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# FINANCIAL STABILITY REPORT 2006



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#### ABBREVIATIONS

CAR – capital adequacy ratio CIS - Commonwealth of Independent States CSB - Central Statistical Bureau of Latvia ECB - European Central Bank EEA - European Economic Area (the European Union Member States, Iceland, Liechtenstein and Norway) EU - European Union EU10 - countries that joined the EU on 1 May 2004 EU15 - EU countries before 1 May 2004 FCMC - Financial and Capital Market Commission FRS - US Federal Reserve System GAP - repricing gap or difference between RSA and RSL GDP - gross domestic product HHI - Herfindahl-Hirschman index MFI - monetary financial institution NBFI - non-bank financial institution NPLs - non-performing loans RIGIBID - Riga Interbank Bid Rate RIGIBOR - Riga Interbank Offered Rate ROA - return on assets ROE – return on equity RSA - interest rate sensitive assets RSL - interest rate sensitive liabilities US - United States of America VaR - the maximum expected losses over a certain period of time and with a given probability (Value-at-Risk)

Sources: the Central Statistical Bureau of Latvia, the Financial and Capital Market Commission, the Latvian Leasing Association, LURSOFT (Database of the Republic of Latvia Register of Enterprises) and the Bank of Latvia.

Charts have been compiled on the basis of data provided by the relevant national central banks (Charts 1, 2, 57 and 59), Reuters (Charts 3 and 38), the Bank of Latvia (Charts 4, 24–32, 42–44, 48, 49, 56 and 58), the Financial and Capital Market Commission (Charts 5–9, 13–17, 24, 33, 34, 36 and 37), the Central Statistical Bureau of Latvia (Charts 10, 45–47, 49, 50, 54 and 55), European Council of Real Estate Professionals (Charts 11 and 12) and MarketLab (Charts 51–53) and estimates prepared by the Bank of Latvia based on the Financial and Capital Market Commission data (Charts 18–23, 35 and 39–41). The table is based on the data of the Bank of Latvia.

Figures featured in the charts are rounded values.

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### **EXECUTIVE SUMMARY**

The previous Financial Stability Report concluded that in the second half of 2005, under the circumstances of buoyant economic growth, increasing lending and rising real estate prices, Latvia's banking sector was financially sound. The same held true with respect to the first half of 2006, but the importance of the previously identified major risks related to the adverse real estate market developments, rise in the euro interest rates and high inflation was intensified by a further increase in macroeconomic risks.

The first half of 2006 also saw an increase in the activity of the Latvian financial sector. It was fuelled by Latvia's persistently robust economic growth as the domestic demand expanded notably. Inflation remained high. With the export expansion rate declining, the current account deficit posted a considerable rise, which was increasingly financed by an increase in the bank long-term external debt. Due to the buoyant economic development and labour outflows, labour market conditions tightened. Fiscal policy was not strict enough to balance the economy. The above trends point to increasing domestic and external imbalances in the economy and a rise in macroeconomic risks. In order to strengthen macroeconomic stability and subdue the steep acceleration in lending, one of the major factors causing inflation hikes, the Bank of Latvia's Council resolved to increase, as of 24 May 2006, the minimum reserve base for banks to include liabilities with the maturity of over two years. In response to macroeconomic development trends of Latvia, continuously negative real interest rates on loans in lats and interest rate hikes in the euro area and US, the Bank of Latvia's Council raised the refinancing rate by 0.5 percentage point (to 4.5%) as of 15 July.

The economic growth enables banks to retain a high asset quality. Despite the accelerated increase in lending, the stock of NPLs even decreased in comparison with the first half of 2005. Specific provisions covered over 100% of the NPLs.

In the circumstances of the increased reserve requirements and rising interest rates, the banking sector still retained high profitability and effectiveness. However, the total spread continued to narrow as a rise in the market interest rates and an increase in total liabilities caused considerable interest expenditure growth, particularly for liabilities to MFIs, exceeding the increase in interest income.

The growth in overall bank capital requirements exceeded that in bank own funds, and CAR decreased year-on-year. Banks' exposure to interest rate and direct foreign exchange risks remained low.

As a result of growing direct and indirect bank exposures to the real estate market, the credit concentration risk increased. Moreover, loans granted to real estate related sectors were concentrated in a relatively small number of Latvian banks which together comprise a systemically important share in the banking sector and are the most active on the credit market.

The financial position of households improved as a result of falling unemployment and rising income. Yet, the growth rate of the household debt considerably exceeded that of the household income. With the interest rates rising, the household debt and the size of average outstanding loans increasing, and high inflation growth persisting, the household lending-related credit risk continued to increase.

The credit risk stress tests results demonstrate that the banks' capacity to absorb a potential credit risk increase has not changed considerably, yet at the end of the first half of 2006 the overall shock absorption capacity of banks was lower than a year ago.

With the liquidity of the banks servicing residents slightly improving, the overall bank liquidity stabilised. However, the growing dependence of the banking sector on funding from foreign banks persisted, increasing banks' sensitivity to any potential changes in terms and conditions of foreign financing.

# 1. EXTERNAL ECONOMIC ENVIRONMENT AND ECONOMIC DEVELOPMENTS IN LATVIA

# Despite energy prices and interest rates continuing on an upward trend, the external economic environment remained favourable. The economic growth of Latvia gained momentum thus boosting macroeconomic risks.

Steady growth of the global economy continued also in the first half of 2006. With the US and China still playing the decisive role, the economic development also gained momentum year-on-year in the euro area and Japan.

In the first half of the year, oil prices maintained the rising trend. It was underpinned by small spare production and processing capacity, risks related to future production volumes in such large oil producing countries as Iraq and Nigeria, and geopolitical instability in the Middle East.

Following the impressive upward adjustment at the beginning of 2006, the growth in the US slowed down in the conditions of rising consumer price index, inflation expectations and wages. In part, higher inflation resulted from the shrinkage in excess capacity in commodity and labour markets. Against this backdrop, the FRS raised the base rate (in four steps) from 4.25% at the beginning of the year to 5.25% at the end of June (see Chart 1).



With exports and domestic consumption strengthening in the first half of the year, the euro area economic activity grew at a faster pace. The euro area exports were driven by the economic growth in its major trade partner countries. In the second quarter, substantial strengthening was recorded for the industrial and services sectors. Labour market conditions improved gradually. The effects of low interest rates figured as an important factor driving the other monetary indicator and credit growth in the euro area in the first four months of 2006. In response to the consumer price rise, the ECB kept on raising the key interest rates. Between December 2005 and June 2006, the minimum bid rate for the main refinancing operations was raised on three occasions (from 2% to 2.75%).

In the first half of the year, the economic growth in the EU10 countries (except Cyprus and Malta) continued to gather momentum, with the Baltic States excelling in particularly high rates. The domestic private demand, supported by net capital inflow and expansion in lending, was the main driver of growth. With inflation on an upward trend in the first six months of the year, the central banks of

#### Chart 1



Hungary and Slovakia raised base rates to 6.25% and 4.0% respectively (see Chart 2). In Poland, where price rises moderated, a reversed trend occurred, with the central bank lowering the base rate on two occasions (to 4.0%).

The economic growth in Lithuania and Estonia proceeded buoyantly in the first half of the year. The GDP growth in Estonia accelerated owing to stronger exports and domestic demand, whereas in Lithuania it moderated somewhat. The expansion in private consumption in Estonia and Lithuania was primarily facilitated by a substantial strengthening of employment, rising wages and salaries, and robust lending. In both countries, unemployment dropped in the first half of the year. The annual average growth in consumer price index in Estonia was on account of administered price rises (by 4.4%) since the beginning of the year (e.g. for heating and public utilities). In Lithuania, the consumer price index went up by 3.5% on average over the projection period.

In the first half of 2006, economic growth in Russia decelerated somewhat against the second half of 2005 due to a notable decrease in the first quarter of 2006. It was mainly on account of weakening construction activity due to severe winter. In the second quarter, however, the growth was stronger than projected, with the construction sector recovering and retail trade notably expanding. Growing income of the population boosted the private domestic demand. The volume of oil production rose slightly in the first half of the year. A higher value of Russia's exports was mainly achieved due to oil price rises. The inflow of foreign investment grew by 40% year-on-year, with resident borrowing abroad accounting for 70%. With inflation rate falling, the central bank of the Russian Federation lowered the base rate by 50 basis points (to 11.5%) at the end of the first half of the year.

The movements in the euro value in global foreign exchange markets in the first half of the year refer to several time periods. The euro rose against the US dollar at the beginning of the year, soon after (in February) depreciating again due to market expectations regarding monetary policies of the euro area and US, particularly those anticipating not narrowing US and euro base rate spreads. Over the following period of three months, the euro appreciated on account of depreciating US dollar and the developments clearly signalling improvements in the outlook for the euro area economic growth. On 5 June, the euro reached a six month high vis-à-vis the US dollar (1.30), with a renewed depreciation starting afterwards. Geopolitical risks mounting in early summer might have been drivers behind the US dollar appreciation due to which the euro depreciated further.

Until May, prices on the global stock markets were rising, a tendency sustained from the previous year (see Chart 3). This was a result of strong financial performance of non-financial corporations and improving economic situation in some regions of the world. In this period, stock prices in the US, euro area, Japan and



Russia surged to the highest levels in several years. Since May, however, stock prices in the major markets have dropped. Moreover, investors reacted to the negative market tendencies more vigorously and, compared with the peak reached in May, the European stock market index Dow Jones EURO STOXX 50 fell accordingly by 6.2%, the US stock market index S&P 500 by 3.4%, and the technology-dominated NASDAQ Composite by 7.3% at the end of June. The most notable drop was recorded by stock markets of Japan (Nikkei 225 by 10.3%) and Russia (RTS by 14.6%). Stock market indices of several countries in Central and East Europe (e.g. the Check Republic, Poland and Hungary) also deteriorated.

In the first half of the year, driven by a favourable economic development perspective, the government bond yields of developed countries continued to increase in the global markets. The yields shrank only in May, mainly due to falling global stock prices. At the end of the reporting period, the US 2- and 10- year government bond yield differentials levelled out to stand at 5.18% and to record an overall increase of 0.8 percentage point against the beginning of 2006. In addition to the favourable outlook for economic growth, the increases in government bond yields were affected by a sizable pickup in risk premiums and aggravating concerns about the inflationary pressures eventually growing in the future. In the conditions of persistently strong demand for US long-term securities, the US government long-term bond yields were held relatively low. In the first half of the year, the yield on German government 2-year bonds rose by 0.7 percentage point (to 3.58%), whereas that on 10-year bonds picked up 0.8 percentage point (to 4.08%). At the end of the first six-month period, the spread between the euro area and US government long-term bond vields remained unchanged. The average vield on Russian government bonds rose slightly (to 6.7%) in the first half of the year.

#### Latvia's Economic Activity

Latvia's economic activity gained stronger momentum in the first half of the year, and the GDP growth reached 12.0%. At the same time, domestic demand strengthened and export growth subsided. Investment growth was vigorous, and the contribution of total consumption to domestic demand increased. In the breakdown by sector, services recorded the steepest rise, with the annual growth in gross value added amounting to 12.8%. In the goods sector, gross value added picked up 8.0%. As of services, trade and real estate, renting and business activities recorded the most rapid development of around 18%. The expansion of the goods sector was notably driven by a dynamic progress in construction (16.7%), whereas gross value added in manufacturing grew only by 6.5%.

Due to the buoyant economic development and labour outflows, labour market tightened, with unemployment shrinking and the number of job vacancies expanding. Employment increased substantially (by 4.1%; unemployment rate<sup>1</sup> was 7.5%)

<sup>&</sup>lt;sup>1</sup> The rate of jobseekers in the total number of economically active population.

in the first half of the year). Tight labour market conditions, steady improvement of productivity and high inflation, combined with rises in the minimum wage and salary, untaxed minimum and wages of public sector employees, triggered a substantial increase in the average gross wages and salaries (20.4%). The annual consumer price inflation was high and sustained (6.7% in the first six months of the year). Its persistence was due to a gradual increase of indirect taxes and higher world energy prices as well as the strong domestic demand. With the latter expanding and export growth decelerating, the current account deficit rose to 17.6% of GDP and primarily reflected the increase in trade deficit. According to the foreign trade indicators released by the CSB, exports of goods grew by 14.5%, while imports strengthened by 29.3%. Deceleration in export growth was primarily determined by shrinking wood and mineral product exports, and, to some extent, also by deteriorating competitiveness of costs and prices.

In accordance with the cash flow methodology, the general government budget posted a financial surplus (4.2% of GDP) in the first half of the year. It was a result of significantly increasing tax collections and of budget expenditure below the projections. Nevertheless, the tendency for the annual expenditure to be small at the beginning of the year and to augment notably towards the end has persisted for several years. In order to strengthen macroeconomic stability and subdue currently steep acceleration in lending, one of the factors behind inflation hikes, the Bank of Latvia's Council resolved to expand, as of 24 May 2006, the minimum reserve base for banks to include liabilities with a maturity of over two years. In response to macroeconomic development trends of Latvia, continuously negative real interest rates on loans in lats and interest rate increases in the euro area and US, the Bank of Latvia's Council raised the refinancing rate by 0.5 percentage point as of 15 July (to 4.5%) and the interest rate on Lombard loans accordingly by 0.5 percentage point.

### 2. BANK CREDIT RISK

With the economic upswing continuing, the quality indicators of bank loans continued to improve. Nevertheless, the credit concentration risk increased as a result of growing direct and indirect bank exposures to the real estate market.

At the end of June, outstanding loans to residents totalled 7 607.3 million lats or 77.1%  $\{59.5\%\}^2$  of GDP, including 3 641.1 million lats to non-financial corporations, 3 184.6 million lats to households and 692.7 million lats to non-bank financial institutions.

In the first half of 2006, the annual growth rate of loans granted to resident nonfinancial corporations continued to increase reaching 50.8% at the end of June. The growth rate of loans to resident households also remained high (see Chart 4). In the second quarter, the annual growth of loans to resident financial institutions decelerated significantly, and the outstanding loans even decreased quarter-onquarter. Nevertheless, the outstanding stock of these loans is quite small and usually much more volatile than that of lending to households and non-financial corporations. The decline in the second quarter relates to financial restructuring in subsidiaries (leasing companies) of some large banks. Due to the restructuring, these leasing companies borrowed abroad directly, without intermediation of resident banks. The banks were thus repaid the loans granted to the leasing companies.

 $<sup>^{2}</sup>$  {} – indicator of the corresponding period of the previous year.



Household loans for house purchase and lending to real estate activities accounted for the major share of the overall increase in the outstanding loans. These were the largest segments of lending to households and non-financial corporations respectively, and the annual growth rate of these loans remained the highest (see Chart 5).

Chart 5

MAIN LENDING SEGMENTS OF THE	130 120	• Real estate activities	130 120
RESIDENT LOAN PORTFOLIO AND THEIR GROWTH RATE (annual growth rates; share in total resident loan portfolio; %)	110 - 100 - 90 - 80 - 70 - 60 - 50 - 40 - 30 - 20 - 10 - 0 -	-	110 100 90 80 70 60 50 40 30 20 10 0
	0	2 4 0 0 10 12 14 10 18 20 22 24 20 28 30 32	

Such lending developments point to a significant increase of credit concentration risk in the banking sector, with the direct and indirect exposures of Latvian banks to the real estate market developments in Latvia continuing to grow. Moreover, the breakdown of the loan portfolio by banks suggests that the credit concentration risk has aggravated for those banks that together represent a significant part of the banking sector.

At the end of June, the exposure to real estate loans exceeded 10% of the assets in six Latvian banks; their assets totalled 55% of the Latvian banking sector assets (see Charts 6 and 7). At the beginning of 2006, there were only four such banks, and their assets accounted for 45% of the banking sector assets.



Loans granted to real estate activities, however, reflect only the direct exposure of banks to the real estate market developments. Real estate market developments in a slightly longer term inevitably affect also the development of the construction sector. Although household loans for real estate purchases are consid-



SHARE OF DOMESTIC LOANS GRANTED TO REAL ESTATE ACTIVITIES IN BANKS ASSETS (number of banks)



Chart 7 SHARE OF DOMESTIC LOANS GRANTED TO REAL ESTATE ACTIVITIES IN BANKS' ASSETS (share of bank assets in total banks' assets; %)





ered one of the lowest-risk types of lending, the credit risk associated with these loans is also indirectly affected by prices on the real estate market, as real estate is used as collateral for these loans.

Considering the long maturities of the household loans for house purchase, the size of monthly loan payments is highly sensitive to interest rate movements. The current interest rate rise on the global markets has an adverse impact on the financial position of households. In the worst case scenario, with the quality of household loans deteriorating significantly, the underlying collateral of bad loans may be sold on the real estate market, thus increasing the supply and reducing the prices. The price decline will result, firstly, in deterioration of the economic position of corporations in the real estate construction and development business. Secondly, impairment of the collateral value may also cause the banks to scale down lending not only to the above-mentioned corporations but also to other sectors using collateralised loans.

High real estate risk concentration in banks may cause the downturn in economic activity, lending growth and real estate prices to become mutually reinforcing. Moreover, it has to be taken into account that some household loans granted for house purchase have, in fact, been used for speculative purposes, thus increasing the possibility that the interest rate increase may exert a direct or indirect pressure on real estate prices. Considering the persistently high growth rate of real estate prices in Latvia and the tax policy in the area of real estate<sup>3</sup>, the share of such loans used to gain profit in total loans for house purchase may not be negligible.

At the end of June, loans granted to real estate activities, construction and household loans for house purchase exceeded 40% of the banks' assets in five Latvian banks (see Chart 8). Moreover, the assets of those five banks constituted 36% of Latvia's banking sector assets (see Chart 9). In comparison with the beginning of the year, the share of loans directly or indirectly related to the real estate market on the balance sheets of banks has expanded.



<sup>3</sup> A Latvian resident, natural person, is charged income tax on real estate operations only when real estate that has been in the possession of this person for less than 12 months is sold. If real estate is in the possession of a Latvian resident, natural person, for more than 12 months the sales proceeds are not subject to income tax.

Chart 8

TO REAL ESTATE ACTIVITIES, CONSTRUCTION AND HOUSEHOLDS FOR HOUSE PURCHASE IN BANKS' ASSETS (number of banks)





#### Box 1. Latvian real estate market development trends

In the first half of 2006, the activity on the Latvian real estate market remained high. According to the data of the CSB, the volume of transactions (35 367) had increased by 24.3% year-on-year (including that of transactions with apartments by 46.0%).

Overall, prices increased significantly in the first months of 2006, yet the distribution of the increase was uneven across market segments and geographical areas. As a result of the high base, the price rise was more moderate in areas with the highest prices (e.g. the prices in Old Riga even decreased somewhat), whereas the prices in previously unpopular, remote areas, which used to be lower, started to grow more rapidly. The overall high real estate price rise was fuelled by the high demand supported by insufficiency of dwelling space, relatively cheap borrowing opportunities and rapidly growing real income as well as the impact of speculative transactions, real estate inflation expectations and limited construction capacities.

According to the estimates of real estate market experts, the average price in the most representative real estate market segment of standard blockhouse apartments in Riga increased by more than 30% in the first half of 2006 and by more than 50% in comparison with June 2005, reaching 1 217 euro per square metre. This extremely high rise exceeds the previous forecasts.

The real estate prices have already reached a high – and often an excessively high – level, considering the quality of apartments and the level of corresponding prices in other European cities (see Charts 10 and 11). For example, one square metre of dwelling space in Riga cost almost three average net monthly salaries in the second quarter, whereas the price to income ratios in other European cities were considerably lower

Chart 10 Vilnius Riga Warsaw AVERAGE APARTMENT SELLING PRICE  $1\ 200$ 1 200 IN 2005 Prague 1.310 (euro per square metre) Berlin 1 500 Brussels Vienna 1 600 Ljubljana 2 000 Amsterdam 2 800 Rome 2.880 Helsinki 2 900 Luxembourg Copenhagen 3 847 4 036 4 300 Dublin Madrid 5 000 Paris 5 564 2 000 4 000 5 000 1.000 3 000 6.000

#### Chart 11

YEAR-ON-YEAR CHANGE IN AVERAGE APARTMENT PRICE IN 2005 (%)



(e.g. 1.3 in Warsaw, 1.5 in Athens and Dublin). Gradual decrease of gross rental returns also suggests that the prices have reached a very high level. Nevertheless, as the demand remains high and available dwelling space insufficient, the current forecasts do not provide for any price decline. Price adjustment could take place if the borrowing costs became considerably higher, additional taxes or fees on real estate or related business were introduced and the supply of dwelling space grew significantly.

Construction and the new housing market segment develop buoyantly. In the first half of 2006, residential buildings with the total area of 312 thousand square metres were put into operation, which is 47.2% more year-on-year (see Chart 12). It is expected that a total of 4.5 thousand of new apartments may be built in 2006, which is 18% more than in the previous year. New apartments account for about 15%–25% of the total market supply. Yet it is insufficient to satisfy the demand and cause a significant decline in prices on standard blockhouse apartments.





The high demand has resulted in considerable labour shortages in construction as well as shortages of some construction materials, significantly pushing up construction costs (15.7% year-on-year in the first half of 2006; see Chart 12) and, consequently, leading to higher prices in new housing. The prices of private houses and land also grew significantly in 2006. Rapidly growing construction costs, insufficient capacities and low productivity in the construction sector are likely to remain the causes of failure to satisfy the high demand in the near future.

Considering the imbalance between the demand and supply, situation in the construction sector and uncertainty concerning potential changes in the area of real estate taxation, the high activity and price rises on the real estate market are expected to persist.

> With the economic upswing, the quality of bank loans continued to improve. The high growth rate of lending notwithstanding, NPLs remained broadly unchanged in terms of absolute value (see Chart 13). In comparison with the end of June 2005, the NPLs even decreased by 15.5% in terms of absolute value. NPLs to total outstanding loans stood at 0.5% {1.0%} at the end of June 2006.



The share of loans with repayments up to 30 days past due slightly increased (see Chart 14). The movement of this indicator should in theory be the first signal of any changes in the loan quality. In Latvia's case, however, the changes in the share of loans with repayments up to 30 days past due have so far borne no relation to the development of the other essential indicators of asset quality.



The amount of specific provisions has remained constant for a year and covered 110% of the NPLs at the end of the first half of 2006 (see Chart 15).



Written-off loans amounted to merely 4.4 million lats or 0.4% of the banks' capital and reserves in the first half of 2006. Moreover, the annual growth rate of total outstanding loans was 54.2%, whereas the written-off loans grew merely by 14.9% year-on-year.

The improvement of loan quality was quite broadly based across the whole banking sector. The share of NPLs to outstanding loans contracted in almost all banks. The number of banks with the share of NPLs below 1% increased even more, and the share of the assets of those banks to total banking sector assets reached 71.1% in the first half of 2006 (see Chart 16).



Loan quality indicators by sector and largest household lending segments show that the loan quality is highest in segments directly or indirectly relating to the real estate business (see Chart 17). The differences in loan quality indicators in the loan portfolio of Latvian banks largely relate, however, to the size of the specific loan segments and different lending growth rates. The worst quality remains a feature of loans granted to the fishing sector, which is one of the smallest segments in the overall loan portfolio of the banking sector, and the growth rate of these loans remains the lowest. Household loans for house purchase and loans granted to real estate activities, which at the same time are also the biggest and fastest growing lending segments in Latvia, have the highest loan quality.



As regards non-financial corporations, considering the small absolute values of the NPLs, there is reason to believe that the development of the share of NPLs of individual business sectors primarily reflects the idiosyncratic component of the credit risk, i.e. the credit risk associated with specific corporations, and, to a smaller extent, the systemic component, i.e. the credit risk associated with a specific business sector.

#### Box 2. Stress tests of the banks 'loan portfolio

In the first half of 2006, stress test results<sup>4</sup> remained broadly unchanged, yet the banks 'capacity to absorb a potential credit risk increase is lower in comparison with the end of the first half of 2005 (see Chart 18).



<sup>4</sup> Stress 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. Stress tests reflect banks' losses as the need to make additional provisions for the NPLs whose amount and share in total loans grows as a result of increasing credit risk. The banks' capital and risk-weighted assets are reduced by the amount of additional provisions to be made. Calculations assume that share of the three NPL categories (substandard, doubtful and lost loans) in each bank grows in proportion to the growth of NPLs simulated in the stress test. An exception is the improved results in stress test scenarios, whereby the share of NPLs increases by 4–7 percentage points (see Chart 19). This is related to an increase in own funds of one large bank.



As at the end of 2005, Latvian banks overall would have had no significant problems in absorbing a credit risk increase resulting in the share of the NPLs growing by 1 percentage point at the end of the first half of 2006, and, in this case, only one systemically insignificant bank would have had problems with meeting the minimum capital requirement. As the NPLs amounted to 0.5% of the total bank loans at the end of June 2006, one may conclude that overall Latvian banks would have had no significant problems in absorbing a potential credit risk increase resulting in a three-fold expansion of the NPLs.

The stress test results for specific or sectoral credit risk shocks (see Table 1) in the first half of 2006 continued to point to banks' growing exposure to direct and indirect risks associated with the real estate market (see Charts 20 and 21).

Table 1

SECTORAL CREDIT RISK SHOCKS USED IN STRESS TESTS AND PARAMETERS THEREOF

Types of shock	Shock parameters
Domestic shock	20% <sup>1</sup> of loans to the major domestic market oriented sectors (construction, trade, real estate, renting and business activity) become NPLs.
External shock	20% of loans to the major foreign markets oriented sectors (manufacturing and transport, storage and communication) become NPLs.
Real estate shock	20% of loans to real estate, renting and business activity become NPLs.
Real estate shock affecting households	20% of loans to real estate, renting and business activity and household loans for house purchase become NPLs.

<sup>1</sup> This and the other shock parameters are based on an assumption that the rise in the share of NPLs by 20 percentage points is made up of equal shares of all three categories of NPLs (substandard, doubtful and lost loans).





The banks' sensitivity to a potential shock affecting the most important sectors servicing the domestic market also grew very considerably in the second quarter.

0



Nevertheless, none of the analysed sectoral credit risk shocks would cause any of the banks to become insolvent, i.e. the losses caused by credit risk shocks to banks failing to meet the minimum capital requirements as a result of these shocks would not exceed their own funds.

The losses incurred by potential sectoral credit risk shocks in relation to the banks' assets continued to grow in the first half of 2006, albeit at a lower rate than before (see Chart 22). Only the losses incurred by an external shock display no tendency to grow in relation to the banks' assets. Slightly higher capital adequacy ratios of banks at the end of the first half of 2006 were the main reason behind the improved stress test results with regard to the additional capital required by the banks to meet the capital requirement after the examined sectoral credit risk shocks (see Chart 23).



Only for the real estate shock affecting households the additionally required capital increased in the first half of 2006, reflecting the exceptionally high growth rate of loans included in the scenario for this type of shock.

Overall, the growth rate of lending to non-residents was considerably lower than that of the resident loan portfolio. Thus, the share of non-resident loans in the total Latvian banking sector loans declined to 10.3% at the end of June, in comparison with 10.6% at the end of 2005 and 13.0% at the end of the first half of 2005. The largest share of the non-resident loan portfolio was still comprised of loans granted to residents of the EU10 countries, with their share in the total

bank loans amounting to 3.5% at the end of June (see Chart 24). Yet the highest growth was reported for loans granted to the residents of the EU15 and CIS countries. Moreover, the loan portfolio quality of the loans granted to residents of the CIS countries remains especially high, as the share of NPLs in those loans is negligible.



### 3. BANK PROFITABILITY<sup>5</sup>

#### Bank profitability ratios remained high.

Banks retained a high level of profitability due to the robust economic growth. In the first half of the year, the Latvian banking sector profit after taxes stood at 110.5 million lats, which was an 18.0% increase year-on-year. All banks made profit; however, despite the overall increase, profits shrank for half of the banks.

In the first half of 2006, the banks' ROE was 24.0%, lower than in the respective period of the previous year, as the bank capital posted a higher growth (43.1%; see Chart 25); nevertheless, the ROE of Latvian banks is higher than the average ratio of EU banks.



With the growth in the banking sector assets (43.4%) exceeding that in profit, the banks' ROA also posted a year-on-year decrease (to 1.9%).

ROE decreased for most of the banks, and that of major banks shrank below 30% (see Chart 26).

Overall, the ROE of EU bank subsidiaries in Latvia was slightly higher than that of the banking sector (see Chart 27) at large.

With the continuing expansion of lending and growing interest rates, interest income from loans granted to non-MFI recorded a substantial increase (51.8%). At the end of the first half of the year, the latter accounted for half of the overall



interest income. All interest income contributed approximately two thirds to the overall income (see Chart 28). As a result of an increase in market interest rates and liabilities (to foreign banks in particular), interest expense surged by 81.7%, mostly on account of higher interest expense for liabilities to MFIs and for non-MFI deposits. The interest expense for liabilities to MFIs grew at a very rapid rate, with their amount almost reaching that of the interest expense for non-MFI deposits (see Chart 29). Interest expense accounted for 40.1% of the total expenditure. As a result, the rate of increase in the net interest income moderated somewhat.



#### Total spread continued to narrow.

In the first half of the year, the total spread<sup>6</sup> continued to narrow (see Chart 30), nevertheless remaining at quite a substantial level. The average yield on interest earning assets edged up slightly whereas that on interest bearing liabilities increased at a more rapid rate.



Loans accounted for two thirds of the interest earning assets, contributing an even larger share (76.1%) to the interest income. Consequently, developments of the lending margins are the main factor behind profitability dynamics. In the first half of 2006, the ECB raised its key rate on two occasions, and is expected to continue raising it also in the future. The Bank of Latvia also took some measures to reduce the demand for loans. As a result, interest rates on the market rose and lending costs increased. Under the strong competition, however, particularly in lending, banks had to partially cover the rise in market interest rates by way of narrowing their lending margins. Lending margins (premium over the floating interest rate) posted a historical low.

Banks had to bear increasingly higher costs for the deposits received and liabilities to other credit institutions. The share of these particular liabilities in interest bearing liabilities grew to 37.1% {26.7%}, whereas that in total interest expense to 43.0% {34.0%} at the end of the first half of the year. With the market interest rates rising more notably than those on deposits, the deposit rate spread widened in the first half of the year (see Chart 31).



<sup>1</sup> All margins are calculated on new business. Overall margin has been calculated by subtracting the average deposit rate from the lending rate with a fixed maturity. The margin on total loans, loans granted to households and non-financial corporations has been calculated by subtracting the reference rate: the value of average 6-month money market index (RIGIBOR 6M, EURIBOR 6M or LIBOR USD 6M) for the given period from the relevant lending rate. Margin on deposit rates has been calculated by subtracting the average deposit rate from the reference rate: the value of average 6-month money market index (RIGIBIO 6M, EURIBOR 6M, EURIBOR 6M) for the given period.

## <sup>6</sup> Total spread – the difference between the average interest rates on the interest earning assets and interest bearing liabilities.

The growing dependence on funds from foreign banks under the conditions of rising interest rates promoted a higher increase in banks' interest expense in comparison with interest income and reduced bank profitability.

With the shares of interest income and interest expense in the total income and expenditure expanding respectively, the percentage of income and expenses related to commissions and fees decreased. Expenses related to commissions and fees paid grew at a faster rate than income from commissions and fees; yet, net commissions and fees increased by 18.3% over the year, amounting to 14.2% of total income.

Income from trading with financial instruments increased twice over the year but several banks incurred losses due to financial instrument revaluation. Bank income from foreign currency trading improved, amounting to almost 7.9% of the overall income.

In the first half of the year income from dividends stood at 11 million lats (24.8% less year-on-year), accounting for 2.5% of total income.

The banking sector operational costs picked up 27.7%, with their share in total expenditure shrinking from 42.1% to 37.2%. All types of operating costs posted a rise, with the highest increase recorded for the wages and salaries of councils and boards; nevertheless, their share in the total operating costs remained insignificant.

In the first half of 2006, the growth in the banking sector's expenditure exceeded that in income, standing at 44.6% and 36.7% respectively, and the cost-to-income ratio<sup>7</sup> was 50.3% {50.4%} (see Chart 32).



### 4. BANK CAPITAL ADEQUACY

#### The growth in overall bank capital requirements exceeds that in bank own funds.

The risk-weighted assets expanded at a higher rate than the bank own funds, hence the CAR continued to decrease (to 10.5% at the end of the second quarter; the minimum capital requirement set by the FCMC is 8%). Tier 1 CAR also shrank (to 9.2%; see Chart 33). For five banks, the CAR was 8%–10% at the end of the first half of 2006, and their market share amounted to 47.6% of the total banks' assets (see Chart 34). The number and market share of banks with the CAR of 10%–15% also increased.

<sup>&</sup>lt;sup>7</sup> The cost-to-income ratio has been calculated based on the ECB methodology: (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 + other ordinary income – other ordinary expenditure + adjustment for impairment of available-for-sale financial assets) x 100.



#### **5. INTEREST RATE RISK OF BANKS**

#### Banks' exposure to interest rate risk remained low.

In the first half of 2006, Latvian banks' overall exposure to the repricing risk<sup>8</sup>, the most significant source of the banks' interest rate risk, remained limited. The cumulative 1-year RSA to RSL, which is the most meaningful RSA to RSL ratio for interest rate risk management, stood at 1.03 at the end of the first half of the year. It suggests that overall the Latvian banks' RSA and RSL in the time-band of up to 1 year were almost balanced (see Chart 35).



# The cumulative 1-year difference between the RSA and RSL or the repricing gap (GAP)<sup>9</sup> to the total Latvian banks' assets also remained broadly unchanged (see

<sup>&</sup>lt;sup>8</sup> Repricing risk is the probability of suffering losses due to interest rate movements and mismatching residual maturities of assets and liabilities. Losses are incurred when the interest expenditure growth exceeds that of the interest income or the interest income falls quicker than interest expenditure. When estimating the bank's exposure to repricing risk, only RSA and RSL are examined, and they are distributed into several time-bands depending on the time remaining to repricing, which is the residual maturity for fixed rate instruments and the time remaining to reviewing the interest rates for variable rate instruments.

<sup>&</sup>lt;sup>9</sup> The GAP of a pre-defined time-band is the difference between the RSA and RSL value within the specific timeband. 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.

Chart 36). In the first half of the year, it increased from 2.8% to 3.2%, nevertheless remaining lower year-on-year. Although the GAP to the assets remained broadly unchanged, the RSA and RSL recorded increased imbalances in the most essential time-bands – up to 1 month and 1–3 months – which together comprise more than two thirds of the total banks' assets.



The results of sensitivity analysis show that the impact of any potential interest rate changes on the annual net interest income<sup>10</sup> of Latvian banks would be very insignificant (see Chart 37).<sup>11</sup> With interest rates increasing by 1 percentage point, the negative repricing gap in the time-band of up to 1 month would decrease the net interest income of Latvian banks by 1.3% of the total banks' capital and reserves. The positive repricing gap in the time-band of 1-3 months would increase the net interest income of banks by 0.5% of the total banks' capital and reserves. Positive repricing gaps also in the coming time-bands would reduce the annual negative impact of the overall interest rate rise to 0.2% of the total banks' capital and reserves. The relatively wide positive repricing gaps in the time-bands from 1 month to 12 months mostly result from the application of floating interest rates to bank loans. Thus, any changes in market interest rates are priced into interest rates on bank loans in a relatively short period of time.



The broadly balanced RSA and RSL structure and low banks' sensitivity towards interest rate changes points to a relatively limited exposure of Latvian banks to the interest rate risk.

<sup>&</sup>lt;sup>10</sup> The effect on annual net profit within each time-band is calculated by multiplying the time-band's GAP with the interest rate change and the coefficient of this time-band characterising the part of the year when the GAP of this time-band will be active. The calculation of the coefficient assumes that repricing will be done in the middle of the time-band. For example, 3–6 month time-band coefficient is calculated as follows:  $(12 - 0.5 \times (3 + 6))/12 = 0.625$ . The total effect on the annual profit is the sum of effects of the first four time-bands of the year.

<sup>&</sup>lt;sup>11</sup> As the calculations are based on the GAP method, they do not take into account the interest rate impact on the economic value of the bank and are based on the structure of the banks' aggregate balance sheet as at the end of the quarter.

#### 6. FOREIGN EXCHANGE RISK OF BANKS

#### Overall, the direct foreign exchange risk of banks remained low, yet for some banks the open positions in euro have increased.

The first half of 2006 on the foreign exchange market was marked by depreciation and higher volatility of the US dollar (see Chart 38).



Latvian banks are well protected from the foreign exchange risk stemming from the US dollar fluctuations, as they maintain low open US dollar positions ever since the repegging of the lats at the beginning of 2005. Moreover, the average level of the banks' open US dollar positions was even lower in the first half of 2006. By contrast, the banks' open positions in euro increased considerably at the beginning of 2006, with the weighted average open euro position of the banking sector reaching a historical high of 23.3% of the banking sector own funds at the end of May (see Chart 39). The latest banking data, however, suggest that the open euro positions have notably decreased.



<sup>1</sup>Calculations use the absolute values of the open currency positions. Open currency positions of individual banks have been weighted according to the size of their own funds. Since the repegging of the lats on 1 January 2005, the open euro positions are no longer included in calculations of the total open currency position.

Although the weighted average level of the banking sector's open euro positions is not high, the size of the open euro positions differs considerably across Latvian banks. The majority of Latvian banks have an open euro position within the range of 10% of own funds. Yet several rather small banks had significant open euro positions at the end of June.

Value-at-Risk (VaR)<sup>12</sup> results continue to suggest that the Latvian banks' vulner-

<sup>&</sup>lt;sup>12</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 month. Calculations use the historical daily exchange rate changes within one year prior to VaR evaluation date (last day of the relevant month). Since repegging the lats to the euro, VaR calculations no longer include the euro component.



ability to major adverse exchange rate developments is very low (see Chart 40). Moreover, the VaR results showed even some improvement in the first half of 2006.

<sup>1</sup> It has to be taken into account that the VaR for Latvian banks has been obtained by adding up the VaR of individual banks. The real total VaR of banks is smaller as the VaR of individual banks has not been fully positively correlated.

As in all the period after the repegging of the lats, the potential impact of the US dollar exchange rate fluctuations (the largest source of the banks' foreign exchange risk) remained low also in the first half of the year (see Chart 41). Higher sensitivity of the banks to the US dollar appreciation in the last months of the first half of the year is related to the growing short positions of the US dollar in one bank.



Overall, both the open currency positions and the results of VaR and sensitivity analysis suggest that the direct foreign exchange risk of the banks remains low.

### 7. BANK LIQUIDITY

# The overall liquidity of banks remained slightly above 50% as a result of a minor improvement in liquidity of the banks pursuing an active lending policy.

The overall liquidity ratio of banks stabilised and stood at 51.5% {51.8%} at the end of the first half of the year (the minimum level stipulated by the FCMC is  $30\%^{13}$ ). The stabilisation of the ratio resulted from a minor improvement of liquidity ratio of the banks servicing residents<sup>14</sup>, while the liquidity ratio remained on a decline for the banks servicing non-residents, implying an expansion of risk

<sup>&</sup>lt;sup>13</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, unrestricted) must not be less than 30% of total current liabilities of those banks whose residual maturity does not exceed 30 days.
<sup>14</sup> Banks are grouped by the share of non-resident deposits in the banks' assets: if it exceeds 20%, a bank is regarded as a bank servicing non-residents; if it is below 20%, a bank is regarded as a bank servicing nesidents.

transactions in assets. A rise in the liquidity ratio was partly fostered by the Bank of Latvia decision on raising the minimum reserve requirements for banks from 6% to 8% as of 24 December 2005 and the expansion of the minimum reserve base as of 24 May 2006, incorporating bank liabilities with an agreed maturity of over two years. At the end of the first half of the year, the share of claims on the Bank of Latvia in assets increased by 3.0 percentage points year-on-year and reached 6.4% (see Chart 42).



The short-term liquidity ratio<sup>15</sup> improved somewhat and was 66.0% at the end of the first half of the year  $\{61.2\%\}$ . The share of liquid assets<sup>16</sup> in banking sector assets amounted to 25.3%  $\{29.7\%\}$ .

The maturity mismatch between assets and liabilities diminished in comparison with the end of 2005, and the most imbalanced net position demand liabilities accounted for 2 920 million lats or 29.9% of GDP (33.5% of GDP at the end of 2005).

With vigorous lending continuing, the non-MFI loan-to-deposit ratio edged up further to stand at 124.1%  $\{97.8\%\}$  at the end of the first half of the year. Banks granted an increasingly larger share of loans using borrowing from foreign banks, as their share in total liabilities grew by 9.4 percentage points year-on-year and amounted to 33.1% (including 20.4% from parent banks). The share of non-MFI deposits in liabilities shrank by 9.5 percentage points (to 52.5%). This points to a growing dependence of the Latvian banking sector on foreign financing.

Analysing the situation by groups of banks, it becomes obvious that the banks servicing residents tend to draw euro liquidity from parent banks and European investment banks and in the form of syndicated loans from other foreign banks (see Chart 43). These funds were primarily used to grant euro loans to resident non-MFIs. The dependence of the banks servicing residents on financing from



<sup>15</sup> Short-term liquidity ratio = liquid assets/demand liabilities (to banks and non-MFIs) x 100.

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<sup>&</sup>lt;sup>16</sup> Liquid assets = vault cash + claims on MFIs + central government fixed income securities.

foreign banks continued to grow (at the end of the first half of the year, it amounted to 45.6% of the total liabilities of those banks).

Banks servicing non-residents mostly attracted funds from non-resident non-MFIs in US dollars, and placed the majority of them in foreign banks or invested in securities (see Chart 44). However, the share of attracted funds used for granting loans to residents, mainly in euro, increased. Nevertheless, the liquidity risk relating to non-resident deposits remained low, as the major share of those assets was placed on correspondent accounts in foreign banks and invested in securities. Nonresident non-MFI deposits remained broadly unchanged and stood at 2 628.2 million lats at the end of the first half of 2006. Additional funding was received from other MFIs as well as by means of issuing bonds.



### 8. FINANCIAL VULNERABILITY

# The debt burden of non-financial corporations posted a rapid rise, especially in sectors related to real estate.

In the first half of 2006, the buoyant development of the economy and inflows of investment fostered a strong expansion of the non-financial corporations sector. Seeking to exploit profit opportunities enhanced by a growing demand, corporations substantially expanded their production assets, primarily using borrowed funds for financing (see Chart 45).



A favourable environment encouraged new participants to enter the market. In the first half of 2006, the number of newly registered non-financial corporations had increased by more than one fourth year-on-year. The ratio of businesses having submitted insolvency applications to the Register of Enterprises of the Republic of Latvia to the number of business start-ups continued to shrink.

Preliminary data suggest that the turnover of non-financial corporations continued to expand in the first half of 2006. It was primarily driven by the rapid growth in trade sector – the share of its turnover in the non-financial corporations sector expanded, exceeding 50%. The fastest growth was displayed in real estate sector, with the turnover increasing more than twice, while in construction it rose almost by 50%. With a substantial rise in revenue, the profitability of real estate operations grew significantly, fostered by soaring prices in the real estate market. The rate of return of other sectors was more contained by an increase in costs and, with the profitability growth decreasing, it remained approximately the same yearon-year.

Due to intensive investing in operation, the increase in assets of non-financial corporations was more buoyant year-on-year. With the registration of new and expansion of existing non-financial corporations, the amount of assets underlying real estate operations reported a vigorous rise. As a result, the share of this sector in total assets of non-financial sector expanded substantially. The high profitability sector financed its buoyant expansion through loans (see Chart 46), and the share of bank loans was very significant in the debt composition of real estate operations. Bank information about the granted loans and a rise in the share of long-term creditors in the sector's balance sheet implies that in the first half of the year, the bank loans were increasingly significant in the sector's financing. The rise in prices on the real estate market has been long-lasting and sustained, nonetheless it warrants no longer-term price rise, while the above increase in indebtedness implies a substantial risk accumulation. The current growth in profit and profitability reduces risks associated with a significant deterioration of solvency. Interest payments doubled year-on-year, while their coverage ratio grew. However, the level of assumed risks continued to rise and the targeted profitability decrease still ensuring a sufficient interest coverage ratio shrank.



The growth rate of assets in the construction sector (other sector related to real estate) was much higher year-on-year, and a substantial increase in the sector's debt has also been recorded during the last two-three years. However, in view of stable short-term debt coverage with eligible assets dominating in funding, the liquidity of the sector remained adequate, interest payment coverage was more than sufficient and with a vigorous rise in turnover continuing, a narrowing of the rate of return was not observed.

Overall, an increase in indebtedness prevailed in the development of non-financial corporations sector. It grew also in manufacturing and less leveraged sectors: electricity, gas and water supply and transport, storage and communication (see Chart 47). The vulnerability caused by the deterioration of debt-to-equity ratios continued to be mitigated by a high profitability stabilising in the overall national economy (except the real estate sector), while its further increase was contained by a rise in energy, construction materials, labour and other costs and the relatively high level already achieved.

The largest risk persisted in real estate operations where rapidly growing debt servicing caused no concern due to a substantial profit recorded by this sector in the first half of the year, however, there is no reason to count on a buoyant price



rise in the real estate market, with the rate of return increasing along with a substantial growth in turnover. Considering a more realistic scenario with a lower profitability, non-financial corporations of the sector should revise the opportunities to ensure debt servicing and assess the sustainability of funding structure.

# The household debt continued to pick up at a fast pace; an increasing number of households got involved in mortgage lending.

Although the growth rate of household deposits accelerated, the negative net financial position of households continued on a negative trend and amounted to 9.5% of GDP in the first half of the year (see Chart 48), implying that household liabilities to credit institutions and credit unions exceeded the amount of their deposits. The household debt consisting of liabilities to banks, leasing companies and credit unions stood 77.5% higher year-on-year and totalled 33.4% {23.1%} of GDP (see Chart 49) in the first half of the year, a sustainable low vis-a-vis the euro area countries where it amounts to 60% of GDP on average.



Bank loans granted for house purchase accounted for a major part of the household debt. At the end of the first half of the year, the number of such loans rose to 116.4 thousand (a 31.1% increase year-on-year). 12.9% of households (11.4% at

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the end of 2005) were granted a bank loan for a house purchase. With real estate prices soaring, the average amount of mortgage loan went up by 18.9% (to 20.1 thousand lats) in comparison with the end of 2005.

With the interest rates on interbank loans rising in the euro area, the amount of interest payments by households recorded a steeper rise (38.2% in the first half of the year) and accounted for 1.5% {1.1%} of GDP. However, the extension of loan maturity could be a risk dampening factor ensuring an increase of the total loan without affecting the total monthly payment. Under the circumstances where the interest rates, household debt and average outstanding loans are increasing, the number of households involved in mortgage lending is growing, and a high inflation growth persists, the household lending-related credit risk continued to increase. Nonetheless, the favourable conditions for economic growth mitigated an overall impact of this risk on the financial stability as the household income is also expected to rise. This is confirmed by a rise in the gross wage and salary in the first half of the year (20.4%), as well as the lowest unemployment rate in the last 10 years (7.5%), which was affected by an increase in employment and labour outflow. It is also confirmed by the changes in the share of the living wage<sup>17</sup> and financial margin<sup>18</sup> in the disposable income of households (see Chart 50).



With the share of loans granted in euro expanding in the total household loans (by 9 percentage points in the first half of the year; to 66.7%), a growing mismatch of the currency position developed in the household sector resulting in further aggravation of the bank indirect exchange rate risk. It was however mitigated through the lats peg to the euro and ensuring a stable exchange rate, with fluctuations not exceeding two points.

As variable rate transactions generally dominate the market, an interest rate rise on the euro area interbank market will push up the household debt servicing costs in the medium term. However, information gained from the surveys confirms that the borrowers overwhelmingly are those with a sufficiently high income, able to absorb interest rate increases. Expanding the range of borrowers at the expense of lower income households through the extension of maturity is somewhat sluggish, while credit risk for the banks tends to increase.

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<sup>&</sup>lt;sup>17</sup> The amount of goods and services which meets the needs of the minimum level of living standards accepted by the society. The content of the basket was approved by the Republic of Latvia Council of Ministers Resolution No. 95 of 8 April 1991, while the value of this basket is calculated in current prices by the CSB on a monthly basis. Income tax and social tax are excluded from the calculation of living wage.

<sup>&</sup>lt;sup>18</sup> Financial margin = the disposable income of households – living wage.

#### Box 3. Review of household survey results in May 2006

In accordance with the results of the survey "The Monetary and Banking System in Latvia" conducted by Market Lab in May 2006, 30.7% of the respondents have taken loans (1.0 percentage point over the level in August 2005; see Chart 51). Most of them are 25–49 year old inhabitants of Riga with a secondary vocational or university education and an income level of up to 150 lats per family member. Mortgage loans for housing repairs, real estate purchase and house construction have been taken by slightly less than one tenth of the respondents. 23.5% of the respondents used the other credit facility, predominantly consumer credit (1.1% of the respondents had taken both the mortgage loan and loan for other purposes). Inadequate income (24%) remains a major factor containing borrowing, however, it has become less pronounced year-on-year.



For the majority of the borrowers interviewed, their monthly payments on loans do not exceed 30% of the family income, which it is a positive sign, and this share has further expanded compared with the previous survey (see Chart 52). This can be attributed to a higher household income, as the number of respondents spending 10%–30% of their income for loan repayment has grown significantly. With the household debt on the rise, the proportion of the respondents using up to 10% of their income on servicing their debt remained broadly unchanged.



The respondents that have taken variable interest rate loans have been cautious in assessing their future loan repayment capacity; at a 20%–25% increase in monthly payments (corresponding to approximately 2–3 percentage points interest growth on loans with a 20 year maturity and 4–5 percentage points interest growth on loans with a 10 year maturity), 41% of them would have to restrict other expenses notably.

As the majority of loans are consumer credit with a fixed interest rate, the results of this survey do not point to a significant interest rate impact on a large number of households.

When asked about their plans to take a loan within a year, 16.9% of the respondents replied that they might take a loan, including 5.1% a mortgage loan. Over a half of the respondents has already taken a loan (mainly consumer credit). Mostly senior managers and mid-level managers or civil servants are planning to take mortgage loans. An average income level of these respondents amounts to 200 lats per family member and the total area of a dwelling is 30–70 square metres. The survey confirms that a majority of respondents would borrow for real estate repairs and a slightly smaller number – for its purchase. As a large

part of households remain unable to afford a loan, it would substantially contain the growth potential of banks and other financial intermediaries in the coming years.

Overall, the survey results indicate that the debt servicing burden has slightly decreased for borrowers, however, when assessing their loan repayment capacity in the circumstances of growing interest rates (above 200 basis points), the majority of borrowers recognised their ability to absorb the growth, albeit at the expense of a substantial reduction in other expenses. Overall, the ratio of households involved in borrowing is expanding moderately, implying a weak paying ability of the majority of households. Over a half of the households that are planning to take a loan for real estate purchase, construction or repairs within a year are already indebted (see Chart 53). It means that in the near future the growth in household lending will primarily depend on the existing borrowers and their ability to undertake new liabilities.



### 9. NBFIs

# The role of NBFIs remained insignificant although the growth rate of their assets was high.

At the end of the first half of 2006, the NBFI<sup>19</sup> assets had increased to 1.6 billion lats. Although since the third quarter of 2004 the share of the NBFI assets in the financial system has gradually increased, it was relatively small (11.2%) at the end of the first half of 2006. Of the NBFIs, leasing companies were the major players: their assets accounted for 56% of the overall NBFI assets at the end of the first half of the year.

Loans were a significant share of the NBFI assets. Limits have been set for pension fund and investment fund loans; loans granted by leasing companies (the major NBFI lenders) and other financial intermediaries (the second largest NBFI lenders) accounted for 40%–85% of the NBFI assets. In lending, loans to residents make up the largest share, therefore the breakdown analysis of the NBFI loans to residents is important. It is essential to assess the loan portfolio diversification of financial institutions: in the event of undesirable processes in individual sectors of the economy, insufficient diversification of loans may affect the operation of financial institutions negatively.

As of the first quarter of 2006, the CSB has introduced a new report on leasing sector loans. Once a quarter, leasing companies will report on the outstanding amounts of financial leasing and factoring transactions, new business, portfolio maturity profile and loan breakdown by sector and currency.

At the end of the first half of 2006, the outstanding amount of leasing and factoring loans was 908.8 million lats. In terms of value, financial leasing accounts for

<sup>&</sup>lt;sup>19</sup> Leasing companies, risk and life insurance companies, the third level pension funds, investment funds, credit unions and other financial intermediaries.

the most significant share in the total loan portfolio of leasing companies (71.8% of total loans outstanding).

The financial leasing portfolio data breakdown by resident sector suggests that loans were fairly broadly spread across different sectors of the economy. Financial leasing services were more widely used by those sectors which accounted for smaller shares in bank loans. The most intensive use of leasing services was recorded in transport, storage and communication companies (their share in the total amount of financial leasing granted to residents was 18.9%) as well as manufacturing and trade companies (their share was 14.6% and 13.8% respectively; see Chart 54). Agriculture, hunting and forestry, as well as construction sector companies accounted for a slightly smaller share (8.8% and 7.1% respectively). At the end of the first half of the year, a large amount of financial leasing transactions was recorded for resident households (17.5% of the total financial leasing amount).



In the first half of 2006, loans granted in euro dominated the financial leasing portfolio (75.4%). The contribution of loans in lats and US dollars was smaller (19.5% and 5.1% respectively; see Chart 55). As regards the currency composition of the factoring portfolio of leasing companies, the shares of loans in lats and euro were equally significant, each accounting for approximately 43%, while that of loans in US dollars stood at 10.1%. The currency breakdown of the financial leasing and factoring portfolio was rather similar to that of the bank loan portfolio. The currency composition was mostly determined by the interest rate developments of the respective currencies.

#### Chart 55

PORTFOLIO OF FINANCIAL LEASING BY CURRENCY (at end of first half of 2006; %)





As regards the total debt of households, account should be taken not only of bank loans, but also those granted by other NBFIs (mostly other financial intermediaries). Other financial intermediaries mostly granted loans to households, with the share of such loans reaching 63.4% at the end of the first half of 2006. The total amount of loans granted by other financial intermediaries and leasing companies to private persons stood at 209.5 million lats at the end of the first half of the year (7.0% of the loans of the respective banks).

# **10. COMPETITION AND CONCENTRATION IN THE LATVIAN BANKING SECTOR**

Competition in any sector of the economy, inter alia the banking sector, is an essential prerequisite for effectiveness, innovation, price level, choice opportunities, consumer well-being and placement of funds in the economy, particularly so in cases when banks play an important role in the economy, like they do in Latvia.

Both competition and concentration are difficult to measure due to various objective factors affecting them but not being related to the economy (e.g. historical, cultural, tradition-based factors, etc). The most often used ratios are HHI and concentration ratios (e.g. CR5).

After joining the EU, Latvia is party to a binding agreement on the European single internal market, and all EEA banks with a license issued by their respective central bank are entitled to provide services on the Latvian market without opening their representative office or branch here. By the end of the first half of 2006, the FCMC had received 110 applications from EEA banks on providing services in Latvia. However, these banks have not been very active in the non-financial sector and did not have any significant impact on competition.

### HHI

HHI<sup>20</sup> is used to measure the level of competition in a market segment or subsector. This index is affected by two indicators – the number of market participants and their market share.

In recent years, the HHI of the Latvian banking sector has slightly increased (see Chart 56); nevertheless, moderate concentration persists, pointing to healthy competition. It is due to the sufficiently large number of banks, making it difficult for any of the banks to gain dominant position in the market.



However, the levels of competition of various services and products differ, partly depending on the number of participants offering the respective service. The highest HHI was recorded for resident deposits suggesting that these deposits were mostly concentrated in individual major banks. However, considering all deposits received, it is obvious that the concentration was much smaller as all banks in Latvia accept deposits (either from residents or foreign investors). The HHI of loans granted to residents only slightly exceeded that of overall loans since loans are mostly granted to residents. Overall, the HHI of loans rose somewhat, suggesting a gradual increase in the market share of the major banks, whereas the HHI of deposits decreased in 2006, implying that market shares of the major banks of this sector failed to expand or even shrank somewhat.

Lower level of HHI is observed in the countries with a larger number of credit institutions whereas countries with a small number of banks have a higher HHI; nevertheless, there are exceptions (see Chart 57). From this perspective, competition in Latvia was relatively strong as its HHI is lower than in several other countries with a small number of banks. In 2005, the HHI in ten countries decreased year-on-year whereas Latvia's HHI posted the highest rise, reflecting an expansion of the largest banks' market share.



#### Concentration ratio CR5

CR5 is one of the most frequently used concentration ratios showing the market share controlled by five major banks.

However, CR5 does not show the relative size of these banks. Therefore the individual market share of each bank is also taken into account when assessing this ratio.

The use of CR5 in describing the situation in Latvia is similar to that of HHI: competition in lending is not so strong as in attracting deposits (see Chart 58). Moreover, the market share of the five largest banks in lending tends to increase, driven by the substantial influence of some major banks in the Latvian credit market. CR5 in the resident deposit market decreased somewhat.



Compared to other EU countries (data for 2005), Latvia's CR5 is similar to the concentration ratios of other countries with a small number of banks (see Chart 59).

HHI and CR5 (calculated for bank assets) indicate that banking competition in Latvia is quite high compared to that in other EU countries, particularly the other two Baltic States and Northern countries. However, HHI estimates for specific market segments or products (loans, deposits) indicate that their level of competition is lower than in the Latvian banking sector at large.





Number of credit institutions (right-hand scale)

CR5

### **11. THE NEW CAPITAL ADEQUACY FRAMEWORK**

As the financial market situation has changed radically (many new financial instruments have emerged, credit risk modelling has expanded, methods and techniques for risk management and control have evolved rapidly) since 1988 when the Basel Committee on Banking Supervision adopted the Capital Accord, it has decided to introduce a new capital accord. In 2004, the Basel Committee on Banking Supervision published the New Capital Accord (hereinafter, Basel II), which radically modified the procedure for calculating capital requirements for credit risk, introduced capital requirements for operational risk, augmented the role of banking supervisory authorities in determining and implementing capital requirements of a bank in relation to its particular risk profile, and set forth new requirements for information disclosure. The respective standards are incorporated in the Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions and the Directive 2006/49/EC of the European Parliament and of the Council on the capital adequacy of investment firms and credit institutions, that shall enter into force on 1 January 2007.

The new capital framework consists of three pillars. Under Pillar 1, the minimum capital requirements for credit, operational and market risk are determined. The standardised approach is the simplest recognised method of assessing the requirements for credit risk, and according to it ratings assigned by rating agencies are used in measuring the conditional risk level of bank assets and off-balance sheet items. Where external rating is not assigned to an asset class, fixed conditional risk rating is determined. Five risk weight categories are devised for assets and off-balance sheet items, with 150% weight included along with already existing weights of 0%, 20%, 50% and 100%. The approach based on internal ratings or the Internal Rating-based Approach (IRB), within which the Foundation IRB Approach and the Advanced IRB Approach are incorporated, is a more complicated technique. In determining the capital requirement for operational risk, the Basic Indicator Approach, the simplest technique, or the Standardised Approach, one of the most complicated methods, or the Advanced Measurement Approach can be applied. The implementation of more complicated methods leads to a more accurate risk measurement; to attain it, they require a more advanced level and system of risk management as a precondition. Subject to supervisory approval, the calculation of capital requirement for credit risk using the IRB Approach and for operational risk using the Advanced Measurement Approach will become possible as of 1 January 2008.

Considering that a bank's minimum regulatory capital ratio under Pillar 1 may not be sufficient for hedging all risks, under Pillar 2 each bank is expected to set targets for its capital that are commensurate with the bank's particular risk profile (both fully captured and not captured under Pillar 1; interest rate risks of nontradable portfolio, credit concentration risk, legal and reputation risks, etc) and to ensure the development and operation of an adequate risk management and control system.

A particular emphasis is placed on the importance of timely remedial actions by the supervisory authorities aimed at preventing bank's capital from falling below the minimum regulatory capital ratio. Under Pillar 2, supervisory authorities are entitled to set an increased capital target for individual banks building on the assessment of their risk profile.

Pillar 3 aims at enhancing market discipline by expanding the scope and regularity of public disclosure regarding bank's operation. The information to be disclosed comprises risk profile and capital amount data of the bank.

Year 2007 is the transition period when credit institutions are encouraged to proceed with capital adequacy calculations consistently with currently effective regulations. The majority of Latvian banks project to adopt the Standardised Approach for capital requirement calculations of credit risk. Three parent companies of Latvian banks have voiced their intention to request permission<sup>21</sup> for the calculation, as of 1 January 2008, of capital requirement of credit risk using the IRB Approach. One parent company intends to implement the Advanced Measurement Approach in calculating capital requirement for operational risk. Irrespective of the approach used, bank own funds must not fall below 95% of the minimum equity in 2007, which is calculated in accordance with the currently effective procedure (90% in 2008 and 80% in 2009).

The Basel Committee on Banking Supervision examined the impact of the Basel II on the amount of the minimum capital requirement for credit institutions of 40 countries, including the EU country banks.<sup>22</sup> Though several EU10 countries, Latvia among them, were not included, the market of Latvia corresponds to the 2nd group of banks (relatively small banks) under the EU classification. The examination led to the conclusion that via the standardised approach to the capital calculation of credit risk and additionally calculating the capital requirement of operational risk, the amount of capital requirement will increase by 1% over the current level for banks of the 2nd group under the EU classification. Provided capital requirements of credit risk are calculated using the Foundation IRB Approach, the total amount of capital requirement will fall by 20% for banks of the 2nd group under the EU classification. Overall, it is concluded that the new capital adequacy calculation framework will enhance the stability of the banking system, improve risk management and render capital placement more efficient with an overall beneficial effect on the EU economy in the long term.

<sup>&</sup>lt;sup>21</sup> In accordance with the provisions of the EU Directive 2006/48/EC, the applications for permission to use advanced measurement approaches (i.e. IRB Approach for credit risk, Advanced Measurement Approach for operational risk and Internal Models Approach for counterparty credit risk) by subsidiaries of an EU parent credit institution shall only be submitted to the supervisory authority of the parent credit institution. The parent supervisory authorities of the involved EU countries to decide whether or not to grant or cancel the permission sought.

<sup>22 &</sup>quot;Third Quantitative Impact Study", Basel Committee on Banking Supervision.