source: Bank of Slovenia

2.3 Real estate market

Summary

Growth in residential real estate prices stood at 3.3% in 2016, as the number of transactions reached its highest level since the outbreak of the crisis. Given the favourable economic environment, low interest rates and the positive outlook for the real estate market, further price growth is expected in the future, an indication of the real estate market's shift from the recovery phase to the growth phase. The number of issued building permits rose, which in the wake of growth in the sale of land for building construction is encouraging news for the beginning of the anticipated investment and construction cycle. This could have a favourable impact in reducing the widening gap between supply and demand, and could limit excessive price growth, and thus the potential risk to the banking system in the event of a shock.

Growth in demand is increasingly being reflected in growth in housing loans, as credit standards are only changing slightly, and the policy of favourable loan terms is continuing. Despite the increased optimism in the expectation of further growth in prices, the LTV ratio remains at similar levels and does not entail any great risk to the banking system. For the time being, the commercial real estate market is not following the housing market: the number of transactions did not rise in 2016, while prices of office space and catering/retail units fell sharply. In favourable economic conditions, the gradual restoration of a growth phase can nevertheless be expected in the commercial real estate market.

Residential real estate prices increased by 3.3% overall in 2016, the largest increase since the outbreak of the crisis. The relatively high growth in residential real estate prices was mainly seen in the second half of the year: prices rose by 5% in the third quarter and 6.9% in the fourth quarter. Prices of used and new-build residential properties rose, although the new-build properties still saw some price volatility owing to the lower number of transactions. The reversal on the Slovenian real estate market and its shift from the recovery phase to the growth phase is expected given the improvement of the situation on the labour market and the favourable interest rates, and growth can be expected in the future.

Figure 2.23: Growth in residential real estate prices in Slovenia

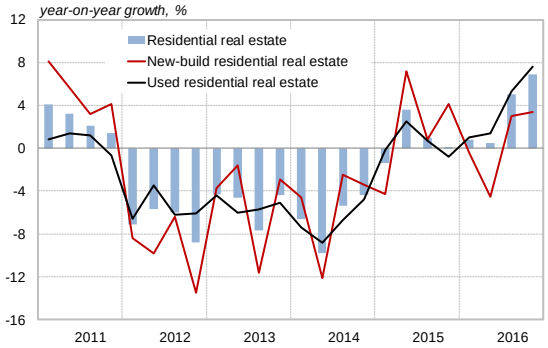
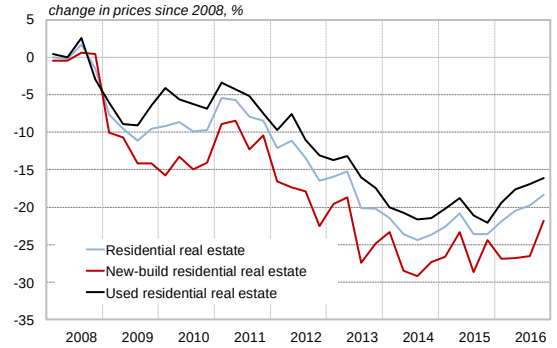


Figure 2.24: Change in residential real estate prices since 2008



Source: SURS

In the wake of the relatively high growth in residential real estate prices in 2016, prices nevertheless remain 18.4% lower thantheir average in 2008. Lower prices compared to the pre-crisis level contributes to the attractiveness of real estates as an investment, and the likelihood of further growth in prices is consequently increasing as demand is encouraged. Prices of used residential real estate in Ljubljana rose faster in 2016 than those in the rest of Slovenia, as a result of the more pronounced fall in real estate prices during the crisis and greater demand over the last year as supply declines. The recovery in the market for family houses in 2016 was slightly slower than that for flats, as a result of the high level of individualisation and the diverse build of family houses, with the resulting lack of development in the market outside of the major towns and their surroundings. The market for houses is nevertheless gradually growing, although prices of used family houses at the end of 2016 were still more than 21% down on 2008.

According to SMARS figures, a total of 32,000 sale transactions in real estate were recorded in 2016, with a total value of EUR 2.1 billion. The number of recorded transactions was up almost 10% on 2015, and was actually higher than 2007. Another indication of the reversal on the real estate market comes from the total value of transactions, which exceeded EUR 2 billion for the first time since 2007. Given the low returns on alternative investments and the low liability interest rates, real estate is an increasingly common investment for households and non-financial corporations. The anticipated growth in real estate prices brought an increase in sales of all types of real estate other than commercial real estate. Residential real estate accounted for 62% of the volume of transactions in 2016, commercial real estate for 17%, and land for approximately 10%.

Figure 2.25: Number and value of completed sales

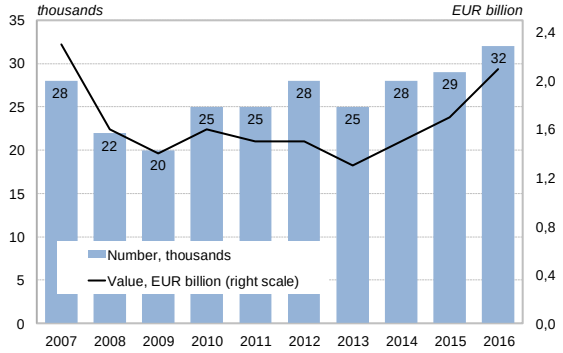
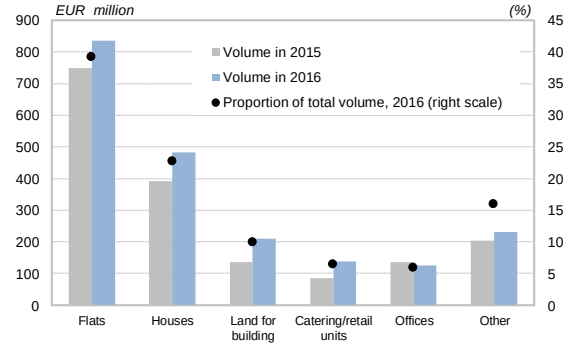


Figure 2.26: Value and breakdown of transactions in real estate



Sources: SMARS, Bank of Slovenia calculations

The number of transactions in residential real estate in 2016 exceeded 10,000 and the previous record level from 2007. According to SURS figures, year-on-year growth in the number of transactions stood at 14.3% in 2016, as used residential real estate in particular continued to record growth in the favourable economic situation as confidence strengthened. Growth in the number of transactions in new-build residential real estate stagnated, as a result of the lack of such real estate on the market. New-build properties are expected to record slightly more pronounced growth this year, as major inventories of housing from residual housing projects, most notably Celovški Dvori in Ljubljana and Nokturno in Koper, are expected to be sold. After bottoming out in 2015, sales of land for building construction also recovered.

Figure 2.27: Number of transactions in real estate

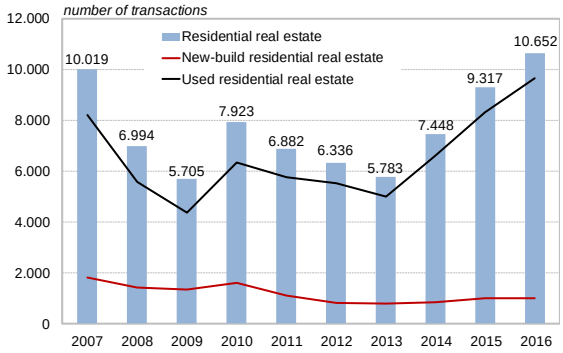
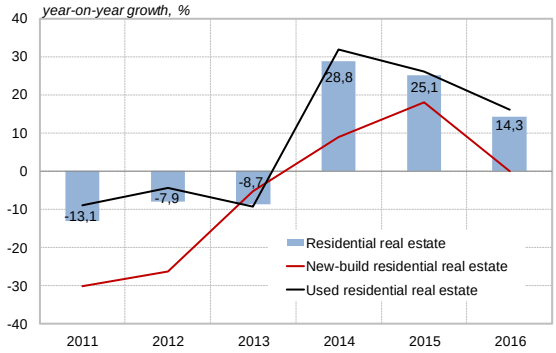


Figure 2.28: Growth in number of transactions in real estate



Source: SURS

The rise in the number of issued building permits and growth in the sale of land for building construction is encouraging news for the start of the anticipated investment and construction cycle. Despite a significant increase in the amount of residential construction put in place, the total amount of construction put in place declined slightly owing to the small proportion accounted for by the former. The decline was attributable to a decline in civil engineering work owing to the decline in government investment at the close of the disbursement of EU funds from the old financial framework. After several quarters of decline, the amount of non-residential building construction put in place saw a renewed increase in the second half of 2016. A future increase in construction activity is suggested by the rising number of issued building permits, for both residential and non-residential buildings, as a result of the lack of high-yielding investments in the context of low interest rates and the anticipated increase in mismatching of supply and demand on the real estate market. The favourable financing conditions and the still relatively low real estate prices could encourage greater demand from those seeking housing and from investors, which could put upward pressure on prices with potential risk to the banking system. However, given the anticipated growth in prices and the declining inventories of new-build housing, investors' interest in housebuilding is growing.

Figure 2.29: Amount of construction put in place

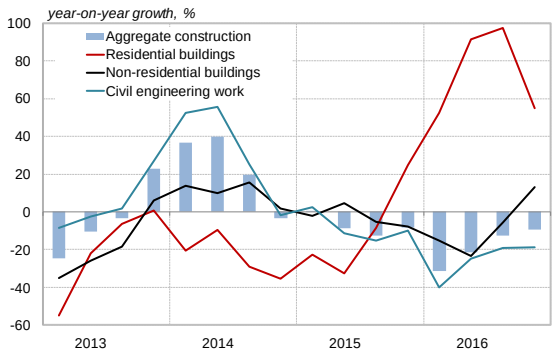
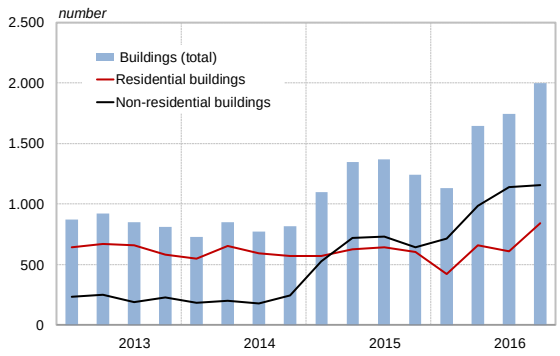


Figure 2.30: Number of issued building permits



Source: SURS

The increased optimism in the wake of rising real estate prices did not have a significant impact on the LTV ratio, which thus entails no increase in risk for the banking system. The average LTV for housing loans stood at 61% in March 2017, an indication of the banks' continuing caution with regard to collateral requirements when approving new housing loans. That the average LTV remains relatively low is also partly attributable to the growth in household disposable income and consequently in the ability to finance a greater proportion of housing with own resources. The anticipated rising real estate prices will raise the value of real estate collateral for housing loans, although excessive optimism could increase the risks to the banking system in the event of a shock. The Bank of Slovenia therefore issued two macroprudential recommendations for the residential real estate market at the end of last year (LTV and DSTI) that limit the increase in risks in the future.

Figure 2.31: New housing loans and average LTV

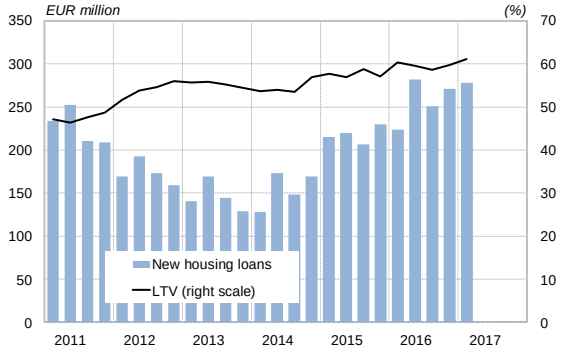
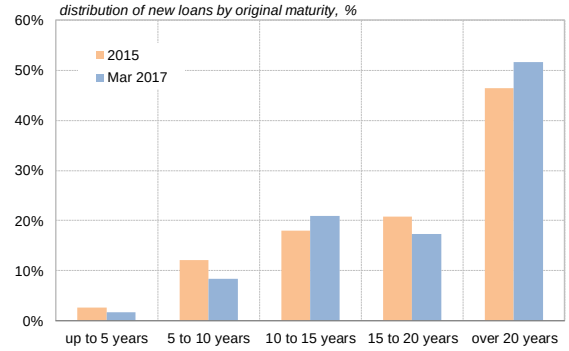


Figure 2.32: Maturity of new housing loans



Source: Bank of Slovenia

The growth in real estate prices slightly reduced housing affordability, as wage growth was slower over the same period. The ratio of prices of flats in Ljubljana to net wages increased in the second half of the year in particular, when there was a sharp rise in housing prices. In 2016 the purchase of a flat therefore required more net monthly wages than in the previous year, as the average net wage in Ljubljana rose by just 1% while prices of used flats rose by 6%. Taking account of loan terms,[1] the housing affordability index remains unchanged, other than for two-room flats. The financing conditions remain favourable, as the average interest rate remains low, while the proportion of new housing loans with a maturity of more than 20 years is continuing to increase. Over the medium term, given growth in real estate prices, a further deterioration in housing affordability can be expected, as it will be difficult for wage growth to keep pace, while no major changes in loan terms can be expected in the short term.

Figure 2.33: Ratio of housing prices to net wages in Ljubljana

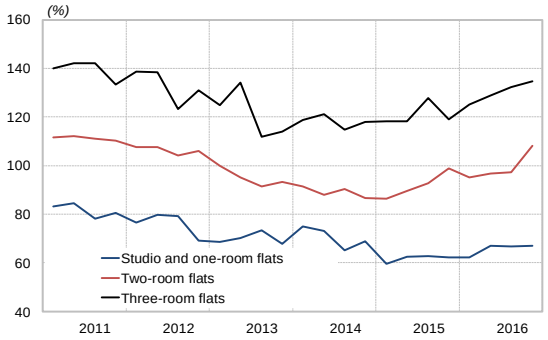
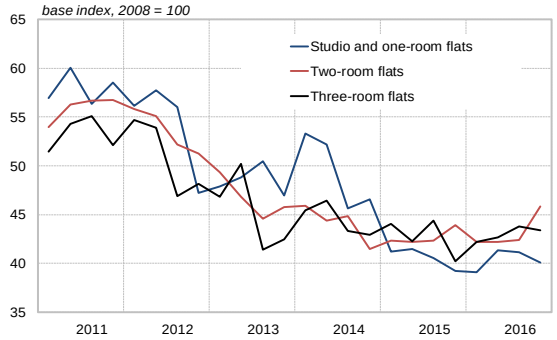


Figure 2.34: Housing affordability index



Note: The left figure illustrates the ratio of prices of used flats to the annual moving average of net monthly wages in Ljubljana. Owing to a break in the data series, average prices are lower in the period since 2015 than in the prior period. The housing affordability index (right figure) is calculated on the basis of prices of used flats, the annual moving averages of monthly wages, and loan terms (interest rates and maturities).

Sources: Bank of Slovenia, SURS

Demand for housing loans is still rising, and growth in housing loans is increasing at a faster pace. According to the Bank Lending Survey, household demand for housing loans is continuing, while there is no sign of any major changes in credit standards[2] other than the occasional fluctuations. The favourable economic developments and situation on the labour market have maintained credit standards at similar levels as demand has increased, with the exception of the first quarter of 2017, when they were tightened slightly as a result of the implementation of the new consumer credit act. The most important factors in the rising demand for housing loans were the rise in consumer confidence, the favourable outlook for the housing market and low interest rates. Growth in housing loans exceeded 5% in March 2017, and the trend is expected to remain positive in the future in the context of favourable loan terms and the positive outlook.

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

[2] 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.

Figure 2.35: Credit standards for housing loans

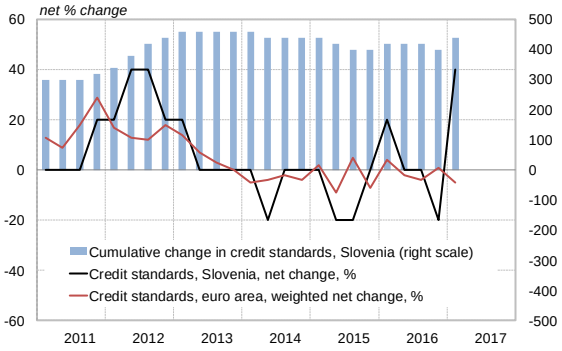
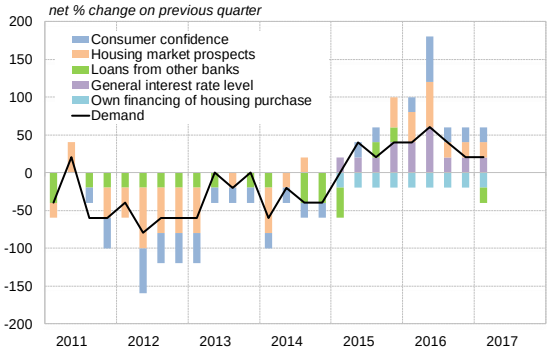


Figure 2.36: Factors affecting household demand for housing loans



Note: The data in the two figures illustrates the net percentage change on the previous quarter. A net change of more than zero means that the factor is contributing to the tightening of credit standards, while a value of less than zero entails an easing of credit standards. In the right figure, a value of more than zero means that the factor is contributing to raise in demand, while a value of less than zero entails reduced demand.

Sources: Bank of Slovenia, BLS

Commercial real estate market

The commercial real estate market is not following the growth trend of the residential real estate market, although prices and the number of transactions can be expected to gradually rise in the future. According to SMARS figures, average prices of office space and catering/retail units fell by 6.4% and 26.6% respectively in 2016, while the number of transactions remained at a similar level to 2015[3]. The small size and heterogeneity of the sample of commercial real estate are factors in price volatility, as individual major deals can have a significant impact on prices. The commercial real estate market is also relatively small and concentrated in the centres of larger towns, while numerous advantages mean that the rental market sees fierce competition. It is therefore difficult to assess developments on the market, although a reversal similar to that in residential real estate has not yet happened. The favourable economic situation and low interest rates can nevertheless be expected to have a positive impact on commercial real estate in the future, with a gradual reversal to growth in prices and volume.

Figure 2.37: Average prices of office space and catering/retail units

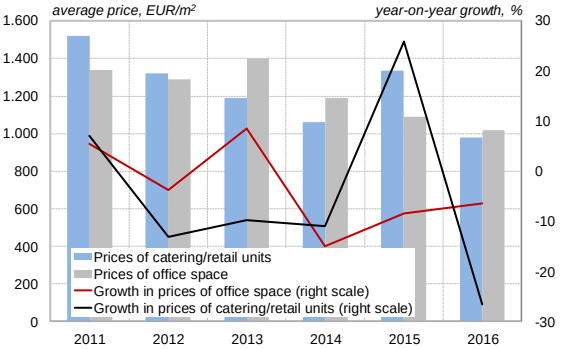
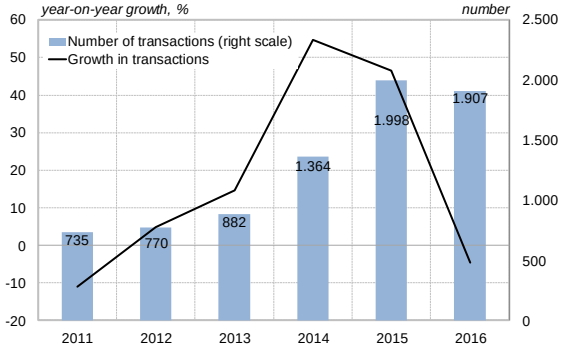


Figure 2.38: Transactions in commercial real estate



Source: SMARS

2.4 Non-financial corporations

Summary

Non-financial corporations' investment rate is increasing, and their excess liquid assets are declining accordingly. The accounting profit of Slovenian non-financial corporations increased to EUR 3.5 billion in 2016. Non-financial corporations continued the deleveraging process in 2016, even though their leverage

[3] There is considerable variation between different databases owing to the small sample size for calculating average prices. The SMARS states that the year-on-year comparison of average prices is significantly affected by the large share accounted for by Ljubljana and the major variations in the average breakdown of office space sales, which reduces its explanatory value.

has reached the euro area median of 106%, and reduced their financial debts by an additional 2.8% over the year. The high increase in corporate leverage in the past in Slovenia was also attributable to the devaluation of corporate equity. Slovenian non-financial corporations' financial debt stood at 102% of GDP, 36 percentage points less than the euro area average. Leverage declined by almost 40 percentage points between 2008 and 2016, as debt declined by 24% or EUR 12.7 billion and equity rose by just 4.7% or EUR 1.7 billion. The recapitalisation of Slovenian non-financial corporations continued in 2016, primarily by non-residents. Balance sheet adjustments are allowing non-financial corporations to improve the debt servicing ratio, thereby improving the ability to finance investments. Strengthened corporate investment is vital for increasing the country's economic potential.

Firms burdened with excessive debt are reducing it, while firms that do not have excessive debt are increasing their debt. SMEs account for 70% of total excessive debt. The ratio of excessive debt to equity across the non-financial corporations sector stands at 20%, its level from 2005. Were equity to remain unchanged, a reduction in excessive debt of just under 3.5% of GDP would see the figure reach its level from the period of sustained economic growth between 2002 and 2005. The proportion of firms with excess debt declined from 30% to 25%. The firms that continue to face excessive debt are more burdened by it than in the past, while the segment of firms burdened with excessive debt contracted sharply.

The conditions seen before the crisis are gradually being reestablished, and with them favourable conditions for a new credit cycle, which nevertheless should be based on sustainable credit growth. Since December 2016 there has been a discernible increase in loans from domestic banks, but firms are still significantly financing themselves via internal reserves, or a reduction in the net positive financial position, and from foreign resources.

Non-financial corporations' performance

Non-financial corporations' investment rate stood at almost 24% at the end of 2016, having already reached its level of 2010. Manufacturing output continued to grow in the early part of 2017. The economic sentiment in early 2017 year was at its best since 2007. Manufacturing firms gave very high assessments of production, and also assessed current and expected demand on the domestic and foreign markets as very favourable. Strengthened corporate investment is vital for increasing the country's economic potential. Non-financial corporations' operating surplus increased by 2.6% in 2016, just under 1 percentage point less than in the previous year.[4] The gross profit ratio has been maintained at its level of before 2009. In line with the strengthened investment, non-financial corporations are reducing their net positive current financial position, which is atypical of this institutional sector. It halved to 0.7% of GDP in 2016. Since December 2016 there has been a discernible increase in loans from domestic banks, but firms are still significantly financing themselves via internal reserves, or a reduction in the net positive financial position, and from foreign resources.

Figure 2.39: Non-financial corporations' gross investment rate, gross profit ratio, and ratio of currency and deposits to annual gross value-added

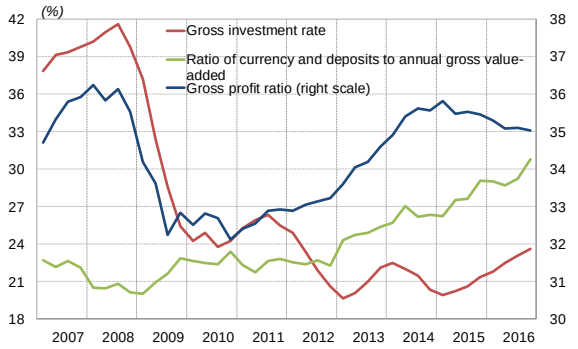
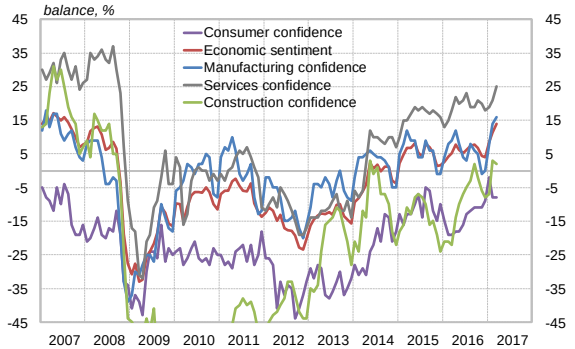


Figure 2.40: Economic sentiment and confidence indicators



Note: The gross investment rate and gross profit ratio are the respective ratios of gross investment and gross operating surplus to gross value-added. Non-financial corporations' holdings of currency and deposits are also calculated in ratio to value-added.

Sources: Bank of Slovenia, SURS

[4] The gross operating surplus is a category in the national accounts, and illustrates corporate earnings from operating activities after payment of labour costs. It entails corporate capital that is available for repayment of lenders, payment of taxes, and financing of investments. It contrasts with the corporate profit disclosed in financial statements.

Slovenian non-financial corporations' total accounting profit increased to EUR 3.5 billion in 2016, close to its level of 2007. Large enterprises' profit increased by more than EUR 1 billion, primarily as a result of improved performance by two major firms in the electricity sector. SMEs accounted for 45% of total corporate profit, their profit having increased by 17%. All the major economic sectors saw an increase in profit in 2016, with the exception of construction, which recorded a loss. Export-oriented firms accounted for 57% of Slovenian non-financial corporations' total profit in 2016, less than in 2015.[5] Firms who primarily sell to the domestic market saw a larger increase in profit in 2016 than did exporters, a reflection of the strengthening of domestic demand.

Figure 2.41: Non-financial corporations' total profit and loss according to financial statements

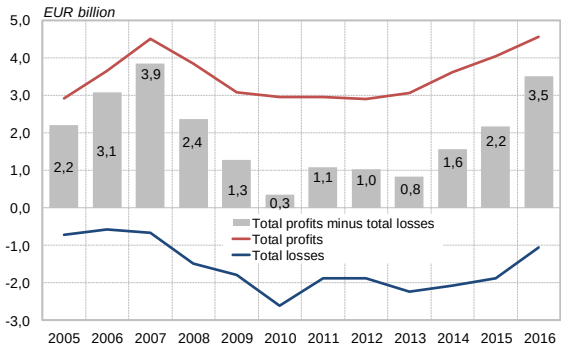
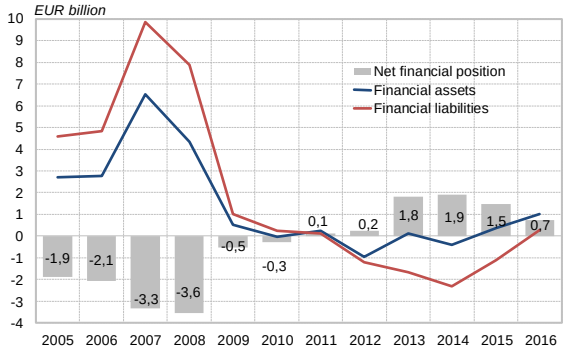


Figure 2.42: Non-financial corporations' annual transactions in financial assets and liabilities, and net financial position from financial accounts



Sources: SURS, Bank of Slovenia

Non-financial corporations' financial assets and liabilities (aggregate analysis)

Since 2012, when non-financial corporations' gross profit ratio began recovering and the net positive current financial position began increasing, non-financial corporations have increased the proportion of their assets accounted for by liquid assets. The proportion of their financial assets accounted for by currency and deposits had increased to 15% by the end of 2016, despite interest rates of close to zero. The current surplus in assets is still mostly being invested in currency and deposits. Non-financial corporations resumed minor investments in equity in the second half of 2015, which owing to the small volume and revaluations is not yet evident in the stock. Non-financial corporations in the euro area also increased their investments in liquid assets over the period in question, although the proportion of total assets that they account for has not yet exceeded 11%. According to expectations, the increase in investment activity will further reduce non-financial corporations' net positive current financial position, thereby reducing the proportion of investments accounted for by available liquid assets.

Figure 2.43: Breakdown of stock of Slovenian non-financial corporations' financial assets by instrument

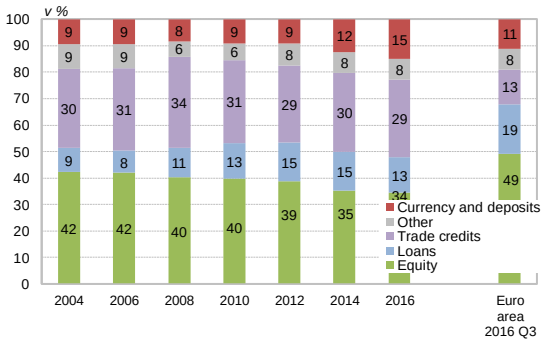
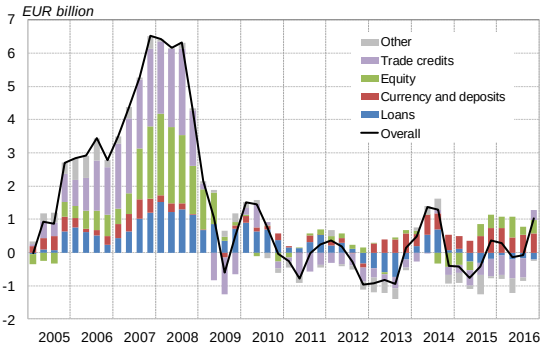


Figure 2.44: Annual moving flows of Slovenian non-financial corporations' financial assets by instrument



Source: Bank of Slovenia

Non-financial corporations continued the deleveraging process in 2016. They reduced their financial debt by an additional 2.8%, while increasing equity by 1.6%. Corporate leverage as measured by the debt-to-equity ratio in financing stood at 106%, having reached the euro area median. Average corporate

[5] Exporters are defined as firms whose sales revenue on foreign markets accounts for more than 25% of their total revenue.

leverage in the euro area stood at around 94%, the average level recorded by Slovenian non-financial corporations between 2001 and 2007. For Slovenian non-financial corporations to reach this level, they would have to reduce debt by just under 12% of GDP while maintaining equity at the same level. Slovenian non-financial corporations would have to raise their equity by just over 12.5% of GDP to reach the leverage figure while leaving debt unchanged, which would be a healthy way of adjusting leverage. Here it should be noted that it is not only recapitalisations that produce increases in equity, but also positive revaluations of equity, in which economic growth is a factor. The relatively high gross profit ratio indicates a healthy basis for further increases in corporate investment. In Slovenia corporate deleveraging was accompanied by a strong trend of devaluation of corporate equity, which resulted in an increase in leverage. Slovenian non-financial corporations have financial debt of around 102% of GDP, while the financial debt of non-financial corporations across the euro area averages 138% of GDP. The figure shows that the debt level of Slovenian non-financial corporations is not a problem, but the structure of their financing is, as there is still a shortfall in equity. Slovenian non-financial corporations' debt declined by EUR 12.7 billion or almost 32% of GDP between 2008 and 2016. The recapitalisation of non-financial corporations continued in 2016, primarily by non-residents. Recapitalisations amounted to almost EUR 1 billion, while equity declined by EUR 300 million owing to revaluations. Slovenian non-financial corporations reduced their borrowings via loans by just over EUR 700 million in 2016 through repayments.

Figure 2.45: Non-financial corporations' debt-to-equity ratio

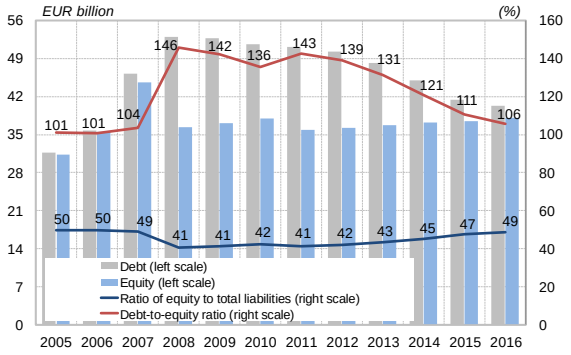
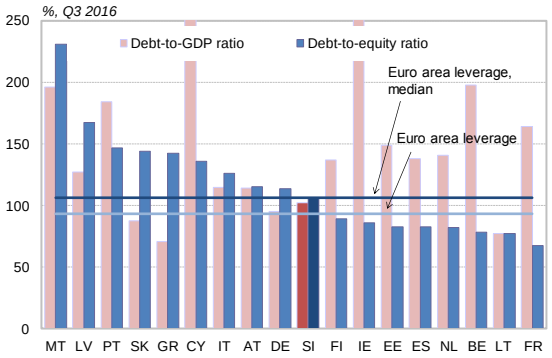


Figure 2.46: International comparison of corporate indebtedness in the euro area



Note: Debt is total financial liabilities minus equity.
Source: Bank of Slovenia

The proportion of Slovenian non-financial corporations' liabilities accounted for by foreign financing is increasing, and reached 27% at the end of 2016. In 2016 there were notable increases in non-residents' capital investments and trade credits, while loans from the rest of the world declined. Non-residents now hold a quarter of Slovenian non-financial corporations' equity. The proportion of loans to Slovenian non-financial corporations accounted for by foreign loans increased to almost 30%, despite a decline in the stock relative to the previous year. Loans from the rest of the world declined by around 2% in 2016, and by the same again in the first quarter of 2017. The principal decline was in the stock of loans from foreign banks, although there was also a decline in foreign business-to-business loans, while the stock of loans from international financial institutions increased in 2016. In 2016 the decline in loans raised domestically was larger than the decline in loans from the rest of the world. The proportions of Slovenian non-financial corporations' liabilities accounted for by equity and loans converged very closely on the average figures across the euro area. The proportion of non-financial corporations' liabilities accounted for by loans in Slovenia is smaller than the average across the euro area, while the proportion accounted for by trade credits and other liabilities is larger. The proportion accounted for by bond issues is still negligible.

Figure 2.47: Breakdown of stock of non-financial corporations' financial liabilities by instrument

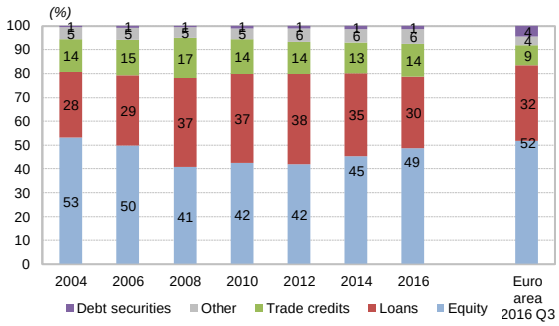
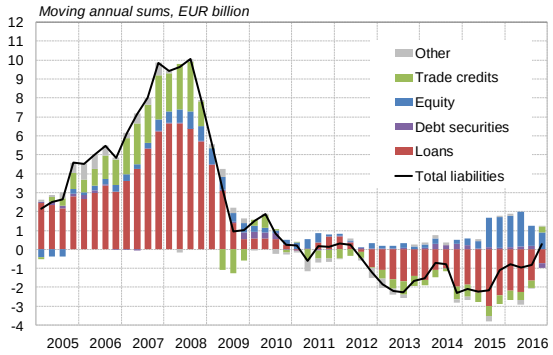


Figure 2.48: Non-financial corporations' financial liabilities by instrument



Source: Bank of Slovenia

Demand for loans is strengthening as a result of the need to finance investment, the low level of interest rates, and other needs for financing. According to a quarterly survey of demand and credit standards (the BLS), the banks are reporting a slight easing of credit standards on corporate loans, primarily as a result of competitive pressures and better understanding of risks. The SURS survey on limiting factors in performance also no longer cites financing difficulties to the fore. A survey on access to corporate financing in Slovenia conducted by the Bank of Slovenia reveals that financing improved less in 2016. Compared with 2015, the external financing situation improved for SMEs, while the improvement for large enterprises was slightly less than in 2015. Since the end of 2010, when domestic bank loans to non-financial corporations, large enterprises in particular, began declining rapidly, certain large enterprises, particularly those with better credit ratings, succeeded in at least partly compensating for the decline in domestic loans with loans from the rest of the world. This was not the case for SMEs, who faced major difficulties in accessing financial resources in the rest of the world.

Figure 2.49: Loans to domestic non-financial corporations from the rest of the world by sector

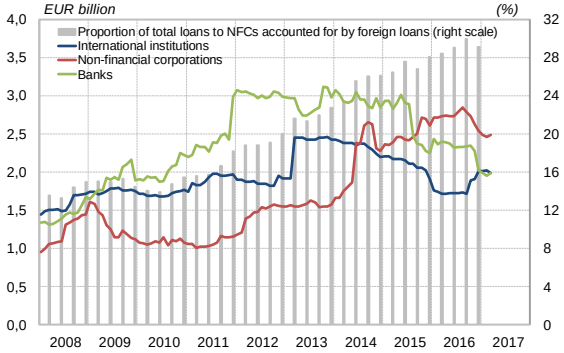
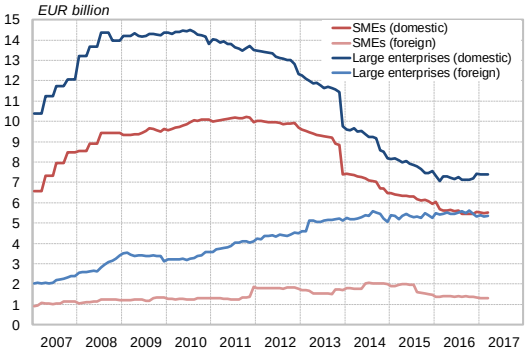


Figure 2.50: Domestic bank loans and total foreign loans by corporate size



Source: Bank of Slovenia

Corporate indebtedness (micro analysis)

According to their closing balance sheets, Slovenian non-financial corporations reached a level of leverage seen before 2002, with liabilities almost equal to equity. Leverage declined in all the main economic sectors in 2016, at both large enterprises and SMEs.[6] The decline in leverage was attributable to an increase in equity and, still, a decline in liabilities. Large enterprises increased their equity by just over 5.5% in 2016, while their liabilities declined by 3%. SMEs increased their equity by 7%, while their liabilities declined by just over 1.5%. For the first time since 2008 the manufacturing and trade sectors saw no reduction in liabilities, although there was no significant increase either. Stronger financing of efficient and competitive firms is vital to strengthened investment. As expected, leverage is highest in the construction sector, and at SMEs.

[6] The leverage figure in the micro analysis differs slightly from the indicator calculated from financial accounts (the differences are the result of the differences in the methodology of data capture). In this section leverage is calculated from closing corporate financial statements collected by AJPES as the ratio of operating liabilities and financial debt to equity.

Figure 2.51: Leverage for major economic sectors

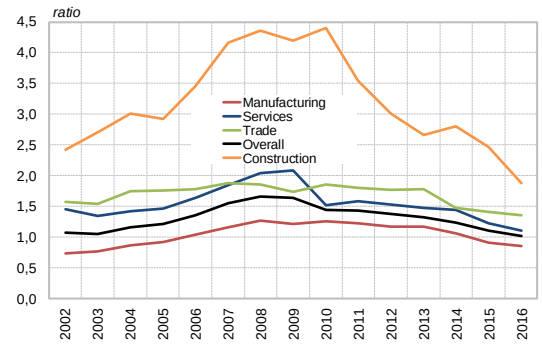
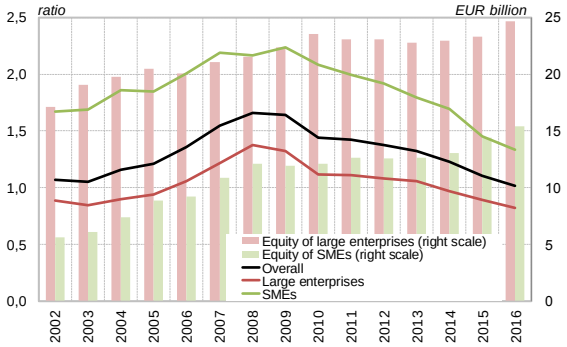


Figure 2.52: Leverage and equity by corporate size



Source: AJPES

Non-financial corporations have seen an improvement in debt servicing capacity for seven years now, via balance sheet adjustments aimed at reducing overleveraging.[7] Non-financial corporations recorded an improvement in debt servicing capacity in 2016, irrespective of corporate size and economic sector. The average repayment period of the net financial debt of all active firms in Slovenia that report their financial statements to AJPES declined to 2.5 years in 2016 (ratio of net financial debt to EBITDA). The shortening is the result of a decline in net financial debt and an increase in earnings. This is the case for all the major economic sectors other than construction, where EBITDA declined by almost 8% and net financial debt by almost 20%. Construction has been disclosing better debt servicing capacity than services for three years now. The service sector with the weakest indicator is financial and insurance activities, with a figure of 23 years, which is also a consequence of its manner of operation. It is followed by real estate activities with a figure of almost 7 years, although this was down 3 years on 2015. Accommodation and food service activities recorded a figure of just under 4.5 years, an improvement of just over 1 year on the previous year. The figures for other services are all below 4 years.

Figure 2.53: Ratio of net financial debt to EBITDA in major economic sectors

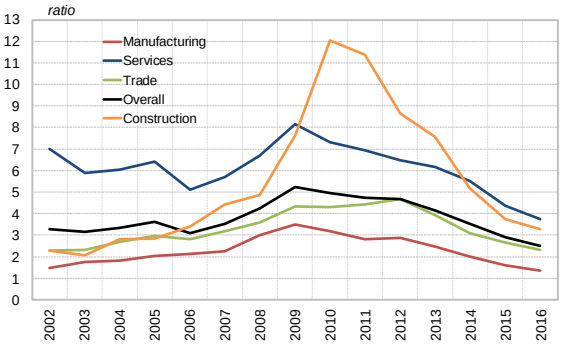
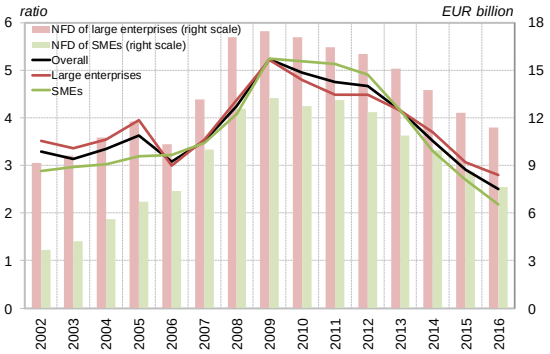


Figure 2.54: Net financial debt (NFD) and ratio of net financial debt to EBITDA by corporate size



Note: The ratio of net financial debt to EBITDA reveals the number of years that are required for the repayment of the net financial debt, assuming no change in current annual earnings. Cash and cash equivalents have been deducted from the financial liabilities illustrated, which is primarily of significance in recent years.

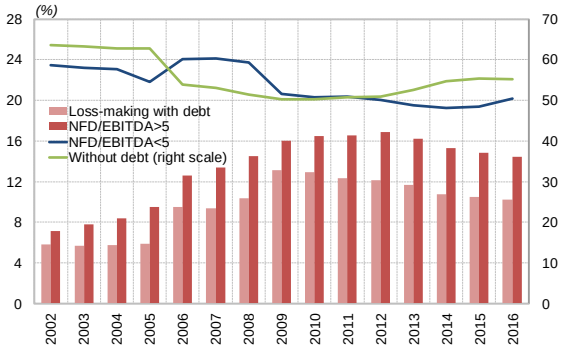
Source: AJPES

At the same time as the improvement in the aggregate ratio of net financial debt to EBITDA, there has also been an improvement in the distribution of firms in terms of the ratio, particularly large enterprises. The proportions of large enterprises with a figure of more than 5 years and of those who disclose debts and are loss-making declined to their lowest levels since 2005 and 2002 respectively. The proportion of all firms that do not disclose any net financial debt remained at its pre-crisis level of over 55%. The proportion of firms whose debt servicing capacity remains below 5 years increased to more than 20% after several years of maintenance at a similar level. At the same time as the increase in the aforementioned proportions, there was a decline in the proportion of firms who disclose a net financial debt and are loss-making, and in the proportion of firms whose net financial debt could only be repaid in more than 5 years. The proportion of firms where the figure is more than 5 years and the proportion of loss-making firms

[7] The ratio of net financial debt to EBITDA is used as an indicator to measure a firm's debt servicing capacity. It is measured as the ratio of financial liabilities, less cash and cash equivalents, to EBITDA. The indicator shows a firm's capacity to regularly service debt (interest and principal), and shows how many years the firm needs to repay debt given the current net debt and EBITDA. A figure of more than 5 years is indicative of a firm that is less able to control its indebtedness, and that has less capacity to obtain the additional debt required to expand turnover.

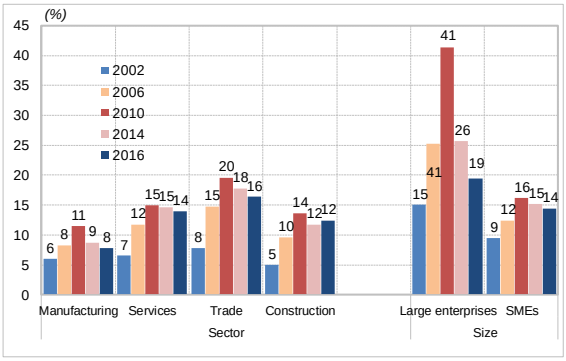
disclosing a net financial debt also declined across the major economic sectors. The exceptions were construction, where both proportions increased slightly, and certain service sectors (financial and insurance activities and real estate activities).

Figure 2.55: Proportions of firms with a ratio of net financial debt to EBITDA of more than and less than 5 years, loss-making firms with net financial debt, and firms without debt



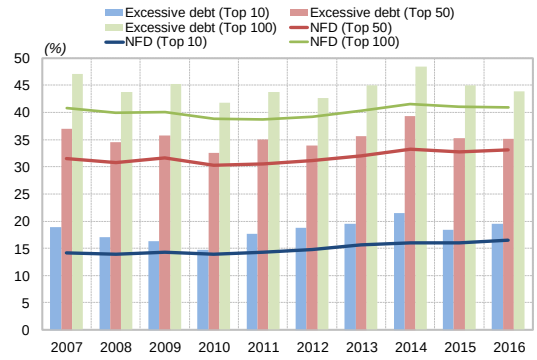
Source: AJPES

Figure 2.56: Proportions of firms with a ratio of net financial debt to EBITDA of more than 5 years by corporate size and by major economic sector



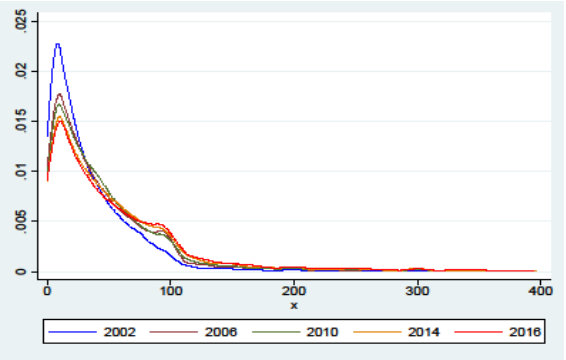
The concentration of excessive debt also declined, as certain firms that were heavily burdened with excessive debt are no longer in the market.[8] The top 100 firms with the largest amount of excessive debt accounted for 44% of total excessive debt in 2016, and the top ten for 19.5%. The proportion of firms with excessive debt declined to just under a quarter, having stood at almost 30% in 2010. Half of the firms with excessive debt are in the service sector, most notably professional, scientific and technical activities and administrative and support service activities, where the largest number of firms are active. The distribution of firms with regard to excessive debt on the balance sheet has become flatter and shifted to the right throughout the period since 2002. The firms that continue to face excessive debt are more burdened by it than in the past, while the segment of firms burdened with excessive debt contracted significantly.

Figure 2.57: Proportion of total net financial debt and total excessive debt accounted for by the top 10, top 50 and top 100 firms



Note: Outliers have been excluded to improve the illustration.
Source: AJPES

Figure 2.58: Distribution of firms with regard to ratio of excessive debt to equity



Firms are primarily reducing excessive debt, which still accounts for just over 40% of total net financial debt. Excessive debt declined by more than 11% in 2016. At just over EUR 18 billion and just over EUR 7 billion respectively, net financial debt and excessive debt are now at their pre-crisis levels from 2007. Excessive debt peaked at EUR 15 billion in 2009, but by 2016 had declined by EUR 8 billion or just over 20% of GDP. The debt of firms burdened with excessive debt has declined by more than a half since 2009, while the debt of firms without excessive debt has increased by a third. Excessive debt that exceeds more than five times EBITDA accounts for almost two-thirds of total excessive debt, and declined by 9.5% in

[8] Excessive debt is calculated as the sum of net financial debt (financial liabilities minus cash and cash equivalents) at firms where the net financial debt is more than five times EBITDA (taking account solely of the excess over five times EBITDA) and the debt of firms that are loss-making or are not disclosing a profit. Three large government-owned firms are excluded. Only active firms are included, which means that firms in bankruptcy and undergoing compulsory composition are not included (in the majority of cases they are not reporting to AJPES).

2016. Excessive debt at loss-making firms and firms that failed to generate positive EBITDA declined by almost 14% in 2016. There was a particular decline in excessive debt at the first group of firms between 2010 and 2014 (those where debt exceeds more than five times EBITDA). The proportion of loss-making firms remained high over this period. Sustainable debt declined by just under 2% in 2016, to reach its level from before 2007 of around EUR 11 billion.

Figure 2.59: Various types of debt for all firms

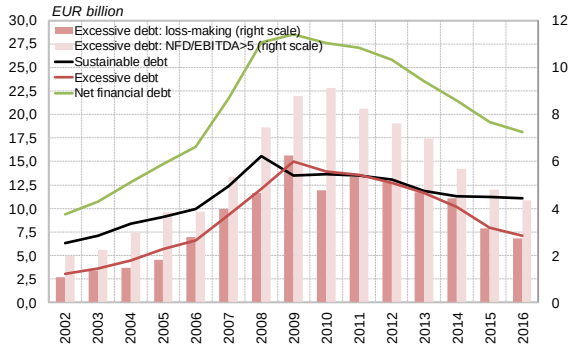
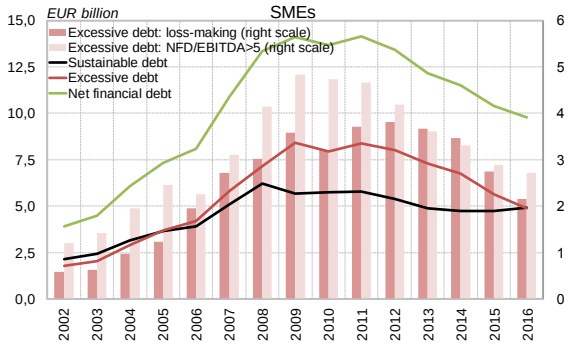


Figure 2.60: Various types of debt for SMEs



Source: AJPES

SMEs account for almost 70% of Slovenian non-financial corporations' total excessive debt. SMEs were slower to deleverage than large enterprises in the past. SMEs account for around 54% of non-financial corporations' total net financial debt. SMEs reduced their net financial debt by EUR 9.8 billion in 2016, to just over a quarter of their assets, equal to the figure from the period before 2004. In 2016 SMEs reduced their excessive debt more quickly than large enterprises for the first time (a decline of almost 14%, compared with 5.5% for large enterprises). They reduced their excessive debt to just under EUR 5 billion, which accounts for just under half of SMEs' total net financial debt. A similar figure was recorded in 2004.

The ratio of excessive debt to equity across the non-financial corporations sector has declined to just under 20%, its level from 2005. Given their current equity, for firms to achieve a ratio of excessive debt to equity of 16%, the average figure from the period of sustained economic growth between 2002 and 2005, they would have to further reduce excessive debt by around EUR 1.5 billion or 3.5% of GDP. Construction was notable for the high burden on equity from excessive debt in the past, but the ratio has been improved by the bankruptcies of a large number of overburdened firms. Firms that have zero or negative equity account for just under a third of excessive debt. The figure has been declining since 2013, but was almost a half lower during the period of sustained economic growth. The ratio of excessive debt to equity declined in all the major economic sectors in 2016 with the exception of trade, where excessive debt increased.

Figure 2.61: Proportion of total net financial debt accounted for by excessive debt

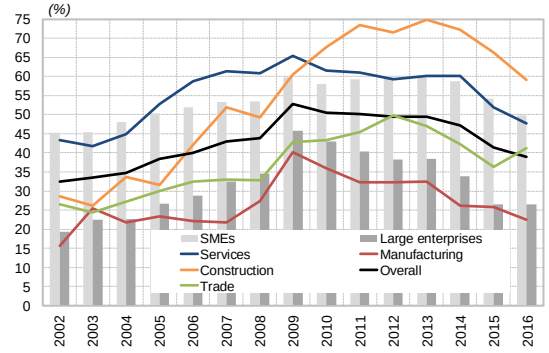
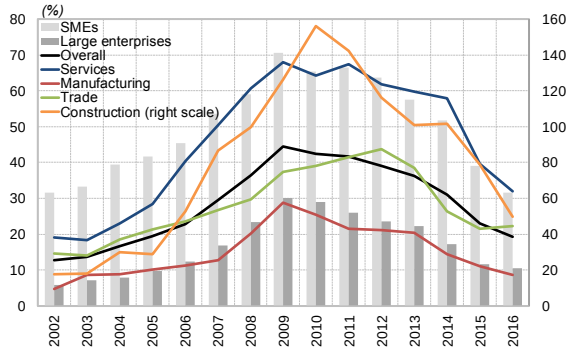


Figure 2.62: Ratio of excessive debt to equity by economic sector and corporate size



Source: AJPES

3 RISKS IN THE BANKING SECTOR

The most significant risks in the banking system remained at the levels seen in the previous half year. The trend in credit risk is favourable, and is forecast to continue declining, partly as a result of the banks' ongoing activities and partly as a result of an autonomous improvement in portfolio quality. Refinancing risk and income risk remain at relatively low levels. Growth in household lending and the anticipated increase in corporate lending, which had begun by the very beginning of 2017, are having a favourable impact on the banks' income, thereby reducing income risk. The rising proportion of sight deposits continues to entail risk in the event of unforeseen external shocks or any switching of deposits between banks. Bank liquidity is favourable, and is significant from the perspective of providing the requisite assets in the event of unexpected outflows from bank balance sheets.

Interest rate risk remains a significant risk, which the banks are managing via adequate hedging. In the event of additional restrictions on the maturity of fixed-rate loans, which are already being signalled, the significance of this risk will decline further. The Bank of Slovenia's supervisory stress tests of IRRBB have shown that banks in Slovenia are relatively conservative when it comes to managing their interest-sensitive positions, and that interest rate risk is under control.

Systemic risk	Risk assessment in Q4 2016	in Q1 2017	in Q2 2017	Trend in risk	Comment
Macroeconomic risk				⇨	Continuation of favourable economic conditions with relatively high economic growth and improving labor conditions. Macroeconomic risks based on the favourable indicators are assessed as low and balanced. The main risk for further growth stems from the external environment.
Credit risk				⇩	The positive trend of decreasing the non-performing claims continues. Coverage by impairments and collateral remains high. Non-performing claims to SME and non-residents are still high, with decreasing trend.
Real estate market				⇧	The real estate market is characterized by a relatively high growth in prices and growth in residential property transactions. In the longer term, there is a possibility of increasing risks in the real estate market in the event of excessive price growth at the growing gap between demand and supply.
Financing risk				⇨	Reducing dependence of banks funding in the wholesale markets and the increase in deposits in total funding. Risks arising from the increasing share of demand deposits. Those risks are lower due to high bank liquidity and access to funding from the Eurosystem in the case of increased liquidity needs.
Interest rate risk				⇨	Interest rate risk without considering hedging remains important risk. The gradual increase of fixed lending rates and restrict lending to longer-term fixed-rate loans reduce interest-rate risk. The latest stress testing have showed that interest-rate risk is managed by banks.
Contagion and large exposures				⇨	The risk of infection is maintained at a low level as the obligations of banks reduced and there is no contagion-induced bank failures. The volume of capital required to reach the initial level of capital adequacy in case of infections further reduced. Concentration risk remains significant in terms of government securities in total assets.
Solvency				⇧	The capital adequacy remained above the average of the euro area countries. Small domestic banks remain the most vulnerable group of banks. The ability to generate internal capital and further decrease of bad assets in bank balance sheets will contribute to the stability of capital adequacy in the future.
Profitability				⇨	Banks are profitable. The profit before tax is comparable to last year's Q1. At still negative growth in net interest income the income risk remains the same in the short term. With the increased lending banks can have a positive impact on reducing the income risk.
Leasing companies				⇩	Growth in new business continues, mainly on the basis of transactions with equipment leasing business with the household sector. Economic growth is also reflected in the growth of equipment leasing business with non-financial corporations and further decline in non-performing loans.

Colour code:

Source: Bank of Slovenia

3.1 Banking system's balance sheet and investments

Summary

The structure of Slovenian banks' investments is relatively stable. The decline in the proportion of total assets accounted for by loans came to an end in 2016, and it is now comparable to the figure from more than a decade ago when Slovenia joined the EU. The banks are maintaining a large proportion of their investments in liquid, safe, but increasingly low-yielding forms of asset. Claims against the central bank and sight deposits at other banks account for more than a tenth of investments, while securities account for a quarter.

The contraction in loans to the non-banking sector slowed last year, and moved into positive growth, which was primarily attributable to household lending, which saw a renewed increase in growth in housing loans and also, since the second half of 2016, in consumer loans. Corporate lending strengthened significantly at the end of last year, and year-on-year growth in corporate loans has been positive since February. Although the reversal in corporate lending is still uncertain, several indicators suggest an increase in lending in the future. Here it should be noted that corporate financing has recently been based more on internal resources and resources in the rest of the world. Non-financial corporations hold relatively large sight deposits with

banks. The stock of corporate loans is now lower than the stock of household loans, which could present an additional (income) challenge for the banks in the wake of an adequate assessment of credit risk.

Changes in the stock and structure of investments

After intensive changes in previous years, balance sheet structure temporarily stabilised, although further changes are anticipated. The banks are maintaining a quarter of their assets[9] in securities, a figure that remains above its long-term average.[10] The proportion of total assets accounted for the most liquid forms of asset[11] also remains above-average, at more than a tenth. The banks could quickly redirect at least part of their highly liquid assets into loans, which after several years of contraction now account for a proportion of total assets that is below its long-term average. The proportion of total assets accounted for by loans to the non-banking sector had increased slightly to 55% in March, after positive growth last year and in the early part of this year. It is now comparable to its level when Slovenia joined the EU. Loans to households have exceeded loans to non-financial corporations on bank balance sheets since October 2015. When Slovenia joined the EU, the ratio of the latter to the former was still 2.5, compared with less than 1 at the end of the first quarter of this year. The structure of bank assets increasingly reflects the switch in bank funding to deposits by the non-banking sector, which has coincided with continual, albeit slow, bank deleveraging on the wholesale markets.

Figure 3.1: Breakdown of bank investments

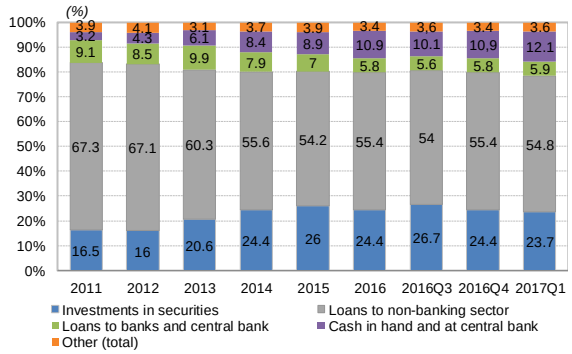
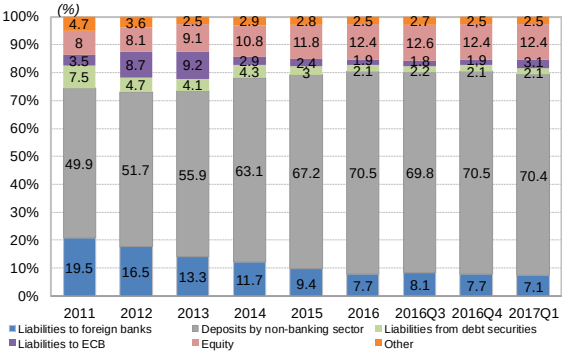


Figure 3.2: Breakdown of bank funding



Source: Bank of Slovenia

The proportion of funding accounted for by deposits by the non-banking sector stood at 70% in March, making them the most important source of bank funding. The figure is comparable to that before Slovenia joined the EU. The proportion of bank funding accounted for by deposits by the non-banking sector is above its long-term average. The proportion accounted for by equity is also above its long-term average, as a result of the bank recapitalisations, the contraction in total assets, and the increase in the banking system's equity from retained earnings. On the asset side the expectations are for a gradual increase in the proportion accounted for by loans and a decline in the proportion accounted for by the most liquid forms of asset, while on the funding side the proportion accounted for by deposits by the non-banking sector is expected to increase further.

Investments in securities continued to account for around a quarter of the banking system's total assets in 2016, although the breakdown of these investments changed slightly. The increase in the proportion accounted for by investments in securities since the end of 2013 is attributable to several factors: the recovery and accompanying recapitalisation of certain banks by means of securities, the rise in prices of Slovenian government securities and European sovereigns in recent years, and the contraction in total assets. The majority of the bank's investments in securities consist of debt securities, mostly Slovenian government securities, although their share is declining. The banks have partly replaced previously higher-yielding government securities with better-yielding bank bonds and corporate bonds as they mature. The proportion of total investments in debt securities accounted for by Slovenian government securities declined from 66% in December 2015 to 53% in March 2016. Over recent years the proportion accounted for by bank debt

[9] There are significant differences in asset structure between the bank groups: the domestic banks have a higher proportion of securities (30% at the large domestic banks, and 31% at the small domestic banks, including fully 40% at the savings banks), while the figure at the banks under majority foreign ownership is just 20%. By contrast the banks under majority foreign ownership are notable for the 61% of total assets accounted for by loans, while the large domestic banks hold less than half of their assets in the form of loans to the non-banking sector (49%).

[10] Average between January 2001 and March 2017.

[11] The banks' claims against the central bank, primarily in the form of excess reserves, and claims that the banks hold in the form of sight deposits at other banks.

securities has increased to 17%, while the proportion accounted for by debt securities of non-financial corporations and other financial institutions has not changed significantly, at more than 5%.

Figure 3.3: Growth in main forms of bank investment and funding

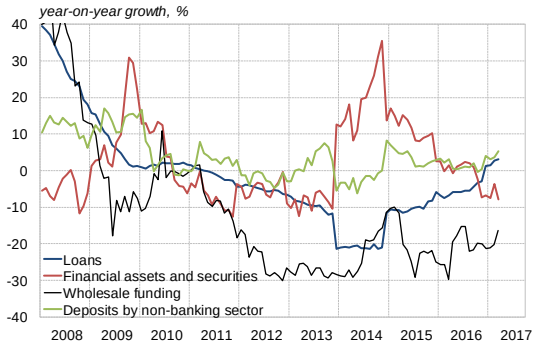
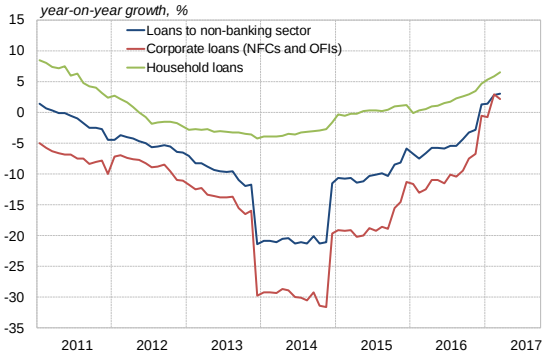


Figure 3.4: Growth in loans to the non-banking sector, to corporates and to households



Note: The category of most liquid assets includes bank assets in the form of balances in accounts at the central bank, cash in hand, and sight deposits at other banks.
Source: Bank of Slovenia

The contraction in lending to the non-banking sector slowed in 2016, and growth in loans has been positive since December. The year-on-year decline in loans to the non-banking sector was still more than 4% in September of last year. Alongside the gradual slowdown in the contraction in corporate loans and the continual increase in growth in loans to households, the reversal in lending activity was primarily attributable to the increase in corporate loans and loans to the government sector at the end of last year.

Lending to non-financial corporations, which contracted for the majority of last year, moved into a net increase at the end of the year. The year-on-year contraction in such loans still stood at close to a tenth at the end of the third quarter of 2016. After several years of negative rates, year-on-year growth in corporate lending moved into positive territory in February 2017, and stood at 2.3% in March. While certain individual loans remained a factor in the sharp increase in corporate loans at the end of last year, the increase in the first quarter of this year, albeit small, was likely a reflection of increased corporate demand, which has also been identified by surveys of banks and firms. SMEs are reporting increased need for financing and higher demand for loans, and better access to bank loans than in the past. Current factors that could act to further strengthen lending activity are the low level of interest rates, the improvement in the economic situation, the relaxation of credit standards, and the large stock of liquid assets held on bank balance sheets.

Figure 3.5: Growth in loans to non-financial corporations by loan maturity

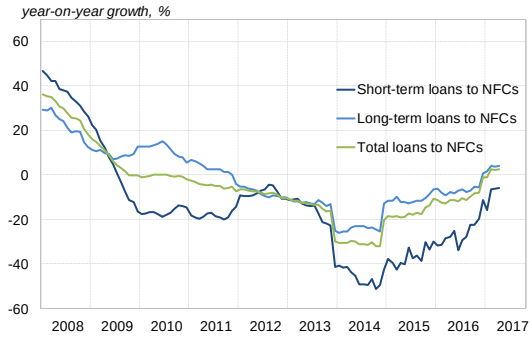
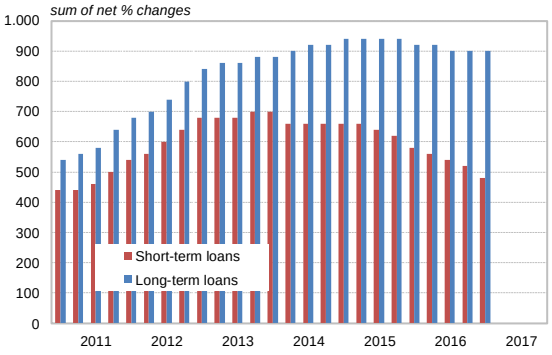


Figure 3.6: Credit standards for loans to non-financial corporations by loan maturity

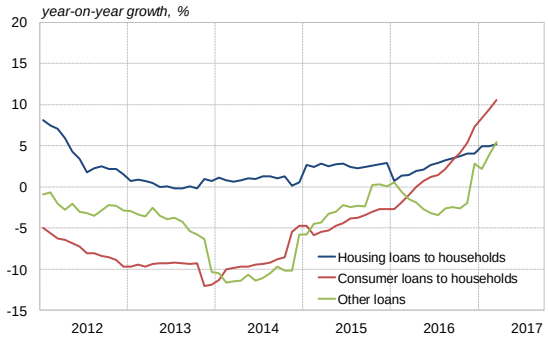


Source: Bank of Slovenia

The positive dynamic in household loans is strengthening: year-on-year growth reached 6.8% in March 2017. Some banks are increasingly focusing their investment policies on household lending. Growth in housing loans, which has remained positive ever since the outbreak of the crisis, had increased to 5.2% by the end of March 2017. The gradual increase in growth was attributable to loan affordability owing to low interest rates, low household indebtedness and growth in prices on the real estate market. After several years of decline, consumer lending began recording positive growth in April 2016, the rate since outpacing aggregate growth in household lending, reaching 10.6% in March 2017. The rapidly increasing dynamic in consumer loans is the result of a more positive economic environment, more favourable conditions on the labour market and increased consumer optimism. These factors have coincided with active policies on the

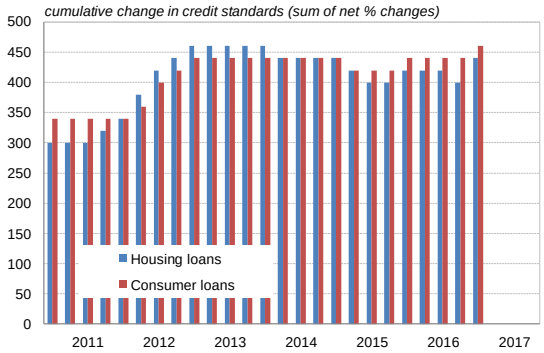
part of certain banks, who are encouraging households to take out consumer loans through quick and simple procedures.

Figure 3.7: Growth in household loans by loan type



Source: Bank of Slovenia

Figure 3.8: Credit standards for housing loans and consumer loans



Having lengthened significantly in recent years, the average maturity of loans to the non-banking sector and corporate loans has been unchanged since last summer. While growth in long-term loans has been positive since the end of 2016, the contraction in short-term loans is slowing. The proportion of corporate loans accounted for by long-term loans increased sharply to 86%, while the corresponding figure for all loans to the non-banking sector was 90%. The BLS reveals a trend of easing credit standards on short-term loans since 2015, which indicates that the reasons for the contraction in this loan segment were more on the demand side than the supply side. The small stock of short-term corporate loans is also a consequence of corporates holding a large stock of assets at banks, and therefore having less need for short-term financing at banks. Given a more favourable supply from banks, the increase in economic activity and in investment could lead to changes in this segment of the portfolio.

Corporate and household demand for loans, and current bank policy

Corporate and household demand for loans strengthened slightly. At the same time larger banks slightly tightened their credit standards for households in the first quarter of 2017. According to bank survey data, credit standards for households were slightly tightened in the first quarter of 2017, in both the housing and consumer segments. Demand for household loans remained relatively unchanged from the previous quarter.

There are relatively large differences in loan growth between the bank groups. The banks are expected in the future to focus more on lending to SMEs and to non-financial corporations in general, and on attracting new clients.[12] The banks are disclosing relatively balanced plans of activity for existing clients and new clients. Their focus on lending to small businesses can be assessed as (very) positive from the perspective of returns for banks and financing options for firms. Certain banks under majority foreign ownership are placing pronounced emphasis on approving consumer loans, regarding which it should be noted that they had previously declined for several years. These banks are also hugely focused on attracting new clients.

Figure 3.9: Demand for housing loans and consumer loans

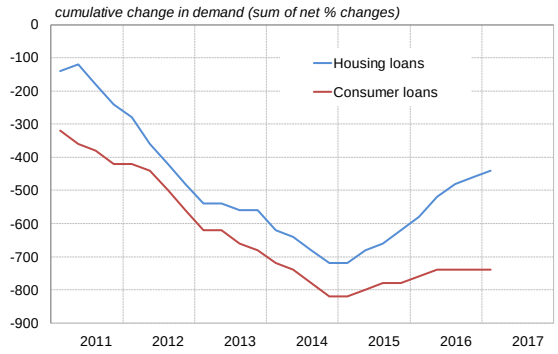
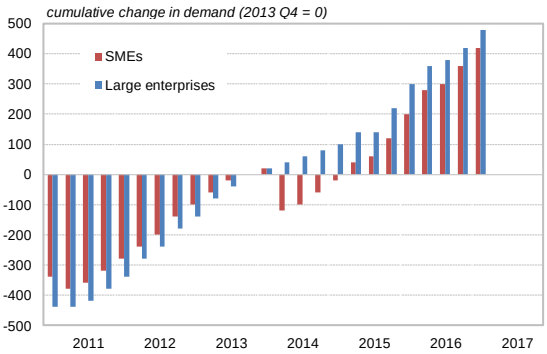


Figure 3.10: Demand for corporate loans



Source: Bank of Slovenia

[12] Spring bank survey for 2016 and first quarter of 2017. The comments here relate to business policy, the banks' stances with regard to lending to specific sectors, and their focus with regard to existing and new clients.

Box 1: Forecasts of bank performance, 2017 to 2019

A functioning process of financial intermediation is gradually being reestablished in the banking system. With interest rates remaining low, the high economic activity and improved situation on the labour market will strengthen credit demand. Lending is recovering, particularly in the household segment. The banks will maintain a focus on the household segment throughout the entire projection horizon. Large enterprises in particular diversified their financing during and after the crisis, and reduced their dependence on domestic banks. Nevertheless, the contraction in corporate loans (loans to non-financial corporations and other financial institutions) has also reached the point of reversal. Growth will be positive throughout the projection horizon, but will nevertheless be outpaced by growth in household loans. In 2017 the proportion of the banks' total assets accounted for by household loans will surpass the proportion accounted for by corporate loans, and the gap between the two figures will widen further in the coming years. The total proportion accounted for by loans to the non-banking sector will increase at the expense of a decline in the proportion accounted for by investments in securities. Slovenian government securities are being replaced by other sovereign bonds and debt securities of other issuers. The loan-to-deposit ratio will remain stable throughout the projection horizon at 78%.

Figure 1.1: Forecasts of year-on-year growth in major balance sheet items

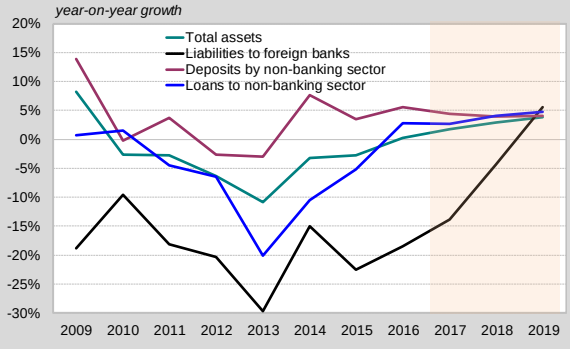
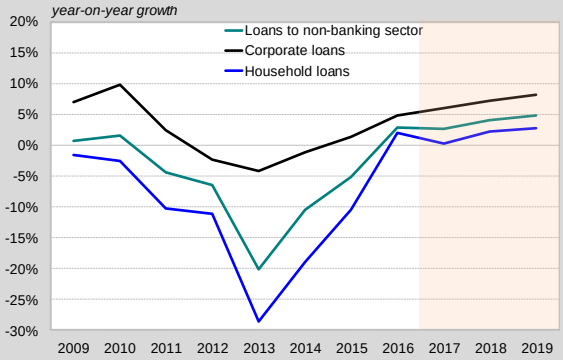


Figure 1.2: Forecasts of growth in loans by sector



Source: Bank of Slovenia

Stable growth in deposits, with an increase in the proportion of sight deposits. The favourable economic situation will maintain stable growth in deposits by the non-banking sector, although in the low interest rate environment the majority of the increase will come from sight deposits. In the wake of increased demand for long-term loans and the switching of investments to securities of longer maturities, where returns have remained positive, the risk of maturity mismatch between assets and liabilities is increasing. The concentration of funding will increase on the liability side. With their indeterminate maturity, the high proportion of sight deposits could, in the event of external shocks, introduce greater unpredictability into the funding structure, and could require banks to hold an adequate level of liquid assets, which could become a limiting factor in their investment policy over the projection horizon.

Figure 1.3: Forecast for growth in deposits by sector

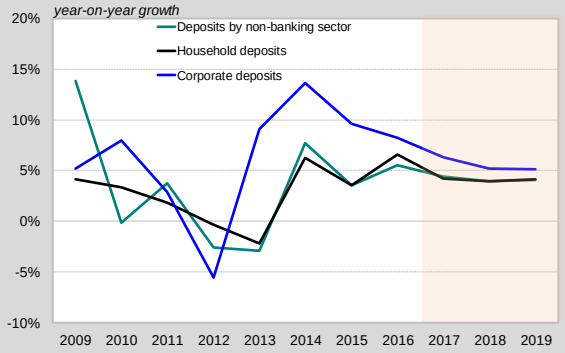
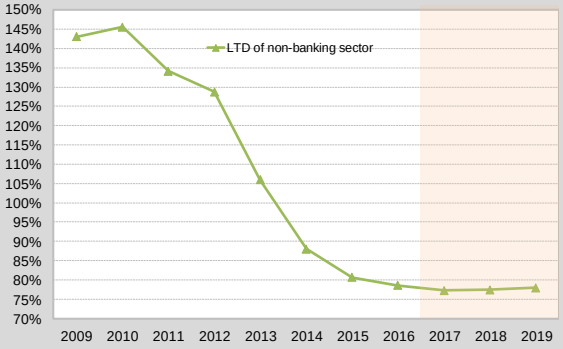


Figure 1.4: Loan-to-deposit ratio



Source: Bank of Slovenia

The banks will perform well over the next three years. The banks will operate throughout the projection horizon at a profit comparable to that recorded in 2016. The banks are adjusting their business models in the direction of an increasing proportion of net non-interest income. Growth in turnover will also bring an increase in net interest income. In addition to the ability to generate income in a low interest rate environment and to limit operating costs while introducing new technologies, the banks' profits will also depend on due diligence in the take-up and monitoring of credit risk. The aim is for impairment costs to remain under control even when interest rates begin rising.

The proportion of non-performing claims will decline further. Probability of default will be lower than growth in balance sheet, which will be reflected in an autonomous decline in the proportion of non-performing claims. The banks could reduce the proportion even further through mitigation measures, such as active resolution of non-performing claims and reclassification of defaulters and non-defaulters, or the sale or write-off of non-performing claims. The reduction in probability of default will have a favourable impact on impairment costs, although growth in turnover will reveal the need for additional impairments. Similarly to a deterioration in the economic situation, the faster normalisation of monetary policy, meaning a rise in interest rates before the end of the projection horizon, i.e. before 2019, would raise the default rate, which would also be reflected in higher impairment costs.

Income risk remains a significant risk in the banking system. The banks' earnings in the coming years will depend primarily on turnover, developments in interest rates, and credit risk parameters. Net interest income will account for just over 60% of the banks' gross income. When interest rates begin rising faster, return on investments will increase, and at the same time the banks will have greater room for effectively pursuing an interest rate policy on the liability side, thereby opening the potential for improving the interest margin. However, the faster pass-through of rising interest rates into bank funding costs on the financial markets than on the investment side would pressure the banks into raising interest rates on term deposits. This could encourage the switching of sight deposits to term deposits, including between banks. The banks' net interest income will not only be under the influence of changes in central bank and market interest rates, but also under the influence of changes in bank balance sheet structure.

The banking system as a whole has capital strength. The banks will operate at a profit over the projection horizon, which will allow them to maintain the attained level of capital adequacy without additional recapitalisations should the forecast growth in turnover be realised. However, the small domestic banks in particular will remain capitally weak throughout the projection horizon. To meet their capital requirements, which in addition to the minimum requirements and pillar two requirements also include capital buffer requirements, will require additional recapitalisations during the projection horizon. The retention of earnings in capital is therefore important for each bank, if there is no guarantee of meeting the prudential requirements over the upcoming medium term, having regard for the imminent regulatory requirements.

3.2 Credit risk

Summary

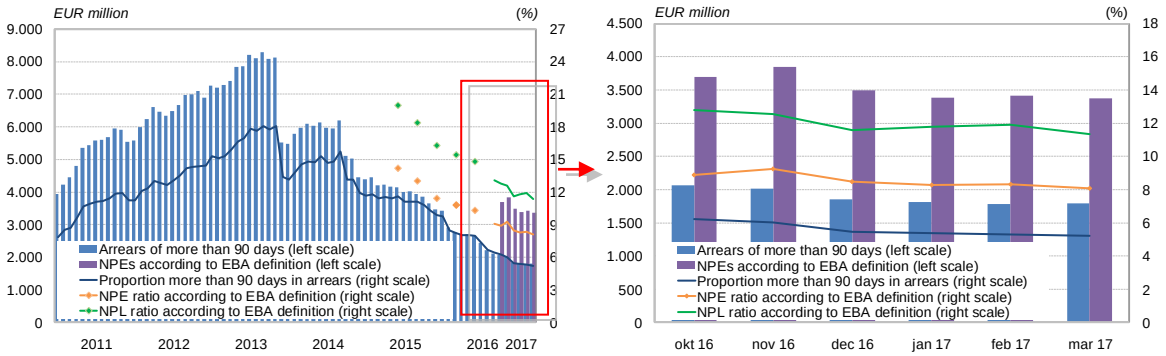
Bank activities to reduce non-performing claims were reflected in an improvement in the quality of the credit portfolio. The banks embarked on the resolution of non-performing claims through expanded sales of non-performing portfolio to investors, in particular the portfolio of non-financial corporations and households, increased write-offs, forbearance of claims, and collateral liquidation. As a result of the continuation of the more active approach, the proportion of claims more than 90 days in arrears declined significantly in 2016 and in the first quarter of 2017, reaching 5.2% of classified claims in March. Despite the larger capture of exposed claims and the application of a soft factor in the form of unlikeliness to pay, the same trend of decline is evident in non-performing exposures (NPEs). NPEs accounted for 8.1% of the banks' exposures in March 2017. The banks have increased coverage of claims more than 90 days in arrears by impairments and provisions since the outbreak of the financial crisis: the figure reached 66% in March 2017. Although the sale of claims has primarily encompassed claims against non-financial corporations, in March 2017 this segment still accounted for the largest proportion of claims more than 90 days in arrears and NPEs. In the SMEs segment, NPEs are strongly concentrated in the real estate activities sector. Non-performing claims against non-residents have declined since the beginning of the recovery of the banking system, while the proportion of total arrears that they account for has remained at the same level, and even increased in 2016. In terms of the geographical origin of clients in the rest of the world, there is a high concentration of claims more than 90 days in arrears against clients in four countries: Croatia, Bosnia and Herzegovina, Serbia and Montenegro

Quality of the credit portfolios of banks and savings banks

An improvement in the quality of the credit portfolio was seen throughout 2016, and continued in the first quarter of 2017. The joint efforts of the Bank of Slovenia and the banks with a more active approach to resolving non-performing claims and the improvement in the economic situation were reflected in the Slovenian banking portfolio.

The review of the quality of the banking system's credit portfolio encompasses claims more than 90 days in arrears and also non-performing exposures (NPEs) according to EBA regulations.[13] Alongside financial assets measured at amortised cost and risk-bearing off-balance-sheet commitments, they also include available-for-sale financial assets, financial assets designated at fair value, and approved undrawn loans. At the same time, in addition to claims more than 90 days in arrears, NPEs also include exposures meeting the unlikely to pay criterion, which include forborne exposures. The difference between the two aforementioned approaches is in the volume of exposures whose portfolio quality is being analysed. The March 2017 figures were classified claims of EUR 35 billion and exposures of EUR 42 billion, together with EUR 1.8 billion in claims more than 90 days in arrears and EUR 3.4 billion of NPEs. Loans accounted for 67% of the Slovenian banking system's exposure in March 2017. In light of the business models of banks where investment business is of less importance, they also have the highest proportions of non-performing claims. The stock of non-performing loans stood at EUR 3.2 billion in March 2017, or 11.4% of total loan stock.

Figure 3.11: Claims more than 90 days in arrears, NPEs and NPLs according to the EBA definition



Source: Bank of Slovenia

As a result of the continuation of the banks' more active approach, the proportion of claims more than 90 days in arrears declined significantly in 2016 to stand at 5.5% of classified claims in December. Claims more than 90 days in arrears declined by an additional 5.2% in the first quarter of 2017, thereby taking the stock close to its level from before the crisis, or more precisely from the end of 2008. The same trend of decline is evident in NPEs, despite the larger capture of exposed claims and the application of a soft factor in the form of unlikeliness to pay. NPEs accounted for 8.1% of the banks' exposures in March 2017, down 5.5 percentage points on the beginning of reporting under the ITS of June 2015.

According to IMF figures,[14] the quality of the Slovenian banking system's portfolio as measured by the proportion of claims more than 90 days in arrears lies at the median of euro area countries. Of the euro area countries where the financial crisis was reflected in a high NPL ratio, Slovenia has been one of the more successful countries in resolving NPLs.

Figure 3.12: NPL ratio according to IMF definition by country

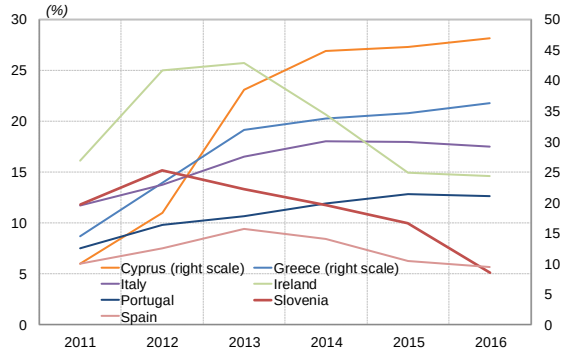
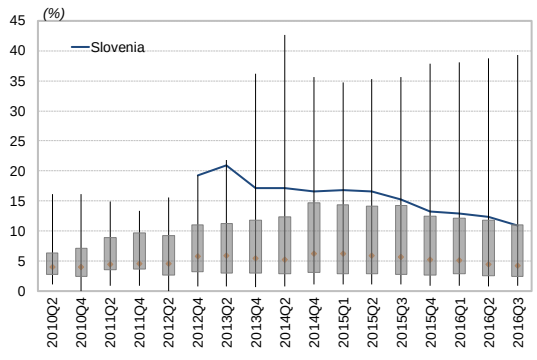


Figure 3.13: Consolidated NPEs[15]



[13] Unless explicitly stated otherwise, in the FSR the EBA definition is illustrated on an individual basis, and not on a consolidated basis.

[14] Data is submitted by national supervisors. Loans or broadly defined claims more than 90 days in arrears are reported as NPLs. In addition, these include claims where the payment of interest over a 90-day timetable is added to the principal, claims being refinanced and claims where the repayment deadline is extended. Claims that are not more than 90 days in arrears, but show soft signs of being non-performing according to the definition of the national supervisor, e.g. the initiation of bankruptcy, are also reported as NPLs. The euro area members as at 2015 (19 countries) are included in all periods of the illustration. Four of the countries failed to report their NPL status.

[15] Figure shows quartiles.

Sources: IMF,[16] ECB,[17] Bank of Slovenia

The data according to EBA methodology, which takes account of consolidated reporting by banks in the Slovenian banking system, presents a worse picture for Slovenia compared with other euro area countries,[18] where just under a third of countries have higher NPEs. The consolidated figures for Slovenia include subsidiaries in former Yugoslav republics, where the economic recovery has been slower than in Slovenia. Shifts on a consolidated basis were already being seen in the third quarter of 2016 in the banking system of the euro area. The distribution of the NPE ratio by country has narrowed since 2015, and is significantly more concentrated around an average of 10%, while the gap between the less- and more-problematic countries also narrowed. Two euro area countries, Greece and Cyprus, are notable for keeping the highest figure at 39%; without them the highest figure would be 16%. In the 2017 spring survey the banks assessed that the year would see a smaller transfer of non-performing claims to the Slovenian banking system within the framework of banking groups.

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

The banks have increased coverage of claims more than 90 days in arrears by impairments and provisions since the outbreak of the financial crisis, and the figure has been stable since the end of 2015. Coverage of claims more than 90 days in arrears stood at 65.2% in December 2016, and increased to 66.1% in March 2017. The stock of impairments and provisions in March 2017 was down a half on the end of 2015, but the decline was smaller than the decline in classified claims, which were down 36%. The decline in impairments is the result of the elimination of non-performing portfolio from bank balance sheets, the sale of non-performing portfolio to investors, and write-offs. Coverage of non-performing exposures by impairments and provisions according to the EBA definition also increased. Coverage of NPEs stood at 56% in December 2016, up 2 percentage points on the end of 2015.

Figure 3.14: Coverage of claims more than 90 days in arrears by impairments and provisions and by capital in the Slovenian banking system

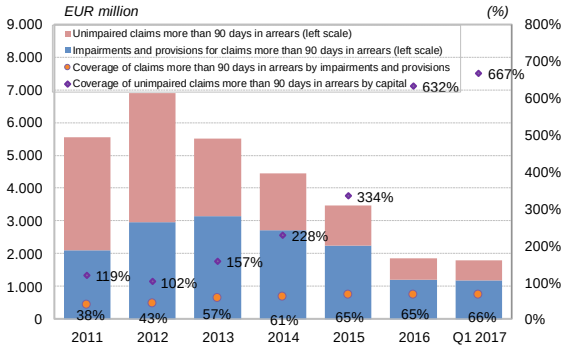
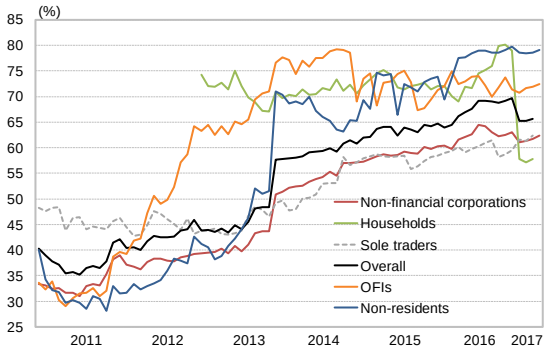


Figure 3.15: Coverage of claims more than 90 days in arrears by impairments and provisions by client segment



Source: Bank of Slovenia

The corporate sector accounts for half of the impairments and provisions for claims more than 90 days in arrears. Coverage of this portfolio segment by impairments is nevertheless below the average for the portfolio as a whole: it stood at 61.1% in December 2016, and 62.4% in March 2017. Coverage of claims against households, which was the highest among all client segments, reached its lowest level in March 2017, although this was a consequence of a change in reporting methodology since September 2016. The stock of provisions for claims against households more than 90 days in arrears declined by 29% or EUR 73 million between December 2015 and March 2017, while the stock of classified claims increased by EUR 987 million or 11% over the same period. Coverage of claims against non-residents more than 90 days in arrears by impairments and provisions gradually increased over the period in question. In March 2017 this segment had the highest coverage: 79% of claims more than 90 days in arrears.

There was a significant increase in 2016 in the coverage of the unimpaired portion of claims more than 90 days in arrears by regulatory capital. This was partly attributable to an improvement in portfolio quality and an increase in coverage by impairments, and partly attributable to an increase in capital and the

[16] Latest available figures (May 2017).
[17] The latest available figures for the euro area are for the third quarter of 2016.
[18] In international comparisons the EBA and other ECB bodies frequently illustrate Slovenia solely through its SSM banks (the three largest banks alone), which ranks it significantly higher on the list of euro area countries.

rise in the banking system's capital adequacy. The coverage of the unimpaired portion of claims more than 90 days in arrears by capital increased from 334% to 632% in 2016.

Figure 3.16: Coverage of claims more than 90 days in arrears by impairments and collateral[19]

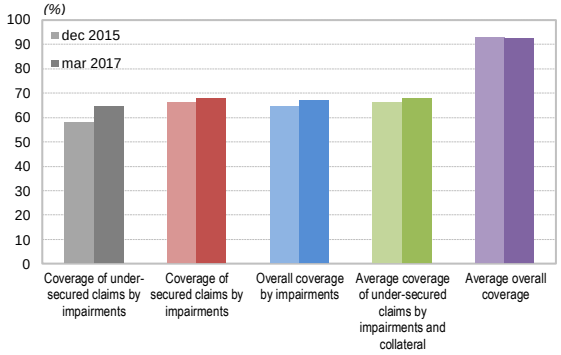
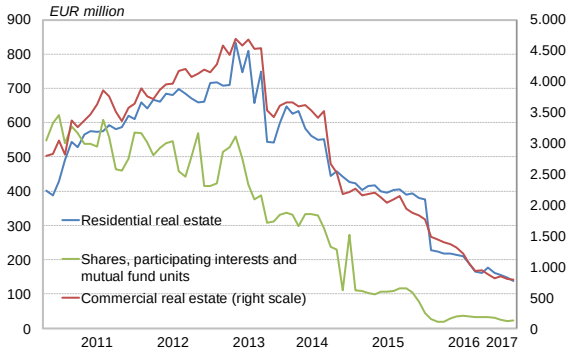


Figure 3.17: Value of collateral for claims more than 90 days in arrears[20]



Source: Bank of Slovenia

The banks increased coverage of claims more than 90 days in arrears by impairments and provisions and by collateral in 2016. The proportion of unsecured claims more than 90 days in arrears declined to 39.7% in 2016. Coverage by impairments is similar for secured and under-secured claims more than 90 days in arrears.[21] It is slightly higher for secured claims, whereby the banks are creating a safety reserve in the event of revaluation or collateral liquidation that would not cover the entire claim. The coverage of secured claims by impairments stood at 67.9% in March 2017. Coverage by impairments in the category of claims that do not achieve full coverage by impairments and collateral stood at 65% in March 2017, while coverage by impairments and collateral together stood at 68%. Real estate, commercial real estate in particular, remains the most important form of asset pledged as collateral in terms of value, although the value of collateral of this type has also been declining since the first transfer of non-performing claims to the BAMC. Collateral of this type was also the most commonly liquidated in 2016, according to the survey.

Active reduction in the proportion of non-performing claims through various approaches

Within the framework of European Commission technical assistance and cooperation with the World Bank, the Bank of Slovenia issued the Handbook for Effective Management and Workout of MSME NPLs.[22] It focuses on important areas of the resolution of non-performing loans to SMEs at banks, and will be included in the package of regulations for the area of credit risk. Banks in Slovenia are facing a key difficulty in resolving the non-performing segment of the portfolio, which is common to the entire euro area, in the lack of an organised market for this purpose. The banks and the Bank of Slovenia continued their activities to reduce the stock of non-performing claims in 2016. The implementation of strategies for managing non-performing claims and meeting resolution targets was reviewed in individual supervisory interviews.

The stock of claims more than 90 days in arrears practically halved in 2016. It declined by EUR 1.6 billion to EUR 1.8 billion, the largest decline since the beginning of the recovery of the banking system. The banks' activities to reduce non-performing claims were expressed in an improvement in the credit portfolio through expanded sales of non-performing portfolio to investors, in particular the portfolio of non-financial corporations and households, increased write-offs, forbearance of claims, and collateral liquidation. There was a record decline in 2016, notwithstanding that write-offs of claims were contrastingly at their lowest level. In 2016 these were down EUR 751 million or 15% on 2015. The trend of decline slowed in the first quarter of 2017, arrears of more than 90 days having declined by EUR 52 million.

19 The figure includes unsecured claims and claims secured with forms of credit protection that are not taken into account in the banks' calculation of impairments and provisions (e.g. collateral in the form of bills of exchange). Collateral is stated at fair value. With regard to collateral in the form of real estate, several banks may enter a mortgage on the same property. In such cases, the value of the mortgage at each successive bank is reduced by the value of the banks' claims with seniority in the possible liquidation of the collateral. Consequently, the value of these forms of collateral is multiplied both for these forms of collateral and as an aggregate.

20 Includes entire value of collateral in the portfolio at aggregate level, irrespective of which claim is secured.

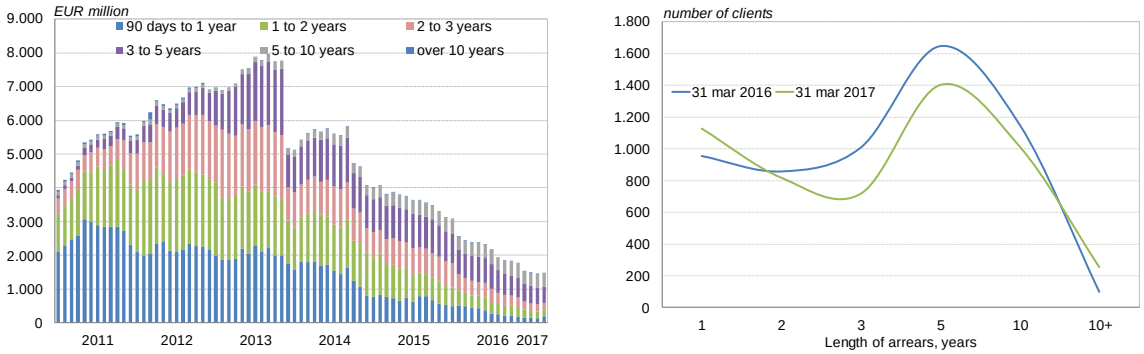
21 The definition of secured claims covers claims where the total value of the collateral is equal to or higher than the amount of the secured claim after impairments (the net claim), while under-secured claims are those claims where the total amount of collateral fails to reach the exposure level of the net claim. The value of the collateral takes account of the reported fair value, excluding negative revaluations. Claims against households and certain other claims are not captured in full in the credit portfolio.

22 The handbook is available online at http://www.bsi.si/en/publications.asp?MapaId=2195.

The banks reported a total of 80 signed MRAs at the end of 2016, involving 171 firms. The largest number of them were signed in 2014. The banks' total exposure to debtors with whom an MRA has been signed amounted to EUR 1.7 billion at the end of 2016. The figure was down on the end of 2015, when it stood at EUR 2.1 billion. The decline was attributable to the sale of firms, divestment, repayment from cash flow generated, the sale of claims, and the transfer of claims from the BAMC to SDH. According to the banks' reports on the progress of MRAs, of the 30 MRAs accounting for 85% of the exposure, 42% were classed as successful at the end of 2016, 33% as partly successful, and 24% as unsuccessful.

The banks are providing for restructuring of claims for clients facing financial difficulties, even independently of MRAs, most often via the extension of the maturity of the loan agreement or the deferral of repayments. Restructured claims amounted to EUR 2.1 billion in March 2017. The stock of restructured claims declined in 2016, but has been increasing again in 2017. The proportion of restructured claims that have again fallen more than 90 days in arrears also increased. The figure reached 27% in March 2017. Non-financial corporations accounted for 75% of the stock of restructured claims, and non-residents for 21%.

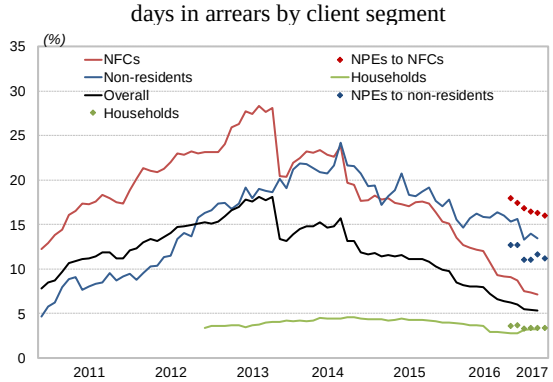
Figure 3.18: Breakdown of claims more than 90 days in arrears by length of arrears, and distribution of clients by length of arrears



Source: Bank of Slovenia

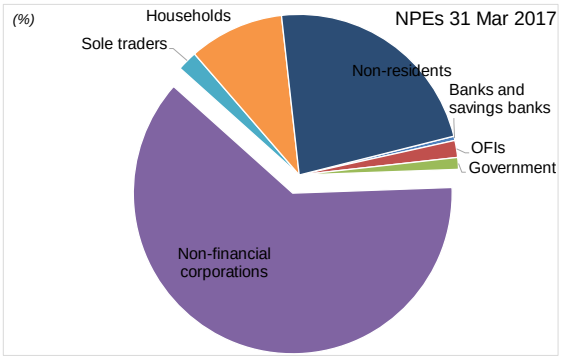
The banks' active approach to resolving the non-performing portfolio also changed the breakdown by length of arrears of claims more than 90 days in arrears. The banks reduced the number of clients whose claims are between 1 year and 10 years in arrears, in particular clients who are 2 to 3 years in arrears. Meanwhile new arrears of up to 1 year and arrears of more than 10 years increased. The increase was also discernible in the stock of claims and in the number of debtors, although the stock and number of clients in the final group is negligible compared with the overall portfolio of arrears. The breakdown could change in the future, despite the resolution of the existing arrears, as it is not able to capture bullet loans, i.e. loans where the principal is repaid as a lump sum at maturity. In the event of the client's financial difficulties, they are only revealed at the maturity of the loan. According to the spring bank survey, bullet loans could account for EUR 0.5 billion of the banks' classified claims, and are primarily concentrated in non-financial corporations and non-residents.

Figure 3.19: Proportion of classified claims more than 90 days in arrears by client segment



Source: Bank of Slovenia

Figure 3.20: Breakdown of NPEs by client segment



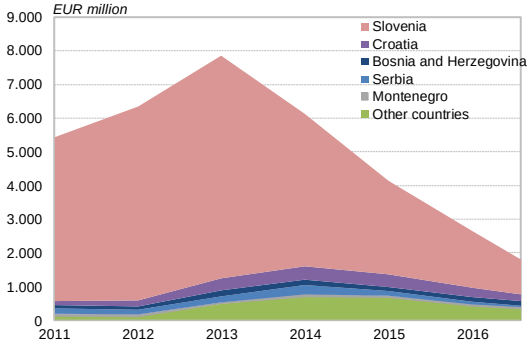
The sale of claims primarily encompassed non-financial corporations, although in March 2017 this segment still accounted for the largest proportion of total claims more than 90 days in arrears and total NPEs. However, both the stock and proportion of claims more than 90 days in arrears in the non-

financial corporations sector have declined to the level recorded at the end of 2009. At the same time active firms have reduced their indebtedness over recent years to close to the pre-crisis level, and are not being downgraded. In March 2017 some 7.3% of claims against non-financial corporations were more than 90 days in arrears, while the corresponding NPE ratio was 16%.

The sale of part of the portfolio in 2016 reduced the proportion of claims more than 90 days in arrears in the household sector to 3.2%, while the corresponding NPE ratio stood at 3.4%. The proportion of claims more than 90 days in arrears reached the level seen at the beginning of reporting in 2013. The burden of non-performing claims on the household sector, which throughout the period of the financial crisis was the least problematic sector in the banks' credit portfolio, thereby declined even further.

Claims in arrears against non-residents have declined since the beginning of the recovery of the banking system, while the proportion of total arrears that they account for has remained at the same level, and even increased in 2016. This is attributable not to a deterioration in the portfolio of non-residents, which is evident from the figure illustrating the graph showing the geographical breakdown of clients' countries of establishment, but to the resolution of non-performing claims primarily against clients established in Slovenia. Claims against non-residents were not subject to transfer to the BAMC, and having remained on bank balance sheets have therefore increased sharply as a proportion of the banks' claims more than 90 days in arrears. The stock of claims against non-residents more than 90 days in arrears has declined sharply since the first transfer to the BAMC in 2013, but more slowly than those in other client segments. The proportion of claims against non-residents in arrears stood at 12.8% in March, at its level of 2010, while the NPE ratio was slightly lower, at 11.2%.

Figure 3.21: Breakdown of classified claims more than 90 days in arrears by client country of establishment



Source: Bank of Slovenia

The decline in the overall proportion of claims more than 90 days in arrears is mainly attributable to the faster resolution of non-performing claims against clients in the Slovenian market, and less to claims against other countries. Dividing the bank credit portfolio into two markets, domestic and foreign, claims more than 90 days in arrears against clients from Slovenia accounted for 57% of non-performing claims in March 2017, having accounted for 83% of the total in November 2013, when the stock of claims peaked. In terms of the geographical origin of clients in the rest of the world, there is a high concentration of claims more than 90 days in arrears against clients in four countries: Croatia, Bosnia and Herzegovina, Serbia and Montenegro They accounted for 55% of claims against non-residents more than 90 days in arrears, which is also a reflection of the actions of the banking groups of parent banks established in Slovenia. In all four countries the economic recovery and GDP growth have been slower than in Slovenia, which suggests a lengthier recovery for this portfolio segment.

Figure 3.22: Number of bankruptcy proceedings initiated

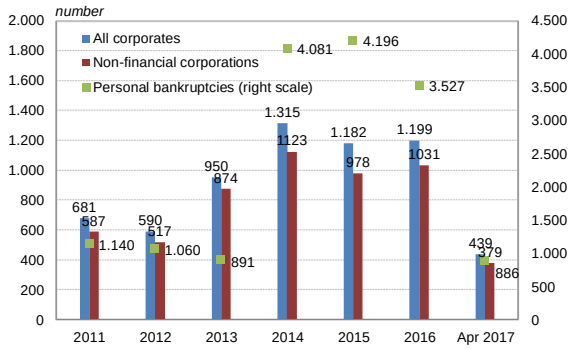
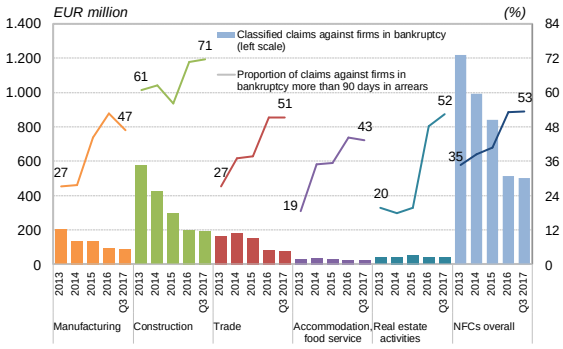


Figure 3.23: Stock and proportion of classified claims more than 90 days in arrears against non-financial corporations in bankruptcy proceedings



Sources: Bank of Slovenia, Supreme Court, AJPES

The banking system's credit portfolio is still burdened with clients in bankruptcy proceedings. The number of corporate bankruptcies initiated continued to increase in 2016, while the number of personal bankruptcies in 2016 was down 16% on the previous year. The client segment with the highest proportion of classified claims against clients in bankruptcy is OFIs. Classified claims against OFIs in bankruptcy stood at EUR 33 million in March 2017, down a third on the end of 2015. However, the proportion of claims against OFIs more than 90 days in arrears accounted for by OFIs in bankruptcy had increased to 78% by March 2017, on account of a decline in arrears of more than 90 days. The largest stock of classified claims against clients in bankruptcy was in the non-financial corporations segment, where the figure of EUR 502 million in March 2017 accounted for 53% of claims against non-financial corporations more than 90 days in arrears. The proportion of claims against non-financial corporations in bankruptcy increased over 2016 and the first quarter of 2017 in the sectors of construction, wholesale and retail trade, accommodation and food service activities, and real estate activities. Despite the rise in the number of clients in bankruptcy, the stock of claims against non-financial corporations in bankruptcy was down on the end of 2015. During this period the banks significantly reduced claims more than 90 days in arrears against non-financial corporations not in bankruptcy, which led to a continual increase in the proportion accounted for by non-financial corporations in bankruptcy during 2016.

Non-performing claims against SMEs

SMEs still account for the largest proportion of claims more than 90 days in arrears and proportion of NPEs, although both figures declined in 2016. Claims more than 90 days in arrears accounted for 12.7% of classified claims in the SMEs sector, while the sector accounted for 39% of the banking system's total claims more than 90 days in arrears in March 2017. Indications of an improvement in the SMEs portfolio come from the default rates, which have significantly improved over the last two years, and resulted in a lower inflow of new non-performing claims. Another source of improvement in the SMEs credit portfolio was the decline in the stock of classified claims against SMEs in bankruptcy. They amounted to EUR 328 million in March 2017, or 65% of total classified claims against non-financial corporations in bankruptcy.

Figure 3.24: Proportion of claims more than 90 days in arrears and NPE ratio

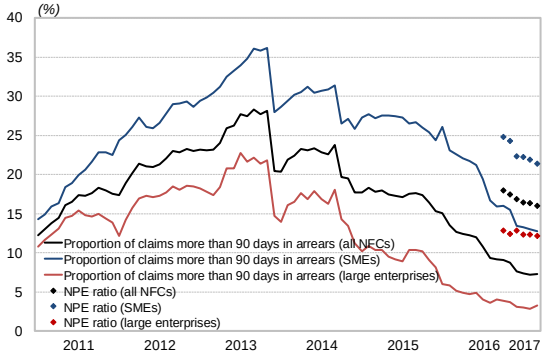
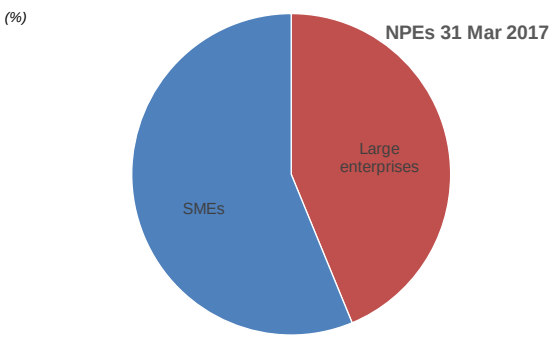


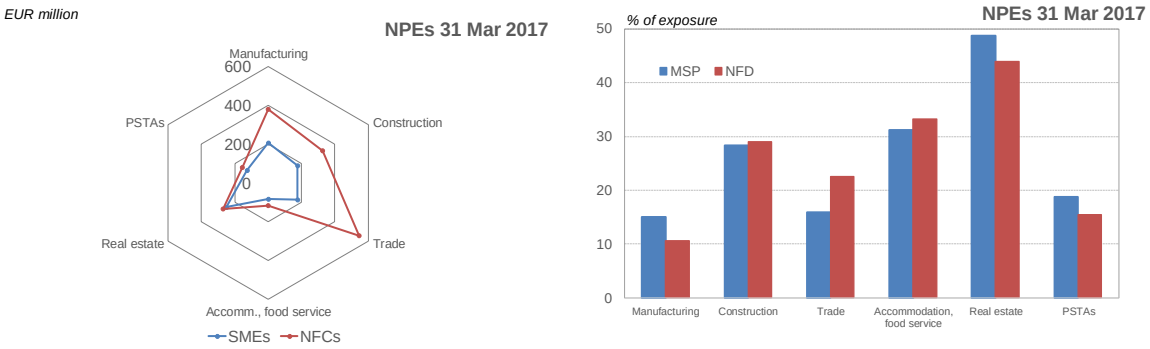
Figure 3.25: Breakdown of NPEs by corporate size



Source: Bank of Slovenia

In the SMEs sector too the most notable sectors in terms of the stock of NPEs are manufacturing, construction, wholesale and retail trade, and real estate activities. There is particularly high exposure concentration in the real estate activities sector, where SMEs account for 83% of exposures to non-financial corporations in the sector. The NPE ratio in the sector stood at 48.7% in March 2017. The most notable sector in terms of all non-financial corporations is wholesale and retail trade, where NPEs accounted for 22.5% of total exposure in the sector in March 2017.

Figure 3.26: Stock of NPEs to SMEs and non-financial corporations by economic sector



Source: Bank of Slovenia

The transition matrices for the credit portfolio show an improvement in the quality of the SMEs and large enterprises portfolios. The pace of transitions between ratings is analysed by means of transition matrices calculated separately for SMEs and large enterprises, on the basis of the number of transitions of firms. The pace of transitions during the 12 months to December 2016 is compared with that of the corresponding period a year earlier. Downgradings are slowing for SMEs, while upgradings are increasing for both corporate segments. The most evident increase in upgradings is for C- and D-rated SMEs, where 28% of C-rated clients and 9.6% of D-rated clients were upgraded in this year's matrix, compared with 19.9% and 4.2% respectively in the previous year. An improvement is also evident in the matrix for large enterprises, where the largest number of upgradings was recorded by clients rated C at the end of 2015.

Table 3.1: Percentage breakdown of transitions of SMEs and large enterprises between credit ratings, in terms of number of clients

Micro, small and medium-size enterprises (SMEs)

		Dec 2015				
		A	B	C	D	E
Dec 2014	A	80,3	15,0	2,5	1,2	0,4
	B	14,2	69,8	12,0	3,4	0,7
	C	3,5	16,4	58,5	17,5	4,1
	D	0,3	1,9	2,0	65,2	30,5
	E	0,0	0,1	0,1	1,6	98,2

		Dec 2016				
		A	B	C	D	E
Dec 2015	A	81,8	14,7	2,3	1,0	0,2
	B	22,8	64,9	10,0	2,0	0,3
	C	5,6	22,4	63,6	6,6	1,7
	D	1,3	2,5	5,8	58,6	31,8
	E	0,2	0,1	0,5	2,7	96,5

Large enterprises

		Dec 2015				
		A	B	C	D	E
Dec 2014	A	91,6	6,2	1,4	0,6	0,3
	B	17,8	73,7	6,8	1,8	0,0
	C	2,4	14,6	68,9	13,4	0,6
	D	0,4	3,4	8,9	78,1	9,3
	E	0,0	0,0	0,7	6,6	92,7

		Dec 2016				
		A	B	C	D	E
Dec 2015	A	90,8	8,0	0,7	0,3	0,1
	B	14,4	76,6	8,6	0,0	0,4
	C	1,5	27,4	66,7	4,4	0,0
	D	3,0	4,2	7,2	76,7	9,0
	E	0,9	0,0	0,9	2,8	95,3

Source: Bank of Slovenia

3.3 Income risk and interest sensitivity

Summary

The Slovenian banking system's profitability improved in 2016. The banks generated a total net profit of EUR 332 million last year, up sharply on the previous year. With gross income almost unchanged, the higher profit was attributable to a decline in impairment and provisioning costs. These reflect the improvement in

the banking portfolio and the improved economic situation. Last year the proportion of the disposal of gross income accounted for by impairment and provisioning costs was the lowest figure for 16 years, at just 8.5%. Non-interest income was solid, but the banks nevertheless realised similar gross income to the previous year, although the former was primarily the result of one-off factors.

Net interest income, the key revenue for banks, declined by 10% last year for the second consecutive year. The decline slowed only slightly in the first quarter of this year. The fall in asset interest rates slowed. The banks are mitigating the decline in net interest income by further lengthening loan maturities. Loans to the non-banking sector were declining until December 2016, but recorded positive growth in the first quarter of this year. Given the already greatly shortened average maturity of funding and the low interest rates, the banks are increasingly constrained in reducing interest expenses. Although this has a favourable impact on the banks' interest expenses, in the period ahead it will be increasingly important to control income pressures arising on the revenue side of the financial statements. Increased investment in loans will be necessary, otherwise the pressures from the revenue side will continue. The banks can only increase non-interest income by a limited amount over the short term. At the same time it is unlikely that the banks will maintain impairment and provisioning costs at such a low level over the medium term. They are unable to further improve cost-effectiveness quickly and suddenly. The banks are thus exposed to relatively high income risk.

This year stress tests for the banking system are being conducted at Eurosystem level in connection with interest rate risk. The aim is a better understanding of the interest sensitivity of assets and liabilities in the banking book, and net interest income. The stress tests are being conducted according to ECB methodology, which is based on the Basel guidelines and relates to interest rate risk in the banking book.[23] The Bank of Slovenia's stress tests of interest rate risk in the banking book (IRRBB) show that banks in Slovenia are relatively conservative when it comes to managing their interest-sensitive positions, and that interest rate risk is under control.[24]

The low interest rate environment is causing an increase in the proportion of sight funding, and a simultaneous increase in the proportion of fixed-rate loans with longer maturities. The gap between the average repricing periods for asset and liability interest rates, without taking account of amortisation schedules, hedging and deposit stability, increased by 4.4 months in 2016 to stand at just over 14 months. The increase in the proportion of sight deposits is reducing the banks' interest expenses over the short term, but through the maturity mismatch of assets and liabilities it is also introducing a certain instability into the funding structure should extreme events be realised. The increase in the proportion of fixed-rate loans will be reflected in a lack of change in the banks' interest income when interest rates rise. The largest factor in the increase in interest rate risk is the increase in the proportion of fixed-rate loans and the lengthening of the average maturity of such loans. However the proportion of total loans to the non-banking sector accounted for by fixed-rate loans remains moderate, at 16%.

OPERATING RESULT AND INCOME RISK

The banks recorded a profit in 2016 for the second consecutive year. Net profit amounted to EUR 332 million last year. The banks also generated a profit in the first quarter of this year. However, the decline in net interest income continued: it was down last year for the second consecutive year, by around 10%. The trend of decline in net interest income has continued in 2017, albeit slightly slower. Interest income declined by a fifth in 2016, while interest expenses were down almost a half. The declines in both slowed in the first quarter of this year. Higher non-interest income allowed the banks to almost maintain their gross income at a level comparable to the previous year, although this was primarily attributable to one-off factors, most notably realised capital gains. That impairment and provisioning costs were low was attributable to the improvement in the quality of the credit portfolio, the banks' more active approach to resolving non-performing loans, and the fact that the banks had created high impairments in previous years. The decline in operating costs seen for several years continued in 2016, although operating costs have declined by less than turnover in recent years.

[23] Basel Committee on Banking Supervision, Interest rate risk in the banking book, issued April 2016 (http://www.bis.org/bcbs/publ/d368.htm).
[24] Bank of Slovenia's supervisory stress tests of interest rate risk in the banking book (IRRBB).

Table 3.2: Banking sector's income statement

	Amount, EUR million			Growth, %			Ratio to gross income, %		
	2015	2016	Q1 2017	2015	2016	Q1 2017	2015	2016	Q1 2017
Net interest	746	670	161	-10,4	-10,1	-6,8	64,4	59,4	57,0
Non-interest income	412	457	122	3,3	11,0	3,8	35,6	40,6	43,0
of which fees and commission	336	307	79	-3,0	-8,4	0,9	29,0	27,3	27,8
of which trading gains/losses	-12	11	3	…	…	…	-1,0	1,0	1,2
Gross income	1158	1127	283	-6,0	-2,6	-2,5	100	100	100
Operating costs	686	667	158	-0,1	-2,7	-0,3	59,3	59,2	55,7
labour costs	368	371	91	0,5	0,7	1,2	31,8	32,9	32,0
Net income	472	460	125	-13,3	-2,5	-5,2	40,7	40,8	44,3
net impairments and provisioning	313	96	-16	-51,8	-69,2	14,0	27,1	8,5	-5,5
of which at amortised cost	222	8	-16	-57,7	-96,5	9,0	19,2	0,7	-5,5
Pre-tax profit	158	364	141	249,2	129,7	-3,4	13,7	32,3	49,9
corporate income tax	-43	-31	-13	439,8	-27,4	-21,2	-3,7	-2,8	-4,6
Net profit	115	332	128	201,1	188,3	-1,2	10,0	29,5	45,3

Source: Bank of Slovenia

Net interest margin and non-interest margin in the banking system

The trend of gradual but sustained decline in the net interest margin continued in 2016 and in the first quarter of 2017. The non interest margin increased over the same period, driven by one-off factors. The net interest margin on interest-bearing assets declined to 1.9% in 2016, and had fallen further below this mark by the end of March 2017. There are no major differences between the bank groups in the level of the interest margin. The net non-interest margin reached a relatively solid level of 1.24% at the end of last year, the large domestic banks having recorded a higher margin than the other two bank groups, at 1.34%. The increase in the non-interest margin is primarily attributable to one-off factors, such as capital gains, a positive result in trading, various dividend payments, and the contraction in the banking system's total assets.

Figure 3.27: Net interest margin by bank group

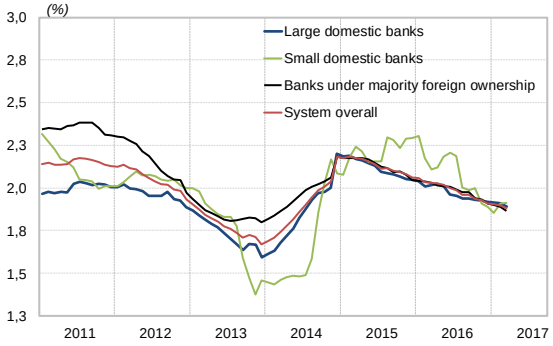
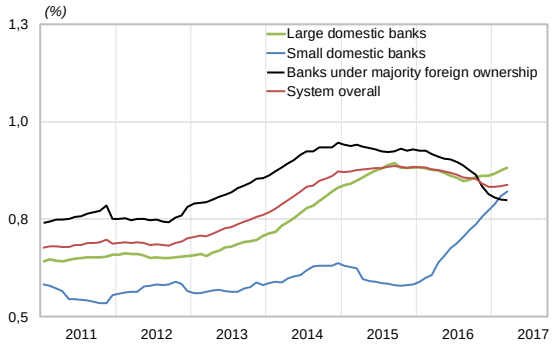


Figure 3.28: Commission margin per total assets



Note: In light of the relatively large fluctuation in non-interest income attributable to certain one-off developments in previous years, only the commission margin is illustrated: fees and commissions accounted for more than 80% of all non-interest income in 2014 and 2015, compared with 65% in 2016.
Source: Bank of Slovenia

Net fees and commission, which account for the largest proportion of the banks' non-interest income, declined further in 2016, but recorded positive year-on-year growth in the first quarter of 2017. The decline in net fees and commission was primarily attributable to a decline in income from various payment services owing to the entry into force of the EU directive on card-based transactions, which limits the fees that banks can charge for services. Fees and commission tied to turnover, i.e. credit transactions and guarantees, also declined. A significant proportion of the banks' income and business from fees and commission is tied to basic lending activity. In the wake of positive growth in loans, net fees and commission began increasing in the first quarter of this year, recording year-on-year growth of close to 1%. The projected increase in growth in the banks' turnover will also bring an increase in this non-interest income.

Decomposition of net interest income and the net interest margin (NIM)[25]

For several years now (since the outbreak of the crisis), price effects have prevailed over quantity effects in the decline in net interest income. The decline in interest income exceeded the decline in interest expenses in absolute terms in 2015 and 2016.[26] The importance to net interest income of changes in quantity and price (effective interest rate) can be evaluated for each of the components, namely interest income and interest expenses. It can thus be determined whether the decline/increase in net interest income is more attributable to changes in interest rates (prices) or changes in quantities on bank balance sheets. Figure 3.29 illustrates price effects and quantity effects on the change in net interest income, while Figure 3.30 illustrates the contributions made by interest-bearing assets and interest-bearing liabilities to the change in NIM.[27] Analysis of the impact of changes in net interest income in the Slovenian banking system since Slovenia joined the EU reveals net interest income to have increased in the period before the crisis, despite a falling NIM, as a result of growth in turnover and lending. Quantity effects prevailed over price effects. By contrast, price effects have prevailed over quantity effects since the outbreak of the financial crisis. After a long period, quantity effects contributed to an increase in net interest income in the first quarter of 2017, although they remained behind price effects. The minimal quantity effects were nevertheless the result of several months of increasing loans. Given the low level of interest rates and the decline in the net interest margin, it is only by increasing investments that generate interest income that the banks can increase net interest. The fall in effective lending rates and returns on securities is slowing, although both are still contributing to the decline in the net interest margin.

Figure 3.29: Contribution to change in net interest income made by quantity and price effects, and net interest margin

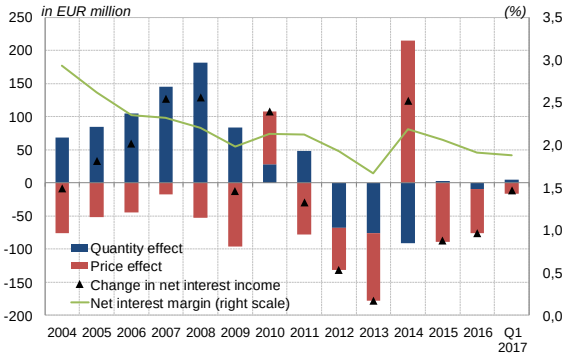
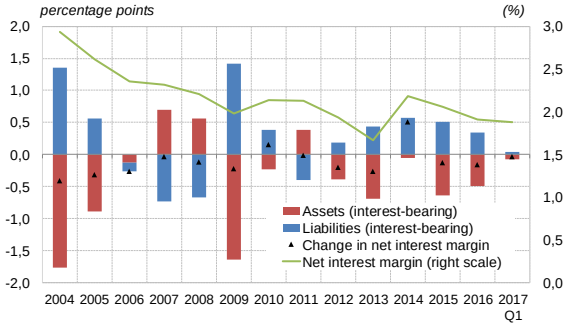


Figure 3.30: Overall contributions made by interest-bearing assets and interest-bearing liabilities to changes in net interest margin in the Slovenian banking system



Note 1: Each calculation in the left figure takes account of 12-monthly moving sums of interest income/expenses.
Note 2: In the right 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 changes in 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.
Source: Bank of Slovenia

The effects on the decline in the net interest margin from effective interest rates on the asset side have prevailed over the effects on the liability side in 2015, 2016 and the first quarter of 2017. Analysis of the contributions to changes in the net interest margin from the asset and liability sides reveals that the decline in the net interest margin over the aforementioned period is the result of a larger fall in effective asset interest rates than in effective liability interest rates. Following the outbreak of the crisis, the changes on the asset side acted to reduce the net interest margin, while by contrast the changes on the liability side mostly acted to raise it. Effective liability interest rates have fallen sharply since the end of 2013. However, the banks are less and less able to compensate for the fall in asset interest rates through this reduction.

[25] The decomposition of net interest income allows for the measurement of the relative importance of changes in individual components of interest income and expenses to the overall change in net interest. Changes in net interest income are illustrated below in terms of their nominal amount in millions of euros, and in relative terms, i.e. with regard to interest-bearing assets (the net interest margin).

[26] Interest expenses in the Slovenian banking system declined sharply as a result of the increase in sight deposits and the fall in the level of interest rates, and amounted to just EUR 158 million in 2016. The ratio of interest income, which amounted to EUR 828 million last year, to interest expenses thus stood at 5, having stood at around 2 in the past, for instance in 2004 and 2010. The sharp decline in interest expenses is an indication that there are fewer and fewer potential income effects to be further exploited in interest expenses, given the low level of interest rates and the high proportion of sight deposits.

[27] For more, see the December 2016 Financial Stability Review. A more detailed breakdown and analysis of net interest margin in Slovenia between 2004 and 2016 can also be found in *Bančni Vestnik* (BV 11 2016), in an article entitled *Net interest margin in a low interest rate environment: evidence for Slovenia*.

Figure 3.31: Contributions made by individual instruments on asset and liability sides to change in net interest margin

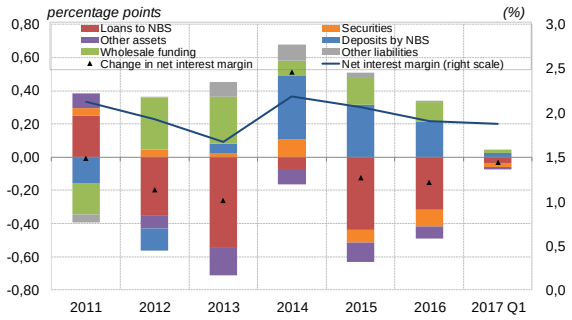
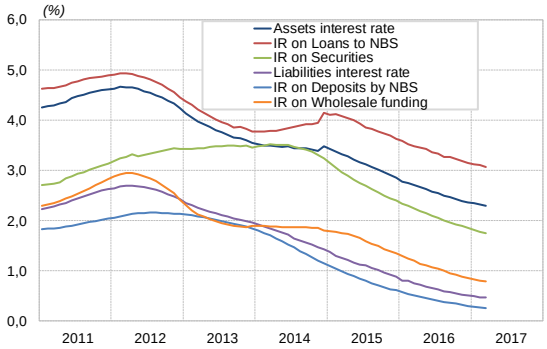


Figure 3.32: Effective interest rates by main instruments of interest-bearing assets and liabilities



Note 1 The categories are calculated for the preceding 12 months.
Figure 3.31 illustrates a more precise itemisation of Figure 3.30 by the main instruments.
Source: Bank of Slovenia

Given the very low interest rates and the decline in the net interest margin, only an end to the contraction in bank balance sheets and the renewed strengthening of lending activity (a quantity effect) can contribute to increasing the banks' net interest income.

Operating costs and impairment and provisioning costs

Operating costs in the Slovenian banking system declined again in 2016. Despite occurring unbroken for several years, the decline in operating costs has been outpaced by the decline in the banks' total assets in recent years. The trend of decline in operating costs at banks has been present for seven consecutive years, and continued in the first quarter of 2017. The pace of decline has nevertheless not been as rapid as the contraction in total assets.[28] The ratio of operating costs to gross income (CIR) stood at 59% in 2016, comparable to the previous year. That the CIR was maintained at the same level was mainly thanks to relatively solid non-interest income, which was attributable to the one-off factors identified above. The ratio of operating costs to total assets has been relatively stable in 2016 and 2017.

Figure 3.33: Ratio of operating costs to average total assets

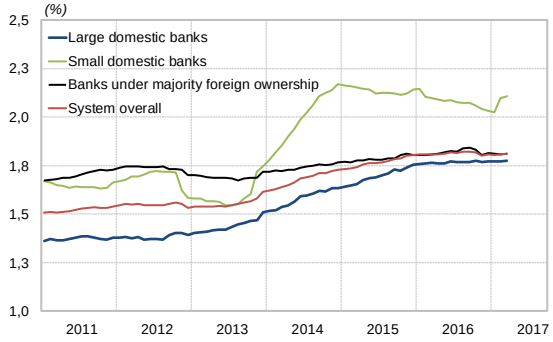
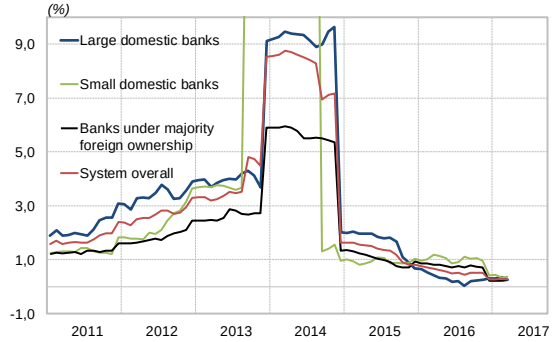


Figure 3.34: Ratio of impairment and provisioning costs to average total assets



Note: The categories are calculated for the preceding 12 months. Values in excess of 10% of total assets are not depicted in the figure.
Source: Bank of Slovenia

[28] The figures reveal that the banks' total assets at the end of 2016 were down 29% on their peak in mid-2010 (comparing the average values for the two years), while operating costs in the banking system in 2016 were down 14% on those recorded in 2010.

Profitability of the Slovenian banking system

Figure 3.35: ROA by bank group

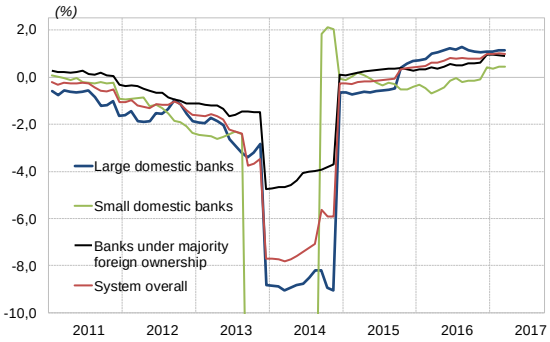
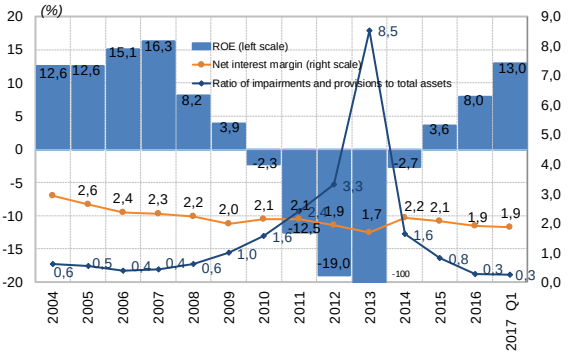


Figure 3.36: ROE, net interest margin on interest-bearing assets, and ratio of impairment and provisioning costs to total assets



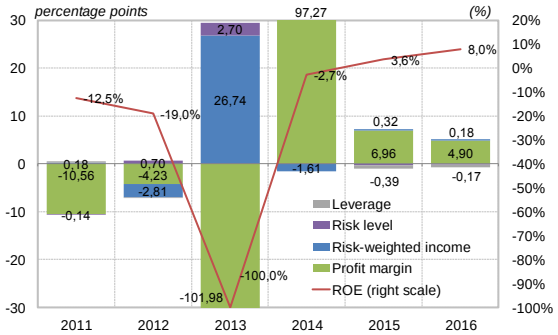
Note: The March 2017 figures for net interest margin on interest-bearing assets and the ratio of impairment and provisioning costs to total assets are calculated over the preceding 12 months. The March 2017 figure for ROE is calculated for the first three months of the year (Figure 3.36). Values of ROA of less than -10% are not depicted in the figure.
Source: Bank of Slovenia

The Slovenian banking system's profitability has improved in recent years. Income risk nevertheless remains relatively high owing to the decline in net interest. The banking system's profitability will depend on the banks' lending activity and other combined measures. In the low interest rate environment the banks are still facing a decline in net interest income. This slowed slightly in the first quarter of this year, albeit not significantly: year-on-year growth in net interest income over the 12 months to March 2017 was still strongly negative in the amount of 9.4%. The banks will have to focus more on additional sources of non-interest income, although the level of this income also depends on turnover itself. Given that the banks currently have low impairment and provisioning costs, and that they are constrained in reducing operating costs, it is primarily an increase in healthy lending activity that will increase the banks' income. The further introduction of advanced technologies and digitalisation can be expected to bring an additional reduction in operating costs, although the banks are at all times relatively heavily burdened by numerous regulatory requirements that act to raise operating costs.

Decomposition of profitability

Analysis of the changes in the banks' ROE via the breakdown of profitability into the four components of profit margin, risk-weighted income, risk level and leverage (illustrated in the figure below) reveals that profit margin and risk-weighted income contributed to the increase in the banking system's profitability in 2016, as they had in the previous year. The other two components of risk level and leverage acted to reduce profitability.

Figure 3.37: Impact of four factors on changes in ROE; decomposition of ROE between 2008 and 2016



Note: The decomposition of ROE is calculated and illustrated for the period to the end of the third quarter of 2016.
Source: Bank of Slovenia

Profit margin and risk-weighted income contributed to the increase in the banking system's profitability in 2016. Profit margin, the ratio of profit to gross income, was again positive in 2016 as the banking system generated a profit. This component has contributed strongly to the improvement in the

banking system's profitability since 2014. Risk-weighted income, the ratio of the banks' gross income to risk-weighted assets, has been increasing for several years now; last year saw a larger decline in average risk-weighted assets than in gross income. Risk-weighted income nevertheless only made a minimal contribution to the increase in profitability (see figure above). Risk level, the ratio of risk-weighted assets to total assets, has been declining for several years now, as the contraction in lending activity has caused risk-weighted assets to decline faster than total assets; it declined last year because overall loans declined more than total assets. Leverage also declined: profits mean that equity in the banking system increased, while total assets declined.

Table 3.3: Individual components in the calculation of ROE by year

	Profit margin	*	Risk-weighted income	*	Risk level	*	Leverage	=	ROE
	pre-tax profit / gross income		gross income / risk-weighted assets		risk-weighted assets / total assets		total assets / equity		pre-tax profit / equity
2008	0,22		0,039		0,76		12,08		8,1%
2009	0,11		0,037		0,78		11,93		3,9%
2010	-0,07		0,037		0,78		12,05		-2,3%
2011	-0,37		0,036		0,79		11,79		-12,5%
2012	-0,50		0,043		0,76		11,89		-19,0%
2013	-3,15		0,033		0,74		12,98		-100,0%
2014	-0,09		0,053		0,58		10,06		-2,7%
2015	0,14		0,057		0,53		8,63		3,6%
2016	0,32		0,058		0,52		8,07		8,0%

Note: The top row of the table gives the formula for the calculation of ROE.
Source: Bank of Slovenia

The banks' profitability indicator improved, while the cost indicators remained comparable to the previous year, and the net interest margin declined. The increase in profit in the banking system brought an improvement in ROE and ROA. The CIR was slightly below 60% in both years. The financial intermediation margin increased as a result of an increase in non-interest income, while the net interest margin declined slightly further.

Table 3.4: Selected bank performance indicators

(%)	2011	2012	2013	2014	2015	2016	mar 2016	mar 2017
Return on assets (ROA)	-1,06	-1,60	-7,70	-0,27	0,42	0,99	1,58	1,55
Return on equity (ROE)	-12,54	-19,04	-97,30	-2,69	3,63	7,96	13,76	12,99
Cost to income ratio (CIR)	53,68	47,43	66,04	55,80	59,26	59,19	54,41	55,67
Interest margin on interest-bearing assets	2,13	1,93	1,68	2,18	2,06	1,91	1,97	1,86
Interest margin on total assets	2,02	1,83	1,59	2,09	1,96	1,82	1,87	1,77
Non-interest margin	0,85	1,40	0,85	1,01	1,09	1,23	1,28	1,36
Gross income / average assets	2,87	3,23	2,44	3,10	3,05	3,05	3,15	3,13

Note: The figures for March in both years are calculated cumulatively, i.e. for a period of three months.
Source: Bank of Slovenia

INTEREST SENSITIVITY

The Bank of Slovenia's stress tests of interest rate risk (IRRBB) have shown that banks in Slovenia are relatively conservative when it comes to managing their interest-sensitive positions and that interest rate risk is under control.[29] If the IRRBB methodology is not taken into account, in particular with regard to amortisation schedules, hedging and deposit stability, the gap between the average repricing periods of asset and liability interest rates widened by 4.4 months in 2016 and by 1.6 months in the first quarter of 2017. The average repricing period on the asset side reached 20.6 months in March 2017, having widened by 4.4 months in 2016 and 1.3 months in the first quarter of 2017. The average repricing period was almost unchanged on the liability side. It reached 4.8 months in March 2017.

[29] Interest-sensitive loans and debt securities are taken into account on the asset side, but not equity investments. Interest-sensitive liabilities to banks and the non-banking sector and debt securities are taken into account on the liability side, but not subordinated financial liabilities or equity.

Figure 3.38: Average repricing period for the Slovenian banking system's assets and liabilities

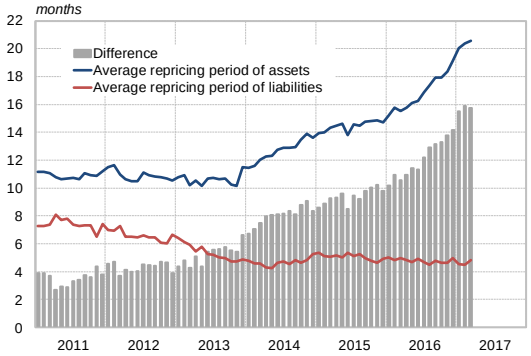
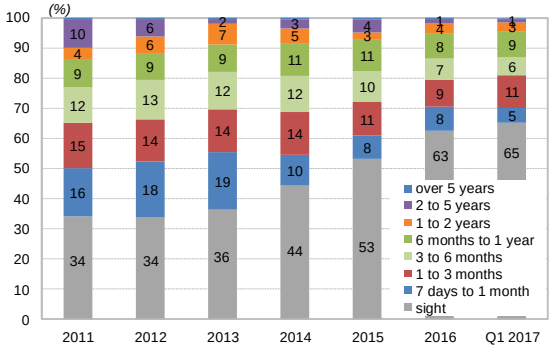


Figure 3.39: Breakdown of deposits by the non-banking sector by repricing period



Note: The calculated average repricing period does not take account of hedging with derivatives, amortisation/depreciation or the stable portion of sight deposits.
Source: Bank of Slovenia

Although deposits by the non-banking sector account for around 71% of total liabilities, the average repricing period on the liability side is also significantly dependent on wholesale funding. The proportion of total deposits accounted for by sight deposits is now very large, at almost two-thirds. The average repricing period on deposits shortened by 0.6 months in 2016, then remained virtually unchanged in the first quarter of 2017 at around 2.7 months. There has been considerable volatility in the average repricing period of liabilities to banks and securities, and it has shortened in early 2017 in line with the shortening maturities of wholesale funding.

Figure 3.40: Average repricing period of stock by instrument

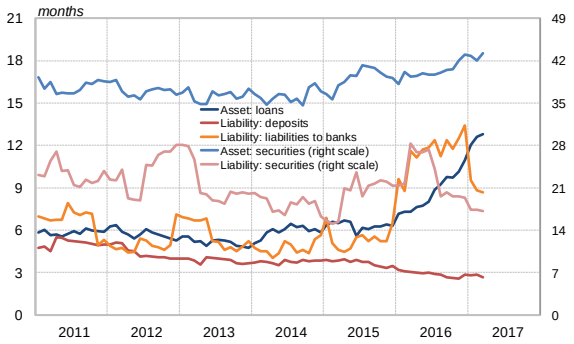
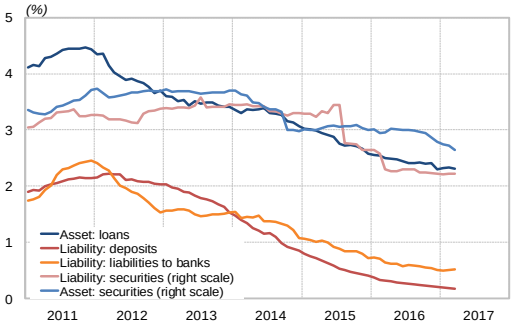


Figure 3.41: Interest rate on stock by instrument

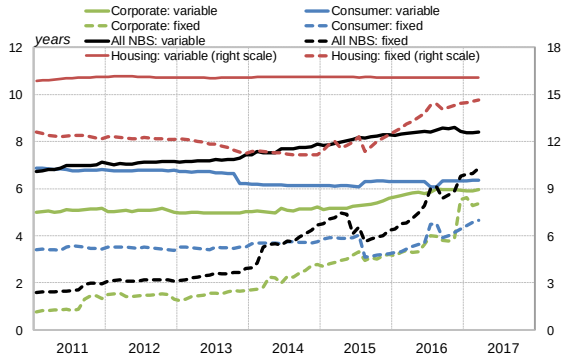


Source: Bank of Slovenia

Fixed-rate loans entail a certain income risk for banks in a period of rising interest rates, particularly on longer maturities.[30] The average repricing period for loans lengthened by 4.6 months in 2016 to 11 months, and by a further 1.8 months in the first quarter of 2017. The largest lengthening was recorded by housing loans: the average repricing period lengthened by almost one year in 2016, and by a further 5.3 months in the first quarter of 2017 to almost 2.2 years. The lengthening of the average repricing period was primarily attributable to an increase in the proportion of fixed-rate loans, and the lengthening of their maturities. While the residual maturity of variable-rate loans has risen only gradually in recent years, the residual maturity of fixed-rate loans has lengthened significantly, particularly since mid-2015. This was primarily evident in housing loans and consumer loans, although the trend had been seen earlier in corporate loans, albeit to a lesser extent.

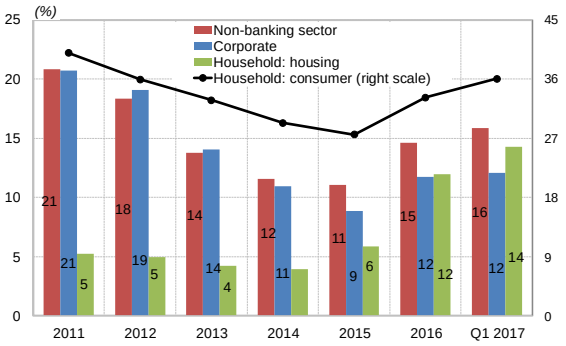
[30] Fixed-rate loans are those where the initial period for which the interest rate is fixed is longer than one year.

Figure 3.42: Average residual maturity for individual types of loans



Source: Bank of Slovenia

Figure 3.43: Proportion of loan stock accounted for by fixed-rate loans



With fixed-rate loans, it is vital that banks are cautious in limiting the maturity of lending, on account of exposure to higher interest rate risk. The proportion of total loans to the non-banking sector accounted for by fixed-rate loans increased to almost 16% in March 2017. The highest proportion of fixed-rate loans was recorded by the household segment, at just under a fifth. The highest growth is being recorded by housing loans, where fixed-rate loans now account for just over 14% of the total. Fixed-rate housing loans are only 0.7 percentage points more expensive than variable-rate loans, and are therefore very popular with households, which avoid exposure to interest rate risk. For the banks, investments with such a long interest rate fixation period entail an increased risk of the loss of interest income, unless adequately covered or hedged on the liability side.

Figure 3.44: Proportion of loans with a fixed interest rate for individual types of new loan

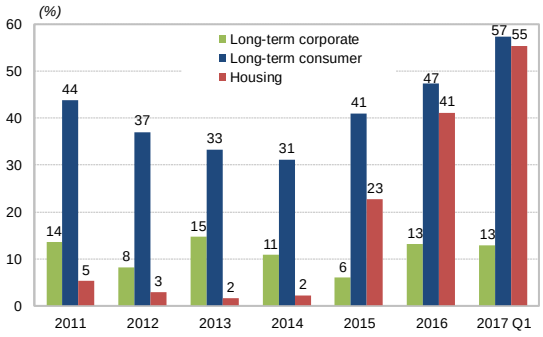
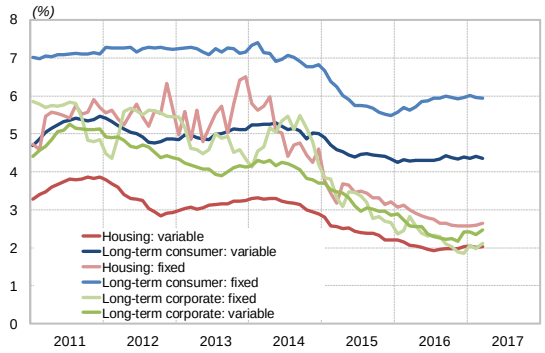


Figure 3.45: Average interest rates for individual types of new loan



Note: The interest rate on corporate loans is calculated as a six-month average, owing to high variability.
Source: Bank of Slovenia

The banks hedge against interest rate risk by various methods. They frequently manage interest rate risk at the level of interest-sensitive balance sheet items. This means that in the event of an increase in fixed-rate funding they increase fixed-rate investments, whereby they must be attentive to the maturity breakdown. Certain banks therefore limited the approval of fixed-rate loans with longer maturities. Individual banks also make use of derivatives.

3.4 Refinancing risk and bank liquidity

Summary

Refinancing risk remains moderate, but average funding maturity is continuing to shorten. Evidence of the banks' favourable liquidity position comes from the high level of the first-bucket liquidity ratio, the solid level of secondary liquidity and the large proportion of the pool of collateral that is free, which gives the banks access to additional funds in the event of increased liquidity needs. Despite the extremely low interest rates, the breakdown of the banks' funding has continued to shift in the direction of an increase in the importance of deposits by the non-banking sector, while the proportion of total funding accounted for by wholesale funding has fallen below a tenth. The management of excess liquidity on the euro area money market remains relatively difficult for Slovenian banks.

Sights deposits by the non-banking sector are continuing to increase, which is shortening the average maturity of deposits by the non-banking sector. This is potentially reducing the stability of this funding in the event of extreme shocks, which are unlikely given the favourable economic situation. To cover major and sudden increases in liquidity requirements the banks have a larger stock of liquid assets, a solid stock of secondary liquidity, and the possibility of accessing additional funds at the ECB, for which reason liquidity risk remains low. A major factor in the slowdown in growth in sight deposits will be potential growth in deposit rates, which depends on the ECB's ongoing monetary policy, developments on the international money markets, and the disposal of the banks' excess liquidity, which could create the need for new funding.

Bank funding

The changes in the funding structure of Slovenian banks seen over recent years slowed slightly in the first quarter of 2017. Deposits by the non-banking sector remain the most important funding source. The proportion of funding that they account for strengthened again in 2016 to just over 70%, a figure that had been recorded by the banks around 2000. The stock of wholesale funding is declining as expected, albeit more slowly than in previous years, as a large proportion of the debt to the rest of the world has already been repaid. The proportion of total funding accounted for by wholesale funding fell below 10% in 2016, thereby sharply reducing Slovenian banks' dependence on the variability on international financial markets. Following a decline in debt to the Eurosystem in recent years, the proportion of funding accounted for by liabilities to the Eurosystem increased to 3.1% in the first quarter of 2017 as a result of the funds obtained in the latest targeted longer-term refinancing operation (TLTRO II).

Figure 3.46: Structure of bank funding

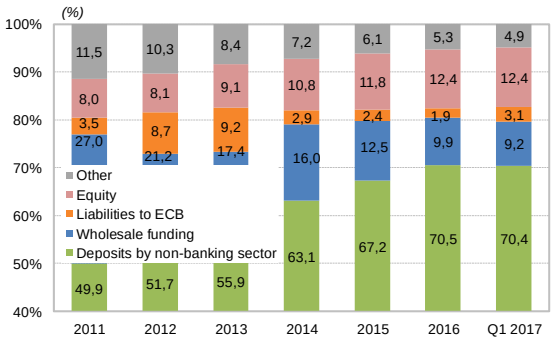
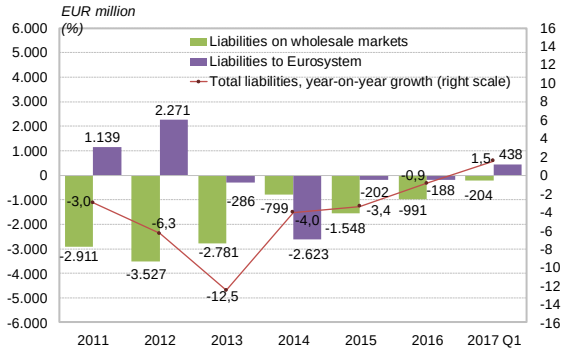


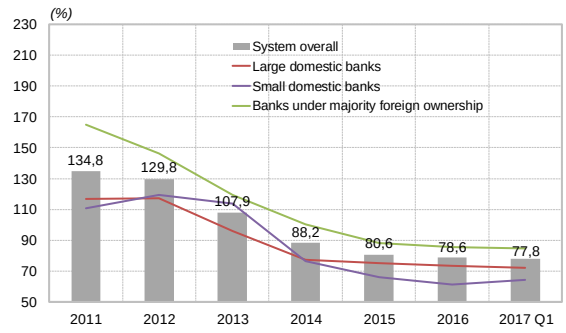
Figure 3.47: Changes in liabilities to the Eurosystem and wholesale funding



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 strengthening as a result of growth in household deposits and deposits by non-financial corporations. Growth in deposits by the non-banking sector was relatively volatile in 2016, but strengthened towards the end of the year, and the trend of growth continued in the first quarter of 2017. The stock was up 5.4% in year-on-year terms in March of this year. The decline in the LTD ratio for the non-banking sector continued in early 2017, as the increase in deposits was significantly larger than the increase in loans to the non-banking sector. The ratio reached 77.8% in March 2017.

Figure 3.48: LTD ratio for the non-banking sector by bank group



Source: Bank of Slovenia

The importance of household deposits as bank funding increased further in 2016. Despite the extremely low deposit rates, the stock of household deposits increased by 6.7% or EUR 1,036 million last year to 16.6 EUR billion, as a result of which the proportion of total liabilities that they account for increased to just under 45%. The trend of growth in household deposits slowed slightly in the first quarter of 2017, but nevertheless remained solid. The favourable impact of economic growth is being evidenced in lower unemployment and higher household disposable income, which is contributing to a potential increase in saving. Given the modest functioning of the Slovenian capital market, the lack of suitable alternative investments, and the traditional behaviour of Slovenian savers, the stable trend of growth in household deposits can be expected to continue in the future.

Year-on-year growth in deposits by non-financial corporations has been slowing since the beginning of 2016, but still stood at a solid 10.5% in March 2017. The stock of deposits by non-financial corporations increased by just over EUR 0.5 billion over the same period to EUR 5.8 billion, or 16% of total funding, making them the second most important source of funding for Slovenian banks. Growth in deposits by non-financial corporations can be expected to slow further in the future, as favourable economic growth increases the opportunities for new corporate investment and thus the spending of savings.

Figure 3.49: Growth in deposits by sector

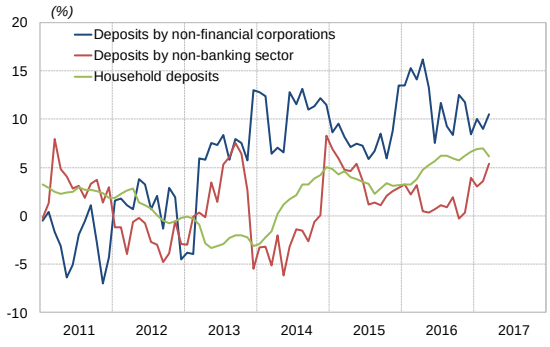
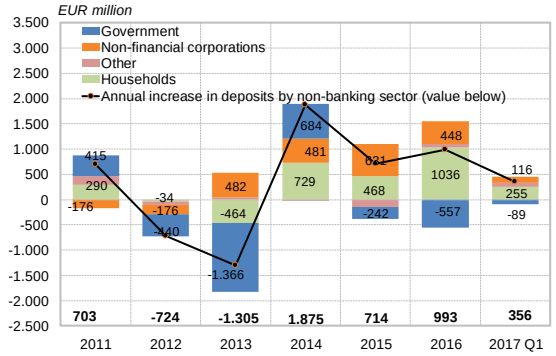


Figure 3.50: Increase in deposits by sector

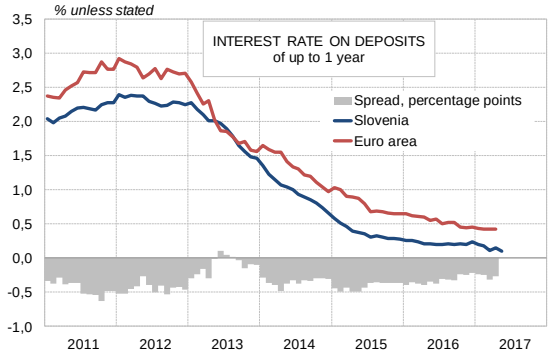


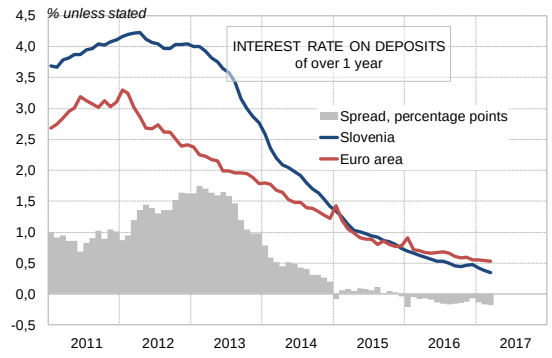
Source: Bank of Slovenia

Maturity of deposits by the non-banking sector

Growth in deposits by the non-banking sector is strengthening further, which is shortening the average maturity of funding. The proportion of total deposits accounted for by sight deposits stood at 65% in March 2017, up 10 percentage points on the end of 2015. Owing to income pressure, the large stock of excess liquidity and the consequent sharp decline in the need for additional funding, all the bank groups maintained deposit rates at minimal levels. The average interest rate on new deposits of up to 1 year remained unchanged at 0.2% in 2016, below the euro area average. The average interest rate on fixed-term deposits of more than 1 year fell further below the euro area average in 2016, and reached 0.4% in March of this year.

Figure 3.51: Comparison of interest rates in Slovenia with interest rates across the euro area for new household deposits





Sources: Bank of Slovenia, ECB

The net increase in household deposits in 2016 and the first quarter of 2017 was driven solely by sight deposits. The stock of sight deposits by households increased by EUR 2.5 billion over this period to EUR 11.3 billion. The net increase was the result of an actual increase in household deposits, and also the result of a decline in short-term and long-term fixed deposits whose funds are left in bank accounts by savers. The proportion of household deposits accounted for by sight deposits stood at 67%, up 11 percentage points on

the end of 2015. Year-on-year growth in sight deposits was relatively stable last year, albeit at a high level, at around 21%. The trend remained similar in the first quarter of 2017.

The proportion of deposits by non-financial corporations accounted for by sight deposits is large, but is increasing more slowly than the figure for household deposits. The stock of sight deposits by non-financial corporations increased by EUR 574 million in 2016 and the first quarter of 2017 to EUR 4.2 billion, or 72% of total deposits by non-financial corporations. The introduction of the charge for corporate sight deposits at certain banks, the aim of which was to discourage the retention of funds in accounts, did not have any great effect.

Figure 3.52: Growth in household deposits by maturity

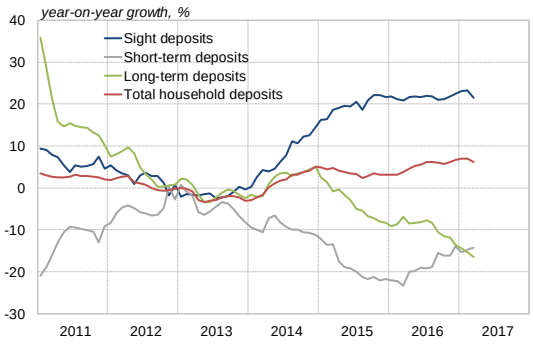
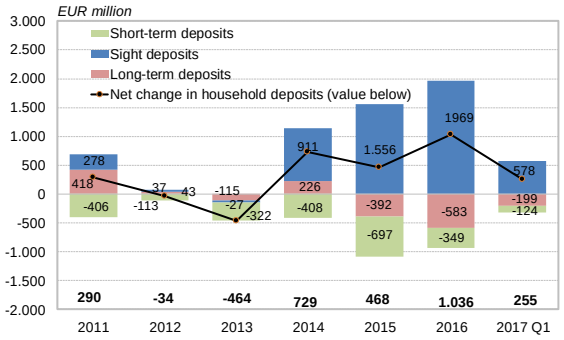


Figure 3.53: Change in stock of household deposits by maturity



Source: Bank of Slovenia

The growth in sight deposits is potentially reducing funding stability in light of the possibility of extreme shocks, although these are unlikely in the context of the ongoing favourable development of the economic environment. For the purpose of monitoring deposit stability, and consequently ensuring liquidity adequacy, the banks have developed internal methodologies and appropriate plans for taking action in the event of a sudden outflow of deposits. Despite a rise in the number of deposits by the non-banking sector, the banks[31] are not identifying a deterioration in their stability. The stability of household sight deposits remains greater than that of sight deposits by non-financial corporations, which are more concentrated and are thus more volatile. In the event of increased liquidity needs the banks have EUR 4.5 billion at their disposal in the form of account balances at the central bank and sight deposits at banks, which represent the most liquid forms of asset. At the same time they have a solid stock of secondary liquidity on their balance sheets in the amount of just over EUR 7 billion, and a large free pool of eligible collateral at the Eurosystem, which would allow for additional funds to be borrowed at the ECB. In the event of the exhaustion of the aforementioned liquid assets, the banks under majority foreign ownership would also have special lines available at their parent banks.

Future changes in the maturity breakdown of deposits by the non-banking sector will primarily depend on factors such are: ECB decisions with regard to changes to the expansionary monetary policy that is maintaining high liquidity on the market, developments on the interbank market, and the decline in the banks' excess liquidity, owing to which the banks would be ready to offer higher interest rates for new funding. A prerequisite for slower growth in sight deposits by the non-banking sector is a rise in deposit rates, which would encourage savers to commit funds to fixed terms. Given the lengthening of funding maturities, certain banks are already offering their clients more encouraging interest rates on long-term deposits, launching special offers for long-term saving and offering combined products related to saving in alternative investments (e.g. mutual funds). The increase in sight deposits is merely one of the factors increasing the maturity mismatch between the banking system's assets and liabilities; for more, see the special section of the FSR on this theme.

Liquidity risk

The Slovenian banking system's liquidity risk remains low and stable. This good liquidity position of Slovenian banks is reflected in the following indicators: a high and relatively stable first-bucket liquidity ratio, a satisfactory level in the second-bucket liquidity ratio, a high proportion of the pool of eligible collateral at the Eurosystem that is free, and high excess liquidity.

[31] According to the Spring bank survey, 2017.

The first-bucket liquidity ratio stabilised in the second half of 2016. It averaged 1.45, a similar level to the end of 2015. The increase in the second-bucket liquidity ratio slowed in 2016, and it averaged 1.23. Developments in the short-term liquidity indicators remained stable in the first quarter of 2017.

Marketable secondary liquidity strengthened in 2016 and in the first quarter of 2017 as a result of increased investment in foreign securities, which reduced concentration risk. The stock of secondary liquidity increased by EUR 406 million over the aforementioned period to EUR 7.1 billion, or 19% of total assets. A sufficient stock of secondary liquidity will play an important role in the event of increased liquidity needs. Investment concentration in secondary liquidity declined as the stock and proportion of Slovenian government securities was reduced. In the quest for investment diversification and better returns, the banks primarily invested in foreign securities rated BBB or higher, which together with the maturing of Slovenian government bonds increased the proportion of secondary liquidity that they account for by almost 6 percentage points to 41%. The small domestic banks that do not have investments in foreign marketable securities rated BBB or higher remain the most exposed to concentration risk. However, growth in the Slovenian economy is producing favourable changes in Slovenia's sovereign credit ratings, which is reducing the probability of the future realisation of concentration risk in secondary liquidity.

Figure 3.54: Daily liquidity ratios for the first and second buckets of the liquidity ladder

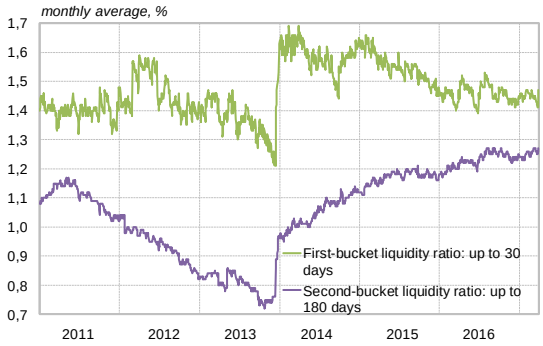
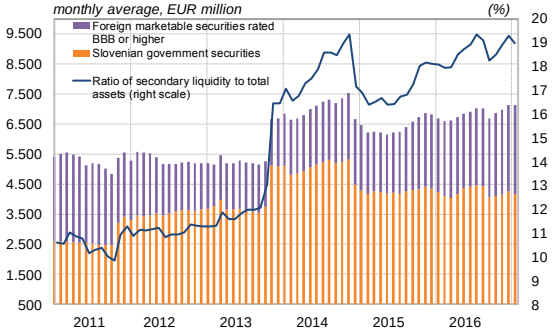


Figure 3.55: Stock of marketable secondary liquidity



Note: Marketable 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 high proportion of the pool of eligible collateral at the Eurosystem that is free provides further evidence of the favourable liquidity position of Slovenian banks. The figure fluctuated around 82% in 2016, but had fallen to 72% by the end of the first quarter of 2017 as a result of Slovenian banks' participation in the TLTRO II. The funding obtained saw liabilities to the Eurosystem increase by EUR 438 million in the first quarter of 2017 to EUR 1.1 billion, raising the proportion of the banking system's total liabilities that they account for to 3.1%. Like those in the majority of other euro area countries, banks in Slovenia are facing high excess liquidity, which strengthened by EUR 150 million in 2016 and the first quarter of 2017 to EUR 2.9 billion.

Figure 3.56: Banks' claims and liabilities vis-à-vis the Eurosystem, and proportion of the pool of eligible collateral that is free

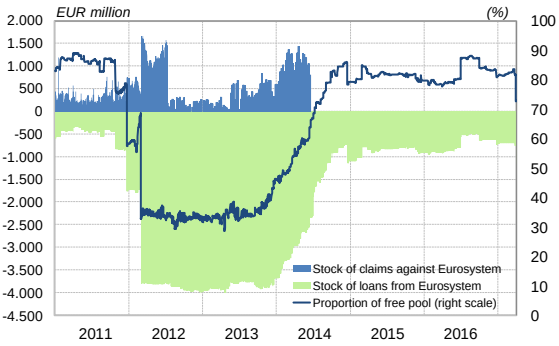
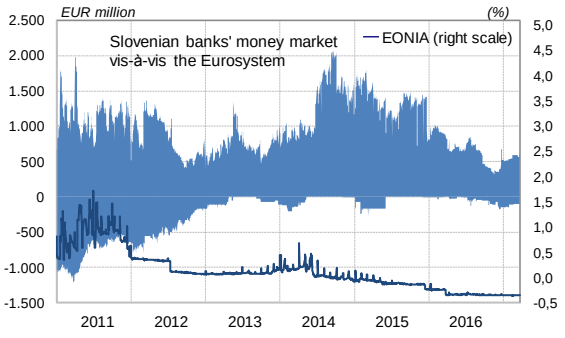


Figure 3.57: Stock of unsecured loans of Slovenian banks placed and received on the euro area money market



Source: Bank of Slovenia

The effective management of excess liquidity on the euro area money market remains difficult for Slovenian banks. Slovenian banks remain net creditors on the euro area money market. After declining

continually in 2016, the stock of net claims increased by EUR 154 million in the first quarter of 2017 to EUR 531 million when the banks placed a portion of the assets obtained in the TLTRO II in the rest of the world. Should interest rates remain at record low levels and euro area banks continue to face high excess liquidity, there is no expectation of an improvement in the conditions for Slovenian banks in the management of excess liquidity in the euro area money market.

3.5 Bank solvency

Summary

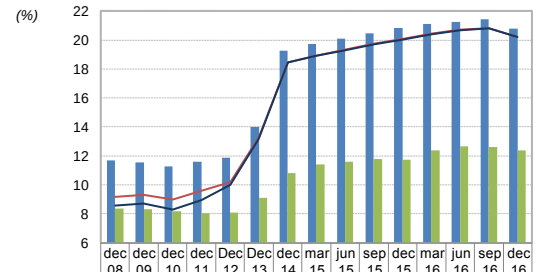
Solvency risk has remained low in the Slovenian banking system, although there is still considerable variation from bank to bank. The banking system's total capital ratio remained satisfactory in 2016, and on a consolidated basis was higher than the comparable figure for the euro area. There was an additional improvement in the high quality of the capital structure, as subordinated debt declined. The small domestic banks remain the most vulnerable in capital terms, despite an improvement in capital adequacy.

The maintenance of stable capital adequacy in the Slovenian banking system in the future will mostly depend on the ability to generate internal capital, particularly in the event of the strengthening of lending activity. One factor in the banks' successful performance will be their ability to adjust their business models to seek better returns while optimising risk take-up. Further changes in investment structure, and thus the level of capital requirements, will depend on this. Reducing capital requirements will depend on further improvements in the quality of the credit portfolio and the optimisation of business processes.

Capital adequacy

The Slovenian banking system's capital adequacy remains good. After a gradual slowdown in growth over the two previous years, the total capital ratio declined by 0.6 percentage points in the final quarter of 2016 to 20.8%, unchanged compared tothe end of 2015. The Tier 1 capital ratio and common equity Tier 1 capital ratio declined by the same amount in the final quarter, both reaching 20.2%. Slovenian banks meet their capital adequacy requirements through the highest-quality forms of capital, which is evidenced in the minimal differences between the aforementioned capital ratios. These differences narrowed further in 2016, as a result of a decline in the stock of subordinated instruments at certain banks.[32]

Figure 3.58: Banking system's basic capital ratios on an individual basis



	dec 08	dec 09	dec 10	dec 11	Dec 12	Dec 13	dec 14	mar 15	jun 15	sep 15	dec 15	mar 16	jun 16	sep 16	dec 16
CAR	11,7	11,6	11,3	11,6	11,9	14,0	19,2	19,7	20,1	20,5	20,8	21,1	21,3	21,4	20,8
Capital / TA	8,4	8,3	8,2	8,0	8,1	9,1	10,8	11,4	11,6	11,8	11,8	12,4	12,6	12,6	12,4
T1 ratio	9,2	9,3	9,0	9,6	10,2	13,3	18,4	18,9	19,3	19,8	20,1	20,4	20,7	20,8	20,2
CET1 ratio	8,6	8,7	8,3	8,9	10,0	13,2	18,4	18,9	19,3	19,7	20,0	20,4	20,7	20,8	20,2

Source: Bank of Slovenia

There was an improvement in capital adequacy in 2016 at the domestic banks, and a deterioration at the banks under majority foreign ownership. Capital adequacy also strengthened moderately at the large domestic banks after the completion of the recovery process. The total capital ratio improved in 2016 by 1.6 percentage points to 24.7%, despite the decline in the final quarter of 2016. The strengthening of the total capital ratio was largely the result of growth in the highest-quality forms of capital, and less the result of a decline in capital requirements. Regulatory capital increased by EUR 80 million as a result of an increase in retained earnings, an increase in other reserves, and the recapitalisation of one of the banks in the group.

After continually increasing in the previous years, the total capital ratio at the banks under majority foreign ownership declined in 2016, by 1.5 percentage points to 18%. In contrast to the domestic banks, regulatory

[32] Certain banks under majority foreign ownership made early repayments on subordinated instruments.

capital at the banks under majority foreign ownership declined by 5.7% in 2016, primarily as a result of a decline in subordinated debt and the cessation of independent operation by one of the banks in the group. Their capital requirements increased by 2.3% at the same time, which had a negative impact on capital adequacy in this group. The increase in capital requirements was more intensive in the final quarter of last year, as a result of the banks' increase in lending activity during this period.

The small domestic banks remain the weakest group in capital terms, despite an improvement in capital adequacy. Their total capital ratio improved by 1.3 percentage points in 2016 to stand at 14.1%, still significantly below the average across the Slovenian banking system. Regulatory capital applied in the calculation of capital adequacy increased last year, primarily as a result of the recapitalisation of one of the banks in the group, but the capital requirements also declined. The ratio of book capital to total assets remains at a very low level: the figure reached 5.7% at the end of December 2016.

Figure 3.59: Tier 1 capital ratio on an individual basis by bank group

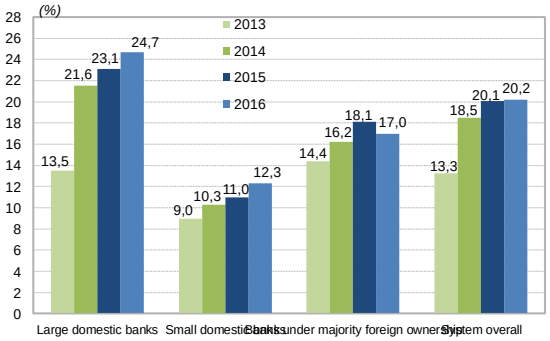
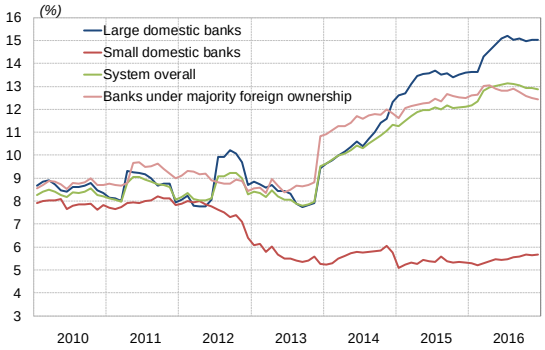


Figure 3.60: Ratio of book capital to total assets on an individual basis by bank group

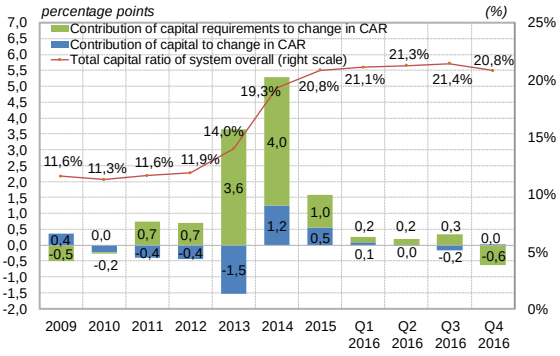


Source: Bank of Slovenia

Capital and capital requirements

In the wake of the minimal decline in regulatory capital there was an almost equal decline in capital requirements in 2016, which left the total capital ratio unchanged in year-on-year terms. The prevailing factor in the change in capital adequacy during 2016 was changes in the level of capital requirements. This was more responsible than regulatory capital for the slowdown in growth in capital adequacy in the first three quarters of the year, but in the final quarter of the year an increase in lending activity brought an increase in capital requirements, thereby reducing the capital adequacy of the Slovenian banking system to the level seen at the end of 2015.

Figure 3.61: Contribution to change in total capital ratio on an individual basis made by changes in capital and capital requirements



Note: 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 Slovenian banking system's regulatory capital declined by EUR 18 million or 0.4% in 2016 to stand at EUR 4,061 million at the end of the year. The recapitalisations of three banks and an increase in the stock of other reserves had a positive impact on regulatory capital. However this was not sufficient to cover the negative impact on regulatory capital from the contraction in subordinated debt at certain banks and the cessation of independent operation by one bank. The decline of EUR 36 million in subordinated

instruments brought an additional improvement in the quality of the capital structure of Slovenian banks. The proportion of total capital accounted for by Tier 1 capital increased by almost 1 percentage point to a high 97.2%

The contraction in capital requirements came to an end in the final quarter of 2016 as a result of an increase in lending activity. Capital requirements declined by 0.3% over 2016 to stand at EUR 1,561 million. The minimal annual decline was the result of an increase of EUR 46 million or 3.4% in capital requirements for credit risk in the final quarter of last year, when the banks recorded a significant increase in corporate and household loans. This resulted in an increase in the proportion of capital requirements for credit risk accounted for by the two aforementioned sectors: together they accounted for more than two-thirds of capital requirements for credit risk at the end of 2016. The revival in credit activity means that increases in capital requirements for credit risk can be expected in the future. The improvement in the quality of the credit portfolio saw a further decline in the stock of capital requirements for exposures in default and exposures associated with particularly high risk by 33% in 2016 to EUR 122 million.

Through the implementation of activities to optimise business processes, in 2016 the banks reduced capital requirements for operational risk by 8% to EUR 149 million, just under 10% of the Slovenian banking system's total capital requirements.

Figure 3.62: Breakdown of capital requirements for credit risk

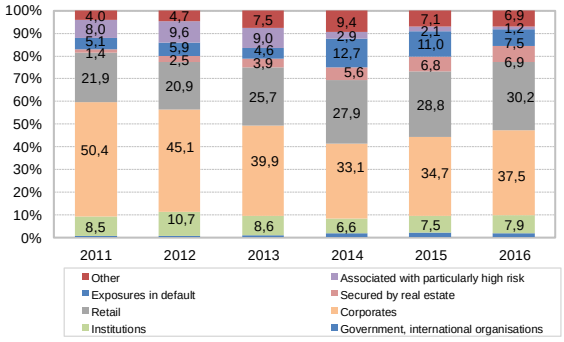
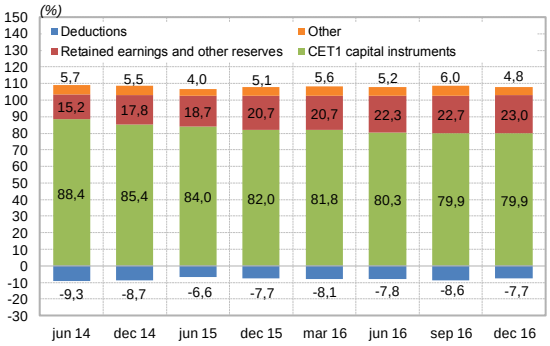


Figure 3.63: Breakdown of common equity Tier 1 capital



Source: Bank of Slovenia

The ability to generate internal capital will make a significant contribution to the long-term stability of capital adequacy in the future. The ongoing improvement in the economic environment and the maintenance of low interest rates are contributing favourably to the gradual revival of lending activity, and thereby to growth in capital requirements. If the improvement in the banks' capital adequacy has to date mostly come from the contraction in capital requirements, in the future its stability will also largely depend on the ability to generate additional capital. However, the generation of internal capital via profit remains relatively constrained owing to the low interest rates. The banks' performance will therefore depend on their ability to tailor their business models to the new economic circumstances by seeking new market opportunities, albeit taking account of the optimal take-up of new risks. The further optimisation of business processes and the disposal of existing capital could also have a favourable impact on capital adequacy.

Comparison of capital adequacy with the euro area (consolidated figures)

The total capital ratio on a consolidated basis improved by 0.5 percentage points in 2016 to 19.1%, as a result of which it differs from the unchanged total capital ratio on an individual basis. The Tier 1 capital ratio and the common equity Tier 1 capital ratio also increased by the same amount, both reaching 18.5%. In addition to the minimal decline in capital requirements, the increase in the ratios was mainly attributable to an increase in regulatory capital. In contrast to regulatory capital on an individual basis, it increased as a result of an increase in the banks' retained earnings, and was also not adversely impacted by the cessation of independent operations by one of the banks.[33]

[33] Poštna banka Slovenije, which was absorbed by its parent bank NKBM d.d. on 1 September 2016, was previously included under its parent bank in reporting on a consolidated basis.

Figure 3.64: Total capital ratio compared with euro area, consolidated figures

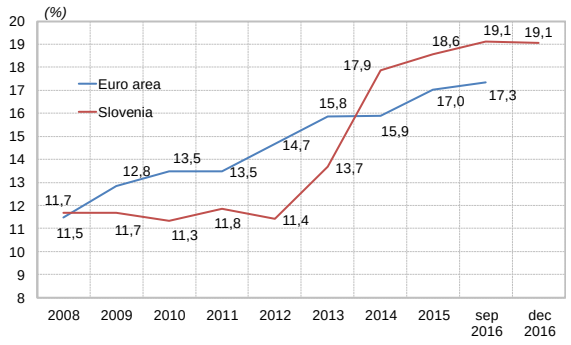
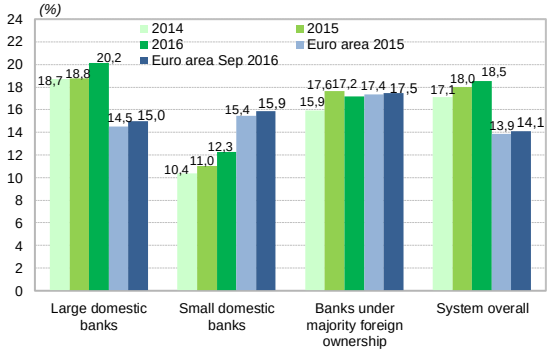


Figure 3.65: Common equity Tier 1 capital ratio (CET1) by bank group, comparison with euro area, consolidated figures



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

The Slovenian banking system's capital adequacy remains above the comparable average across the euro area.[34] At the same time the difference between the total capital ratio and the Tier 1 capital ratio at Slovenian banks is significantly smaller than between the two ratios in the euro area overall. This indicates that Slovenian banks are meeting their capital requirements with the highest quality forms of capital. The ratio of Tier 2 capital to total capital stood at 2.7% at the end of 2016, significantly less than the euro area average of just over 14%. The potential for strengthening capital by means of subordinated instruments is relatively small for Slovenian banks, for which reason there is no expectation of the figure increasing in the future.

Figure 3.66: Total capital ratios by euro area country, September 2016, consolidated basis

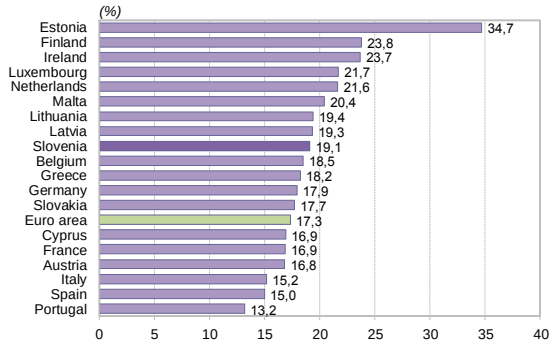
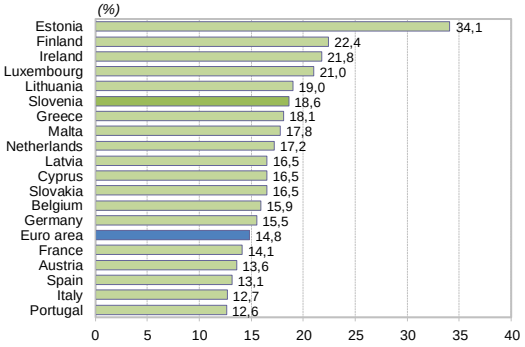


Figure 3.67: Tier 1 capital ratios by euro area country, September 2016, consolidated figures



Source: ECB (SDW)

The favourable capital position of Slovenian banks compared with the euro area is evidenced in the ratio of book capital to total assets. This remained almost double the euro area average in 2016, and stood at 12.5% at the end of the year.

The ratio of the Slovenian banking system's capital requirements to total assets remains higher than the euro area average, although the gap is gradually narrowing. The aforementioned solvency indicator stood at 4.0% in the Slovenian banking system at the end of 2016, compared with the latest euro area figure of 3.1% from September 2016. A major factor in the higher capital requirements of Slovenian banks is the use of higher risk weights, which is attributable to the actual structure of the capital requirements and the prevailing use of the standardised approach for assessing credit risk losses. The IRB approach, which allows banks greater flexibility in the use of risk weights, is used to assess only 2.4% of the Slovenian banking system's capital requirements, significantly below the overall euro area figure of 38%. Slovenian banks are also more exposed to corporates and to retail banking in their capital requirements, to which higher risk weights are applied. Optimising the disposal of capital in the future will depend on further improvements in the quality of the credit portfolio. At the same time developments in capital requirements will depend on changes in business models and thus in investment structure, with the aim of seeking better returns, thereby successfully generating internal capital.

[34] The latest available data for the euro area is for September 2016.

Figure 3.68: Distribution of the ratio of book capital to total assets across euro area countries, consolidated basis

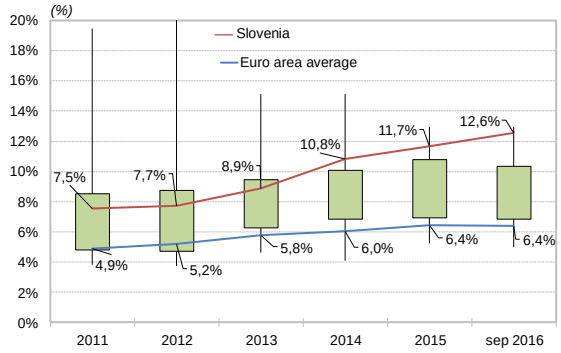
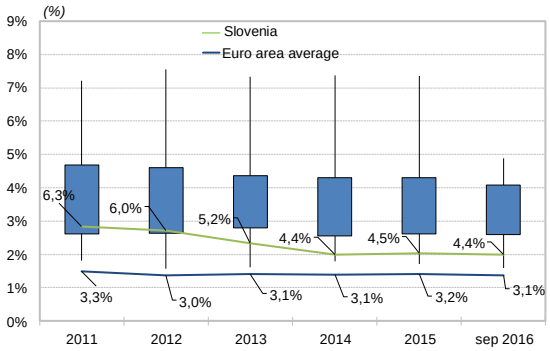


Figure 3.69: Distribution of the ratio of capital requirements to total assets across euro area countries, consolidated basis



Sources: Bank of Slovenia, ECB (SDW)

4 NON-BANKING FINANCIAL INSTITUTIONS

Summary

Economic growth is being positively reflected in the performance of non-banking financial institutions. At leasing companies this is being seen in an increase in new business, particularly in the area of equipment leasing, despite individual transfers as a result of acquisitions and absorptions by commercial banks. The new business is primarily being entered into with non-financial corporations and households, most often for cars and commercial vehicles. The trend of contraction in the stock of leasing business is slowing, while the proportion of claims more than 90 days in arrears declined sharply.

In the insurance sector the economic recovery is being reflected in gradual growth in gross written premium, while the low interest rate environment is having a negative impact on current and future income from investments. The number of insurance corporations disclosing a loss fell as a result of increased demand for life insurance. Last year's stress tests of the insurance sector revealed that the domestic insurance corporations would withstand the baseline scenario well, but individual insurance corporations would have difficulties in the event of the double shock scenario.

In the first quarter of 2017 attention on the capital markets switched to developments in Europe. Economic activity and inflationary pressures saw the required yield on 10-year German government bonds return to positive territory, while political risks inside the EU raised the spreads of other government bonds over the German benchmark. Positive investor sentiment is being reflected in renewed growth in household investments in mutual funds, an increase in volume on the Ljubljana Stock Exchange, and above-average growth in the domestic stock market index, which is also attributable to the low liquidity and shallow nature of the domestic stock market.

4.1 Structure of the Slovenian financial system

The Slovenian financial system's total financial assets stood at 174.7% of GDP at the end of 2016, up 2.2% in year-on-year terms. The financial assets of monetary financial institutions have continued to gradually decline because of the contraction in credit activity. Despite a decline in their share of the financial system as a whole, monetary financial institutions still account for 56% of total financial assets. The central bank's financial assets increased by 25% in year-on-year terms, because of an increase in investments in debt securities (the majority within the framework of the bond purchase programme). The increase of 2.5% in financial assets at non-monetary institutions was primarily attributable to an increase of 6% in assets in the insurance sector and a moderate increase in the financial assets of pension funds and investment funds because of the positive trend on stock markets, while the financial assets of other financial institutions declined slightly.

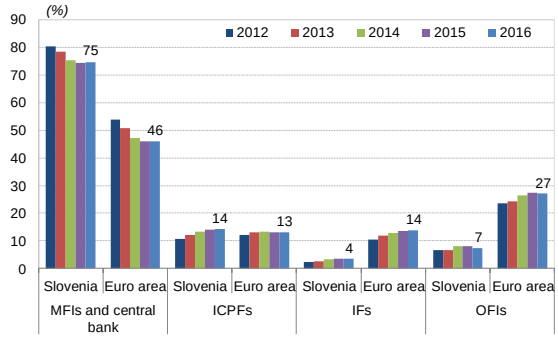
Table 4.1: Financial assets of the Slovenian financial sector

	Financial assets, EUR million			Breakdown, %			Ratio to GDP, %			Change between selected years, %		
	2008	2013	2016	2008	2013	2016	2008	2013	2016	2008	2013	2016
Monetary financial institutions	48.776	44.897	39.073	66,2	63,3	56,2	128,5	125,0	98,2	12,3	-8,0	-13,0
Central bank	9.323	10.806	12.860	12,6	15,2	18,5	24,6	30,1	32,3	10,6	15,9	19,0
Non-monetary financial institutions	15.611	15.225	17.554	21,2	21,5	25,3	41,1	42,4	44,1	-12,7	-2,5	15,3
insurance corporations	4.550	6.475	7.416	6,2	9,1	10,7	12,0	18,0	18,6	-3,3	42,3	14,5
pension funds	1.358	2.139	2.564	1,8	3,0	3,7	3,6	6,0	6,4	4,8	57,5	19,9
investment funds other than MMFs	2.044	1.887	2.480	2,8	2,7	3,6	5,4	5,3	6,2	-52,5	-7,7	31,4
other financial institutions	7.659	4.725	5.094	10,4	6,7	7,3	20,2	13,2	12,8	1,1	-38,3	7,8
Total	73.711	70.929	69.487	100,0	100,0	100,0	194,2	197,5	174,7	5,7	-3,8	-2,0

Source: Bank of Slovenia

The gradual strengthening of the insurance and pension sector in Slovenia, whose share of financial assets surpassed the average figure across the euro area in 2016, is having a positive impact on the development of the entire financial system in Slovenia. The Slovenian financial system nevertheless remains highly concentrated in the banking system. This is also attributable to the habits of domestic savers, who still save primarily in the form of bank deposits, and less in other forms of saving.

Figure 4.1: Structure of financial assets of selected sectors in Slovenia and the euro area



Notes: IFs: investment funds; ICPFs: insurance corporations and pension funds; OFIs: other financial institutions; MFIs: monetary financial institutions, including the central bank (for reason of data comparability)
Sources: ECB (SDW), Bank of Slovenia

4.2 Leasing companies

Leasing companies' turnover

Economic growth and increasing consumer confidence are having a favourable impact on the leasing sector. The growth in new business is based on equipment leasing, which accounted for 94.2% of all new business in 2016. Positive signals are also discernible in real estate leasing, although the small volume means that it not having a major impact on performance.

A similar trend is also evident in the banking sector, where the banks are increasing their presence on the leasing market, particularly through equipment leasing. The banks' new leasing business amounted to EUR 115 million in 2016, up 59.7% on the previous year, while the stock of leasing business was up 83% to stand at EUR 256 million. More than half of the increase was the result of the transfer of business and operations from leasing companies in 2015 and 2016. The business primarily originated from with non-financial corporations and households. The latter accounted for 58% of all new business at banks in 2016, and almost half of the stock of business.[35]

Confidence in the continuation of economic growth had a positive impact on growth in new business.[36] New business was up 8% in year-on-year terms in 2016, and by 13.1% in the first quarter of 2017. Growth in new business in 2016 was driven by increased demand for cars and commercial vehicles in equipment leasing, and for other real estate, hotels and catering establishments in real estate leasing. New business for commercial vehicles and freight vehicles amounted to EUR 55 million in the first quarter of 2017, down 1% on the same period last year, while car leasing business continued to grow, and was up 10% in year-on-year terms at EUR 160 million. The trend in new leasing business for production machinery and equipment reversed into positive territory in the first quarter of 2017: it was up 19.5% on the same period last year at EUR 15 million. New real estate leasing business strengthened further in the first quarter of 2017, although this was primarily attributable to the purchase of receivables from finance leasing of real estate from the rest of the world. New real estate leasing business consequently increased by 78.6% in year-on-year terms to EUR 25.2 million. Commercial real estate is most commonly the subject of a finance lease.

The LTV at the end of the first quarter of 2017 stood at 79% for equipment leasing, down from 79.8% a year earlier, and 99% for real estate leasing, up from 96.8% a year earlier. As in the previous year, the majority of new business in the first quarter of 2017 was concluded with maturities of between 1 and 10 years. Maturities between 1 and 5 years accounted for 32.5% of new business, and maturities between 5 and 10 years for 38%.

[35] Source: Survey of bank performance, 2017.
[36] The analysis below of leasing performance takes account of data from institutions reporting based on the regulation on reporting by institutions providing leasing services.

Figure 4.2: New leasing business[37]

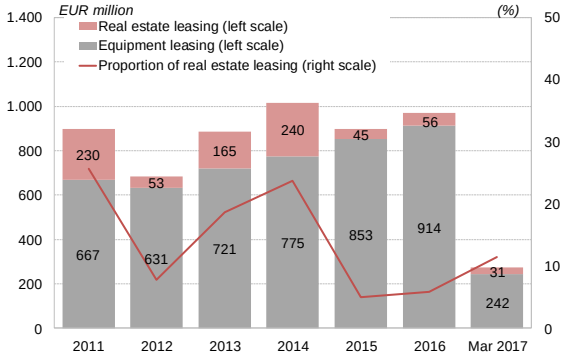
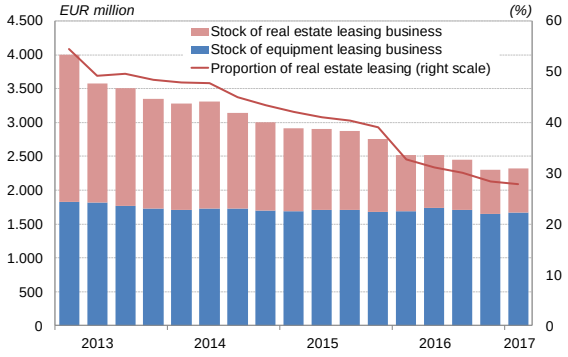


Figure 4.3: Stock of leasing business



Source: Bank of Slovenia

The stock of leasing business in the first quarter of 2017 was up on the previous quarter for the first time in the last two years.[38] The total stock of leasing business was up 0.8% on the final quarter of 2016, although the previous declining trend meant that it was down 7.8% in year-on-year terms at EUR 2.3 billion. The stock of real estate leasing business stood at EUR 645 million at the end of the first quarter of 2017, down 21.7% in year-on-year terms. The main factor in the contraction in the stock of real estate leasing business was a lack of major real estate projects, particularly in the area of commercial real estate, which accounted for the majority of real estate leasing business in the past. Another significant factor was the transfer of business to a commercial bank, which reduced the statistical reporting sample. The stock of equipment leasing business also contracted in year-on-year terms, by 1.1%, which was solely attributable to the transfer of business to a commercial bank in the interim, the stock of equipment leasing having increased again in the quarter after the transfer.

Equipment leasing remains the main source of income for leasing companies. Leasing of cars and commercial and freight vehicles is continuing to provide stable situation in equipment leasing. The stock of leasing business in both categories increased in year-on-year terms, by 5% overall to stand at EUR 1.4 billion. Other categories of equipment leasing contracted over the period in question, and account for just 13.6% of total equipment leasing business.

The quality of leasing business improved further in the first quarter of 2017. The proportion of claims more than 90 days in arrears stood at 6.6% at the end of the first quarter, down 3.7 percentage points in year-on-year terms. In equipment leasing the proportion of claims more than 90 days in arrears declined by 2.8 percentage points to 4.5%, while in real estate leasing the proportion of claims more than 90 days in arrears declined by 4.4 percentage points to 12.1%,. The improvement in the quality of leasing business was primarily attributable to write-offs and the removal of business from the balance sheets of three leasing companies.

Financing of selected institutional sectors

Non-financial corporations and households remain the main source of business for leasing companies. The non-financial corporations sector and household sector together accounted for 97.5% of the stock of leasing business at the end of the first quarter of 2017, or EUR 2.3 billion in total.

Leasing companies' exposure to the non-financial corporations sector is gradually declining. Exposure to non-financial corporations amounted to EUR 1.25 billion at the end of the first quarter of 2017, or 54.1% of the total stock of leasing business, down 1.9 percentage points in year-on-year terms. The contraction in exposure to non-financial corporations is the result of the continuing negative trend in real estate leasing, and the aforementioned transfer of business to a commercial bank in 2016, which also had a negative impact on the moderate year-on-year contraction in equipment leasing. The stock of equipment leasing business with non-financial corporations strengthened relative to the previous quarter, while the contraction in the stock of real estate leasing business ended. The stock of equipment leasing business for commercial and freight vehicles stood at EUR 330 million at the end of the first quarter of 2017, up 17.4% in year-on-year terms, and accounted for 26.3% of the total stock of leasing business with non-financial corporations. Cars are the

[37] Owing to data availability, in this entire section leasing business since 2011 has been disclosed at financed value, excluding the financing of inventories. All business with residents of Slovenia is included in the analysis.

[38] The contraction in the stock of leasing business in 2016 was attributable to an accounting revision in the amount of EUR 130 million in the reporting of one leasing company in the first quarter of 2016, and other transfers of business from two leasing companies to a commercial bank during the last two years.

second largest category of equipment leasing. The stock of leasing business in the aforementioned segment was up 9.6% at EUR 220 million. The stock of other equipment leasing business contracted, similarly to real estate leasing.

The total proportion of claims against the non-financial corporations sector more than 90 days in arrears stood at 9.3% at the end of the first quarter of 2017, down 5.4 percentage points in year-on-year terms as a result of write-offs at the end of 2016. The stock of claims more than 90 days in arrears contracted by 38% to EUR 57 million, while the total stock of leasing business with non-financial corporations contracted by 10.9% to EUR 1.25 billion.

Figure 4.4: Stock and proportion of leasing business more than 90 days in arrears

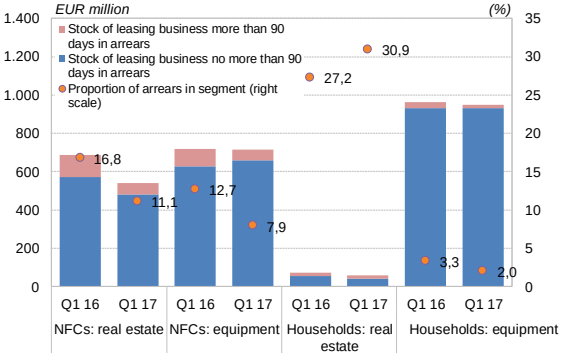
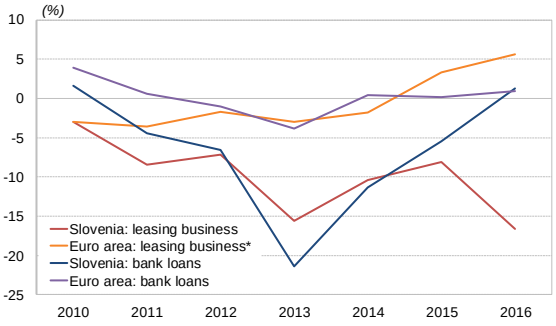


Figure 4.5: Stock of leasing business and bank loans to the non-banking sector



* Data available in June 2016

Sources: ECB, Leaseurope, BAS, Bank of Slovenia, own calculations

The proportion of leasing business accounted for by households is increasing. The proportion of the stock of leasing business accounted for by households stood at 43.4% at the end of the first quarter of 2017, up more than 2 percentage points in year-on-year terms because of the faster contraction in business with non-financial corporations, and not actually as a result of organic growth in business with households. The stock of leasing business with households was down 2.8% in year-on-year terms at EUR 1.0 billion. The quality of this segment of leasing companies' investments is improving. The proportion of claims against households more than 90 days in arrears was down 1.4 percentage points in year-on-year terms at 3.6%.

Leasing companies' performance

Leasing companies have remained profitable in 2017. The high growth seen at the end of 2016 did not continue, but a net profit of EUR 8.7 million was nevertheless generated in the first quarter of 2017.[39] Net profit was down almost a half in year-on-year terms as a result of a larger contraction in revenue from commercial leasing and investment property, which halved, while there were no major changes in expenses.

Figure 4.6: Selected performance indicators

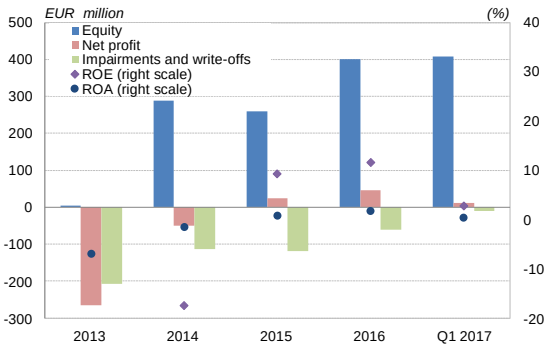
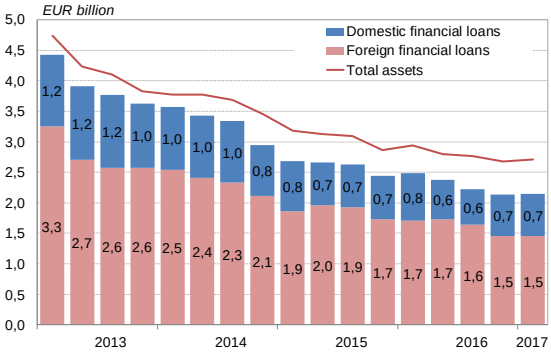


Figure 4.7: Debt funding of leasing companies



Source: Bank of Slovenia

The contraction in the debt funding of leasing companies slowed again over the last two quarters. Domestic and foreign loans increased by 0.5% in the first quarter of 2017 to EUR 2.15 billion. Loans from the rest of the world remain the main source of funding, accounting for 68% of all loans. Similarly to the early part of 2016, in the first quarter of 2017 domestic loans were up on the previous quarter, by 1.7% at EUR 689 million.

[39] The figures for net profit had not been finalised when the FSR was being drafted.

4.3 Insurers

Features of insurers' performance

The insurance sector provides vital services to the economy, and in terms of assets takes first place among non-monetary institutions in Slovenia. The favourable economic situation is producing growth in the insurance sector's total assets. The total assets of insurance corporations[40] and reinsurance corporations stood at EUR 7.2 billion and EUR 885 million respectively at the end of the first quarter of 2017. By contrast insurers are increasingly burdened by the changed circumstances on capital markets, in particular the extremely low level of interest rates, which is not allowing them to generate higher returns on their investments.

The favourable macroeconomic situation is being reflected in the insurance sector's performance with a lag, for which reason more significant growth in written premium can be expected in the coming quarters. Insurance corporations' gross written premium was up 2% in year-on-year terms in 2016, and up 5.6% in the first quarter of 2017. The latter was primarily attributable to an increase in gross written premium from general insurance and life insurance. Insurance corporations' highest growth was recorded by life insurance, where year-on-year growth in the first quarter stood at 11.8%. The growth in life insurance was attributable to increases in gross written premium in traditional life insurance and also in unit-linked life insurance. As the largest category in terms of gross written premium, general insurance increased by 4.3% in the first quarter as a result of an increase in land motor vehicle insurance and motor vehicle liability insurance. Gross written health insurance premium increased by 2.4% over the same period.

Under the healthcare reforms, insurance corporations are exposed to high regulatory risk in connection with supplementary health insurance. Any change in the funding of healthcare services that envisages changes in the area of supplementary health insurance could have a significant impact on the breakdown of insurance corporations' gross written premium and the insurance sector's exposure to risk.

Figure 4.8: Amount of and growth in gross written premium by insurance class

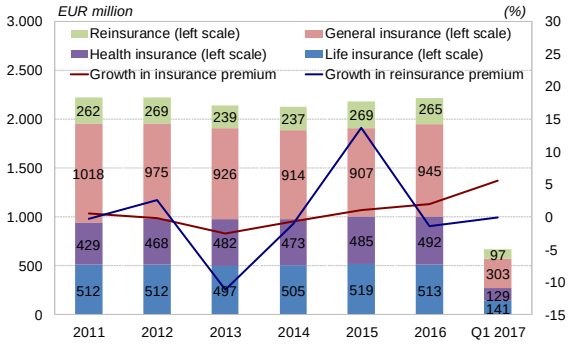
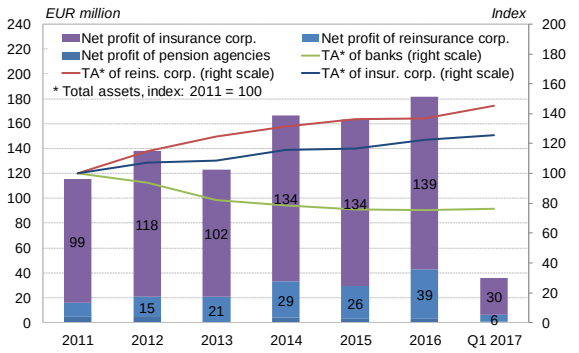


Figure 4.9: Insurers' net profit and total assets



Sources: ISA, Bank of Slovenia

Insurance corporations recorded growth in net profit in 2016, primarily because of a decline in investment expenses and increased profit in life insurance, while net profit in general insurance declined. Insurance corporations' net profit in the first quarter of 2017 was down 22.5% in year-on-year terms. The year-on-year decline in profit was the result of a decline in profit from general insurance, where income from investments declined on one-side and claims payouts increased on the other. The number of loss-making insurance corporations fell from six to four in the first quarter of 2017. All four insurance corporations disclosed a loss in general insurance, while two of them returned to profitability in life insurance. The reinsurance corporations performed better than the insurance corporations in 2016 and in the first quarter of 2017, recording year-on-year increases of 39.4% and 22.1% respectively. This was attributable to an increase in income from investments in 2016, and an increase in insurance premiums in the context of a simultaneous decline in expenses from investments in the first quarter of 2017.

[40] The number of insurance corporations falling under the supervision of the ISA fell to 14 at the end of 2016 after the merger of two insurance corporations, and then to 13 in the first quarter of 2017 as a result of the conversion of one insurance corporation into a branch.

Capital adequacy

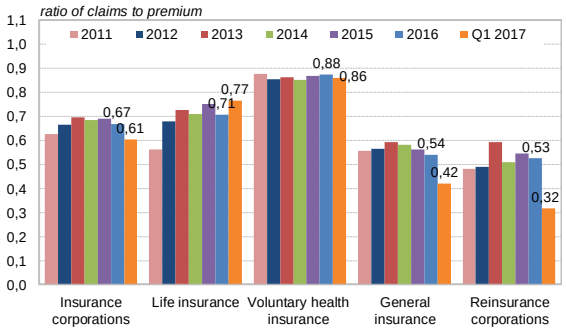
The capital adequacy of insurance corporations in Slovenia remains at a high level. The solvency capital requirement (SCR) expresses the level of capital that allows an institution to absorb significant unforeseen losses and provides a reasonable assurance to policyholders, insurers and beneficiaries. The SCR amounted to EUR 790 million at the end of 2016, with a solvency ratio of 233%, which indicates that insurance corporations remain highly solvent. Five of the 14 insurance corporations had a solvency ratio of less than 200%, while at individual insurance corporations it exceeded 350%. The total minimum capital requirement (MCR) of insurance corporations amounted to EUR 277 million at the end of 2016. The reinsurance corporations also remain highly liquid, with an overall solvency ratio of 275%.

Five of the domestic insurance corporations were included in the 2016 stress tests conducted by the EIOPA, the European insurance regulator, in conjunction with local supervisory authorities. All five of the insurance corporations were able to comfortably withstand the scenario of a longer period of low interest rates, while individual insurance corporations responded slightly worse in the double shock scenario (as a result of a fall in the risk-free interest rate curve and a fall in government bond prices) owing to the length of insurance liabilities and the longer maturities of interest-sensitive investments.[41]

Underwriting risk

The claims ratio as measured by the ratio of gross claims paid to gross written premium improved in 2016. The decline in claims ratio from 0.67 to 0.61 in 2016 was attributable to a decline of 1.3% in claims paid to EUR 1.3 billion, and also an increase of 2% in gross written premium to EUR 1.9 billion. The claims ratio stood at 0.56 over the first quarter of 2017, up 4% in year-on-year terms as a result of an increase of 9.9% in claims paid, while gross written premium increased by 5.6%.

Figure 4.10: Claims ratios for the main insurance classes



Source: ISA

The claims ratio at reinsurance corporations improved in 2016 and the first quarter of 2017. The decline in claims paid was larger than the decline in written premium in 2016, and in year-on-year terms in the first quarter of 2017.

Influence of insurers on the stability of the banking sector via credit insurance

Written premium for credit insurance increased for the second consecutive year. The growth in written premium for credit insurance in 2016 was attributable to growth in written premium for credit insurance for consumer loans (6%) and for housing loans (32%). Premiums for export credit insurance, which was the second most important type of credit insurance, declined by 8%. The main factor in the decline in claims paid in 2016 was a decline in claims from export credit insurance and credit insurance for consumer loans, which together accounted for 69% of claims paid in 2016. The trend remained similar in the first quarter of 2017. The most notable changes relative to 2016 were in written premium from credit insurance for consumer loans, which was down 1% in year-on-year terms after growing in 2016, and written premium from export credit insurance, which increased by 2%.

[41] Detailed data on the insurance stress tests was not yet available when the FSR was being drafted.

Figure 4.11: Written premium and claims paid

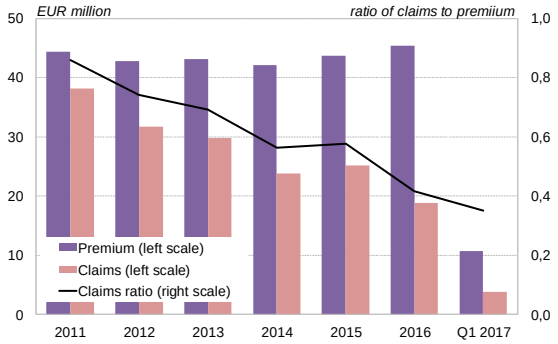
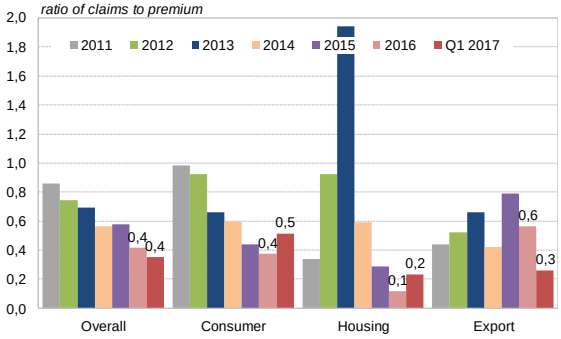


Figure 4.12: Claims ratio for credit insurance



Source: ISA

The positive trend in written premium and the decline in credit insurance claims paid were also reflected in a decline in the claims ratio for credit insurance in 2016, and in year-on-year terms in the first quarter of 2017.

Investment risk

The change in circumstances on capital markets, which because of the low interest rate environment are no longer providing high returns on debt securities, is having an impact on current and future income from investments. Income from investments declined by 24% in 2016, albeit as a result of a decline in income from affiliates, which had increased sharply in 2015. Interest income accounted for 46.2% of income from investments in 2016, having declined by 3.4% to EUR 34.7 million.

In the low interest rate environment, reinvestment risk remains one of the most significant risks for the insurance sector. However, the domestic insurance corporations' performance is based on stable cash flows from insurance policies, which provide a stable, long-term cash flow that is not dependent on the low interest rate environment to the same degree that the commercial banks are. As a result the possibility of contagion within the financial system is smaller.

The investment structure of the domestic insurance sector continues to favour investments in bonds, while the investment structure of insurance corporations across the euro area is more balanced. The Slovenian insurance sector's investments in debt securities amounted to EUR 4.5 billion at the end of 2016, or 60.5% of the insurance corporations' total financial assets. In the pension funds sector there have to date been no major changes in investment structure since the introduction of lifecycle funds.

Figure 4.13: Comparison between Slovenia and euro area of the investment structure of the insurance sector (S.128

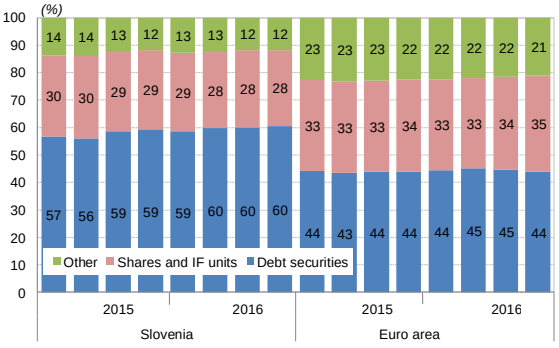
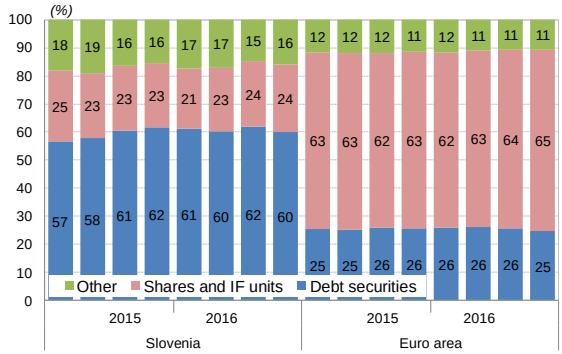


Figure 4.14: Comparison between Slovenia and euro area of the investment structure of the pension funds sector (S.129)



Sources: ECB, Bank of Slovenia

In the search for higher returns, insurance corporations, pension agencies and mutual pension funds are all relying on foreign investments. Insurance corporations held investments of EUR 3.9 billion in foreign securities at the end of 2016, while pension agencies and pension funds together held investments of EUR 1.3 billion. With the aim of increasing their proportion of foreign investments, in recent years insurance corporations, pension agencies and mutual pension funds have reduced their exposure to investments in domestic banks and money-market funds and investments in domestic government bonds. The proportion of foreign investments increased by 14 percentage points between 2011 and 2016 to stand at 65% at insurance corporations, and by 10 percentage points to stand at 59% at pension agencies and mutual pension funds.

Figure 4.15: Proportion of investments by the insurance sector in shares, investment fund units and debt securities by issuer sector

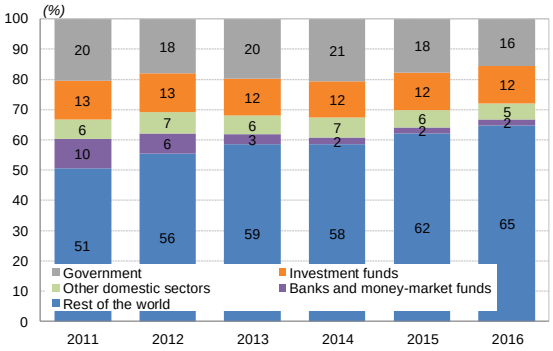
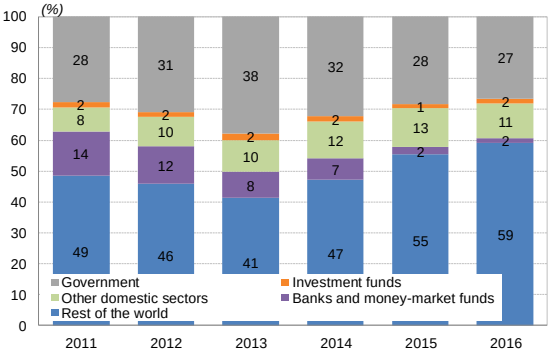


Figure 4.16: Proportion of investments by the pension funds sector in shares, investment fund units and debt securities by issuer sector



Source: Bank of Slovenia

Mutual pension funds' assets under management increased by 4.8% in 2016 to pass the EUR 1 billion mark for the first time.[42] The number of members of mutual pension funds also rose, in line with the increase in assets, by 2.6% to 259,606. Pension agencies, which fall under the oversight of the ISA,[43] are also recording further growth in assets. Pension agencies' assets increased by 9.4% in 2016 to EUR 684 million.

4.4 Capital market

Developments on the capital market

The positive growth on foreign share markets, which in 2016 was based on growth in the US, was more dependent on developments in Europe in the first quarter of this year. The US administration's failure to modify the healthcare reforms gave rise to speculation around the successful outcome of further reforms to encourage additional economic growth in the US (easing the tax burden on US firms and increasing public expenditure). In recent elections voters in Austria, the Netherlands and France expressed confidence in pro-European political parties, which eased speculation over the uncertainty of further European integration. Political risk remains high, because of the upcoming presidential and parliamentary elections in other euro area countries. Economic growth in the EU and increased consumer confidence have been positively reflected in growth in prices on share markets in western Europe in 2017, which were strongly outperformed by US prices last year.

Figure 4.17: Year-on-year changes in selected stock market indices

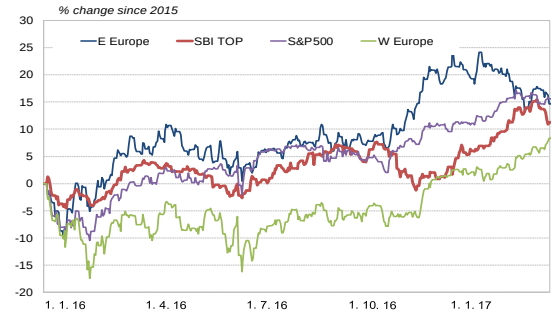
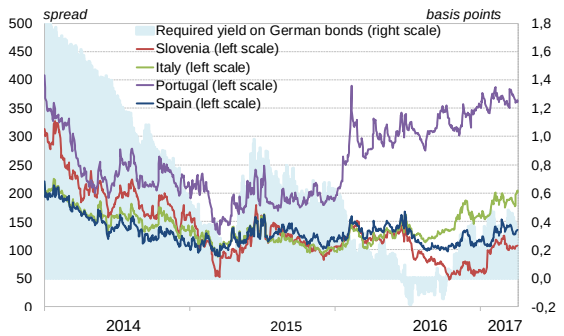


Figure 4.18: Spreads of selected 10-year government bonds over German benchmark bond



Sources: Bloomberg, own calculations

The increased political uncertainties in the euro area in the six months to March 2017 brought a rise in the spreads of euro area government bonds over the German benchmark. Other factors were the increased inflation expectations in the euro area, and the expectation of a more expansive fiscal policy in the US. The yield to maturity on 10-year German government bonds re-entered positive territory at the end of 2016, at 0.2%. The gradual rise in the required yield continued in 2017. The required yields nevertheless remain

[42] Source: SMA, based on three pension fund operators and nine mutual pension funds.
[43] Includes three pension agencies.

sharply below their historical averages, for which reason a gradual rise in required yields and fall in bond prices can be expected when monetary policy is tightened in the future.

Figure 4.19: Market capitalisation on the Ljubljana Stock Exchange and annual turnover ratios

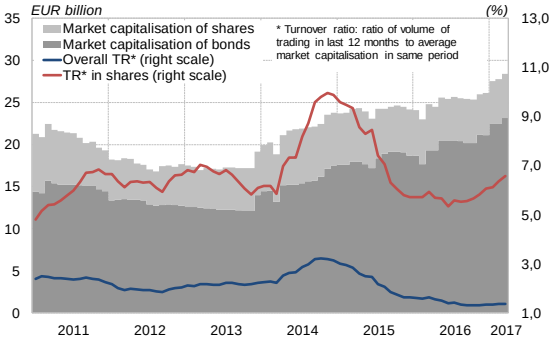
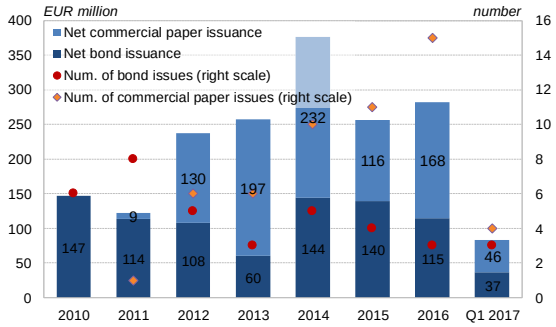


Figure 4.20: Issuance of bonds and commercial paper (excluding government sector)



Sources: LJSE, KDD, Bank of Slovenia

Investor reticence on the domestic stock market eased in the first quarter of 2017. The SBI TOP, Slovenia's stock market index, recorded an above-average rise of 10.9% in the aforementioned period, having risen by 3.1% in 2016. The market capitalisation of shares stood at EUR 5.3 billion at the end of the first quarter of 2017, down 4.3% in year-on-year terms, as a result of the delisting of certain share issuers in 2016. There were no new share issues during the first quarter of 2017. The volume of trading in shares in the first quarter of 2017 was up 32% in year-on-year terms. The concentration of volume remains high: 57% of the total volume in shares related to just three firms listed on the prime market. The contraction in market capitalisation and moderate increase in the volume of trading in shares brought an increase in the turnover ratio.

The market capitalisation of bonds on the Ljubljana Stock Exchange continued to increase in 2016 and early 2017 because of government bond issuance activity. The market capitalisation of bonds stood at EUR 23.1 billion at the end of the first quarter of 2017, up 19.9% in year-on-year terms. The rise in market capitalisation did not have any impact on the volume of trading in bonds, as the majority of trading was on the OTC market. The trend of decline in trading in bonds thus continued: it amounted to EUR 6 million in the first quarter of 2017, down 24.7% in year-on-year terms, having amounted to EUR 19 million over the whole of 2016, down 66.7%

Non-financial corporations increased their issuance of bonds in year-on-year terms in the first quarter of 2017, after a declining trend in 2016. Issuance of bonds by non-financial corporations was down 8.6% in 2016 at EUR 115 million, and amounted to EUR 37 million in the first quarter of 2017, compared with zero in the first quarter of 2016. Issuance of commercial paper by non-financial corporations amounted to EUR 45.8 million in the first quarter of 2017, down 1.3% in year-on-year terms, having amounted to EUR 167 million in 2016, up 46%. Were the expectations of a gradual rise in interest rates in the coming quarters to strengthen, it could lead to greater interest in bond issuance than commercial paper issuance, although the impact on the domestic stock market would be limited owing to low liquidity and the limited number of potential issuers.

Even given the right functioning and oversight, the less developed capital market is poorly complementing traditional sources of financing. The level of development of the Slovenian capital market remains well behind the euro area average. The number of equity issuers is falling continually, while the favourable situation for issuing debt securities is mainly being exploited by firms that have previously been active in this area.

Having declined in 2016, residents' net outward investments in the first quarter of 2017 were up in year-on-year terms. Net outward investments declined in year-on-year terms in 2016 owing to above-average net purchases in 2015 made by pension funds (on account of the gradual introduction of lifecycle funds) and institutions in the sector of captive financial institutions and money lenders. The trend of increase in residents' exposure to bonds issued in EU Member States outside the euro area continued in the first quarter of 2017. Net investments in bonds of these countries were up 21.3% in year-on-year terms at EUR 133 million. The positive trend on stock markets resulted in an increase in investments in foreign shares in the total amount of EUR 111 million. Mutual funds and insurance corporations were the largest net purchasers of shares, in the total amount of EUR 74 million. Residents recorded net sales of foreign shares in

the same period last year. The stock of outward investment stood at EUR 12.3 billion at the end of the first quarter of 2017, up 11.4% in year-on-year terms.

Figure 4.21: Net outward investments by residents

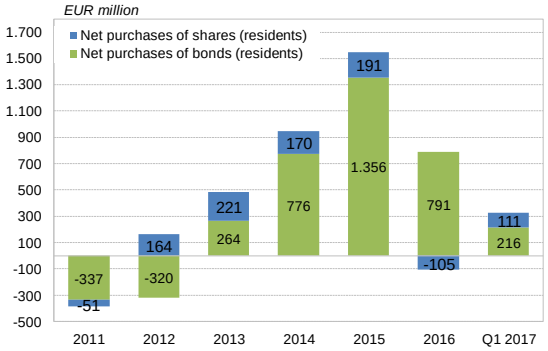
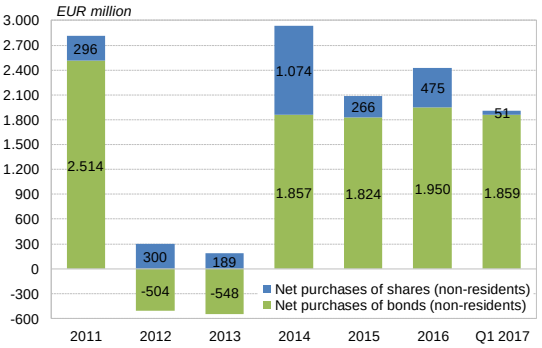


Figure 4.22: Net inward investments by non-residents



Sources: KDD, Bank of Slovenia

Net inward investments by non-residents were primarily made via investments in government debt securities. Non-residents' net purchases of debt securities in 2016 were up 21.7% on the previous year. Their net purchases of domestic shares also increased, as a result of the completion of transactions in connection with acquisitions executed in late 2015 and early 2016. This trend continued in the first quarter of 2017 with regard to bonds, as non-residents' purchases of Slovenian government debt securities increased by 42% in year-on-year terms as a result of new-additional issues of government bonds during this period. Net investments in equities in the first quarter of 2017 amounted to EUR 51 million, down 68% in year-on-year terms.

Investment funds

The positive economic growth being reflected on stock markets is having a favourable impact on inflows into mutual funds and on their assets under management. Mutual funds' assets under management amounted to EUR 2.6 billion at the end of the first quarter of 2017, up 16.2% in year-on-year terms. The figure was up 5.9% on March 2015, despite the increased volatility in the interim. Net investment in mutual funds increased by EUR 20 million during the first quarter of 2017. In the quest for higher returns investors increased their holdings of equity and balanced funds, and reduced their exposure to money-market and bond funds.

The largest factor in the increase in net investments in mutual funds in the first quarter of 2017 was investments by households. In the quest for higher returns, households have recorded net inflows of EUR 21 million and EUR 18 million into balanced funds and equity funds this year, and net withdrawals in the total amount of EUR 6 million from money-market funds and bond funds.

Figure 4.23: Mutual funds by type

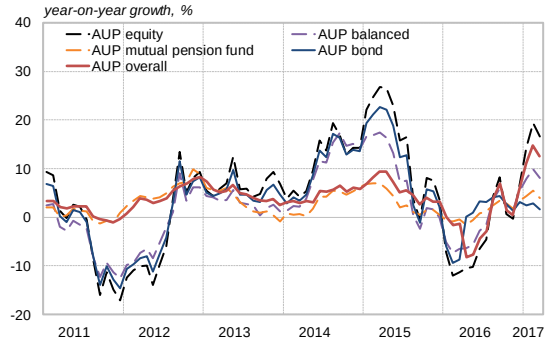
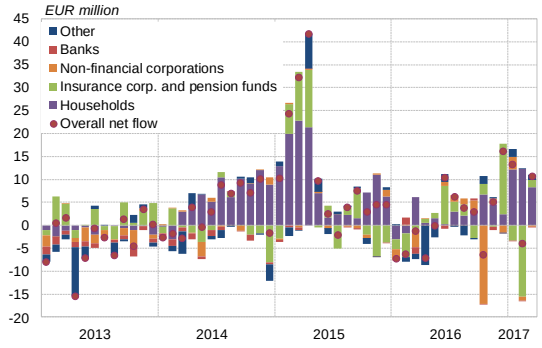


Figure 4.24: Net flows by investor sector



Source: Bank of Slovenia

Consolidation on the mutual fund operators' market is also being reflected in the ownership structure of domestic mutual fund units. By March 2017, non-financial corporations had almost entirely withdrawn from ownership of domestic mutual fund units. This was attributable to the above-average payout to non-financial corporations in October 2016, which came about as a result of consolidation on the market. Households are thus accounting for an increasing proportion of ownership: their holdings reached 59.9% of

the total at the end of the first quarter of 2017. Insurance corporations and pension funds are maintaining their holdings of mutual funds at 34% of the total, despite an increase in net withdrawals in early 2017.

Figure 4.25: Ownership structure of domestic mutual fund units

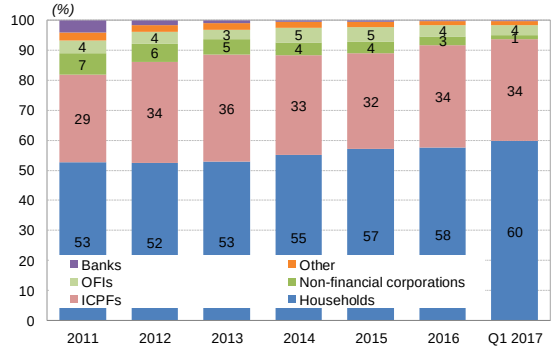
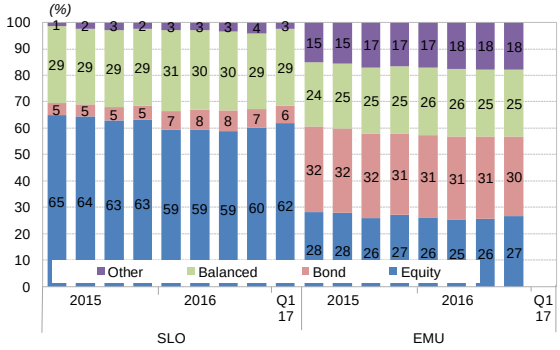


Figure 4.26: Breakdown of investments by fund type in Slovenia and the euro area*



Note: *Data for the euro area not available for the first quarter of 2017.
Sources: Bank of Slovenia, ECB

Domestic investors continue to favour higher-risk forms of saving in mutual funds. Equity funds account for more than 60% of total investments in domestic mutual funds, while the investment breakdown across the euro area is more balanced. Investments in other forms of investment fund, most notably real estate funds and miscellaneous funds, have increased across the euro area over the last two years.

THEMATIC SECTION

LOW INTEREST RATE ENVIRONMENT AND INCREASING MATURITY MISMATCH BETWEEN BANK ASSETS AND LIABILITIES

Authors:

Meta Ahtik
Domenica Di Virgilio
Ana Gorišek
Tomaž Košak
Mitja Lavrič

Contents

1 MATURITY MISMATCH OF INVESTMENTS AND FUNDING 68
1.1 Residual maturity of investments and funding, and maturity gap 68

2 RISKS INHERENT IN MATURITY MISMATCH OF INVESTMENTS AND FUNDING 69
2.1 Increasing maturity mismatch of investments and funding and its consequences 69
2.2 Refinancing risk 69
2.2.1 Situation in the Slovenian banking system 69
2.2.2 Stability of sight deposits 70
2.2.3 Concentration of deposit funding 71
2.2.4 Potential scenarios of developments in sight deposits 72
2.3 Liquidity risk 74
2.3.1 Liquidity ratios and secondary liquidity 74
2.3.2 Asset commonality 74

3 INSTRUMENTS FOR MITIGATING RISKS INHERENT IN EXCESSIVE MATURITY MISMATCH 76
3.1 Categories of available instruments 76
3.2 Deposit guarantee scheme 76
3.3 First-bucket and second-bucket liquidity ratios 76
3.4 Liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) 76
3.5 Restriction of the pace of reduction in the LTD ratio (GLTDF) 77
3.6 Lender of last resort and emergency liquidity assistance 77
3.7 Minimum reserves 77

4 CONCLUSION 78

5 REFERENCES AND SOURCES 79

Figures

Figure 1.1:	Gap between weighted average maturity of assets and liabilities in Slovenia (months)	68
Figure 1.2:	Stock of assets and liabilities of various residual maturities, including cash on the asset side	68
Figure 2.1:	Structure of bank funding	70
Figure 2.2:	Interest rate spread between deposits of various maturities	70
Figure 2.3:	Proportion of total deposits accounted for by sight deposits	70
Figure 2.4:	Proportion of total liabilities accounted for by sight deposits	70
Figure 2.5:	Ratio of sight deposits by the non-banking sector to GDP	71
Figure 2.6:	Distribution of net monthly changes in the stock of sight deposits by the non-banking sector in Slovenia, 1995 to 2017	71
Figure 2.7:	Distribution of net monthly changes in the stock of total deposits by the non-banking sector in Slovenia, 1995 to 2017	71
Figure 2.8:	Proportions of deposits of the entire banking system (excluding households) and of deposits with a residual maturity of up to 90 days accounted for by the top 30 depositors	72
Figure 2.9:	Proportion of total deposits accounted for by the top 30 depositors	72
Figure 2.10:	Exposure to contagion risk as a result of asset commonality in Slovenia, March 2017	74
Figure 2.11:	Bank exposure to the five securities accounting for the largest proportions of the Slovenian banking system's total assets, March 2017	74

LOW INTEREST RATE ENVIRONMENT AND INCREASING MATURITY MISMATCH BETWEEN BANK ASSETS AND LIABILITIES

Central banks have used the instruments of low interest rates for the purpose of holding inflation at close to but under its target of 2%. At the same time this measure has reinforced certain risks to financial stability. The Slovenian banking system is particularly exposed to income risk, largely in connection with interest rate risk, liquidity risk and refinancing risk. Some of these risks are being strengthened by the persistence of low interest rates, while in light of the banks' current adaptations to the low interest rate environment other risks can be expected to strengthen when interest rates return to their normal levels. The risks interact: an improvement in one can sometimes lead to a deterioration in another.

Interest rate risk can be measured by the difference between the average repricing periods for asset and liability interest rates and by the interest rate gap. Both indicators in the Slovenian banking system reveal the sensitivity of the banks' performance to a rise in interest rates. Contractually defined interest rates are another significant factor in interest rate risk. In the event of inadequate hedging against interest rate risk, the banks with a higher proportion of fixed-rate loans (which have increased recently) will feel fewer positive income effects from the rise in interest rates than the banks with a higher proportion of variable-rate loans. When the banks' hedging against interest rate risk is taken into account, the picture of interest rate risk is significantly improved.[44]

The persistence of low interest rates could also lead to an increase in income risk. In the past the decline in the net interest margin was attributed primarily to price factors (developments in interest rates on various elements of interest-bearing assets and liabilities), and less to quantity factors, despite the decline in lending activity. Given the limited possibilities of improving cost-efficiency, and the limited possibilities of further reducing interest expenses, the banks will be exposed to increased income risk over the medium term if they fail to expand lending activity.[45]

The widening of the maturity gap between investments and funding is increasing the importance of liquidity at banks. Refinancing risk is increasing as the average maturity of investments lengthens and the average maturity of funding shortens. The increase in the proportion of deposits by the non-banking sector accounted for by sight deposits is continuing to increase, which is reducing the banks' interest expenses over the short term, but is also introducing uncertainty into the funding structure through the increased maturity mismatch of assets and liabilities. The effective maturity and stability of sight deposits need to be taken into account for the assessment of liquidity risk and refinancing 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. If the contractually defined maturity of sight deposits is taken into account in the calculation, the average maturity of funding is shortening sharply. Because the average maturity of investments is lengthening at the same time, the maturity mismatch of investments and funding is increasing. The high proportion of sight deposits and short-term deposits is increasing the possibility of deposit switching between banks or deposit flight in the event of a shock, and is increasing the banks' liquidity requirements[46] and interest rate risk.

This paper will focus on refinancing risk and liquidity risk inherent in the excessive maturity mismatch of bank investments and funding, as these are the risks with the greatest potential to develop into risks of a systemic nature, at least in theory.

[44] For more, see the *Income risk and interest sensitivity* section.
[45] For more, see the *Income risk and interest sensitivity* section, June 2016 Financial Stability Review, and Ahtik, Banerjee & Remšak (2016).
[46] Liquid assets are usually lower-yielding than illiquid investments, which is an additional pressure on bank profitability.

1 MATURITY MISMATCH OF INVESTMENTS AND FUNDING

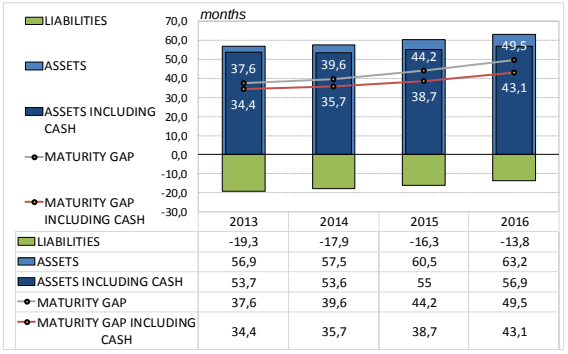
1.1 Residual maturity of investments and funding, and maturity gap

The banks are still holding a large proportion of their investments in the most liquid forms of asset, namely securities and claims against the central bank. The average maturity of corporate loans is nevertheless lengthening as mainly long-term loans are approved. In the wake of the sustained contraction in short-term loans, which are declining in terms of stock and in terms of new loans, there has been a sharp increase in the proportion of corporate loans accounted for by long-term loans. A similar process is also discernible in household loans, as a result of intensive approvals of housing loans. Consequently, the effect of the approval of long-term loans is stronger than the effect of the increase in liquid assets. It is evident that the weighted average residual maturity on the asset side is lengthening (Figure 1.1).

Slovenian banks are mostly funding assets of various (longer) maturities through sight deposits. The banks' dependence on domestic funding is reducing their dependence on foreign wholesale funding, which is simultaneously reducing refinancing risk on interbank market. The banks are reducing their interest expenses by increasing the proportion of short-term funding, but at the same time are exposing themselves to increasing maturity mismatch of assets and liabilities. Figure 1.1 shows that the weighted average residual maturity of funding is declining on a sustained basis as a result of the increase in sight deposits.

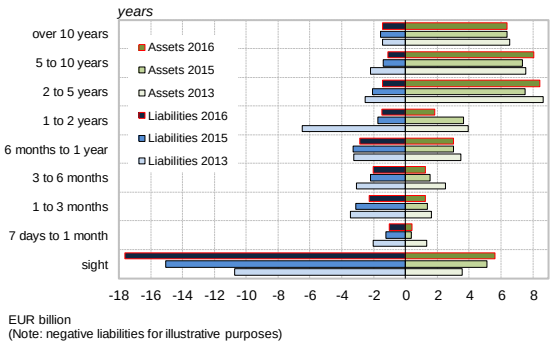
The maturity mismatch gap widened by 31.6% over the previous years (excluding holdings of cash), or by 25.3% (including cash assets).

Figure 1.1: Gap between weighted average residual maturity of assets and liabilities in Slovenia (months)



	2013	2014	2015	2016
LIABILITIES	-19,3	-17,9	-16,3	-13,8
ASSETS	56,9	57,5	60,5	63,2
ASSETS INCLUDING CASH	53,7	53,6	55	56,9
MATURITY GAP	37,6	39,6	44,2	49,5
MATURITY GAP INCLUDING CASH	34,4	35,7	38,7	43,1

Figure 1.2: Stock of assets and liabilities of various residual maturities, including cash on the asset side



EUR billion
(Note: negative liabilities for illustrative purposes)

Note: Equity as a source of funding is not included in the calculation of the residual maturity of funding.
Source: Bank of Slovenia

Owing to the extremely short-term contractually defined maturity of sight deposits, the average maturity of funding is shortening, while the average maturity of investments is lengthening. The maturity mismatch of investments and funding is therefore increasing. Figure 1.2 illustrates the stocks of assets and liabilities in various buckets of residual maturity.

2 RISKS INHERENT IN MATURITY MISMATCH OF INVESTMENTS AND FUNDING

2.1 Increasing maturity mismatch of investments and funding and its consequences

The maturity mismatch or gap between the residual maturity of investments and funding is one of the fundamental features of banking. Banks allow depositors to meet their need for liquid assets, which they simultaneously place in long-term loans (Diamond & Dybvig, 1983). Other authors (Calormis & Kahn, 1991) believe that maturity mismatch, particularly the existence of sight deposits, reinforces the discipline of bank managers, as deposits can leave a bank relatively quickly in the event of the perception of increased risk at the bank. The last financial crisis proved that this mechanism of disciplining is not effective enough, as an exaggerated maturity gap has proven to be one of the key weaknesses in the banking system (Vinas et al., 2010). Brunnermeier and Oehmke (2013) showed that banks strive to maximise profit through shortening the maturity of funding, which can increase the maturity mismatch between assets and liabilities to unreasonable levels. The increasing mismatch of investments and funding in the banking system is introducing risks at the micro level (idiosyncratic risk) and also the macro level (systemic risk).

From the micro perspective, increasing maturity mismatch is leading to increased risk at individual institutions. The most evident risk resulting from the widening gap is liquidity risk, which is the risk of a loss occurring owing to the inability to settle all maturing liabilities, or the need to provide the necessary funds at significantly higher costs than normal owing to the inability to provide enough funds to settle liabilities at maturity. Short-term funding is subject to refinancing risk. Depositors can withdraw sight deposits from bank accounts at no cost, thereby depriving the bank of its funding. The actual stability of sight deposits is therefore very important to banks. As highlighted in the introduction, liquidity risk and refinancing risk are not the only risks inherent in the increasing maturity mismatch of investments and funding.

Through direct or indirect contagion or correlated sensitivities to structural shocks, risks at the level of individual bank can lead to systemic disruption and consequently to a financial crisis. A typical example is a bank run, which can spread throughout the entire system through the indirect channel (Diamond & Dybvig, 1983). An increased probability of systemic disruption is therefore one of the major macroeconomic consequences of the widening maturity gap.

2.2 Refinancing risk

2.2.1 Situation in the Slovenian banking system

Refinancing risk is diminishing in the Slovenian banking system as a result of debt repayment on the wholesale markets. The leading role in bank funding played by deposits by the non-banking sector is continuing to strengthen (Figure 2.1). The proportion of bank funding accounted for by sight deposits is roughly double its pre-crisis level, an indication of the potential for an increase in refinancing risk. The main reason for the increase in sight deposits is the maturing of short-term and long-term deposits, which are mostly not being renewed because of the extremely low interest rates, and the extremely small spreads between interest rates on sight deposits and interest rates on fixed-term deposits (Figure 2.2), which is reducing the opportunity costs of saving in sight deposits.

Figure 2.1: Structure of bank funding

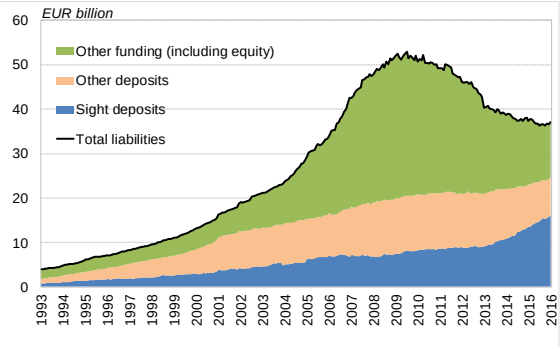
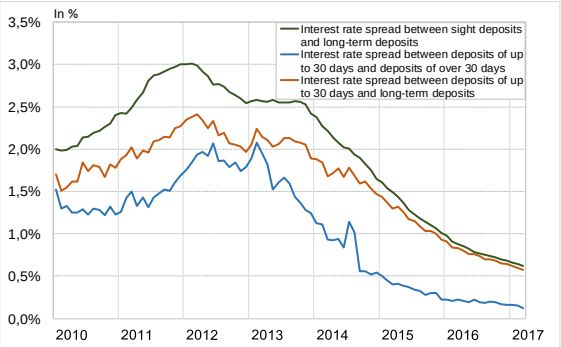


Figure 2.2: Interest rate spread between deposits of various maturities



Source: Bank of Slovenia

In terms of the proportion of total liabilities accounted for by sight deposits, Slovenia is ranked fifth in the EU, and is also ranked fifth in terms of EU Member States with the highest ratio of liquid assets to current liabilities. This funding structure is also determined by the business model of Slovenian banks, which are primarily funded by deposits (a correspondingly larger proportion of which are sight deposits in the low interest rate environment). However, it is clear from Figure 2.3 that the proportion of total deposits accounted for by sight deposits in Slovenia remains within the bounds of the 25th and 75th percentiles. The large proportion of liquid assets suggests that the Slovenian banking sector does not differ greatly from other European countries in terms of risks owing to excessive maturity mismatch.

Figure 2.3: Proportion of total deposits accounted for by sight deposits

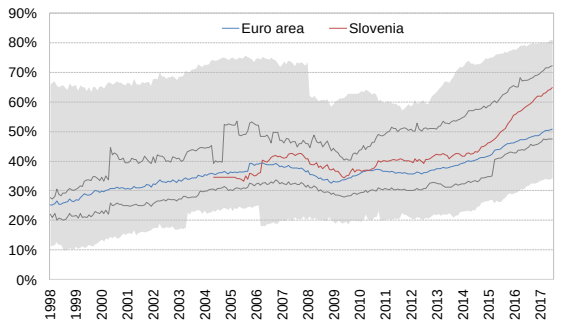
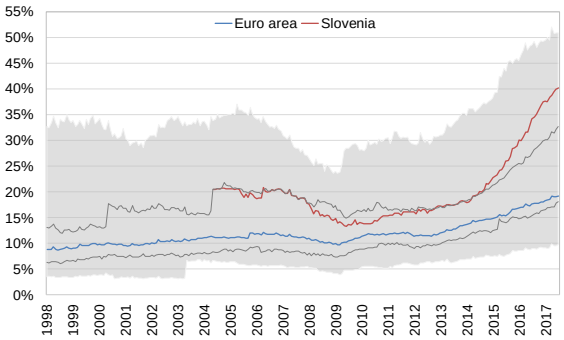


Figure 2.4: Proportion of total liabilities accounted for by sight deposits



Note: The latest data relates to March 2017. The shaded areas show the upper and lower limits for the proportion of sight deposits in EU Member States; the grey line denotes the 25th and 75th percentiles.
Source: ECB (SDW)

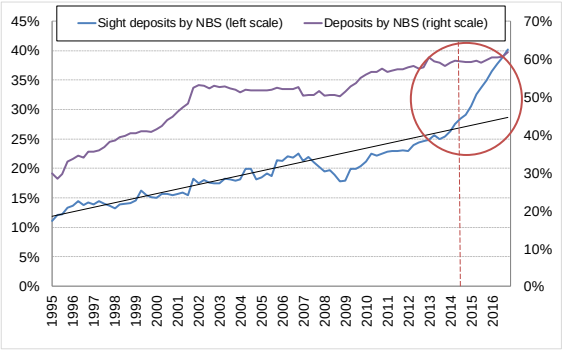
2.2.2 Stability of sight deposits

The effective maturity or stability of sight deposits need to be taken into account for the assessment of refinancing risk. This is not unambiguously defined, and under normal market conditions it is the case that it sharply exceeds the contractually determined maturity, and can even amount to several years. In specific circumstances their effective maturity could be significantly shorter than the historical average, and could more closely approach the contractual maturity. Owing to a lack of confidence in connection with bad experiences when investing in alternative forms of investment, savers remain committed to bank deposits for the moment. When confidence is restored this could change, which could be reflected in an outflow of bank deposits, or higher interest expenses and increased income risk.

As illustrated by Figure 2.5, deposits by the non-banking sector are increasing at a similar tempo as in the past, as they usually track the changes in GDP. It is possible to reach conclusions about the stability of changes in deposits from here. However, the trend in the ratio of sight deposits to GDP deviated from the long-term trend with the introduction of the negative interest rate on the deposit facility in mid-2014 (the proportion is now approximately 12 percentage points above the long-term trend), as fixed-term deposits were switched to sight deposits. It is reasonable to expect that the normalisation of interest rates will see a renewed decline in the proportion of sight deposits at banks, in favour of fixed-term deposits. During low-probability stress events, sight deposits are less stable than deposits with a (longer) determinate contractual

maturity. However, a large number of banks allow depositors (for an appropriate charge) to make early withdrawal of fixed-term deposits on non-specific grounds.

Figure 2.5: Ratio of sight deposits by the non-banking sector to GDP



Note: Trend calculated for period to Q4 of 2006. The red line marks the introduction of the negative interest rate on the deposit facility in June 2014.
Sources: Bank of Slovenia, SURS

Conclusions can be drawn about the stability of deposits by the non-banking sector from past developments, namely from the monthly changes in the stock of total deposits and sight deposits by the non-banking sector between 1995 and 2017. Net changes in stock, i.e. the sum of inflows and outflows, are shown. Figure 2.6 shows the distribution of changes in the stock of sight deposits and total deposits by the non-banking sector. Over the 20-year data series it is evident that the maximum net monthly change in the stock of sight deposits was 9%, and occurred only once in the period illustrated. At the same time, it can be seen that the largest net monthly change in the stock of total deposits by the non-banking sector was 1.9% (Figure 2.7). Changes in sight deposits at one bank usually reflected opposing changes in the deposits at other banks. On this basis it can be concluded that in the past in the Slovenian banking system deposits were primarily switched between banks[47] and between different maturities, but did not leave the banking system, which from the perspective of financial stability would be one of the principal concerns.

Figure 2.6: Distribution of net monthly changes in the stock of sight deposits by the non-banking sector in Slovenia, 1995 to 2017

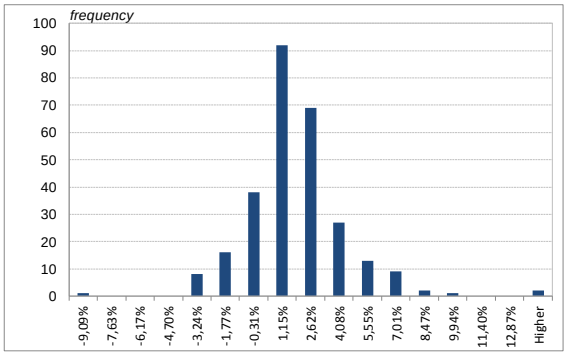
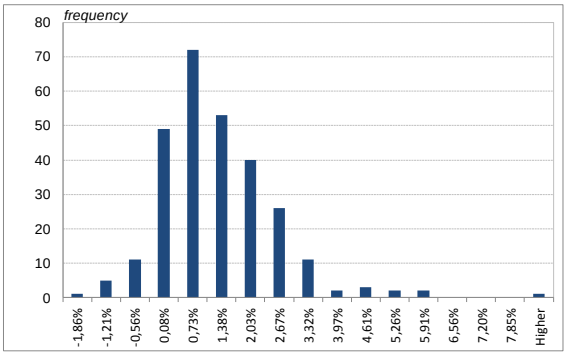


Figure 2.7: Distribution of net monthly changes in the stock of total deposits by the non-banking sector in Slovenia, 1995 to 2017



Source: Bank of Slovenia

It can therefore be concluded from the historical data that deposits are relatively stable.

2.2.3 Concentration of deposit funding

A very important element in refinancing risk management is ensuring the diversification of funding across individual investors, types of deposit, markets, maturities, etc. The withdrawal of a major client from a bank or from the banking system could hit a credit institution hard, but a depositor of this type also has greater negotiating power, and can extract higher interest rates for their deposits, which increases the bank's interest expenses, thereby increasing income risk.

On the basis of monthly reports by banks and savings banks, the Bank of Slovenia monitors the deposits of the top 30 depositors, the proportion of the total deposits at the bank or savings bank that they account for, the interest rates, and the breakdown of the residual maturity of the deposits.

[47] In certain circumstances this could also be grounds for concern.

Deposit concentration across individual depositors varies significantly from bank to bank, and is generally higher at smaller banks than at larger banks. The proportion of the banking system's total deposits accounted for by the top 30 depositors (excluding households) stood at 42.6% in March 2017, down 7 percentage points on the beginning of 2016. Despite the decline in exposure to the largest depositors at system level, the banks are still significantly dependent on certain large depositors, and the heavy dependence is increasing liquidity risk. The proportion of deposits with a residual maturity of up to 90 days accounted for by the top 30 depositors declined in 2016, and stood at 47.3% in March 2017 (Figure 2.8).

Figure 2.8: Proportions of deposits of the entire banking system (excluding households) and of deposits with a residual maturity of up to 90 days accounted for by the top 30 depositors

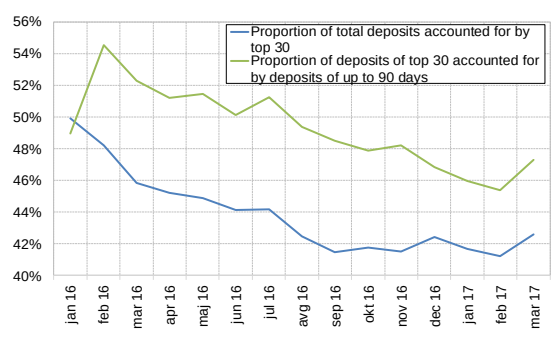
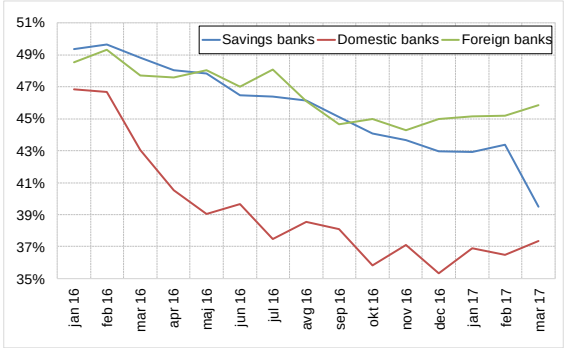


Figure 2.9: Proportion of total deposits accounted for by the top 30 depositors



Source: Bank of Slovenia

The domestic banks saw a sharp reduction in the concentration of the deposits of the top 30 depositors in 2016. The concentration of the largest depositors at the domestic banks declined from 49.4% in 2016 to 37.4% in March 2017. The figure also declined at the savings banks, to stand at 39.5% at the end of March 2017. This entails a decline in concentration of 10 percentage points relative to the beginning of 2016. The concentration of the top 30 depositors at the banks under majority foreign ownership is relatively high, and stood at 45.9% in March 2017 (Figure 2.9). Because corporate deposits are still increasing, the decline in concentration does not indicate that non-financial corporations are withdrawing their deposits from the banking system; competition between banks for the funds of major clients can lead to excessive rises in interest rates, similar to that experienced by the banking system in 2012.

2.2.4 Potential scenarios of developments in sight deposits

That the proportion of sight deposits is above its historical average suggests that the situation is not stable. Developments in the proportion of sight deposits will be subject to one of the following scenarios in the future:

1. a shift back to fixed-term deposits (the most likely scenario);
2. switching of deposits by the non-banking sector between banks, which could be triggered by (among other things) excessive adjustments in deposit rates as a result of competition between banks;
3. a gradual withdrawal of deposits by the non-banking sector from the banking system;
4. a bank run as a consequence of an (extremely unlikely in the improved macroeconomic situation) external shock (the potential causes of such a shock are not broached in this paper).

Shift to fixed-term deposits

The most likely scenario is that when the rise in interest rates occurs, sight deposits will shift back to fixed-term deposits. This scenario is also favoured by the developments illustrated in Figures 2.5 and 2.6.

Switching of deposits by the non-banking sector between banks

There is a risk that banks will compete for deposit funding through excessive adjustments in interest rates on deposits. Because interest rates are not repriced simultaneously, there is a probability that a particular bank will reprice its interest rates faster than other banks, thereby attracting depositors from other banks. The bank that is first to reprice its deposit rates will attract the sight deposits of banks that are slow in repricing interest

rates. This scenario could lead to excessive rises in deposit rates for the purpose of retaining this source of funding. Strong competition between banks could strengthen the adjustments in interest rates, and could consequently weaken the profitability of the Slovenian banking system. The Slovenian banking system faced a similar situation in 2012. The Bank of Slovenia then introduced a macroprudential instrument of limits on deposit rates,[48] which it could reactivate should the situation repeat itself.

Gradual withdrawal of deposits by the non-banking sector

The gradual withdrawal of deposits by the non-banking sector is dependent on the existence of alternative investment opportunities. The banks could respond and adapt by replacing the lost deposit funding with funding that does not comprise deposits by the non-banking sector. Any rise in the cost of such funding could increase income risk.

Bank run

The bank run scenario is significantly less likely than the scenario of a gradual withdrawal of deposits by the non-banking sector or switching within the banking system. There nevertheless remains a question as to what the probability is of the banks surviving a bank run scenario, which is the most problematic of the potential scenarios. The question is whether the probability of a bank run is high enough for the risk to require macroprudential intervention.

Traditionally deposits by the non-banking sector have been classed as a stable source of bank funding, irrespective of their maturity. Kaufman[49] claims that the risk of a bank run is usually overstated. Macroprudential instruments also assume significant stability on the part of (sight) deposits.[50] This assumption is only realistic for ordinary circumstances and smaller disruptions in the system, while the potential outflow during a more serious crisis could be significantly larger.

The following causes of bank runs are identified in the literature:

a) ***Systemic shock***: as long as shocks are completely independent between depositors, it can be predicted that in each period a specific fixed proportion of deposits leaves the banking system. The liquidity coverage ratio (LCR) is also based on this idea. However, there are events that hit a large part of the population (natural disasters, financial crisis, stock market bubbles). In such an event the aggregate outflow of deposits by the non-banking sector can be stochastic. The possibility of a bank run increases when the amount of cash reserves is below the level of sight deposits, as depositors fear that banks will not be able to repay the amounts wanted.

b) ***Non-performing loans and losses***: if an individual bank has difficulties with losses, a run can first occur at this bank, but owing to information asymmetry the uncertainty and lack of confidence can be transferred to other banks. Idiosyncratic financial contagion may spread to the system along the following channels (Caccioli et al., 2013):

   - counterparty risk,
   - refinancing risk, and
   - asset commonality or overlapping portfolios.

The best policy for limiting excessive reactions by individuals is preventing the spread of losses and maintaining confidence. This is also ensured by an appropriate level of capital adequacy at banks, a deposit guarantee scheme, etc.

Depositors who see a particular bank as vulnerable would probably switch their deposits to another bank within the banking system, and would thus mitigate the consequences of the idiosyncratic shock. The specific shock would thus not gain systemic components. A bank undergoing a liquidity shock would probably be rescued by the central bank with liquidity assistance (in its role as the lender of last resort), or with emergency liquidity assistance (ELA), or would be helped by other banks through interbank lending, which could only occur if depositors' assumption of the bank's vulnerability was erroneous, and other banks that are better-versed in risk assessment than untrained individual depositors assess it as stable.

[48] For more, see online at http://www.bsi.si/en/financial-stability.asp?MapaId=1889.
[49] Kaufman, G.G. (2008).
[50] For more, see Commission Delegated Regulation (EU) 2015/61.

2.3 Liquidity risk

2.3.1 Liquidity ratios and secondary liquidity

The first liquidity indicator to support the assertion that liquidity risk is low and stable is the relatively high first-bucket liquidity ratio. It averaged 1.44 in March 2017. The second indicator confirming that liquidity risk is low is the second-bucket liquidity ratio, which averaged 1.26 in March 2017. Further evidence of the good liquidity position came from the proportion of the banks' total assets accounted for by secondary liquidity, which reached 18.21% at the end of March 2017. An adequate stock of secondary liquidity will make a significant contribution to weathering any liquidity pressure that could arise as a result of the rapid withdrawal of sight deposits. Despite the relatively high liquidity ratios, given the high stock of sight deposits, available liquid assets are vital to managing liquidity risk.

2.3.2 Asset commonality

The mechanism of contagion owing to the commonality or overlapping of bank investments in the portfolios of multiple banks acts as follows: two institutions, A and B, have the same assets in their liquidity portfolio. As a result of an external shock, A must suddenly sell off its assets. The effect of the sale on the price of the instrument depends on the market liquidity of the instrument on the secondary market. If the sale of the assets has an effect on the price of an instrument that is common to both institutions, it has an impact on the value of B's portfolio. If the impact of the change in the value of B's portfolio is intensive enough to cause a decline in its capital adequacy, B must also sell off some of its assets, which gives rise to additional pressure on asset values.

Because Slovenian government bonds generally have less market liquidity than other government bonds, large holdings of these assets could represent a vulnerability for banks. Should the need to sell liquid assets arise at a systemic level, the banks would probably have to sell them at a discount. Recently the banks have increased their investments in foreign securities rated BBB or higher. They are thereby supporting the aim of reducing the concentration of investments in Slovenian government securities, which is having a favourable impact on the trend in the risk in question.

Slovenian government securities account for a relatively high proportion of the total assets of certain banks. Often these banks also account for a relatively large proportion of all Slovenian government securities on bank balance sheets (Figure 2.10). If one of these banks was forced to sell off securities, it would certainly have an impact on their price. Certain securities account for fully 5% of the total assets of some banks,[51] and often these banks with a significant exposure to a particular security account for a large proportion of the total issue of the security (Figure 2.11). This also reveals the possibility of an impact on the price of the security during any sale. In both figures it is the case that the higher an individual bank is on the vertical axis, the greater the impact would be on the bank from the sale of securities. Distance from the origin on the horizontal axis shows the intensity of the potential systemic impact from an individual bank.

Figure 2.10: Exposure to contagion risk as a result of asset commonality in Slovenia, March 2017

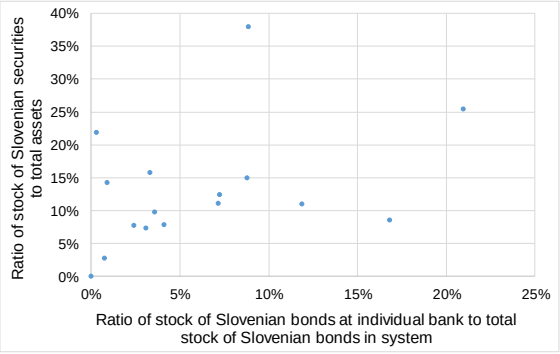
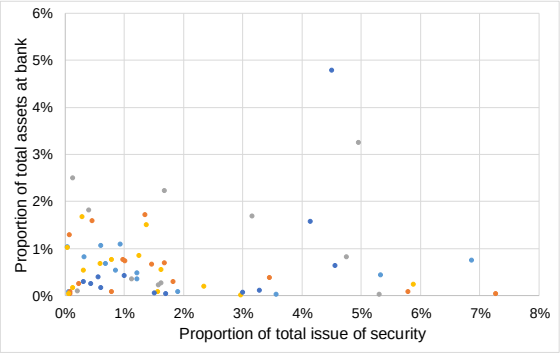


Figure 2.11: Bank exposure to the five securities accounting for the largest proportions of the Slovenian banking system's total assets, March 2017



Source: Bank of Slovenia

[51] Does not include BAMC securities where the entire issue is held on the balance sheet of a single bank.

If repricing were to occur on global markets owing to new inflation expectations or the revision of the risk premium, the value of these assets would fall sharply, and the banks' capital adequacy would consequently deteriorate. The banks are also exposed to market risk on account of exposure to similar securities.

3 INSTRUMENTS FOR MITIGATING RISKS INHERENT IN EXCESSIVE MATURITY MISMATCH

3.1 Categories of available instruments

There are several instruments that have traditionally been used as a tool to mitigate or prevent bank runs. The existing instruments affecting the proportion of sight deposits or the risks inherent in excess maturity mismatch of investments and funding can be divided into instruments that:

1. act on bank liquidity (microprudential instruments [first-bucket and second-bucket liquidity ratios, LCR] and a macroprudential instrument [GLTDF]);
2. maintain confidence in the banking system (the deposit guarantee scheme at banks, the central bank's function as lender of last resort and the emergency liquidity assistance system);
3. act on the funding structure of institutions, and mitigate maturity mismatch (minimum reserves, net stable funding ratio [NSFR]).

3.2 Deposit guarantee scheme

One of the most effective tools preventing a bank run is the deposit guarantee scheme at banks. The fundamental objectives of the deposit guarantee scheme are to protect investors and to maintain their confidence in the banking system. A sound and effective deposit guarantee scheme is one of the important conditions for the maintenance of financial stability in a country. In Slovenia 75.6% of the total deposits of depositors entitled to the guarantee were covered by the guarantee in March 2017. Because the deposit guarantee has a limit of EUR 100,000, depositors whose deposits exceed the guarantee limit can switch part of their deposits to another bank, thereby reducing the proportion of deposits not covered by the guarantee. This action guarantees the entire deposit, and such behaviour is therefore expected.

3.3 First-bucket and second-bucket liquidity ratios

The liquidity ratio is the ratio of the sum of financial assets in domestic and foreign currency to the sum of liabilities in domestic and foreign currencies, taking account of residual maturity. For the purposes of calculating the liquidity position, banks must classify their financial assets into two buckets, as follows:

1. first bucket: financial assets and liabilities[52] with a residual maturity of up to 30 days;
2. second bucket: financial assets and liabilities with a residual maturity of up to 180 days.

Banks calculate the liquidity ratio daily for an individual bucket for the previous business day. The first-bucket liquidity ratio must be at least 1. The second-bucket liquidity ratio is merely of an informative nature. Should a bank fail to meet the first-bucket liquidity ratio requirement, it must state the reasons for that failure in its liquidity report.

The microprudential liquidity ratios may be applied until the implementation of the European liquidity standards (the liquidity coverage ratio), which will be implemented in full at the beginning of next year.

3.4 Liquidity coverage ratio (LCR) and net stable funding ratio (NSFR)

Compared with previous capital requirements directives, one of the most important innovations of Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit

[52] Banks take account of liabilities according to the following criteria:
a) residual maturity;
b) sight deposits by households and non-financial corporations in the amount of 40%;
c) sight deposits by households and non-financial corporations in the second bucket in the amount of 35%.

institutions and investment firms is the liquidity coverage requirement. Although the previous directives also contained general rules on liquidity, they did not include detailed rules in connection with the composition of liquid assets and the method of calculating net cash flows.

The aim of the liquidity coverage ratio (LCR) is to prevent liquidity risk by reducing credit institutions' dependence on short-term funding and liquidity provided by central banks, by introducing a requirement to hold sufficient liquid assets to handle a surplus of liquid outflows over inflows that could be expected to occur over a 30-day stress period.[53] Banks must meet the LCR in full as of 1 January 2018.

The net stable funding ratio (NSFR) is not yet binding. According to the proposal by the European Commission in November 2016,[54] it is expected to be fully implemented in 2021. The ratio focuses on constraining banks in their transformation of maturity structure. The binding NSFR will build on institutions' improved funding profiles and establish a harmonised standard for how much stable, long-term sources of funding an institution needs to weather periods of market and funding stress.

3.5 Restriction of the pace of reduction in the LTD ratio (GLTDF)

The Bank of Slovenia has introduced a macroprudential instrument to define minimum requirements 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).

The purpose of the instrument is to slow the rate of decrease in the non-banking sector LTD ratio, and to contribute to the stabilisation of funding structure and limit systemic liquidity risk in funding.

The GLTDF instrument has achieved the objectives set, having ensured a larger proportion of stable funding (deposits instead of wholesale funding). The concept of the instrument is completely neutral with regard to effects on sight deposits.

3.6 Lender of last resort and emergency liquidity assistance

The function of the lender of last resort protects depositors and prevents a run on deposits from arising during a loss of confidence in the banking system. Euro area credit institutions may obtain loans from the central bank not only in the form of monetary policy operations, but also exceptionally in the form of emergency liquidity assistance. The provision of emergency liquidity assistance is at the discretion of the national central bank, although the Governing Council of the ECB may oppose the decision by the national central bank or limit the amount of emergency assistance. Depositors' awareness of the possibility of such an intervention by the central bank reduces the likelihood of a run on deposits.

3.7 Minimum reserves

Minimum reserve requirements have traditionally been the main instruments for managing liquidity risk. Minimum reserves had the role of covering potential withdrawals of deposits, which reinforced depositors' confidence and thus the stability of deposits. These days minimum reserves are a monetary policy instrument[55] (Robitaille, 2011), and given their very low level (just 1% in the Eurosystem) they can only have a small effect on depositors' confidence. The proposal of the Bank for International Settlements (2016), which is unrealistic at the moment (given the role of minimum reserves in the euro area), is for minimum reserves to be used as an instrument of financial stability. By modifying minimum reserves the central bank could *ex ante* limit cyclical developments in the maturity mismatch of assets and liabilities.

[53] For more, see Regulation (EU) No 575/2013 and Commission Delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for credit institutions.

[54] COM(2016) 850 final

[55] The minimum reserve requirement stabilises money-market interest rates, as averaging the reserve requirement over the maintenance period (usually six weeks) encourages institutions to balance the effects of temporary volatility in liquidity. In addition, in normal market conditions minimum reserves increase the structural liquidity deficit (i.e. net demand for cash from banks), which can improve the Eurosystem's ability to act as an effective liquidity provider.

4 CONCLUSION

As a result of the prevailing low interest rates, there have been numerous changes on the asset and liability sides of bank balance sheets. Bank liabilities have become significantly more short-term, as insufficient returns mean that depositors are not motivated to retain their money at banks over the longer term. By contrast, the low interest rates are encouraging borrowers to generate credit demand, particularly for longer-term housing loans and corporate loans, while banks have recently been approving such loans in larger amounts. The excessive increase described in the maturity gap in bank assets and liabilities is increasing some risks in the banking system, where refinancing risk and liquidity risk in particular are of a potentially systemic nature.

Reviewing the reasons for the increase in these risks revealed that there were two key factors in their recent strengthening: the aforementioned high proportion of sight deposits, which (because of indeterminate contractual maturity) in the event of a (nevertheless unlikely) shock can be withdrawn very quickly from the banking system, and the high level of liquid asset commonality. These liquid assets allow banks to significantly exceed the liquidity regulatory requirements, but the price of these assets (mostly Slovenian government bonds) would fall sharply in the event of a mass sale being undertaken by several banks. The proceeds would no longer suffice to cover payments to depositors, who would demand the withdrawal of deposits *en masse*.

Notwithstanding the presence of these two risks in the Slovenian banking system, the regulatory safety mechanisms, whether established (deposit guarantee scheme, ELA, liquidity ratios, last-resort liquidity aid, etc.) or emerging (LCR, NSFR, etc.), mean that the current situation is not problematic. It is nevertheless appropriate to remind banks to carefully monitor the development of the two risks on their own balance sheets and in the banking system, particularly given that the risk level to which a bank is exposed in refinancing risk and liquidity risk does not depend on the bank alone, but mostly on the behaviour of other banks in the banking system.

5 REFERENCES AND SOURCES

1. Ahtik, M., Banerjee, B., and Remšak, F.: Net interest margin in a low interest rate environment: Evidence for Slovenia; Bančni Vestnik Vol 65, No. 11, November 2016.
2. Brunnermeier, M.K. & Oehmke, M. (2013). The Maturity Rat Race. *The Journal of Finance*, Vol 68, No. 2, pp. 483-521. <https://www0.gsb.columbia.edu/faculty/moehmke/papers/MaturityRatRace.pdf>
3. Caccioli, F., Shrestha, M., Moore, C. & Farmer, D. (2013). Stability analysis of financial contagion due to overlapping portfolios. St Giles, University of Oxford.

   <https://arxiv.org/pdf/1210.5987.pdf>
4. Calomiris, C.W. & Kahn, C.M. (1991). The Role of Demandable Debt in Structuring Optimal Banking Arrangements. *The American Economic Review*, Vol 81, No. 3, pp. 497-513. <http://www.bu.edu/econ/files/2012/01/calomiris-kahn.pdf>
5. Commission Delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for credit institutions, OJ L 11/2 of 17 January 2015.
6. Diamond, D.W. & Dybvig, P.H., (1983). Bank Runs, Deposit Insurance, and Liquidity. *The Journal of Political Economy*, Vol 91, No. 3, pp. 401–419. <https://www.macroeconomics.tu-berlin.de/fileadmin/fg124/financial_crises/literature/Diamon_Dybvig_Bank_Runs__Deposit_Insurance__and_Liquidity.pdf>
7. Kaufman, G.G. (2008). Bank Runs. The Concise Encyclopedia of Economics. *Library of Economics and Liberty.* <http://www.econlib.org/library/Enc/BankRuns.html >
8. Financial Stability Review, June 2016
9. Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012, OJ L 176/1 of 27 June 2013.
10. Vinals, J., Fiechter, J., Pazarbasioglu, D., Kodres, L., Narain, A. & Moretti, M. (2010). Shaping the new financial system. *IMF Staff Position Note*, 10, 15. <https://www.imf.org/external/pubs/ft/spn/2010/spn1015.pdf>