

**FINANCIAL STABILITY REPORT**

**2010**

## ABBREVIATIONS

CAR – capital adequacy ratio  
CSB – Central Statistical Bureau of Latvia  
EC – European Commission  
ECB – European Central Bank  
EKS – electronic clearing system of the Bank of Latvia  
EU – European Union  
EU15 countries – EU countries before 1 May 2004  
Eurostat – Statistical Bureau of the European Union  
FCMC – Financial and Capital Market Commission  
FRS – US Federal Reserve System  
GAP – repricing gap or difference between RSA and RSL  
GDP – gross domestic product  
IMF – International Monetary Fund  
JSC – joint stock company  
LCD – Latvian Central Depository  
lr – liquidity ratio  
Ltd. – limited liability company  
MFI – monetary financial institution  
NBFS – non-bank financial sector  
ROA – return on assets  
ROE – return on equity  
RSA – interest rate sensitive assets  
RSL – interest rate sensitive liabilities  
RWA – risk weighted assets  
SAMS – interbank automated payment system of the Bank of Latvia  
SRS – State Revenue Service  
Treasury – Treasury of the Republic of Latvia  
UK – United Kingdom  
US – United States of America  
VaR – the maximum expected losses over a certain period of time and with a given probability (Value-at-Risk)  
VAT – value added tax  
VNS – securities settlement system of the Bank of Latvia

*Data on the branches of foreign banks registered in the Republic of Latvia have been disregarded for the purposes of calculating ROE, CAR and Tier 1 CAR, open foreign exchange positions, the liquidity ratio set by the FCMC; nor have they been used for liquidity and credit risk stress tests or bank sensitivity analysis with regard to currency and interest rate risks.*

*Sources: the CSB, the FCMC, LURSOFT (Database of the Republic of Latvia Register of Enterprises), the LCD, Reuters, Latio Ltd., Ober Haus Real Estate Latvia Ltd., Arco Real Estate Ltd., the ECB, Eurostat, the State Unified Computerised Land Register, the State Land Service, NASDAQ OMX Riga, the Treasury and the Bank of Latvia.*

*Charts have been compiled on the basis of data provided by the respective national central banks and the Bank of Latvia (Charts 1–6, 5.1, 10.1–10.4, 13, 14, 16, 18, 24–27, 46–57, 59 and Table 1), Bank for International Settlements (Table 3.1), the State Unified Computerised Land Register (Chart 4.1), Latio Ltd., Ober Haus Real Estate Latvia Ltd., Arco Real Estate Ltd. (Charts 4.2 and 4.4), the CSB (Charts 4.3, 4.4, 5.1, 10–12, 14 and 45), MG Media Ltd. (Charts 4.5–4.7), Latio Ltd. (Charts 4.6, 4.7 and 5.1), NASDAQ OMX Riga (Chart 5.1), the FCMC (Charts 5.1, 7, 8, 17–20, 28–30 and Table 2), Bloomberg (Table 6), data of the household survey "The Monetary and Banking System in Latvia" commissioned by the Bank of Latvia (Charts 7.1–7.3), estimates prepared by the Bank of Latvia, also based on the FCMC data (Charts 9, 21–23, 31–44 and Tables 2, 4 and 5), bank lending surveys conducted by the Bank of Latvia (Charts 9.1–9.9), the ECB (Charts 10.2 and 15), Eurostat (Chart 15) and the LCD (Charts 58–60).*

*Figures featured in the charts are rounded values.*

*The Financial Stability Report analyses and evaluates the performance of the Latvian financial system, focussing on the banking operations, on the basis of information and data available up to 31 December 2010. Forecasts are also based on more recent data.*

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## EXECUTIVE SUMMARY

**In 2010, the macroeconomic and financial environment saw an overall improvement, promoting financial sector risk mitigation.** Economic recovery resulted from export growth, the national fiscal situation stabilised, the first issue of government bonds after crisis was launched, Latvia's credit risk insurance premium constantly moderated, and upgrading of the sovereign credit rating began. Demand growth in Latvia's major trade partners and the persistently low interest rates in euro area supported the recovery of the Latvian financial sector. At the same time, the issues related to the sustainability of the government debt in some European countries became more prominent, thus raising concern with respect to their impact on the EU financial system and economic growth and confirming the close links of the government debt and financial risks.

**Along with the economic recovery, the main performance indicators of the financial sector also improved.** Overall, banks concluded year 2010 with losses, albeit at a considerably smaller scale year-on-year, and in 2010 bank profitability gradually improved. The amount of overdue loans decreased. Banks continued to increase their capital (both the paid-up capital and the subordinated and reserve capital, and the bank CAR remained high).

**At the same time, decline in the bank loan portfolio persisted.** The contraction of the bank loan portfolio is a result of deleveraging: banks, non-financial corporations and households refrained from assuming new risks and increasing their liabilities which had already been excessively accumulated during the lending and real estate boom. A considerable credit risk of borrowers still persisted. Although the overall more favourable macroeconomic situation supported both a slight easing of the credit standards applied to creditworthy customers as well as an increase in demand for certain loans, recovery of lending would require the presence of sustainable economic growth factors: predictable business conditions (mostly taxes) and sustainable economic restructuring measures that improve the credibility of the national development, facilitate gradual reduction in unemployment and restoration of the profitability of non-financial corporations.

**In the future, financial stability will largely depend on the economic developments driven both by the situation abroad and the domestic economic growth.** An accelerated economic growth and generally solid external demand have been forecast for 2011; nevertheless, several risk factors and the related decline in confidence at the turn of 2010 and 2011 should be taken into account.

**In 2011, the major financial stability risks in Latvia are as follows:**

**1. A high credit risk of borrowers persists.** Households as well as individual sectors of the economy (real estate, trade, construction, hotels and restaurants) have high debt levels. Household solvency remains threatened by the fragile conditions on the labour market: unemployment is high, remuneration is stagnant. At the same time, household solvency deteriorates as a result of the resumed price rises, inter alia those of the global food and energy prices and administered prices, as well as a further increase of the tax burden. The costs of engaging in business activities also record a pick-up due to an increase in taxes and raw material and energy prices. Under such circumstances potentially higher interest rates in the euro area would further impair the debt service capacity of non-financial corporations and households with high indebtedness levels. The situation could aggravate due to a number of external risks which might potentially dampen the economic growth of Latvia's trade partners, thus posing threats to the prospects of Latvia's exporting non-financial corporations and the sustainability of the economic growth. The risk of deterioration of the quality of restructured loans can also be considered a source of a potential increase in loans past due over 90 days in 2011 as the process of loan restructuring is still going on and such loans account for almost one fifth of total loans.

**2. The banks trying to obtain funding in the international markets are likely to face an increase in financing costs** (an overall trend of interest rate rise, more expensive financial resources due to an increase in sovereign debt risk in EU countries and the ample refinancing needs of a number of countries and financial institutions in 2011 which inter alia may also affect the financing costs of Swedish parent banks). Availability of money market funding could be a more difficult issue for those banks without the funding of parent banks and with a loan portfolio largely financed by short-term deposits.

In view of the potential risks, banks should:

- duly assess the quality of the restructured loans and accumulate provisions, if required;
- be prudent in the process of seeking new markets and instruments for investing their funds, inter alia with respect to non-resident lending;
- strive to attract longer-term funding, thus reducing the vulnerability to potential negative developments on the global financial markets.

## 1. BANKING MACROFINANCIAL ENVIRONMENT

### 1.1 External Economic and Financial Environment

**External risks to the financial sector remain high overall.** The most essential upward ones are associated with the European debt crisis, its potential adverse implications for the public and bank financing, and price hikes in the commodities markets whereas an improving global macroeconomic environment is the major stabilising factor. In 2010, the global economy resumed its growth, with GDP picking up 3.0% in the advanced economies, 7.1% in the emerging and developing economies, and 5.0% in the world as a whole.<sup>1</sup> Economic activity strengthened more than expected in many countries (in the first half of the year in particular). In part, it was on account of the massive economic stimulus measures. Despite the still positive global growth prospects for 2011, the development is anticipated to be slower than in 2010. The fading-out of fiscal stimulus measures combined with tighter credit standards in China is likely to undermine the global economic growth. According to the forecasts of IMF analysts, GDP is expected to pick up 2.5% in the advanced economies, 6.5% in the emerging and developing countries, and 4.4% in the world overall in 2011.<sup>2</sup>

**In Europe, sovereign debt risks heightened.** Market participants have continued to show concern for countries with high sovereign debt levels, low growth potentials and strong risks of debt refinancing. The global financial market stabilisation that had set in towards the close of 2009 was interrupted in 2010 by the turmoil in the European government securities market when market participants' minds were preoccupied with concerns about the situation in a number of euro area peripheral countries, i.e. Greece, Portugal, Spain, and Ireland where public debt levels soared. The yields on government securities were on an upward trend in these countries. Greece incurred problems with attracting the needed financing from the external market in April, Ireland followed suit in November. Both countries applied for international assistance. As amidst the European debt crisis market risk aversion increased, the yields on the usually safer-thought securities, e.g. the US and German government bonds, decreased. At the same time, the euro depreciated against the US dollar and stock prices dropped, in Europe in particular.

**A number of measures implemented in Europe and unlikely to be withdrawn in the short run helped stabilise the situation in the government securities market in 2010, yet they will have to be replaced by long-term measures over time.** Thus, the fiscal consolidation measures and structural reforms in many countries helped balance the situation. With European countries and international organisations closely liaising, the European Financial Stabilisation Mechanism and the European Financial Stability Facility (after 2013, to be replaced by the European Stability Mechanism) were set up. Due to existing tensions, the ECB also decided to review its collateral framework, applying a schedule of graduated haircuts to the assets rated in the BBB+ to BBB– range, and suspending the application of the minimum credit rating threshold for an identified period of time in the case of all outstanding and new marketable debt instruments issued or guaranteed by the Greek government.

**The problems of crisis-hit countries can spill over to other countries as well, boosting borrowing costs in them, hampering their access to international financial markets, and giving rise to investment losses for banks.** Borrowing costs can be most affected by government debt problems in countries with low credit ratings. The issue ranks particularly important for Latvia due to its intention to return to the Eurobond market and the current limited direct access of Latvian banks to foreign financial markets. Increasing risk premiums render the resources costlier also for the Swedish parent banks of Latvian banks, for a significant part of their funds come from the international financial markets. At this juncture, the overall resilience of Swedish banks to negative shocks is deemed to be high, yet what would happen in the event of serious external downturns or financial market turmoil is still clad in uncertainty.

**The probability of on-going price hikes in commodities markets is high, and the ensuing effect on Latvia's non-financial corporations and households remains negative.** Globally, the upward pressure on oil prices is generated by the rising demand from countries with stronger economic recovery and more volatile demand due to geopolitical risk factors. In the first half of 2010, oil prices were unstable, while in the second half of the year marked by growing demand they started to follow a gradual, slightly upward trend. According to the forecasts of the International Energy Agency, a more solid global demand for oil is to be expected also in 2011. A progressive recovery of the global economy may trigger an additional demand for industrial metals;

<sup>1</sup> IMF and World Economic Outlook (updates of January 2011).

<sup>2</sup> IMF and World Economic Outlook (updates of January 2011).

meanwhile, precious metal prices largely depend on financial market stability. With the supply of agricultural output changing with the onset of the new season, the upward pressure on prices is likely to subside. The prices hiked in the second half of 2010 when the demand strengthened and the supply contracted due to poor weather conditions.

**The anticipated augmenting of price hike risks in 2011 has an upside pressure on the euro base rates, while the US inflation argument has not prevailed or been pressing so far.** In 2010, the ECB and the FRS left their base rates unchanged on the grounds of negligible or temporary price hikes and still fragile economic recovery. The ECB decision making was encumbered by uneven performance across countries and industries. Amidst substantially increasing inflationary risks, the ECB is expected to raise the euro base rates. The countries with a more buoyant economic recovery and stronger inflationary pressures, e.g. Sweden, Norway, China, and Canada, raised their base rates as early as 2010. Market participants predict that the central banks of the UK, Poland, and Russia will also raise their base rates, thus eventually containing household demand in their own countries and, consequently, decelerating the expansion of Latvia's exports to these countries.

**Inflationary risks could make central banks limit or at least keep unchanged the employment of unconventional monetary instruments.** Turmoil in government securities markets in the euro area peripheral countries held the ECB back from gradually withdrawing unconventional monetary instruments already in 2010, some efforts at the beginning of the year notwithstanding. If the ECB takes to the pursuit of a tight monetary policy, EURIBOR will be up and cause a direct increase in debt servicing costs for many Latvian borrowers.

**The expanding external demand and improving indicators of foreign non-financial corporation and household confidence provided a positive momentum for the Latvian economy in 2010. This was particularly evident from the exports dynamics.** The growth in Latvia's exports was driven by the expanding external demand in Lithuania, Estonia, Russia, and Germany. Exports from Latvia to Sweden and Poland also increased rapidly. It was partly on account of currency appreciation *vis-à-vis* the euro in these countries, which supported competitiveness of Latvian prices. In 2011, foreign demand is expected to grow less due to the base effect. Fiscal consolidation measures in some major trade partners of Latvia are likely to shrink foreign demand for exports from Latvia in 2011.

### **Box 1. Systemic risks and bank countercyclical framework**

*The fourth version of the Capital Requirements Directive (CRD IV) now in making provides for improved supervision at the macro-prudential level, i.e. timely identification of systemic risks and implementation of measures to mitigate them. Systemic risks emerge:*

- 1) due to the composition of financial system: there are financial institutions that are systemically important because of their size, significance for the payment and settlement systems, or interconnectedness, as their problems can cause disruption to wider financial system as well;*
- 2) as a cumulative result of individual systemically unimportant bank operation due to unsustainable growth rates.*

*In order to minimise the impact, each cause of systemic risks herein requires an individual approach.*

*Regarding the systemically important financial institutions (SIFIs) it is envisaged to:*

- specify the qualitative and quantitative criteria for SIFI identification;*
- identify global, regional and local SIFIs;*
- foresee specific or set tighter regulatory requirements for SIFIs (e.g. increase the capital adequacy requirement);*
- ensure more intensive supervisory oversight of SIFIs.*

*The countercyclical framework aims at mitigating the unsustainable growth rate. This reform package covers several areas, e.g. accounting (due to volatility of financial indicators which arises from valuation at fair value, restricting and application of the expected loss concept<sup>3</sup> to asset valuation), and the introduction of additional indicators with the aim to curb lending and improve credit quality (loan to value ratio, debt to income ratio, loan to deposit ratio, leverage ratio).*

*The countercyclical capital buffer is potentially the most effective instrument to reduce cyclicality. Countries are envisaged to enjoy the right of establishing a countercyclical buffer requirement up to 2.5% of total risk weighted assets, if there is a build-up of systemic risks. All banks, irrespective of the country of registration,*

<sup>3</sup> See Section "What is macro-prudential supervision?" of Box 2 in Bank of Latvia's Financial Stability Report for 2009.

that extend credit to the residents of a national country shall be subject to the countercyclical capital buffer requirement. Each bank will calculate the countercyclical capital buffer requirement as a weighted average of requirements depending on the geographical composition of its portfolio of credit exposure and the size of the countercyclical capital buffer established for each country. Competent authorities of other countries will be entitled to raise the level of countercyclical capital buffer requirement, if, by their judgement, the build-up of system-wide risks is larger than established by the national authority, e.g. if the countercyclical capital buffer requirement in Latvia is 2%, Estonia will be entitled to apply the countercyclical capital buffer requirement for credit extended by its banks to Latvian residents in the amount of 2.1% but not 1.9%. However, this mechanism is not mandatory if a national country establishes its countercyclical capital buffer requirement in excess of 2.5% (Basel III provides for such an opportunity if this is deemed appropriate in the national context). Be it so, other countries may resolve to limit the countercyclical capital buffer requirement for their national bank-extended loans to residents of the respective country in the amount of 2.5%. This is a principally new approach to the framework that both creates a systemic risk mitigation instrument without prejudice to the principle of free capital flow and without impairing financial market competition, and boosts the efficiency of countercyclical measures. CRD IV will comprise the basic methodological principles for establishing the size of countercyclical capital buffer requirement, while their application will depend, to a large extent, also on national authorities with the responsibility to ensure financial stability. For mitigating systemic risks, essential is not only the establishment of an appropriate size of countercyclical capital buffer requirement but also the time for starting its build-up (with a 12-month pre-announcement period for banks) and identification of national authority with discretion to release this requirement. How to balance stability considerations with development needs is a very important decision. In order to make well-considered decisions on the size of countercyclical capital buffer requirement and its deployment, each country will have to set up an appropriate institutional framework stipulating the procedure for liaising and decision-making for the authorities involved in safeguarding financial stability. The countercyclical capital buffer requirement affects not only national banks but also banks of other countries that extend credit to national residents; hence cross-country harmonisation of the size of countercyclical capital buffer and the period of its validity is so important.

### **Box 2. Reform of the EU financial supervisory system**

In September 2010, the Council of Europe approved a legislative package thus creating the legal basis for a new EU financial supervisory framework. This was a follow-up of the recommendations voiced by the EC in September 2009 regarding a radical reform of the so-far mainly national-regulatory-regime-based EU supervisory system. This decision has emerged as a result of serious political discussions lasting for more than 6 months among the European Council, the EC and the EP.

The reform introduces essential changes in the EU framework for supervising banks and securities and insurance market participants. As an outcome of these changes, a new European System of Financial Supervision (ESFS) has emerged to operate as of January 2011. The new two-pillar (macro-prudential and micro-prudential) system will help strengthen the supervision of financial system both as a whole, i.e. at the macro-prudential level, and at the level of individual entities, i.e. at the micro-prudential level.

The ESFS comprises the European Systemic Risk Board (ESRB) responsible for macro-prudential oversight and a network of micro-supervisory institutions. This network is represented by three European supervisory authorities: the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), and the European Insurance and Occupational Pensions Authority (EIOPA) as well as the Joint Committee of the European Supervisory Authorities and supervisory authorities of the EU Member States.

#### **ESFS macro-prudential supervisory pillar**

The former system of EU financial supervision did not have any mechanism at the macro-prudential level to ensure efficient identification of systemic risks and to support their adequate mitigation.

The most important strategic goal of the ESRB is to mitigate and prevent systemic risks threatening the stability of the EU financial system as a whole. Thus, in contrast to the former European financial supervisory framework, a stronger focus is on the systemic risks jeopardising the whole financial system of the EU vis-à-vis individual risks to certain financial systems of EU Member States. However, the ESRB can issue recommendations and warnings to particular countries if systemic risks jeopardising the stability of the whole EU financial system arise from the developments in them.

The ESRB operation will rely on the synthesis of analytical work carried out by central banks and micro-supervisory authorities. Representatives of the Bank of Latvia and FCMC will take an active part in the work of the ESRB and its committees and working groups.

One of the most important ESRB's tasks when elaborating the warning and recommendation issuance procedure is to develop a common set of indicators enabling faster and enhanced public awareness of financial stability risks. This system would enable the assessment of cross-border financial institutions' risk levels according to uniform standards.

The General Board of the ESRB is the main decision-making body of the ESRB. It represents a wide range of experience, expertise and stances. The leading role in the General Board belongs to the ECB and central banks of EU countries duly accounting for their functions in the financial stability domain.

#### **ESFS micro-prudential supervisory pillar**

As a result of the reform, the former banking, pension fund, securities and insurance market supervisory committees, i.e. the Committee of European Banking Supervisors (CEBS), the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS), and the Committee of European Securities Regulators (CESR) before exercising only advisory functions have gained in importance. The new supervisory authorities took over all functions of the given committees, with their tasks and authority expanding substantially. Representatives of the FCMC will actively participate in the work of the European supervisory institutions.

One of the most essential conceptual features of the EU financial supervisory reform consists in its orientation towards developing common regulative and supervisory standards and practices within the single EU market. The main task of the European supervisory authorities in this context is to develop fully harmonised supervisory regulations.

The European supervisory authorities have the discretion to settle disputes arising among national financial supervisors, and temporarily ban excessively risky financial products or operations. These authorities will assume the leading role also in protecting the consumers' rights, enhancing transparency, simplicity and fair attitudes in the market of financial products and services for consumers across the whole internal market of the EU.

### **Box 3. Basel III reform**

#### **Enhanced capital quality, capital adequacy and liquidity requirements for banks after the implementation of Basel III requirements**

Following the implementation of Basel III requirements, banks will have to comply with tighter requirements for capital quality, capital adequacy and liquidity. On 16 December 2010, the Basel Committee on Banking Supervision released the text of Basel III reforms comprising detailed global regulatory framework standards on bank capital adequacy and liquidity, providing for strengthening the resilience of banks at both micro-prudential, i.e. individual bank, and macro-prudential, i.e. system-wide, levels. The new Basel III standards have been developed to address the weaknesses of the regulatory framework, particularly revealed by the recent global financial crisis, as the quality of bank capital as well as the levels of capital and liquidity were insufficient to cope with the serious systemic shocks. The gradual phasing-in of the main Basel III requirements is projected to take six years, the period starting with 2013.

#### **Essence of Basel III Reform**

The new quality requirements introduce changes to the definition of capital and set forth tighter requirements for the elements included in the capital. Tier 1 capital is made up of common equity Tier 1, i.e. common equity, share premium of the respective share issuance and reserves resulting from stockholders' payments and bank's retained earnings, and Additional Tier 1, i.e. hybrid capital instruments that meet specific criteria (e.g. they must be perpetual, i.e. there is no maturity date, and there are no step-ups or other incentives to redeem, in certain cases instrument's principal shall be written-down and the instrument itself shall be convertible into Tier 1 common capital, cancelled dividends or coupon payments for holding the given instrument are not accruable). Basel III defines more accurately the criteria for elements, e.g. subordinated capital, to be included in Tier 2 capital. Tier 3 capital is removed from the capital calculation. Basel III stipulates that the elements included in Tier 1 capital shall cover going-concern capital, i.e. losses resulting from regular operation, while those included in Tier 2 capital shall cover gone-concern capital, i.e. losses arising from liquidation. In addition, Basel III stipulates amendments regarding deductions from capital.



Along with setting tighter criteria for the definition of capital, the Basel III framework stipulates ensuring larger amount of capital, providing for higher criteria to be met by common equity Tier 1 and Tier 1 capital. The amendments are intended to ensure the dominating role for common equity Tier 1. In accord with the new requirements, common equity Tier 1 must be at least 4.5% of risk weighted assets (RWA) at all times, whereas Tier 1 capital must be at least 6.0% of RWA. Up to now, common equity Tier 1 was 2.0% (4.0% in Latvia) and Tier 1 capital stood at 4.0% of RWA. Minimum total capital requirement remains unchanged at 8.0% of RWA.

In addition, Basel III introduces a system of capital buffers, stipulating banks to hold capital above the existing minimum capital adequacy requirement in order to ensure, if required in stress periods, the meeting of the minimum capital requirement. Basel III provides for the introduction of two types of buffers: the capital conservation buffer of 2.5%, i.e. minimum common equity Tier 1 requirement of 7% of RWA, and Tier 1 total capital requirement of 8.5% of RWA, and the countercyclical capital buffer of 0%–2.5% of RWA (see also Box 1 Systemic risks and bank countercyclical framework). In times of excess credit growth, competent supervisory institutions will be entitled to oblige banks to set up a countercyclical capital buffer. This said capital conservation buffer is intended to pay for the losses in a stress situation to ensure minimum common equity Tier 1 requirement and Tier 1 minimum capital requirement at 4.5% and 6.0% respectively. Basel III simultaneously projects restrictions on profit distribution (dividend payments, engaging in share-buybacks and making discretionary staff bonus payments) in the event of non-compliance with the capital buffer maintenance requirement.

The Basel III requirements regarding counterparty credit risk are much stricter for banks with a permission to use the internal ratings-based models method. They concern transactions with derivatives, repo-style transactions and securities financing activities. Basel III defines stricter parameters to be used in risk transaction value calculation models. Depending on the counterparty, the capital requirements for over-the-counter market financial derivatives will be strengthened.

The Basel III framework foresees to introduce a leverage ratio to be calculated by dividing Tier 1 capital by total unweighted risk exposure. Thus, this ratio is not subject to risk adjustments and shall act as a supplement to CAR. It is comparatively simple and provides additional safeguard against model risks and valuation errors. It is introduced to directly restrict the rapid leverage growth and for the system to have at its disposal sufficient amount of high-quality capital. The excessive leverage of banks in many countries was a major cause why they plunged into the recent global economic and financial crisis so deep.

Quantitative liquidity ratios are a new area of Basel framework. The global financial crisis showed that the banking liquidity risk management suffers from essential weaknesses that cannot be addressed by the existing regulatory framework. In response to the lessons from the crisis, the Basel III framework provides for the introduction of two new minimum quantitative standards, which govern the liquidity management: the liquidity coverage ratio for short-term liquidity management and net stable funding ratio for long-term liquidity management. The liquidity coverage ratio calculated as a ratio of bank's high-quality liquid assets to total simulated net cash outflows for the next 30 calendar days underpins the minimum amount for the bank to maintain, over a thirty day horizon established by supervisors, in unencumbered high-quality liquid assets to offset net cash outflows the bank could encounter under an acute stress scenario. The stable funding ratio calculated as a ratio of available stable funding to required stable funding underpins the needed minimum required stable financing duly accounting for the composition of bank's assets or operational liquidity.

### **Implementation of Basel III**

In order to minimise the adverse effect of higher capital and liquidity requirements on crediting the real economy, a gradual phasing in of the Basel III framework is projected (see Table 3.1). Regarding the leverage ratio, a testing period is projected to appraise whether the proposed requirement is consistent with the full credit cycle and various models of commercial activities. Both liquidity coverage and net stable funding ratios are projected observation periods as well, with a review possibility if unforeseen consequences arise.

Table 3.1

## PHASE-IN ARRANGEMENTS

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Minimum common equity capital ratio (%)	–	–	3.5	4.0	4.5	4.5	4.5	4.5	4.5
Capital conservation buffer (%)	–	–	–	–	–	0.625	1.25	1.875	2.5
Phase-in of deductions from common equity Tier 1 (%)	–	–	–	20	40	60	80	100	100
Minimum Tier 1 capital (%)	–	–	4.5	5.5	6.0	6.0	6.0	6.0	6.0
Minimum total capital (%)	–	–	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital			Phase-out over 10-year horizon beginning 2013						
Leverage ratio	Supervisory monitoring		Testing				Migration to Pillar 1		
Liquidity coverage ratio	Observation period				Introduce minimum standard				
Net stable funding ratio	Observation period						Introduce minimum standard		

## 1.2 Domestic economic and financial environment

**Latvia's macroeconomic and financial environment improved in 2010:** the GDP downturn stopped and the growth was back on a positive track in the second half of the year. In 2010 overall, GDP contracted by 0.3%.

**Exports figured as the primary driver of economic progress.** In line with the rebound in competitiveness and with partners' economies and foreign trade both on the upswing, the growth in exports was recorded for almost all commodity groups and to almost all major trade partners. Investment started to grow again in the second half of the year, albeit on the backdrop of the steep decrease in previous periods its increase was slow and insufficient to trigger a more robust economic development. Private consumption also recovered in the second half of the year, to a larger extent on account of the low basis though, and, caused by a number of factors, more prudent household spending behaviour was reported again towards the close of the year.

**With the economy on the upturn, a gradual downside in unemployment was observed, wages and salaries began to go up by year's end, and some sectors' non-financial corporations recovered their profitability; nevertheless, these positive attainments were still fragile.** Over the year, the share of jobseekers contracted from the historic 20.5% high in the first quarter to 16.9% in the fourth quarter. Even though the downward trend is expected to last well into 2011, it is likely to be moderated by a mismatch between the skills workers possess and businesses require. Wages and salaries in the economy began to rise towards the end of the year, yet, in the year as a whole, a 3.5% decrease in the average remuneration was observed. Household incomes are expected to increase moderately in the future as well.

**Although labour market improvements and consumer price deflation supported certain stabilisation in household financial vulnerability in 2010, the income of the latter and the performance of non-financial corporations were adversely affected by fiscal consolidation in terms of increased tax burden.** The elevated taxes exerted upward pressures on inflation, while the weak demand and dropping production costs underpinned 1.1% lower average consumer prices than in 2009. At the end of 2010 and in early 2011, however, with fuel and food prices soaring and extra tax burden emerging in 2011, inflation hiked notably owing to supply factors and exerted negative impact on consumers' purchasing power and confidence.

**The raising of tax rates and cuts to the budget expenditure in 2010 were aimed at attaining fiscal deficit target below 8.5% of GDP. Given the ongoing economic stabilisation programme, a decline in sovereign debt risk and costs of financing shall be expected;** it is confirmed by a constant decrease in Latvia's credit risk insurance premium observed last year, the upgrading of Latvia's credit rating to BB+ on 7 December 2010 by Standard & Poor's and of Latvia's sovereign rating outlook from stable to positive on 9 March 2010; moreover, on 15 March 2011, Fitch Ratings raised Latvia's credit rating by one grade, thus re-establishing positive future outlook and investment grade for Latvia.

**Economic stabilisation, upgrading of sovereign ratings, lower risk perceptions and accumulation of lats excess liquidity were reflected in the lats money market interest rates, which dropped to historic lows.** The average weighted interest rate on interbank overnight transactions, the lats money market most liquid

segment, dropped from 1.01% in January to 0.23% in December. The lats money market excess liquidity reduced the banks' need to engage in mutual transactions, and the average monthly value of the lats transactions in the interbank market was 366 million lats (920 million lats in 2009). Longer term money market interest rates also slid down. So 3-month RIGIBOR went down from 6.80% at the beginning of the year to 0.85% at its end, whereas 6-month RIGIBOR declined from 8.81% to 1.39% respectively and was close to EURIBOR of respective maturity at the end of the year.

**The Bank of Latvia lowered its refinancing rate from 4.0% to 3.5% as of 24 March**, whereas the overnight deposit facility rate was reduced from 1.0% at the beginning of the year to 0.25% in November. The deposit facility rate was lowered with a view to give an extra stimulus to banks to channel their ample funds into the economy.

**Yields on government short-term securities declined considerably in the primary market.** In the last auction of 2009, the weighted average yield on 6-month Treasury bills was 9.27%, whereas in the concluding auction of 2010, it stood at 1.22%. A similar decline from 10.25% to 1.78% was recorded also for 12-month Treasury bills. In 2010, the Treasury resumed offering 2-, 3-, and 5-year government bonds; as of the beginning of 2011, 10-year government bonds have also been issued because the demand in this market segment had recovered.

Meanwhile, NASDAQ OMX Riga stock turnover was 14.6 million lats in 2010 (a 49.0% year-on-year increase). NASDAQ OMX Riga stock price index OMXR appreciated by 41.1% in 2010, pointing to the economic recovery.

**In 2011, the pace of economic growth is expected to accelerate, and the external demand would be sufficiently strong; nevertheless, the overall outlook for the economic growth remains unclear due to a number of internal and external risk factors.** The section on external economic environment deals with the major external risks. In the domestic context, the gradual move towards country's fiscal sustainability notwithstanding, the projected raising of tax rates under the fiscal consolidation programme could hamper the overall economic development. Higher tax rates and food and energy price hikes are likely to have an adverse effect on population's purchasing power; hence further recovery of private consumption is also likely to be slow and unbalanced. In addition, the present budget planning process does not dissipate the uncertainty about the further consolidation measures, which, in turn, makes consumers and investors act with precaution. The so-far implemented budget balance-improving measures do not dispel concerns about the insufficiency of structural reforms either and thus prevent a further build-up of confidence in the future economic advance.

#### **Box 4. Latvia's real estate market**

*In 2010, Latvia's real estate market stabilised, but some signs of stagnation were observed. The real estate market activity was slightly higher than in the previous year; however, it was mainly determined by the growing number of transactions conducted outside Riga, – overall, the number of such transactions recorded an increase of 7.6% year-on-year (see Chart 4.1). The number of transactions in Riga was volatile but overall, the number of transactions registered in 2010 posted a 7.7% year-on-year decline.*

*The introduction of a housing tax<sup>4</sup> and a tax on capital gains for the real estate sales transactions<sup>5</sup> in 2010 caused high volatility in the number of transactions at the turn of the year while it did not affect the amount of further transactions significantly.*

*Foreign buyers' interest in real estate purchase in Latvia was stirred up by the "Amendments to the Immigration Law"<sup>6</sup>, allowing non-residents to receive a temporary residence permit in Latvia (up to five years) when purchasing a real estate (in the amount of 100 thousand lats in Riga, Riga planning region or cities of Latvia; in the amount of 50 thousand lats in the rest of the territory of Latvia); however, the number of transactions aimed at receiving a residence permit was small in 2010, – overall, temporary residence permits were issued to 110 foreigners<sup>7</sup>. Although the number of such transactions is expected to increase in 2011, it is unlikely to affect the real estate market activity significantly. However, this may foster launching of new construction projects and completion of the on-going ones – the potential buyers want to acquire good quality apartments in new projects or in the centre of Riga as the requirements for receiving a permanent residence permit are high.*

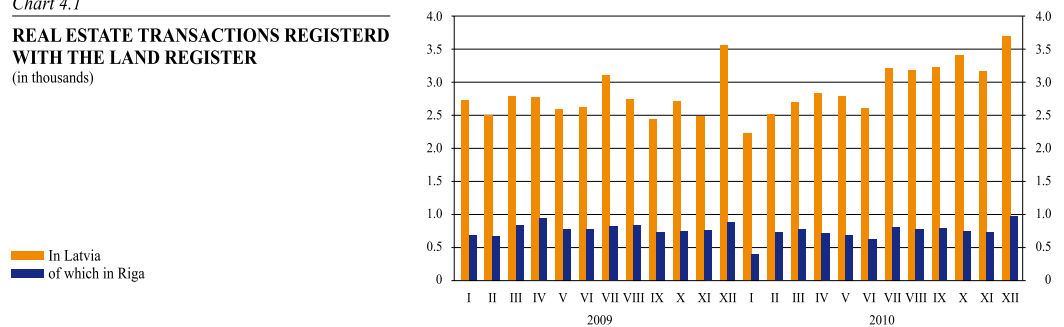
<sup>4</sup> "Amendments to the Law 'On Real Estate Tax'", 1 December 2009.

<sup>5</sup> "Amendments to the Personal Income Tax Law", 1 December 2009.

<sup>6</sup> "Amendments to the Immigration Law", 22 April 2010.

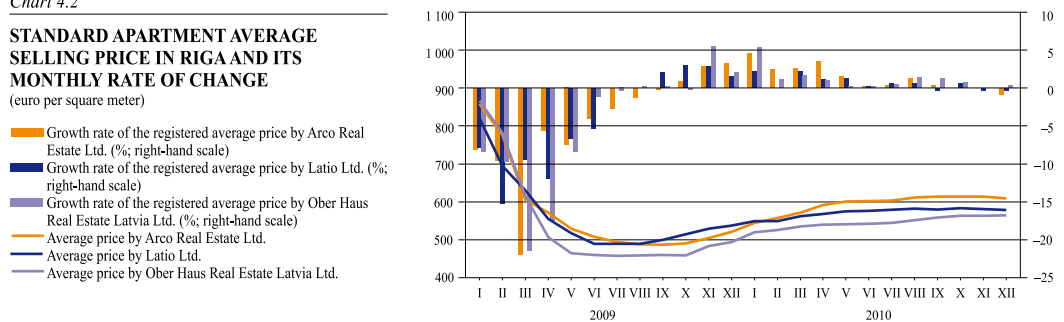
<sup>7</sup> As a temporary residence permit is also granted to the real estate buyer's spouse and children who are under age, the number of the respective transactions is smaller than that of the temporary residence permits issued.

Chart 4.1

**REAL ESTATE TRANSACTIONS REGISTERED WITH THE LAND REGISTER**  
 (in thousands)


The standard apartment price rise continued in 2010; however, they moderated in the second half of the year with price fluctuations not exceeding one per cent month-on-month (see Chart 4.2). At the end of the year, the average standard apartment price was 584 EUR/m<sup>2</sup> (a year-on-year increase of 12.7%). The price rise observed after bottoming out could be assessed as price stabilisation following too sharp a drop, but the stagnation phase started at the end of 2010 as further development was limited by the low household income and persisting high credit standards of banks. The State Land Service data on sales of all types of apartments in Riga also recorded a similar trend. However, the average standard apartment price in Riga was still considerably (by more than 65%) lower than the highest price registered in April 2007.

Chart 4.2

**STANDARD APARTMENT AVERAGE SELLING PRICE IN RIGA AND ITS MONTHLY RATE OF CHANGE**  
 (euro per square meter)


The price rise was also hindered by lack of quality apartments on the market, – in 2009 and 2010, the investors and population who could afford to buy a real estate, chose the best apartments available on the market thus decreasing the supply of quality flats. The insufficient choice of the standard apartments on the market contributed to increasing demand for apartments in new projects. However, the recovery of economic growth in 2011 may foster demand for real estate and thus a rise in prices. This is also supported by bank forecasts regarding further easing of standards of loans granted to households for house purchase (see Box 9).

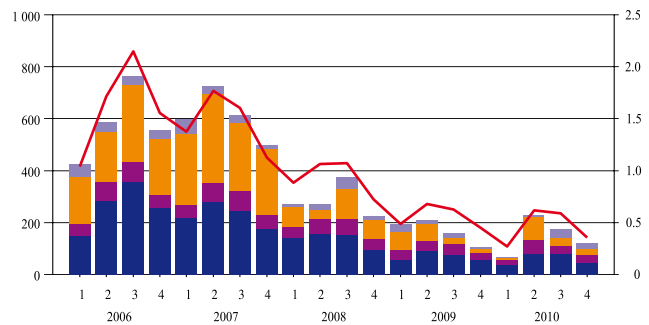
In 2010, banks actively foreclosed real estate from insolvent borrowers (both natural persons and real estate project developers). In most cases, as a result of auctions, the foreclosed real estate was made available to real estate management companies affiliated to the respective banks thus becoming important players on the real estate market. Although these real estate management companies do not currently actively engage in any activities with the foreclosed real estate, they are likely to affect the real estate market situation significantly over the next three to five years, offering the foreclosed real estate for sale or rent.

For the construction sector the year 2010 was unfavourable. The volume of construction was small (construction and repair of residential and non-residential buildings at current prices shrank by 21.5%), the construction costs continued on a downward trend (the average construction costs were 2.6% lower year-on-year) and the share of loans past due in the construction sector was high (see Section 4.2). During the year, the number of building permits issued for new residential buildings declined by 18.1% but the capacity planned in the building permits – by 15.2% (see Chart 4.3). However, in the second half of the year several project developers announced their plans to complete the unfinished new buildings and even launch new projects, justifying this by the increase in both domestic and foreign purchasers' demand for good quality apartments in new projects and the low construction costs.

Chart 4.3

**CAPACITY AND NUMBER OF NEWLY ISSUED HOUSE BUILDING PERMITS**  
 (in thousands of square meters)

■ New single apartment houses  
 ■ Renovation of single apartment houses  
 ■ New apartment houses  
 ■ Renovation of apartment houses  
 — Number of granted building permits (in thousands; right-hand scale)

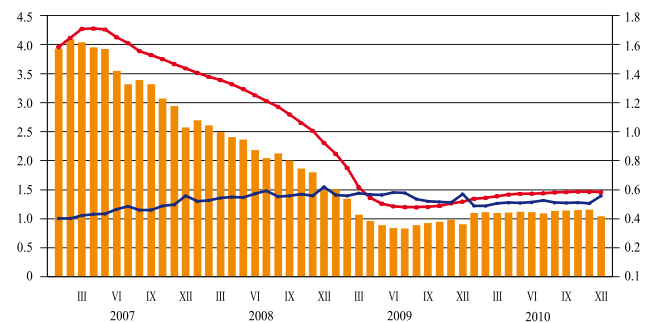


In 2010, with real estate prices moving up year-on-year, the household purchasing power of real estate declined slightly, i.e. more than average monthly net wages were already necessary for buying one square meter of a standard apartment (see Chart 4.4). However, in the course of the year purchasing power movements were moderate, pointing to the relative stability of the income to real estate price ratio. This ratio will most likely persist also in 2011, as similar to income of real estate buyers, further real estate price rises will be closely related to economic growth.

Chart 4.4

**AVERAGE NET WAGE AND SALARY AND STANDARD APARTMENT AVERAGE PRICE**

■ Ratio of real estate prices to net wage and salary  
 — Average net monthly wage and salary in Riga (in thousands of euro; right-hand scale)  
 — Standard apartment average price per square meter in Riga (in thousands of euro; right-hand scale)

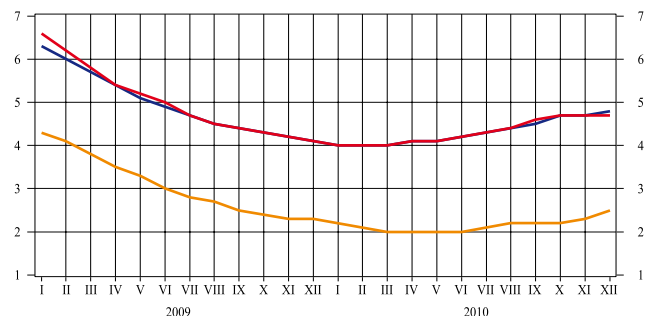


On the rental market of the housing in Riga, the trough was reached in 2010 with a minor increase in rent starting in the second half of the year (see Chart 4.5). The rent for apartments in new projects that are in good condition and that for apartments in the centre of Riga increased more rapidly as there was lack of quality apartments for rent on the market, which do not require investing additional resources. The supply of the apartments for rent that belong to foreigners – investors who have acquired real estate in Latvia with the aim of renting it – increased.

Chart 4.5

**AVERAGE RENT PRICES (UTILITY COSTS EXCLUDED)**  
 (per month; lats per square meter)

— Apartments in the centre of Riga that are in good condition  
 — Standard apartments  
 — Apartments in new projects

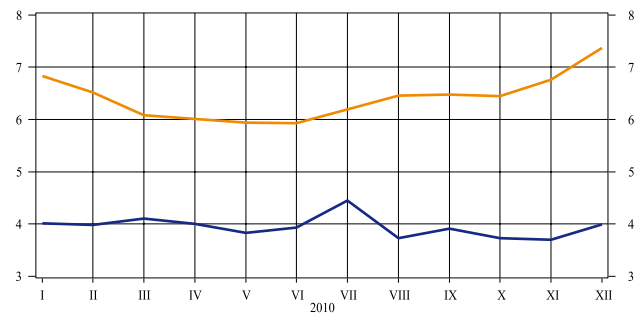


Although, with the average standard apartment price growing, the gross residential yield and net residential yield started to decrease, the resuming increase in rent and a small drop in the weighted average interest rate on a new loan granted for house purchase contributed to resuming yield. Thus, following some fluctuations over the year, at the end of 2010, both the gross rental yield and net rental yield exceeded that observed at the beginning of the year (see Charts 4.6 and 4.7). As the average standard apartment prices in Riga remained unchanged but rent grew moderately due to demand, the rental yield will continue to increase in 2011.

Chart 4.6

**GROSS RENTAL YIELD<sup>1</sup> AND WEIGHTED AVERAGE INTEREST RATE ON LOANS TO HOUSEHOLDS FOR HOUSE PURCHASE (%)**

Legend:  
— Gross yield  
— Weighted average interest rate on loans

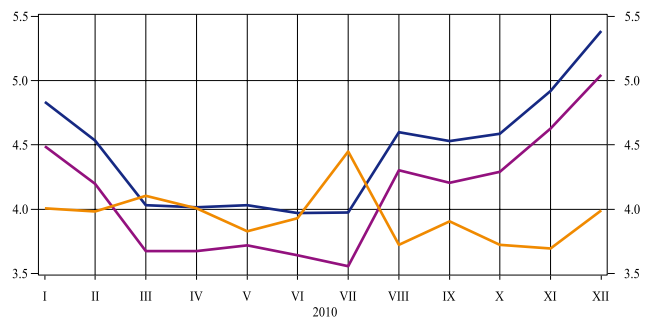


<sup>1</sup> The gross rental yield reflects the income of an apartment owner if the apartment is purchased and let out. Gross yield (per annum) = (average rent per square meter x 12 months) / (average selling price per square meter) x 100.  
 Note: The calculation of yields is based on the average rental price per square meter of standard apartments in Riga housing estates quoted in MG Media Ltd. internet catalogue Rent in Riga; the average purchase price of a standard apartment in Riga reported by Latio Ltd.; the interest rate is the weighted average interest rate on loans in all currencies to private persons for house purchase.

Chart 4.7

**NET RENTAL YIELD<sup>1</sup> WITH LOAN MATURITY OF 25 YEARS (%)**

Legend:  
— Loan with uniform payment schedule  
— Loan with decreasing payment schedule  
— Interest rate on loans for house purchase



<sup>1</sup> Net rental yield indicates the income of an apartment owner if the apartment is purchased, a loan maturing in 25 years is taken and the purchased apartment is let out. Net yield (per annum) = (average rent per square meter x average apartment space x 12 months x loan maturity in years – aggregate interest rate on credit) / (average selling or market price of apartment x loan maturity in years) x 100.

In 2010, the commercial real estate rent stopped decreasing and posted an increase in some segments (mainly trading premises and A class offices). The number of premises that are not leased also went down. The first signs of the resuming commercial real estate projects surfaced in 2010. Construction resumed within several on-going but unfinished projects; moreover, the number of building permits issued for the construction of offices and industrial production buildings and warehouses started to rise in the second half of the year, thus suggesting that both project developers and banks financing them see the potential for further development of the commercial real estate market.

**2. THE FINANCIAL POSITION OF BANKS**

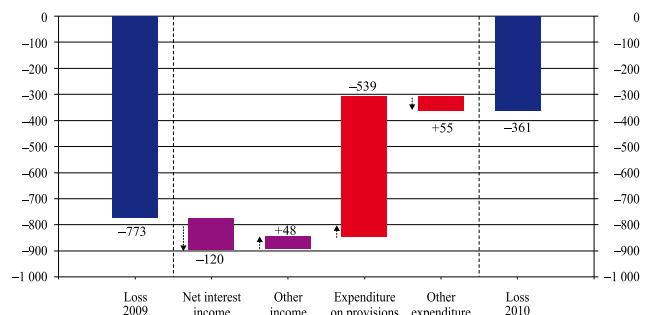
**2.1 Profitability**

**Banks concluded year 2010 with losses, albeit at a considerably smaller scale year-on-year since the need for building provisions moderated.** In 2010, total bank losses amounted to 360.7 million lats (773.4 million lats in 2009; see Chart 1). Expenditure on provisions for non-performing loans and commitments, the main reason for losses in 2010, shrank considerably (to 727.1 million lats, down from 1 266.1 million lats in 2009).

Chart 1

**BANK FINANCIAL PERFORMANCE AND ITS CHANGES (in millions of lats)**

Legend:  
█ Loss  
█ Income  
█ Expenditure  
 ↑ Positive impact on the results for 2009  
 ↓ Negative impact on the results for 2009

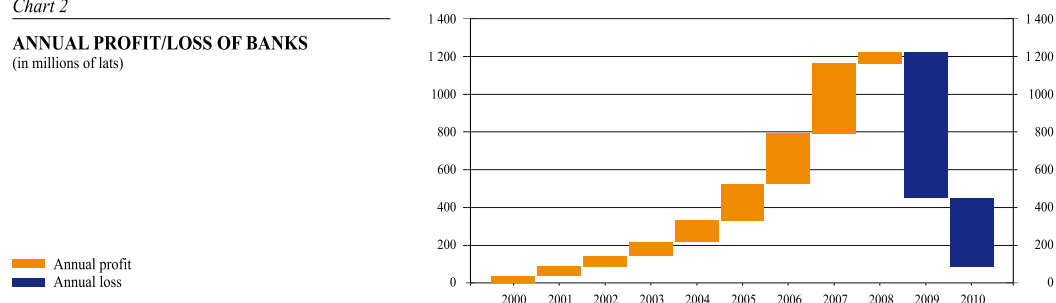


As a result of smaller losses, ROE (–20.4%; –41.6% in 2009) and ROA (–1.6%; –3.5% in 2009) improved, although still remaining in a negative territory.

Losses of the last two years were almost equal to the overall bank profit since 2000 (see Chart 2).

Chart 2

**ANNUAL PROFIT/LOSS OF BANKS**  
(in millions of lats)

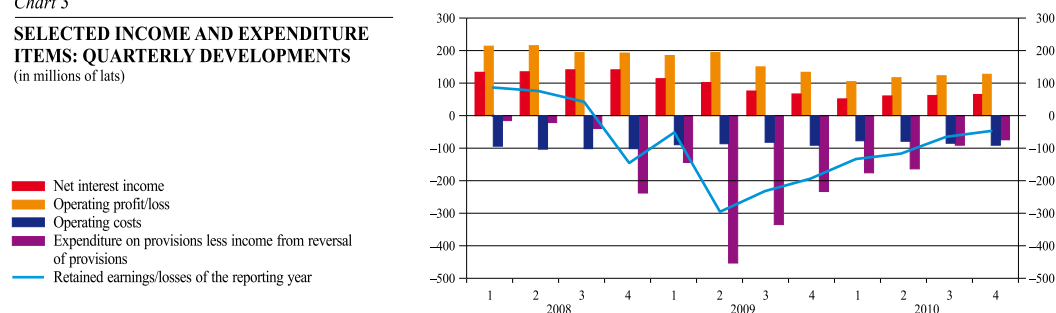


**An increasing number of banks made profit in some months.** However, only nine banks earned profit throughout 2010, with their total profit amounting to 8.3 million lats and their assets accounting for 15% of total bank assets. Losses incurred by the three state-owned banks exceeded half of total bank losses whereas their assets were a mere 15% of total bank assets.

**With each quarter in 2010 bank profitability improved:** net interest income and operating income slightly increased while expenditure on provisions and hence also losses shrank considerably (see Chart 3).

Chart 3

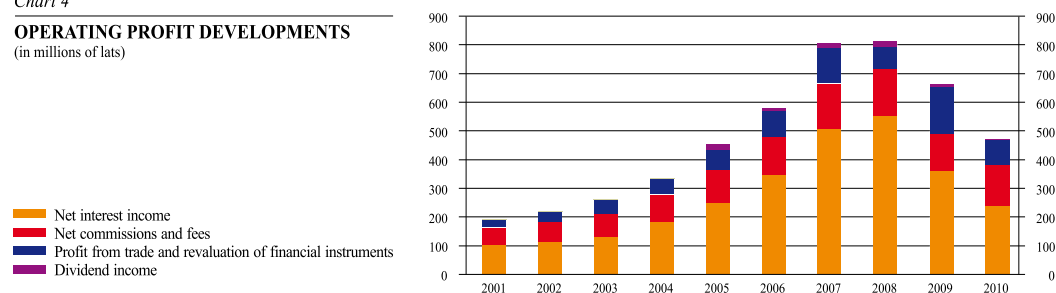
**SELECTED INCOME AND EXPENDITURE ITEMS: QUARTERLY DEVELOPMENTS**  
(in millions of lats)



**The shrinking loan portfolio and loan delinquency caused a year-on-year decrease in interest income by one third in 2010.** Interest expense also contracted by roughly one third. As a result, net interest income declined by one third year-on-year and its share in operating income narrowed from 54.1% to 50.7%. Net interest income remained the major source of operating income (see Chart 4).

Chart 4

**OPERATING PROFIT DEVELOPMENTS**  
(in millions of lats)



Interest income and/or expense of some small banks and branches of foreign banks grew over the year or their interest expense shrank more rapidly than their interest income; hence, their net interest income increased year-on-year.

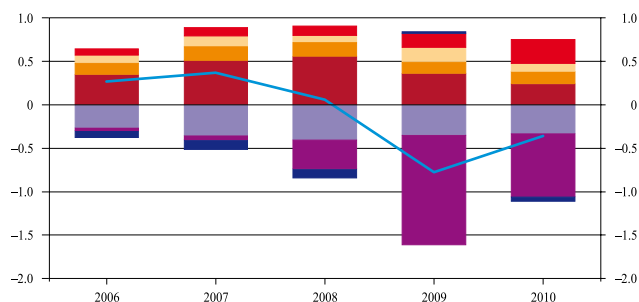
**Net income from commissions and fees** increased by 7.0%, while its share expanded from 19.8% in 2009 to 29.8% in 2010. With interest income declining, banks sought opportunities to earn other types of income, e.g. commissions and fees. Income from commissions and fees was almost the sole position of operating income posting an increase over the year though not exceeding the pre-crisis level.

Gains from trades of financial instruments and financial instrument revaluation result were smaller than in the previous year (see Chart 5).

Chart 5

#### INCOME AND EXPENDITURE BREAKDOWN (in billions of lats)

■ Net interest income  
■ Net commissions and fees  
■ Profit from trade and revaluation of financial instruments  
■ Other income  
■ Operational costs  
■ Expenditure on provisions for doubtful debts  
■ Other expense  
— Retained earnings/losses of the reporting year



**With income declining, operating income in 2010 shrank** by 28.9% (to 471.6 million lats) year-on-year. It covered the operating costs, albeit was insufficient for making provisions (see Table 1).

Table 1

#### SELECTED INCOME AND EXPENDITURE ITEMS (in millions of lats)

	2009	2010	Year-on-year changes (%)
Net interest income	358.7	239.1	-33.3
Interest income	1 014.1	684.4	-32.5
Interest expense	655.3	445.2	-32.1
Net non-interest income	304.8	232.5	-23.7
Dividend income	10.0	3.2	-68.3
Net commissions and fees	131.5	140.7	7.0
Profit from trade and revaluation of financial instruments	163.3	88.6	-45.8
Operating profit	663.6	471.6	-28.9
Operating costs	346.8	331.7	-4.4
Expenditure on provisions for doubtful debts and liabilities	1 266.1	727.1	-42.6
Other income	180.1	277.8	54.3
Other expense	108.6	54.5	-49.8
Loss (-) before taxes	-877.9	-363.9	-58.5
Loss (-)	-773.4	-360.7	-53.4

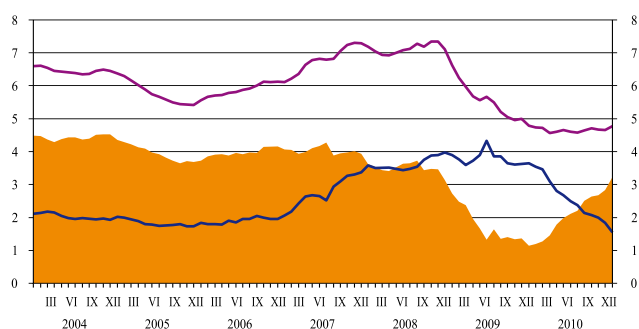
The decrease in the operating costs was minor, as banks had implemented a major review of their costs already in 2009.

**The low interest rate margin also made an additional pressure on bank profitability.** Banks started 2010 with a historic low of the transaction overall margin; over the year the margin gradually increased, exceeding 3 percentage points at the end of the year (see Chart 6).

Chart 6

#### DEVELOPMENTS OF THE OVERALL MARGIN ON BUSINESS WITH RESIDENT NON-MFIs OUTSTANDING (%)

— Weighted average lending rate  
— Weighted average deposit rate  
■ Overall margin (in percentage points)



According to forecasts, the key ECB interest rates will be raised in 2011, hence an increase in interest rates on euro transactions can be expected. Such transactions account for a considerable share in both the loans granted and deposits received.

If the solvency of bank customers does not improve, the margin may also increase. Some uncertainty with respect to customer solvency developments still persists in the financial environment: a high rate of unemployment, low wages and salaries, and an increase in tax payments and prices. The relatively inactive real estate market



makes it difficult to dispose of the pledged real estate. Thus profitability developments are closely related to credit risk changes, inter alia loan loss recognition and lending growth rate developments in the future.

Another factor that will affect bank profitability is financing, its availability and potential price rise or the so called crowding-out effect which might materialise, with EU countries refinancing large amounts of their government debt and issuing additional debt securities towards achieving fiscal budget objectives and with banks also refinancing a large share of their debt. Besides, the global instability in the Middle East may also affect it.

Moreover, due to several measures taken by the EU to strengthen financial stability (e.g. the new capital adequacy requirements, introduction of the financial stability duty, etc.) banks will incur extra costs in the coming years; hence, the price of their services will probably rise.

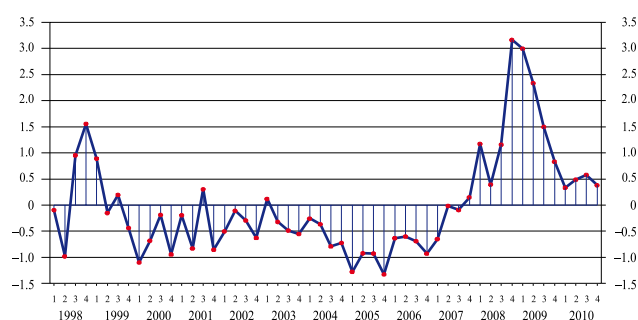
The number of banks operating with profit is expected to grow in the future; nevertheless, several banks will end year 2011 with losses.

### **Box 5. Dynamics of the financial stress index of Latvia's banks in 2010<sup>8</sup>**

*In 2010, the financial stress index (FSI) of Latvia's banking sector remained at a relatively low level, not exceeding one standard deviation of the stress index and thus pointing to the fact that the level of stress experienced by the banking system in 2010 was considerably lower than that seen in 2008 and 2009. Nevertheless, it still remained higher than in 2000–2007 (see Chart 5.1).*

Chart 5.1

#### **FINANCIAL STRESS INDEX**



*In the first quarter of 2010, the index value declined quarter-on-quarter, mostly on account of a rapid decrease in the Latvian money market rates having a downward effect on FSI throughout 2010 as the interest rates plummeted from a record high in 2009 to a historic low.*

*In the next quarters, the FSI value fluctuated around 0.5, pointing to stabilisation and stress returning to its historical average, following the high level of financial sector stress in 2008 and 2009. Such FSI behaviour resulted from the dynamics of most variables comprised in the FSI, except bank profit and loans outstanding. The contribution of several index components accounting for the high stress level in 2009 was close to zero in 2010: with the share of loans past due over 90 days stabilising, the provisions ratio in 2010 no longer rose as rapidly as in 2009; real estate prices and economic growth stabilised and even improved somewhat.*

*Nevertheless, bank losses and negative credit growth<sup>9</sup> throughout 2010 limited a potential further reduction of FSI; the stress level of Latvian banks is lower, though still remaining above the historical average.*

## **2.2. Capital Adequacy**

**At the end of the year, banks' own funds reached almost 2 billion lats. The CAR calculated by banks stood at 14.6% at the end of 2010, considerably exceeding the statutory minimum capital requirement of 8% set by the FCMC, while Tier 1 CAR was 11.5% (see Chart 7 and Table 2). The bank CAR retained its**

<sup>8</sup> The stress index reflects the stress level of Latvian banks, expressed in terms of standard deviations from the mean. Index values above (below) zero indicate whether the stress is above (below) the historical mean. The stress index incorporates changes in loans granted to residents, changes in resident and non-resident deposits, changes in liabilities to MFIs, bank profit, changes in provisions ratio, changes in interbank money market rates (RIGIBOR), changes in NASDAQ OMX Riga index OMXR, and changes in real GDP and real estate prices. For methodology for the index calculation see the Bank of Latvia Financial Stability Report, 2009, p. 20.

<sup>9</sup> Negative credit growth contributes to an increase in the stress index as it is characteristic of a weak demand for loans and/or points to a limited supply. Limitations on the supply side suggest that banks are unwilling to assume additional risks and that testifies to increasing risks in the financial system whereas the moderation of the demand for loans testifies to a downside in the economic activity and deterioration of solvency of bank customers, materialising in credit risk growth and thus creating stress in the financial system.

historic high as an increase in the bank capital and a decrease in RWA fully offset the impact of bank losses for 2010 on the CAR.

Chart 7

### CAR DEVELOPMENTS (%)

(%)

■ CAR  
● Tier 1 CAR  
— Minimum capital requirement

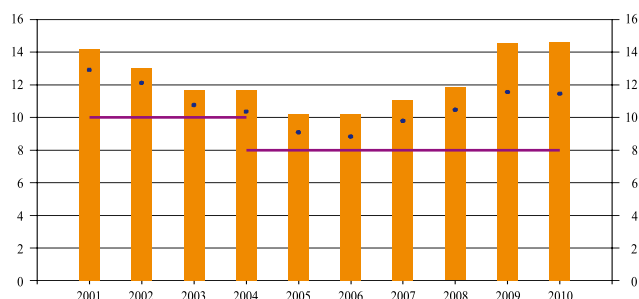


Table 2

### OWN FUNDS OF BANKS, CAPITAL REQUIREMENT AND CAR

(at end of period; in millions of lats)

	2009	2010	Year-on-year changes (%)
Own funds	2 050.4	1 925.1	-6.1
Tier 1 capital	1 630.0	1 538.6	-5.6
Paid-up share capital	1 616.9	1 887.2	16.7
Capital requirement	1 126.9	1 052.0	-6.6
Capital requirement for credit risk	1 016.6	948.8	-6.7
Capital requirement for position, foreign exchange and commodities risks	18.7	14.6	-21.9
Capital requirement for operational risk	91.5	88.6	-3.2
CAR (%)	14.6	14.6	0
Tier 1 CAR (%)	11.4	11.5	0

In 2010, the **paid-up share capital of banks** posted a notable rise, reaching 1 887.2 million lats at the end of the year. It remained the main source of the banks' own funds, ensuring high overall quality of the bank capital.

**In 2010, 14 banks expanded their capital**, with the overall increase amounting to 324.4 million lats, including a rise of 278.8 million lats, 20.7 million lats and 24.8 million lats in the paid-up share capital, subordinated capital and reserve capital respectively. Some banks are planning to increase their capital also in 2011.

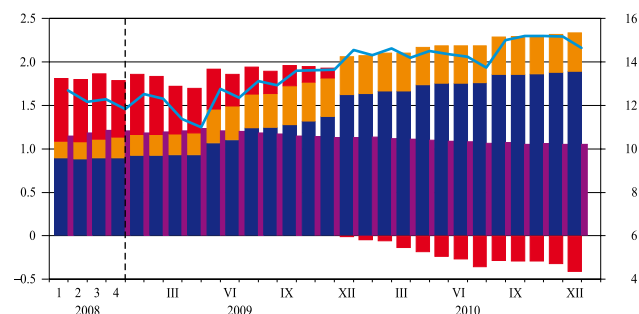
**The amount of the bank capital requirements continued on its downward trend** (see Chart 8). It was related to a decline in the capital requirement for credit risk exposure both on account of the accumulated provisions as well as the repaid and written-off loans. The requirement regarding other risks did not post any material changes, with its share in the total capital requirement also remaining a mere 10%.

Chart 8

### CAPITAL AND CAPITAL REQUIREMENT DEVELOPMENTS

(in billions of lats)

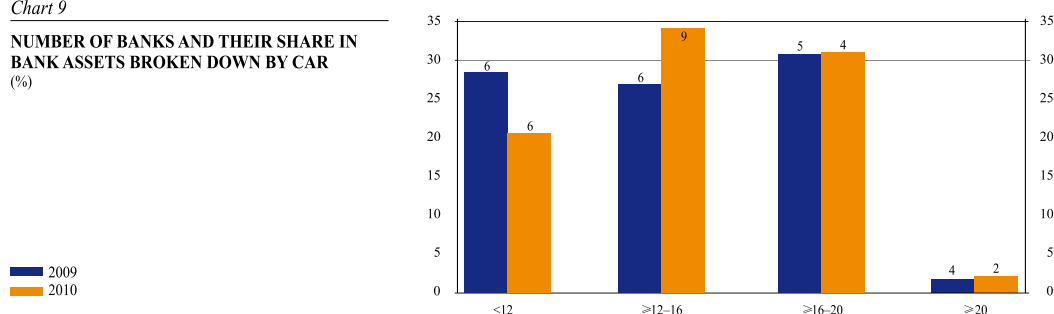
■ Paid-up share capital  
■ Subordinated capital  
■ Other capital  
■ Summary of capital requirement calculation  
— CAR (%) (right-hand scale)



All banks fulfilled the capital requirement, and the CAR of almost all banks even exceeded 10%. The range of the CAR remained quite broad. The share of the banks with their CAR exceeding 12% increased considerably (see Chart 9).

Chart 9

NUMBER OF BANKS AND THEIR SHARE IN BANK ASSETS BROKEN DOWN BY CAR (%)



### Box 6. Major changes in the banking regulation in Latvia

"Amendments to the Law 'On Credit Institutions'", adopted by the Saeima of the Republic of Latvia on 23 December 2010 and effective as of 21 January 2011, revise the definition of the term "group of connected clients", providing that, apart from the factors stipulated before, risks incurred by the clients due to a common major source of funding should be taken into account when identifying such a group. The previously stipulated exemption from exposure restrictions with respect to exposures to a credit institution or investment brokerage firm with maturity of up to one year has been cancelled; a restriction in the amount of 25% of the bank's own funds has also been stipulated for such large exposures. In order to mitigate the impact of the above changes on the operation of the small banks (their ability to execute settlements and reduce costs arising from the maintenance of additional correspondent accounts), an opportunity to apply an alternative quantitative restriction in the amount of 100 million euro has been provided for exposures to a bank or an investment brokerage firm where this amount exceeds 25% of the bank's own funds but does not exceed the bank's own funds.

The amendments provide for the rights and obligations of the institutions involved in the supervision of cross-border groups with regard to risk assessment of the consolidation group and the financial institutions therein and for stipulating the capital required for its coverage, supervision measures and sanctions, and exchange of information; they also stipulate the procedure for making the joint decisions on risk assessment and the related additional capital requirements. The amendments stipulate the criteria and procedure for identifying a significant branch of a credit institution.

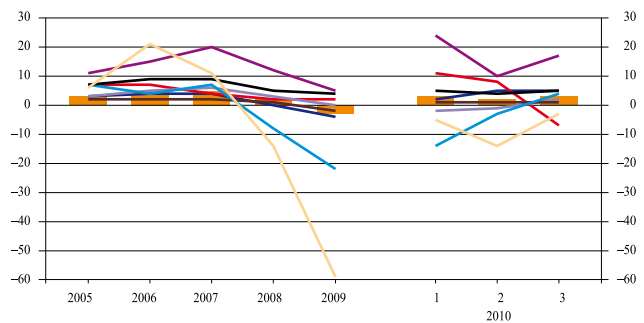
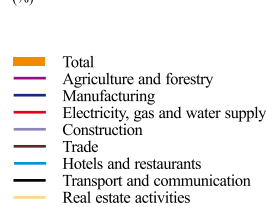
To improve the process of credit institution restructuring, a provision has been incorporated in the law delegating the FCMC the right to exempt a credit institution transferring or taking over the divested assets of another credit institution in case of a transfer of a credit institution entity from one or several provisions regulating credit institution operation for a period of up to three years. During the above period, the credit institution is prohibited from receiving new deposits and other repayable funds from an unrestricted scope of clients and from granting new loans or expanding the limits of the existing loans; the credit institution shall be liquidated after the period of exemption established by the FCMC has expired if the credit institution has failed to ensure compliance of its operation with the provisions of the Law "On Credit Institutions".

## 3. BANK CREDIT RISK

### 3.1 Financial Vulnerability of Bank Customers

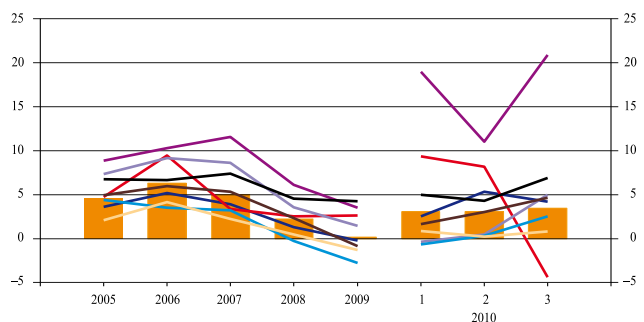
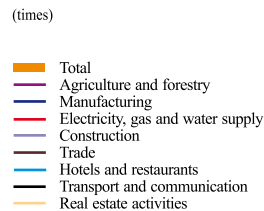
The economic recovery observed in 2010 was *inter alia* reflected in the growing turnover and profits of non-financial corporations pointing to restoration of profitability in several sectors in comparison with the financial results for the year 2009 aggregated for non-financial corporations operating in Latvia (see Chart 10). Although direct comparison with the results of the financial year is impossible because of the diverging income and expenditure cycles of sectors by quarter and the range of respondents, conclusions can be drawn about the trends characterising the changes in the profitability of non-financial corporations surveyed by the CBS in 2010. The overall improvement in profitability was spurred by cost reductions and business optimisation as well as growing sales on external markets. Although the quarterly data suggest that the profitability in most sectors (real estate activities, construction, hotels and restaurants) is significantly below the pre-crisis levels, in some sectors (manufacturing, agriculture and forestry, electricity, gas and water supply) it already approaches the pre-crisis levels.

Chart 10

**PROFITABILITY OF NON-FINANCIAL CORPORATIONS (%)**


Against the background of higher profitability, the ability of non-financial corporations to pay interest (i.e. the ratio of earnings before interest and taxes to interest expense) improved in the first three quarters of 2010, suggesting a gradual reduction in the insolvency risk (see Chart 11). The improvement of this ratio was determined by both increased earnings before interest and taxes as well as shrinking interest expense on account of EURIBOR and RIGIBOR lingering at their historical lows (despite a slight rebound in EURIBOR in the second half of 2010). Nevertheless, the estimated interest coverage remained too low in the sectors of real estate activities as well as hotels and restaurants in 2010, as their operation and business expansion was based on the use of extensive financial leverage. Accumulation of losses incurred by the real estate sector, whose borrowing accounts for more than one third of the aggregate loan portfolio of banks, on the balance sheets of commercial companies leads to subsequent foreclosure of collateral by banks.

Chart 11

**INTEREST COVERAGE RATIOS OF NON-FINANCIAL CORPORATIONS (times)**


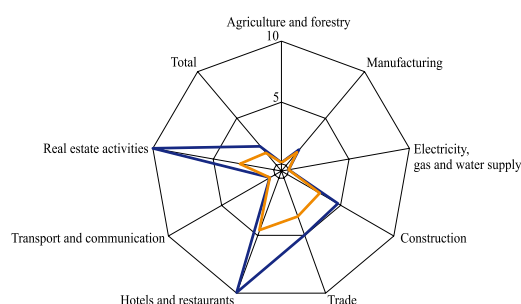
The probability that the upside risk to inflation will materialise in raising of the central bank policy rates becomes increasingly higher in 2011. Interest rates on loans payable by non-financial corporations will be mostly affected by the ECB decisions on increasing the key ECB interest rates, as the euro loans granted by banks constitute over 90% of the aggregate loan portfolio. Any potential increase in the payable interest rates on loans and the subsequent deterioration of the debt service abilities will aggravate the insolvency risk for highly-leveraged non-financial corporations.

The balance sheets of the previous years show that **the financing structure of non-financial corporations has become increasingly more dependent on external financing sources which, against the background of contracting sales in 2009, had a direct impact on the financial stability of non-financial corporations and their ability to meet commitments.** Although the aggregate liabilities of non-financial corporations remained broadly unchanged in 2009, operational losses had a negative effect on the size of equity. Deterioration of the total liabilities to equity ratio in 2009 was more pronounced in the sectors of real estate as well as hotels and restaurants, where the equity decreased two-fold (see Chart 12). Equity contracted also in construction and trade. The only sectors that were able to increase equity were energy, gas and water supply, and mining and quarrying. The gradual recovery of profitability in 2010 enabled several sectors to boost capital, yet the overall decline in liabilities of non-financial corporations was negligible. The persistently high debt levels in sectors previously oriented towards satisfying the rapidly growing domestic demand (real estate activities, trade, construction, hotels and restaurants) point to high financial vulnerability of those sectors.

Chart 12

**LIABILITIES TO EQUITY RATIO OF  
NON-FINANCIAL CORPORATIONS**  
(times)

— 2008  
— 2009



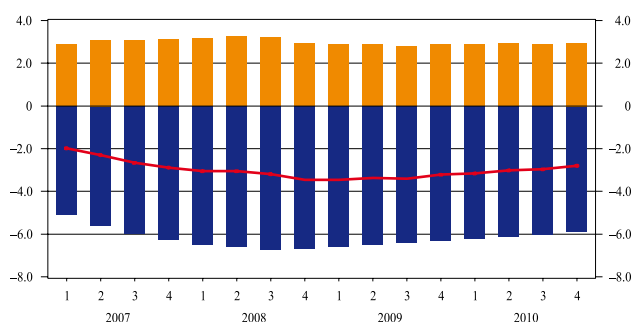
Several measures implemented by the government to support business start-ups and facilitate the operation of small enterprises (the introduction of small capital limited liability companies and a fixed tax rate for micro-businesses) were successful: 13.4 thousand entities were registered with the Commercial Register of the Enterprise Register of the Republic of Latvia in 2010, representing a 45% increase year-on-year. This is also confirmed by the data registered by LURSOFT, according to which more than 40% of the limited liability companies registered in 2010 were small capital limited liability companies with reduced equity of up to 2 000 lats. In parallel to business start-up attempts, the consequences of the crisis were reflected in the number of filed insolvency applications, particularly with regard to non-financial corporations in real estate or construction related areas. The number of insolvency proceedings started in 2010 (2.6 thousand) was similar to that in 2009, when almost a 60% year-on-year increase was observed. Another indication of looming insolvency risk is the conclusion published by LURSOFT in mid-summer 2010 that more than 40% of the 2009 annual reports of non-financial corporations processed by LURSOFT report negative equity. It suggests that the number of non-financial corporations showing actual insolvency signs (failure to reorganise business could lead to their bankruptcy) is much bigger than follows from the statistics on ongoing insolvency proceedings.

**The negative net position of households *vis-à-vis* banks continued to shrink in 2010, mainly on account of contracting long-term liabilities.** At the end of 2010, the negative net position to GDP amounted to 22.0% (2.6 percentage points lower year-on-year; see Chart 13). In a year, the long-term household debt *vis-à-vis* banks decreased by 364.9 million lats or 6.5%, whereas the short-term debt grew by 17.5 million lats or 3.7%. Despite some volatility throughout the year, household deposits expanded in 2010 overall.

Chart 13

**HOUSEHOLD DEPOSITS WITH MFIs AND  
NET POSITION *VIS-À-VIS* MFIs, DEBT TO  
MFIs AND LEASING COMPANIES**  
(in billions of lats)

■ Household debt to MFIs and leasing companies  
■ Household deposits with MFIs  
— Net position of households *vis-à-vis* MFIs



**The overall rate of decline of the household debt to financial institutions<sup>10</sup> accelerated, yet higher interest rates may pose a risk to the solvency of households.** With the growth in household lending remaining below the repayments and write-offs of the existing debt, aggregate debt in nominal terms continued to decrease in all quarters of 2010 (by an average of 91.2 million lats per quarter), while its rate of decline at 6.4% exceeded that in 2009 at 6.0%. The ratio of debt to GDP also shrank to 46.3%, representing a 1.8 percentage point decrease year-on-year (see Chart 14).

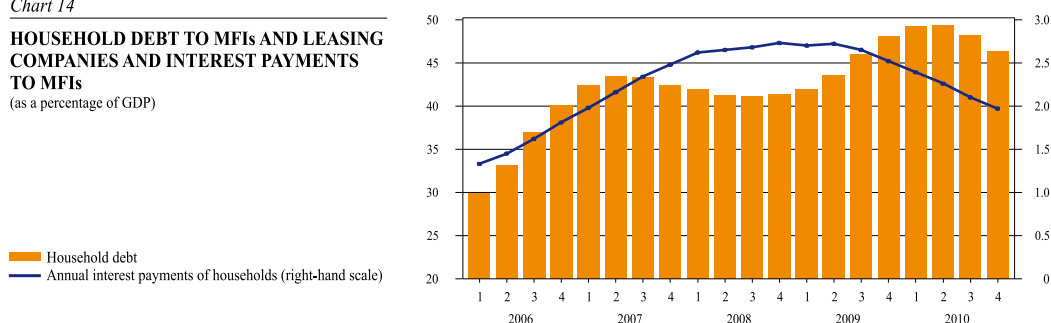
**RIGIBOR continued on a downward trend, whereas EURIBOR remained persistently low; therefore, the interest payable by households also decreased further.** The shrinking of the aggregate household loan portfolio also contributed to the decline in interest payments. With the growth in household loan delinquency in 2010 decelerating, delinquent loans had a more moderate effect on the shrinking of the interest payments as compared to the previous year. Nevertheless, as the base rates currently remain low, there is a risk that their

<sup>10</sup> *Vis-à-vis* banks, leasing companies and credit unions.

Chart 14

### HOUSEHOLD DEBT TO MFIs AND LEASING COMPANIES AND INTEREST PAYMENTS TO MFIs

(as a percentage of GDP)



expected rise may result in higher household loan delinquency. Household loan portfolio primarily consists of euro-denominated borrowing, mostly at floating interest rates which are linked to 3- or 6-months EURIBOR. Consequently, any changes in EURIBOR would affect a large part of household borrowers, particularly those who already find it difficult to cover their monthly debt payments.

**Household solvency remains threatened by the unfavourable conditions on the labour market: unemployment remains high, remuneration is also stagnant.** Although the number of unemployed and unemployment rate started to decrease in 2010, registered unemployment remained high at the end of the year at 14.3%.<sup>11</sup> The net wage and salary<sup>12</sup> also continued to shrink year-on-year, albeit at a decelerated rate. At the end of the year, the average wage and salary remained at the level of the end of the previous year, suggesting a probable reversal in the downward trend in wages and salaries.

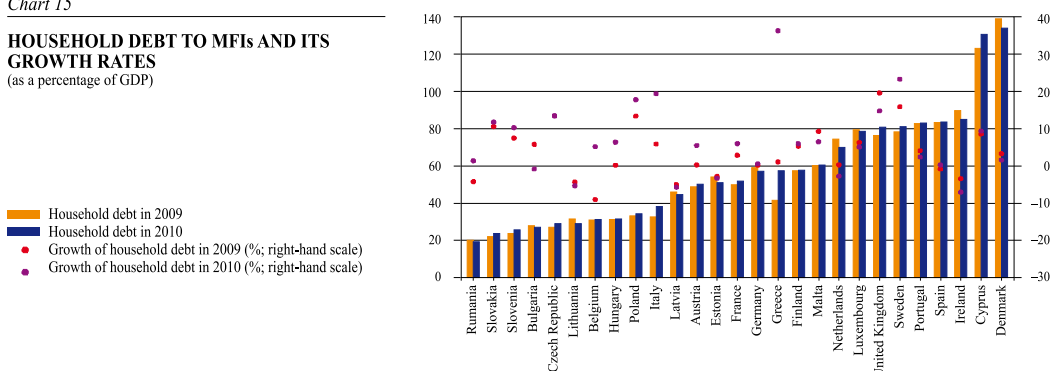
**After a longer break, the rising prices again started to exert a downward pressure on the purchasing power of households.** Although the average level of consumer prices in 2010 was lower than the year before, the prices on goods started to increase towards the end of the year, mainly as a result of the sharp rise in oil prices supported by the US dollar appreciation and due to higher food prices. With no significant increase in household income, such a price rise affecting both the prices on consumer goods as well as services (including utilities) in combination with potentially higher base rates considerably increases the insolvency risk for households. The survey of households conducted by the Bank of Latvia (see Box 7) also points to deterioration of the financial position of household borrowers in comparison with the previous year.

**Although the ratio of household debt to GDP in Latvia is lower as compared to most EU countries, it remains higher than in majority of Central and East European countries** (see Chart 15). Nevertheless, as in part of the Central and East European countries household debt to GDP increased in 2010, while in Latvia it decreased, it is expected that the level of debt in Central and East European countries will become more homogenous in 2011.

Chart 15

### HOUSEHOLD DEBT TO MFIs AND ITS GROWTH RATES

(as a percentage of GDP)



Sources: ECB and Eurostat. Debt ratio calculations for some countries use the Eurostat forecast of GDP for 2010.

<sup>11</sup> Source: State Employment Agency.

<sup>12</sup> Source: CSB. Net wage and salary: remuneration calculated by subtracting the compulsory state social insurance contributions paid by employees and personal income tax from the gross wage and salary. Average monthly net wage and salary is estimated by dividing the gross or estimated wage and salary fund by the average number of staff in full-time equivalents.

### Box 7. Review of household survey results in 2010

In 2010, the Bank of Latvia commissioned FACTUM Ltd. to conduct an annual household survey "The Monetary and Banking System in Latvia". The survey was conducted from 21 May to 4 June 2010 and 1 000 replies from respondents were received.

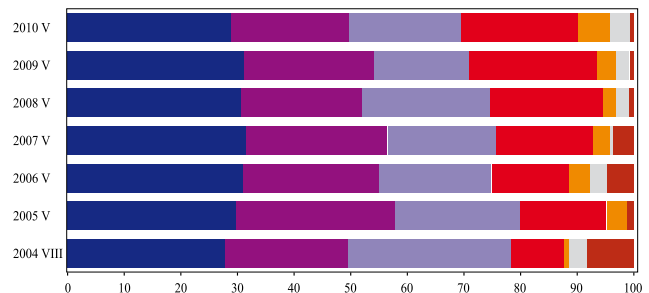
According to the results of the survey, 28.9% of population had taken a loan from a bank or a leasing company in 2010 (see Chart 7.1), representing a 2.4 percentage point decrease in comparison with the previous year's survey. Insufficient income remained an important preventing factor in undertaking loan commitments; nevertheless, the unwillingness to be in debt has gained significance during the last three years.

Chart 7.1

#### DISTRIBUTION OF RESPONDENT REPLIES ON EXISTENCE OF CREDIT LIABILITIES AND THE REASONS FOR ABSTAINING FROM NEW CREDIT LIABILITIES

(% of all replies)

- I have a loan from a bank or a leasing company
- I cannot afford it
- There is no need
- I do not want to be in debt
- I do not trust banks/leasing companies
- Other reason
- Hard to say



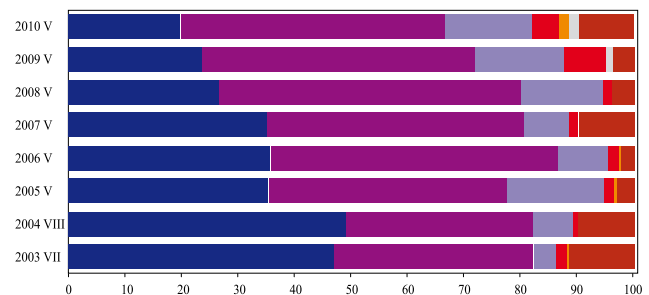
The solvency of borrowers continued to deteriorate, as the proportion of borrowers spending less than 30% of their monthly income to pay against debt obligations (considered a safe threshold for the ratio of monthly loan payments to income) decreased. In 2010, this proportion was merely 66.4% in comparison with 71.8% in 2009 (see Chart 7.2). The proportion of borrowers unsure as to what part of income they use to cover their debt obligations increased considerably, which may be related to instability in household income (changes in wages and salaries, lay-offs). This is also confirmed by the replies to the question concerning the changes in family income that have occurred during the previous year: only 10.1% of the borrowers stated that their family income had not decreased during the year, whereas 35.2% indicated that their income had shrunk by more than 30%.

Chart 7.2

#### PART OF HOUSEHOLD INCOME SPENT ON REPAYMENT OF CREDIT LIABILITIES

(of respondents with loans)

- Up to 10%
- 11%–30%
- 31%–50%
- 51%–80%
- More than 80%
- Income is below the monthly payments
- Hard to say



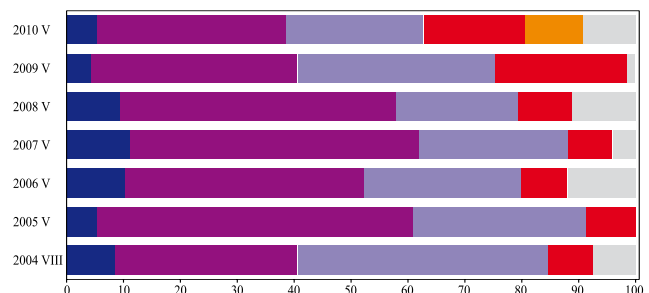
The evaluation of loan repayment ability should the monthly payments grow by 20%–25% also remained pessimistic (see Chart 7.3). Despite a minor increase (5.2%) in the share of borrowers whose income was sufficiently high not to be affected by the above rise in costs in 2010, it still remained much lower than the average level in 2006–2008 (10.2%). The share of borrowers able to meet the debt obligations on account of curbing other expenditure should the monthly payment grow also remains small.

Chart 7.3

#### EVALUATION OF MONTHLY LOAN REPAYMENT ABILITIES SHOULD THE MONTHLY LOAN PAYMENTS INCREASE BY 20%–25%

(of respondents with loans)

- My income is sufficiently high and these changes would not affect my solvency
- I would be still able to repay the loan, yet I would have to cut other expenditure
- I would have to ask the bank to change the repayment schedule by extending the loan maturity and reducing the monthly payments
- I would no longer be able to make the monthly payments
- I am already unable to make the monthly payments
- Other reply



Household plans to take new loans were broadly unchanged in 2010 as compared to 2009. As in the previous year, more than 90% of the survey respondents had no plans to take on new loans in the next year's time.

Overall, the household survey results suggest that the borrowers' position has deteriorated: income has decreased, the part of income spent on monthly payments against debt obligations has increased and the ability of borrowers to absorb a potential rise in the monthly payments has also weakened. The cautious attitude of the respondents towards taking new loans within the next year's time can be explained by the unfavourable economic situation at the moment of the survey.

#### **Box 8. Changes in the provisions of the Insolvency Law**

The Parliament of the Republic of Latvia adopted the Insolvency Law on 26 July 2010 (effective from 1 November 2010), following lengthy debates throughout 2010. Although the previous law was only in effect for two years, with the financial crisis affecting the economic agents, a solution to speed up the liquidation of unviable non-financial corporations, support the return of economically active population under the heavy burden of excessive debt to economically active environment and, finally, facilitate faster and more effective recovery of creditor funds was required.

Firstly, the new Insolvency Law was developed, in order to improve and streamline the insolvency proceedings for legal entities by clarifying the rights of various creditors, which would overall support the mitigation of lending risks. Faster insolvency proceedings enable to start immediate sales of the debtor's property, thereby aiming to sell the assets of legal entities at their maximum value. According to the new law, an insolvent legal entity can resort to two proceedings: workout proceedings and insolvency proceedings.

The law provides that, upon submission of an insolvency petition of a legal entity, a creditor shall make a deposit in the amount of two minimum monthly wages into a dedicated account opened by the Insolvency Administration; this will cover the costs of the insolvency proceedings of the particular legal entity. Higher costs of insolvency proceedings preclude the creditors from using the insolvency proceedings against solvent legal entities to speed up debt collection; this fact is also confirmed by a significant decrease in the number of initiated insolvency proceedings. Nevertheless, there is a risk that, the creditor (including the SRS) being unsure about the probability of the recovery of the debt and the debt collection costs, the number of out-of-business entities in the total number of legal entities might increase.

Secondly, the new Insolvency Law provides for significant changes in the insolvency proceedings of a natural person, whereby he/she can be released from unfulfillable debt obligations and his/her solvency can be restored. It has to be noted that the insolvency proceedings of a natural person have been split into two proceedings: bankruptcy proceedings and the subsequent proceedings for the discharge from debt obligations. The new law narrows down the range of persons entitled to launch natural person insolvency proceedings and also sets several restrictions on applying the insolvency proceedings, thereby reducing the previously wide-spread concerns that the proceedings might be misused to write off debt obligations.

The insolvency proceedings cannot be applied to a person who intentionally provided untrue information to the creditors within a period of three years prior to announcing the insolvency proceedings or a person who has used at least 30% of the granted loan for purposes outside the scope of the contract. In addition to the above-mentioned restrictions, the debt discharge proceedings are not applicable when the debtor, within a period of three years prior to announcing natural person insolvency proceedings, has concluded deals that have caused the insolvency or incurred losses to the creditors, and also when the debtor has intentionally provided untrue information concerning his/her property status and failed to disclose his/her real income. Thus the above law provides for tighter criteria to evaluate the acts of the person. The obligation imposed on the administrator to sell off the debtor's property within a period of six months enables better satisfaction of creditor claims and provides the debtor whose property and income are insufficient to cover all obligations an option to be freed from the obligations upon expiry of a specific period (of 1 to 3.5 years depending on the size of the debt and the size of uncovered obligations after the completion of the debt set-off proceedings) and restore solvency.

At the same time, due to lower costs of proceedings, insolvency proceedings have become considerably more accessible to wider public. Natural person insolvency proceedings provide for a first deposit in the amount of two monthly minimum wages as well as a monthly payment to creditors of 30% of income, but no less than 1/3 of the minimum wage. The above amendments have resulted in an increase in the number of filed natural person insolvency petitions. Considering that the statutory provisions rely on fair behaviour on the part of



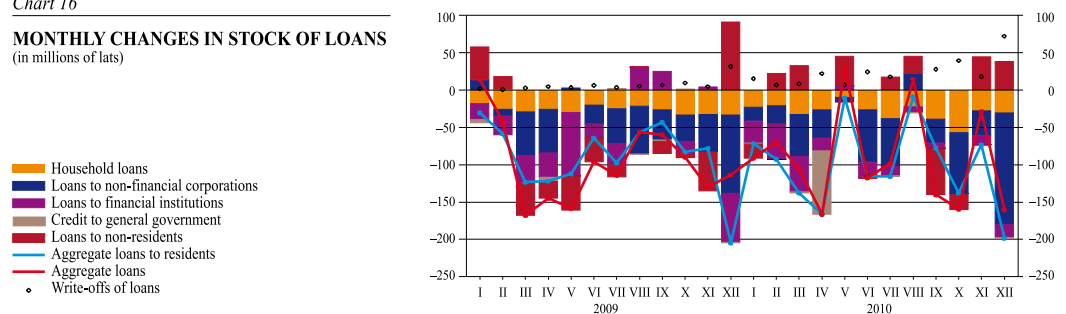
the debtor, using the insolvency proceedings as a means of settlement between the debtor and creditors when the debtor and the creditor have failed to reach an agreement on the fulfilment of obligations, there are no indications that insolvency proceedings are widely used just to get rid of debt obligations.

### 3.2 Banking Sector Loan Portfolio Shifts and Quality

**The aggregate loan portfolio of banks continued to shrink throughout 2010:** from 15.43 billion lats at the beginning of the year to 14.33 billion lats at the end of the year (by 7.1%), with the decrease accelerating in the fourth quarter of 2010 as a result of more active write-offs of bad debts. Although non-financial corporations and financial institutions were the most significant contributors to the decline of the aggregate loan portfolio, the loan portfolio of households also shrank considerably (see Chart 16). As at the end of December 2010, loans to non-financial corporations and household loans had contracted by 8.2% and 5.7% year-on-year respectively.

Chart 16

#### MONTHLY CHANGES IN STOCK OF LOANS (in millions of lats)

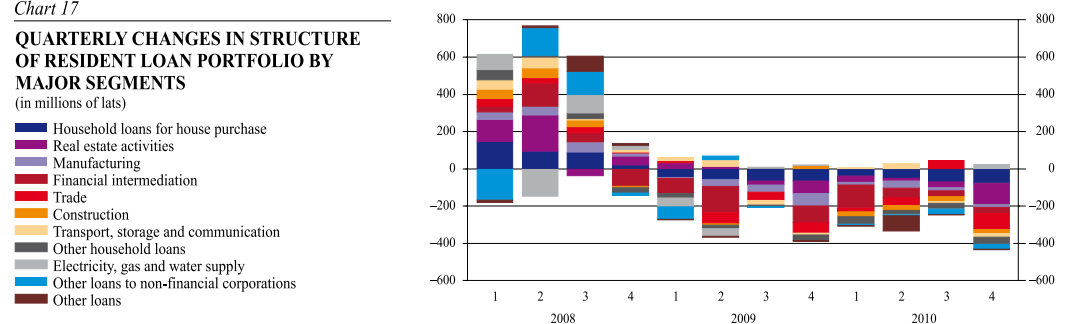


**With banks focussing on earning opportunities outside Latvia, non-resident loan portfolio grew by 6.4% in 2010** (to 1.88 billion lats), accounting for 13.1% of the aggregate loan portfolio of banks. Lending to non-residents involves additional risks (i.e. sovereign, legal and reputational risk), and proper management of those risks is considerably more difficult due to reasons like credibility of information about the borrowing entity's owners, business and financial results as well as collateral administration; therefore, any further strengthening of non-resident lending could become a noteworthy source of risk.

**Domestic loans continued to shrink in practically all segments** (see Chart 17). In absolute terms, the most significant reduction in loans was observed in real-estate-related segments (household loans for house purchase, real estate activities and construction), which can be explained by sizeable loan repayments and write-offs of unrecoverable debts. With banks cutting back on financing to their leasing subsidiaries, loans granted to financial and insurance activities also contracted notably. Although overall banks report a slight easing of the credit standards, particularly vis-à-vis export-oriented non-financial corporations (see the results of the bank lending survey in Box 9), so far the lending growth remains in a negative territory.

Chart 17

#### QUARTERLY CHANGES IN STRUCTURE OF RESIDENT LOAN PORTFOLIO BY MAJOR SEGMENTS (in millions of lats)



**The contraction of the bank loan portfolio is still a result of deleveraging on the balance sheets of banks as well as non-financial corporations and households, and of the lack of stable preconditions for lending recovery.** The level of debt accumulated during the lending and real estate market boom was significant for banks, non-financial corporations (particularly in domestic demand oriented sectors) and households alike. Stronger risk aversion and unwillingness to undertake new debt is typical of a crisis as well as a period that follows immediately after the crisis, especially against the background of a significant fall in real estate prices

and when the crisis is characterised by a large proportion of delinquent loans and there is a lack of incentives to restore economic growth. Although the overall more favourable macroeconomic situation supported both a slight easing of the credit standards applied to creditworthy customers as well as an increase in demand for certain loans, recovery of lending would require the presence of sustainable economic growth factors: predictable business conditions (mostly taxes) and sustainable economic restructuring measures that improve the credibility of the national development, facilitate gradual reduction in unemployment and restoration of the profitability of non-financial corporations. Currently, the labour market remains fragile and the economic recovery prospects are insufficiently strong; therefore, the insolvency risk of borrowers remains high and the demand and supply of loans is dampened. The latest government decisions in the area of fiscal consolidation that increased the tax burden also have a negative effect on confidence. Considering the need of further fiscal consolidation effort, a predictable tax policy in the medium-term perspective is essential to enhance the borrowing of both non-financial corporations and households.

**The recovery of economic growth and the willingness of banks to return to profit will support gradual activating of lending.** The financial position of both non-financial corporations and households is gradually, albeit slowly improving. Moreover, further shrinking of loans will continue to be supported by the write-offs of lost loans. In 2011, the loan portfolio could grow in some promising export-oriented sectors, yet the share of those sectors in the loan portfolio is small. Banks compete mainly to attract creditworthy customers, and their conservative lending policies compress the range of potential borrowers which is already narrow as it is. Also some amendments to laws (amendments to the Insolvency Law, application of the VAT on income from auctioning real estate collateral) will make banks even more cautious when evaluating the credit risk of borrowers. In 2011, the same as in 2010, foreclosure of mortgage properties, their maintenance or implementation of disposal strategies will remain a significant challenge for banks.

**Loans past due over 90 days increased in 2010, albeit at a considerably slower rate than in 2009.** With debt servicing problems persisting (mainly for borrowers with a heavy debt burden), the share of loans past due over 90 days continued to expand in the first half of 2010 from 16.4% at the end of December 2009 to 19.0% at the end of June 2010 (see Chart 18). As the economy showed some signs of recovery and banks restructured part of the loan portfolio, positive signals in terms of the loan portfolio quality were also observed in the second half of the year. Having peaked at the end of September at 19.4%, the share of loans past due over 90 days contracted slightly towards the end of 2010 and edged down to 19.0% at the end of December. This could suggest that a turning point with regard to the loan quality has been reached. Although the contraction of the loans past due over 90 days in the fourth quarter is mostly explained by the write-offs of lost loans, a significant decrease in new loans past due warrants some optimism, suggesting that no further increase in loans past due over 90 days can be expected in the nearest months (see Chart 19).

Chart 18

**LOANS PAST DUE OVER 90 DAYS, PROVISIONS MADE, THEIR SHARE IN AGGREGATE LOAN PORTFOLIO OF THE BANKING SECTOR**

(in billions of lats)

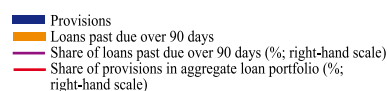
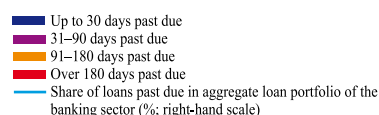


Chart 19

**LOANS PAST DUE AND THEIR SHARE IN AGGREGATE LOAN PORTFOLIO OF THE BANKING SECTOR**

(in billions of lats)



**In the first half of 2010, banks continued to build considerable loan loss provisions, and this was one of the main reasons behind the sizeable losses incurred.** The share of aggregate provisions in the loan portfolio of banks grew from 9.4% at the end of December 2009 to 12.0% at the end of July 2010 (peak value) and decreased slightly thereafter, standing at 11.7% at the end of December. The process of building provisions for loans with deteriorating quality continued also in the second half of the year; nevertheless, with the economy starting to recover, it was established that the provisions accumulated for some loans and groups of loans (during the previous periods on the basis of prudent estimates) were too big, thus in these cases the provisions were reduced. Write-offs of lost loans were another important factor behind the shrinking of provisions in the second half of the year.

**Loans past due over 90 days are likely to decrease in 2011, yet the extent will depend on how quickly the banks will manage to clean their balance sheets of unrecoverable loans.** Although the quality of the restructured loans is expected to deteriorate in 2011, taking into account the gradual improvement in the financial position of borrowers against the backdrop of favourable domestic and stable external macroeconomic environment factors, no significant worsening of the loan portfolio quality can be anticipated. The imminent loan write-offs (as suggested by the persistently high percentage of loans in workout) will shed toxic loans from the loan portfolio.

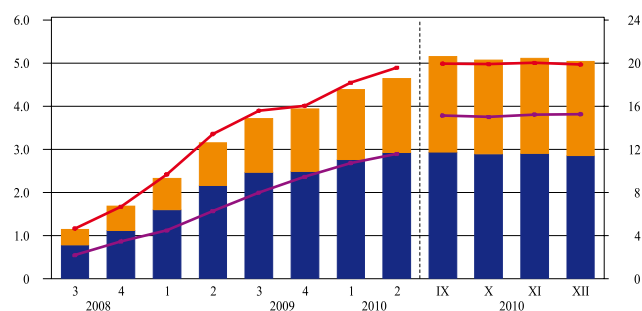
**Writing off long-delinquent payments does not necessarily mean lower risks for banks.** In 2010, banks began active foreclosure of collateral securing defaulted loans. The above collateral is increasingly more often sold at auctions to related corporations engaged in real estate management and sales. If the collateral is purchased using the funds lent by the bank or injected capital, the risks for the bank could remain broadly unchanged at a consolidated level, as the bank still remains vulnerable to the real estate market developments. Although at the current juncture the amount of assets shifted to the balance sheets of related companies is insignificant, considering the exceptionally high share of loans in workout, the process could accelerate significantly in 2011. In the medium term, the low liquidity of the real estate market and the low prices could considerably affect the operation of those real estate management corporations and, consequently, also the relevant banks. In order to limit those risks, detailed property disposal strategies with various real estate market development scenarios have to be developed. The implementation of an economically justified management model for the unfinished real estate properties also has to be ensured, with a view to preventing impairment of those properties due to quality losses.

**In 2010, banks continued active measures providing concessions to troubled borrowers in a hope that the solvency of those customers will be restored.** In the first half of 2010, the restructured loans grew significantly (from 16.1% of the aggregate loan portfolio of banks at the end of December 2009 to 19.6% at the end of June 2010; see Chart 20). Although the restructuring process continued also in the second half of the year, the share of restructured loans remained broadly unchanged, amounting to 19.9% of the aggregate loan portfolio at the end of December 2010. This can be partly explained by repeated loan restructuring measures implemented by banks and the start of recovery process for bad debts.

Chart 20

**RESTRUCTURED LOANS AND LOANS IN WORKOUT, THEIR SHARE IN THE AGGREGATE LOAN PORTFOLIO OF THE BANKING SECTOR\***  
(in billions of lats)

■ Restructured loans  
■ Loans in workout  
— Share of restructured loans (%; right-hand scale)  
— Share of loans in workout (%; right-hand scale)



\* The data on restructured loans and loans in workout up to June 2010 is not fully comparable with later observations due to improvements introduced in recording of those loans by the FCMC.

**Deterioration of the quality of restructured loans poses a significant risk to banks and it can be considered the main source of a potential increase in loans past due over 90 days in 2011.** Taking into account that these borrowers were already granted concessions in light of their financial difficulties, their credit risk is higher. There is also a risk that for some part of those loans restructuring solution was postponement of the problem. The expected EURIBOR rise in 2011 could become a risk factor for deterioration of the quality of restructured

loans. It is possible that although granting a repayment extension, which is a typical way of restructuring, managed to restore the solvency of the borrowers in the period of low interest rates, rising interest rates could result in another round of problems for those particular borrowers.

**In 2010, loans in workout and the share of those loans in the aggregate loan portfolio of banks expanded significantly, suggesting that very often the solvency of troubled borrowers remains unrestored.** The share of loans in workout amounted to 15.3% at the end of December. Almost all of those loans were past due over 180 days. The impressive size of loans in workout suggests that the loan write-offs could increase significantly in 2011. The new Insolvency Law adopted by the Parliament of the Republic of Latvia on 26 July 2010 provides the reason to hope that the process of balance sheet cleaning in the banking sector will become quicker.

### Box 9. January 2011 survey of bank lending to non-financial corporations and households

The regular Bank of Latvia survey conducted in January 2011 on lending by the Latvian banks sums up the information about banking sector's lending trends during the second half of 2010 and forecasts for the first half of 2011. The survey covered nine banks, representing over 84% of the aggregate bank loan portfolio to resident financial corporations and households.

#### Credit standards, terms and conditions

According to the survey results, in 2010 bank lending standards remained broadly unchanged (see Charts 9.1 and 9.2), and banks have no plans of altering their credit standards in the first half of 2011. The number of banks reporting slightly easing credit standards with regard to loans to households increased, yet the forecast for the first half of 2011 is more cautious (the number of such banks has decreased). Some banks report about easing credit standards regarding loans to export-oriented non-financial corporations.

The number of banks reporting the impact of the underlying factors for credit standard tightening for non-financial corporations has diminished, while the number of banks reporting industry-specific outlook and collateral-related risk as factors contributing to the easing of credit standards has increased (see Chart 9.3).

The opinion of survey participants with regard to easing standards for households (consumer credit and other lending in particular) is less optimistic. Nevertheless, a number of factors like competition from other banks and expectations about the general economic activity could contribute to the easing of credit standards (see Charts 9.4 and 9.5). The risk on collateral demanded by banks is the only factor that could contribute positively to the tightening of credit standards for household consumption loans and other lending.

Chart 9.1

#### CHANGES IN CREDIT STANDARDS FOR NON-FINANCIAL CORPORATIONS

(net percentage of banks reporting tightening of credit standards)

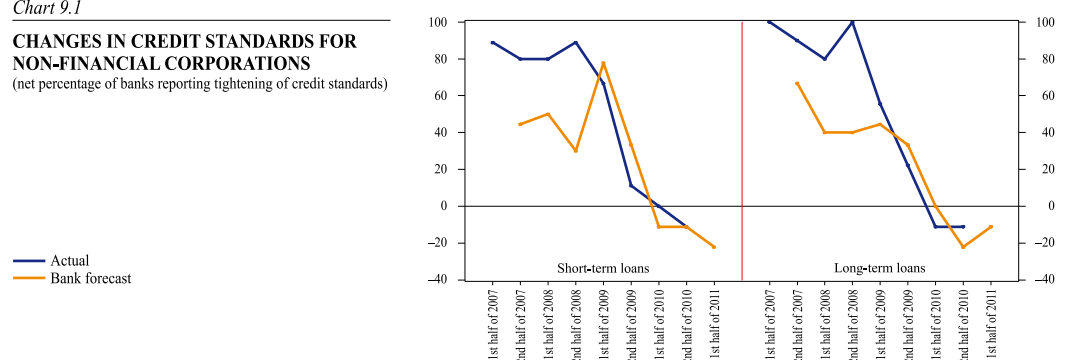


Chart 9.2

#### CHANGES IN CREDIT STANDARDS FOR HOUSEHOLDS

(net percentage of banks reporting tightening of credit standards)

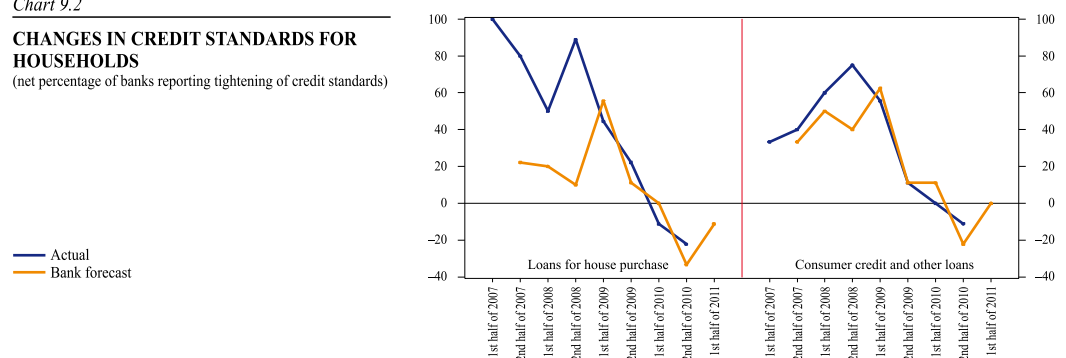


Chart 9.3

### FACTORS CONTRIBUTING TO TIGHTENING CREDIT STANDARDS FOR LOANS TO NON-FINANCIAL CORPORATIONS

(net percentage of banks reporting a positive contribution of factors)

■ 1st half of 2007  
 ■ 2nd half of 2007  
 ■ 1st half of 2008  
 ■ 2nd half of 2008  
 ■ 1st half of 2009  
 ■ 2nd half of 2009  
 ■ 1st half of 2010  
 ■ 2nd half of 2010

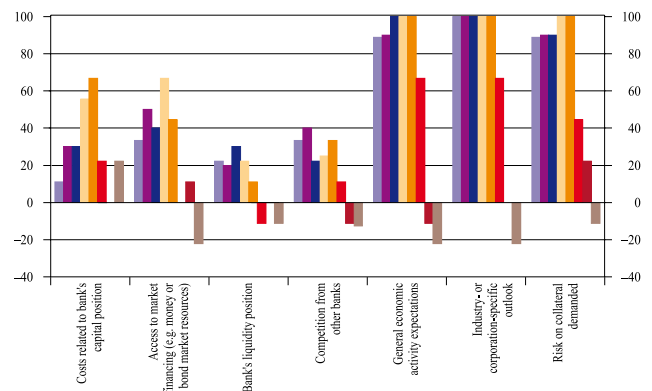


Chart 9.4

### IMPACT OF UNDERLYING FACTORS ON TIGHTENING OF CREDIT STANDARDS FOR HOUSEHOLDS

(net percentage of banks reporting positive contribution of factors with regard to loans for house purchase)

■ 1st half of 2007  
 ■ 2nd half of 2007  
 ■ 1st half of 2008  
 ■ 2nd half of 2008  
 ■ 1st half of 2009  
 ■ 2nd half of 2009  
 ■ 1st half of 2010  
 ■ 2nd half of 2010

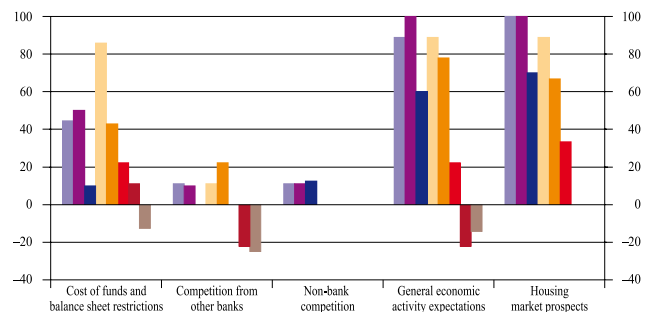
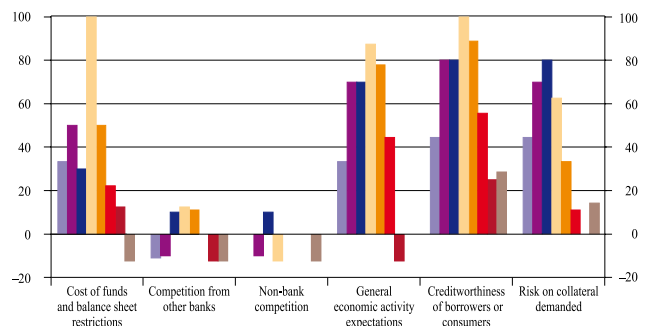


Chart 9.5

### IMPACT OF UNDERLYING FACTORS ON TIGHTENING OF CREDIT STANDARDS FOR HOUSEHOLDS

(net percentage of banks reporting positive contribution of factors with regard to consumer credit and other loans)

■ 1st half of 2007  
 ■ 2nd half of 2007  
 ■ 1st half of 2008  
 ■ 2nd half of 2008  
 ■ 1st half of 2009  
 ■ 2nd half of 2009  
 ■ 1st half of 2010  
 ■ 2nd half of 2010



With banks easing their credit standards, the terms and conditions for receiving a loan are also slightly improving. The margins set by banks on ordinary loans to households and non-financial corporations decrease, while non-financial corporations can enjoy more favourable loan maturity terms.

#### Loan demand

Banks have indicated that in 2010 the demand for loans from non-financial corporations increased, primarily due to the growing need for fixed investment. Although in the second half of 2010 the demand fell behind that of the first half of 2010, banks forecast an increase in loan demand in the first half of 2011 (see Chart 9.6). The demand from households for house purchase loans has also risen, primarily driven by borrowers' confidence in the improvement of their financial position (see Chart 9.7). A rise in loan demand from households is also projected suggesting that banks anticipate a more solid economic recovery in 2011.

Chart 9.6

### CHANGES IN NON-FINANCIAL CORPORATIONS' DEMAND FOR LOANS OR CREDIT LINES

(net percentage of banks reporting increased demand)

— Actual  
— Bank forecast

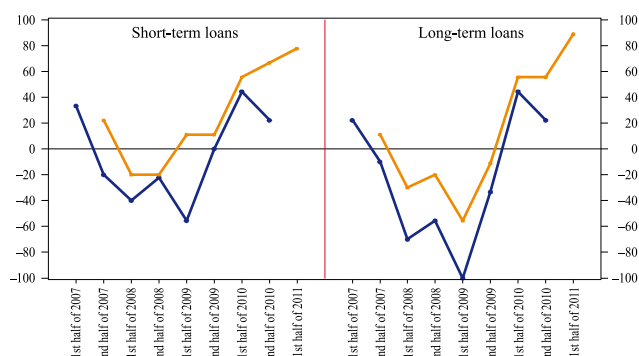
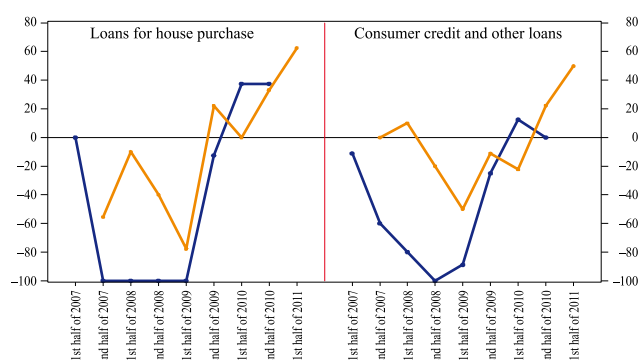


Chart 9.7

### CHANGES IN HOUSEHOLD DEMAND FOR LOANS

(net percentage of banks reporting increased demand)

— Actual  
— Bank forecast



### Creditworthiness of borrowers

According to the bank assessment, the creditworthiness of non-financial corporations remained broadly unchanged in 2010 overall, with the situation to be sustained also in the first half of 2011. For some sectors of the economy, e.g. manufacturing, transportation and storage, and trade; see Chart 9.8), however, improvements in the financial situation are expected. The financial position of households improved in the second half of 2010 vis-à-vis the previous periods, yet the outlook for the first half of 2011 remains cautious, and most survey participants consider that the financial position of households will remain unchanged.

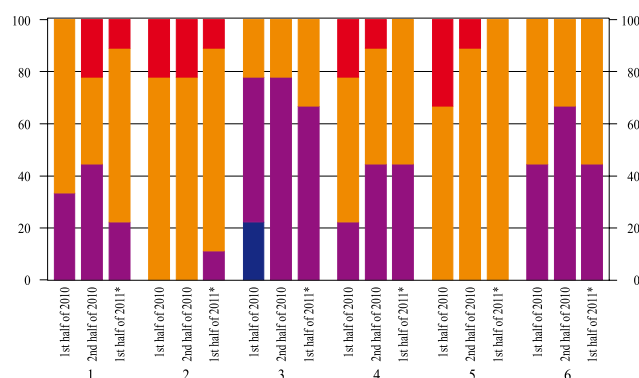
Chart 9.8

### BREAKDOWN OF REPLIES REGARDING ASSESSMENT OF CHANGES IN FINANCIAL POSITION OF HOUSEHOLDS AND COMPANIES IN INDIVIDUAL SECTORS

(%)

— Broadly unchanged/ will not change  
— Improved somewhat/ will improve  
— Deteriorated somewhat/ will deteriorate  
— Improved considerably/ will improve

1 Households  
2 Real estate  
3 Manufacturing  
4 Trade  
5 Construction  
6 Transportation  
\* Forecast.



### Loan restructuring

The responses of survey participants suggest that the creditworthiness of households with applied temporary postponement of debt liabilities is assessed in most cases as unchanged or slightly improved (see Chart 9.9).

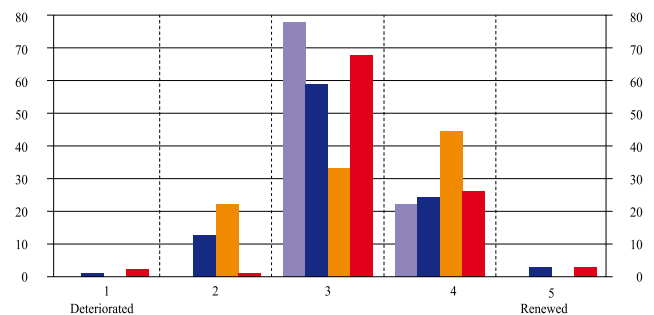
According to the assessment of some banks, however, the situation of households deteriorated in the second half of 2010.

The bank assessment of restructured debt of non-financial corporations has become more uniform, suggesting that debt restructuring is not going to change non-financial corporations' creditworthiness significantly.

Chart 9.9

**CHANGES IN CUSTOMERS' CREDITWORTHINESS AFTER EXPIRATION OF DEBT LIABILITIES' POSTPONEMENT TERM DUE TO LOAN RESTRUCTURING**  
(*vis-à-vis* period prior to restructuring; percentage of responses)

Households in the first half of 2010  
Households in the second half of 2010  
Non-financial corporations in the first half of 2010  
Non-financial corporations in the second half of 2010



### 3.3 Credit Risk Shock-Absorption Capacity

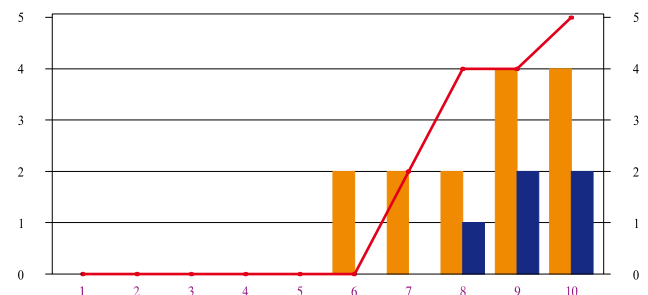
**The ability of banks to maintain a high level of capital adequacy by continuing to actively increase capital enabled banks to preserve the credit risk shock-absorption capacity at a rather high level also in 2010.** Banks managed to successfully absorb the additional losses incurred as a result of the loan portfolio quality continuing to deteriorate in the first half of 2010, albeit at a much slower rate than in 2009. Banks made actual capital injections as well as following the best international practice and the requirements of the FCMC<sup>13</sup>, within the framework of the strategic planning of their operations, carried out capital planning by evaluating the need to increase the capital for a period of no less than three following years.

**The results<sup>14</sup> of sensitivity test analysis<sup>15</sup> show that as at the end of 2010, without any additional capital injections, Latvian banks would have been able to absorb a potential increase in the credit risk resulting in the loans past due over 90 days expanding by almost one third, representing a 6 percentage point increase in the share of loans past due over 90 days in the aggregate loan portfolio.** Overall, the credit risk shock-absorption capacity of banks remained quite high throughout 2010. Seeming deterioration of the credit risk shock-absorption capacity at the end of the second half of the year in comparison with the end of the first half was mainly related to the adjustments made in capital increase plans of some banks (see Charts 21 and 22).

Chart 21

**GENERAL CREDIT RISK SHOCK ABSORPTION CAPACITY**  
(number of banks with CAR below minimum capital requirement; increase in share of loans past due over 90 days (in percentage points) in aggregate loans)

Q4 of 2009  
Q2 of 2010  
Q4 of 2010



Note. Data for 2010 do not include JSC Parex banka.

<sup>13</sup> "Regulations on the Internal Capital Adequacy Assessment Process" adopted by the FCMC on 20 March 2009 (in effect as of 26 March 2009).

<sup>14</sup> Sensitivity test results provide an indication of the scale of losses resulting from growing credit risk that banks would be able to absorb before their CAR falls below the minimum capital requirement. Sensitivity tests reflect bank losses as the need to make additional provisions for loans past due over 90 days whose volume and hence also the share in total loans grow as a result of increasing credit risk. The estimates use the provisioning ratio (60%) proposed by the FCMC reflecting the share of the additional aggregate provisions made by the banks in the loans past due over 90 days. It is assumed that the banks' profit for the reporting year is zero, and their capital and risk weighted assets are reduced by the amount of the required additional provisions. The estimates take into account the banks' capital increase plans for 2010 and 2011.

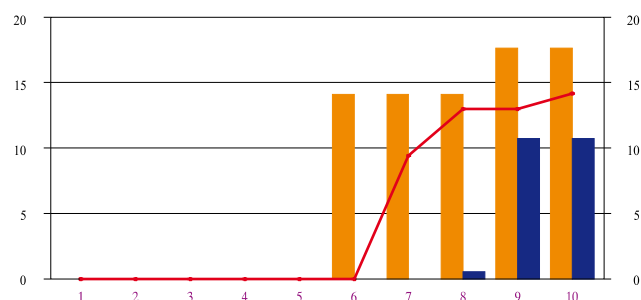
<sup>15</sup> The reported data on credit risk sensitivity and stress test results in 2010 do not include the data on the JSC Parex banka. The JSC Parex banka restructuring process providing for a split-off of the toxic assets of the bank in 2010 brought significant changes to the bank's balance sheet which, in turn, were reflected in the financial indicators of the bank. Since August 2010, the JSC Parex banka operates in the status of a resolution bank (it means that the bank does not accept deposits, grant new loans and provide other traditional banking services and focuses on maximum recovery of the injected public funds by ensuring effective loan restructuring and management of foreclosed loan collateral). Therefore, in order to evaluate the bank's credit risk shock-absorption capacity, an individual sensitivity analysis and stress testing is required using the methods appropriate in light of the operational specifics of the bank. The data on the JSC Citadele banka are included in the estimates for the second half of 2010.

Chart 22

**GENERAL CREDIT RISK SHOCK  
ABSORPTION CAPACITY**

(share of banks with CAR below minimum capital requirement in aggregate bank assets; increase in share of loans past due over 90 days (in percentage points) in aggregate loans)

■ Q4 of 2009  
■ Q2 of 2010  
— Q4 of 2010



**In order to analyse the credit risk shock-absorption capacity of banks in the context of economic development, a macroeconomic stress test was performed** using scenarios based on the latest forecasts of macroeconomic fundamentals. The macroeconomic stress testing was conducted in accordance with the methodology provided in the Bank of Latvia Financial Stability Report 2009. The baseline scenario is based on the quarterly macroeconomic forecasts of the Bank of Latvia.<sup>16</sup> The impact of the shocks examined in the stress scenario on the risk factors of the credit risk model was modelled using the macroeconomic model of the Bank of Latvia.<sup>17</sup> The credit risk model uses macroeconomic factor values consistent with the baseline and stress scenarios to evaluate changes in the proportion of loans past due over 90 days. At the concluding stage, this proportion is used to evaluate the shock-absorption capacity of banks by calculating the CAR, additionally required provisions and capital.

**The baseline scenario** assumes that the Latvian economy will recover in 2011. Latvia's GDP growth is forecast to reach 3.3%, the rate of jobseekers to decline to 17.1%, whereas the annual average inflation is expected to increase to 2.7%.

**The stress scenario** analyses the potential reaction of the Latvian economy to a combination of two types of shocks: external demand shock (–10%) and the shocks determining a decline in investment and private consumption. The external demand shock could materialise with the economic growth in trade partner countries decelerating significantly which, in turn, could be affected by the rising oil and food prices, fiscal consolidation measures implemented in several countries, the potentially negative effect of the growing sovereign debt risk in some EU Member States as well as the expected interest rate raises. Domestic investment and private consumption in the stress scenario is affected by higher inflation as a result of growing oil prices (+20% shock in comparison with the baseline scenario) and food prices (+15% shock in comparison with the baseline scenario) in combination with additional fiscal consolidation efforts (+2% shock in comparison with the baseline scenario) enhancing the confidence shock (–2% shock in comparison with the baseline scenario). The impact of the combination of the above shocks was simulated using Latvia's macroeconomic model. The results of the modelling show that such a shock could significantly delay the economic recovery process. Should the shock materialise, the GDP growth would be 4.8 percentage points lower than in the baseline scenario, the rate of jobseekers would be 0.3 percentage point higher than in the baseline scenario, whereas inflation would be 1.3 percentage points higher than in the baseline scenario.

**Scenario modelling results**

According to the baseline scenario, the share of the loans past due over 90 days will decrease to 14.7% as at the end of 2011. According to the stress scenario, the share of the loans past due over 90 days would grow to 21.0% as at the end of 2011.

**The macroeconomic stress test shows that should the stress scenario materialise all banks would be able to absorb the additional losses incurred due to higher credit risk without increasing the capital.** Additionally required provisions in the event of the stress scenario materialising would grow to 431.3 million lats or 2.1% of the total bank assets. Table 5 features aggregated results of the macroeconomic stress test.

**Although no significant deterioration of the quality of the existing loan portfolio is expected in 2011, uncertainty still prevails as to the losses that the banks could face in relation to the restructured loans and loans in workout.** The coverage of high risk loans (i.e. restructured loans and loans in workout) by provisions

<sup>16</sup> See the "Macroeconomic Developments Report" of March 2011.

<sup>17</sup> See Beņkovskis, K., Stikuts, D. Latvia's Macroeconomic Model. Riga: Bank of Latvia. Working Paper No 2/2006.



varies quite considerably across banks. The bank provisioning ratio<sup>18</sup> for loans in workout as at the end of 2010 was higher than the provisioning ratio for riskier part of the restructured loans (i.e. loans past due over 90 days). The weighted average provisioning ratio for loans in workout was 42.3%. The weighted average provisioning ratio for restructured loans past due over 90 days was 32.8% at the end of 2010.

**In order to evaluate the banks' capacity to absorb potential losses that could be incurred by high-risk loans, an additional stress test was performed.** The macroeconomic stress test enabled an evaluation of the banks' capacity to absorb losses by making provisions against an increase in loans past due over 90 days caused by macroeconomic shocks. The additional stress test, in turn, enabled an evaluation of the banks' capacity to absorb losses that could be incurred as a result of making additional provisions for high-risk loans to reach the average level across the banks. The stress test is based on an assumption that the banks' credit portfolio is grouped depending on the economic sector and loan collateral, and the respective weighted average provisioning ratio is applied to those groups of loans. A scenario using the weighted average provisioning ratios is based on the view that the average provisioning ratios for loans in workout provide an objective reflection of the potential losses that could be incurred by loans with an increased value of expected losses. Considering that, the balance of loans in workout and restructured loans has been divided into two basic groups depending on the type of borrower (loans to households and non-financial corporations). These groups have then been divided into the following sub-groups:

1. household loans for house purchase, reconstruction and renovation;
2. other household loans;
3. loans to non-financial corporations for construction and real estate activities;
4. mortgage loans to other non-financial corporations;
5. loans to other non-financial corporations with other collateral and unsecured.

The basic rules to establish the provisioning ratio used in the stress test are displayed in Table 3, whereas the weighted average provisioning ratios used in calculations are featured in Table 4.

*Table 3*  
**BASIC RULES FOR ESTABLISHING PROVISIONING RATIOS UNDER THE WEIGHTED AVERAGE PROVISIONING RATIOS BASED SCENARIO**

Loans in workout	Restructured loans	
	not past due and past due under 90 days	past due over 90 days
In each sub-group, the banking sector actual weighted average provisioning ratio for corresponding sub-group of loans in workout	In each sub-group, the banking sector actual weighted average provisioning ratio for corresponding sub-group of restructured loans	In each sub-group, the banking sector actual weighted average provisioning ratio for corresponding sub-group of loans in workout

*Table 4*  
**WEIGHTED AVERAGE PROVISIONING RATIOS USED IN THE STRESS TEST**  
(as at end-2010; %)

Sub-group	Loans in workout	Restructured loans	
		not past due and past due under 90 days	past due over 90 days
Household loans for house purchase, reconstruction and renovation	36.8	10.4	36.8
Other household loans	38.7	13.5	38.7
Loans to non-financial corporations for construction and real estate activities	47.6	17.5	47.6
Mortgage loans to other non-financial corporations	44.2	8.2	44.2
Loans to other non-financial corporations with other collateral and unsecured	43.4	14.1	43.4

The same weighted average provisioning ratios were applied to restructured loans past due over 90 days than to the loans in workout, as it was considered that the value of their expected losses is similar.

**The stress tests show that the need to make provisions for high-risk loans to reach the average level of provisions in the banking sector would overall create no significant problems to the banks.** Only one small bank would need to increase its capital. Additionally required provisions would grow to 208.2 million lats or 1.0% of the total bank assets. Table 5 features aggregated results of the stress tests.

<sup>18</sup> The ratio between the balance of provisions made for the respective group of loans and the balance of these loans.

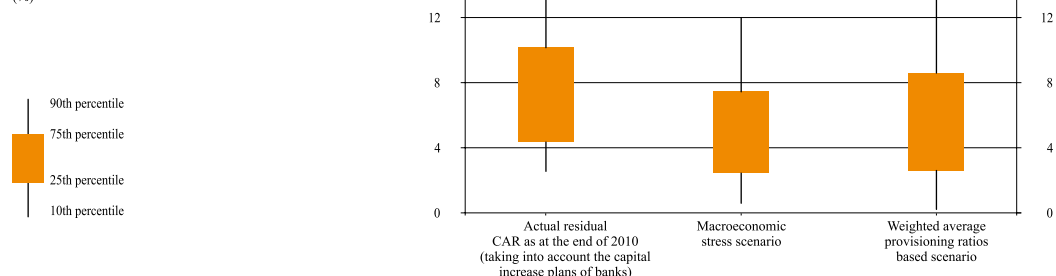
The excess capital adequacy of the banks (difference between the bank's CAR and the statutory minimum for CAR (8%)) as a result of materialisation of the above scenarios is reflected in Chart 23.

Table 5  
AGGREGATED STRESS TEST RESULTS AT THE END OF 2010

	Macroeconomic stress scenario	Weighted average provisioning ratios based scenario
Number of banks with CAR below 8%	0	1
Additionally required capital (in millions of lats)	0	14.5
Additionally required provisions (in millions of lats)	431.3	208.2
Assets of banks with CAR below 8% (% of aggregate bank assets)	0	0.5
Additionally required provisions (% of aggregate bank assets)	2.1	1.0

Chart 23

#### RESIDUAL CAR OF BANKS (%)



Summarising the results of both stress tests, it can be concluded that, should the downside risks to the economic growth and additional losses from high-risk loans materialise in 2011, banks would be overall capable to absorb the above shocks. The additionally required provisions are likely to be within the range of 200–435 million lats. This amount is significantly lower than the banks' expenditure on provisions for non-performing loans and commitments in 2009 (1 266.1 million lats) and 2010 (727.1 million lats).

## 4. BANK LIQUIDITY AND MARKET RISKS

### 4.1 Bank Funding and Liquidity Risks

**Significant external risks persisted, affecting the availability of funding.** 2010 saw several positive signals for investors: in December Standard & Poor's raised Latvia's credit rating to BB+, the cost of Latvia's credit risk insurance gradually moderated by approximately 300 basis points (fluctuating around 260 basis points at the end of 2010), and the JSC *Parex banka* was divided into two parts, establishing the JSC *Citadele banka* and proceeding with the JSC *Parex banka* restructuring. However, the global financial instability arising from an increase in sovereign debt risk in several EU countries restricted access to the foreign financial market for Latvian banks. Consequently a larger financial risk persists for the banks financing their loan portfolio from non-bank deposits with short maturity.

**In 2010, deposits received by banks continued to grow rapidly.** Over the year, non-bank deposits expanded by 1 560.9 million lats (resident and non-resident deposits increased by 567.8 million lats and 993.1 million lats respectively). At the end of 2010, deposits reached a historic high of 11 110.6 million lats (see Chart 24). The increase mostly resulted from expanding resident and non-resident deposits, pointing to restored depositors' confidence and growth in several sectors of the economy. As to resident deposits, the lats continued to regain credibility and the lats share in resident deposits widened by 6 percentage points over the year (to 46%; see Chart 25). Nevertheless, RIGIBID being lower than EURIBID might limit a further increase in the lats share. The deposit interest rates offered by banks also reflect it: they are lower for the lats deposits.

**The liabilities of subsidiaries of the bank groups of EU15 countries to their parent banks continued to contract, although signs of stabilisation were observed.** Financing from parent banks shrank by 183.0 million lats over the year, but the amount of funding slowly stabilised or even increased in some banks in the second half of the year (see Chart 26). The loan portfolio of this group of banks posted a notable decline (979.4 million lats); however, the funding which was available as a result of the decrease in the loan portfolio

was partly invested in claims on parent banks or the Bank of Latvia (454.0 million lats). Consequently these banks are in a good position to resume lending if the economic situation in Latvia continues to improve. In the above group of banks non-bank deposits grew by 186.0 million lats, including an increase of 302.5 million lats in deposits of non-financial corporations, pointing to a recovery of the economy.

Chart 24

**DYNAMICS OF NON-BANK DEPOSITS**  
(in billions of lats)

- Non-resident deposits
- Resident deposits
- Treasury deposits

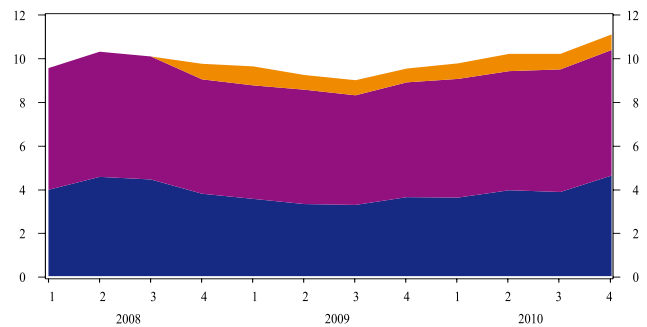


Chart 25

**RESIDENT NON-BANK DEPOSITS BY CURRENCY**  
(%)

- Treasury deposits in lats
- Non-bank deposits in lats (excluding Treasury)
- Treasury deposits in euro
- Non-bank deposits in euro (excluding Treasury)
- Non-bank deposits in other foreign currencies

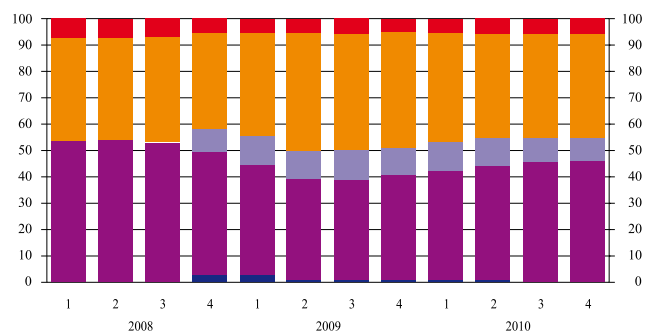
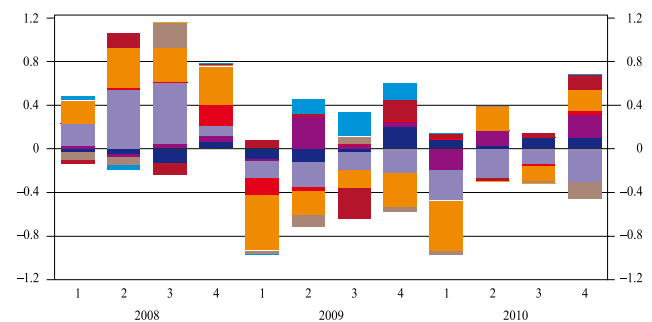


Chart 26

**QUARTERLY CHANGES IN KEY ASSET AND LIABILITY ITEMS OF SUBSIDIARIES OF THE BANK GROUPS OF EU15 COUNTRIES**  
(in billions of lats)

- Claims on the Bank of Latvia
- Claims on parent banks
- Loans to non-banks
- Government securities
- Liabilities to parent banks
- Liabilities to other banks
- Non-bank deposits
- Paid up and subordinated capital

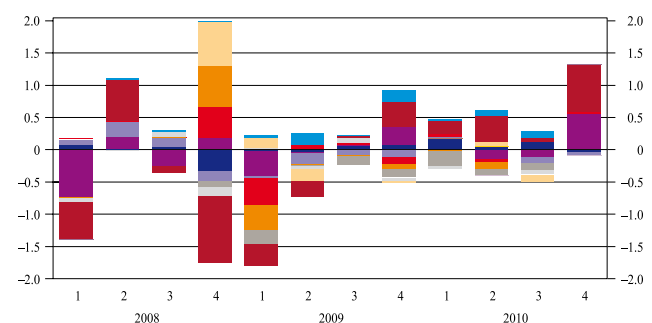


**As to other banks, the structure of funding was notably affected by the replacement of foreign bank funds with non-bank deposits.** Over the year, the funding received from foreign banks contracted by more than 50% or 572.1 million lats (including a 447.5 million lats drop in the repayment of syndicated loans; see Chart 27); non-bank deposits were the only major source of funding recording a 1 374.9 million lats increase. For banks of this group considerable risk persisted for banks with a loan portfolio almost completely financed by short-term non-bank deposits: if the sovereign credit rating does not improve, these banks will find it difficult to obtain alternative funding in the financial markets.

Chart 27

**QUARTERLY CHANGES IN KEY ASSET AND LIABILITY ITEMS OF OTHER BANKS**  
(in billions of lats)

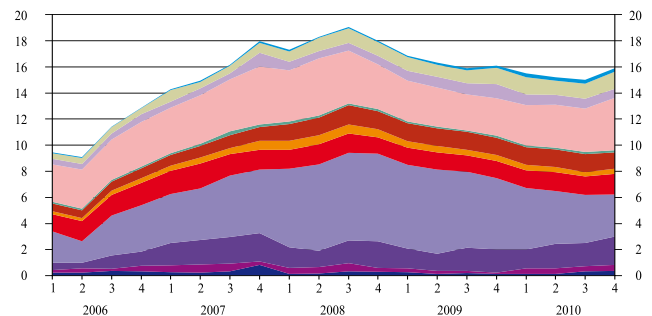
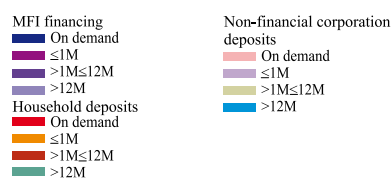
- Claims on the Bank of Latvia
- Claims on banks
- Loans to non-banks
- Government securities
- Liabilities to the Bank of Latvia
- Syndicated loans
- Liabilities to other banks
- Treasury deposits with JSC Parex banka and JSC Citadele banka
- Other non-bank deposits
- Paid up and subordinated capital



**Sensitivity of Latvian banks to the funding received from foreign MFIs eased, albeit still remaining substantial.** The decrease in the long-term component of the above funding in the bank balance sheets was a negative trend as the long-term financing was resumed or attracted anew on a much smaller scale. Over the year, the share of foreign MFI funding with a residual maturity of over 1 year in bank balance sheets shrank by 10.3 percentage points. It is related to the repayment of syndicated loans and suggests that some parent banks refinance their subsidiaries, stipulating a shorter period of repayment. Nevertheless, the share of long-term financing in the foreign MFI funding remained substantial (51.9% of total foreign MFI funding or one fifth of all liabilities; see Chart 28).

Chart 28

**COMPOSITION OF BANK FUNDING SOURCES BY RESIDUAL MATURITY**  
(in billions of lats)



**With the bank loan portfolio decreasing and deposits growing, the compliance with the liquidity ratio<sup>19</sup> set by the FCMC reached a historic high (67.9%; see Chart 29).** Although the dispersion of the bank liquidity ratio was notable, even the lowest liquidity ratio was more than 15 percentage points above the minimum defined by the FCMC (30%; see Chart 30). Overall, the level of the liquidity ratio of the subsidiaries of bank groups of EU15 countries and other banks remained very high. Banks mostly placed their excess liquidity in claims on the Bank of Latvia (a year-on-year increase of 576.4 million lats) and on MFIs (541.1 million lats, mostly in demand claims on banks in Sweden, Germany and the US). Overall, the share of these items in the balance sheet grew by 4.9 percentage points, accounting for 22.4% of total bank assets. Bank investments in securities remained low (6.3% of total bank assets).

Chart 29

**LIQUIDITY RATIO (DEFINED BY FCMC) BY BANK GROUP**  
(%)

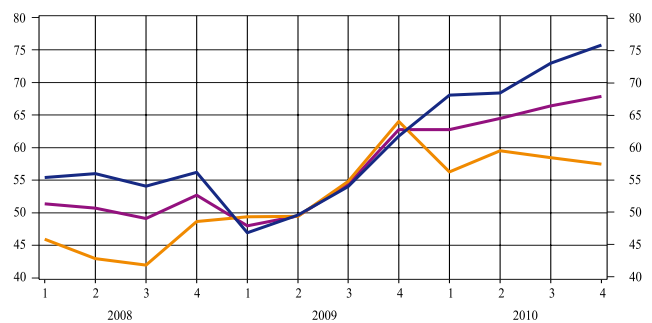
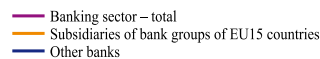
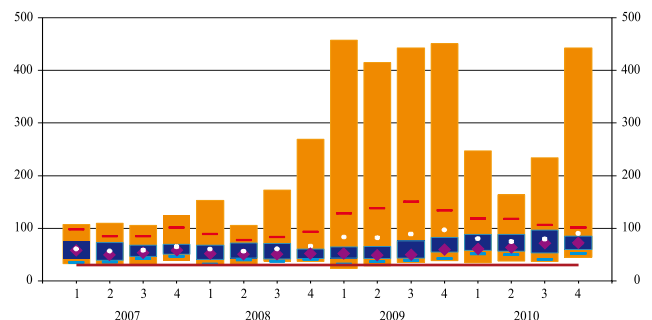
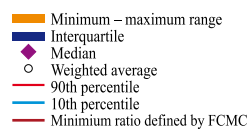


Chart 30

**DISPERSION OF  $l_r$  (DEFINED BY FCMC)**



<sup>19</sup> Liquid assets (vault cash; claims on the Bank of Latvia and solvent credit institutions whose residual maturity does not exceed 30 days, and deposits with other maturity, if a withdrawal of deposits prior to the maturity has been stipulated in the agreement; investment in financial instruments, if their market is permanent and unrestricted) must not be less than 30% of banks' total current liabilities with residual maturity under 30 days.

The liquidity stress tests, conducted by the Bank of Latvia with the purpose of evaluating the significance of the potential consequences of financial outflows, suggest that with an increase in the bank liquid assets the bank resilience to the shock of financial outflows has improved<sup>20</sup>.

The first stress test scenario shows the proportion of non-resident deposits that may flow out without causing liquidity deficit to banks, on the condition that banks do not borrow additional funds to offset the deposit outflows. According to the stress test results, all banks would still be able to fulfil their liabilities even if more than half of non-resident non-MFI deposits had flown out. This relation improved considerably over the year as a result of investing a substantial share of non-resident deposits in liquid assets (see Charts 31 and 32). Should outflows of all non-resident non-MFI deposits occur, nine banks whose total assets account for 22% of bank assets in Latvia would default on their short-term liabilities and lose liquidity. However, the data for 2008 and 2009 indicate that not a single bank has experienced monthly outflows of non-resident deposits of such amount, and maximum outflow of non-resident deposits in any bank has not exceeded 15% of total non-resident deposits with that bank.

Chart 31

#### LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF NON-RESIDENT DEPOSITS (31.12.2010; number of banks)

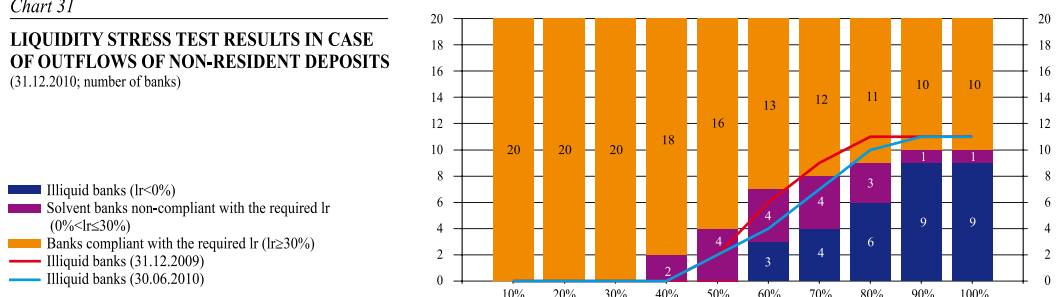
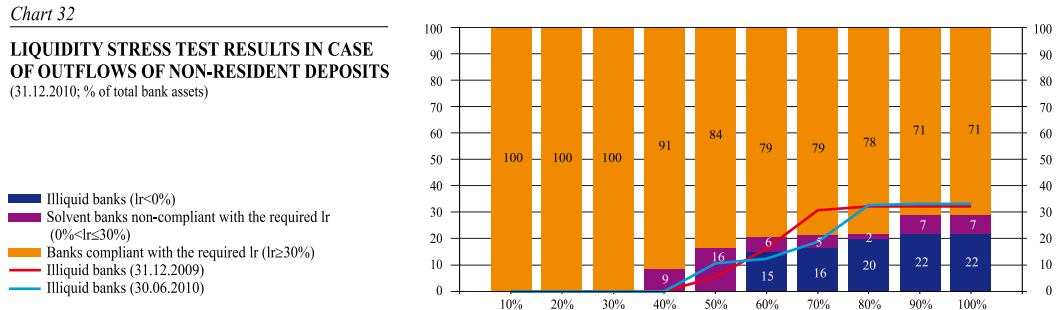


Chart 32

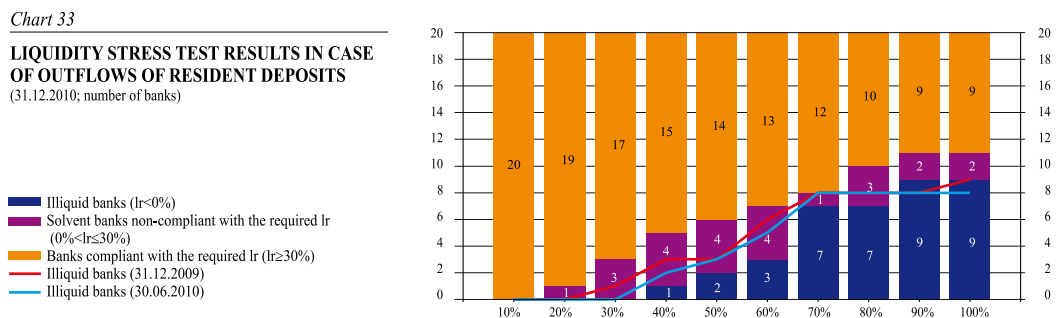
#### LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF NON-RESIDENT DEPOSITS (31.12.2010; % of total bank assets)



The second stress test scenario shows the proportion of resident deposits that may flow out without causing liquidity shortages to banks, on the condition that banks do not borrow additional funds to offset the deposit outflows. Liquidity stress test results lead to a conclusion that liquid assets of any bank cover no less than 39% of the bank's total resident non-MFI deposits. Absorption of this shock has improved considerably year-on-year (see Charts 33 and 34). Should outflows of all resident non-MFI deposits occur, nine banks whose total assets account for 58% of the banking sector assets, would default on their short-term liabilities and lose liquidity. In 2008 and 2009, the maximum monthly outflows of resident deposits in each individual bank did not exceed 15% of the bank's total resident deposits.

Chart 33

#### LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF RESIDENT DEPOSITS (31.12.2010; number of banks)

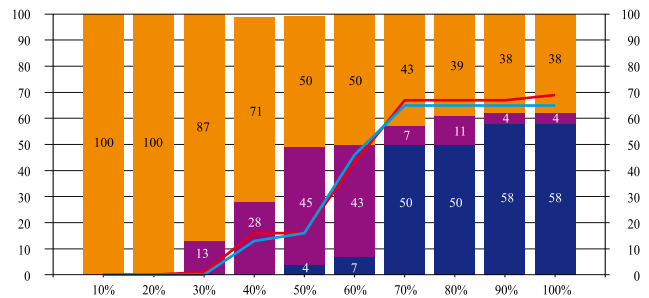


<sup>20</sup> The results of the liquidity stress tests indicate the tolerance of the banks to the outflows of non-resident non-MFI deposits, resident non-MFI deposits and total (MFI and non-MFI) financing with the residual maturity of up to three months before their lr reaching 0.

Chart 34

**LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF RESIDENT DEPOSITS**  
 (31.12.2010; % of total bank assets)

■ Illiquid banks ( $lr < 0\%$ )  
 ■ Solvent banks non-compliant with the required  $lr$  ( $0\% < lr \leq 30\%$ )  
 ■ Banks compliant with the required  $lr$  ( $lr \geq 30\%$ )  
 — Illiquid banks (31.12.2009)  
 — Illiquid banks (30.06.2010)



The third stress test scenario assumes an outflow of all financing with a maturity of up to three months (both deposits and MFI financing) from banks. In this case it is evident that banks could survive an outflow of financing of up to 24% (see Charts 35 and 36). Overall, the resilience to shocks strengthened in the large and medium-size banks over the year. In the event of a 50% bank asset outflow, only two banks whose total assets account for 12% of total assets of Latvian banks would need additional funds in order to restore positive liquid assets.

Chart 35

**LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF FINANCING WITH MATURITY OF UP TO 3 MONTHS**  
 (31.12.2010; number of banks)

■ Illiquid banks ( $lr < 0\%$ )  
 ■ Solvent banks non-compliant with the required  $lr$  ( $0\% < lr \leq 30\%$ )  
 ■ Banks compliant with the required  $lr$  ( $lr \geq 30\%$ )  
 — Illiquid banks (31.12.2009)  
 — Illiquid banks (30.06.2010)

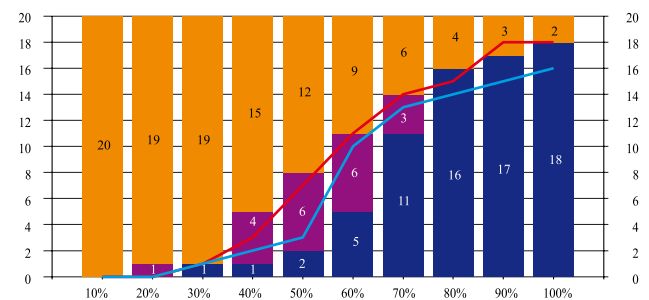
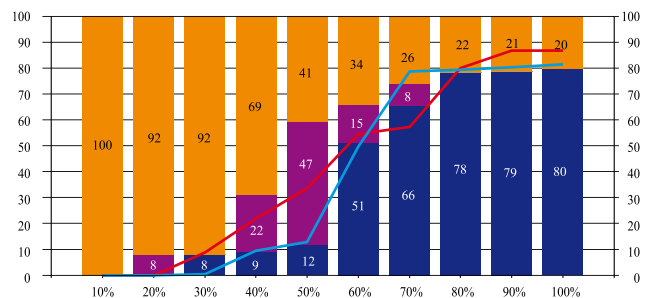


Chart 36

**LIQUIDITY STRESS TEST RESULTS IN CASE OF OUTFLOWS OF FINANCING WITH MATURITY OF UP TO 3 MONTHS**  
 (31.12.2010; % of total bank assets)

■ Illiquid banks ( $lr < 0\%$ )  
 ■ Solvent banks non-compliant with the required  $lr$  ( $0\% < lr \leq 30\%$ )  
 ■ Banks compliant with the required  $lr$  ( $lr \geq 30\%$ )  
 — Illiquid banks (31.12.2009)  
 — Illiquid banks (30.06.2010)



Liquidity stress results show that the bank capacity to absorb shocks of financial outflows has improved considerably, mostly on account of bank lending policies as banks invested the received funds into liquid assets.

**Box 10. Loan-to-deposit ratio developments in Latvia**

Loan-to-deposit ratio is one of the most often used indicators for assessing bank liquidity risk. It shows the proportion of the amount of loans granted by the bank to non-banks as compared to their deposits. The smaller the share of deposits in the funding of the bank's loan portfolio, the bigger the risk that it will have to face more serious difficulties in obtaining financing in the money markets in case of a crisis. It is a common view that attraction of deposits is generally a more stable funding than a money market financing.

In Latvia, a constant and accelerated increase in loan-to-deposit ratio was observed since 2001 until the unwinding of the global financial crisis in 2008 (see Chart 10.1). Rapid lending growth played a significant role in the rise in loan-to-deposit ratio, promoted by several strong demand and supply side factors. Contrary to the lending activities, however, the growth of the deposit base was much slower as the level of savings in the economy was not sufficient and there was no sustained tradition of provisioning yet. That accounts for a very high level of the loan-to-deposit ratio of Latvian banks in comparison with that in other EU countries as well (see Chart 10.2).

Chart 10.1

**DEVELOPMENTS OF LOAN-TO-DEPOSIT RATIO OF LATVIAN MFIs**

(%)

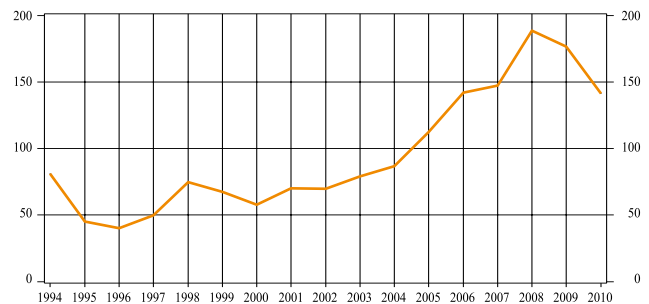
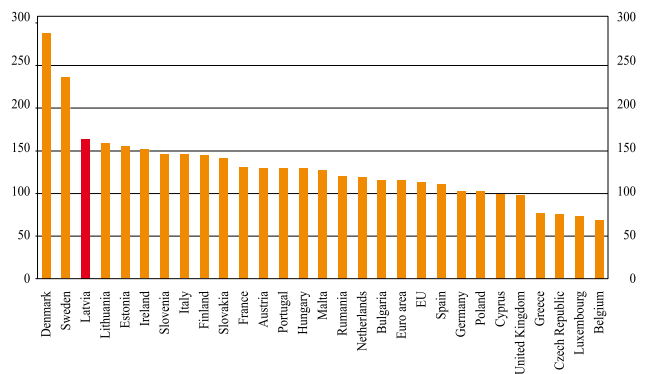


Chart 10.2

**BANK LOAN-TO-DEPOSIT RATIO OF EU COUNTRIES IN 2009**

(%)

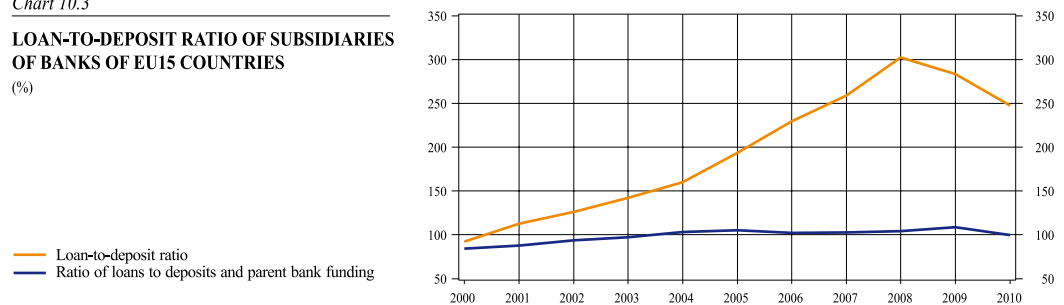


The most substantial increase in the loan-to-deposit ratio was observed in the subsidiaries of bank groups of EU15 countries where the above ratio exceeded 300% at the end of 2008 (see Chart 10.3). It means that for this group of banks less than one third of the overall loan portfolio was funded by deposits. Nevertheless, the remaining two thirds of the funding which was provided by parent banks can be considered a sufficiently safe long-term investment by parent banks of EU countries. At the end of 2010 the loan-to-deposit ratio contracted as a result of a considerable fall in lending activities, though still remaining at a high level (approximately 250%).

Chart 10.3

**LOAN-TO-DEPOSIT RATIO OF SUBSIDIARIES OF BANKS OF EU15 COUNTRIES**

(%)



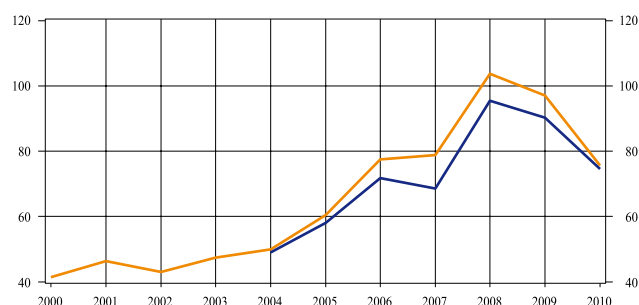
The loan-to-deposit ratio of other banks rose notably before the crisis, reaching a high (104%) at the end of 2008 and moderating during the crisis (down to 75% at the end of 2010; see Chart 10.4). The ratio of these banks was considerably lower than that of the bank subsidiaries of EU15 countries. However, the deposit profile of these two groups of banks was different. In other banks, the share of resident deposits did not exceed 35% of total deposits in comparison with the bank subsidiaries of EU15 countries where the share of resident deposits accounted for more than 85% of total deposits. Moreover, demand deposits accounted for the largest share of non-resident deposits in other banks. The very short maturities of non-resident deposits notwithstanding, the deposit base of this group of banks remained stable historically, and 2010 also saw an increase in non-resident deposits.

Chart 10.4

**LOAN-TO-DEPOSIT RATIO OF OTHER BANKS**

(%)

— Loan-to-deposit ratio  
— Ratio of loans to deposits and MFI funding with maturity over 1 year



Supply and development of long-term savings products would reduce the vulnerability of Latvian banks related to the global financial market fluctuations.

## 4.2 Foreign Exchange Risk

Banks continued to pursue a conservative and prudent management policy with regard to open foreign exchange positions. In 2010, the overall net open foreign exchange position of banks remained relatively low with minor fluctuations<sup>21</sup>. Over the year it expanded by a mere 0.1 percentage point, i.e. from 3.5% relative to the banks' own funds at the beginning of the year to 3.6% at the year-end.

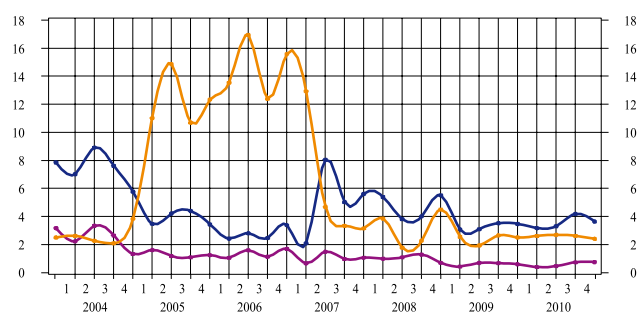
The dynamics of the banks' overall net open foreign exchange position generally depends on the fluctuations of the open positions of the two major currencies in banks' balance sheets, i.e. the euro and the US dollar. Already since the first half of 2007 (when the threshold of 10% relative to a bank's own funds for the net open euro position was reinstated<sup>22</sup>), the weighted average open euro position of banks remained at below 5% of their own funds. In 2010, changes in the weighted average open euro position of banks were negligible: it shrank by 0.1 percentage point, i.e. from 2.5% relative to the banks' own funds at the beginning of the year to 2.4% at the end of it. As to the US dollar, its weighted average open position of banks slightly moved up (from 0.6% relative to the banks' own funds at the beginning of the year to 0.8% at the end of it, i.e. by 0.2 percentage point; see Chart 37).

Chart 37

**WEIGHTED AVERAGE LEVEL OF OPEN FOREIGN EXCHANGE POSITIONS OF THE BANKING SECTOR**

(% of own funds)

— Overall  
— Euro  
— US dollar



Notes: Data for the period starting with the fourth quarter of 2009 and ending with the fourth quarter of 2010 do not include JSC Parex banka. Calculations use the absolute values of the open foreign exchange positions. Open foreign exchange positions of individual banks are own funds-weighted. Between 1 January 2005 and May 2007, the open foreign exchange positions of the euro were excluded from the calculations of the aggregate open foreign exchange position due to the lats peg to the euro.

VaR calculations<sup>23</sup> also suggest that exposure of banks to direct foreign exchange risk remained relatively low in 2010 (see Chart 38). In 2010, the VaR of banks, as percentage of the banks' own funds, fluctuated between 0.02% and 0.05%, i.e. was rather low.

The results of sensitivity analysis also confirm low exposure of banks to direct foreign exchange risk. In 2010, bank sensitivity to the potential increase in the exchange rate fluctuations of the US dollar grew year-on-

<sup>21</sup> Hereinafter, data on the dynamics of the banks' overall net open foreign exchange position and net open positions in individual currencies, VaR values and sensitivity to the US dollar fluctuations for the period starting with the fourth quarter of 2008 and ending with the fourth quarter of 2010 do not include the JSC Parex banka.

<sup>22</sup> FCMC, 26 April 2007, Regulation No. 57 "Amendments to the Regulation for Calculating Capital Adequacy".

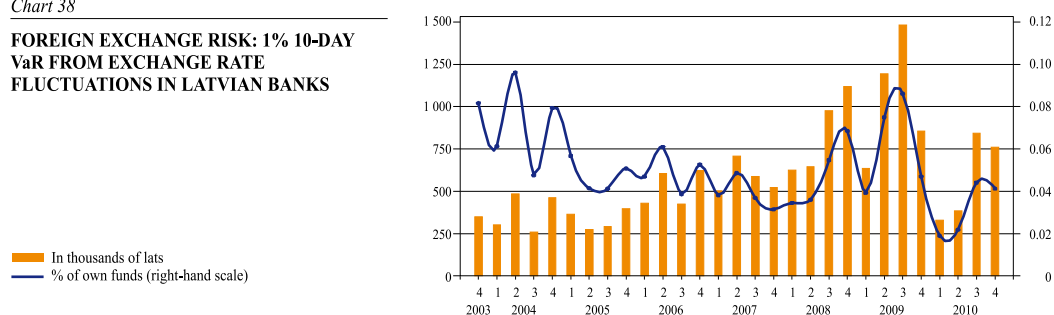
<sup>23</sup> VaR reflects the maximum expected losses over a certain period of time with a given probability. 1% 10 day VaR from exchange rate fluctuations means that within the next 10 days there is only a 1% probability that losses from exchange rate fluctuations will exceed the VaR. In this report, VaR was obtained based on open currency positions of individual banks at the end of each quarter. Calculations use the historical daily exchange rate changes within one year prior to the VaR evaluation date (last day of the relevant quarter). Since repegging the lats to the euro, VaR calculations no longer include the euro component.



year (see Chart 39). Nevertheless, aggregate losses of banks on account of a 10% appreciation of the US dollar relative to the lats would be no higher than 0.05% of the banks' own funds. Losses on account of a depreciation of the US dollar would also be relatively insignificant – 0.06% of the banks' own funds.

Chart 38

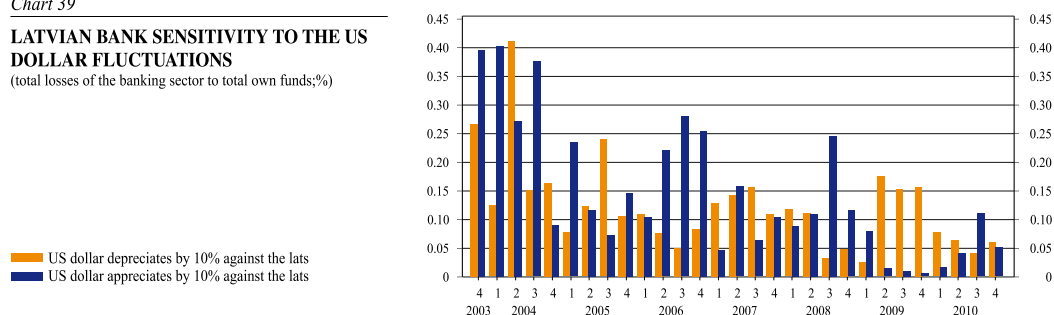
**FOREIGN EXCHANGE RISK: 1% 10-DAY  
VaR FROM EXCHANGE RATE  
FLUCTUATIONS IN LATVIAN BANKS**



Note: Data for the period starting with the fourth quarter of 2009 and ending with the fourth quarter of 2010 do not include JSC Parex banka. One should keep in mind that VaR for Latvian banks is the aggregate of VaRs of individual banks. The actual aggregate VaR for banks is somewhat lower, because of the lack of full positive correlation between VaRs of individual banks.

Chart 39

**LATVIAN BANK SENSITIVITY TO THE US  
DOLLAR FLUCTUATIONS**  
(total losses of the banking sector to total own funds;%)



Note: Data for the period starting with the fourth quarter of 2009 and ending with the fourth quarter of 2010 do not include JSC Parex banka.

**The direct foreign exchange risk of banks is minor in comparison with their aggregate risks.** At the end of 2010, the share of the requirement for foreign exchange risk in the total capital requirement of banks accounted for a mere 0.5% (the total share of requirement for market risks was 1.4%).

### 4.3 Interest Rate Risk

**In 2010, changes were observed in the RSA and RSL term structure.** The balance of the RSA and RSL of the Latvian banks has slightly deteriorated for the time-band<sup>24</sup> of up to 1 year. The cumulative 1-year RSA to RSL ratio, which is an important ratio for the interest rate risk management purposes, moved up somewhat in 2010, standing at 1.13 {1.04}<sup>25</sup> at the end of the year (see Chart 40). Such changes mostly resulted from a decrease in RSL. The decrease in RSL in this time-band was driven by a relatively significant fall in the RSL to credit institutions and central banks and an increase in the amount of deposits non-sensitive to interest rate changes. The amount of RSL to credit institutions and central banks shrank by approximately 1.5 billion lats over the year. Most of these liabilities account for long-term funding from foreign parent banks with resetting the interest rate in the period of up to 3 months; hence the RSL in the time-bands of up to 1 month and 1–3 months posted relatively significant decreases. Growth in the deposits non-sensitive to interest rate changes can be explained by changes in bank terms for setting interest rates on deposits whereby interest is no longer paid on part of demand deposits (for current accounts).

<sup>24</sup> RSA and RSL are broken down in time-bands by residual maturity, i.e. time period from the last day of the reporting period until the contract expiration date or the date when repayment becomes due and/or interest rates have to be reset under the contractual conditions (see the FCMC "Regulations on the Management of Interest Rate Risk, Preparation of a Report on the Calculation of Economic Value Decline and of a Report on the Term Structure of Interest Rate Risk" of 7 March 2008).

<sup>25</sup> The respective indicator of the previous year is provided in braces.

Chart 40

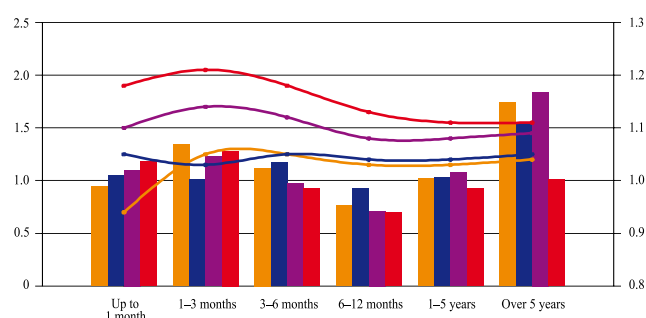
## RSA AND RSL RATIO OF LATVIAN BANKS

RSA / RSL

- 1st half of 2009
- 2nd half of 2009
- 1st half of 2010
- 2nd half of 2010

Cumulative RSA / RSL (right-hand scale)

- 1st half of 2009
- 2nd half of 2009
- 1st half of 2010
- 2nd half of 2010



**Changes in the term structure of RSA and RSL resulted in an increase in GAP<sup>26</sup>.** The cumulative 1-year GAP relative to banks' assets increased to 10.6% {3.6%} at the end of 2010. The most pronounced increase in GAP (to 7.8% {2.1%}) was observed in the time-band of up to 1 month, with the RSL to credit institutions in the above time-band shrinking since the second half of 2009 (see Chart 41).

Chart 41

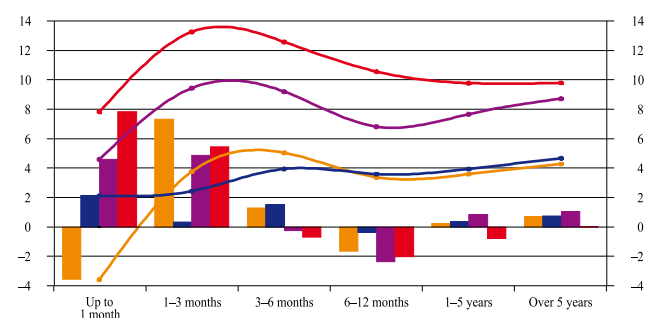
## GAP'S SHARE IN TOTAL LATVIAN BANKS' ASSETS (%)

GAP

- 1st half of 2009
- 2nd half of 2009
- 1st half of 2010
- 2nd half of 2010

Cumulative GAP

- 1st half of 2009
- 2nd half of 2009
- 1st half of 2010
- 2nd half of 2010



**The results of short-term sensitivity analysis show that at the end of 2010 the overall impact of potential interest rate parallel changes on net annual interest income of Latvian banks<sup>27</sup> would be more pronounced year-on-year but would still remain relatively insignificant** (see Chart 42).<sup>28</sup> With interest rates increasing in parallel by 200 basis points<sup>29</sup> (i.e. by 2 percentage points), the positive GAP in the time-bands of up to 1 month and 1–3 months would raise the net annual interest income of Latvian banks by 2.5% of the banks' total own funds. All in all, considering the relatively small negative GAP in the maturity bands of 3–6 months and 6–12 months, a parallel rise in the interest rate by 200 basis points would result in an increase in banks' annual net interest income by 2.3% (cumulative effect) of the banks' total own funds. GAP changes resulted from shifts in the distribution of the main interest rate risk indicators (see Chart 42).

**Almost half of banks would gain additional income from a rise in interest rates.** The interquartile range demonstrates that for half of the banks the effect of interest rate parallel increase by 200 basis points on net annual interest income would be in the range between -0.1% {-1.6%} and 4.7% {2.2%} of the bank's own funds. In the breakdown by banks, in the case of 200 basis point rate shock the net annual interest rate income would increase by maximum 13.7% {8.5%} of their own funds, whereas the potential maximum fall in income would be 2.1% {4.1%} (see Chart 43). In 2011, market participants expect a modest overall rise in interest rates.

<sup>26</sup> The GAP of a pre-defined time-band is the difference between the RSA and RSL values within the specific time-band. The larger a particular bank's GAP, the higher its interest rate risk exposure. In the event of a positive GAP, the bank will incur losses from an interest rate decline, as the RSA exceed the RSL and, therefore, the bank's interest income will shrink more notably than the expenditure. In the event of a negative GAP, the bank will incur losses from a rise in interest rates, as the liabilities exceed the assets and, therefore, the bank's interest expenditure will grow more than the income.

<sup>27</sup> The impact on net annual interest income within each time-band is calculated by multiplying the time-band's GAP with the interest rate change and the ratio of this time-band characterising the part of the year when the GAP of this time-band will be active. For the purposes of calculating the ratio, it is assumed that repricing will take place in the middle of the time-band. For example, 3–6 month time-band ratio is calculated as follows:  $(12 - 0.5 \times (3 + 6)) / 12 = 0.625$ . The overall impact on the profit for the year is the aggregate effect for the first four time-bands.

<sup>28</sup> As the short-term sensitivity analysis is based on the GAP method, the interest rate impact on the bank's economic value is not taken into account and interest income calculations are based on the structure of the banks' balance sheet as at the end of 2010.

<sup>29</sup> EBA (CEBS), following the recommendations of the Basel Committee on Banking Supervisors, proposes to set the level of unexpected parallel shift of interest rates (parallel rate shock) at 200 basis points. Sources: *Principles for the Management and Supervision of Interest Rate Risk*. Basel Committee on Banking Supervision. July 2004; *Technical aspects of the management of interest rate risk arising from non-trading activities under the supervisory review process*. Committee of European Banking Supervision. October 2006. Such parameter value for the interest rate shock has currently also been introduced by the FCMC in the "Regulations on the Management of Interest Rate Risk, Preparation of a Report on the Calculation of Economic Value Decline and of a Report on the Term Structure of Interest Rate Risk".

Given the expectations and the pattern of the Latvian bank GAP changes, the possibility of banks incurring significant losses in 2011 as a result of the interest rate risk materialisation is quite small.

Chart 42

**SHORT-TERM SENSITIVITY ANALYSIS:  
IMPACT OF INTEREST RATE INCREASE  
BY 200 BASIS POINTS ON THE ANNUAL NET  
INTEREST INCOME OF LATVIAN BANKS BY  
MATURITY**  
(% of own funds)

Impact Cumulative impact  
 1st half of 2009 1st half of 2009  
 2nd half of 2009 2nd half of 2009  
 1st half of 2010 1st half of 2010  
 2nd half of 2010 2nd half of 2010

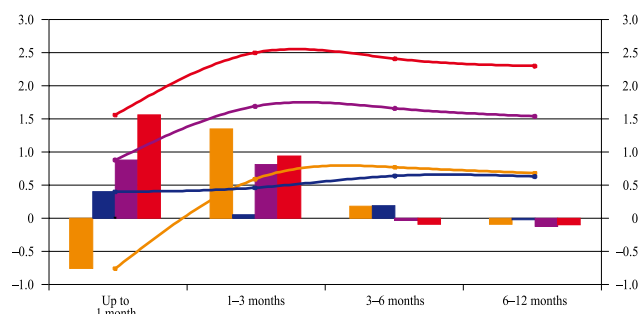
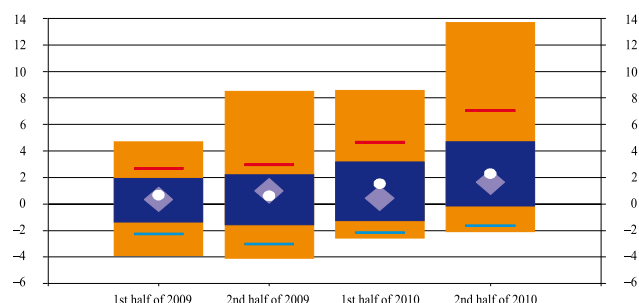


Chart 43

**SHORT-TERM SENSITIVITY ANALYSIS:  
CUMULATIVE IMPACT OF INTEREST RATE  
INCREASE BY 200 BASIS POINTS ON THE  
ANNUAL NET INTEREST INCOME OF  
LATVIAN BANKS IN BREAKDOWN  
BY BANKS**  
(% of own funds)

Minimum – maximum range  
 Interquartile  
 Median  
 Weighted average  
 90th percentile  
 10th percentile



In order to assess the banks' capacity to absorb the impact of particularly adverse interest rate changes on the net annual interest income of banks, a stress test was performed. The calculations were based on the scenario of a significant interest rate increase (shock).

The assumptions underlying the scenario of a significant interest rate increase (shock) are as follows:

- repricing will take place in the middle of the time-band;
- bank interest rate risk positions<sup>30</sup> at the moment of assessment are equal to the positions at the end of 2010;
- the interest rate increase (shock) in particular time bands (i.e. up to 1 month; 1–3 months, 3–6 months, 6–12 months) occurs only on the bank liabilities side;
- on the asset side no increase in the yield curve is observed (the increase is insignificant)<sup>31</sup>;
- the value of the interest rate increase (shock) for the lats is equal to the respective shock value for the euro;
- the value of the interest rate increase (shock) for other currencies (except the lats, euro and US dollar) is equal to the arithmetic mean of the shock values for the euro and US dollar.

**At the end of 2010, the largest net interest rate risk positions in the balance sheet were recorded in euro, US dollars and lats.** In order to assess the impact of the potential interest rate developments of the above currencies on the bank exposure to interest rate risk, the scenario of a significant interest rate increase (shock) provides for the following assumption. The amount of a significant interest rate increase (shock) in each time-band has been defined as the spread between the upper limit of the implied future rate 90% confidence interval of the EURIBOR, Eurodollar and 3-month money market index of other currencies (see Table 6) and the actual value of the 3-month money market index at the moment of calculation (i.e. 9 March 2011).

<sup>30</sup> The net interest rate risk position is the difference between the long and short positions (see the FCMC "Regulations on the Management of Interest Rate Risk, Preparation of a Report on the Calculation of Economic Value Decline and of a Report on the Term Structure of Interest Rate Risk").

<sup>31</sup> Such a conservative assumption has been applied, taking into account the specifics of the bank GAP in time-bands of up to 1 year in order to level out the positive impact of the yield curve increase on the net annual interest income of banks. It enables the assessment of banks' capacity to absorb a decline in net annual interest income as a result of an increase in the cost of bank liabilities.

Table 6

**UPPER LIMIT OF THE IMPLIED FUTURE RATE'S 90% CONFIDENCE INTERVAL OF THE EURIBOR, EURODOLLAR AND OTHER CURRENCIES' 3-MONTH MONEY MARKET INDEX<sup>32</sup>**

(%)

	Up to 1 month	1–3 months	3–6 months	6–12 months
Euro	1.2964	1.6093	2.0975	2.4730
US dollar	0.3762	0.4663	0.5664	0.8769
Other currencies <sup>33</sup>	0.8363	1.0378	1.3320	1.6750

The stress test results suggest that materialisation of a scenario of a particularly adverse increase in interest rates would not cause a significant negative impact on the banks' capability to absorb shocks related to the interest rate risk. All banks would be capable of absorbing additional losses in the amount of up to 1.5% of their total own funds without additional increase in their capital. The overall CAR of banks would decline by a mere 0.2 percentage point.

**Interest rate changes in the financial market affect not only bank income but also the economic value of bank assets, liabilities and off-balance sheet items.**<sup>34</sup> The impact of interest rate changes on bank income and their economic value can be considered to be two separate though mutually interrelated perspectives of the interest rate risk. The results of the sensitivity analysis based on a bank's economic value provide a broader (long-term) outlook on the potential impact of interest rate changes on the financial position of banks. Conversely, a sensitivity analysis based on the net annual interest income only provides an assessment over a short-term horizon.

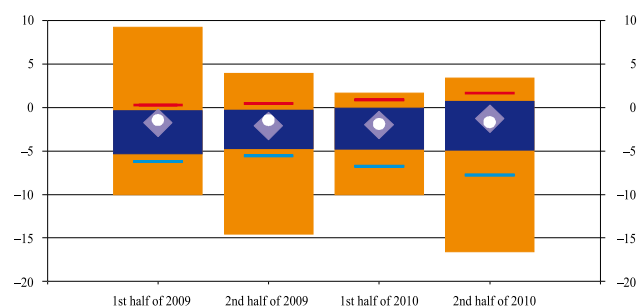
**The results of sensitivity analysis suggest that a moderate overall impact of the interest rate risk on the economic value of banks persisted.** At the end of 2010, the decline in the economic value of Latvian banks resulting from sudden and unexpected interest rate changes in the banking-book would be about 1.7% {1.4%} of the banks' own funds, suggesting a relatively small exposure of banks to interest rate risk in the long-term.

**For half of the banks the fall in their economic value due to a rise in interest rates would not exceed 5% of their own funds.** In the breakdown by banks, the maximum increase of the economic value in case of an interest rate parallel increase by 200 basis points would amount to 3.4% {3.9%} of the banks' total own funds at the end of 2010, whereas the maximum decrease would be 16.6% {14.6%} of their own funds (see Chart 44). The interquartile range suggests that for half of the banks the effect of an interest rate parallel increase by 200 basis points on their economic value would be in the range between –0.7% {–0.3%} and –4.9% {–4.7%} of the bank's own funds.

Chart 44

**SENSITIVITY ANALYSIS: CUMULATIVE IMPACT OF INTEREST RATE INCREASE BY 200 BASIS POINTS ON THE ECONOMIC VALUE OF LATVIAN BANKS IN BREAKDOWN BY BANKS**  
(% of own funds)

- Minimum – maximum range
- Interquartile
- Median
- Weighted average
- 90th percentile
- 10th percentile



**Summing up the results of the sensitivity analysis and stress test, it can be concluded that the changes in the term structure of RSA and RSL notwithstanding, the direct exposure of Latvian banks to interest rate risk was limited in 2010.** However, with the GAP growth trend persisting, banks should pay more attention to balancing the RSA and RSL.

<sup>32</sup> Source: Bloomberg.

<sup>33</sup> Calculated as the arithmetic mean of the values of the upper limit of the implied future rate's 90% confidence interval of the EURIBOR and Eurodollar 3-month money market indices (see the scenario assumptions).

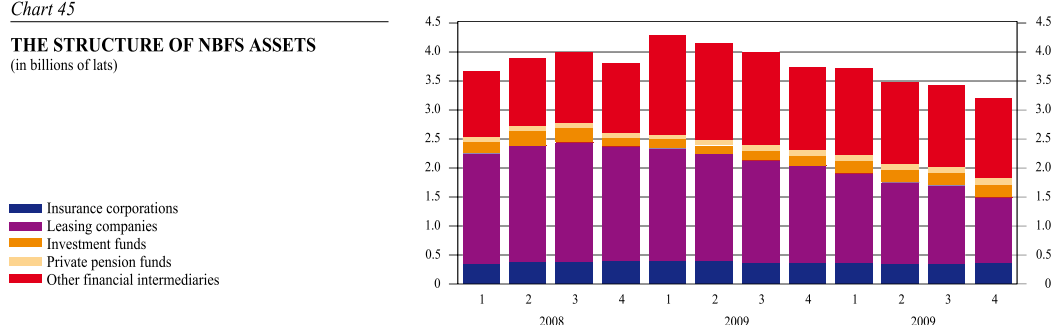
<sup>34</sup> A bank's economic value is the present value of the bank's expected net cash flow generated by claims and liabilities that are both on and off the bank's balance sheet.

## 5. RISKS IN NBFS

**The total NBFS assets continued to decrease in 2010** (to 3 205.7 million lats; see Chart 45), and the share of NBFS assets in the financial sector shrank to 12.7% at the end of 2010. Leasing companies and other financial intermediaries, whose principal activity was related to granting other loans, as well as the so called quick credit providers and lombards retained a predominant role in the NBFS assets, accounting for about 80%. The decline in NBFS assets was mainly on account of the decreasing leasing companies' assets.

Chart 45

**THE STRUCTURE OF NBFS ASSETS**  
(in billions of lats)



**Despite the shrinking outstanding amount of the leasing portfolio, positive trends were observed on the leasing market in the second half of 2010** – the amount of new leasing loans grew for the first time since 2007 (by 88.3% in the fourth quarter of 2010 in comparison with the respective period of the previous year). The financial leasing segment recorded the largest increase with the maturity of loans of one year to five years. Overall, the outstanding amount of the leasing portfolio continued to contract steadily (–26.5% in the fourth quarter of 2010 year-on-year). In the breakdown by sector, the rate of decrease of the outstanding amount of leasing granted by non-financial corporations slowed down in transport, storage and communication as well as mining and quarrying. The structure of the leasing portfolio remained unchanged in 2010: the outstanding amount of leasing loans granted to non-financial corporations averaged 76% but that of loans to households – 20%.

**The outstanding amount of loans granted by other financial intermediaries also continued to decrease in 2010, and the structure of loans remained broadly unchanged.** In 2010, other financial intermediaries granted somewhat more than a half of all loans to residents (of them, 42% accounted for consumer credit to private persons) but other loans – to non-residents (mainly to non-euro area residents).

**As before, leasing companies financed their operation by predominantly using loans attracted from resident MFIs and non-resident MFIs.** The ratio of total loans of leasing companies to assets accounted for 91% (94% in 2009). The role of resident MFIs loans in the financing of leasing companies weakened but the amount of financing attracted from non-resident MFIs grew considerably: the share of loans from non-resident MFIs in assets was 30% in 2009 but approximately 60% – in 2010 (resident MFIs loans accounted for 34.6% and 28.4% of assets respectively).

**The financing of other financial intermediation institutions in the form of loans attracted from resident and non-resident MFIs was lower than that of leasing companies.** In 2010, the total borrowings of other financial intermediaries accounted for 51% of assets on average (60% of assets in 2009), including the loans from resident MFIs – 9.6% of assets (14.8% of assets in 2009).

**In 2010, the level of insurance premiums signed by life insurance corporations notably exceeded that of premiums signed in 2009; however, it was still slightly lower than in 2008.** At the same time, the level of insurance compensation was lower than in 2009 and 2008. Thus, the technical result of insurance activities improved that basically ensured life insurance companies' profit in 2010. In contrast to developments on the life insurance market, the level of gross insurance premiums signed by non-life insurance corporations continued to shrink in 2010, and the level of insurance compensation was slightly lower than in 2009. Thus, non-life insurers' profit in 2010 was slightly higher than in the previous year.

**The insurers' investment portfolio remained broadly unchanged. A trend to increase investment prudently in non-fixed income instruments in the life insurance segment was observed.** Time deposits with credit institutions accounted for the largest share in the life insurers' investment portfolio (on average 55% of all investment in the financial instrument market in 2010; 59% in 2009), while the share of investment in fixed income securities remained unchanged (on average 38%). At the same time, investment in non-fixed income

securities, i.e. investment fund certificates, increased to 6.4%, although a lower amount of such investment persisted also previously). Deposits of non-life insurers in the financial market are mainly placed in debt securities and other fixed-income securities (on average 58% of all investment in financial instruments in 2010) and in time deposits with credit institutions (on average 31% of total investment in financial instruments in 2010).

**The share of investment funds in the NBFS is relatively small; therefore, although investment funds are active participants of financial markets, their impact on developments in the financial sector was minor.**

Investment fund net assets increased by 21.8% in 2010 and amounted to 204.3 million lats at the end of the year. In 2010, the development of investment funds was determined by larger risk investment: net investment flow to money market funds declined in 2010 but to risk-oriented funds, for instance, equity funds, – increased. At the same time, net investment flow to closed-end investment funds that are mainly the real estate funds established by banks, was stable and slightly smaller than in the second half of 2009. Time deposits still accounted for the largest share in the structure of investment funds (36.7%; 41.5% in 2009). The proportion of shares and other non-fixed income securities in the total investment portfolio was 14.4% at the end of 2010 (5.3% at the end of 2009). Total investment in real estate amounted to 7% of the total investment portfolio in 2010.

**Private pension fund assets increased throughout the year, reaching 114.3 million lats at the end of 2010.**

This points to positive dynamics of contributions made by the current and new participants and funds' operation. Given the operational specifics of pension funds, the structure of investment remained broadly unchanged, and the funds were mainly invested in low-risk instruments – deposits with credit institutions and highly rated bonds.

**Looking at the operation of the NBFS within the context of the stability of the financial system, the NBFS does not represent material risks to the stability of Latvia's financial system due to the insignificant total amount.**

Risks in the NBFS are mainly related to further economic developments. The operation of some NBFS will be also affected by the expected legislative amendments, for instance, the licensing of the so called quick credit providers planned to be started in autumn of 2011 will most likely cause adjustments in the market of other financial intermediaries. In the NBFS related to investment management, risks are overall linked to financial market risks on a global scale, including the rising interest rates. In the insurance sector, risks are primarily related to economic growth and insurers' ability to expand the insurance coverage while in the financial area, risks are related to investment management, as these corporations are the largest institutional investors in the financial market.

## 6. FINANCIAL INFRASTRUCTURE

### 6.1 Payment systems

**The Bank of Latvia assessed systemic risk in the following Bank of Latvia's payment systems in 2010: the SAMS, the EKS and TARGET2-Latvija. Three indicators were applied by the Bank of Latvia to assess systemic risk: 1) the share of the payment systems in the respective payment segment; 2) concentration ratio – the share of the five largest participants in the system and 3) the netting effect ratio (the efficiency of using settlement funds in the payment systems).**

#### The SAMS

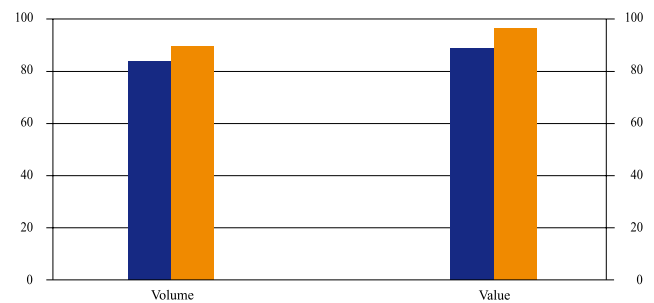
The SAMS is a large-value real-time gross lats settlement system used for interbank payments, settlement of monetary operations, retail payment systems and securities settlement systems as well as for executing urgent or large-value customer payments. Hence, the SAMS is mainly described by value ratios.

In 2010, 73.2 thousand interbank payments were processed via the SAMS and their value amounted to 152.6 billion lats, thus representing 89.0% and 96.3% of interbank credit transfers made in lats in terms of volume and value respectively (see Chart 46). The credit transfers handled among Latvian banks via correspondent banking arrangements accounted for the remaining share.

Chart 46

**THE SHARE OF SAMS TURNOVER IN THE INTERBANK CREDIT TRANSFERS IN LATS (%)**

■ 2009  
■ 2010

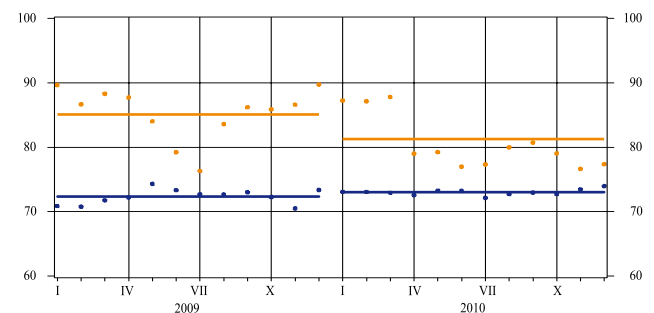


Year-on-year, the volume concentration ratio of SAMS increased from 72.3% to 73.0% in 2010; while the value concentration ratio decreased from 85.1% to 81.3% (see Chart 47). The fall in the value concentration ratio of SAMS was mainly attributable to the recourse by credit institutions to a 7-day deposit facility, thus less frequently resorting to the overnight deposit facility. Although the value concentration ratio of SAMS exceeds the limit of 80% stipulated by the ECB, this development does not indicate a probability of any significant domino effect in the system, as one of the system's five largest participants is also the Bank of Latvia, which is not exposed to any liquidity and credit risk.

Chart 47

**THE SAMS CONCENTRATION RATIOS (%)**

● Volume  
— Average volume ratio (per annum)  
● Value  
— Average value ratio (per annum)



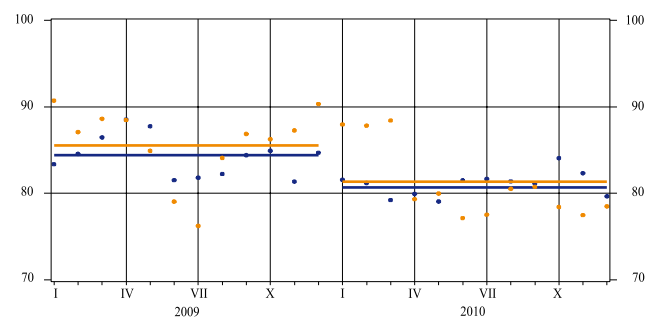
The value of interbank payments effected via the SAMS rose by 0.8% (to 152.6 billion lats) in 2010, and that of customer payments declined by 19.9% (to 8.8 billion lats). The volume of interbank payments shrank by 7.0% (to 73.2 thousand) and that of customer payments decreased by 2.4% (to 96.3 thousand). Interbank and customer payments amounted to 43.2% and 56.8% of total payment volume respectively and value of interbank and customer payments stood at 94.5% and 5.5% of total payment value respectively.

In 2010, the value concentration ratio of bank payments (81.4%) exceeded that of the customer payments by 0.7 percentage point (80.7%; see Chart 48). The concentration ratio of the two payment types recorded a year-on-year decline.

Chart 48

**THE SAMS PAYMENT VALUE CONCENTRATION RATIOS (%)**

● Customer payments  
— Average customer payment ratio (per annum)  
● Bank payments  
— Average bank payment ratio (per annum)



In addition to the concentration ratio and the share of a payment system in the respective segment, systemic risk or a probability of the so-called domino effect is influenced by the efficiency of using settlement funds in the systems, described in the gross settlement systems by the share of funds in account balances used for settlement.

Bank settlement accounts with the Bank of Latvia are used for the financial market settlements in lats. The respective efficiency ratio is calculated as the percentage of payments sent by banks via the SAMS to the balance

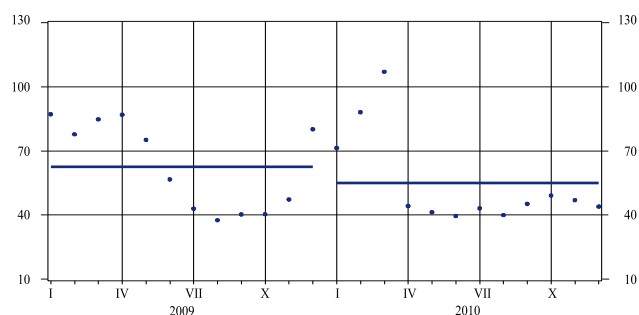
on the bank accounts with the Bank of Latvia. The balance on the above accounts is substantially affected by the minimum reserve ratio set by the Bank of Latvia (3% for bank liabilities with a maturity of over two years and 5% for bank liabilities with a maturity of up to two years). The above ratio remained unchanged in 2010, as in 2009. The introduction of 7-day deposit facility by the Bank of Latvia had a notable effect in 2010, as it contributed to a decline in the SAMS turnover, since so far the banks resorted to the overnight deposit facility with the Bank of Latvia. In 2010, the average daily balance on the bank accounts with the Bank of Latvia (698.7 million lats) was 1.4% lower year-on-year. The value of payments made by banks in the SAMS shrank by 12.6% (to 96.9 billion lats) in 2010. Overall, this development accounted for a decrease in the efficiency of the settlement fund use in the SAMS: from 62.6% in 2009 to 55.0% in 2010 (see Chart 49), i.e. funds on accounts were used 0.6 times in the payments via the SAMS.

Chart 49

#### THE EFFICIENCY OF USING SETTLEMENT FUNDS IN THE SAMS (%)

(%)

• Monthly ratio  
— Average ratio (per annum)



The three indicators of the systemic risk assessment showed that the SAMS was a system providing efficient and safe payment environment to its participants and the entire financial system in 2010.

### The EKS

The EKS is a net settlement system processing retail payments in lats and euro and ensuring two clearing cycles daily. On 9 November 2010, the functionality of the system regarding the settlement in euro was substantially changed as a result of converting the payment message standard, introducing another clearing cycle and enabling the exchange of the euro cross-border credit transfer messages with STEP2, the system of the Euro Banking Association (PE-ACH; Pan-European Automated Clearing House), via SEPA Clearer, the system of Deutsche Bundesbank. The EKS is used for processing retail payments; hence it is mainly described by payment volume ratios.

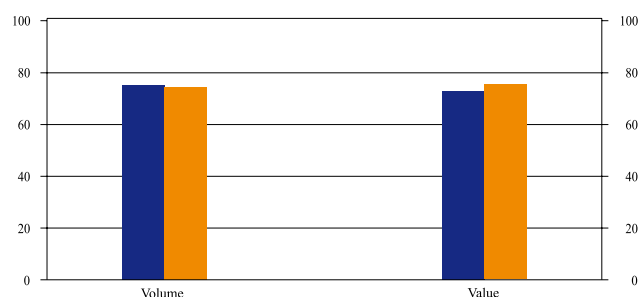
In 2010, of retail customer credit transfers made among banks in lats, 74.8% (32.8 million) and 74.9% (10.5 billion lats) were handled by the EKS in terms of volume and value during the lats settlement (75.1% and 72.8% respectively in 2009; see Chart 50). Mutual settlement of retail credit transfers made by some banks of Latvia accounted for the residual share.

Chart 50

#### THE SHARE OF TURNOVER OF EKS LATS SETTLEMENTS IN CUSTOMER INTERBANK CREDIT TRANSFERS IN LATS (%)

(%)

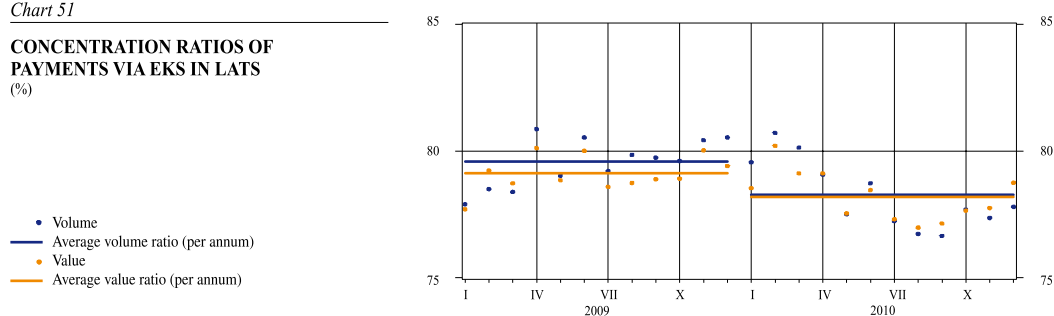
■ 2009  
■ 2010



The volume concentration ratio (78.3%) of the payments handled by the EKS in lats in 2010 recorded a moderate year-on-year decrease (79.6% in 2009; see Chart 51). The value concentration of payments executed via the EKS in lats also shrank somewhat (from 79.1% in 2009 to 78.2% in 2010). The average annual concentration ratio of the lats settlement via the EKS was lower than the limit of 80% set by the ECB both in terms of volume and value in 2010. The total volume of lats payments executed in the EKS expanded by 991.3 thousand or 3.1% (to 32.8 million) and value rose by 339.4 million lats or 3.3% (to 10.5 billion lats) in 2010.

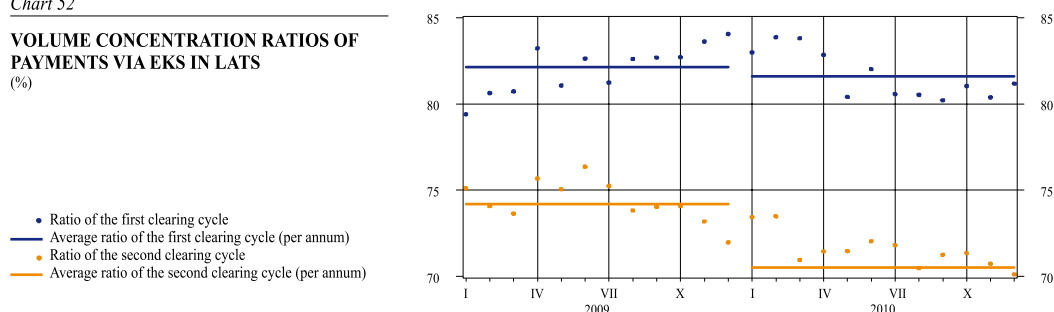


Chart 51

**CONCENTRATION RATIOS OF  
PAYMENTS VIA EKS IN LATS**  
(%)


As regards the lats settlement in the EKS, in 2010, 69.9% of the volume of all payments made in lats and 57.0% of the value of payments handled in both clearing cycles in lats were processed in the first clearing cycle. In the first clearing cycle, 22.9 million payments amounting to 6.0 billion lats were handled and in the second clearing cycle, 9.9 million payments in the amount of 4.5 billion lats were handled in 2010. Of the lats payments executed in the EKS, the total volume of payments rose by 6.1% and value increased by 3.1% in the first clearing cycle, while in the second clearing cycle the volume of payments shrank by 3.1% and value expanded by 3.7% in comparison with 2009. As a retail payment system, the EKS is primarily described by payment volume ratios. A comparison of the payment volume concentration ratios of both clearing cycles of payments executed in lats (see Chart 52) showed that in the first clearing cycle the volume concentration ratio was by 11.1 percentage points higher than that of the second clearing cycle (81.6% and 70.5% respectively) in 2010. Moreover, the ratios of both clearing cycles were characterised by a downward trend. The functionality of the EKS enabling the payment settlement in the second clearing cycle in case the payment is not settled in the first clearing cycle, contributes to mitigating the impact of concentration ratio of the first clearing cycle on the systemic risk.

Chart 52

**VOLUME CONCENTRATION RATIOS OF  
PAYMENTS VIA EKS IN LATS**  
(%)


In addition to the concentration ratio and the share of a payment system, systemic risk is determined by the efficiency of using settlement funds in the payment systems.

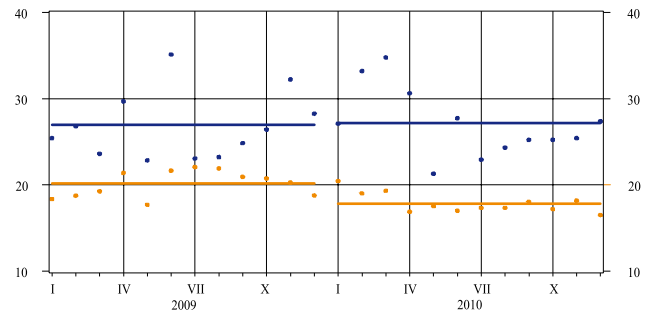
The efficiency of using settlement funds in the net settlement systems, including the EKS, is described by the netting effect ratio, i.e. the system participants' net debit positions as a percentage of the system's gross transaction value. According to the ECB methodology, where the system's netting effect ratio is below 10%, the system is deemed to be highly efficient – with high netting effect, i.e. the majority of transactions are mutually offset (netting) and the system's participants do not need additional liquidity on their accounts. In the event of settlement errors, however, high netting effect may become a significant risk as the system participants incur additional obligations which may trigger liquidity risk and credit risk expansion in the system. As regards the payments executed via the EKS in lats, the netting effect ratios of the first and second clearing cycles were 27.2% and 17.8% in 2010 respectively (see Chart 53). Hence, neither a substantial netting risk to the payments made in lats, nor its expansion was identified in 2010. The value of net settlement positions of payments executed in lats grew by 3.8% in the first clearing cycle and declined by 8.3% in the second clearing cycle, and the value of payments made in lats via the EKS rose by 3.1% in the first clearing cycle and expanded by 3.7% in the second clearing cycle. Hence, of payments executed in lats, the netting effect ratio of the first clearing cycle increased by 0.2 percentage point year-on-year and that of the second clearing cycle dropped by 2.3 percentage points.

Since the value of net debit positions of payments executed by the EKS participants in lats was minor in 2010 compared with the balance on the bank accounts with the Bank of Latvia (0.2% on average), the netting effect created no need for additional funds in lats (liquidity risk) in the system.

Chart 53

**THE NETTING EFFECT RATIOS OF PAYMENTS VIA EKS IN LATS (%)**

• Ratio of the first clearing cycle  
 — Average ratio of the first clearing cycle (per annum)  
 • Ratio of the second clearing cycle  
 — Average ratio of the second clearing cycle (per annum)



The processing of retail payments made in euro via the EKS has been launched as of 2008. The above operation enables the EKS participants to settle retail payments executed in euro among Latvia's banks within a single day – similar to the payments made in lats. The need to execute payments by the end of the business day has been stipulated by Core Principle IV of the Bank for International Settlements document "Core Principles for Systemically Important Payment Systems".

In order to ensure compliance with the SEPA requirements, the functionality of the system was substantially modified in 2010. The above modifications took effect on 9 November 2010, and as a result, the settlement has been effected in three cycles, the number of participants has changed notably and a connection with STEP2, the system of the Euro Banking Association, has been established via SEPA Clearer, the system of Deutsche Bundesbank.

In 2010, the EKS processed 310.1 thousand payments executed in euro in the total amount of 1.5 billion euro, i.e. a year-on-year growth of 22.8% and 17.0% in terms of volume and value respectively.

The EKS ensured efficient and safe payment environment to its participants and the entire financial system in 2010.

### TARGET2-Latvija

TARGET2-Latvija is the Latvian component of Trans-European Automated Real-time Gross Settlement Express Transfer system TARGET2.

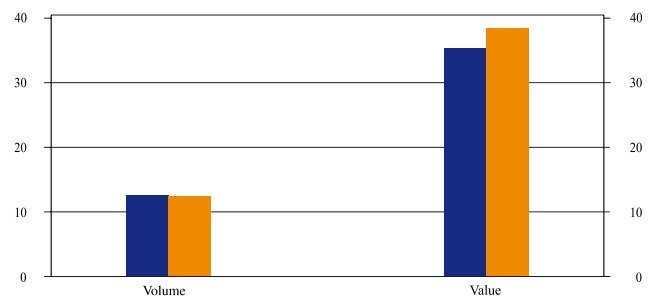
TARGET2-Latvija is a large-value real-time gross euro settlement system used for interbank payments in euro as well as for executing urgent or large-value customer payments.

In 2010, 28.0 thousand interbank payments were processed via TARGET2-Latvija and their value stood at 188.5 billion euro, thus representing 12.4% and 38.4% of interbank credit transfers effected in euro in terms of volume and value respectively (12.6% and 35.4% in 2009 respectively; see Chart 54). The credit transfers of Latvian banks handled through correspondent banking arrangements accounted for the residual share.

Chart 54

**THE SHARE OF TARGET2-LATVIJA TURNOVER IN THE INTERBANK CREDIT TRANSFERS IN EURO (%)**

■ 2009  
 ■ 2010



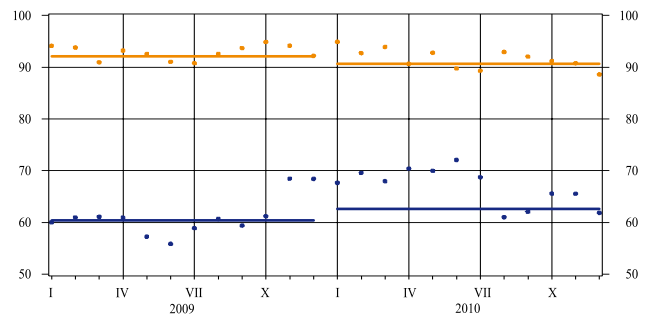
The volume concentration ratio of TARGET2-Latvija amounted to 62.7% and the value concentration ratio stood at 90.7% in 2010 (see Chart 55). The value concentration ratio of TARGET2-Latvija exceeds the limit of 80% stipulated by the ECB, nevertheless, this development does not point to a probability of any significant domino effect in the system, as one of the system's five largest participants is the Bank of Latvia. However, TARGET2-Latvija is only one of the components in TARGET2 system, and its share is smaller than 0.1% both in terms of volume and value, hence a relatively high efficiency of using settlement funds in one of TARGET2 components does not point to a risk of domino effect in the whole system of TARGET2.

Chart 55

**TARGET2-LATVIJA CONCENTRATION RATIOS (%)**

(%)

- Volume
- Average volume ratio (per annum)
- Value
- Average value ratio (per annum)



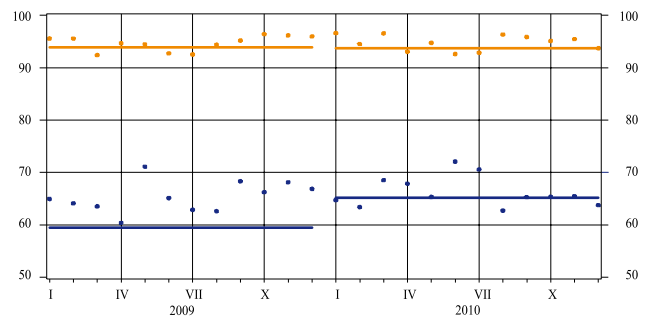
The value of interbank payments processed in TARGET2-Latvija declined by 2.6% (to 188.5 billion euro) in 2010, and that of customer payments increased by 61.5% (to 9.3 billion euro). Interbank and customer payments comprised 10.2% and 89.8% of total payment volume processed in TARGET2-Latvija and the value of interbank and customer payments amounted to 95.3% and 4.7% of total payment value respectively. In 2010, the value concentration ratio of interbank payments (93.7%) was by 28.6 percentage points higher than that of the customer payments (65.1%; see Chart 56). The value concentration ratio of customer payments rose by 5.7 percentage points, while the value concentration ratio of interbank payments recorded a minor decline of 0.2 percentage point in comparison with 2009.

Chart 56

**TARGET2-LATVIJA PAYMENT VALUE CONCENTRATION RATIOS (%)**

(%)

- Customer payments
- Average customer payment ratio (per annum)
- Bank payments
- Average bank payment ratio (per annum)



The volume of interbank payments fell by 12.9%, reaching 28.0 thousand, and that of customer payments grew by 95.8% (to 247.6 thousand) year-on-year.

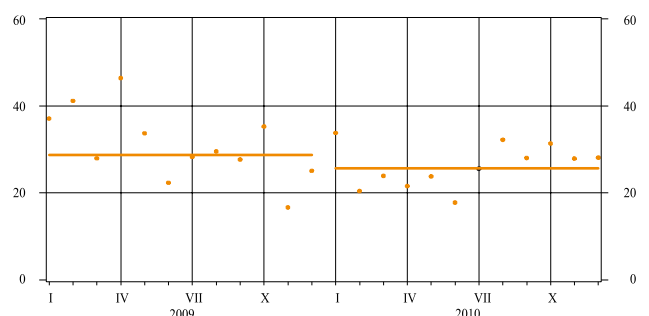
The netting effect ratio of TARGET2-Latvija was calculated as the ratio of payments sent by the participants to TARGET2-Latvija to the balance on the participants' euro accounts opened in TARGET2-Latvija. In 2010, funds held in accounts were on average used 25.6 times in payments executed via TARGET2-Latvija (see Chart 57; the payments made by all participants in the system, including the Bank of Latvia and Treasury, and balance on the respective accounts are taken into consideration in calculation). In contrast to the accounts in the SAMS on which also minimum reserves are held in addition to the funds needed for settling day-to-day payments, such a relatively high efficiency ratio of TARGET2-Latvija settlements can be attributed to the fact that the participants deposit funds into the accounts in TARGET2-Latvija only to make day-to-day payments. The average daily balance on the participant euro accounts in TARGET2-Latvija rose by 10.9% (to 30.2 million euro) in 2010, while the value of payments executed via TARGET2-Latvija decreased by 0.2% (to 200.0 billion euro). Overall, the above development accounted for a minor decline in the efficiency of using settlement funds in TARGET2-Latvija (from 28.7 times to 25.6 times, i.e. by 3.1 points).

Chart 57

**THE EFFICIENCY OF USING SETTLEMENT FUNDS IN TARGET2-LATVIJA (times)**

(times)

- Monthly ratio
- Average ratio (per annum)



TARGET2-Latvija ensured efficient and safe payment environment to its participants and the entire financial system in 2010.

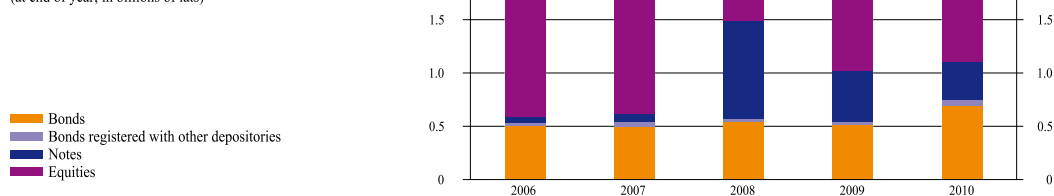
## 6.2 Securities Settlement Systems

Problems in the securities settlement infrastructure may cause disruptions in payment system operation, affect the implementation of monetary policy and the financial system stability. The LCD is the sole central securities depository in Latvia. The LCD accounts for, performs safe-custody of and effects settlement in all Latvian publicly issued financial instruments. The securities settlement system of LCD is systemically important since it has been used for the securities settlement of the Bank of Latvia monetary policy operations. The LCD executes cash settlement for the securities transactions made in lats via the Bank of Latvia's payment system SAMS.

At the end of 2010, securities amounting to 1.8 billion lats were recorded in the LCD (0.1 billion lats more year-on-year; see Chart 58). Overall, the securities recorded in the LCD expanded on account of an increase in equities recorded in the LCD by 11% (to 0.8 billion lats). The amount of short-term debt securities recorded in the LCD declined by 26% (to 0.4 billion lats) along with the growing amount of bonds recorded in the LCD (by 22%; to 0.6 billion lats). The above changes were attributable to a higher liquidity of credit institutions and lower interest rates; hence the demand for the government long-term debt securities rose enabling the Latvian government to borrow funds for a longer term. Although the share of securities transferred from other depositories and recorded in the LCD is minor in the aggregate amount of securities recorded in the LCD (3.5% at the end of 2010), it has expanded 2.3 times in comparison with the previous year.

Chart 58

**OUTSTANDING SECURITIES REGISTERED WITH THE LCD AND TRANSFERRED FROM OTHER DEPOSITORIES**  
(at end of year, in billions of lats)

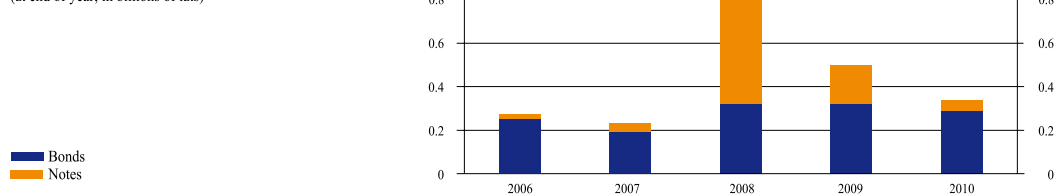


At the end of 2010, 18.6% of securities recorded in the LCD were held in the securities accounts in the VNS. The amount of securities recorded in the VNS shrank by 32.7% in comparison with the end of 2009, since the banks' liquidity amplified and the need to participate in the Bank of Latvia's monetary operations where the securities recorded in the VNS were accepted as collateral for the Bank of Latvia's monetary policy instruments minimised.

Outstanding securities recorded in the VNS amounted to 0.34 billion lats at the end of 2010, of which, the Treasury bills were in the amount of 0.05 billion lats and Treasury bonds stood at 0.29 billion lats (see Chart 59). The amount of bonds declined by 9.9% and that of notes shrank by 83.2% year-on-year.

Chart 59

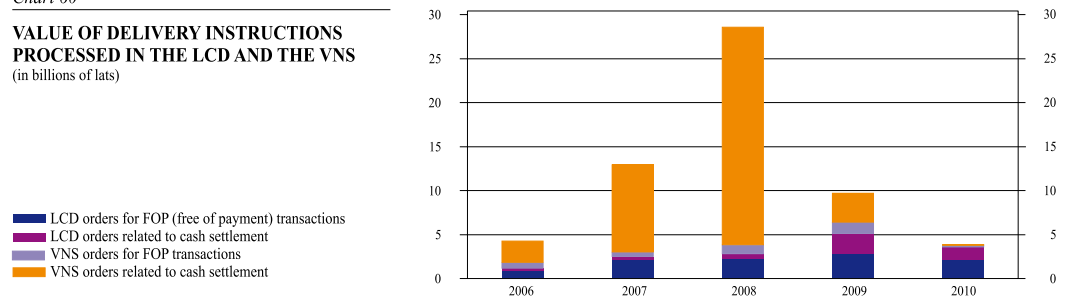
**OUTSTANDING SECURITIES REGISTERED WITH THE VNS AND TRANSFERRED FROM THE LCD**  
(at end of year, in billions of lats)



Outstanding securities in the VNS declining, the value of delivery instructions processed by the VNS decreased notably. In 2010, the value of delivery instructions for cashless transactions processed in the VNS was 0.28 billion lats, i.e. 78.5% lower year-on-year, and that of delivery instructions related to cash settlement amounted to 0.03 billion lats, i.e. 99% less year-on-year (see Chart 60).

Chart 60

**VALUE OF DELIVERY INSTRUCTIONS  
PROCESSED IN THE LCD AND THE VNS**  
(in billions of lats)



The LCD and Bank of Latvia ensured efficient and safe environment for securities transaction settlement to the financial market participants and the entire financial system in 2010.

## APPENDIX

## Bank performance indicators

	Subsidiaries of the bank groups of EU15 countries					Other banks				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Balance sheet items										
Number of banks and subsidiaries of foreign banks	7	7	9	9	9	17	16	18	18	20
Total assets (in millions of lats)	9 161.8	12 383.5	13 736.8	13 138.2	12 626.2	6 745.5	9 532.5	9 506.6	8 540.1	9 341.0
Share of loans in total assets (%)	81.4	81.1	83.3	81.2	76.7	50.7	51.1	54.1	55.7	49.7
Share of deposits in liabilities (%)	36.1	31.6	28.6	29.9	32.6	65.9	65.7	61.3	65.8	74.9
Share of liabilities to MFIs in liabilities (%)	52.9	56.7	59.3	51.8	50.5	16.2	18.4	16.7	11.4	5.2
Loans to deposits ratio (%) <sup>35</sup>	229.8	259.2	302.4	283.7	247.7	77.5	78.8	103.8	97.1	75.6
Leverage ratio (%) <sup>36</sup>	6.6	7.9	7.5	6.3	6.6	8.9	8.0	7.0	9.0	8.3
Profitability										
ROE (%) <sup>37</sup>	11.4	13.5	5.7	-30.5	-12.5	14.0	10.6	-2.1	-11.1	-28.6
ROA (%) <sup>38</sup>	0.9	1.2	0.4	-2.7	-1.0	1.1	0.8	-0.2	-0.8	-2.4
Cost-to-income ratio (%) <sup>39</sup>	42.6	37.0	41.8	42.6	56.4	51.7	54.3	62.5	70.2	93.8
Profit margin (%) <sup>40</sup>	52.0	61.3	27.0	-172.1	-44.8	53.9	46.0	-5.7	-75.1	-127.0
Capital adequacy										
CAR (%)	9.4	10.8	12.7	15.4	15.2	11.4	11.4	10.8	13.5	14.0
Tier 1 CAR (%)	7.7	9.5	11.6	11.8	11.4	10.6	10.3	8.8	11.0	11.5
Liquidity										
Lr (%) <sup>41</sup>	40.6	46.4	48.7	64.0	57.4	59.4	62.1	56.3	61.9	75.9
Liquid assets to total assets ratio (%) <sup>42</sup>	14.9	15.5	13.0	14.1	19.5	36.0	37.4	34.0	31.8	37.7
Asset quality										
Share of specific provisions for non-performing loans in the loan portfolio (%)	0.5	0.6	1.6	9.3	10.9	0.8	0.6	3.5	9.8	13.4
Share of loans past due over 90 days in the loan portfolio (%)	0.3	0.5	3.0	14.8	15.0	0.8	1.2	4.9	20.0	27.3

<sup>35</sup> General government loans and deposits excluding.

<sup>36</sup> The ratio of assets to capital and reserves.

<sup>37</sup> Annualised profit/loss ratio to average capital and reserves of the reporting period (data of foreign bank subsidiaries are not included in the calculation of the ratio).

<sup>38</sup> Annualised profit/loss ratio to average assets of the reporting period.

<sup>39</sup> Cost-to-income ratio = (operating costs + intangible and fixed asset depreciation and disposal)/(net interest income + income from dividends + net commissions and fees + profit/loss from trades of financial instruments + financial instrument revaluation result + net ordinary income + adjustment for impairment of available-for-sale financial assets) x 100.

<sup>40</sup> Ratio of pre-tax profit to operating income.

<sup>41</sup> Liquid assets as stipulated by the FCMC (vault cash; claims on the Bank of Latvia and solvent credit institutions whose residual maturity does not exceed 30 days, and deposits with other maturity, if a withdrawal of deposits prior to the maturity has been stipulated in the agreement; investment in financial instruments, if their market is permanent, unrestricted) must not be less than 30% of banks' total current liabilities with residual maturity under 30 days.

<sup>42</sup> Liquid assets = vault cash + claims on central banks and other credit institutions + central government fixed income debt securities.