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**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
BRIC	Brazil, Russia, India, China
BoS	Bank of Slovenia
CRR	Capital Requirements Regulation
CRD IV	Capital Requirements Directive IV
OFIs	Other financial institutions
DSTI	Debt service-to-income ratio
TARS	Tax Administration of the Republic of Slovenia
BAMC	Bank Asset Management Company
DSs	Debt securities
AMCs	Asset management companies
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
EMU	Economic and Monetary Union
EONIA	Euro OverNight Index Average (weighted average interest rate for overnight credit)
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
Euro area (19)	The euro area countries (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Slovenia, Cyprus, Malta, Slovakia, Estonia, Latvia and Lithuania).
EU-SILC	European Union Statistics on Income and Living Conditions
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
CSCC	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-sized enterprises
MTS Slovenia	Part of the Euro MTS electronic trading platform for euro-denominated government and para-government benchmark bonds
NFCs	Non-financial corporations
QE	Quantitative easing
ROE	Return on equity
SBI TOP	Blue-chip index at Ljubljana Stock Exchange
SCR	Solvency capital requirement
SDW	Statistical Data Warehouse
Slonep	Slovenian real estate portal ( <a href="http://www.slonep.net">www.slonep.net</a> )
SORS	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 breakdown 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 breakdown is instead based on the features of their operations, in particular their funding structure.

## 1 EXECUTIVE SUMMARY

In 2015 and the first quarter of 2016 the banking system operated in an environment of favourable economic activity, and an outlook of moderate growth for this year. The most significant risks in the banking system show no change in the trend since the last Financial Stability Review was released in January 2016, with credit risk, income risk and interest rate risk remaining prominent. The risks inherent in the persistent environment of low or negative interest rates have recently come to the fore. As inflation remains low, the slow and uncertain economic recovery in the euro area is increasing the uncertainty over the maintenance of low interest rates, thereby escalating the adverse impact on financial intermediation. To maintain their interest margin and profitability, banks are adjusting their business models to the new environment by changing the structure and maturity of investments and funding, and by switching investments to higher-yielding, higher-risk assets. While the proportion of funding accounted for by sight deposits is increasing rapidly, additional unpredictability is being introduced into operations. The changes in bank behaviour are increasing the likelihood of the realisation of interest rate risk, credit risk and market risk in the future, and are simultaneously requiring adequate secondary liquidity as a safety valve in the event of the realisation of these risks.

Table 1.1: Overview of risks in the Slovenian banking system

Systemic risk	Risk assessment		Trend in risk	Commentary
	for Q4 2015	for Q1 2016		
Macroeconomic risk			→	Favourable forecasts of ongoing economic growth. Exports remain the key factor, while household consumption is also increasing, under the influence of positive trends on the labour market.
Credit risk			↓	Further improvement in the quality of the credit portfolio under the influence of the improvement in the financial position of firms, economic growth, and bank activity in forbearance, write-offs and collateral realisation. Coverage by impairments and capital is increasing.
Real estate market			→	Stabilisation of real estate prices, and increased volume in used housing on the real estate market.
Refinancing risk			↓	Further stabilisation of funding structure with reliance on domestic funding. High excess liquidity, a high proportion of unencumbered collateral and thereby a potential source of liquidity at the ECB. Stabilisation of the LTD ratio. Potential instability of funding as a result of the shortening of average funding maturity.
Interest rate risk			↑	Opening of the gap between the average repricing periods for asset and liability interest rates, as a result of the widening of maturity gaps between investments and liabilities. The increased focus on loans with a fixed interest rate is widening the gap between assets and liabilities.
Solvency risk			→	Further growth in capital adequacy, as a result of growth in capital (bank profitability) and a renewed decline in capital requirements as lending activity continues to contract. The small domestic banks remain the most vulnerable in capital terms, with a total capital ratio below the euro area average.
Income risk			→	The risk remains relatively high owing to the persistence of the low interest rate environment and the ongoing contraction in bank turnover. A favourable effect of reduced credit risk via a decline in impairments and provisions.

Colour code:     

**The ongoing process of corporate deleveraging and favourable domestic economic growth are having a positive impact on the financial position of firms and their creditworthiness.** As leverage declines, the burden on firms with excessive financial debt is also gradually diminishing. Leverage remains above-average at SMEs, although they have deleveraged more than the average since 2008, and have improved performance more than large enterprises. In contrast to other euro area countries, the corporate sector in Slovenia has primarily deleveraged by paying down debt, while its equity has remained practically unchanged over the last seven years.

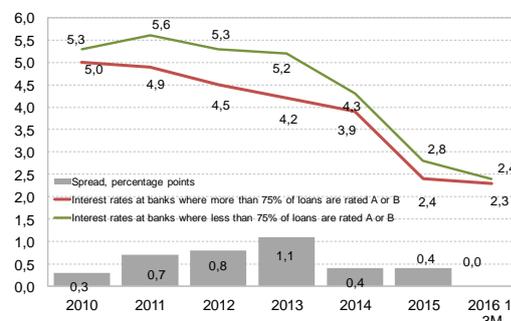
**Corporate debt servicing capacity is increasing as a result of the deleveraging process and improved performance.** Firms' improved financial positions have been reflected in the banking system's credit portfolio through an increase in client upgradings and a slowdown in client downgradings.

**Alongside the favourable impact of economic growth, the ongoing decline in credit risk at the banks was largely attributable to bank activity in the form of forbearance, increased write-offs and collateral realisation.** The proportion of claims more than 90 days in arrears had declined to 8.2% by March, while the proportion according to the broader European Banking Authority definition had fallen to 10.8%. The backlogs are still in the SMEs segment, where the

resolution of non-performing claims is only now intensifying, and has been encouraged by the Guidelines for the management of non-performing exposures to SMEs adopted by the Bank of Slovenia. The proportion of claims with lengthy arrears of several years, where the likelihood of successful forbearance is smaller, also remains relatively high.

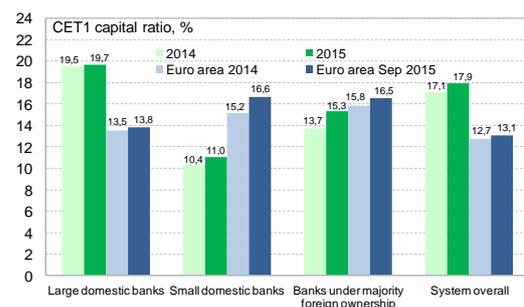
The retention on bank balance sheets of non-performing claims that do not yield income entails a major burden in achieving adequate profitability or, in the case of banks bound by commitments to the European Commission, the required profitability. The banks with higher-quality investments were able to begin cutting lending rates earlier, and offered them at lower levels than the banks with poorer investment quality. As a result of increased competition and the successful clean-up of portfolios at the latter, the gap narrowed over the last two years, and had almost disappeared by early 2016.

Figure: Interest rates on new corporate loans in relation to portfolio quality



**Despite a growing economy, a sharp fall in lending rates and an increase in corporate creditworthiness, bank lending activity has continued to contract.** The banks' tightened credit standards, which have primarily prevented the creation of new non-performing claims against already over-leveraged debtors, are no longer the key factor in the ongoing contraction in loans. The sharply reduced interest rates are more encouraging to new borrowing than in the past. In past years the restricted access to loans at Slovenian banks encouraged firms to seek alternatives, first by borrowing in the rest of the world, which despite a decline in the last year continues to account for a large proportion of loans to non-financial corporations (NFCs), at 28%. With better access and a fall in the cost of financing on capital markets, the attraction of borrowing via bond and commercial paper issuance grew at large enterprises. Given the lack of development in the capital market in Slovenia, this source of financing remains limited solely to large enterprises, and represents a modest alternative to bank financing. **The main factor in the limited demand for loans was firms' propensity to make use of internal financing,** which will increase further in importance as profitability rises. Firms assess that access to financing is diminishing in importance as a limiting factor in their business.

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



**The resilience of the banking system to potential shocks has increased further, primarily through recapitalisations, but also through the earnings generated across the system in the last year.** Alongside the relatively high coverage by impairments (among the highest in the euro area), the remaining non-performing claims are sufficiently covered by capital in the system overall. However, the small domestic banks remain prominent as the most capitally vulnerable bank group, even though their exposure to solvency risk diminished slightly last year. Capital adequacy is favourable

across the system, but the gaps between banks are nevertheless widening.

**As a result of the favourable trend in credit risk in 2015 and early 2016, income risk is lower than in previous years, but the effect is thought to be more short-term.** Reduced impairment and provisioning costs placed less of a burden on bank profitability than during five years of losses. Their ongoing impact on bank income depends strongly on the future success of the resolution of the banks' remaining non-performing portfolio. The effects of the release of impairments on successfully forborne claims could also have further positive effects on bank income in the future. Over the long term income risk is strongly dependent on the duration of the low interest rate environment, and the banks' success in adjusting their business models to these circumstances.

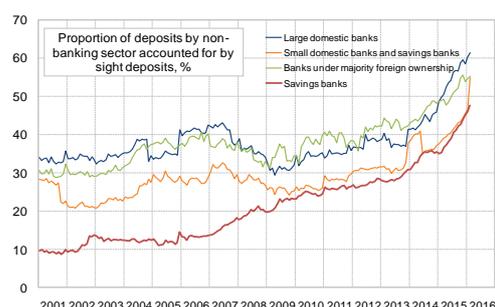
**The falls in lending rates and in returns on securities, and the contraction in loans are reducing the banks' income generation base.** Banks across the euro area have partly compensated for the fall in lending rates by increasing lending activity, which has not happened at Slovenian banks in a situation of ongoing contraction in credit activity. As the average maturity of deposits continues to shorten, the banks' net interest expenses have also continued to decline, although the sharply reduced level of interest rates and the increase in the proportion of sight deposits mean that the banks have diminishing room for further cuts in interest expenses. Despite an improvement in the income performance indicators after five years in negative territory, the maintenance of the low interest rate environment is a factor in the banks' exposure to income risk.

**The banks are adjusting to the new situation by changing the structure and maturity of their investments, thereby slightly mitigating the impact of falling interest rates on the interest margin.** In corporate lending, the average maturity of approved loans is lengthening, and is now significantly longer than in the period of high growth in borrowing. A decline in short-term corporate lending is however a positive development from the perspective of the past improper practice of financing long-term projects via short-term loans. In the household segment the spread between asset and liability interest rates is being maintained or even widened, by means of the lengthening of the average maturities of housing loans, and as a result of a sharp reduction in average maturities and hence in interest expenses on household deposits. Income risk at Slovenian banks would only diminish in the wake of the resumption of stable credit growth, which would partly compensate for the pressure of low interest rates on the net interest margin.

**The opening of maturity gaps between investments and funding is increasing interest rate risk at the banks.** To maintain their interest margin and profitability, banks are adjusting their business models to the new environment by changing the structure and maturity of investments and funding. The recent lengthening of the average repricing period on loans was particularly attributable to the increase in new housing loans with a fixed interest rate. The widening gap between the average repricing periods for asset and liability interest rates is increasing interest rate risk,

which in the event of a rise in interest rates would be reflected in faster growth in expenses from short-term funding than in income from long-term investments.

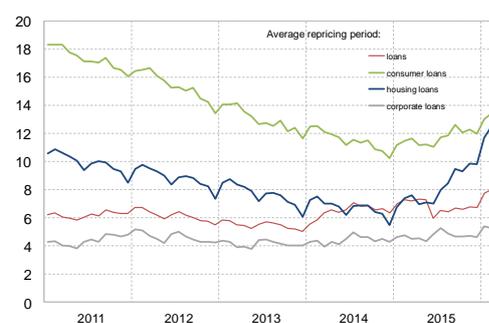
Figure: Percentage of deposits by non-banking sector accounted for by sight deposits



rates. The proportion of household deposits accounted for by sight deposits reached almost 60%. The virtual equalisation of deposit rates between banks is not encouraging savers to switch between them. In the event of a rise in market interest rates there is a risk of renewed competition between banks to retain their primary source of funding.

Slovenian investors' reticence towards alternative forms of investment is not a sufficient guarantee that certain savers will not diversify their portfolios and make withdrawals from banks. **For this reason controlling liquidity risk at banks and maintaining an adequate level of secondary liquidity will gain in importance.** It is also important to control liquidity risk at the individual bank level although the stability of deposits is maintained at the system level, as triggers for

Figure: Average repricing period for asset interest rates by loan type, in months



**Deposits by the non-banking sector strengthened their position as the banks' most important source of funding, although the increase in sight deposits means that there is no guarantee of their stability.** Stable growth in household deposits is strengthening the stability of funding structure, in which dependence on the financial markets is declining permanently. The increase in new deposits, particularly in the household sector, is almost exclusively in the sight deposits segment, being fuelled also by maturing term deposits, on account of discouraging interest

switching may arise within the banking system, in the wake of an increase in the vulnerability of an individual bank.

**Bank liquidity indicators remain high and stable.** The banks' excess liquidity and the availability of additional funding from the Eurosystem represent a challenge to the effective management of excess liquidity and the quest for appropriate returns in a situation of high liquidity across the Eurosystem. Marketable secondary liquidity has reached 18% of the banking system's total assets, primarily in Slovenian government bonds. This concentration has been diminishing over the last six months, as investments increase in foreign securities rated BBB or higher that are still eligible collateral for the Eurosystem. The banks' predictions of a reduction in the concentration of secondary liquidity are thus being realised, while it also reflects the quest for higher-yielding investments.

**The risk of the strengthening of shadow banking in Slovenia remains small.** The low interest rate environment and the ever-stricter regulation of the banking sector are increasing the risk of the strengthening of shadow banking within the euro area. The risk of strengthening entails the transfer of activities from the more-regulated banking sector to other less-regulated sectors such as investment funds, other financial intermediaries and financial auxiliaries. The risk of the strengthening of shadow banking in Slovenia is nevertheless below the euro area average, as alternative sources of financing for the economy are less developed in Slovenia.

## 2 MACROECONOMIC ENVIRONMENT

### Summary

*Economic growth in the euro area increased in 2015, but internal political factors and geopolitical risks will be a significant limiting factor in achieving future growth. The persistence of low inflation is another risk.*

*Economic growth in Slovenia remained relatively high in 2015, but international institutions' forecasts for 2016 and 2017 are lower. Exports remain the key factor in economic growth, while household consumption increased, primarily as a result of employment growth and strengthened purchasing power. Despite the low returns on bank savings, Slovenian households remain reticent with regard to alternative forms of saving, having invested merely just under a third of their current disposable financial assets in such assets in 2015.*

*Firms remain net lenders to other sectors, and are continuing to deleverage. At the same time the financial sector, the banking sector in particular, is reducing loans as a proportion of GDP, thereby weakening the opportunity to generate income.*

*After falling for three years, prices of housing rose slightly last year, but there is still a trend of falling house prices. Further evidence that the real estate market is gradually reviving comes from the increase of a quarter in the volume of transactions. Housing affordability deteriorated slightly last year, but remains better than before the crisis.*

*The corporate burden from excess financial debt is gradually easing, and firms are moving towards a more acceptable financing structure. Leverage declined from 123% in the previous year to 111% last year, while the ratio of net financial debt to EBITDA declined from 3.5 to 2.9 years, an indication of renewed corporate deleveraging and an improvement in firms' debt servicing capacity. The ratio of excess debt to net financial debt declined from 43% to 39% last year. The concentration of debt diminished, as firms that were heavily burdened with excess debt withdrew from the market. The conditions seen before the crisis are gradually being reestablished, and with them the conditions for a new credit cycle, which nevertheless should be based on sustainable credit growth.*

### 2.1 International environment

**Economic growth in the euro area increased in 2015, but remained moderate.** In the wake of slow growth in exports, the largest factors in economic growth were an increase in private consumption and, to a lesser extent, gross fixed capital formation. The euro area's weaker export growth is the result of a slowdown in the global economy and trade in developing countries, most notably the cooling of the Chinese economy as a result of the changeover to a new economic model. Private consumption is expected to again be the most important factor in economic growth in the euro area this year, as growth in real disposable income increases and the unemployment rate falls. Low energy prices, low interest rates and the weak euro will have a favourable impact on growth, partly as a result of additional stimulus measures by the ECB aimed at improving access to lending and reducing the cost of financing.

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

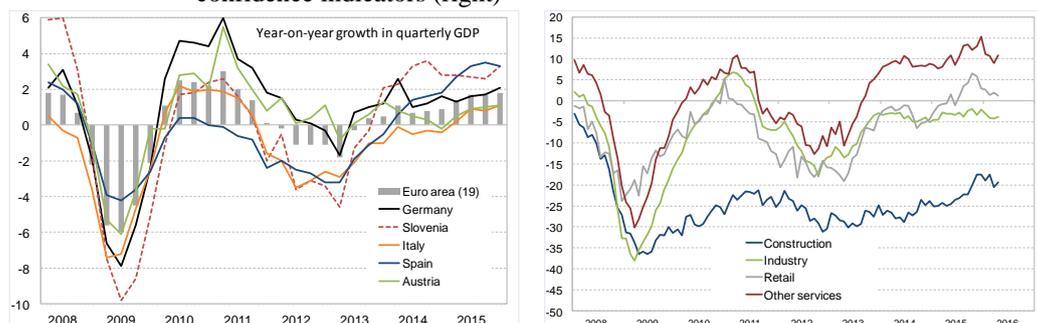
	Real GDP				Unemployment rate				Inflation			
	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
<b>EU</b>	1,4	2,0	1,8	1,9	10,2	9,4	8,9	8,5	0,6	0,0	0,3	1,5
<b>Euro area</b>	0,9	1,7	1,6	1,8	11,6	10,9	10,3	9,9	0,4	0,0	0,2	1,4
Germany	1,6	1,7	1,6	1,6	5,0	4,6	4,6	4,7	0,8	0,1	0,3	1,5
Italy	-0,3	0,8	1,1	1,3	12,7	11,9	11,4	11,2	0,2	0,1	0,2	1,4
Austria	0,4	0,9	1,5	1,6	5,6	5,7	5,9	6,1	1,5	0,8	0,9	1,7
France	0,2	1,2	1,3	1,7	10,3	10,4	10,2	10,1	0,6	0,1	0,1	1,0
Croatia	-0,4	1,6	1,8	2,1	17,3	16,3	15,5	14,7	0,2	-0,3	-0,6	0,7
<b>Slovenia</b>	3,0	2,9	1,7	2,3	9,7	9,0	8,6	8,1	0,4	-0,8	-0,2	1,6

Note: Shaded area signifies European Commission forecasts.

Source: European Commission spring forecast

**Economic growth in Slovenia's most important economic partners strengthened in 2015, but the recent forecasts by international institutions were nevertheless revised slightly downwards.** Significant differences from country to country remain, particularly in the relative levels of high public and private debt, and the implementation of structural reforms, but economic growth was more balanced across countries in 2015. Internal political factors and geopolitical risks will remain a significant limiting factor in achieving economic growth in the future. The refugee crisis, the continuation of the Russia-Ukraine conflict, instability in Syria and Iraq, and the possibility of new terrorist attacks in Europe are all to the fore. There is also uncertainty over future growth in connection with the referendum on the UK's potential exit from the EU. In the assessment of international institutions and the Bank of Slovenia, the situation in the international environment this year will nevertheless be slightly more favourable than last year.

Figure 2.1: Year-on-year growth in quarterly GDP, in percentages (left), and euro area confidence indicators (right)



Note: GDP figures are not seasonally adjusted.

Sources: Eurostat, IMF database, European Commission, SORS

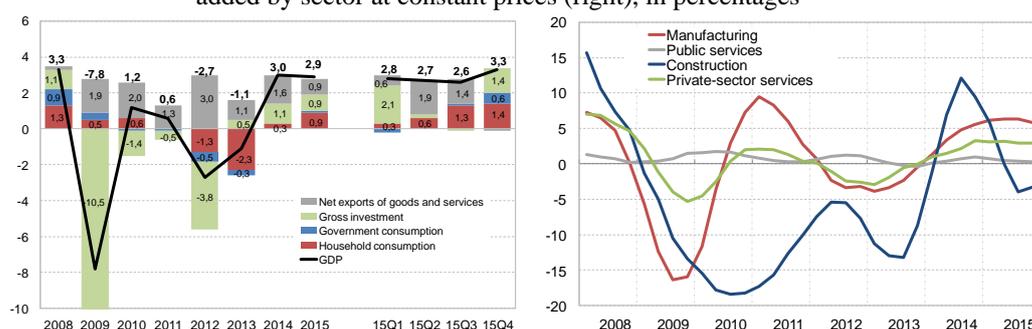
**After falling for two years, commodity prices have begun rising this year, oil prices recording the most pronounced developments.** After bottoming out in January, oil prices began rising, which was partly attributable to an agreement between the largest oil producers to freeze pumping, thereby bringing excess supply closer to the level of demand. Nevertheless, no major rise in oil prices can be anticipated in the near future, which will continue to represent a challenge to exporting countries and an ongoing need for adjustments, but will also have a positive impact on household purchasing power and private consumption.

**After improving last year, the economic sentiment deteriorated slightly in the early part of this year, despite signs of continuing economic growth.** There are still significant variations between sectors: confidence indicators remain at low levels in construction, while there is uncertainty in industry and retail. The latter is primarily attributable to a decline in orders and weaker business expectations. This suggests that economic growth in the euro area will merely be moderate this year.

## 2.2 Economic developments in Slovenia

**Economic growth remained relatively high in 2015 at 2.9%, significantly above the euro area average.** Despite a slowdown at end of the year, exports remained a key factor in economic growth. Household consumption also strengthened, primarily as a result of employment growth, increased purchasing power and low energy prices. Growth in investment slowed slightly as the European financial framework ended, which had a particularly negative impact on investment in construction. There are signs of an increase in private-sector investment in transport equipment and production capacity, which is helping to maintain stable growth in value-added in industry. Government consumption also increased for the first time since 2009, as a result of less restrictive policy and the resulting increase in intermediate consumption and expenditure on social transfers. According to the forecasts of international institutions, economic growth will slow to 1.7% in 2016, primarily as a result of a decline in government investment during the changeover to the new financial framework for 2014-2020, and lower export growth. Private consumption, private-sector investment and government consumption are all expected to continue rising.

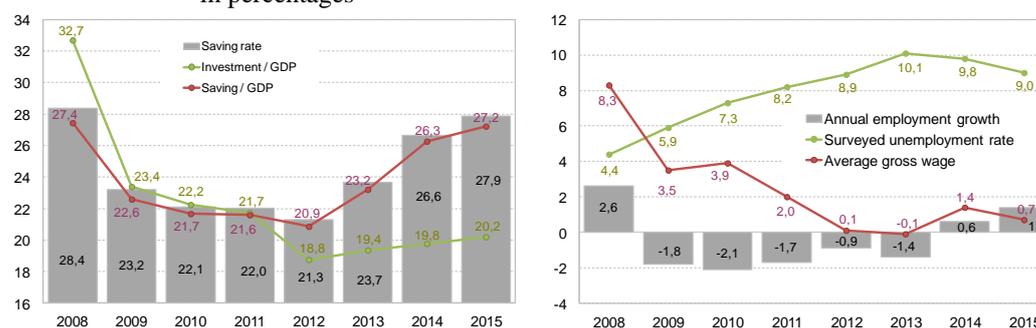
Figure 2.2: Year-on-year growth in quarterly GDP (left), and year-on-year growth in value-added by sector at constant prices (right), in percentages



Source: SORS

**Saving in the Slovenian economy strengthened again in 2015, albeit slightly more slowly.** The ongoing growth in saving is an indication of the continuing lack of appetite for investment, growth in which increased only slightly as a proportion of GDP in 2015. The saving-investment gap as a proportion of GDP is continuing to widen. Given the less favourable conditions for saving in the low interest rate environment, in the future saving can be expected to decline and investment to increase. This is already being reflected in strengthened household consumption, which could be followed by investment having the real estate market stabilise. Positive factors are also present on the labour market, where the surveyed unemployment rate fell for the second consecutive year, and is expected to fall further. Employment growth and the gross average wage also increased.

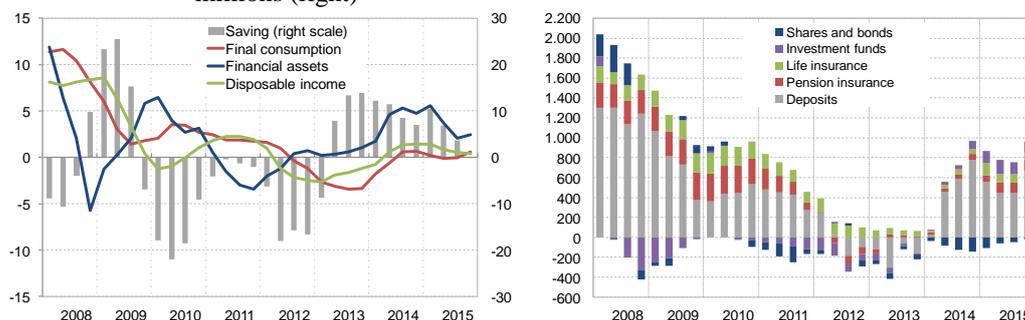
Figure 2.3: Saving rate, and ratios of investment and saving to GDP (left), and surveyed unemployment rate and growth in employment and gross average wage (right), in percentages



Source: SORS

**In the low interest rate environment savers are achieving minimal returns with traditional forms of saving. Their funds have to be diversified into higher-risk investments for greater returns.** Although interest rates on bank deposits are very low, Slovenian savers are greater users of bank saving than their counterparts across Europe and in particular in the US, who traditionally hold a greater proportion of their savings in shares and bonds. Households across the euro area hold approximately around a third of their assets in deposits, compared with more than 40% at households in Slovenia. The figure is below 15% for households in the US. Owing to the partial loss of confidence in the capital market by Slovenian households, according to the bad experience of the past, changing the structure of household saving will be a very gradual process. The data for the financial transactions of Slovenian households in 2015, when the banks' liability interest rates were at very low levels, also reveals just a small increase in other forms of saving (pension and life insurance, investment funds). Slovenian households invested merely just under a third of their current disposable financial assets in alternative forms of saving in 2015. Households' saved financial assets are always a claim against output generated in the economy. The importance of low interest rates is for output in the economy to again approach its potential level, which entails greater employment and economic growth.

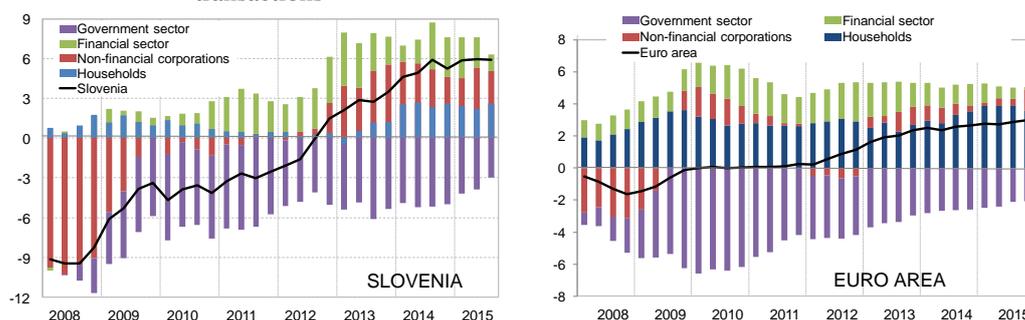
Figure 2.4: Year-on-year growth in final consumption, disposable income, financial assets and savings of households, in percentages (left), and annual transactions (four-quarter moving sum) in various forms of household financial asset, in EUR millions (right)



Source: Bank of Slovenia

**Insufficient investment demand to absorb the available saving in the economy is leading to the persistence of the low interest rate environment.** While saving and thus net lending by households remains at a high level as expected, saving and net deleveraging by non-financial corporations has not yet come to an end, which is even more the case in the euro area overall than in Slovenia alone. The factors maintaining this situation remain the increase in saving as a result of the aging population, the decline in government consumption as part of its high indebtedness, and the slowdown in productivity growth, which is reducing the profitability of investment.

Figure 2.5: Net lending/borrowing as a percentage of GDP by the principal economic sectors in Slovenia (left), and the euro area overall (right), four-quarter moving sum of transactions



Note: The figures for the financial sector in Slovenia show transactions excluding the effects of the recapitalisations at the end of 2013 and 2014.

Sources: Bank of Slovenia, SURS, ECB

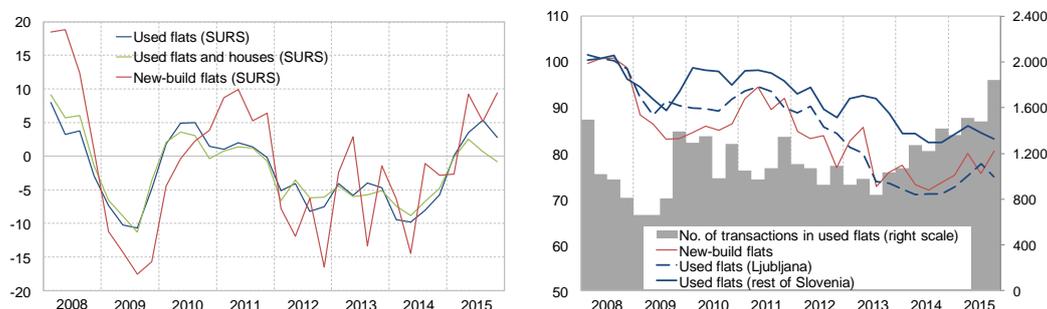
**The decline in net loans as a proportion of GDP or in net lending by the financial sector in Slovenia and across the euro area is weakening the financial sector's opportunity to generate income.** The financial sector is still generating income via lending and borrowing (financial intermediation), but the margin is declining all the time and the income generation problem is increasingly evident.

### 2.3 Real estate market

**After falling for three years, prices of housing rose slightly last year, but there is still a trend of falling prices of houses. Further evidence that the real estate market is gradually reviving comes from the increase of 25% in the volume of transactions.** According to the Statistical Office of the Republic of Slovenia (SURS) figures, prices of used flats rose by 5.3% in 2015 in Ljubljana, and by 1.3% in the rest of Slovenia. Although prices in Ljubljana rose by more than in the rest of Slovenia, at the end of 2015 they were still down 25% on 2008, while prices in the rest of Slovenia were down 17%, having fallen by less than prices in Ljubljana over the previous years. Prices of new-build flats rose by 5.3% last year. Prices of houses continued to fall; the decline since 2008 deepened to 37% for new-build houses and 27% for used houses. Volume continued to grow last year: it increased again by a quarter. Annual growth in transactions in used apartments

slowed from 45% to 15% in Ljubljana, but the pace remained similar in the rest of Slovenia. Transactions in new-build apartments increased by 18.6%, while transactions in used houses increased by fully 31%.

Figure 2.6: Growth in prices of used and new-build housing in Slovenia (left), and basic housing price index (2008 = 100) (right), in percentages

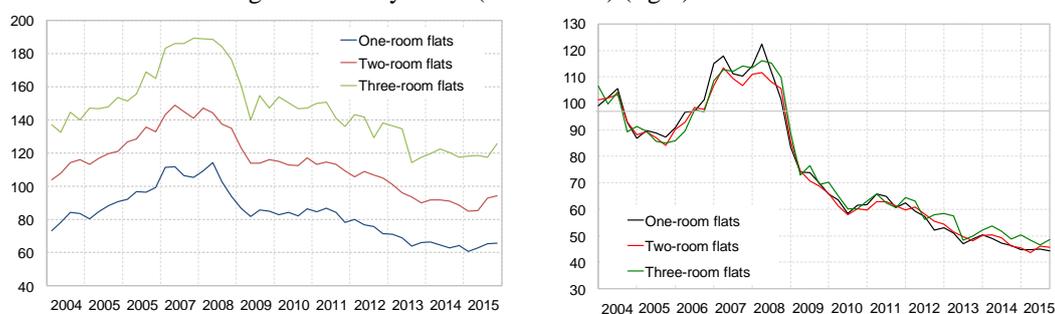


Source: SURS

### Housing affordability deteriorated slightly in 2015, but remains better than before the crisis.

The ratio of prices of flats to wages in Ljubljana, which measures housing affordability, increased last year. Purchasing a flat in the final quarter of last year required an average of five more monthly wage payments than in the previous quarter. A similar indication comes from the housing affordability indicator that takes account of loan terms.<sup>1</sup> The deterioration in housing affordability in the final quarter of 2015 was primarily attributable to a rise in the average price of used flats relative to the first quarter. This effect prevailed over the favourable effect of lower variable interest rates on housing loans and the lengthening of the average maturity of housing loans, which reached 19.2 years at the end of 2015. The ratio of prices to wages is slightly below the long-term average, which indicates under-valuation of real estate, and has been since 2013, the low occurring in the third quarter of 2014. The ratio was however approaching its long-term average by the end of 2015.<sup>2</sup>

Figure 2.7: Ratio of housing prices to net wage for Ljubljana in percentages (left), and housing affordability index (2004 = 100) (right)



Note: Ratio of prices of used flats to annual moving average of net monthly wages (left figure). 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 the prices of used flats, the annual moving averages of monthly wages, and loan terms (interest rates and maturities).

Sources: TARS, SMARS, Bank of Slovenia calculations

**There are several factors acting to raise demand for housing and readiness to buy, and bringing the fall in prices of flats to an end:** lower interest rates for housing loans, lower real estate prices, easier credit standards for housing loans, economic growth, relatively low household indebtedness, buyer expectations, etc. The assessment could be that the period of rapid falls in

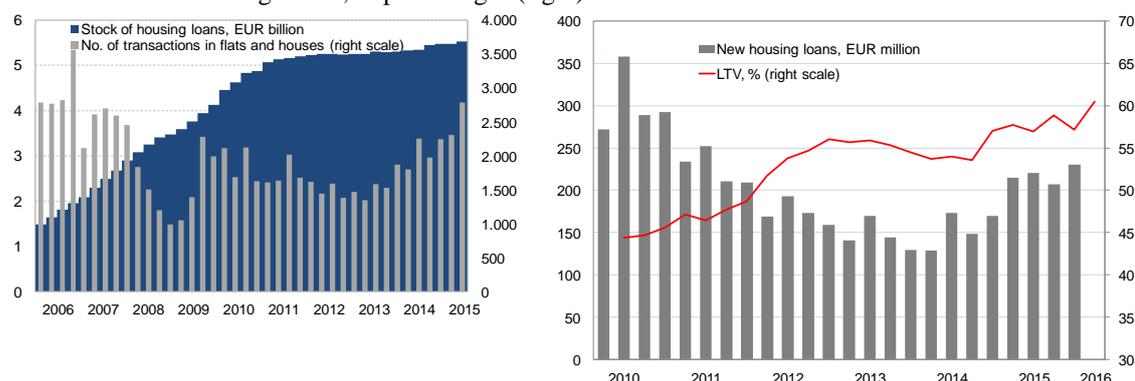
<sup>1</sup> The assumption is that the purchase of the housing is financed entirely by a loan, subject to terms of approval calculated as an average for the banking system.

<sup>2</sup> The calculation of the long-term average of the ratio of prices to wages for flats took account of the average values between 2000 and 2015. A more accurate calculation would require the use of a longer, more stable period; the short time that the Slovenian housing market has functioned normally makes this impossible. A change in the baseline period would also lead to a change in the long-term average. The aforementioned limitations should be taken into account in the interpretation.

prices has come to an end, and that a stable period of gentle fluctuations in real estate prices will follow.

**The volume of transactions in used flats and houses in 2015 rose to its pre-crisis level, but this was not reflected in growth in the stock of housing loans.** The volume of transactions in new-build flats and houses remains down a half. New housing loans increased by 41% in 2015, but year-on-year growth in the stock of housing loans was just 3.3% at the end of the year. New housing loans increased also as a result of changes in the terms on existing housing loans (e.g. changes from variable rate to fixed rate, changes in currency or currency clause from Swiss franc to euros). The decline in the use of loans in the purchase of residential real estate is also indicative of a change in the behaviour of buyers, who are more frequently using their own funds to purchase real estate, although the link cannot be directly confirmed.

Figure 2.8: Stock of housing loans to households, in EUR billion, and annual growth, in percentages (left), and new housing loans to households in EUR million and average LTV, in percentages (right)

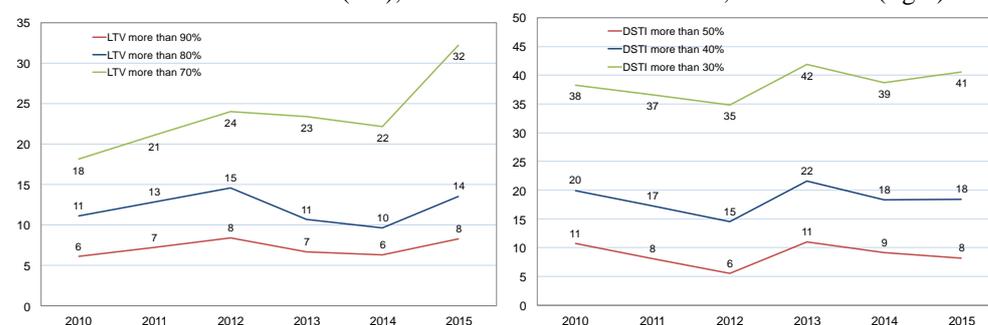


Note: The figure for the number of transactions in flats and houses in 2006 is estimated on the basis of the number of transactions in used flats and houses. The LTV figure for November 2015 is calculated exclusive of two savings banks.

Sources: Bank of Slovenia, SURS

**The banks and savings banks slightly relaxed their credit standards on housing loans and eased the terms during approval of housing loans in 2015.** The LTV for new housing loans (the ratio of the loan to the value of the collateral) averaged 56.3%, up 1.8 percentage points on the previous year. The proportion of new housing loans with the highest LTV increased last year. LTVs of more than 70% accounted for almost a third of new housing loans in terms of value in 2015, up 10 percentage points on the previous year. The proportion of new housing loans with the highest DSTI (the debt service to income ratio) was unchanged from the previous year. Some 18% of new housing loans approved in 2015 (in value terms) had a DSTI of more than 40%.

Figure 2.9: Percentages of new housing loans (in value terms) with LTVs of more than 70%, 80% or 90% (left), and DSTIs of more than 30%, 40% or 50% (right)



Note: Figures for 2011 are estimates. DSTI is mostly measured with regard to the earnings of a single client (and not the household or all agreement signatories).

Source: Bank of Slovenia, survey in 2015 and 2016

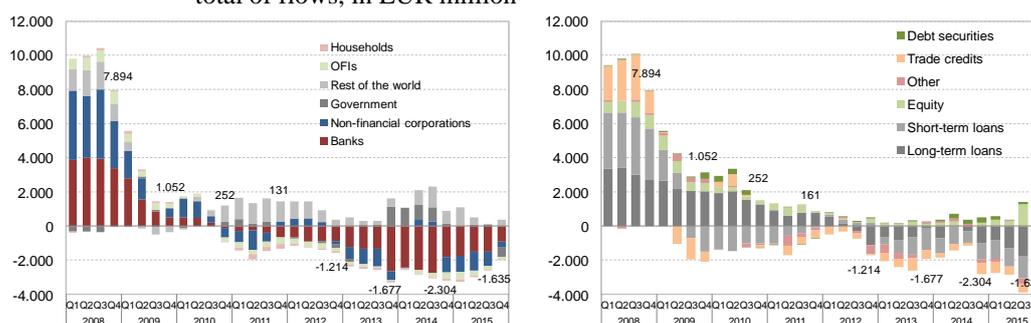
## 2.4 Corporate sector

### Corporate financing flows

Corporate financing flows in 2015 were negative for the fourth consecutive year, in the amount of EUR 1,635 million, although the pace of the contraction in corporate financing slowed. Non-financial corporations' reduction in debt to domestic banks in 2015 was almost half of that in the previous year: debt was reduced by EUR 919 million via loan repayments, debt-to-equity conversions and write-offs. Corporate financing at domestic banks is therefore still declining: non-financial corporations have made net debt repayments totalling EUR 6,902 million over the last five years. Business-to-business financing in Slovenia is also declining. Last year non-financial corporations also reduced their financing at suppliers and customers via trade credits and advances. The contraction in trade credits between non-financial corporations is also an indication of the persistent reluctance on their part to take up credit risk in respect of other non-financial corporations.

**Inflows of equity strengthened in the second half of last year.** Inflows of equity from the rest of the world amounted to EUR 1 billion last year, while the inflows of domestic equity amounted to EUR 240 million. The inflows strengthened primarily as a result of corporate recapitalisations, although the increase in the stock of equity was uneven because of other negative effects such as revaluations (e.g. valuation of marketable shares). Non-financial corporations have only maintained a positive financing dynamic with the rest of the world.

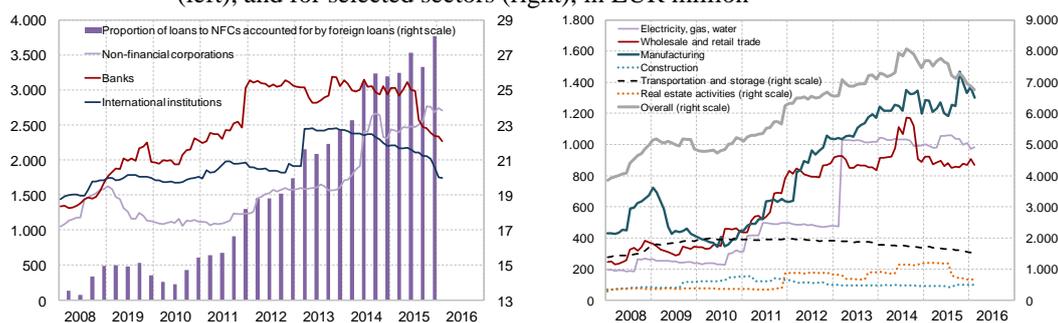
Figure 2.10: Corporate borrowing by sector (left), and by instrument (right), annual moving total of flows, in EUR million



Source: Bank of Slovenia

**Corporate financing in the rest of the world declined last year, after five years of increase as non-financial corporations partly compensated for the decline in financing at domestic banks after the crisis with financing in the rest of the world.** The stock of corporate loans from the rest of the world began to decline in the second half of last year; it was down 6.9% in year-on-year terms at the end of the year, having increased by 5% in the previous year. Having remained virtually unchanged since 2012, loans from foreign banks declined by 20% in 2015. Loans from international institutions also declined, by 14%, while loans from corporates in the rest of the world increased by 16%. Loans from the rest of the world accounted for 28.1% of total corporate loans at the end of 2015, up 2.3 percentage points on a year earlier, loans to corporates in Slovenia having declined by 17%. Because non-financial corporations have been privatised and sold to foreign investors in recent years, there is also expected to be a change in the financing model.

Figure 2.11: Stock of corporate loans from the rest of the world by foreign creditor sector (left), and for selected sectors (right), in EUR million



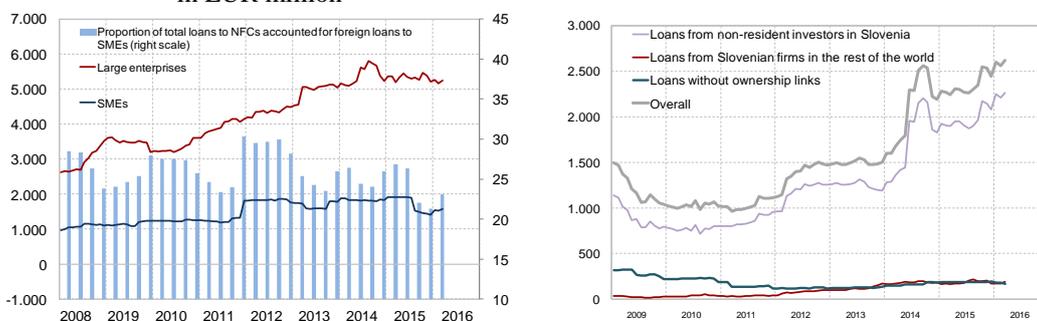
Note: The figures for 2013 include two major transactions with international financial institutions. The figures for 2014 include two major transactions and revaluations with corporates in the rest of the world. Growth in the stock of loans from the rest of the world was positive in 2014, while the flows were negative; the increase in the stock was the result of a revaluation caused by the reclassification of a corporate from other financial institutions to non-financial corporations. The figures for 2015 include two major transactions.

Source: Bank of Slovenia

Corporates will also be able to obtain equity and debt financing from parent affiliates or financing from banks in the rest of the world, which will mean that these corporates will have less demand for and will obtain less lending on the domestic market.

**Large enterprises in particular have increased their loans from the rest of the world since 2008.** The main contraction in the stock of corporate loans from the rest of the world, which began declining in the second half of last year, was at SMEs, while the stock of loans at large enterprises remained almost unchanged. The proportion of the stock of loans in the rest of the world accounted for by SMEs was 23% at the end of the first quarter of 2016. Loans from corporates in the rest of the world have increased in particular over the last two years. These primarily consisted of loans from foreign investors in Slovenia, which accounted for 86% of the total at the end of the first quarter of 2016.

Figure 2.12: Stock of corporate loans from the rest of the world for SMEs and large enterprises (left), and from foreign corporates in terms of ownership link (right), in EUR million



Note: The figures for 2013 include two major transactions with international financial institutions. The figures for 2014 include two major transactions and revaluations with corporates in the rest of the world. Growth in the stock of loans from the rest of the world was positive in 2014, while the flows were negative; the increase in the stock was the result of a revaluation caused by the reclassification of a corporate from other financial institutions to non-financial corporations. The figures for 2015 include two major transactions.

Source: Bank of Slovenia

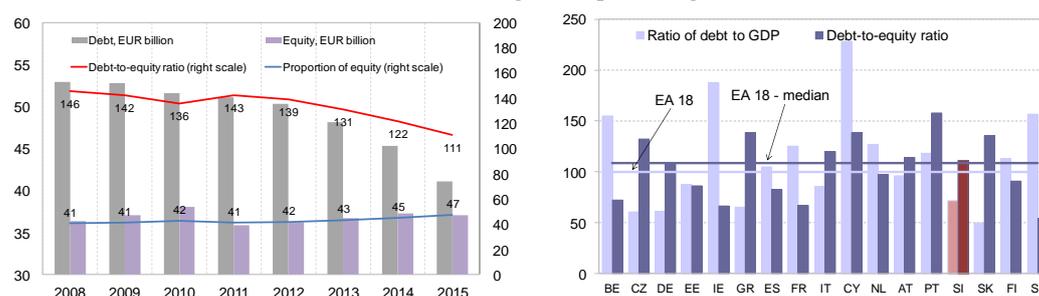
**Other forms of corporate financing remain modest.** Financing via commercial paper declined last year, while corporate bonds remain at almost the same level. The latter remain under-utilised as a source of financing, and are not a significant alternative to more established forms of corporate financing. Firms are also financing themselves from internal reserves via retained earnings, and are creating deposits at banks to make it easier to overcome liquidity difficulties. According to SORS figures, fewer and fewer manufacturing firms and construction firms are citing financial problems and problems in obtaining loans as a limiting factor in performance, while the proportion of firms in the wholesale and retail trade sector citing these as a limiting factor has remained at virtually the same level.

The corporate financing model should be based more on growth in equity in the future, and less on debt financing.<sup>3</sup> The corporate debt-to-equity ratio at the end of 2015 was at the median euro area level. The ratio of corporate debt to GDP is below the euro area average, which indicates that the level of corporate debt is not problematic, although the financing structure is inappropriate, as firms lack equity. Changes in capital valuation have had a profound impact on the debt-to-equity ratio: corporate deleveraging has gone hand-in-hand with a trend of capital devaluation. In addition to capital revaluations, which can have an impact in both directions, corporate equity can be increased not only by new investment or recapitalisations, but also by improved performance and an increase in retained earnings.

In contrast to other euro area countries, only in Slovenia (and Latvia) have firms deleveraged primarily via debt reduction and less via an increase in equity. By the end of 2015, the corporate sector in Slovenia had deleveraged by paying down debt by 22% since the end of 2008; the corresponding increase in the stock of equity was just 2%. The reduction in the corporate debt-to-equity ratio across the euro area was based mostly on an increase in equity.

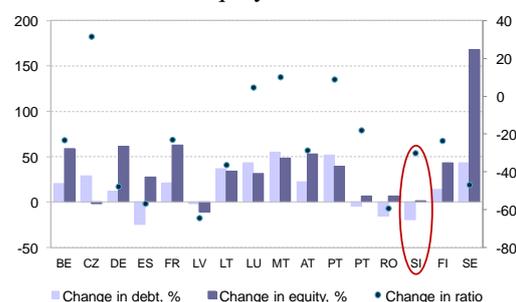
Another factor in the quality of corporate credit demand is the value of the real estate that firms pledge as collateral for loans. The real estate market is reviving, but real estate prices are low compared with the prices recorded in the pre-crisis years, which means that corporate access to loans has been reduced. At the same time firms were able to use their assets as collateral during the period of excessive credit growth before the crisis, and if they are still repaying the loans they are limited in obtaining new loans, as the assets have already been used as collateral. In recent years banks have focused more on the financial indicators of the debtor's cash flow, although the importance of collateral is still substantial.

Figure 2.13: Corporate debt-to-equity ratio (left), and comparison of corporate indebtedness with the euro area in 2015 (right), in percentages



Note: Figures for 2015 are estimates on the basis of quarterly figures (right figure).  
Sources: Bank of Slovenia, Eurostat, Bank of Slovenia calculations

Figure 2.14: Comparison of change in corporate debt, corporate equity and corporate debt-to-equity ratio between 2008 and 2015 across the euro area, in percentages



Sources: Eurostat, Bank of Slovenia calculations

### Corporate indebtedness

The trend of decline in non-financial corporations' indebtedness is still continuing. Non-financial corporations' leverage<sup>4</sup> as measured by the debt-to-equity ratio declined from 123% to

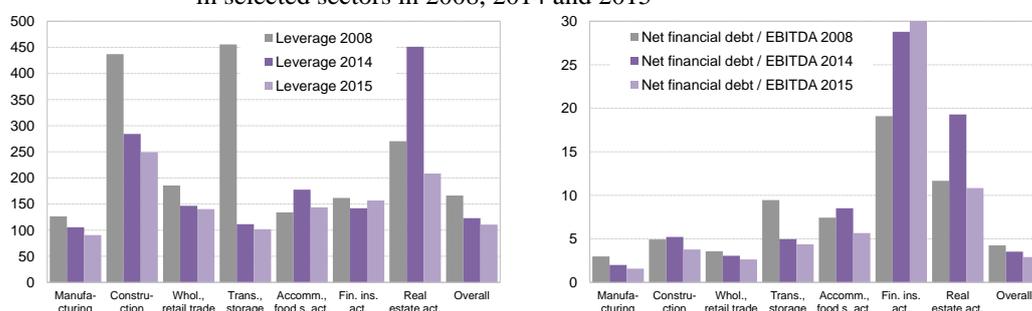
<sup>3</sup> Equity accounts for 46% of the financial liabilities of Slovenian firms, compared with 51% across the euro area.

<sup>4</sup> The value for leverage calculated here differs slightly from the indicator published previously, which illustrates the ratio of debt to equity in corporate financing on the basis of financial accounts data (the differences are the result of the

111% last year. The ratio of net financial debt to EBITDA<sup>5</sup> across all firms declined from 3.5 to 2.9 years last year, an indication of the renewed improvement in corporate debt servicing capacity. Indebtedness was lowest last year at firms in the manufacturing sector: their leverage stood at 91% last year, while their ratio of net financial debt to EBITDA stood at 1.6 years. Leverage declined at firms in the majority of sectors last year, most notably in the sectors of real estate activities, accommodation and food service activities, and manufacturing. Leverage remains high at construction firms and firms in the real estate activities sector. Debt servicing capacity improved last year at firms in the majority of sectors, most notably real estate activities, accommodation and food service activities, and construction. Indebtedness from the perspective of both indicators increased last year at firms in the financial and insurance activities sector.

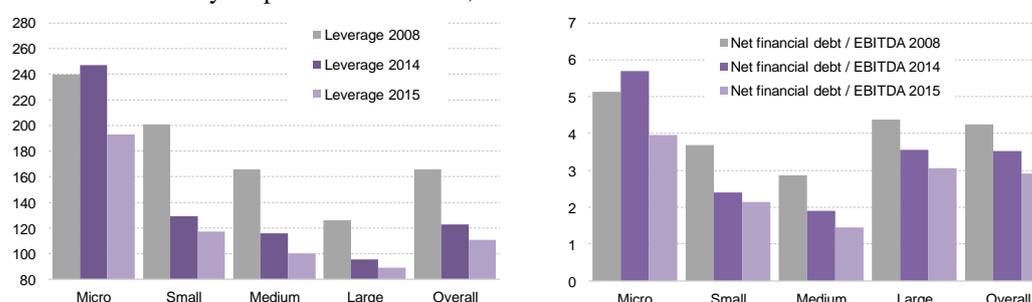
**In 2015 the reduction in leverage was greater at SMEs than at large enterprises, but leverage at SMEs remains higher than at large enterprises.** Micro enterprises, where leverage is highest, recorded the largest reduction last year, and also recorded the largest improvement in debt servicing capacity. The largest reduction in indebtedness from the perspective of both indicators between 2008 and last year was at small and medium-sized enterprises.

Figure 2.15: Leverage in percentages (left), and net financial debt to EBITDA in years (right) in selected sectors in 2008, 2014 and 2015



Sources: AJPES, Bank of Slovenia calculations

Figure 2.16: Leverage in percentages (left), and net financial debt to EBITDA in years (right) by corporate size in 2008, 2014 and 2015



Sources: AJPES, Bank of Slovenia calculations

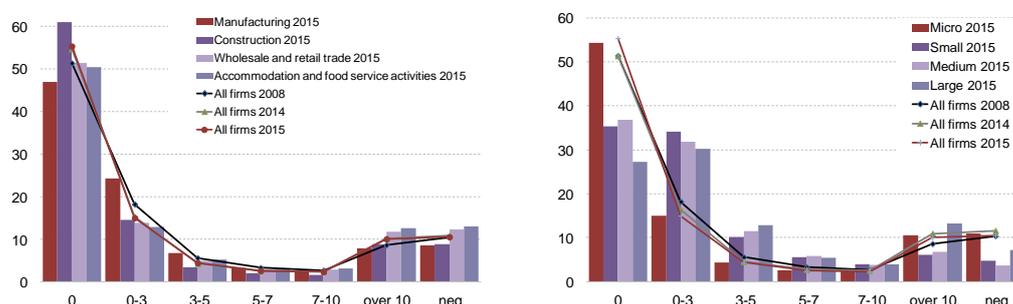
**The proportion of firms with high capacity to service financial liabilities and the proportion of firms with no financial liabilities again increased slightly in 2015 relative to the previous year, while the proportion of firms with low debt servicing capacity declined.** The proportion of firms with high capacity to service financial liabilities was still down on 2008, while the proportion of firms with the lowest debt servicing capacity (an indicator of more than 10) was up. This is still being reflected in caution and stricter requirements from the banks in their credit standards, alongside less willingness to take up additional risks. The proportion of firms in the accommodation and food service sector activities and the wholesale and retail trade sector with higher debt servicing risk was again higher than in the manufacturing sector last year. The proportion of large enterprises with higher debt servicing risk was also higher than the proportion of SMEs. Again, almost half of firms had net financial debt in 2015, and their ratio of net financial

differences in the methodology of data capture). In this section leverage is calculated as the debt-to-equity ratio from closing corporate balance sheet figures collated by AJPES.

<sup>5</sup> The net financial debt to EBITDA indicator is measured as the ratio of financial liabilities, less cash and cash equivalents, to cash flows from operating activities. The indicator shows a firm's capacity to regularly service debt (interest and principal), and shows how many years of cash flow the firm needs to repay debt; the lower the ratio, the lower the risk in the repayment of the firm's liabilities.

debt to EBITDA declined from 5.2 to 4.5 years. Last year 43% of firms had the capacity to repay their net financial debt in less than five years, unchanged from the previous year.

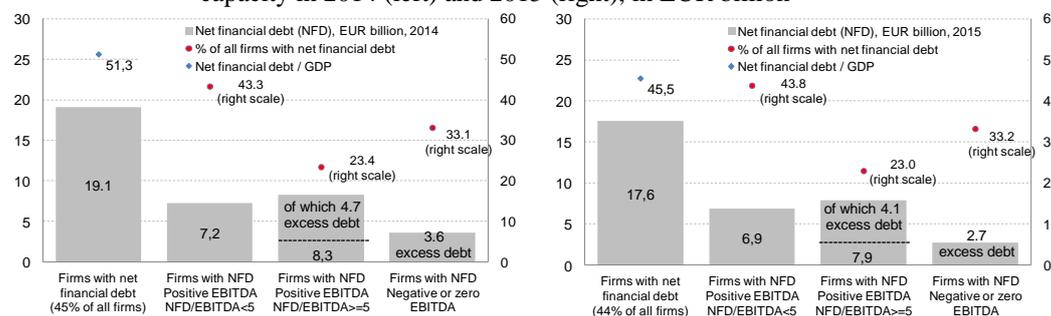
Figure 2.17: Distribution of the net financial debt to EBITDA indicator for selected sectors (left), and in terms of corporate size (right) in 2008, 2014 and 2015



Sources: AJPES, Bank of Slovenia calculations

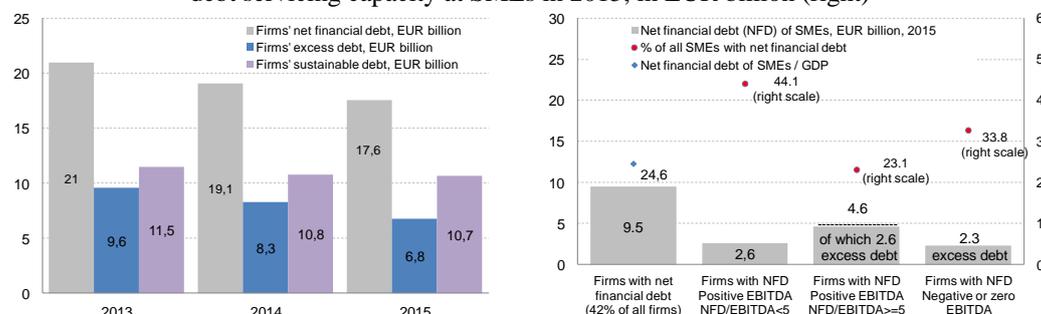
**Corporate financial recovery is gradually progressing: in terms of the structure of the net financial debt, EUR 10.7 billion or 61% of the total was sustainable in 2015, 3 percentage points more than in the previous year.** Excess corporate debt,<sup>6</sup> i.e. that proportion of total debt that firms have less capacity to repay, amounted to EUR 6.8 billion or 39% of total net financial debt. More than a third of the net financial debt is subject to necessary restructuring. EUR 2.7 billion of net financial debt also requires operational restructuring: the firms in question were unprofitable last year. The EUR 2.7 billion of excess corporate debt that would also require operational restructuring in 2015 was down EUR 0.9 billion on 2014 (and down EUR 1.5 billion on 2013). The total excess debt in 2015 was also down on the previous year, by 18% (and down 29% on 2013).

Figure 2.18: Net financial debt and excess debt with regard to corporate debt servicing capacity in 2014 (left) and 2015 (right), in EUR billion



Sources: AJPES, SURS, Bank of Slovenia calculations

Figure 2.19: Net financial debt, excess debt and sustainable debt at all firms in 2013, 2014 and 2015 (left), and net financial debt and excess debt with regard to corporate debt servicing capacity at SMEs in 2015, in EUR billion (right)



Sources: AJPES, SURS, Bank of Slovenia calculations

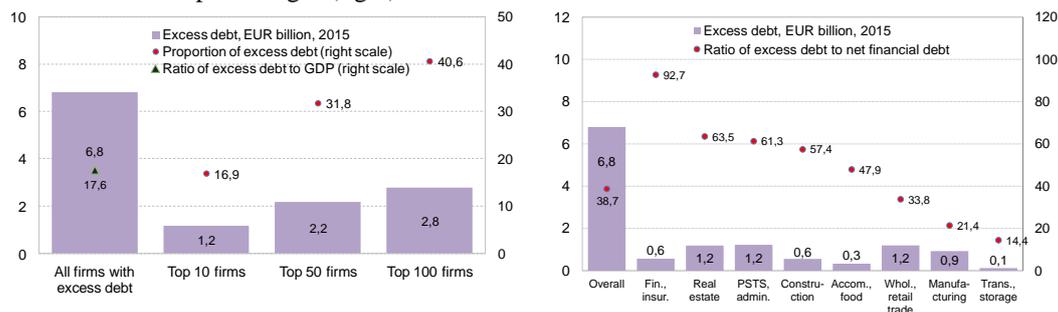
<sup>6</sup> Excess debt is calculated as the excess net financial debt (NFD; financial liabilities minus cash) for firms where  $NFD/EBITDA \geq 5$  or  $NFD/EBITDA = 0$  or is negative. The figures exclude three large government-owned firms, and firms undergoing bankruptcy, compulsory composition, or preventive restructuring in the period to May 2015. The calculation of excess debt for 2013 excluded three large government-owned firms, and firms undergoing bankruptcy, compulsory composition, or preventive restructuring in the period to August 2014.

**Excess debt at SMEs declined by 18.3% in 2015, from EUR 6 billion to EUR 4.9 billion.** SMEs account for 88% of the excess debt at firms that require operational restructuring. The corresponding figure for excess debt at firms that are operating profitably but where the ratio of net financial debt to EBITDA is more than 5 is less, at 63%.

**Excess debt is concentrated at a small number of firms; the hundred firms with the largest excess debt accounted for 41% of total excess debt in 2015, down 3 percentage points on the previous year.** The ratio of excess debt to GDP is declining, from 22.3% in 2014 to 17.6% in 2015 (down from 26.6% in 2013). Excess debt declined again last year in almost all sectors, while the concentration of excess debt also declined, with the exception of firms in financial and insurance activities. The ratio of excess debt to net financial debt varies from sector to sector. Excess debt accounts for 93% of net financial debt in financial and insurance activities, and 64% of net financial debt in real estate activities, while manufacturing has one of the lowest figures at 21%. Firms in the sectors of real estate activities, wholesale and retail trade, and professional, scientific and technical activities and administrative and support service activities account for more than a half of total excess debt.

**The corporate burden from excess financial debt is gradually easing, and firms are moving towards a more acceptable financing structure.** The ratio of excess debt to net financial debt declined from 43% to 39% last year. The concentration of debt diminished, as large enterprises that were heavily burdened with excess debt withdrew from the market. The conditions seen before the crisis are gradually being reestablished, and with them the conditions for a new credit cycle, which nevertheless should be based on sustainable credit growth.

Figure 2.20: Concentration of excess debt in 2015, in EUR billion (left), and excess debt by sector, in EUR billion, and ratio of excess debt to net financial debt by sector in percentages (right)



Sources: AJPES, SURS, Bank of Slovenia calculations

Figure 2.21: Concentration of excess debt in 2014, in EUR billion (left), and excess debt by sector, in EUR billion, and ratio of excess debt to net financial debt by sector, in percentages (right)



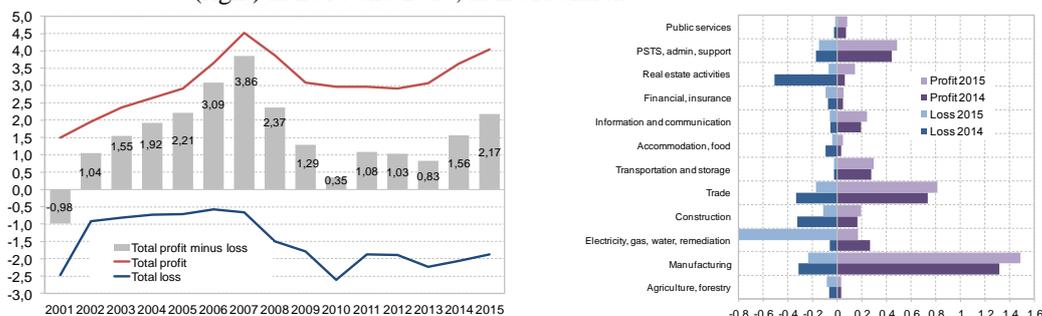
Sources: AJPES, SURS, Bank of Slovenia calculations

### Corporate performance

**The performance of non-financial corporations improved again in 2015. Corporate net profit increased by almost a half to EUR 2.2 billion.** Total profit increased by 11.4% to EUR 4 billion last year, while total loss declined by 9.6% to EUR 2.2 billion. The most notable increases in total

profit last year were recorded by firms in the manufacturing sector (up 13.3% at EUR 1.5 billion) and in the wholesale and retail trade sector (up 10.7% at EUR 0.8 billion). After several years of losses, firms in the sectors of construction and real estate activities generated a positive net profit of EUR 0.1 billion last year. SMEs saw a greater improvement in performance in 2015 than did large enterprises. Net profit increased at SMEs, most notably at micro enterprises. Net profit at large enterprises declined by a third. By contrast, the largest increase in net profit in the previous year was recorded by large enterprises, while net profit at micro enterprises was negative.

Figure 2.22: Total profit and loss and net profit (left), and total profit and loss by sector (right) in 2014 and 2015, in EUR billion



Sources: AJPES, Bank of Slovenia calculations

### 3 RISKS IN THE BANKING SECTOR

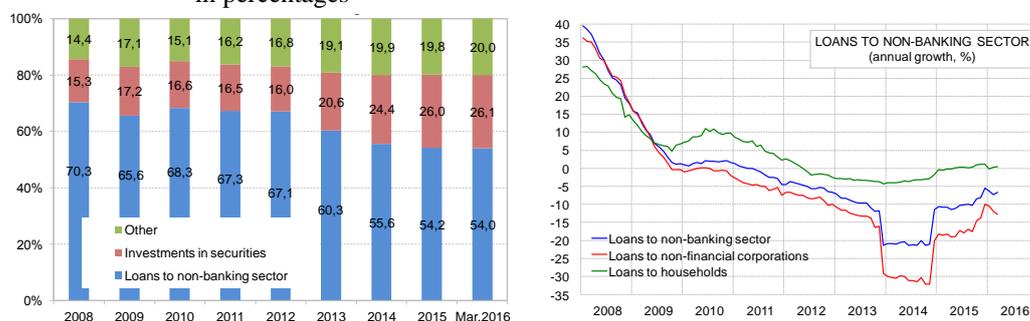
In 2015 and the first quarter of 2016 the banking system operated in an environment of stable economic activity, and a favourable outlook for future growth. The most significant risks at the banks are displaying a trend of decline or of remaining unchanged at low levels. Income risk and credit risk have remained at relatively high level, albeit with a trend of further decline, largely under the influence of the resolution of the banks' non-performing claims. The diminishing dependence on wholesale funding, the high liquidity and the wide open access to liquidity at the ECB, and the stable growth in the proportion of funding accounted for by domestic deposits are continuing to reduce financing risk. Bank solvency achieved across the system is at a favourable level, but has not yet reached an adequate level of capital at each individual banks.

The risks being provoked by the persistent environment of low or negative interest rates have recently come to the fore. To maintain their interest margin and profitability, banks are adjusting their business models to the new environment by changing the structure and maturity of investments and funding, by switching investments to higher-yielding, higher-risk assets, and by competing among themselves to attract good clients in such a way that interest rate risk is increasing. This risk is increasing further as the average maturity of investments lengthens further while investments with a fixed interest rate simultaneously increase, unless there is adequate collateral on the funding side. The opening of the maturity gap between investments and funding demands the maintenance of an adequate level of secondary liquidity, particularly in the wake of the sustained increase in the proportion of funding accounted for by sight deposits, which is increasing the risk of their partial switching to alternative forms of saving.

#### 3.1 Bank balance sheet and investments

**The intensive change in the investment structure of Slovenian banks seen over the previous three years slowed in the first quarter of 2016.** The recovery in corporate lending is still limited by insufficient creditworthy demand and other limiting factors on the supply and demand sides, for which reason the banks are also focusing on other investments. By March 2016 the proportion of loans to the non-banking sector had reached its lowest level since the outbreak of the financial crisis, at 54%. The banks increased the proportion of investments in securities to 26.1%, in 2014 on account of the recovery of certain banks, and later as a result of the quest for higher returns and reduced take-up of new risks. However, in the low interest rate environment the opportunity to invest in higher-yielding securities has also diminished. The banks are still opting to purchase securities eligible as Eurosystem collateral. In addition to Slovenian government bonds, these primarily include euro area government debt securities, yields on which have fallen sharply in recent times.

Figure 3.1: Breakdown of bank investments (left), and year-on-year growth in loans (right), in percentages



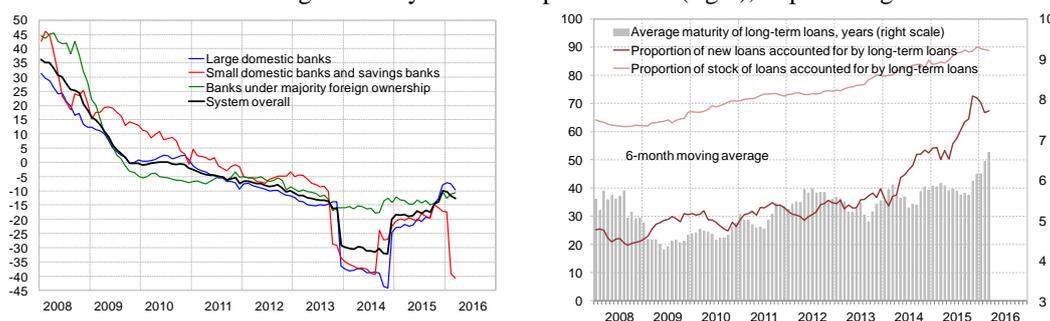
Source: Bank of Slovenia

**The slowdown in the contraction in lending to the non-banking sector, which began in 2015, eased slightly in the first quarter of 2016.** This was attributable to the wind-down of Factor banka and Probanka, and the elimination of their portfolios from the system. The year-on-year contraction in loans to the non-banking sector stood at 6.7% across the banking system in March, or at 4.7% if the aforementioned two banks are excluded. The reasons for the ongoing contraction

in credit activity can be found on both the supply side and the demand side. For more on this, see the thematic section of this report.

**The contraction in loans to non-financial corporations continued in the first quarter of 2016.** The year-on-year decline in these loans stood at 12.8% at the end of the first quarter. In addition to the quality of demand for loans, credit activity has been limited by the persistently high indebtedness and the lack of equity at firms, which are maintaining credit standards at the previous levels. The economic environment and favourable interest rates are encouraging firms to also increase demand for loans for longer-term investments, which is being reflected in the lengthening of the average maturity of new loans. In an environment of low interest rates and contraction in lending, to a certain extent the banks are compensating for the loss of interest income by lengthening loan maturities.

Figure 3.2: Year-on-year growth in loans to non-financial corporations by bank group (left), and average maturity of new corporate loans (right), in percentages



Source: Bank of Slovenia

**Household loans have been recording positive year-on-year growth since May 2015.** The rate declined slightly at the beginning of this year, as a result of the appreciation of the Swiss franc dropping out of year-on-year calculation, reaching 0.5% in March. The low level of indebtedness of households, low interest rates on loans and affordable real estate prices are certainly contributing significantly to the ongoing growth in housing loans, which reached 1.4% in March. The contraction in consumer loans has been slowing for some time now: by the end of the first quarter the rate was just 1% below the positive growth threshold. The rise in the employment rate, and the increase in disposable income and consequently in purchasing power could make a favourable contribution to further growth in household loans in the future.

## 3.2 Credit risk

### Summary

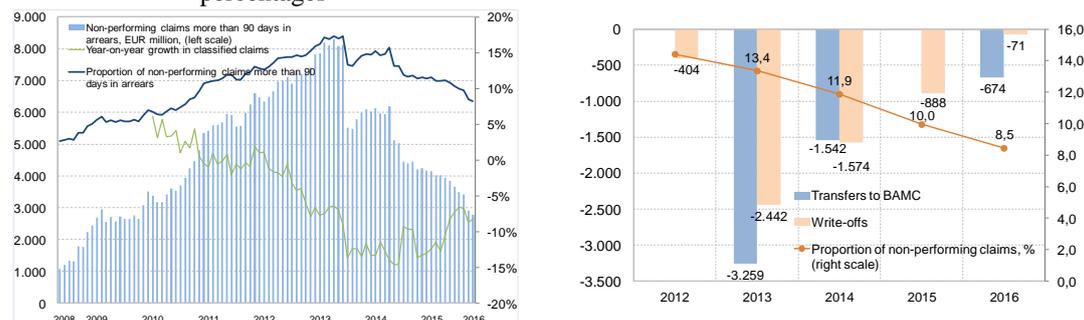
*The banks' activities to reduce credit risk have been reflected in a declining proportion of non-performing claims. Through forbearance, increased write-offs and collateral realisation, and the wind-down of Factor banka and Probanka with absorption by the BAMC in early 2016, the proportion of claims more than 90 days in arrears had declined to 8.2% by March, while the proportion according to the broader European Banking Authority definition had fallen to 10.8%. The impact of economic growth on the improvement in investment quality is being reflected in manufacturing in particular. There are still reserves in the SMEs segment, where investment quality is disproportionately worse than in the large enterprises portfolio. The proportion of claims with lengthy arrears of several years, which are less likely to be suitable for forbearance, also remains relatively high.*

*As claims more than 90 days in arrears decline, coverage by impairments is continuing to improve, reaching 66.1% in March 2016, a notable figure for Slovenian banks among the euro area countries. Overall coverage of claims by impairments and collateral is favourable, and the ratio of unimpaired claims more than 90 days in arrears to capital declined further in 2015.*

*Quality of the credit portfolios of banks and savings banks*

**The improvement in the quality of the banks' credit portfolio continued in 2015 and early 2016.** The proportion of classified claims more than 90 days in arrears stood at 8.2% in March 2016. Since the first transfer to the BAMC in November 2013, the stock of claims more than 90 days in arrears has declined from EUR 8.1 billion to EUR 2.8 billion, equivalent to 7.2% of GDP. The active approach to the resolving of non-performing claims encompassed transfers of non-performing claims to the BAMC, increased write-offs of non-performing claims, restructuring agreements and MRAs with 72 corporates, and an increase in bank forbearance with regard to the individual client.

Figure 3.3: Annual growth in classified claims and claims more than 90 days in arrears (left), transfers to the BAMC<sup>7</sup> and write-offs (right), in EUR million and percentages



Sources: Bank of Slovenia, IMF (latest data for 2015)

**The proportion of claims more than 90 days in arrears declined throughout 2015, and maintained the trend until March 2016.** The largest factor in the reduction in the stock and proportion of classified claims was the wind-down of Factor banka and Probanka, which were absorbed into the BAMC in February 2016. According to the spring survey, claims at banks were reclassified from non-performing to performing<sup>8</sup> in even greater amounts than in previous years, with the exception of claims against households. Should the favourable economic growth trend continue, a further improvement in bank portfolios can be expected.

**As part of the stabilisation of the banking system, in September 2013 the Bank of Slovenia initiated the process of the orderly wind-down of Factor banka and Probanka, which was completed in February 2016 with the withdrawal of the operating licence.** Claims more than 90 days in arrears at Factor banka and Probanka<sup>9</sup> had been the largest burden on the small domestic banks since 2010. Upon absorption into the BAMC, claims more than 90 days in arrears were reduced by EUR 0.5 billion to EUR 232 million, thereby accounting for 9.9% of the total, which represents a significant improvement, although still above the system average. The small domestic banks' classified claims accounted for 7.7% of the banking system's credit portfolio in March.

**Credit portfolio quality in Slovenia remains one of the weakest in the euro area, although there is a discernible trend of improvement.** According to data collected by the IMF,<sup>10</sup> portfolio quality in Slovenia is ahead of Cyprus, Greece, Italy, Portugal and Ireland. The trend of an increasing proportion is continuing in the first four of these. In Ireland, Slovenia and Spain, where the governments are actively involved in the resolution of non-performing claims via transfers to a bad bank, a trend of a declining proportion is evident.

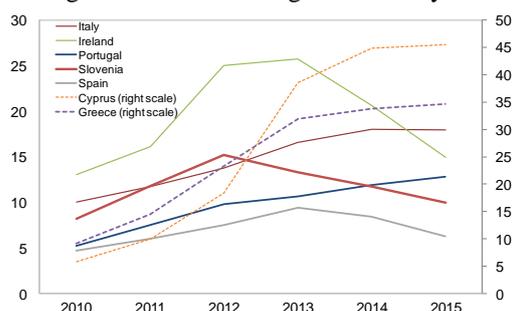
<sup>7</sup> Performing claims against associated clients with non-performing claims were also transferred to the BAMC.

<sup>8</sup> Definition according to individual bank's assessment.

<sup>9</sup> At the beginning of the orderly wind-down process they accounted for 48% of the small domestic banks' classified claims, and 66% of the claims more than 90 days in arrears at the aforementioned bank group.

<sup>10</sup> 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.

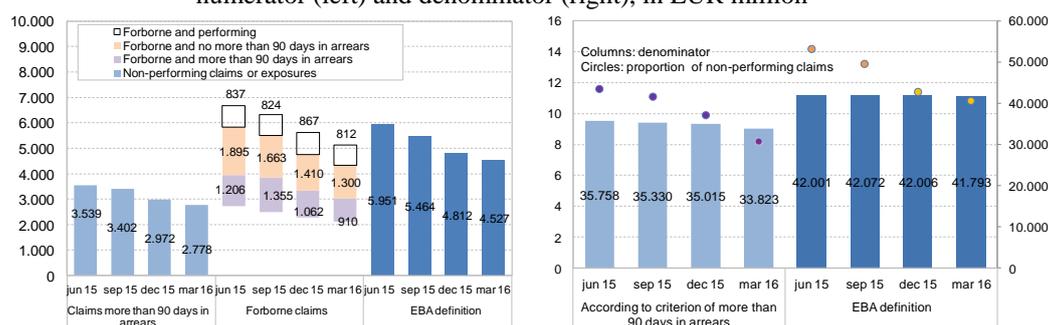
Figure 3.4: Percentage of NPLs by country



Source: IMF (latest data for 2015)

The data according to the European Banking Authority (EBA) figures indicates increased credit risk and a weaker position relative to other euro area countries.<sup>11</sup> The EBA has set out a standardised definition of non-performing exposures for the purpose of transparency within the EU. The definition is broader than the current published definition of claims more than 90 days in arrears, as it also includes exposures that meet the unlikelihood to pay criterion. According to the EBA methodology, non-performing exposures also include certain forborne exposures or claims in respect of which there has been a change in repayment terms owing to the client's financial difficulties. An observation period is also established for forborne exposures, which means the claims are maintained as non-performing for a certain time after the beginning of their regular repayment.

Figure 3.5: Comparison of non-performing claims according to the criterion of more than 90 days in arrears with non-performing exposures according to the EBA definition, numerator (left) and denominator (right), in EUR million



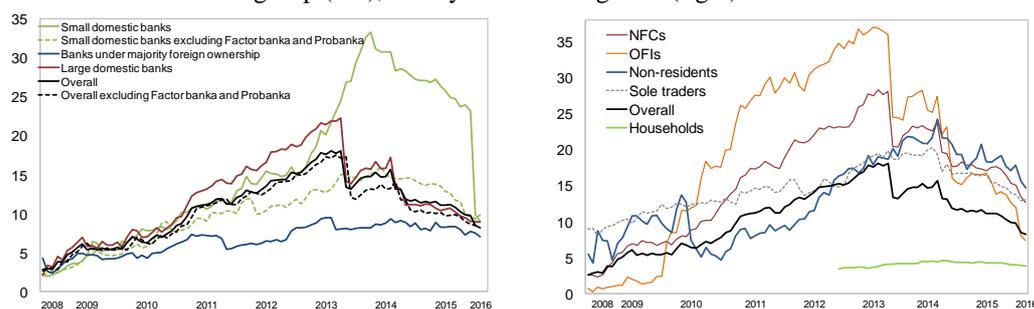
Source: Bank of Slovenia

In addition to the expanded capture of non-performing claims, primarily including forborne claims, there is also an expansion in the denominator of the indicator, which, alongside the existing financial assets measured at amortised cost (loans and debt securities) and commitments given under off-balance-sheet items, also includes available-for-sale financial assets, financial assets designated at fair value, and approved undrawn loans. According to the data available as at 31 March 2016, this entails an expansion of the previous numerator of claims more than 90 days in arrears in the amount of EUR 2.8 billion to the EBA definition of non-performing exposures in the amount of EUR 4.5 billion.

Although larger in stock and proportion, non-performing exposures according to the EBA definition also declined significantly. The stock of non-performing exposures declined by EUR 1.4 billion between June 2015 and March 2016, while the proportion declined from 14.2% to 10.8%. Over the same period claims more than 90 days in arrears and forborne claims not more than 90 days in arrears declined by EUR 0.7 billion, although EUR 0.6 billion was in the observation period of one year after the beginning of regular debt servicing.

<sup>11</sup> 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.

Figure 3.6: Arrears of more than 90 days as a proportion of the banks' classified claims by bank group (left), and by customer segment (right)



Source: Bank of Slovenia

**Portfolio quality is improving in the more indebted segments, in particular in terms of claims against non-financial corporations and non-residents.** Non-financial corporations still account for the majority of claims more than 90 days in arrears, but both the stock and proportion of claims within the aforementioned sector have fallen to the level recorded in 2010. At the same time active corporates have reduced their indebtedness over recent years to the pre-crisis level, an indication that the difficulties faced by active corporates in servicing debt are diminishing. Claims against non-financial corporations more than 90 days in arrears amounted to EUR 1.6 billion in March 2016, or 12.7% of classified claims in this sector. There has been a consistent trend of decline in this figure since the third quarter of 2014. Households are the least problematic sector in the credit portfolio: their proportion of claims more than 90 days in arrears has been unchanged since the beginning of 2014. Household claims more than 90 days in arrears accounted for 3.8% of classified claims in this sector in March 2016. The stock of claims against non-residents more than 90 days in arrears has been declining since November 2014, and stood at EUR 0.6 billion in March 2016, down a half on its peak in October 2014. While it was primarily the large domestic banks that reduced their claims against non-residents more than 90 days in arrears in 2015, the largest contribution in the first quarter of 2016 came from the small domestic banks, and the exclusion of claims at Factor banka and Probanka.

#### *Classified claims against non-financial corporations more than 90 days in arrears*

**Claims more than 90 days in arrears against SMEs<sup>12</sup> have increased significantly faster than those against large enterprises since the outbreak of the financial crisis.** Claims against large enterprises have been resolved via MRAs, while the SMEs portfolio requires an alternative approach from the banks on account of its granularity. In December 2015 the Bank of Slovenia issued guidelines for the management of non-performing claims against SMEs to aid banks' senior management in the in-depth restructuring of SMEs (e.g. segmentation of clients in similar treatment, and conversion of debt to equity or assets). The guidelines instruct the senior management and owners of these corporates that successful restructuring requires them to act fairly and honestly, which includes the disclosure of all relevant information, that the banks' requirements and conditions should be observed, and that additional financial engagement is required of the owners, either in the form of personal guarantees or in the form of recapitalisation.

**The proportion of the banking system's remaining non-performing portfolio accounted for by SMEs is increasing because of the faster resolving of non-performing claims against large enterprises.** Classified claims more than 90 days in arrears against large enterprises have declined by virtually the same amount since the end of 2014 as those against SMEs, but the stock of the former has almost halved and now stands at EUR 0.5 billion, while the figure for SMEs is EUR 1.2 billion. The sale of corporate assets within the framework of MRAs also had a profound impact in 2015. The proportion of non-performing claims declined by the same amount, 4 percentage points, against large enterprises and against SMEs. The figure for SMEs remained high at 21.3% in March 2016, compared with a figure of 6.4% for large enterprises.

<sup>12</sup>SMEs include micro, small and medium-sized enterprises, the size of enterprises being defined on the basis of the definition set out in Article 55 of the ZGD-1H. For corporates that have ceased publishing their financial statements, their last known size is taken into account throughout the subsequent existence of their exposure in the banking system.

**Transitions of non-financial corporations between credit ratings**

Table 3.1: Proportion of transitions of SMEs and large enterprises between credit ratings, taking into account the number of customers, in percentages

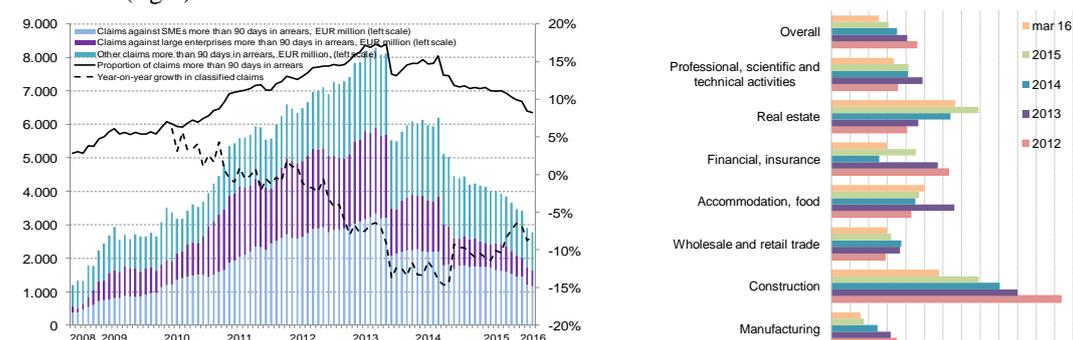
Micro, small and medium-size enterprises (SME)													
		Dec 2014					Dec 2015						
		A	B	C	D	E			A	B	C	D	E
Dec 2013	A	78,1	17,1	3,1	1,3	0,4	Dec 2014	A	81,8	14,7	2,0	1,3	0,3
	B	11,5	70,3	13,1	4,0	1,2		B	15,9	70,4	10,7	2,8	0,4
	C	3,1	9,8	53,2	24,8	9,0		C	6,3	16,8	61,5	12,6	2,9
	D	0,6	0,9	2,7	60,0	35,8		D	0,7	1,7	2,5	70,0	25,0
	E	0,1	0,1	0,2	2,5	97,2		E	0,1	0,2	0,3	1,8	97,7
Large enterprises													
		Dec 2014					Sep 2015						
		A	B	C	D	E			A	B	C	D	E
Dec 2013	A	85,2	10,2	2,5	1,5	0,6	Dec 2014	A	91,6	6,2	1,4	0,6	0,3
	B	8,0	69,3	14,7	7,2	0,8		B	17,8	73,7	6,8	1,8	0,0
	C	1,1	3,8	50,6	38,9	5,7		C	2,4	14,6	68,9	13,4	0,6
	D	0,5	0,0	1,4	79,5	18,6		D	0,4	3,4	8,9	78,1	9,3
	E	0,0	0,0	0,0	5,9	94,1		E	0,0	0,0	0,7	6,6	92,7

Source: Bank of Slovenia

**Downgradings of corporates are slowing.** The pace of transitions of corporates between credit ratings continued to slow in 2015. The pace of transitions between credit ratings is analysed by means of transition matrices calculated separately for SMEs and large enterprises, on the basis of the number of transitions of corporates. The pace of transitions during 2015 is compared with that of the previous year. The transition matrix for 2015 discloses an improvement in practically all combinations of transitions and for both segments of corporates, although a larger improvement can be discerned in the large enterprises segment. This is the result of the larger scale of resolving via transfers to the BAMC and via forbearance within MRAs, while the SMEs segment reveals the impact of client granularity.

**The quality of the credit portfolio of non-financial corporations improved overall in 2015 and early 2016, although there was a variation from sector to sector.** The most significant decline in the stock and proportion of claims more than 90 days in arrears since the end of 2014 has been recorded by construction corporates. Despite a decline of 15.2 percentage points in the proportion since the end of 2014, in March 2016 it was still sharply above the average for non-financial corporations at 28.9% of classified claims.

Figure 3.7: Arrears of more than 90 days by corporate size (left), and proportion of claims more than 90 days in arrears by sector for non-financial corporations, in percentages (right)



Source: Bank of Slovenia

**A notable improvement was also recorded by manufacturing, where the trend of decline in claims more than 90 days in arrears continued.** The improvement in the breakdown of the portfolio in manufacturing is largely the result of favourable economic growth. This is being reflected in improved profitability in the corporate sector and in increased debt servicing capacity. The proportion of claims more than 90 days in arrears in the manufacturing sector was down 4.2 percentage points on the end of 2014 at 8.2%. At the same time the proportion of total claims against non-financial corporations more than 90 days in arrears accounted for by the manufacturing sector declined by 4.6 percentage points to 7.8%.

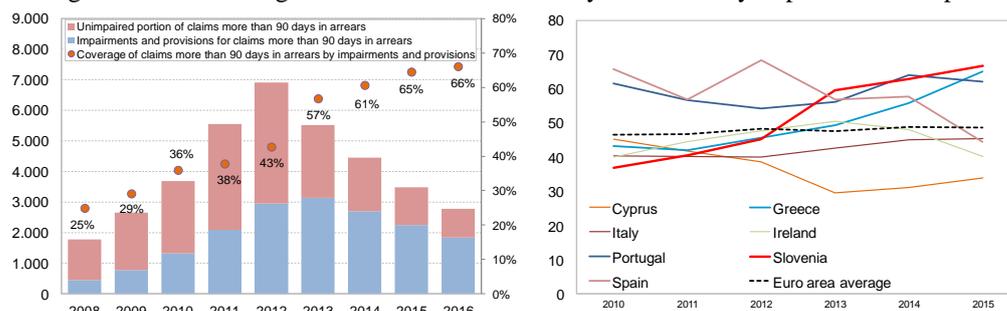
The stock and proportion of claims more than 90 days in arrears remain above average in the sectors of wholesale and retail trade and real estate activities. The two sectors together accounted for 35.8% of claims against non-financial corporations more than 90 days in arrears in March 2016. They both saw a faster reduction in classified claims than in claims more than 90 days in arrears: the proportion of the former was down 3.9 percentage points on the end of 2014 at 14.9%, while the proportion of the latter actually increased by 2 percentage points to 33.3%.

**Coverage of claims more than 90 days in arrears by impairments and provisions, capital and collateral**

The banks have increased coverage of claims more than 90 days in arrears by impairments and provisions since the outbreak of the financial crisis. Coverage of claims more than 90 days in arrears stood at 66.1% in March 2016, 17.7 percentage points more than before the first transfer to the BAMC in November 2013. Coverage increased despite a trend of decline in the stock of impairments and provisions, which were down EUR 865 million on the end of 2014, primarily as a result of write-offs of claims in the amount of EUR 959 million that had the highest level of coverage by impairments. At the same time impairments have also been released for corporates with which MRAs were concluded.

With regard to the euro area countries with the highest proportions of NPLs,<sup>13</sup> coverage by impairments in Slovenia has recorded the longest continuous increase and has reached the highest level of any euro area country. Coverage in Greece is also increasing sharply, but in contrast to Slovenia it has a trend of increase in the proportion of NPLs, and thus in the need for additional impairments.

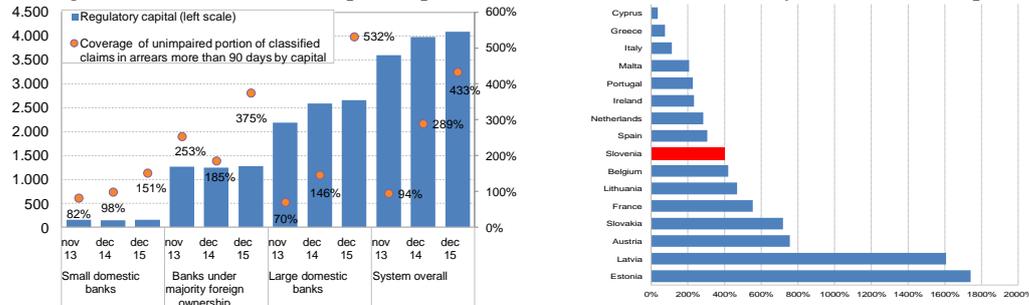
Figure 3.8: Coverage of claims more than 90 days in arrears by impairments and provisions



Sources: Bank of Slovenia, IMF

The highest coverage by impairments is recorded by claims against non-residents, the figure standing at 77.3% in March 2016. The large domestic banks created 90% of the impairments, as they are the most exposed to this client segment. At the small domestic banks coverage for OFIs is extremely low after the wind-down of Factor banka and Probanka, which accounted for the majority of the claims against clients in the aforementioned sector within the bank group. Coverage by impairments in this bank group amounts to 8.8%. The corporate sector accounts for 55% of all impairments across the banking system; coverage by impairments stands at 62% in this segment. Coverage by impairments is above-average in the OFIs and households segments (72.5% and 69.1% respectively).

Figure 3.9: Ratio of unimpaired portion of claims more than 90 days in arrears to capital



Sources: Bank of Slovenia, IMF

<sup>13</sup> According to latest available figures reported to the IMF.

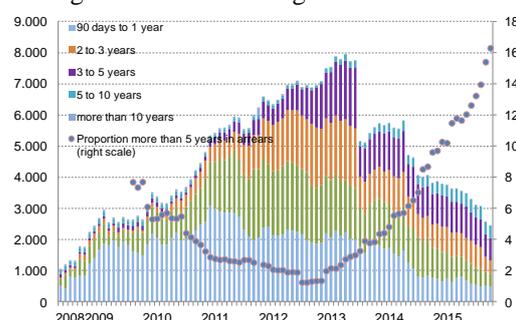
**Comparing the situation before and after the recapitalisations, at the large domestic banks there has been a notable increase in coverage of the unimpaired portion of claims more than 90 days in arrears by regulatory capital.** In addition to the capital injection, in the past this indicator also reflected the effect of the transfer of non-performing claims to the BAMC. The further improvement of coverage by capital in 2015 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 rise in the banking system's capital adequacy. The coverage of the unimpaired portion of claims more than 90 days in arrears by capital reached 433% at the end of 2015. The small domestic banks remain undercapitalised with regard to the stock of net non-performing claims in their portfolio. Slovenia is ranked in the middle of the euro area countries, in terms of coverage by impairments and provisions and coverage by capital.

### *Resolving claims more than 90 days in arrears*

During the financial crisis and the subsequent process of the resolving of non-performing claims, the banks' assets contracted, which was primarily reflected in the contraction of the credit portfolio. Claims in lengthy arrears remained in the portfolio, while new loans are not keeping pace with the contraction in bank balance sheets to maintain the balance between performing and non-performing loans, thereby increasing profitability and easing the burden on capital.

**The maturity of claims in the banking system's portfolio is lengthening relative to the length of arrears.** Arrears of more than five years accounted for 16% of claims more than 90 days in arrears. The figure stood at 3% at the point of weakest portfolio quality, in November 2013. The structure of the claims transferred to the BAMC had no impact in this respect, as the transfer consisted of claims of all maturities. The retention in the portfolio of the debtors with the longest arrears is an indication that in the resolution of non-performing claims there are delays in addressing that part of the portfolio where there are probably few if any corporates with good prospects that it is reasonable to resolve or forbear. Impairments of claims against debtors more than five years in arrears average 80%.

Figure 3.10: Percentage breakdown of claims more than 90 days in arrears



Source: Bank of Slovenia

**The effect of MRAs can be seen in the partial release of impairments of claims against the corporates involved.** The banks took a collective approach to the resolution of large enterprises by signing MRAs. If a corporate is meeting the established criteria inside an MRA, the bank may release part of the impairments and provisions in respect of the debtor, while conversely if the corporate begins to settle its liabilities in arrears, the bank again increases impairments and provisions. Impairments and provisions in respect of numerous debtors with which agreements had been signed were released in 2015 and the first quarter of 2016, which has had a beneficial impact on the banking system's performance. Further improvement is expected in the wake of the implementation of the Bank of Slovenia guidelines for the management of non-performing claims.

**The banks are providing for the forbearance of claims by debtors facing financial difficulties, even independently of MRAs, most often via the extension of the maturity of the loan agreement or the deferral of repayments.** Forborne claims amounted to EUR 3 billion in March 2016, of which 30.1% are indicative of failed forbearance, having fallen more than 90 days in arrears. The corporate sector accounts for EUR 2.2 billion of the forborne claims, half of which are in the sectors of wholesale and retail trade and manufacturing. The success of forbearance as measured by the proportion of forborne claims that again fall more than 90 days in arrears was highest in the manufacturing sector, where the figure was 14.5%. The success of forbearance was

lower in the wholesale and retail trade sector, a quarter of claims again falling more than 90 days in arrears.

Table 3.2: Forborne classified claims and claims more than 90 days in arrears against non-financial corporations by sector, in EUR million and percentages

	Amount of classified claims in forbearance, EUR million			Proportion of classified claims in forbearance, %			Amount of classified claims more than 90 days in arrears, EUR million			Proportion of classified claims more than 90 days in arrears, %		
	dec 14	dec 15	mar 16	dec 14	dec 15	mar 16	dec 14	dec 15	mar 16	dec 14	dec 15	mar 16
Agriculture, forestry	62	66	59	31,9	35,1	32,9	8	12	13	12,7	17,6	21,5
Manufacturing	880	604	542	23,0	17,0	15,6	150	81	79	17,0	13,4	14,5
Electricity, gas, water, rem.	43	17	14	4,0	1,6	1,4	40	9	9	91,8	49,8	63,9
Construction	210	164	125	14,7	12,4	10,8	96	84	44	46,0	51,2	35,3
Trade	688	630	592	26,7	25,0	24,1	187	164	150	27,2	26,1	25,4
Transportation and storage	118	111	109	7,5	6,3	6,8	5	5	6	4,1	4,1	5,4
Accommodation, food	166	146	148	42,5	38,7	40,6	40	42	46	24,3	28,9	31,1
Information, communication	69	55	53	15,1	15,0	8,8	43	38	37	62,1	69,7	70,1
Financial, insurance	142	97	66	58,5	53,0	61,6	18	16	5	12,3	16,0	8,0
Real estate	301	309	290	40,0	43,3	44,0	99	160	124	33,0	51,9	42,6
Professional, scientific and technical activities	250	149	118	21,8	13,3	12,1	73	67	53	29,1	45,2	45,5
Public services	88	103	95	28,2	35,5	34,3	13	12	12	15,1	11,8	12,7
Overall	3.018	2.452	2.211	21,6	18,1	17,1	772	690	579	25,6	28,1	26,2

Source: Bank of Slovenia

The banks have embarked on the resolution and clean-up of their balance sheets via write-offs,<sup>14</sup> which has been further encouraged by the guidelines for the management of non-performing claims against SMEs. The banks wrote off claims in the amount of EUR 959 million in 2015 and the first quarter of 2016, and are forecast to record write-offs of EUR 275 million in 2016 and EUR 270 million in 2017 according to surveys.

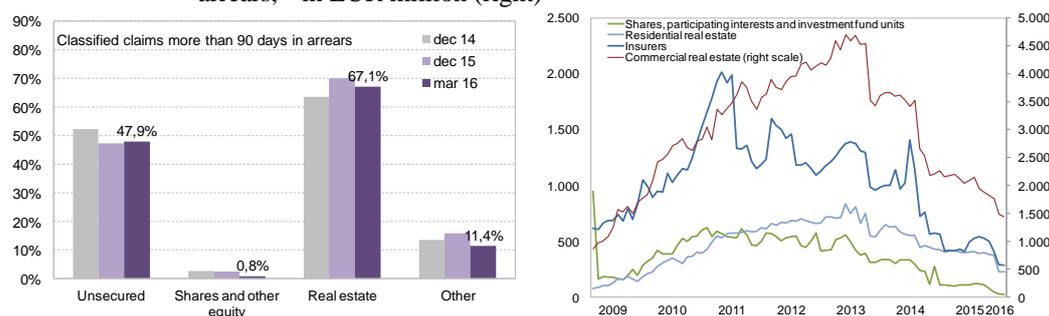
The banks are expected to carry out the ongoing resolution of non-performing claims primarily through further forbearance. They are forecasting that they will reduce the stock of non-performing claims by a quarter over 2016, and by a further fifth over 2017. Around 30% of the reduction is expected to be achieved via forbearance, and a quarter via write-offs. Just under 7% is expected to be resolved via a transfer to a unit outside the bank. The remainder of the reduction is expected to be achieved via the realisation of collateral, the sale of claims to third parties, and other methods.

#### *Collateralisation of claims*

In 2015 the banks increased the resolution of non-performing claims via the realisation collateral. In resolving the non-performing portfolio the banks also use the realisation of collateral for loans from which inflows are no longer expected. According to the 2016 spring survey, the amount of loans for which the banks lodged a request for the realisation of collateral and were repaid from it was up significantly on previous years. According to survey data, collaterals were realised for claims in the amount of EUR 668 million in 2015, mostly for claims against non-financial corporations. In addition there was an improvement in the success of collateral realisation, whereby the banks suffered smaller losses than in previous years. Real estate collateral, commercial real estate in particular, remains the most common form of collateral, and is also the most frequently realised.

<sup>14</sup> In light of the amendments to the Regulation on the assessment of credit risk losses (Official Gazette of the Republic of Slovenia, Nos. 29/12 and 12/14), the banks are writing off unsecured claims against debtors more than one year in arrears or in bankruptcy proceedings, and claims secured by real estate collateral more than four years in arrears or for which the bank in question did not receive any payment from the realisation of collateral over the same period.

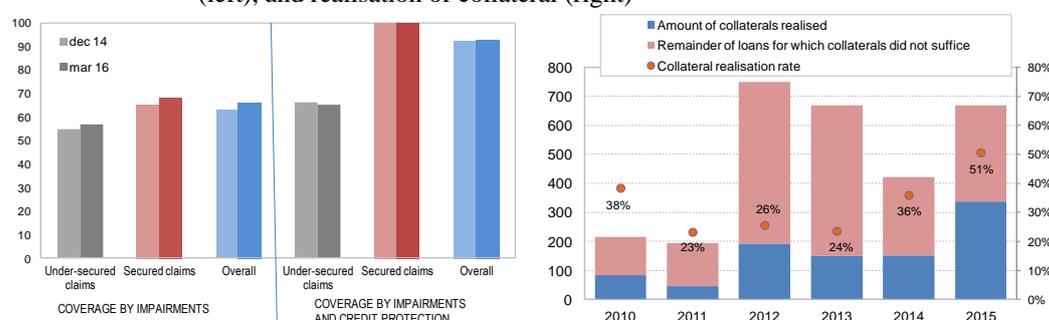
Figure 3.11: Ratio of collateralisation of claims more than 90 days in arrears by type of credit protection (left), and value of collaterals for claims more than 90 days in arrears,<sup>15</sup> in EUR million (right)



Source: Bank of Slovenia

**In the division of claims more than 90 days in arrears into secured claims and under-secured claims,<sup>16</sup> there is a significant difference in their coverage by impairments and provisions.** The banks maintained the coverage of claims in the first and second categories at the same levels between the final quarter of 2014 and the first quarter of 2016. Secured claims more than 90 days in arrears have a higher coverage, at almost 70% in March, whereby the banks are creating a safety reserve for when the realisation of collateral does not cover the entire claim. By contrast, secured claims in arrears have a large surplus in the value of collateral over the actual claims, for which reason the banks do not need such high coverage by impairments, despite the decline in the value of collateral. According to the latest figures, coverage by impairments in the category of claims that do not achieve full coverage by impairments and collateral amounted to 57%, while coverage including collateral stood at 65%. Taking account of impairments plus collateral received up to the amount of the net claim more than 90 days in arrears, the banking system's coverage stood at 92.7% in March 2016. In March 2016 some 21% of claims more than 90 days in arrears failed to achieve 100% coverage by collateral or impairments.

Figure 3.12: Coverage of claims more than 90 days in arrears by impairments and collateral<sup>17</sup> (left), and realisation of collateral (right)



Note: Coverage by impairments and collateral may be no more than 100%, owing to the consideration of the value of collateral only up to the amount of the unimpaired portion of the claim.

Source: Bank of Slovenia

<sup>15</sup> Includes entire value of collateral in the portfolio at aggregate level, irrespective of which claim is protected. Coverage by collateral can therefore spill over, and is not comparable to the illustration of coverage in Figure 1.10.

<sup>16</sup> 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 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.

<sup>17</sup> The figure includes unsecured claims and claims secured with forms of collateral 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 priority in the possible realisation of the collateral. The collateral value is thus multiplied, both for these forms of collateral and as an aggregate.

### 3.3 Income statement and income risk

#### Summary

The banks recorded a profit of EUR 158 million in 2015, having recorded a loss in the previous year. Last year's improvement in performance and return to profitability were attributable to the decline in credit risk and the resulting reduction in impairment and provisioning costs. The improvement in the quality of the credit portfolio has also had a beneficial impact in the reduction of income risk in the banking system in the first quarter of this year. The banks sharply reduced impairment and provisioning costs in 2015, and generated very solid profits. The increase in profit was the result of lower impairment and provisioning costs. They are strongly dependent on the successful resolution of the bank's non-performing portfolio: successful corporate restructuring, and the write-off or sale of non-performing claims. However, the falls in lending rates and in returns on securities, and the contraction in loans are reducing the banks' income generation base. The banks' net interest expenses have also continued to decline, although the sharply reduced level of interest rates and the increase in the proportion of sight deposits mean that the banks have diminishing room for additional cuts in interest expenses.

The decline in net interest is continuing to outpace the contraction in total assets, and the net interest margin declined only slightly last year, although the trend of decline has continued this year. The banks are relatively limited in making any further improvements in cost-efficiency. The banks remain exposed to relatively high income risk in the environment of low interest rates.

#### Operating result and income risk

The banks generated a pre-tax profit of EUR 158 million in 2015, and EUR 146 million in the first quarter of this year. Net interest income declined by 10% last year. There was a sharp decline in both interest income and interest expenses. Owing to the simultaneous decline in non-interest income, which was caused by a contraction in lending activity and a net loss from trading activities, the banking system's gross income declined by almost a tenth compared with the previous year. As loans contract further, the banks cannot compensate for the loss of net interest income by increasing net non-interest income. The proportion of the banks' gross income accounted for by net interest stood at two-thirds last year, slightly above the average over the last 15 years. Impairment and provisioning costs were down sharply on the previous year, by 58%, which was the decisive factor in the increase in profitability.

Table 3.3: Banking sector income statement, March 2016

	Amount, EUR million				Growth, %				Ratio to gross income, %			
	2013	2014	2015	mar 16	2013	2014	2015	mar 16	2013	2014	2015	mar 16
Net interest	708	832	746	173	-20,1	17,5	-10,4	-10,0	64,9	67,6	64,4	59,6
Non-interest income	383	399	412	117	-43,6	4,1	3,3	18,2	35,1	32,4	35,6	40,4
of which fees and commission	339	346	336	78	0,0	2,0	-3,0	-6,0	31,1	28,1	29,0	26,9
of which gain/loss on trading	-3	7	-12	2	...	...	...	...	-0,3	0,6	-1,0	0,7
Bruto dohodek	1091	1231	1158	290	-30,3	12,8	-6,0	-0,4	100	100	100	100
Gross income	721	687	686	158	-2,9	-4,7	-0,1	-2,7	66,1	55,8	59,3	54,4
labour costs	384	367	368	90	-3,8	-4,6	0,5	-0,2	35,2	29,8	31,8	30,8
Net income	370	544	472	132	-55,0	47,0	-13,3	2,5	33,9	44,2	40,7	45,6
net impairments and provisioning	3809	650	313	-14	138,1	-82,9	-51,8	-127,2	349,1	52,8	27,1	-4,7
of which at amortised cost	2903	524	222	-14	141,8	-81,9	-57,7	-153,0	266,1	42,6	19,2	-4,9
Pre-tax profit	-3439	-106	158	146	342,9	-96,9	-249,2	86,1	-315,2	-8,6	13,7	50,3
corporate income tax	-147	-8	-43	-16	...	...	...	...	-13,4	-0,6	-3,7	-5,7
Net profit	-3586	-114	115	130	...	...	...	...	-328,6	-9,3	10,0	44,7

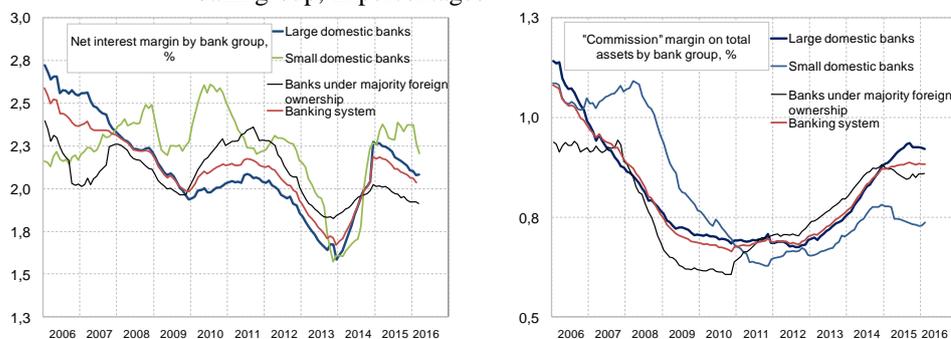
Source: Bank of Slovenia

**The persistent decline in net interest income is maintaining high income risk in the banking system.** This will increase further in the environment of persistently low interest rates. Factors such as the contraction in lending, the fall in asset interest rates on loans, and the maturing of securities held by the banks on their balance sheet and their replacement with lower-yielding securities are reducing the banks' interest income. The fall in liability interest rates, which continued last year, is slowing, on account of the low levels reached. In the wake of any further increase in sight deposits, fewer and fewer additional beneficial effects can be expected. The key to managing income risk at the banks will be a gradual increase in lending activity, while ensuring credit risk is managed.

*Net interest margin in the banking system*

The net interest margin is displaying a moderate but sustained trend of decline. The non-interest margin remains at a level comparable to the previous year. Having reached almost 2.2% in 2014, the net interest margin had declined to 2.03% by the end of the first quarter of 2016. The net interest margin calculated for the first quarter alone was less than 2%.

Figure 3.13: Net interest margin (left), and "commission" margin on total assets (right) by bank group, in percentages



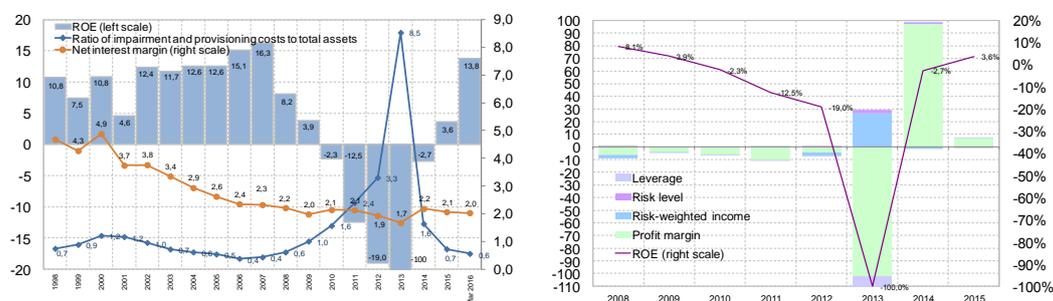
Note: In light of the relatively large fluctuation in non-interest income attributable to certain one-off developments in previous years, only the "commission" margin is illustrated: fees and commissions last year accounted for more than 80% of all non-interest income.

Source: Bank of Slovenia

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

Last year there was a decline in net income and in impairment and provisioning costs. The banks' net income, i.e. income before impairments and provisions, amounted to 39% of gross income in 2015, slightly in excess of the pre-crisis figure, although the nominal amount is down on the pre-crisis figure. The decline in net interest means that in the low interest rate environment the banks will be forced to further reduce operating costs and to optimise business processes or to modify their business models. Operating costs have continued to fall for the sixth consecutive year. The cost-to-income ratio nevertheless deteriorated, as a result of the larger decline in net interest. The improvement in the quality of the credit portfolio brought a sharp decline of 58% last year in impairment and provisioning costs in the banking system's income statement, while the proportion of the disposal of gross income that they account for was comparable to the pre-crisis figure. The banks actually disclosed a positive result of EUR 14 million from net impairment and provisioning costs in the first quarter of this year, which was a factor in the very decent profits in this period.

Figure 3.14: ROE, net interest margin on interest-bearing assets and ratio of impairment and provisioning costs to total assets, 1998 to 2015, in percentages (left), and impact of four factors on changes in profitability: decomposition of ROE, 2008 to 2015 (right)



Notes: 1) The March 2016 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 2016 figure for ROE is calculated for the first three months of the year (left figure). 2) The decomposition of ROE is calculated and illustrated for the period to the end of 2015 (right figure).

Source: Bank of Slovenia

### Decomposition of profitability

The largest factor in the increase in ROE was the improvement in the ratio of profit to gross income. 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 (see right figure above) reveals that profit margin and risk-weighted income contributed to the increase in the banking system's profitability in 2015. The other two components of risk level and leverage acted to reduce profitability.

Table 3.4: Individual components in the calculation of ROE by year

Leto	Profit margin	Risk-weighted income	Risk level	Leverage	ROE
	pre-tax profit	gross income	risk-weighted assets	total assets	pre-tax profit
	gross income	risk-weighted assets	total assets	equity	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	0,59	10,08	-2,7%
2015	0,14	0,055	0,53	8,69	3,6%

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

Source: Bank of Slovenia

Profit margin, the ratio of profit to gross income, was positive in 2015 as the banking system generated a profit. It made a significant contribution to the improvement in profitability for the second consecutive year. Risk-weighted income, the ratio of the banks' gross income to risk-weighted assets, is increasing further as the contraction in loans brought a larger decline in risk-weighted assets than in gross income, although the contribution to the improvement in profitability was minimal. Risk level, the ratio of risk-weighted assets to total assets, declined slightly as a result of the more rapid contraction in loans than in total assets. Leverage declined again: the amount of equity in the banking system increased further last year, as total assets contracted.

### Selected bank performance indicators

The generation of a profit in 2015 and the first quarter of 2016 meant that there was a particular improvement in the banks' profitability indicators, while the decline in income brought an increase in the cost-to-income ratio and a decline in the interest margin, and the non-interest margin remained comparable to the previous year.

Table 3.5: Selected bank performance indicators, March 2016

(%)	2009	2010	2011	2012	2013	2014	2015	mar 2016
ROA	0,32	-0,19	-1,06	-1,60	-7,70	-0,27	0,42	1,58
ROE	3,87	-2,30	-12,54	-19,04	-97,30	-2,69	3,62	13,77
CIR	53,95	52,22	53,68	47,43	66,04	55,80	61,31	54,41
Interest margin on interest-bearing assets	1,98	2,14	2,13	1,93	1,68	2,18	2,06	1,97
Interest margin on total assets	1,88	2,02	2,02	1,83	1,59	2,09	1,96	1,87
Non-interest margin	1,00	0,86	0,85	1,40	0,85	1,01	0,98	1,28
Gross income / average assets	2,88	2,88	2,87	3,23	2,44	3,10	2,94	3,15

Source: Bank of Slovenia

## 3.4 Interest rate risk

### Summary

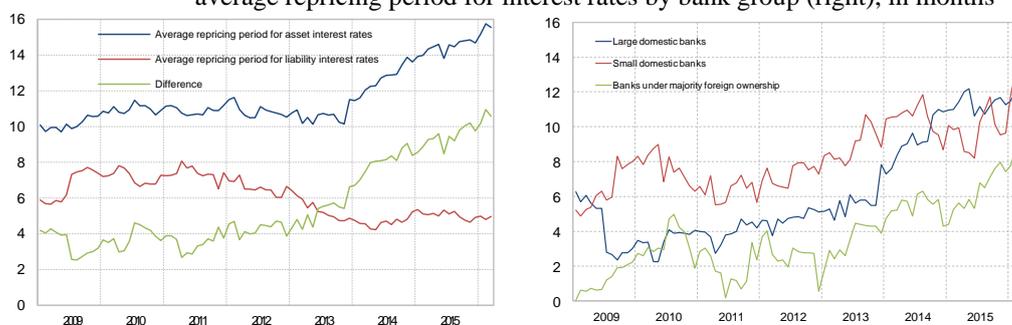
The difference between the average repricing periods for asset and liability interest rates is still widening, thereby increasing the banks' exposure to interest rate risk, ignoring collateral instruments. It stood at 10.6 months in March 2016, having lengthened by 0.8 months over half a year. The banks' exposure to the risk of a rise in interest rates thereby further increased. The difference widened primarily as a result of a lengthening of the average repricing period for asset interest rates. On the asset side, the average repricing period lengthened for loans and stabilised for securities. In the last half-year interest rate risk increased most at the small domestic banks, which are also the most exposed to the risk of a rise in interest rates.

The cumulative interest rate gap of up to 1 year between interest-sensitive assets and liabilities narrowed by EUR 0.3 billion between September 2015 and March 2016 to the negative amount of EUR 2.7 billion. All the bank groups recorded a negative interest rate gap.

### Average repricing period for interest rates

Interest rate risk as measured by the difference between the average repricing periods of asset and liability interest rates stood at 10.6 months in March 2016, compared with 9.8 months in September 2015. The average repricing period for asset interest rates increased from 14.7 months in September 2015 to 15.5 months in March 2016, while the average repricing period for liability interest rates was unchanged over the same period at 5.0 months. The difference between the average repricing periods for asset and liability interest rates thus widened by 0.8 months over a period of six months. The key factor in the lengthening of the average repricing period for asset interest rates by 0.8 months was the increase in the average repricing period for loans. The average repricing period for debt securities shortened slightly compared with September, and has displayed a trend of stabilisation since rapid growth in August 2015. The breakdown of the banking system's investments and liabilities has shifted further over the last six months in the direction of an increased proportion accounted for by securities.

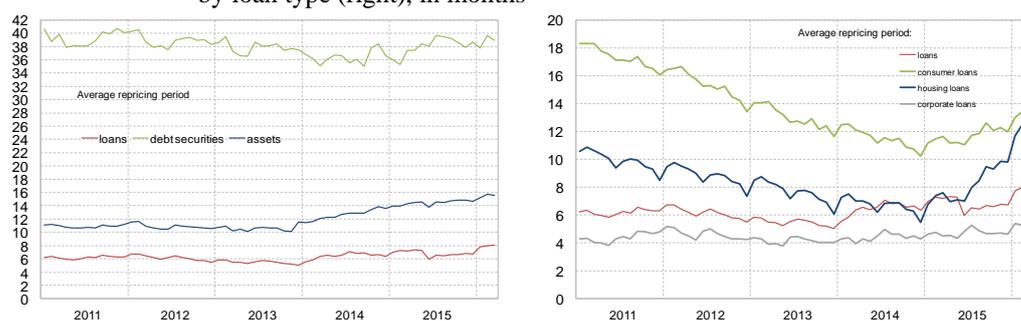
Figure 3.15: Average repricing period for interest rates (left), and difference between the average repricing period for interest rates by bank group (right), in months



Source: Bank of Slovenia

The recent lengthening of the average repricing period on loans was attributable to the increase in new housing loans with a fixed interest rate. Variable-rate loans continue to account for 95% of the stock of loans, although the proportion of new loans with a fixed interest rate is increasing sharply. The proportion of consumer loans with a fixed interest rate is similarly increasing, although the figure is already higher than the corresponding figure for housing loans at 28%. In the wake of the repayment of existing debt with a variable interest rate and the maintenance or increase in the proportion of new loans with a fixed interest rate, the average repricing period for loans will continue to lengthen. New housing loans to households with a fixed interest rate have recently been increasing, particularly at the banks under majority foreign ownership. While housing loans with a fixed interest rate accounted for 4.8% of all household loans at the aforementioned bank group in March 2016 (compared with 4.4% across the banking system), the corresponding figure for new loans was 19.3%. The figure was significantly smaller at the small domestic banks at 9.1%, while at the large domestic banks it was in between, at 13.9%.

Figure 3.16: Average repricing period for asset interest rates by principal asset type (left), and by loan type (right), in months



Source: Bank of Slovenia

**The small domestic banks and large domestic banks are most exposed to interest rate risk, while the banks under majority foreign ownership are less exposed,** having reduced interest rate exposure by entering into transactions with their parent banks. The difference between the average repricing periods of asset and liability interest rates was larger at the domestic banks, at 13.8 months at the small banks and 11.7 months at the large banks in March 2016, than at the foreign banks, where the figure was 8.2 months.

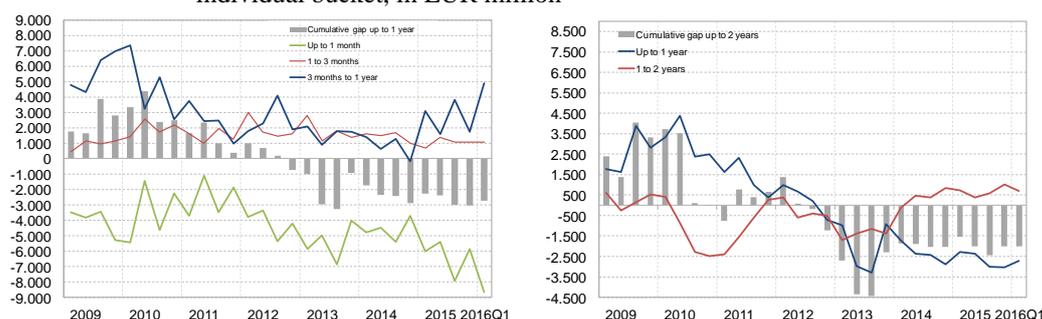
**Interest rate risk has increased at all the bank groups over the last six months.** The difference between repricing periods increased most at the small domestic banks, by 2.1 months. The reasons are primarily on the investment side, where there was an increase in the proportion of debt securities with longer maturities at the expense of a decline in loans. By contrast, on the liability side there was a sharp increase in deposits received with shorter average maturities than borrowings via loans, the proportion of which declined. The difference narrowed by 1.1 months at the banks under majority foreign ownership, as a result of the lengthening of the average repricing period for asset interest rates (loans and debt securities). The difference at the large domestic banks increased by a negligible 0.5 months.

**The banks' exposure to interest rate risk will increase further in the environment of low interest rates.** The consequences of this environment are evident in the maturity breakdown of deposits by the non-banking sector, and the shortening of the average repricing period for liability interest rates. The quest for higher returns will continue to push changes in the structure of investments and the lengthening of average maturities, and will lead to the lengthening of the average repricing period for asset interest rates. Both processes will widen the difference between the average repricing periods for asset and liability interest rates, which in the event of a rise in interest rates would be reflected in faster growth in expenses from short-term funding than in income from long-term investments.

### *Interest rate gap*

**The cumulative interest rate gap of up to 1 year between interest-sensitive assets and liabilities was negative in the amount of EUR 2.7 billion in the first quarter of 2016,** having been negative in the amount of EUR 3.0 billion in September 2015. There was no significant change in interest-sensitive assets and liabilities with a repricing period of less than 1 year between September 2015 and March 2016: there was an increase of EUR 55 million on the asset side, and a decline of EUR 243 million on the liability side. All the bank groups recorded a negative interest rate gap before hedging against interest rate risk is taken into account. The banks under majority foreign ownership had the smallest gap, at barely EUR 177 million, while the large domestic banks had the largest, at EUR 1.8 billion.

Figure 3.17: Gap between interest-sensitive assets and interest-sensitive liabilities by individual bucket, in EUR million



Source: Bank of Slovenia

**The cumulative gap of up to 2 years was negative in the amount of EUR 2 billion in March 2015.** All the bank groups recorded a negative gap in this bucket. The banks under majority foreign ownership again had the smallest gap, at EUR 140 million, while the large domestic banks had the largest, at EUR 1.2 billion.

### 3.5 Funding risk

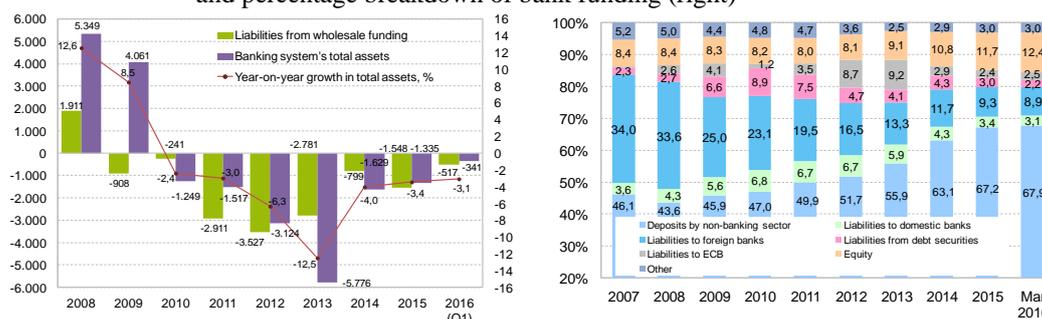
#### Summary

*Refinancing risk is continuing to gradually diminish. This has been reflected in the ongoing decline in dependence on funding on the wholesale markets and in the stable growth in deposits by the non-banking sector, in the banks' high excess liquidity, the increasing proportion of total assets accounted for by secondary liquidity, and the high proportion of free eligible collateral providing for the availability of additional funding in the Eurosystem. The banks' burden in servicing debt to the rest of the world is gradually easing. Deposits by the non-banking sector strengthened their position as the banks' most important source of funding, although the increase in sight deposits means that there is no guarantee of their stability. In the wake of any switching of savers' assets from banks to other investments, an important role will therefore be played by liquidity adequacy. In the environment of low interest rates and excess liquidity across the Eurosystem, the banks will continue to have limited opportunity to effectively manage excess liquidity, and limited opportunity to seek investments with adequate yield. Although liquidity is favourable at Slovenian banks, the increase in the proportion of deposits by the non-banking sector accounted for by sight deposits is rapidly increasing the requirement for adequate secondary liquidity.*

#### **Further bank deleveraging and changes in funding structure**

**Dependence on wholesale funding has continued to diminish.** The decline in wholesale funding amounted to EUR 517 million over the first quarter of 2016, a third of the decline over the whole of 2015. At 11%, the proportion of bank funding accounted for by wholesale funding is just a third of the figure at the outbreak of the crisis. Because the banks have already repaid a large proportion of the debt to the rest of the world, pressure on refinancing will continue to ease. The banks will see EUR 0.7 billion or 17% of the debt to the rest of the world mature in the year to the end of March 2017. The corresponding figure a year ago was double.

Figure 3.18: Changes in total assets and changes in wholesale funding, in EUR million (left), and percentage breakdown of bank funding (right)



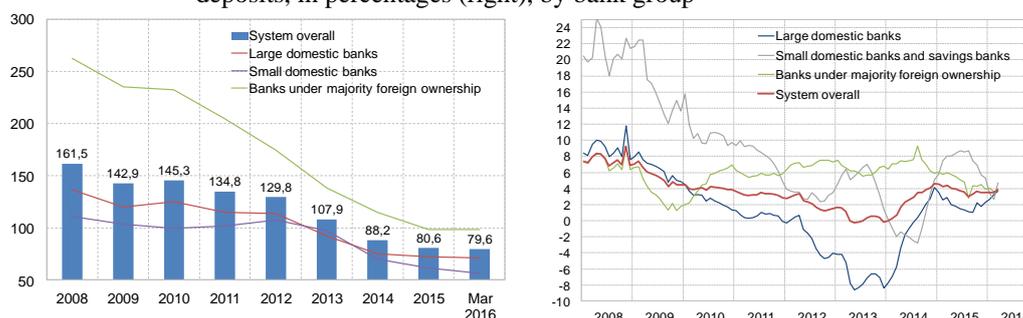
Note: Liabilities to the rest of the world include issued debt securities.  
Source: Bank of Slovenia

**Deposits by the non-banking sector strengthened their position as Slovenian banks' main source of funding.** Year-on-year growth in deposits by the non-banking sector began increasing again in the final quarter of 2015, reaching 3.2% at the end of March 2016. Deposits by all sectors other than non-residents and the general government sector increased in nominal terms over this six-month period. In the ongoing low interest rate environment, the maturity breakdown of deposits by the non-banking sector is continuing to change in the direction of an increase in sight deposits, which could disturb the stability of this funding in the future, and is increasing the importance of effective liquidity management. For more on this, see the thematic section of this report.

**Growth in household deposits remained relatively stable, reaching 3.8% at the end of March 2016.** Household deposits increased by EUR 525 million in nominal terms over the last six months, despite the low interest rates. This strengthened their leading position in the breakdown of the funding of the Slovenian banking system, where they accounted for 43%. Household deposits increased at all the bank groups, the large domestic banks recording the largest increase. However, in attracting deposits in the ongoing low interest rate environment the banks are not competing on offered interest rates. Another increasingly significant limiting factor is the fall in asset interest rates and the pressure on profitability. In the context of low interest rates households have seen the opportunity cost for holding sight deposits decline, thereby increasing the potential for switching to other non-banking investments.

**The funding sustainability indicator is gradually stabilising.** The LTD ratio for the non-banking sector has remained around 80% over the last six months, primarily as a result of the slowdown in the contraction in lending.

Figure 3.19: LTD ratio for the non-banking sector (left), and annual growth in household deposits, in percentages (right), by bank group



Source: Bank of Slovenia

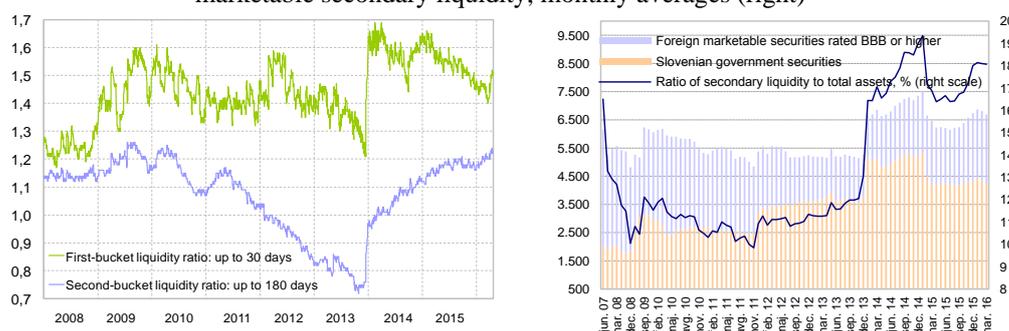
### Liquidity risk

**The liquidity of the Slovenian banking system remained high and stable in the first quarter of 2016.** One indication of good liquidity was the relatively high first-bucket liquidity ratio, which averaged 1.45 over the first quarter, down 0.1 on the average of the previous year. The second-bucket liquidity ratio remained relatively stable in the first quarter of this year, averaging 1.19, in

excess of its level before the outbreak of the financial crisis. However, the banks' need for an adequate amount of secondary liquidity is increasing because of the increase in sight deposits.

**The concentration of Slovenian government securities in marketable secondary liquidity is slowly diminishing.** The stock of marketable secondary liquidity averaged EUR 6.7 billion in March 2016, or 18% of total assets, up EUR 450 million on last September. The banks primarily increased their investments in foreign marketable securities rated BBB or higher. The proportion that they account for increased by just under 4 percentage points over the last six months to 37%. The banks are thereby supporting their intention to reduce the concentration of Slovenian government securities in marketable secondary liquidity, which declined to 63%, and to simultaneously seek better returns. Adequate secondary liquidity will be important in the future because of the increasing stock of sight deposits and the potential transfer of these assets out of the banking system.

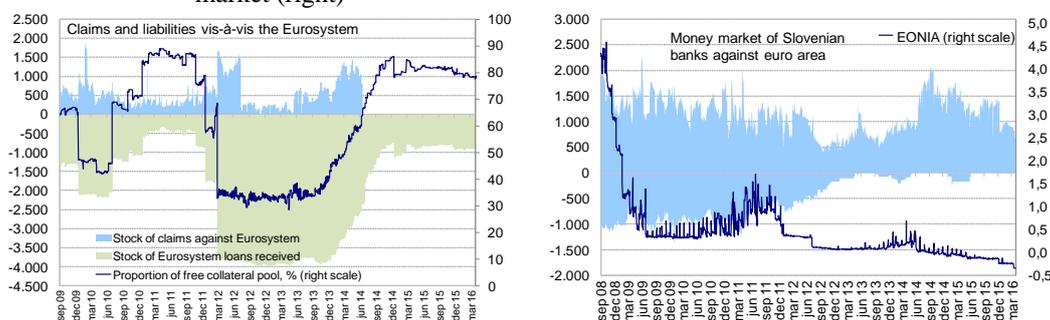
Figure 3.20: Daily first-bucket and second-bucket liquidity ratios (left), and stock of marketable secondary liquidity, monthly averages (right)



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

**High excess liquidity means that the banks remain uninterested in Eurosystem funding.** Liabilities to the Eurosystem have remained relatively stable over the recent period. They fluctuated around EUR 900 million, accounting for 2.5% of the Slovenian banking system's total funding. Given the high excess liquidity and the ongoing contraction in lending activity, the banks are rarely participating in ordinary or targeted Eurosystem operations, and this is unlikely to change in the near future. The proportion of the pool of eligible collateral for Eurosystem operations that is free thus remains high and stable, having fluctuated around 80% over the recent period.

Figure 3.21: Banks' claims and liabilities vis-à-vis the Eurosystem, in EUR million, and proportion of the pool of eligible collateral that is free (left), and stock of unsecured loans of Slovenian banks placed and received on the euro area money market (right)



Source: Bank of Slovenia

**The management of excess liquidity on the euro area unsecured money market remains limited for Slovenian banks.** The banks remain net creditors on this market, although the stock of claims declined sharply in mid-December of last year, and reached EUR 671 million in March of this year. The banks under majority foreign ownership sharply reduced their claims against their parent banks, most likely as a result of the further deepening of the negative interest rates at which the assets were placed with parent banks. The Eurosystem is faced with high excess liquidity,

while market interest rates remain negative, for which reason the banks will remain limited in pursuing more effective and active management of excess liquidity on the money market in the future.

### 3.6 Bank solvency

#### Summary

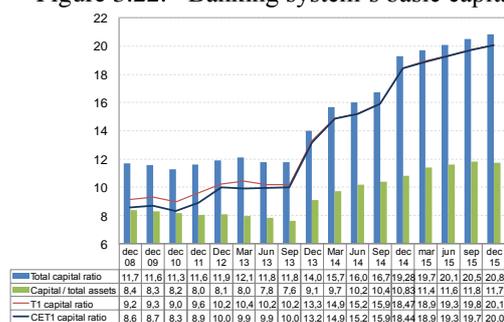
The Slovenian banking system's solvency risk declined further in 2015. The small domestic banks remain the most capitally vulnerable bank group, even though their exposure to solvency risk diminished slightly last year. Capital adequacy on an individual basis increased at the level of the banking system, primarily as a result of a decline in capital requirements, and to a lesser extent as a result of an increase in capital. The increase in capital resulted from the positive performance of the banking system and the recapitalisation of certain banks. In contrast to previous years, the decline in capital requirements was not solely the result of a further decline in lending, but also a slight improvement in the use of capital, namely an increase in the proportion of low-risk investments.

The stability of capital adequacy in the future will depend on the banks' ability to generate internal capital, which will be relatively limited in the low interest rate environment. Because increasing profit on account of lower impairment and provisioning costs is not sustainable in the long term, the banks will have to adjust their business models sensibly and efficiently to the economic situation. At the same time a major influence over the capital position will be exerted by the ongoing effective management of non-performing claims, which will provide for the more efficient use of capital by the banks.

#### Capital adequacy

**The capital adequacy of the banking system increased in 2015.** The total capital ratio increased by 1.5 percentage points to stand at 20.8%. The other two capital ratios were up 1.6 percentage points: the Tier 1 capital ratio reached 20.1% at the end of December 2015, while the common equity Tier 1 capital ratio reached 20.0%. The differences between the aforementioned capital ratios are small, as the banks are meeting their capital adequacy requirements with the highest quality forms of capital.

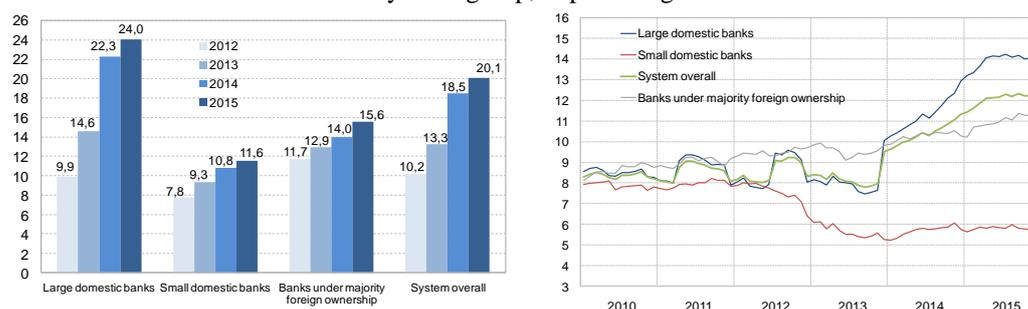
Figure 3.22: Banking system's basic capital ratios on an individual basis, in percentages



Source: Bank of Slovenia

**Capital adequacy improved at all the bank groups in 2015, although there was no significant decline in the variations between them.** The small domestic banks and savings banks remain the most capitally vulnerable, even though their exposure to solvency risk diminished slightly last year. Their total capital ratio increased by 1.2 percentage points to stand at 13%, significantly below the average across the Slovenian banking system. The increase in the capital ratio was the result of an increase in capital via recapitalisations, and also a decline in capital requirements as a result of the contraction in lending activity. Their ratio of capital to total assets remained almost unchanged, and was the lowest of any of the bank groups, which means that they have greater exposure to solvency risk than the other groups.

Figure 3.23: Tier 1 capital ratio (left), and ratio of book capital to total assets (right), on an individual basis by bank group, in percentages



Source: Bank of Slovenia

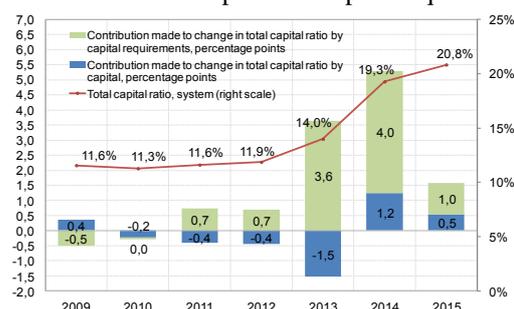
The small domestic banks slightly improved the quality of the credit portfolio in 2015, thereby reducing the burden on capital. The proportion of claims more than 90 days in arrears declined by 4.6 percentage points to 9.3% (for more, see the section on credit risk). At the small domestic banks and at the other bank groups the effective management of credit risk and, above all, the reduction of non-performing claims will have a significant impact on the maintenance of a stable capital position.

### Capital and capital requirements

**Capital adequacy improved in 2015, primarily as a result of a decline in capital requirements, and to a lesser extent as a result of an increase in capital.** The Slovenian banking system's stock of regulatory capital increased by 2.5% to EUR 4,079 million. Profits and minor recapitalisations saw the banks increase the highest-quality form of capital, namely common equity Tier 1 capital, thereby further strengthening the capital quality structure. The proportion of total bank capital accounted for by original own funds had reached 96.3% by the end of 2015.

**The capacity to generate internal capital will be very important to the maintenance of a stable capital position in the future, but is relatively limited in the ongoing low interest rate environment.** The profit generated last year was primarily the result of a year-on-year decline in impairment and provisioning costs, and not growth in net interest income, which is continuing to decline in year-on-year terms. This way of generating internal capital is not sustainable over the long term, for which reason the banks will have to tailor their business models to the economic situation.

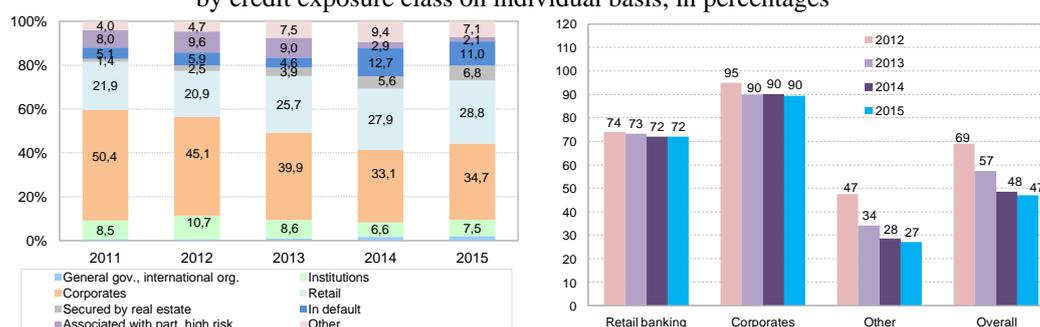
Figure 3.24: Contribution to change in capital ratio on an individual basis made by changes in capital and capital requirements, in percentage points



Source: Bank of Slovenia

**The decline in capital requirements continued in 2015, albeit not solely through the ongoing contraction in lending activity, but also through a slight improvement in the use of capital.** Capital requirements declined by 5.2% in 2015 to EUR 1,566 million. Capital requirements for credit risk continue to account for the majority of total capital requirements (89%). Capital requirements for exposures to corporates and retail exposures declined in the wake of the further contraction in loans, but nevertheless account for the majority of the capital requirements for credit risk.

Figure 3.25: Breakdown of capital requirements for credit risk (left), and risk weights (right), by credit exposure class on individual basis, in percentages



Note: The risk weight is calculated as the ratio of risk-weighted assets for credit risk to the total credit exposure for each class of credit exposure, expressed as a percentage.

Source: Bank of Slovenia

Two changes in the breakdown of the capital requirements for credit risk are indicative of a slight improvement in the efficiency of the use of capital. First, the stock of capital requirements for exposures associated with particularly high risk and exposures in default, whose risk weights are the highest, declined by 22% or EUR 51 million in 2015 to EUR 181 million. This was the result of the ongoing clean-up of bank balance sheets. Second, there was an increase of 14% last year in the capital requirements for exposures secured by real estate on which the banks are able to apply lower risk weights, thereby easing the burden on capital, to EUR 94 million. In addition to the aforementioned ability to generate internal capital, a significant factor in the stability of capital adequacy will be the continuing effective management of non-performing claims, which will contribute to the more efficient use of existing capital.

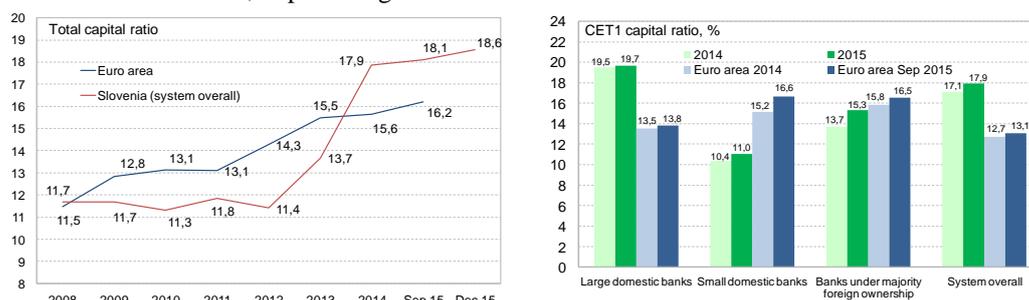
#### *Comparison of capital adequacy with the euro area (consolidated figures)*

**The banking system's total capital ratio on a consolidated basis improved again in 2015, and remains above the available figure for the euro area average.** It increased by 0.8 percentage points to stand at 18.6%. There were also increases in the Tier 1 capital ratio and the common equity Tier 1 capital ratio, which reached the same value of 17.9%.

In contrast to the total capital ratio on an individual basis, the increase in the total capital ratio on a consolidated basis was, similarly to the average across the euro area, more the result of growth in capital than a decline in capital requirements. The contribution to the increase in the Slovenian banking system's total capital ratio on a consolidated basis made by capital was 0.7 percentage points, while the contribution made by capital requirements was 0.1 percentage points. The reason is regulatory nature: in accordance with the CRD IV, as of the beginning of 2015 banks have been required to apply a risk weight of 100% to exposures to central government and central banks of the former Yugoslav republics, having previously been allowed a discretionary right, and hence a weight of 0%. This was reflected in an increase in the capital requirements for exposures of this type, by EUR 65 million to 75 million EUR.

**Slovenian banks use higher-quality capital to meet the total capital ratio than the average across the euro area.** The structure of the Slovenian banking system's regulatory capital on a consolidated basis reveals that original own funds account for 96.5% of the total, compared with the euro area average of 84.8%.

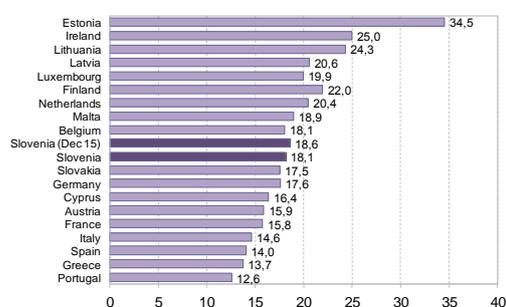
Figure 3.26: Total capital ratio for the banking system (left), and common equity Tier 1 capital ratio by bank group (right), compared with the EU, on a consolidated basis, in percentages



Note: For the sake of comparability, medium-size euro area banks are included under large domestic banks. The euro area figures include domestic banking groups and independent banks.

Source: Bank of Slovenia

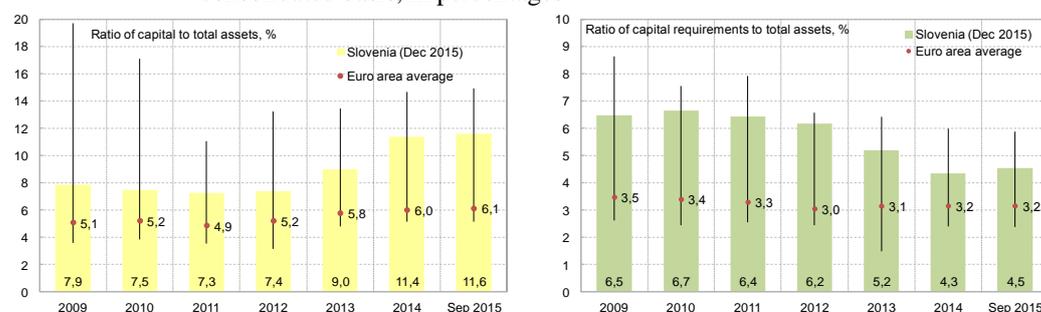
Figure 3.27: Total capital ratios by euro area country, September 2015, in percentages



Source: Bank of Slovenia

**The ratio of book capital to total assets remains indicative of the more favourable capital position of the Slovenian banking system compared with the euro area overall.** It remained almost unchanged in 2015 at 11.6%, still significantly above the available figure for the average across the euro area. Another significant solvency indicator is the ratio of capital requirements to total assets, which reveals a less favourable position on the part of Slovenian banks. Because the contraction in capital requirements on a consolidated basis on account of the aforementioned regulatory changes was minimal compared with the contraction in total assets, the aforementioned indicator increased slightly in 2015. It reached 4.5%, and thus remains above the euro area average. The use of the standardised approach and actual structure of the capital requirements for credit risk are the main reasons for the use of the higher risk weights that are restricting Slovenian banks from using capital more efficiently.

Figure 3.28: Distribution of the ratio of book capital to total assets (left), and ratio of capital requirements to total assets (right), for euro area countries, figures on a consolidated basis, in percentages



Note: The euro area figures include domestic banking groups and independent banks.

Source: Bank of Slovenia

## 4 NON-BANKING FINANCIAL INSTITUTIONS

*The low interest rate environment and the ever-stricter regulation of the banking sector are increasing the risk of the strengthening of shadow banking within the euro area. The risk of strengthening entails the transfer of activities from the more-regulated banking sector to other less-regulated sectors such as investment funds, other financial intermediaries and financial auxiliaries. The risk of the strengthening of shadow banking in Slovenia nevertheless remains below the euro area average, as alternative sources of financing for the economy are less developed in Slovenia.*

*The situation in the leasing market improved in 2015. Leasing companies generated an operating profit for the first time in six years, although the trend of contraction continued, particularly in real estate leasing business. Two leasing companies ceased trading in 2015 for this reason, while one was absorbed by a commercial bank and ceased trading as an independent entity. The proportion of claims more than 90 days in arrears declined in the first quarter of 2016 for the second consecutive quarter.*

*Insurers play a significant role in the maintenance of financial stability. Through their presence on the financial markets they provide a significant source of financing for issuers opting to issue debt securities. The persistent low interest rate environment is increasing reinvestment risk, which could have an adverse impact on the performance of life insurers and pensions insurers in particular. Solvency II entered into force on 1 January 2016. Its purpose is to draw up new rules for capital requirements and risk management standards to replace the existing solvency requirements.*

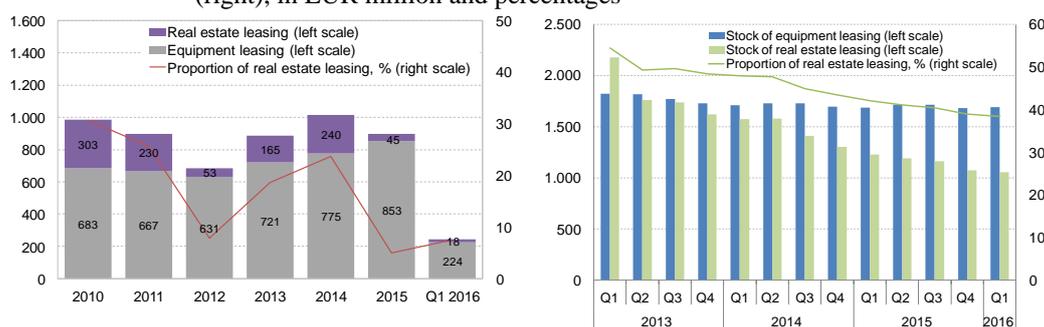
*The increased uncertainty encompassing the capital markets in the second half of 2015 continued in the first quarter of 2016. Concerns surrounding the future growth of the global economy were again to the fore, and were the main factor in the fall in commodity prices. The increasing divergence between the monetary policies of the Fed and the ECB increased volatility on the major stock markets. The domestic stock market saw a decline in the volume of trading in shares and bonds alike. The risk of low liquidity on the regulated capital market in Slovenia remains heightened. The choice of shares available for investment has continued to shrink in 2016, while the supply of debt securities remains stable, primarily as a result of the need for refinancing and debt rollover.*

### 4.1 Leasing companies

#### *Leasing companies' turnover*

**New leasing business declined by 11.6% in 2015 to EUR 898 million**, as a result of low activity in real estate leasing. New equipment leasing business increased by 10% over the same period. In real estate leasing there was a notable base effect: the high value of new leasing business in 2014 was the result of institutional changes at individual reporting entities, and the transfer of business to other reporting entities in the form of new contracts. As a result new real estate leasing business declined by 85% in 2015 to EUR 45 million. New business in the first quarter of 2016 was up 17.7% in year-on-year terms at EUR 242 million, as a result of growth of 15.3% in equipment leasing business to EUR 224 million, where cars, commercial vehicles and freight vehicles were again prominent. The LTV ratio for equipment leasing remained stable at 79.6%. Real estate leasing business in the first quarter of 2016 was up 57.2% at EUR 18 million, equivalent to just 7.4% of total new business. The LTV ratio for real estate leasing remains high at 96.8%. The trend of decline in the stock of leasing business continued in 2015 and the first quarter of 2016. The total stock of leasing business at the end of the first quarter of 2016 was down 5.7% in year-on-year terms at EUR 2.8 billion.

Figure 4.1: New leasing business<sup>18</sup> and proportion accounted for by real estate leasing (left), and stock of leasing business and proportion accounted for by real estate leasing (right), in EUR million and percentages



Source: Bank of Slovenia

**Leasing companies' shift in business from real estate to equipment is continuing.** As a result of the lack of new real estate leasing business, the stock of real estate leasing business contracted to EUR 1.1 billion, and the proportion of total leasing business that it accounted for declined by 3.7 percentage points in 2015 to 38.9%. The stock of equipment leasing business remains stable, with a trend of increase.<sup>19</sup> The car and freight vehicle segments have recorded stable growth over the last five quarters. Leasing business in commercial and freight vehicles in the first quarter of 2016 was up 11% in year-on-year terms at EUR 440 million, and accounted for 26% of total equipment leasing business. Car leasing business in the first quarter of 2016 was up 4.1% in year-on-year terms at EUR 974 million, and accounted for 55.5% of total equipment leasing business. Other equipment leasing business declined slightly.

**The quality of leasing companies' investments has improved over the last two quarters.** The contraction in claims more than 90 days in arrears seen in the final quarter of 2015 continued in the first quarter of 2016. The proportion of claims more than 90 days in arrears in the first quarter of 2016 was down 0.6 percentage points in year-on-year terms at 9.4%.

#### *Financing of other institutional sectors*

The non-financial corporations sector and household sector accounted for 96.2% of the stock of leasing business at the end of the first quarter of 2016, or EUR 2.6 billion in total.

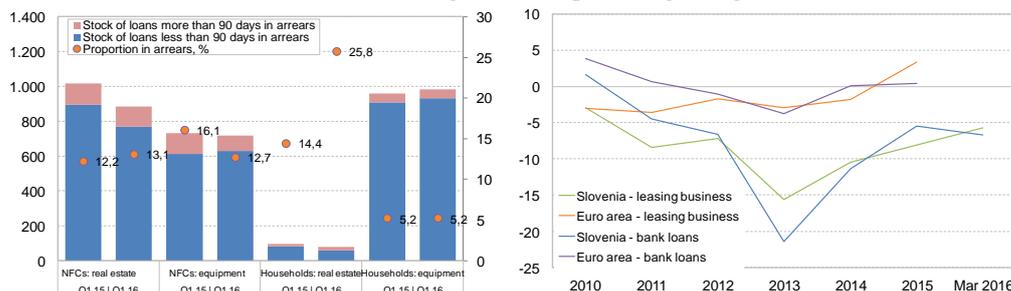
**The household sector increased its new business in the first quarter of 2016.** The year-on-year increase of 3.7% in new business with the household sector to EUR 112.2 million was attributable to private individuals, while sole traders recorded a decline in new business of 25.5%. The stock of business with the household sector remained unchanged in year-on-year terms at EUR 1.04 billion. The proportion of claims against the household sector more than 90 days in arrears increased by 0.1 percentage points in year-on-year terms to 4.9%. The increase was attributable to real estate leasing business, where the proportion of claims more than 90 days in arrears increased to 26% as a result of the contraction in the total stock of real estate leasing business.

**The ongoing favourable economic activity is having a positive impact on leasing companies' business with non-financial corporations, particularly in equipment leasing.** The greatest expression of interest has been in leasing of commercial and freight vehicles. Despite the growth in new equipment leasing business over the last three years, the total stock of leasing business with non-financial corporations has continued to contract, and was down 8.4% in year-on-year terms in March 2016, primarily as a result of the ongoing contraction in real estate leasing business. The proportion of claims more than 90 days in arrears in the non-financial corporations sector was down 0.9 percentage points in year-on-year terms at 12.9%.

<sup>18</sup> In this entire section leasing business is disclosed at historical cost until 2008 due to the availability of figures, and at financed value since, excluding the financing of inventories since 2010. All business with residents of Slovenia is included in the analysis.

<sup>19</sup> The decline in the stock of equipment leasing business in the final quarter of 2015 was the result of the transfer of business from one leasing company to a commercial bank. As a result the stock of equipment leasing business at the end of 2015 was down 0.9% in year-on-year terms. Had the transfer of business not occurred, the stock of equipment leasing business would have been up 2.6% in year-on-year terms.

Figure 4.2: Stock and proportion of leasing business more than 90 days in arrears, in EUR million and percentages (left), and growth in stock of leasing business and bank loans to the non-banking sector, in percentages (right)

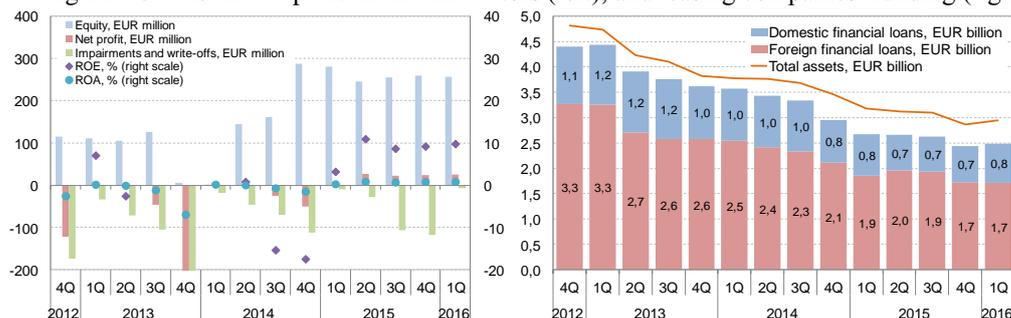


Sources: ECB, Leaseurope, BAS, Bank of Slovenia, own calculations

### Leasing companies' performance

Leasing companies again recorded a slight increase in impairment costs in 2015, but nevertheless recorded a profit for the first time in six years. Their total profit in 2015 amounted to EUR 24 million, with an ROE of 9.2%. Performance was also positive in early 2016: total profit in the first quarter was up 177% in year-on-year terms at EUR 25.1 million, while impairments were down 21.1% in year-on-year terms at EUR 7.2 million. Leverage increased from 9.9 to 10 at the end of the first quarter of 2016, as equity and debt both declined in year-on-year terms.

Figure 4.3: Selected performance indicators (left), and leasing companies' funding (right)



Note: A net loss of EUR 266 million was recorded in the final quarter of 2013, which sharply reduced equity. ROA and ROE were therefore strongly negative during this period.

Source: Bank of Slovenia

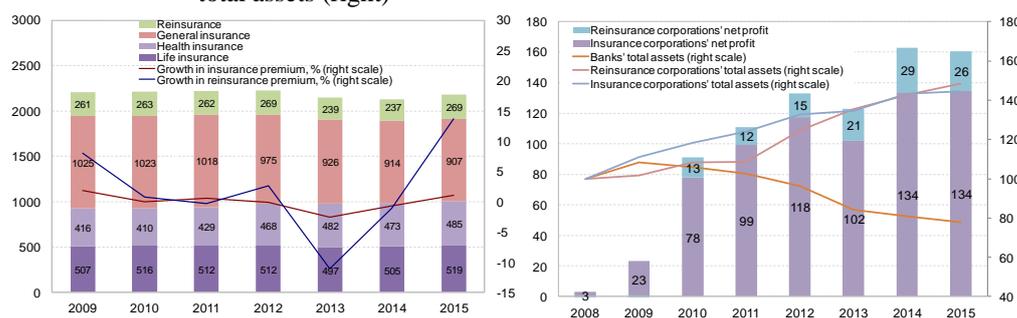
**Financial loans from the rest of the world remain the principal source of funding for leasing companies.** The stock amounted to EUR 1.7 billion in the first quarter of 2016, or 68.8% of total loans. The stock of foreign loans was down 7.9% in year-on-year terms, while the stock of domestic loans was down 5.2% at EUR 777 million, despite an absolute increase over the last two quarters.

## 4.2 Insurers

### Features of insurers' performance

After three years of a negative trend, insurance corporations recorded positive growth in gross premium in 2015. Insurance corporations' gross written premium amounted to EUR 1.9 million in 2015, up 1% on 2014. This was attributable to growth in the life insurance and health insurance segments, while general insurance contracted again as a result of a change in policyholders' habits and aggressive competition between insurance corporations. Reinsurance corporations increased their gross written premium by 13.6% in 2015, as a result of increased interest in insurance against fires, natural disasters and financial losses of various types.

Figure 4.4: Gross written premium by type of insurance, in EUR million, and annual growth, in percentages (left), and net profit, in EUR million, and index (2008 = 100) of total assets (right)



Sources: ISA, Bank of Slovenia

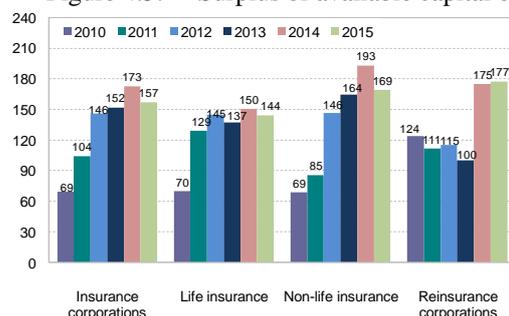
Insurance corporations' total assets increased by 0.67% in 2015 to EUR 6.6 billion, while reinsurance corporations' total assets increased by 3.6% to EUR 836.1 million. The increase was attributable to an increase in the total assets of the life insurance segment, while there was a slight decline in the total assets of the general insurance sector.

**Insurance corporations improved their performance in 2015, despite the increased uncertainty on the market.** They recorded net profit of EUR 134.4 million. Losses were recorded by two general insurance corporations, three life insurance corporations and three health insurance corporations. The market shares of these insurance corporations were less than 0.1% in the general insurance segment, 10.5% in the life insurance segment and 21% in the health insurance segment in terms of gross premium. Reinsurance corporations' net profit declined by 9.3% to EUR 26 million. This was attributable to an increase of 26.4% in claims expenses, while income from insurance premium increased by 12%. The increase in claims expenses was the result of claims payments after the ice damage of 2014 and an increase in gross claims in other property insurance and accident insurance.

### Capital adequacy

**The capital adequacy of insurance corporations and reinsurance corporations according to the Solvency I methodology remains high, despite declining in 2015.** The surplus in available capital over the minimum capital requirements at insurance corporations contracted by 16 percentage points in 2015 to 157%, as a result of a decline of 6.6% in available capital and an increase of 2.9% in the minimum capital requirements. The surplus in available capital over the minimum capital requirements at reinsurance corporations increased by 2 percentage points to 177%.

Figure 4.5: Surplus of available capital over minimum capital requirements, in percentages



Source: ISA

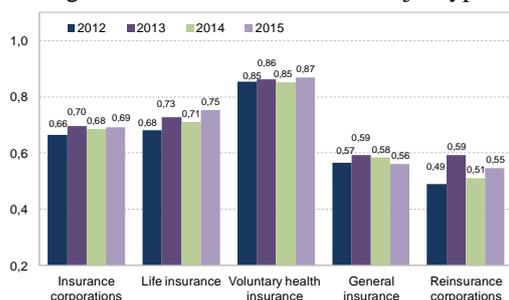
On 1 January 2016 the new methodology for the calculation of capital adequacy in accordance with Directive 2009/38/EU (Solvency II) was introduced into Slovenian law by the ZZavar-1. Under Solvency II, insurance corporations will measure two capital requirements in 2016: the solvency capital requirement (SCR) and the minimum capital requirement (MCR). Stress tests of insurance corporations were conducted in 2014, in which capital adequacy was first tested under Solvency II. According to ISA reporting, at that time the insurance sector was disclosing an adequate capital structure on the basis of Solvency II. Average capital adequacy in the market was

approximately 180%. Two insurance corporations failed to meet the capital adequacy requirements under Solvency II. In this instance there were no material deviations that the insurance corporations themselves were unable to address through their performance or an increase in capital. To a certain extent the shortfall had already been rectified in 2014.

### *Underwriting risk*

**The claims ratio as measured by the ratio of gross claims paid to gross written premium rose by 0.01 index points in 2015 to stand at 0.69.** The claims ratio improved to 0.56 in the general insurance segment, as a result of a decline in claims paid. The claims ratio for life insurance improved by 0.04 index points to stand at 0.75. While life insurance premium increased by 2.8% to EUR 519 million, claims paid increased by 9.1% to EUR 391 million as a result of survival rates and early redemptions. The claims ratio for voluntary health insurance increased, as a result of an increase of 4.6% in claims paid to EUR 421 million.

Figure 4.6: Claims ratio for major types of insurance

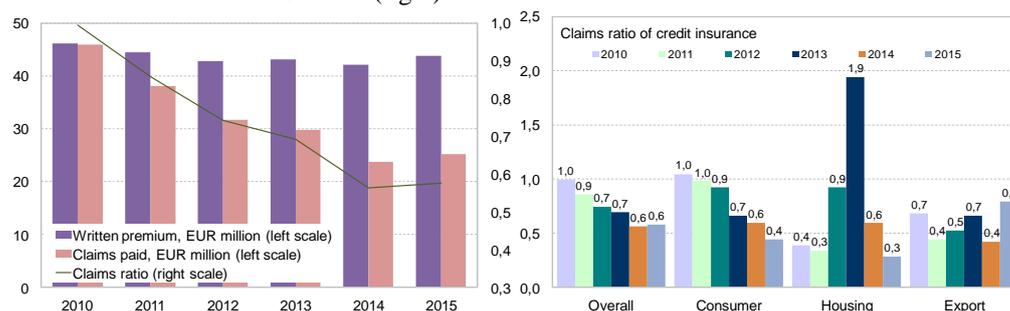


Source: ISA

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

**The claims ratio for credit insurance increased to 0.58 in 2015, despite a renewed increase in written credit insurance premium.** Written credit insurance premium was up 3.8% in 2015 to EUR 44 million. The increase was attributable to growth in insurance on housing loans and consumer loans, which increased by 60% to EUR 3 million and by 5.8% to EUR 16 million respectively, as a result of the increase in bank activity in new housing loans and new consumer loans, which increased by 40.9% to EUR 872 million and by 11.6% to EUR 884 million respectively in 2015. Export credit insurance declined by 5.8% to EUR 13 million.

Figure 4.7: Written premium and claims paid, in EUR million (left), and claims ratio for credit insurance (right)



Source: ISA

Credit insurance claims increased by 5.9% in 2015 to EUR 25 million. The increase was attributable to claims paid on export credit insurance, which increased by 77.9% to EUR 10 million. Other types of credit insurance claims declined in 2015. The claims ratio for credit insurance improved by 0.02 index points to stand at 0.58, as a result of the adverse impact of export credits.

### *Investment risk*

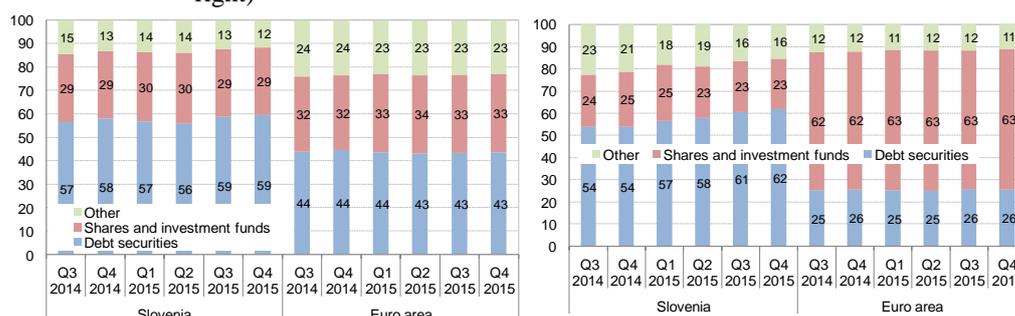
**The increased volatility on the capital markets was also reflected in bond values, which represent the majority of the insurance sector's investments.** Concerns for the cooling of the

global economy were reflected in a fall in bond values, and an increase in yields. Insurance corporations succeeded in compensating for the adverse impact of increased write-downs and negative revaluations of bonds through increased income from affiliates (in the form of dividends and other income, which amounted to EUR 4 million in 2014 and EUR 30 million in 2015), as changes on the bond market were limited. A large rise in interest rates could have an adverse impact on insurance corporations' performance and capital adequacy. In the first quarter of 2016 required yields again fell to their level of early 2015.

**The anticipated continuation of the low interest rate environment is increasing reinvestment risk, which could have an adverse impact on the performance of life insurers and pensions insurers in particular.** The ongoing fall in interest rates is making it harder for insurance corporations to match assets and liabilities. However 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 significantly smaller.

**The insurance sector plays an important role in the issuance of government bonds and treasury bills, and in the issuance of corporate bonds and commercial paper.** The insurance sector's investments in debt securities amounted to EUR 4.2 billion at the end of 2015, or 59% of insurance corporations' total financial assets. Investments in domestic debt securities amounted to EUR 1.3 billion, or 31% of insurance corporations' total investments in debt securities. The pension fund sector's investments in debt securities amounted to EUR 1.5 billion at the end of 2015, or 62% of its total investments.

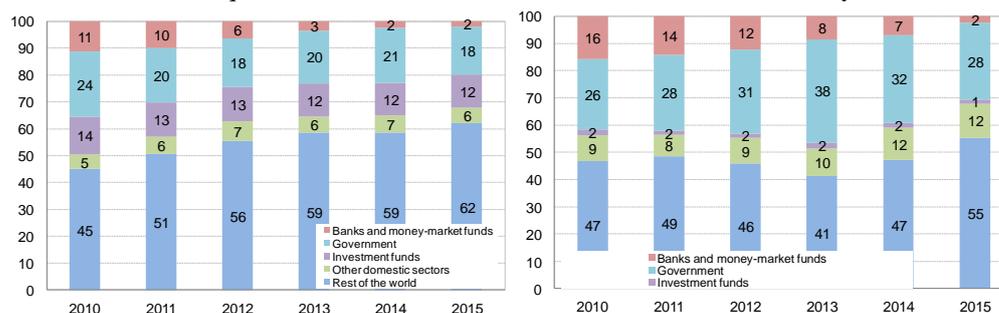
Figure 4.8: Comparison between Slovenia and euro area of percentage breakdown of financial assets of insurance sector (S.128; left) and pension fund sector (S.129; right)



Sources: ECB, Bank of Slovenia calculations

**Comparing the breakdown of investments of domestic and foreign insurance providers, the most notable feature is the domestic pension funds as the providers of supplementary pension insurance.** Investments in bonds and money-market instruments were prevalent at the domestic pension funds at the end of the 2015 financial year. The introduction of lifecycle funds, which was facilitated by the ZPIZ-2, gave pension funds the chance to introduce new investment policies providing for greater flexibility in investment. In light of the gradual introduction of lifecycle funds and a lack of suitable alternative investments, domestic pension funds remain more inclined towards debt securities, while euro area pension funds have more appetite for investing in shares and other investment funds.

Figure 4.9: Percentage of investments by the insurance sector (left) and pension funds (right) in quoted shares, investment fund units and debt securities by sector



Source: Bank of Slovenia

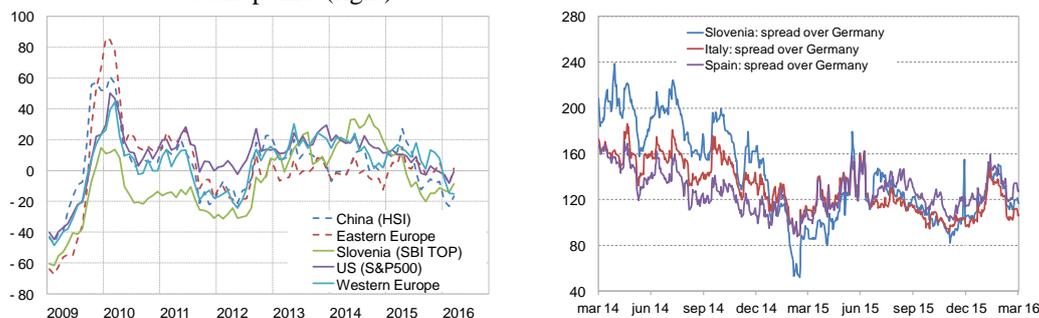
Insurance corporations and pension funds are increasing their investments in the rest of the world, and are reducing their exposure to domestic government securities. Foreign investments accounted for 62.1% of insurance corporations' total investments and 55.4% of pension funds' total investments at the end of 2015.

### 4.3 Capital market

#### *Developments on the capital market*

**The negative dynamic seen on foreign markets at the end of the previous year continued in the first quarter of 2016.** Investor attention was focused on the crude oil market in the early part of the year, as the movements in the majority of share indices tracked those in oil prices. Oil reached its lowest price of the last several years in the second half of January. International developments have less impact on Slovenia's regulated capital market. The main influences on the domestic regulated capital market are low liquidity, the shallow supply of and demand for securities, and the limited number of securities providers, which is declining because of the privatisation process. This is also being reflected in greater volatility in the SBI TOP, Slovenia's main stock market index.

Figure 4.10: Year-on-year change in selected stock market indices, in percentages (left), and spread in selected 10-year government bonds over German benchmark bonds, in basis points (right)



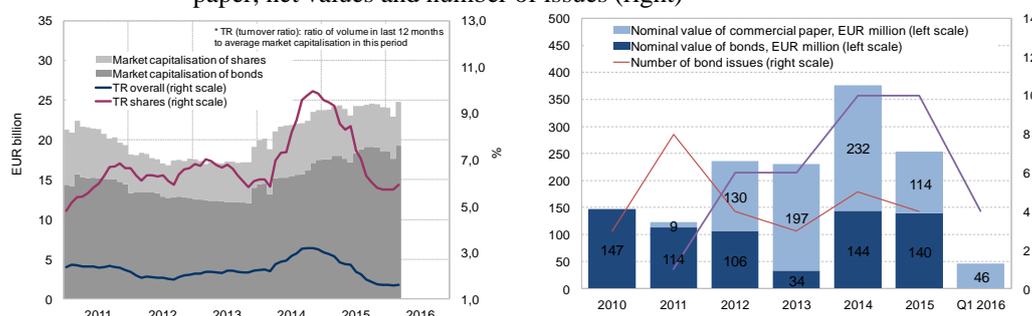
Sources: Bloomberg, own calculations

**Despite a positive reversal in February, the majority of stock market indices ended the first quarter down in year-on-year terms.** The composite stock market index for western Europe (DJ EuroStoxx) was down 6.8%, while the S&P 500 in the US was up 0.8%, partly on account of the slide in the US dollar in relation to other currencies. Emerging market indices recorded positive growth in the first quarter, primarily as a result of the rebound in oil prices and slightly more encouraging news from China.

**The Slovenian stock market index was up 4.3% in the first quarter, as a result of speculation over the start of a new privatisation process, and on the basis of expectations of higher dividends, which will be decided on at AGMs.** The monthly volume of trading in shares averaged EUR 25 million in the first quarter of 2016, up 1.5% in year-on-year terms, but down 10.1% on the monthly average in 2015. The concentration of volume remains high: 46% of the total volume in the aforementioned period was in shares in just two firms listed on the prime market. Shares in three firms that underwent acquisitions were delisted from the stock exchange over this period. At the end of the first quarter of 2016 there remained 44 shares listed on the Ljubljana Stock Exchange, with a total market capitalisation of EUR 5.5 billion. The proportion of the market capitalisation of shares accounted for by non-residents stood at 29.8% at the end of the first quarter of 2016, up 0.6 percentage points on the end of 2015. The sharp increase in the turnover ratio in 2014 was the result of the privatisation process, which brought a sharp increase in volume that year. The lack of new share issues and the gradual stalling of the privatisation process in 2015 had a negative impact on the turnover ratio in 2015. A significant development in 2015 was the change in the ownership of Ljubljana Stock Exchange. Zagreb Stock Exchange successfully completed its acquisition from CEESEG just before the end of the year. Ljubljana Stock Exchange anticipates that the new ownership and its synergies will have a beneficial impact on the Slovenian capital market and the performance of the stock exchange. The key risks, including low liquidity and the trend of decline in the number of public limited companies,

nevertheless remain. A total of five shares were delisted from Ljubljana Stock Exchange's entry and standard markets in 2015, while three shares were delisted from the entry and standard markets in the first quarter of 2016. There were no new share issues during this period.

Figure 4.11: Market capitalisation on the Ljubljana Stock Exchange, in EUR billion, and annual turnover ratios (left), and issuance of corporate bonds and commercial paper, net values and number of issues (right)



Sources: LJSE, CSCC, Bank of Slovenia calculations

### Corporate financing via issuance of debt securities remains at the level of the previous year.

Four firms opted to issue commercial paper in the first quarter of 2016, in the total amount of EUR 46 million, down 3.2% in year-on-year terms. No firm decided to carry out a bond issue. The favourable situation on the market was exploited by the finance ministry, which in the first quarter of this year issued bonds with a nominal value of EUR 1.5 billion and a coupon rate of 2.25% maturing in 2032, and increased its issuance of 30-year bonds by EUR 125 million. The total value of issued treasury bills amounted to EUR 130.5 million in the first quarter of 2016.

Table 4.1: Overview of Slovenia's regulated capital market

	2009	2010	2011	2012	2013	2014	2015	Q1 2016
<b>Shares</b>								
Market capitalisation								
amount, EUR billion	8,5	7,0	4,9	4,9	5,2	6,2	5,5	5,5
as % GDP	23,9	19,7	13,5	13,9	14,7	16,7	14,3	14,3
annual growth, %	-0,1	-17,3	-30,3	0,8	5,3	20,1	-11,1	-0,1
residents, %	7,2	10,0	12,3	13,6	15,5	25,4	29,3	29,8
Volume								
amount, EUR million	719,8	360,8	394,5	302,9	299,4	608,1	333,7	75,0
as % GDP	2,0	1,0	1,1	0,9	0,8	1,6	0,9	0,8
annual growth, %	-24,4	-49,9	9,3	-23,2	-1,1	103,1	-45,1	1,49
Annual change in SBI TOP, %	15,0	-13,5	-30,7	7,8	3,2	19,6	-11,2	-8,74
<b>Bonds</b>								
Market capitalisation								
amount, EUR billion	10,8	13,2	14,5	12,7	14,5	17,5	18,6	19,3
as % GDP	30,6	37,2	40,0	36,1	41,2	47,0	48,4	50,0
annual growth, %	59,2	21,9	9,6	-11,9	15,6	20,7	6,4	7,0
Volume								
amount, EUR million	156,3	108,9	59,6	55,4	86,1	69,0	55,9	7,3
as % GDP	0,4	0,3	0,2	0,2	0,2	0,2	0,1	0,1
annual growth, %	-39,2	-30,3	-45,3	-7,0	55,4	-19,8	-19,0	-11,5

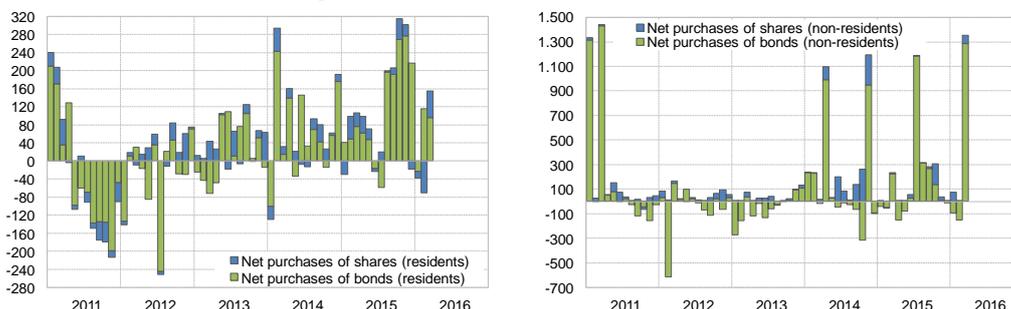
Sources: LJSE, SURS, Bank of Slovenia calculations

**Residents' demand for foreign investments, foreign bonds in particular, increased in the second half of 2015.** The greatest demand for foreign bonds came from banks, insurance corporations and pension funds, which accounted for 76.9% of the total volume of trading in foreign bonds over the last five months of 2015. The trend slowed slightly in the first quarter of 2016, although volume was up 16.6% in year-on-year terms. Investments in foreign bonds can be expected to increase further over the rest of 2016. The quest for higher returns and the drive for investment diversification are the main factors in the increased demand for foreign bonds.

The quest for higher returns is forcing investors outside of their established investment policies, which is being reflected in increased demand for bonds from countries outside the euro area. In the first quarter of 2016 banks, insurance corporations and pension funds focused on purchasing bonds

from EU Member States from south-eastern Europe, having primarily purchased bonds from inside the euro area in the previous year.

Figure 4.12: Net outward investments by residents (left), and inward investments by non-residents (right), in EUR million



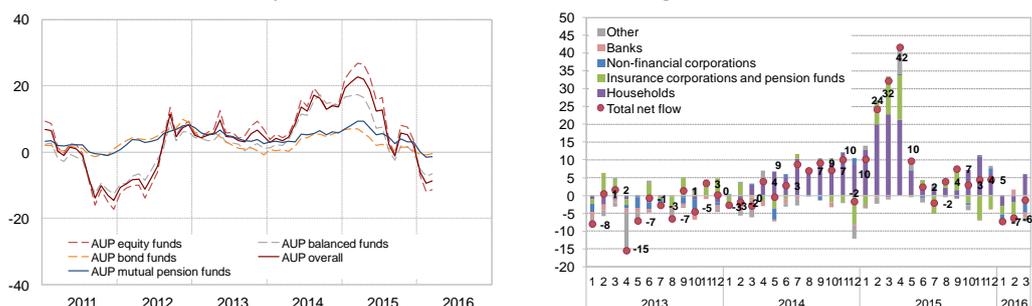
Sources: CSCC, Bank of Slovenia

**Non-residents are not showing significant demand for Slovenian securities.** The exception is government bond issuance, which is resulting in an increased net flow into bonds, most recently in early March 2016, when the finance ministry issued a 16-year bond with a nominal value of EUR 1.5 billion.

### Investment funds

**In line with ESRB's broad definition of shadow banking, the majority of shadow banking in Slovenia comprises the investment fund sector in conjunction with leasing companies.** Here it should be noted that the greatest risks of shadow banking are as follows: (1) companies engaged in the transfer of financial assets and securitisation deals (financial vehicle corporations or FVCs), (2) intermediaries in securities and derivatives, and (3) hedge funds. All three categories are characterised by elevated risk for reason of maturity and liquidity transformation, and increased leverage. Owing to the small size of the domestic capital market and the delay usually seen in the introduction of new financial services in the market, there were no such activities in the Slovenian environment in 2015. Investment funds were thus one of main sources of shadow banking, although from the perspective of financial stability they are significantly less risky than the aforementioned activities, and represent an important source of financing.

Figure 4.13: Year-on-year growth in mutual funds by type, in percentages (left), and net cash flows by investor sector, in EUR million (right)



Source: Bank of Slovenia

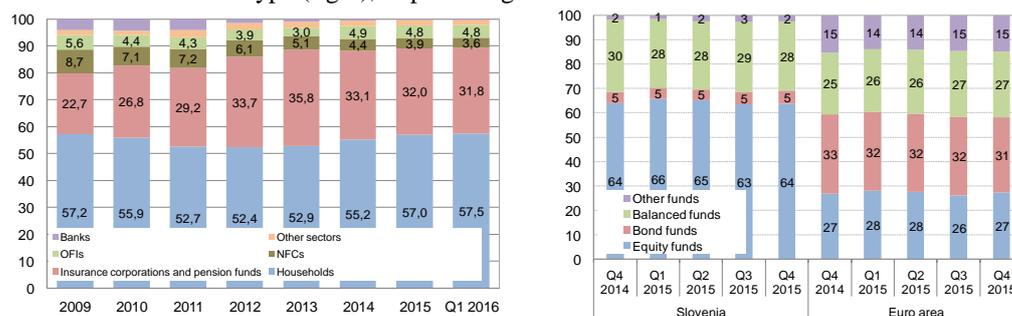
**The increased volatility on stock markets had an adverse impact on fund performance last year and in the first quarter of this year.** Investment funds' assets under management amounted to EUR 2.2 billion at the end of March 2016, down 8.9% in year-on-year terms. The decline was attributable to a negative return (of 8.8%), and net withdrawals. Investment funds recorded above-average inflows in the amount of EUR 67 million in the first quarter of 2015, compared with net withdrawals of EUR 14 million in the first quarter of 2016.

**The ownership structure of domestic investment fund units remains stable.** Households remain the largest owners of domestic investment fund units. They held 57% of the total in 2015, up almost 2 percentage points, primarily as a result of significant net inflows in early 2015. Households' net inflows in the first quarter of 2016 amounted to EUR 1.2 million, primarily as a

result of net inflows in March, having recorded net withdrawals in the first two months of the year, despite the release of household sector assets from the completion of sales and the squeeze-out of minority shareholders from individual firms at the end of 2015 and in the first two months of 2016. Households are holding additional funds in bank deposits, owing to the increased uncertainty on capital markets.

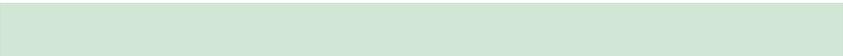
The net flow into investment funds from insurance corporations and pension funds was positive in 2015 in the amount of EUR 19.5 million, while the net flow over the first quarter of 2016 was negative in the amount of EUR 8.1 million.

Figure 4.14: Ownership structure of domestic investment fund units by sector (left), and comparison between Slovenia and euro area of breakdown of investments by fund type (right), in percentages



Sources: Bank of Slovenia, ECB

Comparing the breakdown of investments in domestic investment fund units, it is evident that Slovenian investors have much greater appetite for equity investment funds (63.6% of total investments in funds). The average investor from the euro area has a significantly more balanced investment structure.



## **THEMATIC SECTION**

# **IMPACT OF LOW MARKET INTEREST RATES ON BANK PERFORMANCE**

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## IMPACT OF LOW MARKET INTEREST RATES ON BANK PERFORMANCE

*The aim of the article is to analyse the impact of the low interest rate environment on the Slovenian banking system from three perspectives: the impact on liquidity and lending, the impact on the formulation of asset and liability interest rates, and the impact on changes in the structure of bank investments and liabilities and on the interest margin.*

*The restoration of stability and confidence to the financial system, which were eroded by the financial crisis, required the intervention of governments and central banks. The ECB responded to the crisis with extensive standard and non-standard measures, but the transmission mechanism in several euro area countries, among them Slovenia, had been significantly degraded. Although Slovenian banks responded to the ECB's non-standard liquidity operations (most notably the VLTRO), this was not reflected in growth in lending activity. Only the rehabilitation of the banking system at the end of 2013 that stabilised the banking system, and with the increase in capital at the banks and the transfer of non-performing claims to the BAMC put in place the right conditions for the revival of credit growth. After these measures had been taken the banks no longer identified any limitations in capital and liquidity.*

*The anticipated revival of lending nevertheless did not take place, which could have been attributable to factors on the demand side and on the supply side. The high level of indebtedness and the lack of equity at firms are still limiting factors preventing increased lending. The banks' limited lending activity in the previous period also encouraged firms to rely more on internal financing, and partly on borrowing in the rest of the world. On the supply side, ECB measures and the recapitalisation of the banking system had a positive impact in an increase in liquidity and capital at the banks. The banks have nevertheless maintained credit standards at high levels, and are relaxing them slowly. A feature of the Slovenian banking system that is affecting lending activity is also the rapid progress of the consolidation of the banking system and the commitments to the European Commission during the approval of state aid aimed at reducing total assets and operating costs.*

*The developments in asset and liability interest rates in Slovenia are under the influence of market interest rates, country risk, the macroeconomic circumstances, and factors specific to the Slovenian banking system. The developments in Slovenian interest rates therefore have their own peculiarities, and in certain periods differ significantly from the developments in average euro area interest rates. In the Slovenian banking sector there is a greater spread of interest rates between banks, particularly just before or during major changes in interest rates, which could also be a result of pronounced interbank competition through interest rates. For this reason there follows an examination of the developments in interest rates and competition in the segments of (1) liability interest rates, (2) asset interest rates on long-term corporate loans to firms with higher ratings, (3) short-term corporate loans, and (4) housing loans, in particular the fixed-rate segment.*

*The intensive period of falling interest rates is coming to a close, the rates having already fallen below 0.5%. Interest rates on long-term corporate loans to firms with higher ratings fell particularly sharply at the large domestic banks, thereby becoming comparable to those offered by the banks under majority foreign ownership. The large domestic banks obtained market share in this loan segment by cutting interest rates. The banks under majority foreign ownership have controlled the market in short-term corporate loans for several years, offering loans with lower interest rates. In the housing loans to households segment, the proportion of fixed-rate loans is increasing, which entails greater risk for the banks in a period of rising interest rates.*

*While the developments in and level of the net interest margin have over the last 15 years been subject to a variety of situations in the banking system, the economy and the terms of borrowing in the rest of the world, it is in the last two years that the banks have first faced an environment of historically low interest rates. The sharp fall in interest rates has resulted in an increase in the proportion of bank funding accounted for by sight deposits, which for the moment has not caused any switching of deposits into other forms of saving. The fall in asset interest rates outpaced the fall in liability interest rates in 2015, although for now the banks have succeeded in compensating for the fall in lending rates both by extending the maturities of assets and by changing interest rates and shortening the average maturity of deposits on the liability side, thereby maintaining the interest rate spread on the lending and deposit parts of the balance sheet. Because there is*

diminishing manoeuvring room on the liability side, the fall in lending rates and in returns on securities on the asset side, in addition to the ongoing contraction in lending, is putting sustained downward pressure on the banks' net interest margin.

The low interest rate environment is leading Slovenian banks into new challenges. **In the wake of a change in the business models that are the product of the ongoing low interest rate environment, and that have recently been reflected in an increase in the proportion of loans with a fixed interest rate, the banks are required to adjust their assessment of interest rate risk and income risk, and to tailor their plans to generate internal capital accordingly.** The low interest rate environment encouraged the banks to lower interest rates, first on the liability side, and then on the asset side. At the same time, most notably in respect of housing loans, the banks have increased the proportion of loans with a fixed interest rate, which requires specific adjustments, primarily for long-term capital plans and profit plans.

**The banks must be particularly careful not to begin understating risks, and to reduce spreads irrespective of the credit risk that they take up.** The persistence of the low interest rate environment and the narrowing of the spreads between individual interest rates is leading to a general convergence of interest rates at historically low levels.

**In the event of a rapid rise in market interest rates there is a risk that in order to keep their primary source of funding stable the banks would again begin competing through deposit rates.** In the given environment of low interest rates, the banks are recording an increase in the proportion of sight deposits on the liability side. When the period of rising interest rates arrives, the increased risk of competition between banks via interest rates will be transferred to the liability side, which again entails pressure on the interest margin.

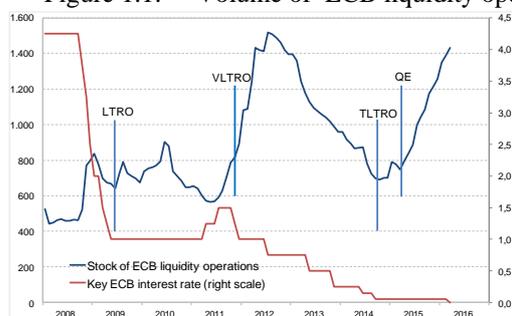
# 1 ECB measures and credit growth during the crisis

## 1.1 ECB crisis measures and participation of Slovenian banks

**Special circumstances often demand special measures.** The recent financial crisis has changed the financial world: the consequences of the crisis were profound and evident in numerous companies and households. The turmoil was particularly evident at financial institutions, which were exposed to numerous deficiencies and fragilities of the system. Confidence is the foundation of the financial and banking systems, and intervention by governments and central banks was necessary to calm the situation and to restore confidence.

**At the outbreak of the financial crisis in 2008 the ECB responded decisively, and implemented numerous measures aimed at the recovery of the broken monetary policy transmission mechanism** (ECB, 2015). One of the first measures was a significant cut in the key interest rate, which reduced the cost of financing and helped to mitigate the consequences of the financial crisis. Like other major central banks, the ECB cut the key interest rate to historically low levels.

Figure 1.1: Volume of ECB liquidity operations, in EUR billion, and ECB key interest rate



Source: ECB (SDW)

**In addition to cutting the key interest rate, the ECB also broadened and increased the size of its liquidity operations, which was the key to providing liquidity for numerous banks in the wake of the shutdown of interbank financing.** In the early part of the crisis the ECB increased the number of liquidity instruments while simultaneously reducing the quality of the collateral requirements, thereby increasing the banks' access to the operations. As the debt crisis escalated and uncertainty in the euro area increased, it also began carrying out non-standard measures.

Table 1.1: Major ECB measures during the crisis

<b>Longer-term refinancing operations</b>
Long-term refinancing operation (LTRO) with maturity of 1 year (June 2009)
Very long-term refinancing operation (VLTRO) with maturity of 3 years (December 2011 and February 2012)
Targeted longer-term refinancing operation (TLTRO and TLTRO II) with maturity of up to 4 years
<b>Asset purchase programme</b>
Programme expanded in March 2015 to purchase of government bonds (quantitative easing)
Monthly purchases increased by ECB from EUR 60 billion to EUR 80 billion in March 2016
Asset purchase programme extended to March 2017 and expanded to investment grade corporate bonds
<b>Introduction of negative interest rate</b>
Initial rate of -0.10% (June 2014), gradual reduction to -0.40% (March 2016)
<b>Forward guidance (July 2013)</b>
More transparent and precise explanation of future monetary policy measures and methods

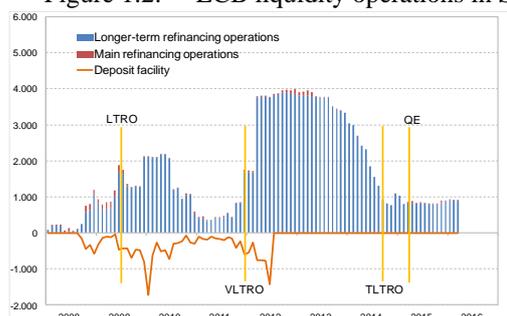
Source: ECB

**The purpose of the measures was to pursue the ECB's objective of maintaining price stability, and consequently raising the inflation rate towards 2%.** Securities purchases (government bonds in particular) represent monetary stimulus for the economy in a situation when key interest rates are at the lower limit, as they allow for cheaper access to financing. This usually encourages investment and consumption, which should contribute to a rise in inflation towards the target value.

**The introduction of a negative deposit rate is a significant measure to encourage lending in the euro area.** Under a negative deposit rate, banks have to pay interest to deposit their excess liquidity with the central bank, which acts as a disincentive and consequently encourages lending. The result of the introduction of negative interest rates has been a fall in interbank interest rates

into negative territory for the first time in the history of the euro area: the EURIBOR has been negative at all maturities of up to 1 year since February.

Figure 1.2: ECB liquidity operations in Slovenia, in EUR million



Source: Bank of Slovenia

**Slovenian banks participated to a great extent in the 3-year long-term refinancing operations in 2011 and 2012 (VLTROs).** EUR 1.02 billion was borrowed in the two operations. According to survey data (source: Bank Lending Survey; the BLS), the main reasons for participating in the VLTROs were funding during the uncertain situation on the financial markets, and difficulties with funding on the interbank market. The banks mostly saw this type of funding as a replacement for short-term debt, and also to a lesser extent for medium-term debt that would shortly be falling due.

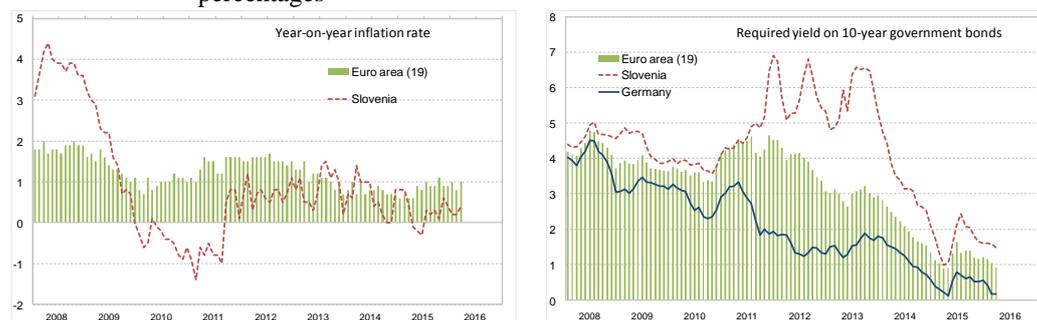
Of less interest to Slovenian banks was participation in the targeted long-term refinancing operations (TLTROs): the banks only participated to a significant extent in the first two operations, when they borrowed EUR 706 million, which was 71% of the initial estimate of funding (Bank of Slovenia, 2014). In the four TLTROs conducted in 2015, Slovenian banks borrowed just EUR 45 million (Bank of Slovenia, 2015). The banks' motivation for participating in the TLTROs was different from that for the VLTROs. As their motivation the participating banks mostly cited the attractive terms allowing for higher profits and preventive effects to mitigate any difficulties with funding. The TLTROs were also used to replace other maturing funding from Eurosystem operations (in particular the VLTRO).

## 1.2 Impact of ECB measures in Slovenia and across the euro area

**It is hard to assess the impact of the standard and non-standard monetary policy measures, as there is no knowledge of the hypothetical scenario, namely developments in the absence of these measures.** For a thorough assessment of the effectiveness of these measures it would be necessary to take account of other factors that are usually affected by monetary policy. The direct impact in Slovenia and across the euro area is evident primarily in increased liquidity and the fall in required yields on government bonds. The literature also identifies positive effects on economic growth and inflation (Joyce et al., 2011; Weale & Wieladek, 2014). The inflationary effects have nevertheless been modest (partly as a result of the pronounced fall in oil prices), but there remains the question of the developments in inflation (or deflation) in the absence of the non-standard measures. An additional challenge for ECB action is the differences between the Eurosystem countries,<sup>1</sup> and the consequent disparity in the need for an expansive monetary policy.

<sup>1</sup> The euro area is failing to meet the requirements imposed by the theory of optimum currency area.

Figure 1.3: Year-on-year inflation as measured by the HICP excluding energy, food, alcohol and tobacco (left), and required yield on 10-year government bonds (right), in percentages

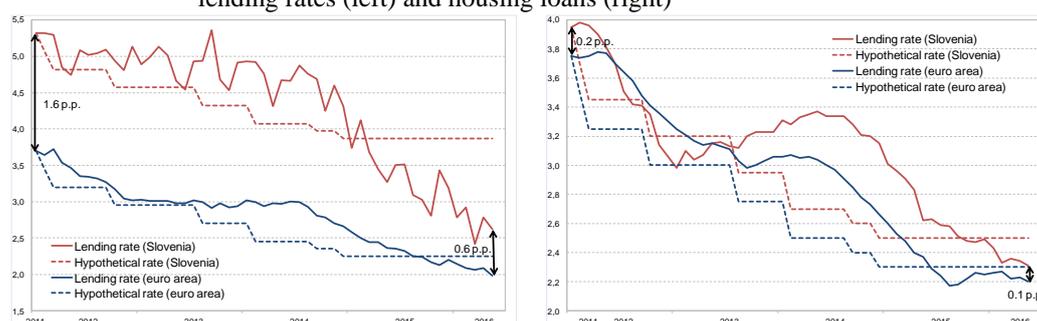


Source: Eurostat

**The impact on inflation in Slovenia was smaller than that in the euro area overall, even if growth in prices of energy, food, alcohol and tobacco is eliminated from the picture.** However the non-standard measures had a profound impact in the fall in the required yield on 10-year government bonds, which fell 5.4 percentage points from its peak, compared with 3.9 percentage points across the euro area. The larger fall in Slovenia was also the consequence of the high growth in the required yield prior to the recovery of the banking system. Yields on Slovenian government securities remain above the euro area average. The methodology of the study of developments (ECB, 2015) confirms that the required yield fell more in countries that were hit harder by the crisis.<sup>2</sup>

**The transmission of the ECB interest rate into corporate lending rates was relatively modest as of the beginning of the fall in interest rates in October 2013, but began to improve after the completion of recovery and the beginning of the TLTRO.** The interest rate spread between Slovenia and the euro area average, which stood at 1.6 percentage points in October 2011, narrowed to just 0.6 percentage points by February 2016. The transmission of ECB interest rates into household lending rates slowed with the culmination of the crisis in 2013, but returned within normal boundaries after the bank recapitalisations and the transfer of non-performing claims to the BAMC. Monetary policy, and the combination of standard and non-standard measures, thus had a significant impact on the price of loans; this fell by more than average in Slovenia (which was of course partly attributable to other factors), and consequently approached the interest rates seen across the euro area. The prevalence and persistence of low interest rates means that banks are able to begin dealing with the problems in generating a net interest margin of sufficient magnitude.

Figure 1.4: Effect of the transmission of changes in the main refinancing rate into corporate lending rates (left) and housing loans (right)



Note: The figure illustrates developments in lending rates for corporates and housing purchases from October 2011, when the fall in the main refinancing rate began, and in the hypothetical interest rates (dotted line) that illustrate the full and immediate transmission of changes in the main refinancing rate into lending rates.

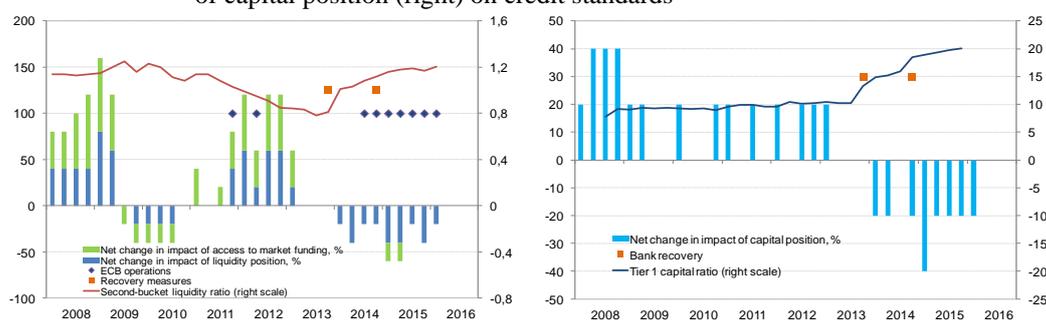
Sources: Bank of Slovenia, ECB (SDW)

**The objective of the VLTRO was to ensure the effective transmission of monetary policy measures into the economy, with support for the banks to maintain and increase lending to non-financial corporations and households, which is the key to maintaining stability (ECB, 2012).** One of the significant side effects of the VLTRO was the carry trade, where banks earmarked the funds obtained cheaply at the ECB for purchases of higher-yielding government

<sup>2</sup> The analysis was limited to France, Italy, Germany and Spain.

bonds that at the time of purchase (2011 to 2013) were significantly riskier (Acharya & Steffen, 2013; Popov & Van Horen, 2013). The key question is whether banks invested the funds obtained in the 3-year operations in government bonds instead earmarking them for financing the private non-banking sector (Broner et al., 2014), or whether purchases of government bonds had no impact on corporate and household lending (Ahtik & Albertazzi, 2014). According to the BLS, the earnings on high-yielding government bonds played a noteworthy role in the decisions by Slovenian banks, although the survey suggests that certain banks were also encouraged to lend to non-financial corporations and households. Slovenian banks cited the improvement of their liquidity position, the possibility of increased profitability and a reduction in the need for deleveraging as the consequences of their participation in the VLTROs. The impact on credit standards and lending terms at Slovenian banks could mostly not be identified from the BLS. According to the answers cited in the BLS, there was no impact on credit standards or lending terms from the TLTROs. The banks primarily saw the benefits of the operation in the possibility of improving profitability and improving the capital position.

Figure 1.5: Impact of liquidity position and access to funding on the market (left) and impact of capital position (right) on credit standards



Note: A net change in the impact of access to market funding and the liquidity and capital positions of more than zero entails a tightening of credit standards, while a value of less than zero entails an easing of credit standards.

Sources: Bank of Slovenia, ECB (SDW)

**The recovery measures carried out in late 2013 had a key impact on bank perceptions, both in the area of limits on the capital side and on the liquidity side.** The transfer of illiquid non-performing claims and their replacement with BAMC and government bonds had an impact on capital adequacy and on the liquidity ratio, as Figure 1.5 illustrates. There was notably a significant improvement in the second-bucket liquidity ratio,<sup>3</sup> which had declined consistently over the previous period despite the banks' intensive participation in the VLTRO. The banks had constantly cited in 2011 and 2012 that their liquidity position was leading to a tightening in credit standards. Only after the recovery measures had been carried out did the banks begin reporting that the capital and liquidity positions were contributing to the easing of credit standards; they had therefore ceased being limiting factors.

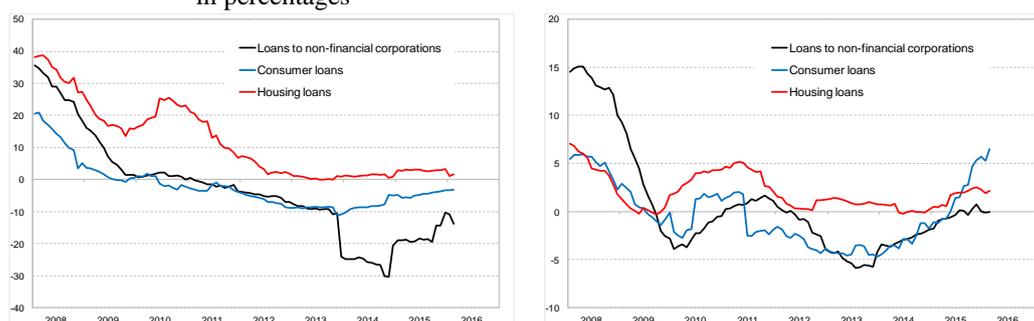
### 1.3 Revival of credit growth: positive signs and obstacles

**Notwithstanding the statements by banks that they no longer face limits imposed by the capital and liquidity positions, there has not been a revival in lending.**<sup>4</sup> It is evident that year-on-year growth in all types of loans to the non-banking sector is already positive in the euro area overall, while in Slovenia it remains modest or negative. According to the BLS, the ECB's non-standard measures have been reflected via increased liquidity in the euro area in a relaxation of credit standards and loan terms, which is having a favourable impact on credit activity. By contrast, despite certain positive signs, in Slovenia the ECB's non-standard measures have not yet been reflected in increased lending activity; the only increase is in housing loans. Here the question is raised of why the favourable economic situation and expansionary ECB policy is not being reflected in increased credit activity in Slovenia.

<sup>3</sup> The second-bucket liquidity ratio (LR2) is the ratio of the sum of financial assets in domestic and foreign currencies to the sum of liabilities in domestic and foreign currencies with a residual maturity of up to 180 days.

<sup>4</sup> It should of course be noted that the hypothetical situation, that is the situation where the ECB measures had not been taken, is an unknown. It can be presumed that in this case lending would be even more modest than it currently is.

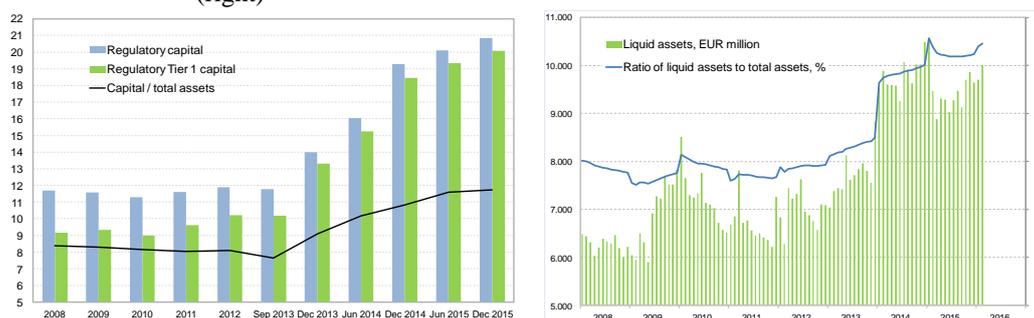
Figure 1.6: Year-on-year growth in loans in Slovenia (left) and across the euro area (right), in percentages



Note: Loans shown in gross amounts, according to ECB methodology.  
Source: ECB (SDW)

**The reasons for the further contraction in credit activity in Slovenia can be found on the demand and on the supply side .** If the limiting factors were stronger on the supply side in the early part of the crisis, the recovery of the banking system in late 2013 and the improvement in the economic situation in 2014 helped to ease them. Since the recovery, more positive signs can be seen on the supply side compared with the demand side, partly as a result of the measures of the Slovenian government, the Bank of Slovenia and the ECB. There are nevertheless still limiting factors on both sides, and they are only slowly diminishing in a background of strengthened economic growth, which is at a level that should provide enough support for an increase in credit demand at firms.

Figure 1.7: Banking system's capital adequacy, in percentages (left), and liquidity position (right)



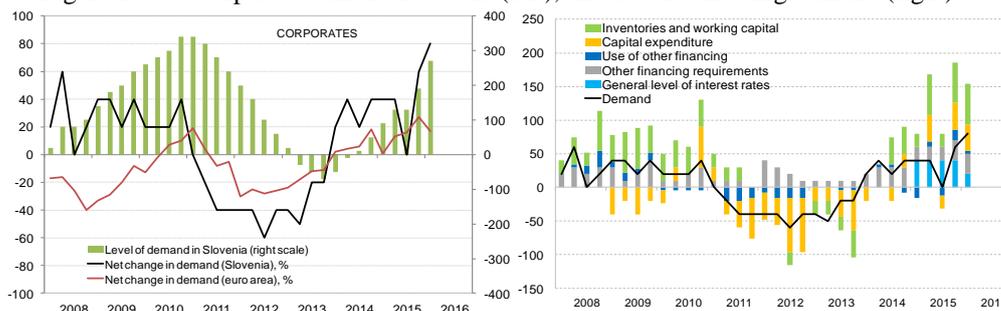
Source: Bank of Slovenia

### *Demand-side factors affecting credit growth*

**Indebtedness and lack of equity at companies are still limiting factors preventing increased corporate lending.** Despite the gradual decline in corporate indebtedness since 2011, it is still high in individual segments of the corporate sector. From the perspective of the capacity to invest, there is still a prevailing lack of equity at Slovenian companies compared with debt capital, which is depressing their creditworthiness. The banks highlight undercapitalisation and the need for the financial and ownership restructuring of companies as one of the largest limiting factors in lending growth. The banks are consequently maintaining credit standards at high levels.

**Demand for corporate loans has been increasing since the recovery of the banking system in late 2013.** There are still questions as to the quality of this type of demand, particularly from the perspective of collateral, creditworthiness and the purpose of lending. It is not necessarily the companies with good investment plans and low indebtedness that are providing the demand for loans. Although there are numerous companies free of financial debt, their financing model is supported by internal sources. It can nevertheless be assessed that the increased demand and ever-lengthening maturities of new loans are indicative of firms' readiness to expand investment, encouraged by the favourable economic situation and low interest rates.

Figure 1.8: Corporate demand for loans (left), and factors affecting demand (right)



Sources: Bank of Slovenia, BLS

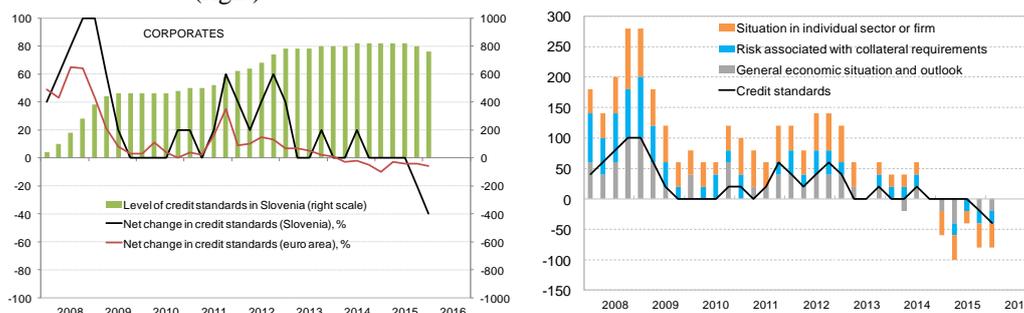
**To a greater extent than in the past, companies are relying on sources of financing outside the Slovenian banking system, by borrowing in the rest of the world.** The restrictions on loans in the Slovenian banking system encouraged firms to seek alternatives, first by borrowing in the rest of the world. The uncertainty surrounding financing and the reduced access to loans in the Slovenian banking system, in combination with more favourable interest rates, brought an increase in borrowing in the rest of the world, which remains at a relatively high level, accounting for 28% of total loans to NFCs, despite a recent decline. With greater access and a fall in the cost of financing on capital markets, the attraction of borrowing via bond and commercial paper issuance grew at large enterprises. Given the lack of development in the capital market in Slovenia, this source of financing remains limited solely to large enterprises, and represents a modest alternative to bank financing.

*Supply-side factors affecting credit growth*

**On the credit supply side, it was primarily the recovery of the banking system in late 2013 and the transfer of non-performing claims to the BAMC that improved the conditions for an increase in lending.** With the increase in the banks’ capital adequacy and the beginning of the process to resolve non-performing claims, there was a sharp increase in the banks’ resilience in the event of major shocks and a sudden increase in credit risk. Having been reduced, the proportion of non-performing claims is no longer a limiting factor in lending.

**The banks have nevertheless maintained credit standards at high levels, and are only easing them slowly.** On corporate loans, housing loans and consumer loans to households, standards have only changed slightly, despite the increased demand and the ECB’s expansionary measures. The largest risk is related to the specific client or sector, while the general economic situation and the impact of risk related to collateral contribute less to the restriction of bank lending policy, although they are still large. The reasons that the risk assessments of certain borrowers and sectors are so high can be found in the high debt-to-equity ratio (Figure 1.10; for more, see below). Only at the end of 2015 and in the first quarter of 2016 was it possible to see any easing of these credit standard factors with regard to corporate loans. In the BLS the banks also cited stricter regulatory requirements as one of the limiting factors in credit supply. As in other euro area countries, this factor played a major role particularly in the wake of introduction of the requirements of the CRR and CRD IV.

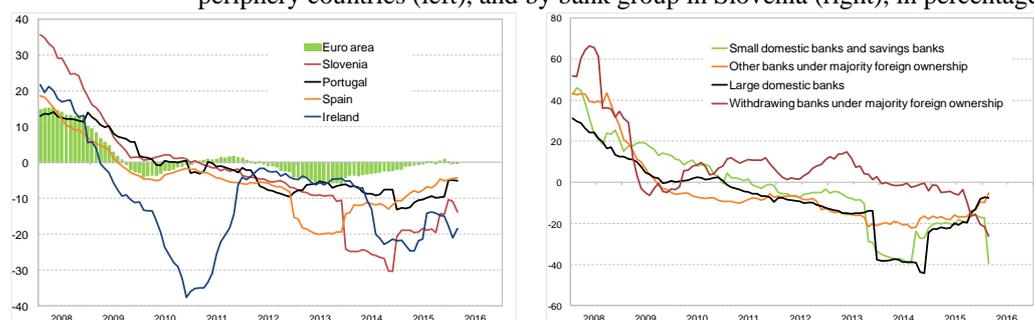
Figure 1.9: Credit standards for corporate loans (left), and factors affecting credit standards (right)



Source: Bank of Slovenia

**Credit activity is also being limited on the supply side by the commitments made to the European Commission during the approval of state aid.** In countries with extensive difficulties in the banking sector and a consequent need for state aid, a significantly lower level of credit activity compared with the euro area average is evident. In these countries growth in credit activity is still strongly negative, and has been since the outbreak of the crisis, particularly in countries where state aid was received by a large number of systemically important banks. During the approval of state aid in the restructuring period by the European Commission among others, they committed themselves to contracting their balance sheets, cutting costs, placing restrictions on lending, and pursuing a required return on equity. In the low interest rate environment the required return has proved even harder to achieve, and could make the banks reluctant to lend in the future.

Figure 1.10: Year-on-year growth in loans to non-financial corporations in selected euro area periphery countries (left), and by bank group in Slovenia (right), in percentages



Sources: ECB (SDW), Bank of Slovenia

**After the recovery of the banking system, the process of consolidating the Slovenian banking system accelerated through mergers and the withdrawal of certain banks.** The orderly wind-down of two small private banks and other bank mergers will have a long-term favourable impact on the stability of the banking system, but could have an adverse impact over the short term as business processes are adjusted and synergies sought. In particular the announced withdrawal of certain banks under majority foreign ownership from the Slovenian banking market was a factor in the gradual decline in corporate and household loans in 2015. There is a discernible positive trend in year-on-year lending growth at the other banks under majority foreign ownership, and also at the large domestic banks, which indicates that the recovery has been successful and that the banks are slowly stabilising.

**Increased credit activity on the part of the banks is evident in household lending, as a result of a change in the banks' business models focused on retail banking.** Housing loans represent a good opportunity for the banks to increase lending, given the relatively low indebtedness of Slovenian households, the low real estate prices and historically low interest rates. Despite the aforementioned positive factors, in the survey the banks cite poor creditworthiness (particularly among the young) as the most significant obstacle to increased growth in housing loans, as a result of the expansion of temporary employment and low income, uncertainty on the real estate market and the low levels of equity. A more pronounced reversal in investment in real estate will require greater optimism, and more confidence in the stability and future growth in prices. The stock of consumer loans has continued to decline, despite the positive impact of low interest rates and the slight strengthening of consumer confidence, primarily as a result of the use of other sources of financing, most notably own financing from savings. However, in the future greater activity can also be expected in this segment, in the wake of further falls in unemployment and increases in real wage and disposable income.

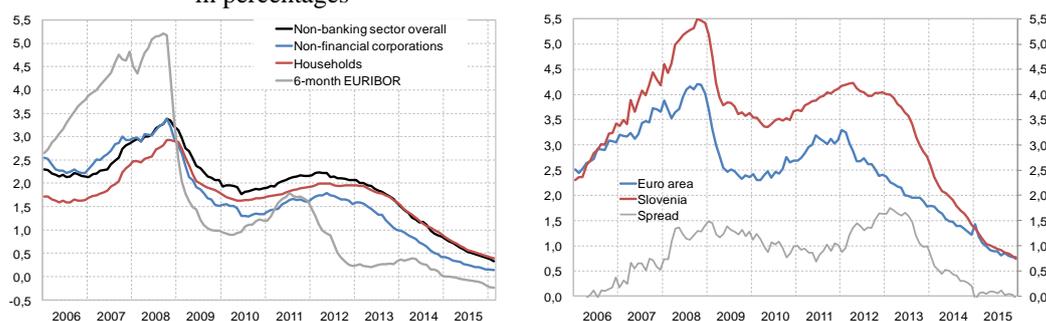
## 2 Bank lending and deposit interest rates setting, and net interest margin

### 2.1 Developments and periods of competition between banks over liability interest rates

Liability interest rates in Slovenia were considerably higher than the euro area average in the period before 2015. It was only in 2013 that the banks began sharply reducing liability interest rates. Across the euro area the sharp reduction in liability interest rates began in 2012, as soon as there was a pronounced decline in ECB interest rates and market interest rates. At that time interest rates in Slovenia were still under the strong influence of specific circumstances in the banking system, which was overly dependent on funding on international financial markets. A second wave of recession also hit Slovenia in 2012.

The 6-month EURIBOR fell by 1.4 percentage points in 2012, as other market interest rates also fell sharply. Euro area liability interest rates on long-term household deposits fell by a half, and in early 2012 were almost 1 percentage point lower than the comparable interest rates in Slovenia. These fell by barely 0.1 percentage points in 2012. At the end of 2012 Slovenian banks were willing or compelled to pay interest rates 1.6 percentage points above the euro area average on long-term deposits.

Figure 2.1: Interest rates on stock of deposits by the non-banking sector, households and non-financial corporations (left), and interest rates on new household deposits with a maturity of more than 1 year in Slovenia and the euro area overall (right), in percentages

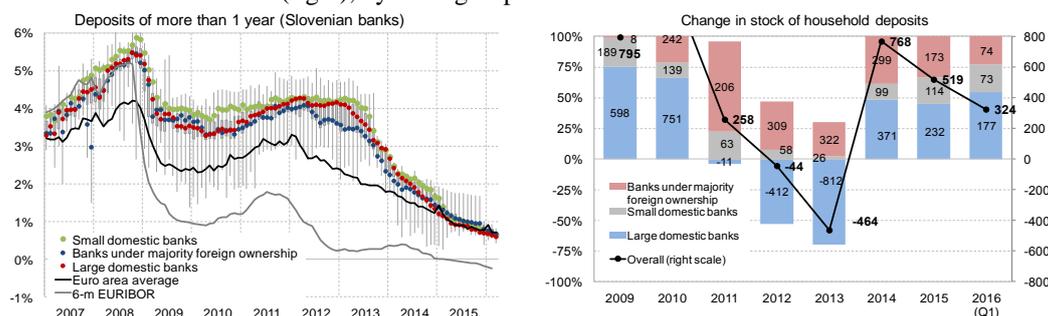


Note: Monthly average calculated for the 6-month EURIBOR.

Sources: Bank of Slovenia, ECB, Eurostat

With access to the financial markets closed after the outbreak of the crisis, a period of competition for household deposits through interest rates began. Before the crisis, in 2008, Slovenian banks obtained a third of their funding from foreign banks. The figure was actually more than a half at the banks under majority foreign ownership. The crisis made this funding unobtainable, and it plummeted by more than a half, or EUR 8.5 billion, by 2012. The banks thus became very active in obtaining domestic primary funding. The LTD ratio for the non-banking sector declined by just over 30 percentage points during this period, and by a third at the banks under majority foreign ownership. The decline was primarily the result of a contraction in financing of the domestic economy (8%), while deposits increased (14%). The increase in deposits was most pronounced in household deposits, at the banks under majority foreign ownership. The ratio had passed 160% in 2008 before the crisis, and was indicative of an unsustainable bank funding model.

Figure 2.2: Distribution of interest rates on new household deposits with a maturity of more than 1 year, in percentages (left), and increase in household deposits, in EUR million (right), by bank group



Sources: Bank of Slovenia, ECB

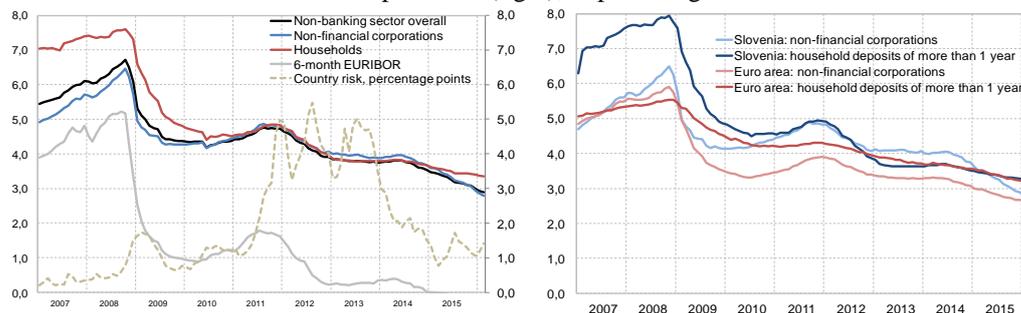
**Deposits were switched from the large domestic banks to the banks under majority foreign ownership in the 2010 to 2013 period in particular, more as a reflection of confidence or the lack thereof than as a reflection of movements in interest rates.** The lack of confidence in the large domestic banks was partly attributable to the issue of the transfer of non-performing loans to the bad bank in late 2013. The banks under majority foreign ownership had lower interest rates on household deposits throughout the entire period. Since 2008 the banks under majority foreign ownership have had to undergo a rapid deleveraging process, and as representatives of their parent foreign banks have enjoyed greater confidence and a sense of stability, thereby attracting local deposits. This process encouraged fierce competition to attract primary funding through interest rates between the large domestic banks and small domestic banks. Before September 2013, when the process of the orderly wind-down of Factor banka and Probanka began, the aforementioned two banks provided additional competition for household deposits through exceptionally high interest rates. Between 2010 and September 2013 the average interest rate at Factor banka and Probanka on household deposits with a maturity of more than 1 year was 4.2%, compared with around 3.8% at other banks. The high interest rates only produced minor changes in market share, as confidence played a key role in the choice of bank. After the orderly wind-down interest rates at the small domestic banks began falling rapidly.

**During the fierce competition for deposits through rises in interest rates, in March 2012 the Bank of Slovenia introduced an instrument to limit the rises in deposit rates in order to reduce income risk.** In addition to the previous sharp fall in market interest rates, the decline in country risk, the wind-down of Factor banka and Probanka, the anticipated recovery of the domestic banking system, and the instrument introduced by the Bank of Slovenia, the high liability interest rates were also under pressure from the growing contraction in the banks' turnover on the asset/lending side. The high liability interest rates in 2012 and even more so in 2013 seriously threatened the net interest margin, and a fall in liability interest rates was unavoidable in 2013. Between that time and early 2016 liability interest rates fell, and stabilised at 0.7% on long-term household deposits, and at 0.3% on deposits by the non-banking sector (irrespective of maturity). In the current situation, where they will bottom out and how long liability interest rates will be at such a low level is likely to depend more on developments in the euro area than on the state of the domestic economy.

## 2.2 Developments and periods of competition between banks over asset interest rates

**The fall in asset interest rates was more gradual, and only became more pronounced in mid-2014, around a year and a half later than liability interest rates.** The first wave of reductions came after the crisis in 2012, partly as a result of a rise in 2011. The fall in asset interest rates was attributable to a large decline in country risk in 2014 and a decline in bank funding costs, partly as a result of lower liability interest rates. Funding costs have been declining for banks since 2012, and more markedly since 2013, given the fall in market interest rates and later in liability interest rates.

Figure 2.3: Interest rates on the stock of loans to the non-banking sector, households and non-financial corporations and the EURIBOR (left), and interest rates on the stock of household loans with a maturity of more than 1 year and total loans to non-financial corporations (right), in percentages



Note: The country risk premium is measured as the spread between the yields on long-term Slovenian and German government bonds.

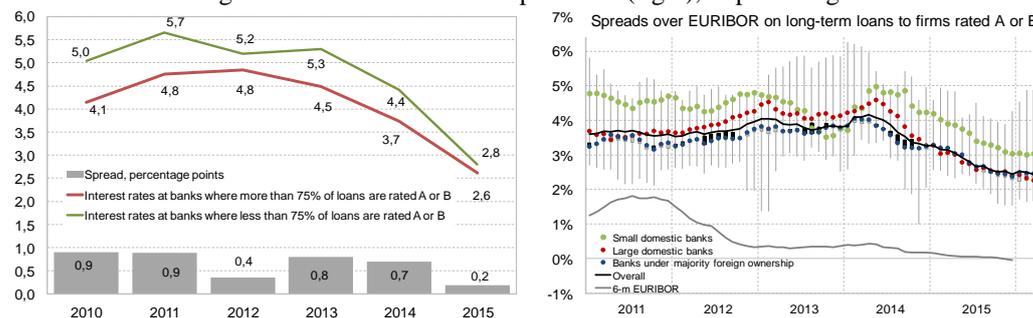
Sources: Bank of Slovenia, ECB

**The country risk premium as measured by the spread between the yields on long-term Slovenian and German government bonds was particularly high in 2012, and even in 2013, when it began to fall rapidly towards the end of the year.** At the end of 2012 the country risk premium for Slovenia stood at a high 4 percentage points, which reflected the international lack of confidence in the Slovenian economy. The premium remained at high levels between 2011 and 2014, when it fell sharply after the recovery of the banking system and as a result of other domestic and international factors. The premium had been below 0.5 percentage points before the crisis, primarily as a result of convergence, but this can no longer be expected.

**The later fall in asset interest rates relative to liability interest rates was also seen across the euro area, albeit only on corporate loans,** and not on household loans, where interest rates have been falling gently since 2011, when the fall in market interest rates began. The reason for the later fall in asset interest rates, which entail income for banks, than in liability interest rates, which entail expenses, is that this is in the banks' interest, as it delays the decline in the interest margin. This is also allowed to them due to different average maturities of interest-bearing assets and liabilities in connection with the non-banking sector.

**Corporate sector**

Figure 2.4: Interest rates on higher-rated corporate loans with regard to portfolio quality (left), and concentration of spreads over the EURIBOR on long-term loans to higher-rated non-financial corporations (right), in percentages



Note: SID banka is not included in the calculation. Banks are divided into two groups with regard to the proportion of classified claims against non-financial corporations rated A or B. The first group includes banks where the proportion of classified claims against such non-financial corporations is more than 75%, while in the second group the figure is lower. Similar trends are evident when the banks are divided into groups with regard to an above- or below-average proportion of classified claims against non-financial corporations rated A or B, instead of the arbitrarily determined figure of 75%.

Source: Bank of Slovenia

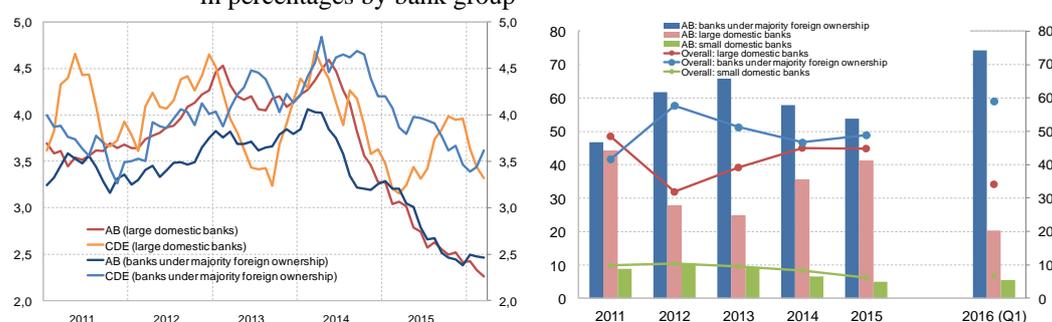
**The rapid fall in liability interest rates could have caused a fear of losing clients at the banks.** The banks with a higher-quality portfolio could afford to begin reducing asset interest rates earlier, thereby retaining clients with better credit ratings. At the banks that focused on clients with better credit ratings – those where more than 75% of their classified claims against non-financial

corporations were rated A or B – in 2013 interest rates for higher-rated firms were 1.1 percentage points lower than at other banks (excluding SID banka, owing to its specific actions on the market). This spread had narrowed to 0.4 percentage points by 2014, which was attributable to stronger competition from other banks in the aforementioned market, particularly those that had been through the process of resolution of the banking portfolio.

**Long-term corporate loans to higher-rated firms**

**In 2014 and part of 2015 the large domestic banks increased their market shares in the segment of new long-term corporate loans to higher-rated firms, although not necessarily with the lowest interest rates.** Until 2015, interest rates for firms rated A or B were higher at the large domestic banks than at the banks under majority foreign ownership. In the first half of 2014, when rates were at their highest in all the years since 2011, these interest rates began to fall sharply, and by the end of the year were approaching those offered to their clients by the banks under majority foreign ownership. In 2013 just 38% of the new long-term corporate loans at the large domestic banks were approved for clients rated A or B (compared with more than 70% in 2011), while the figure at the banks under majority foreign ownership was 83%. Over the next two years, after the recovery of certain banks and the transfer of certain loans to the BAMC, the corresponding figure at the large domestic banks increased to 70%, while at the banks under majority foreign ownership the figure declined by 10 percentage points in 2014 before increasing again to more than 80% the following year. The increase in market share in the aforementioned loan segment at the large domestic banks in 2014 and 2015 was not just the result of having the lowest interest rates, as these were comparable to those at the banks under majority foreign ownership. It is true that the large domestic banks recorded the largest fall in interest rates during that period. Certain banks have a very high negative correlation between the change in market share for new loans and the change in interest rates in the segment in question. The large domestic banks are particularly notable in this respect, although they are not notable for the lowest interest rates.

Figure 2.5: Spreads over EURIBOR on new long-term corporate loans for firms rated A or B, and C, D or E (left), and market shares for new loans in individual years for all firms and only for firms rated A or B, and for the same types of loan (right), in percentages by bank group



Note: SID banka is not included in the calculation. Loan restructuring, particularly before 2015, had an impact on developments in interest rates for clients with lower credit ratings at the large domestic banks, which generally have lower interest rates despite lower ratings.

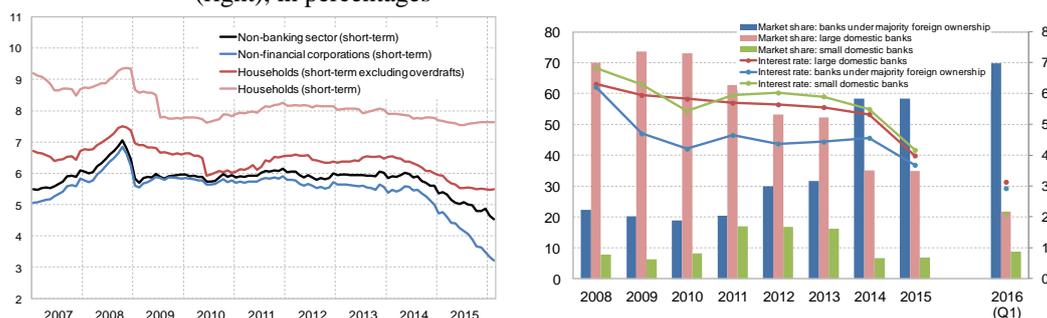
Source: Bank of Slovenia

**The fall in asset interest rates is resulting in a decline in the interest rate spread and thus in the interest margin in the corporate sector, particularly at the large domestic banks, where the fall was largest and there is greater exposure to income risk.** Interest rates in the segment of better-performing firms began falling at the banks under majority foreign ownership, followed by the large domestic banks. The banks thereby aimed to retain the firms with better prospects, instead of these firms searching for alternative sources of financing. To a greater extent than the other bank groups the large domestic banks also adjusted their asset interest rates because of the favourable interest income from the securities that they obtained from the BAMC during the transfer of non-performing claims. Before 2014 corporate loans in Slovenia were significantly more expensive than in the euro area overall, but after the reduction they are more comparable to the euro area average.

*Short-term corporate loans*

The lowest interest rates on short-term corporate loans are at the banks under majority foreign ownership, which recorded the largest increases in market share in this segment between 2012 and 2014 (their market share remained unchanged in 2015 at 58%), although they did not significantly change their interest rates, except in 2015, when they reduced them together with the other two bank groups. The banks under majority foreign ownership have always had the lowest interest rates, and in terms of market share have been the most important in this segment since 2014. An examination of short-term interest rates on corporate loans at individual banks reveals that no bank has stood out with the lowest interest rates for any length of time, as was the case for liability interest rates.

Figure 2.6: Asset interest rates on stocks for various sectors in terms of maturity (left), and market shares and interest rates on new short-term corporate loans by bank group (right), in percentages

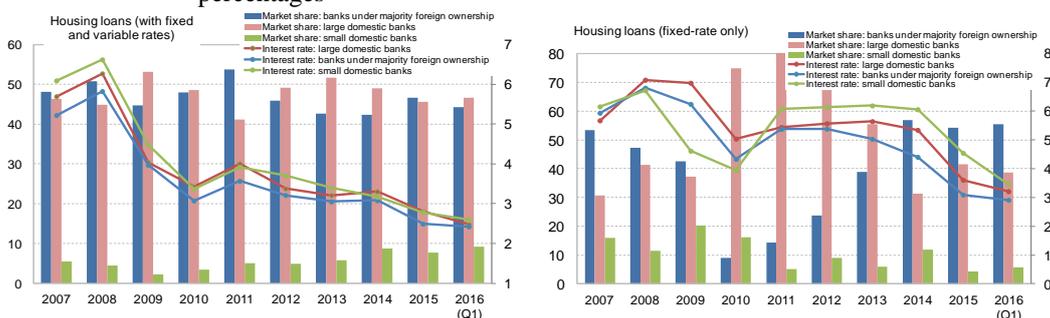


Source: Bank of Slovenia

*Household sector*

Slovenia belongs to a group of southern European countries (alongside Italy, Spain and Portugal) where loans with a variable interest are prevalent. The proportion of new loans to the non-banking sector accounted for by loans whose interest rate is modified within one year and that are therefore classified as variable-rate loans increased from 63% in 2013 to 80% in 2015. The trends vary greatly across individual types of loan. While the proportion of variable-rate corporate loans is increasing, the proportion of housing loans with a fixed interest rate increased sharply in 2015.

Figure 2.7: Shares and interest rates for new housing loans irrespective of type of remuneration (left), and for fixed-rate loans only (right) by bank group, in percentages

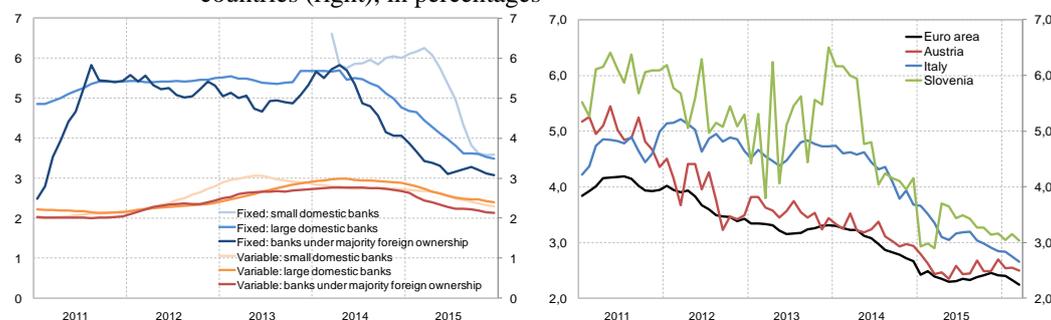


Source: Bank of Slovenia

As in other countries where variable-rate loans are prevalent, it is evident in Slovenia that in the housing loan market in particular there has been a conversion of variable-rate loans into new fixed-rate loans. After falling, fixed interest rates on housing loans have converged very closely on variable interest rates, while at the same time with fixed interest rates borrowers are no longer exposed to the risk of rising interest rates. The estimated rate of repayment of housing loans

increased from 10.9% to 13% in 2015.<sup>5</sup> In Italy the rate increased from 7% to 13%. The higher figure in Slovenia, even in previous years, is also the result of the conversion of Swiss franc loans into euro loans. Loan conversion is primarily evident at four banks, where there has been an increase in new housing loans with a fixed rate and also a change in the stock of such loans.

Figure 2.8: Spreads on fixed-rate and variable-rate housing loans by bank group (left), and interest rates fixed for more than 10 years in Slovenia and certain other euro area countries (right), in percentages



Source: Bank of Slovenia

**Certain banks under majority foreign ownership in particular have had very low fixed interest rates on housing loans, through which they could give rise to excessive competition on the fixed-rate housing loan market.** These banks are also competing fiercely on the variable-rate housing loan market. The period of low interest rates can be expected to last some time longer, although the banks must be careful that in their desire to increase their retail business, which is seen as safer and more stable, they do not expose themselves to excessive risk of a rise in market interest rates, and thus to income risk. Banks across the euro area are also opting to offer very low fixed interest rates on housing loans. Average euro area interest rates on housing loans fixed for more than 10 years were still 0.8 percentage points lower than in Slovenia in March 2016. This could indicate that Slovenian banks would be comparatively better protected in a period of rising interest rates, albeit only over a short time horizon. With this change in their business models, the banks that are increasing the proportion of housing loans with fixed interest rates must also change their assessment of interest rate risk, adjusting their long-term capital plans accordingly.

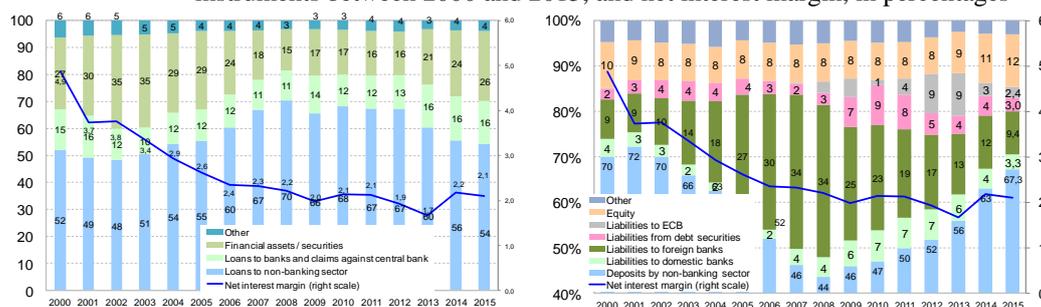
<sup>5</sup> The repayment rate is measured by the change in new loans and the change in stock over the observation period. The change is calculated in ratio to the stock at the beginning of the observation period.

### 3 Changes in balance sheet and income statement structure as a result of the low interest rate environment

#### 3.1 Changes in the structure of bank funding and investments

The banks' asset and liability structures reflect their behaviour over various periods: the period of convergence with the EU, the period of high borrowing in the rest of the world and rapid growth in lending, the crisis period, and the period after bank recovery and the period of the low interest rate environment. Until the end of the loan expansion (2008), loans increased on bank balance sheets, while after the bank recovery in 2013 and 2014 the proportion of securities in the bank portfolio increased. In parallel with the contraction in loans, there was a sharp decline in the proportion of loans to the non-banking sector, which in early 2016 was comparable to the figure before the period of several years of borrowing from banks in the rest of the world. There have also been extensive changes in the structure of the banks' liabilities: in the wake of the increase in deposits by the non-banking sector, which at the end of 2015 were just over EUR 4 billion higher than at the end of 2008, and the several years of continual debt repayment on the wholesale markets after 2008 and the resulting contraction in bank balance sheets, the proportion of bank funding accounted for by deposits by the non-banking sector has increased sharply in recent years to more than two-thirds. The structure of bank funding in the Slovenian banking system in early 2016 was comparable to that of just over a decade earlier.

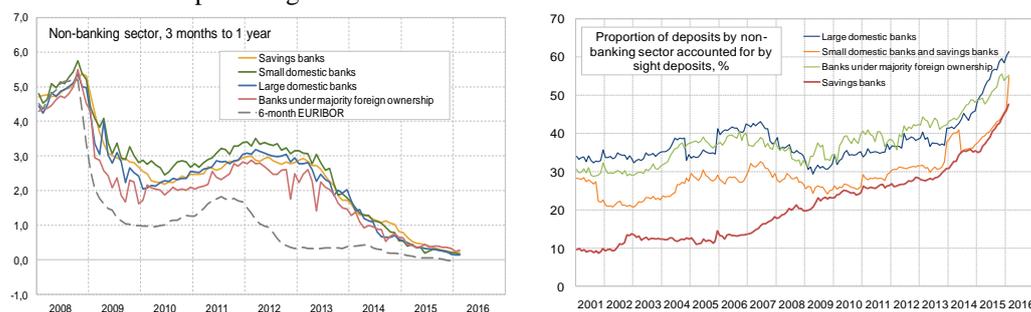
Figure 3.1: Asset structure (left) and liability structure (right) in terms of principal instruments between 2000 and 2015, and net interest margin, in percentages



Source: Bank of Slovenia

The most obvious consequence of the low interest rate environment for balance sheet structure is the shortening of the average maturity of deposits by the non-banking sector, households in particular. Deposits by the non-banking sector have displayed a trend of increase over several years, but the proportion of sight deposits is increasing sharply, and the additional favourable income effects are gradually diminishing. After declining temporarily in 2012 and 2013, deposits in the banking system have increased moderately since 2014, and growth has continued in 2016. However, simultaneous with the fall in interest rates there has also been an intensive change in the maturity breakdown of deposits. The proportion of sight deposits surpassed a half in 2015, and approached 60% in the first quarter of this year. The increase in the *de facto* interest-free portion of bank funding had a positive impact on the net interest margin, and alongside the fall in interest rate was a major factor in the decline in the banks' interest expenses.

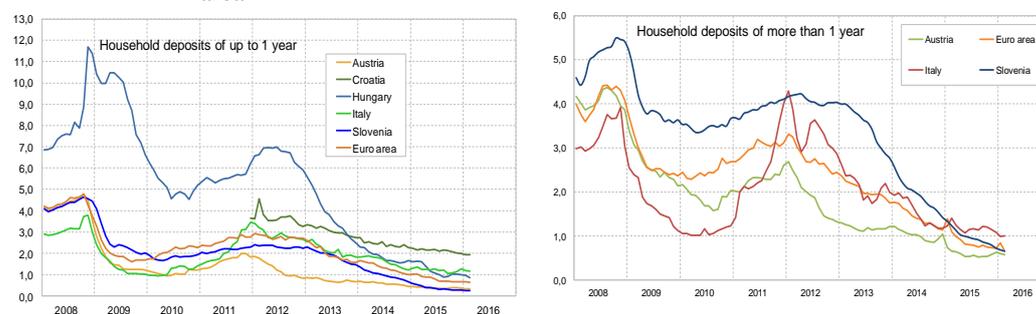
Figure 3.2: Interest rates on deposits by the non-banking sector on new deposits with a maturity of 3 months to 1 year (left), and proportion of total deposits by the non-banking sector accounted for by sight deposits by bank group (right), in percentages



Source: Bank of Slovenia

**Despite the sharp decline in returns on bank deposits, there has not been a discernible switch to alternative forms of investment.** Households' net inflows into mutual funds in 2015 were less than a quarter of the net increase in household deposits. Despite the financial crisis after 2008, the loss of confidence brought by the Cyprus crisis, the recovery of a large part of the banking system and the process of falling liability interest rates, deposits by the non-banking sector declined in the banking system in 2012 and 2013, as did household deposits. Net inflows into mutual funds strengthened last year compared with the previous year, but only amounted to a quarter of the increase in deposits. Household deposits recorded very solid growth at the end of last year and early in this year, while the net inflow into mutual funds was modest. In a situation of low interest rates on deposits and a high proportion of sight deposits, households are not opting for any increase in investments in mutual funds.

Figure 3.3: Interest rates on new household deposits with a maturity of up to 1 year (left) and more than 1 year (right) in Slovenia, certain neighbouring countries and the euro area



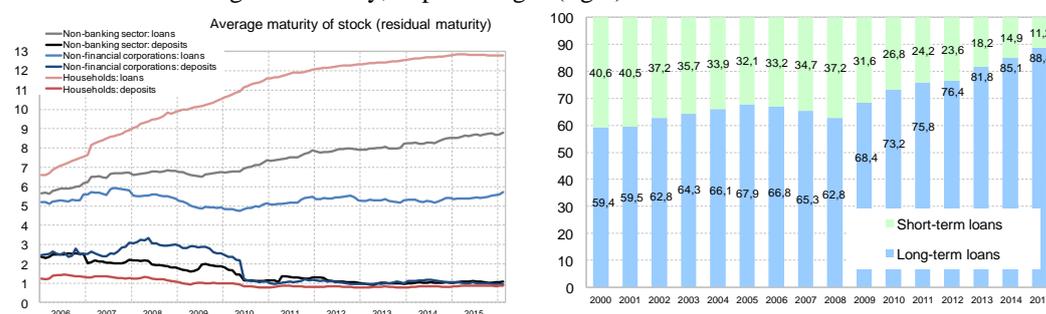
Note: The figures for Croatia and Hungary for deposits of more than 1 year are not available in the database.  
Source: ECB (SDW)

**Of the neighbouring countries, interest rates on deposits are primarily comparable to those in Austria, which is also a member of the euro area.** Interest rates on new household deposits in the maturity segment of up to 1 year stood at 0.25% in February 2016, comparable to those in Austria (0.33%) and lower than in other neighbouring countries. Croatia is notable for higher interest rates, although it is not a country where Slovenian households invested their savings in the past; it is necessary to take account of currency risk, as it is not a member of the euro area. In the long-term segment the level of interest rates at Slovenian banks is only slightly higher than at banks in Austria, for which reason there is no incentive for any switching of deposits to any of the neighbouring countries.

**On the investment side the fall in interest rates was reflected primarily in a lengthening of the average maturity of investments, corporate loans in particular.** The contraction in corporate lending was significantly sharper in the case of short-term loans. The proportion of new loans that they account for declined from 80% in 2008 to just 40% in 2015. The proportion of the stock declined from 40% to 10% over this period. The average maturity of all non-banking sector interest-bearing assets reached 8.8 years, and has maintained a trend of lengthening, particularly in the non-financial corporations sector and, to a lesser extent, in the household sector. The average

maturity of non-banking sector interest-bearing liabilities is around one year, primarily as a result of the prevalence of sight liabilities.

Figure 3.4: Average maturity of assets and liabilities in terms of residual maturity by sector, in years (left), and breakdown of loans to the non-banking sector in terms of original maturity, in percentages (right)



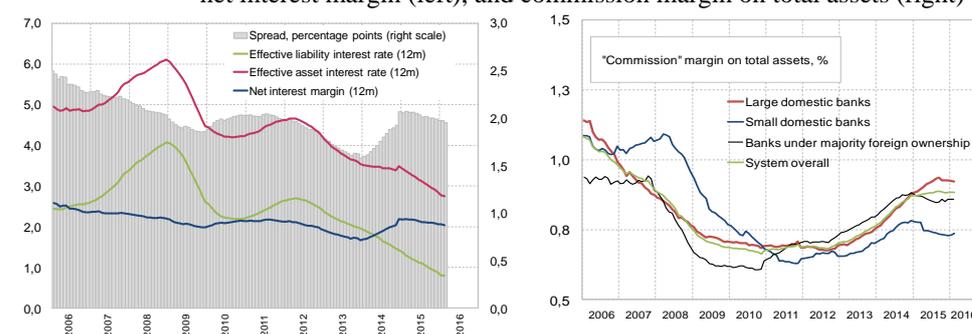
Source: Bank of Slovenia

**As sight deposits increase, the lengthening of the average maturity of assets is increasing the potential liquidity risk and interest rate risk at banks in Slovenia.** In the wake of the increase in the stock and proportion of sight deposits in bank funding, the banks have to increase secondary liquidity<sup>6</sup> accordingly.

### 3.2 Impact of interest rates on interest income and expenses, and developments in the net interest margin

**Interest income and interest expenses in the banking system are declining as a result of the contraction in balance sheets and also the low interest rate environment.** The negative lending dynamic, the fall in interest rates on deposits and, recently, on loans and securities, the lengthening of the average maturity of investments, and the increase in the proportion of sight deposits by the non-banking sector are having a profound impact on developments in the banks' interest income and interest expenses. Taking account of the cumulative figures for interest income and expenses within the year, the banks' net interest income has again been declining in year-on-year terms since the beginning of 2015; the decline stood at 10% in March 2016, larger than the decline in interest-bearing assets.

Figure 3.5: Effective interest rates on the banks' interest-bearing assets and liabilities and the net interest margin (left), and commission margin on total assets (right)



Note: The asset and liability interest rates in the left figure are calculated as the ratio of the 12-monthly flow of total interest income/expenses to average interest-bearing assets/liabilities over the same period. The net interest margin is calculated at each point for the last 12 months as a ratio to interest-bearing assets.

Source: Bank of Slovenia

**Should the banks' net interest income continue declining, it could be expected that there would be a continuation of combined measures by means of which the banks will try to compensate for the loss of this income,** with a focus on increasing the proportion of gross income accounted for by net non-interest income and further reducing operating costs. The figures for 2015 reveal that the proportion of gross income accounted for by non-interest income was slightly above-average at the large domestic banks. According to the latest figures, the large

<sup>6</sup> See the section of liquidity and funding in the main section of the FSR.

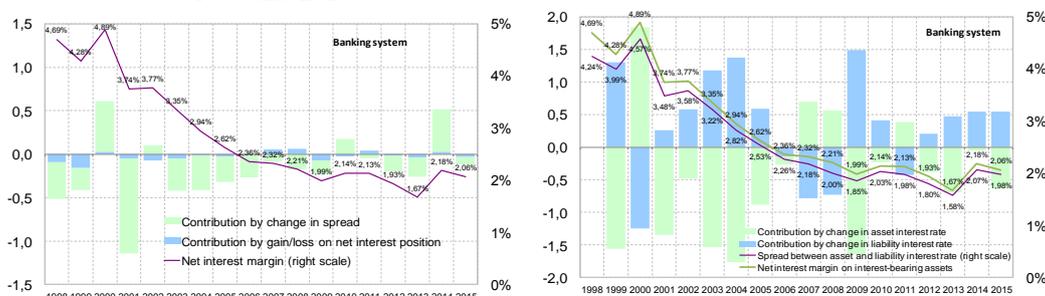
domestic banks are operating with a higher non-interest margin (1.22%)<sup>7</sup> than the banking system overall (0.98%), while the figure is lowest at the banks under majority foreign ownership, at 0.66%. The vast majority of non-interest income at all the bank groups consists of fees and commission. Net non-interest income was still down at the end of last year, because the banks were still reducing their credit activity. The commission component of the non-interest margin<sup>8</sup> has increased in recent years.

**Developments in the net interest margin and its principal components according to the DuPont method**

The net interest margin can be decomposed into principal components (the DuPont method) to explain its changes over time. Below it is decomposed into interest rate spread and the gain/loss on the net interest position.<sup>9</sup>

**The fall in asset interest rates<sup>10</sup> across the banking system in 2015 outpaced the fall in liability interest rates, and was a factor in the as-yet minimal decline in the interest rate spread and net interest margin.** Figure 3.6a illustrates the developments in net interest margin and the contribution of the two components, i.e. the yield/cost spread (YCS) and the gain/loss on net interest position (GLNIP). It is primarily by changing the interest rate spread that banks affect changes in the margin. For example, in 2014 the majority of the increase in the margin was realised by the change of almost 0.5 percentage points in the YCS to 2.2%, while the impact of the GLNIP was minimal. It was a similar but opposite case in 2015, with the changes in a downward direction. By contrast, changes in the YCS in 2015 have already been reflected in a decline in return on the investment side of bank balance sheets. In contrast to the previous year, the fall in effective asset interest rates outpaced the fall in liability interest rates last year: the first fell by 0.63 percentage points, the second by 0.54 percentage points. In 2015 the net interest margin and the YCS both declined, and the directions of the changes in asset and liability interest rates were comparable at individual bank groups.

Figure 3.6: Developments in net interest margin and contributions made by changes in yield/cost spread and gain/loss on net interest position (left), and developments in interest rate spread and net interest margin, and contributions to changes in interest rate spread made by changes in asset and liability interest rates (right), in 1998 and 2015



Note: The calculation takes account of 12-monthly moving sums of interest income/expenses and interest-bearing assets/liabilities, and the net interest margin is calculated at each point for the period of the preceding 12 months. The change in liability interest rates is multiplied by -1, as a rise in liability interest rates narrows the spread, and a fall widens the spread.

Source: Bank of Slovenia

<sup>7</sup> In previous years, most notably in 2012 and 2013, certain one-off developments (e.g. the early redemption of hybrid debt instruments in 2012 and the booking of finance expenses in the non-interest section of the income statement in 2013) led to significant fluctuation in the non-interest margin and the proportion of gross income accounted for by non-interest income at certain domestic banks.

<sup>8</sup> This component is an illustration of commission in the non-interest margin, which is significantly more stable than other components of non-interest income, as it does not reflect certain transactions or developments where extraordinary non-interest income or expenses had an impact on the non-interest margin at certain banks and banking groups in previous years.

<sup>9</sup> For more, see the Fed paper entitled *Net Interest Margin Performance* (Federal Reserve Bank of Atlanta, 2012), which illustrates the scheme of the decomposition of net interest margin into its principal components and their contributions to changes therein. The following categories were defined to this end: a) YEA = yield on earning assets, b) CIBL = cost of interest-bearing liabilities, c) YCS = yield/cost spread, d) NIP = net interest position (ratio of interest-bearing assets minus interest-bearing liabilities to interest-bearing assets), and e) GLNIP = gain/loss on net interest position = NIP × CIBL. The categories are calculated at each point for the preceding 12 months (see note to Figure 3.6).

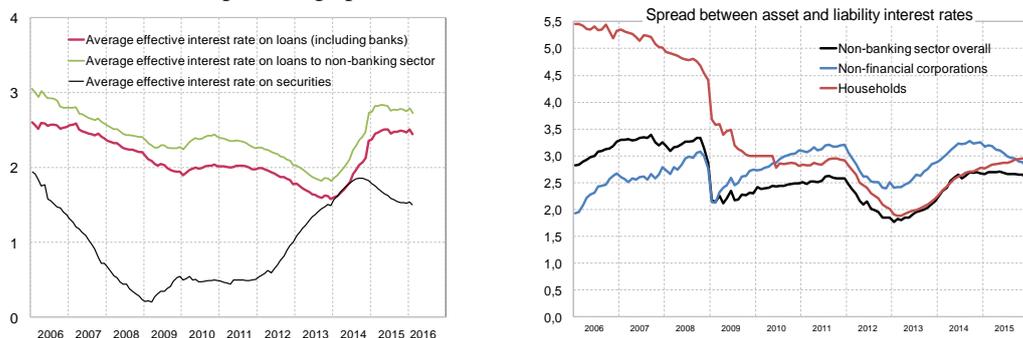
<sup>10</sup> The categories are as defined in note 3: the ratio of interest income to interest-bearing assets, the ratio of interest expenses to interest-bearing liabilities and the effective spread between them.

The majority of banks recorded a decline in the net interest margin and the interest rate spread in 2015, although the net interest margin at the banks under majority foreign ownership is slightly lower than the system average. Similarly to the banking system overall, the decline in the margin and in the YCS are the result of the fall in asset interest rates. At the large domestic banks the net interest margin stood at 2.17% last year, while asset interest rates declined by 0.72 percentage points (and liability interest rates by 0.59 percentage points); similar behaviour was seen at the banks under majority foreign ownership and the savings banks. At the small domestic banks including the savings banks the fall in liability interest rates again outpaced the fall in asset interest rates. The banks under majority foreign ownership had the lowest margin last year, at 1.92%. They have operated with the lowest margin of all the bank groups for the majority of the last 15 years.

### *The challenge to banks from the low interest rate environment*

The current developments in net interest income will gradually reduce the banks' manoeuvring room in attaining their desired returns. The fall in interest rates was increasingly transmitted to the asset side last year, and by the end of the year the fall in effective asset interest rates had outpaced the fall in comparable interest rates on the liability side.<sup>11</sup> In the first quarter of 2016 effective interest rates fell to 3.3% on loans to the non-banking sector and to just 1.9% on debt securities, down from 4.2% and 2.8% respectively in 2014. The effective interest rate on deposits by the non-banking sector fell to 0.6% as a result of the fall in interest rates and the sharp increase in the proportion of sight deposits, or to just 0.35% when calculated for the first quarter of 2016 alone.

Figure 3.7: Spreads between effective interest rates (effective return) for loans to the non-banking sector and debt securities, and average effective bank funding costs, i.e. ratio of interest expenses to interest-bearing liabilities (left), and interest rate spread between average asset and liability interest rates in various sectors (right), in percentage points



Note: The figures are calculated at each point for the period of the preceding 12 months.

Source: Bank of Slovenia

The interest rate spread on loans to and deposits by the non-banking sector has been maintained at almost an entirely comparable level for a longer period now. A similar indication comes from the maintenance of the relative spread between the realised interest rate on loans and the interest rate representing effective funding costs on interest-bearing liabilities. In addition, the falling returns on the financial markets in the LIRE<sup>12</sup> are gradually putting more pressure on the banks' interest income.

The interest rate spread for corporates has been narrowing since mid-2014, when there was a relatively sharp fall in asset interest rates. A year and a half earlier, when liability interest rates had already fallen, interest income in the corporate segment was increasing. Across the euro area the fall in interest rates on corporate loans was more gradual, which allowed corporate loans in Slovenia to become more comparable in price terms to the euro area average. It can be expected that the interest rate spread measured as the spread between corporate lending and deposit rates will settle at the attained level of 2.8 percentage points, interest rates on corporate deposits having virtually approached zero, while lending rates have already equalised with the rates across the euro area.

<sup>11</sup> See also decomposition of net interest margin.

<sup>12</sup> Low interest rate environment.

**In contrast to the corporate segment, the interest rate spread in the household segment has not narrowed since 2014, but has actually widened** (from 2.6 to 3 percentage points). This is the result of a smaller fall in asset interest rates, which is partly attributable to the very long maturities of housing loans, while the fall in liability interest rates was very sharp for households. The proportion of sight deposits, which have a minimal return, is also increasing. From the simplified calculation of the interest rate spread it follows that retail banking has recently been more profitable than business banking.

The banks have diminishing space for further cuts in interest expenses, either in any additional reduction in liability interest rates, or an increase in sight deposits. Given the same shift in maturities and the same level of interest rates in 2016 as in 2015, there would be minimal impact on the banking system's income statement.<sup>13</sup>

**Given the continuation of the trends in the banking system and the anticipated persistence of the low interest rate environment, the banks are gradually facing increasing downward pressures on margins in the future.** These are, on the investment side, a) the contraction in credit activity, b) the fall in interest rates on loans and securities, and c) the maturing of the portfolio of debt securities, which in the coming years the banks will have to replace with lower-yielding securities (more than half of all securities by the end of 2017), and, on the funding side, d) the sharp fall already seen in liability interest rates, and the increase in sight deposits, which is limiting further reductions in interest expenses.

**The banks' interest income will decline further, although banks in Slovenia are forecasting that the net interest margin in 2016 and 2017 will be comparable to last year.** In their projections on the basis of survey data,<sup>14</sup> the banks are still forecasting a contraction in total assets over the next two years (by 4.0% in 2016 and by 5.1% in 2017), and further declines in lending and net interest income (by 5.5% and 7.7% respectively) and in non-interest income (by 4.1% and 4.6% respectively). The net interest margin is therefore expected to be maintained at comparable levels, i.e. around 2%, while the non-interest margin is expected to exceed 1%. In light of the developments and trends in 2015 and the first quarter of 2016, which suggest a gradual but sustained decline in the net interest margin for banks, these expectations can be assessed as relatively optimistic.

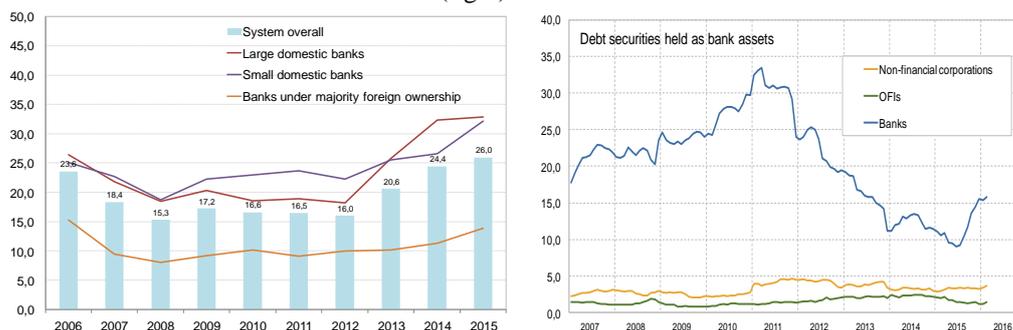
#### *Maturing of the banks' securities in 2016 and 2017*

**As their higher-yielding securities mature, the banks will be exposed to the potential loss of a part of their interest income.** There is a likelihood that they could opt to increase their investments in higher-risk bank bonds and corporate bonds, or in bonds of high-risk countries outside the euro area, which could increase their credit risk. For now the banks' exposure to corporate bonds is relatively low, although the proportion of investments in bank securities increased last year (Figure 3.8b).

<sup>13</sup> The basic calculation shows that in the event of a switch from short-term and long-term deposits to sight deposits of equal intensity to that seen in 2015, the effects this year would be minimal. The proportion of sight deposits increased by 10 percentage points in 2015, of which 8 percentage points was at the expense of short-term deposits and 2 percentage points was at the expense of long-term deposits. Under the assumption that the remuneration of sight deposits is zero, the interest rate on short-term deposits is 0.25% and the interest rate on long-term deposits is slightly above 1%, and that the stock of deposits in the Slovenian banking system is EUR 25 billion, a comparable switch in 2016 would result in a decline in interest expenses of just EUR 11 million.

<sup>14</sup> Spring bank survey, 2016.

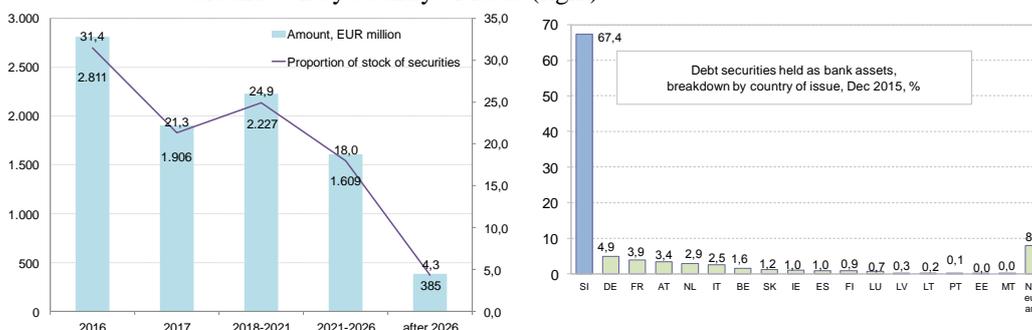
Figure 3.8: Proportion of total assets accounted for by securities by bank group (left), and proportions of banks' holdings of debt securities accounted for by corporate bonds and bank bonds (right)



Source: ECB (SDW)

The projected pace of the maturing of debt securities will reduce the banks' interest income in the years ahead. Yields to maturity have already declined sharply on account of the rise in securities prices. More than half of the banks' debt securities will mature in 2016 and 2017.

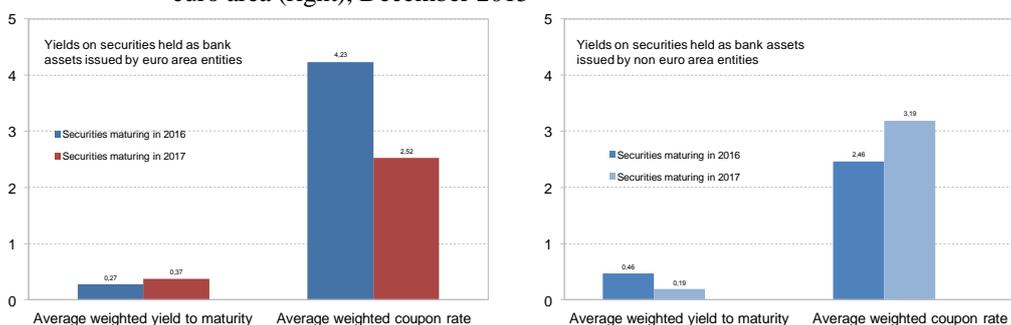
Figure 3.9: Maturing of debt securities held as assets by banks in coming years (left), and breakdown by country of issue (right)



Sources: Bank of Slovenia, ECB

Of the total of EUR 8.9 billion<sup>15</sup> (December 2015), EUR 2.8 billion will mature by the end of 2016 and EUR 1.9 billion by the end of 2017. The banks will have to replace the relatively high coupon rates on securities with significantly lower rates, which will act to reduce their income.

Figure 3.10: Yields on debt securities held as assets by Slovenian banks and maturing in 2016 and 2017 for securities issued by entities in the euro area (left) and outside the euro area (right), December 2015



Note: The calculation of the average (weighted) yield for an individual bucket of residual maturity does not necessarily reflect all the data; it may reflect only that data captured in the SHSS database. Consequently the yield calculated in each bucket does not reflect the entire stock of debt securities and is deficient.

Sources: Bank of Slovenia, ECB

<sup>15</sup> The vast majority (92%) are from euro area countries (Slovenia with 67%, followed by Germany with 5%, France and Austria), while the majority of the remainder is accounted for by other EU countries (UK, Poland, etc.).

## 4 Econometric analysis of the determinants of net interest margin

### Abstract

*The level of interest rate is one of the most significant determinants of net interest margin (NIM). Studies show that the effect of interest rates and the shape of the yield curve on the developments in NIM differs in situations when interest rates are low compared with situations when interest rates are high. These findings are also confirmed by this analysis: during a period of "normal interest rates", a change in the interest rate has only a small (contrary to the majority of studies) negative effect on NIM, a fall of 1 percentage point in interest rates entailing an increase of 0.03 percentage points in NIM. During a period of low interest rates, a fall of 1 percentage point in the money-market interest rate causes a decline of 0.3 percentage points in NIM. This finding poses a bad outlook for bank profitability, as the banks will have to operate for some time in a low interest rate environment.*

*Other macroeconomic factors also have a very significant role in the generation of NIM, and in a situation of low interest rates economic growth becomes a particularly significant factor. Among bank-specific determinants factors that display a relatively stable effect on NIM are the proportion of deposit funding, which correlates positively with NIM, and the risk appetite, which correlates negatively.*

### 1. Introduction

Several studies have reached conclusions that prevalence of low interest rates (particularly over the long term) has a negative impact on the net interest margin and on bank profitability. Recent research confirms that the effect of interest rates and the yield curve on the capacity to generate interest margin is significantly more intensive in a period of low interest rates than the effect in a situation when interest rates are higher. This analysis follows the approach (with data for several countries) used by Claessens, Coleman and Donnelly (2016). Analysis of the determinants of NIM is first conducted on data for the whole period, before the sample is then divided into sub-samples that represent a period of "normal" interest rates and a period of low interest rates (defined as 3-month money-market rates of less than 1%). It is thus possible to observe how the effects of factors in NIM change between the two periods. Although past developments cannot serve to predict future developments, the findings of this analysis are useful in the interpretation of the capacity to generate NIM in a situation of low interest rates, which in light of the forward guidance and the monetary policy measures employed<sup>16</sup> is likely to prevail for some time yet.

### 2. Data and methodology used

The literature divides the determinants of net interest margin (NIM) into three main categories, the first of which is **macroeconomic factors** (GDPg, IR, INFL), and the second of which is factors describing the **attributes of the banking sector** (HHI). At a given time  $t$ , both groups of factors are the same for all banks operating in a specific environment (e.g. the country). The third category comprises the **bank-specific indicators** (NIM, CREDIT\_GROWTH, EQUITY\_LIABILITIES, DEPOSITS\_LIABILITIES, SIZE, LIQUIDITY, RISK and NPL).

Table 4.1: Variables and data used in the econometric analysis of determinants of net interest margin

	DESCRIPTION	SOURCE
NIM/NOM	ratio of net interest to average interest-bearing assets	Bank of Slovenia, own calculations
EA	dummy variable: equal to 1 during membership of the euro area, otherwise zero	
GDPg/rGDP	economic growth	SURS
IR/OM	3-month money-market interest rate	Eurostat
INFL	inflation rate	SURS
HHI	Herfindahl-Hirschman index	Bank of Slovenia, own calculations
CREDIT_GROWTH/KREDITNA RAST	difference between growth in loans at the bank and across the banking system	Bank of Slovenia, own calculations
EQUITY_LIABILITIES/KAPITAL_PASIVA	ratio of equity to average total liabilities	Bank of Slovenia, own calculations
DEPOSITS_LIABILITIES/DEPOZITI_PASIVA	ratio of deposits by the non-banking sector to average total liabilities	Bank of Slovenia, own calculations
SIZE/VELIKOST	logarithm of total total assets	Bank of Slovenia, own calculations

<sup>16</sup> For more, see the section on ECB measures and credit growth during the crisis.

LIQUIDITY/LIKVIDNOST	average liquid assets / average assets	Bank of Slovenia, own calculations
RISK/TVEGANJE	ratio of risk-weighted assets to total assets	Bank of Slovenia, own calculations
NPL	proportion of claims rated D or E	Bank of Slovenia, own calculations

Source: Bank of Slovenia

The determinants of NIM were analysed on a sample of data reported by banks on a monthly basis to the Bank of Slovenia. Given the large variability of the monthly data, quarterly data constructed as an average of the monthly data was used. The analysis relates to the period between the first quarter of 2002 and the final quarter of 2015. It includes 21 banks that operated in Slovenia for the majority of this period.

The following equation was assessed:  $NIM_{i,t} = NIM_{i,t-1} + X_{i,t}\beta' + \varepsilon_{i,t}$ , where *NIM* is the net interest margin of a particular bank *i* at a particular time *t*.  $X_{i,t}$  is the vector of explanatory variables in which all the variables in the three categories described above and presented in Table 4 are incorporated.  $NIM_{i,t-1}$  represents the lagged value of the dependent variable, which expresses the persistence in the movement of the variable over time.  $\varepsilon_{i,t}$  represents the error term for a particular bank in a particular quarter. In order to eliminate or reduce endogeneity, all variables used are lagged by one quarter. Because the estimates that contain a lagged explanatory variable are biased and inconsistent owing to the correlation between  $NIM_{i,t-1}$  and  $\varepsilon_{i,t}$ , in addition to the fixed effects model, use is made of the generalised method of moments (Arellano & Bover, 1995; Blundell & Bond, 1999), which also has a deficiency, since it is better suited to panels where the cross-section dimension is large compared with the time dimension, but in this case the relationship (at least when the entire sample is used) is the reverse. The results do not vary significantly between the two types of estimation.

Analysis was conducted for the whole sample and for the sub-periods distinguished by an interest rate of 1% between the normal interest rate environment and the low interest rate environment. The first sub-period covers the first quarter of 2002 to the second quarter of 2009, and the final quarter of 2010 to the first quarter of 2012; the other, significantly shorter sub-period comprises the remainder of the observation period. The analysis will become more reliable as the period of low interest rates lengthens and more data is included.

### 3. Results of analysis

The results are illustrated in Table 4.2. The first two columns with the results illustrate the equations for the whole sample, equations 3 and 4 the results for the period of normal interest rates, and equations 5 and 6 the results for the period of very low interest rates. In each case the first equation illustrates the results obtained using the fixed effects model, while the second equation illustrates the results obtained using the generalised method of moments (GMM).

The statistically significant lagged variable confirms the finding that the level of NIM depends on its values in the previous period.

The **macroeconomic factors** incorporated in the analysis include growth in GDP, inflation and the money-market interest rate. The macroeconomic variables largely show a statistically significant effect on NIM, which indicates the key importance of a stable macroeconomic environment to successful bank performance.

The **interest rate** is one of the key variables in this analysis, where the aim is to explain how its level affects banks' capacity to generate interest margin.

It is predicted that NIM will be lower in situations of low interest rates, as the yield curve is flatter at such times, and it is this very spread between long-term and short-term interest rates that allows banks to generate earnings in the transformation of maturities. Of course the final effect will be dependent on the proportions of funding and investment with variable and fixed interest rates and on the length of the repricing period on loans and deposits held by banks in their balance sheets. Banks and banking sectors with a large proportion of investments with variable interest rates are more sensitive to changes in market interest rates during situations of prevailing low interest rates. Slovenian banks belong to this category. Contrastingly, credit risk can be realised in the wake of a rise in interest rates, which leads to a decline in banks' interest income. Certain studies (Dietrich & Wanzenried, 2011; Van Ommeren, 2011) failed to identify major statistically significant effects of interest rates or the yield curve on profitability or on banks' net interest margin. By contrast, Borio, Gambacorta and Hofmann (2015) find that the level of interest rates and the yield curve have a more intensive effect on NIM when interest rates are low. Genay and Podjasek (2014) also

find that the low interest rate environment has negative effects on NIM in the US. Similar findings were reported by Busch and Memmel (2015) for Germany, and by Claessens, Coleman and Donnelly (2016) for a group of 44 countries.

In this analysis too the effect of the interest rate<sup>17</sup> on NIM was pronounced and statistically significant across five equations. The difference between the contributions to the change in NIM in a period of normal interest rates and in a period when interest rates have fallen below 1%<sup>18</sup> is pronounced. During a period of normal interest rates the interest rate has a negative effect on NIM: the higher the interest rate, the lower the NIM recorded by banks. With the changeover to a period of low interest rates, this relationship reverses: banks have the capacity to generate a higher NIM when the interest rate is higher. Also the size of the effect is not symmetric: during the normal period, a rise in the interest rate has only a small negative effect on NIM, a fall of 1 percentage point in interest rates entailing an increase of 0.03 percentage points in NIM. During a period of low interest rates, a fall of 1 percentage point in the money-market interest rate causes a decline of 0.3 percentage points in NIM.<sup>19</sup> With the fall in interest rates on the money market, banks approached the lower limit on the deposit side where a reduction in expenses is no longer practically feasible, with the exception of the expansion of sight deposits, which also has its own limit. Competitive pressures led to an intensive reduction in interest rates on the income side, which resulted in a decline in NIM.<sup>20</sup>

In light of the turning point when Slovenia became a member of the euro area, a dummy variable (**EA**) is included to express the use of the single currency since 2007.<sup>21</sup> After controlling for the effects of other variables, banks recorded a higher average NIM in the period when Slovenia had joined the euro.

**GDP growth** captures the effects of economic activity on bank performance. In a period of low or even negative growth, banks have more modest turnover, and in addition the quality of their assets deteriorates and the proportion of non-performing loans increases (Banerjee, Ahtik & Schipper, 2015). In line with expectations GDP growth has a positive and statistically significant effect on NIM in all the equations illustrated. The effect is more intense in a period of low interest rates, when growth is more modest than in a period of normal interest rates.

The impact of **inflation** on NIM could not be predicted. A high inflation rate is indicative of an unstable macroeconomic environment: in this case the effect on NIM is predicted to be negative. However, the past<sup>22</sup> inflation indexation of interest rates allowed banks to generate earnings, and furthermore the deflationary environment in which banks are currently operating does not represent a favourable macroeconomic environment. The results confirm the final finding: banks recorded a higher NIM when inflation rates were higher, while the result for the period of low interest rates marked by deflation is not statistically significant.

The most relevant of the variables indicating the **structure of the banking system** is the **concentration indicator**, the **HHI**. In line with the majority of authors (Rachdi, 2013; Dietrich & Wanzenried, 2011; Van Ommeren, 2011; Kok et al., 2015) who identified a positive effect on bank profitability from higher concentration, Slovenian banks also record a higher NIM when concentration in the banking sector is higher, which indicates either that a more concentrated market structure allows banks to generate higher earnings because of the limited level of competition, or that the more efficient banks gain higher market shares and consequently increase concentration in the sector. A positive effect on NIM from higher concentration is also identified in this analysis, albeit only over the whole period. The result is not significant in the period of normal interest rates, while in the period of low interest rates concentration can be identified as having a negative effect on the capacity to generate NIM, albeit only in one equation.

<sup>17</sup> The rate used is the 3-month money-market rate: the SITIBOR until 31 December 2006, and then the EURIBOR. The money-market interest rate from the database maintained by Eurostat was used for certain control specifications for the period before 2002.

<sup>18</sup> The weighted average NIM stood at 2.67% in the first period, and 2.06% in the second period.

<sup>19</sup> The values in the table differ from those cited here, because the regression analysis was conducted on standardised data.

<sup>20</sup> For more, see the sections entitled *Formulation of bank lending and deposit rates, and net interest margin* and *Changes in balance sheet and income statement structure as a result of the low interest rate environment*. Subsequent analysis will focus on the determinants on the income and expense sides, and on non-linear relationships between the explanatory variables and the dependent variable.

<sup>21</sup> The results are similar when a variable representing membership of the EU is used: it is possible to assume that the changes in the banking business occurred already when Slovenia joined the EU. The variable is only included in the equations relating to the period of normal interest rates.

<sup>22</sup> The use of nominal interest rates for short-term instruments has been mandatory since 1 July 2002, while as of June 2003 it has no longer been mandatory to use indexation for transactions with a maturity of more than 1 year.

Table 4.2: Results of econometric analysis of the determinants of net interest margin

VARIABLES	NIM					
	Equation 1	Equation 2	Equation 3	Equation 4	Equation 5	Equation 6
NIM <sub>(-1)</sub>	0.848*** (0.0155)	0.840*** (0.0195)	0.824*** (0.0241)	0.827*** (0.0226)	0.806*** (0.0314)	0.789*** (0.0505)
EA <sub>(-1)</sub>	0.0906*** (0.0322)	0.0886*** (0.0296)	-0.0218 (0.0496)	0.0288 (0.0374)		
GDP <sub>g(-1)</sub>	0.0464*** (0.00644)	0.0438*** (0.00514)	0.0300*** (0.00968)	0.0256*** (0.00671)	0.0861*** (0.0146)	0.0977*** (0.0175)
IR <sub>(-1)</sub>	-0.0329*** (0.00910)	-0.0330*** (0.00780)	-0.0223 (0.0162)	-0.0291** (0.0116)	0.265*** (0.0828)	0.250*** (0.0414)
INFL <sub>(-1)</sub>	0.0431** (0.0181)	0.0324* (0.0170)	0.107*** (0.0312)	0.0985*** (0.0245)	0.0122 (0.0294)	0.0231 (0.0224)
HHI <sub>(-1)</sub>	0.0872*** (0.0190)	0.105*** (0.0200)	-0.00248 (0.0426)	0.0268 (0.0299)	-0.0789* (0.0420)	0.0314 (0.0404)
CREDIT_GROWTH <sub>(-1)</sub>	0.0118 (0.0389)	-0.0237 (0.0256)	-0.0235 (0.0912)	-0.0436 (0.109)	0.0174 (0.0475)	-0.0919** (0.0395)
EQUITY_LIABILITIES <sub>c</sub> 1)	0.00539 (0.0140)	0.0310** (0.0143)	-0.00934 (0.0342)	0.0528*** (0.0183)	0.0142 (0.0166)	0.0103 (0.0158)
DEPOSITS_LIABILITIE S <sub>(-1)</sub>	0.0484*** (0.0182)	0.0652*** (0.0144)	0.0765** (0.0318)	0.0584** (0.0265)	-0.0359 (0.0369)	0.0713** (0.0318)
SIZE <sub>(-1)</sub>	-0.00839 (0.0393)	0.0121 (0.0140)	0.00793 (0.0672)	0.000396 (0.0232)	-0.202** (0.0788)	0.00531 (0.0263)
LIQUIDITY <sub>(-1)</sub>	0.000237 (0.0154)	-0.000380 (0.0183)	0.00251 (0.0271)	0.0319 (0.0307)	-0.0117 (0.0223)	0.0235 (0.0257)
RISK <sub>(-1)</sub>	-0.0331** (0.0142)	-0.0193* (0.0116)	0.00233 (0.0242)	-0.0108 (0.0158)	-0.0488* (0.0280)	-0.00251 (0.0216)
NPL <sub>(-1)</sub>	-0.00187 (0.0101)	0.00202 (0.00997)	0.0130 (0.0199)	0.00787 (0.0221)	-0.0530*** (0.0171)	-0.00816 (0.0152)
CONSTANT <sub>(-1)</sub>	-0.00831 (0.0381)	-0.0155 (0.0312)	0.0388 (0.0665)	0.0267 (0.0385)	-0.122 (0.0807)	-0.0987** (0.0481)
NUMBER OF OBSERVATIONS	920	920	526	526	332	332
R <sup>2</sup>	0.864		0.839		0.790	
NUMBER OF BANKS	21	21	21	21	21	21
Standard errors in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1						
A/B test AR(1) p-value		0.0003		0.0009		0.0006
A/B test AR(2) p-value		0.6784		0.7482		0.4962

Source: Bank of Slovenia

Statistically significant results are also shown by certain **bank-specific variables**.

The better-**capitalised** banks<sup>23</sup> are able to fund themselves more cheaply, as investors deem them to be lower risks; their interest expenses are therefore lower, which results in a higher NIM.<sup>24</sup> The results, which are statistically significant only for the whole period and the period of normal interest rates, confirm this. Banks with more equity in their total liabilities<sup>25</sup> have the capacity to generate higher NIM.

The **proportion of deposit funding** also has a positive effect on the capacity to generate NIM, whereby the level of interest rates does not affect the efficiency of the use of deposit funding to generate NIM. The results are statistically significant (with the exception of one equation) in the whole sample and in the two sub-samples. Banks with stable deposit funding<sup>26</sup> therefore recorded a higher NIM, although this funding can be comparatively expensive, at least in good times, particularly in the case of long-term deposits. Their value is particularly evident during crisis periods when wholesale funding can be rapidly withdrawn, as happened in Slovenia.

<sup>23</sup> Measured by the ratio of equity to total liabilities.

<sup>24</sup> A higher level of equity means that banks have to generate higher income to meet a sufficient return on equity (ROE), and thus satisfy the shareholders. In analysis of the effect of bank capitalisation on ROE, the direction of the effect is not single-signed.

<sup>25</sup> The ratio used is not risk-adjusted.

<sup>26</sup> The proportion of stable deposit funding is estimated at 70% to 80% of total deposits.

**Risk appetite** is measured by average risk weight (the ratio of risk-weighted assets to total assets). The sign could not be uniformly predicted: higher-risk investments entail higher returns, but the return could fall to zero if borrowers fail to repay their debt. In this case the effect on NIM is negative. The data shows that a negative effect prevails. The result is statistically significant in the whole sample and in one of the equations illustrating the period of low interest rates. This indicates that banks underestimated the risk of their loans granted, as higher-risk loans yielded zero income instead of high risk premiums.

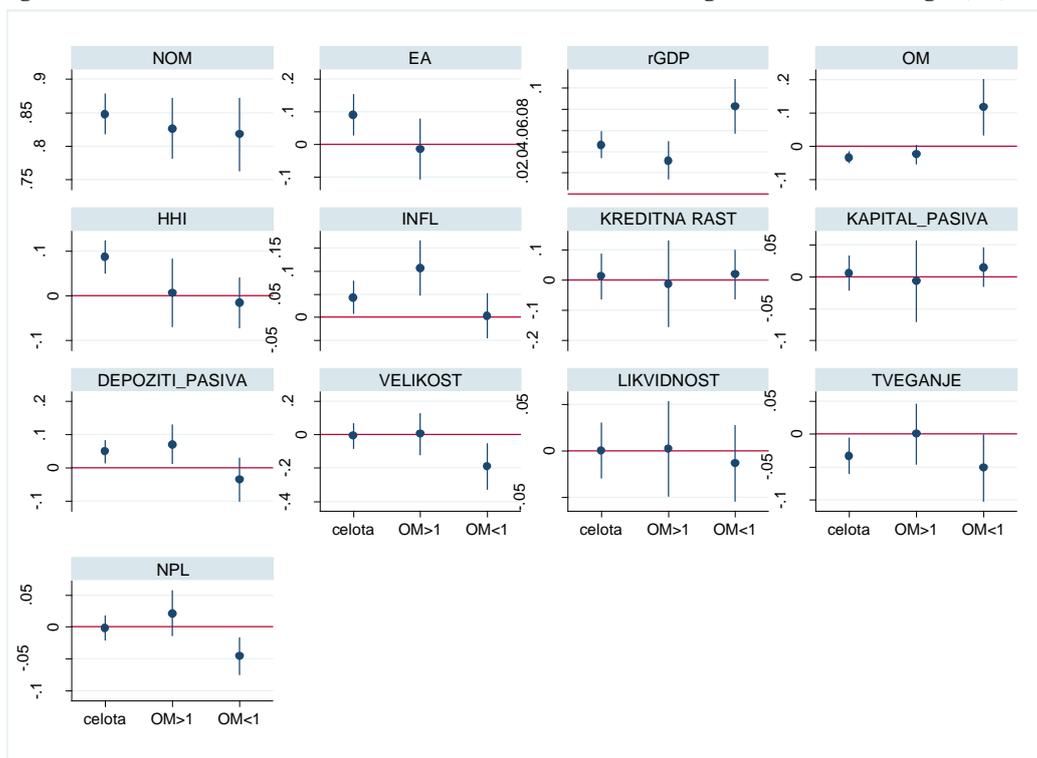
The other bank-specific variables have non-zero statistical significance in individual equations only. It can be identified that in a period of low interest rates above-average **credit growth** has a negative effect on NIM. It is possible that banks increasing their turnover attract new clients through favourable interest rates or maintain their credit growth through higher interest rates on deposits or a greater stock of long-term deposits, owing to which their NIM is lower. In a period of low interest rates, after controlling for other variables, **larger banks** record lower NIM, and it is also possible that **non-performing loans** have a negative effect on NIM. The liquidity variable is not statistically significant in any of the equations.

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## 5. Appendix

**Figure 1: Illustration of contributions of individual variables to change in net interest margin (FE).**



Note: All illustrated variables are entered in the equation lagged by one quarter.

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