Periodical Part

Financial stability review / Lietuvos Bankas ; 2013

FINANCIAL STABILITY REVIEW

2013

2013

Abbreviations

AB	public company
BPD	UAB *Būsto paskolų draudimas*
CCUL	Central Credit Union of Lithuania
CDS	credit default swap
CIU	collective investment unit
CIS	Commonwealth of Independent States
CRD IV	Capital Requirements Directive IV
CRR	Capital Requirements Regulation
CSD	Central Securities Depository
CSDL	AB Central Securities Depository of Lithuania
DTI	debt-to-income ratio
ECB	European Central Bank
EBI	European Banking Authority
EU	European Union
ESRB	European Systemic Risk Board
EURIBOR	euro inter-bank offered rate
FMI	financial market infrastructure
GDP	Gross domestic product
GS	Government Securities
IMF	International Monetary Fund
ISC	Insurance Supervisory Commission
LCR	liquidity coverage ratio
LSC	Securities Commission of the Republic of Lithuania
LTL	litas
LTV	loan-to-value ratio
MPFI	monetary financial institutions
NSFR	net stable funding ratio
PF	pension funds
p.p.	percentage points
RE	real estate
RoE	return on equity
S	securities
SSS	Securities Settlement System
VĮ	state enterprise
USA	United States of America

The Review was prepared by the Economics and Financial Stability Service of the Bank of Lithuania.

The Review is available in the PDF format on the website of the Bank of Lithuania at www.lb.lt

The Review is based on data available before 1 May 2013.

The publication Financial Stability Review is available at *EBSCO Publishing, Inc., Business Source Complete* database (http://www.ebscohost.com/titleLists/bt-journals.pdf).

Contents

Boxes

Foreword

Financial stability can be defined as the state of the financial system when their participants (banks, other financial institutions, market infrastructures) are capable of continuously efficiently carrying out the financial intermediation function and withstanding shocks without any material impact upon the efficient reallocation of financial resources. The policy for safeguarding and strengthening financial stability is based on on-going monitoring of the market situation, early identification and prevention of potential risks. The key objectives of ensuring financial stability include identification of systemic internal and external threats to the financial system, assessment of its ability to withstand the impact of adverse shocks, projection and application of risk mitigation measures, and provision of recommendations to market participants on efficient management of the arising risks. The objective of early identification and assessment of the sources of the risks threatening the financial system is to minimise the probability of financial crises and any possible losses thereupon.

The purpose of the annual Financial Stability Review prepared by the Bank of Lithuania — to promote all-round recognition of potential risks to the financial system in Lithuania and identify the system's abilities to withstand them, as well as encourage discussions on financial stability issues among financial market participants and the public at large. The Financial Stability Review for 2013 represents an overview of developments in the national financial system, the standing of the banking sector and its main borrowers — households and non-financial enterprises — and their abilities to withstand any adverse changes in the external and internal macroeconomic environment and financial markets. The Review also contains an assessment of the performance of insurance undertakings, the status in the securities markets and the financial market infrastructure. The Review discloses the risks potentially threatening the financial system in Lithuania, analyses the probable impact channels, assessment of possible losses in risk realisation cases, and discusses the abilities of the system to withstand them to the extent of enabling to safeguard stability of the financial system.

SUMMARY

Having within the past year and a half withstood the termination of the operations of several market participants, the Lithuanian financial system proved to be resistant enough to continue operating even in an adverse environment, which had been earlier only simulated for the purpose of a stress testing exercise. In February 2013, the operations of *AB Ūkio bankas* were suspended, with subsequent revocation of its licence. The above mentioned bank was not a major credit provider, but it ranked fourth in Lithuania in terms of deposit holdings. Also, at the turn of 2013, the operations of several credit unions were suspended, and their licences revoked due to inappropriate management of risks assumed. The suspension of the operations of several institutions attracting deposits, however, did not cause any major turbulence in the financial system. Deposits in the banking sector continued to increase and the surge in indicators reflecting the country's risk profile was rather short-lived.

The loan portfolio in the banking sector is gradually recovering. In view of the strengthening of the financial position of the largest borrowers — households and non-financial enterprises — their ability to repay the loans was also increasing, therefore the banks have been increasingly favourably viewing crediting requests. Given the continuously prevailing low interest rates borrowers started to use borrowing facility more actively. Non-financial companies have been borrowing more in order to upgrade their obsolete equipment. Companies were active in borrowing from leasing companies to which funding was provided by banks managing them. Outstanding obligations of households to banks continued to decrease, but at a somewhat slower pace than before. Although overall expectations concerning economic development on the part of households have improved, a major part of the population still views the future quite cautiously, which could be a factor stimulating accumulation of precautionary savings. Banks expect the loan portfolio, accounting for the largest part of the banks' assets, to grow in 2013 by 1–5 per cent, broadly due to the increasing borrowing demand on the part of the private sector.

The improvement in the quality of loan portfolios granted to corporations led to a decrease in the share of non-performing loans in the banking sector for the third year in a row. On the one hand, this decrease in the share of non-performing loans was to an extent caused by the write-off of part of the earlier granted loans. On the other hand, the financial standing of corporations has improved within the past several years since the economic downturn. Furthermore, though at a slow pace, the financial standing of households has also started improving. Unless any unexpected turbulences occur, the quality of the banking sector loan portfolio is likely to continue improving. Even if they do, the banking sector is by far better prepared to withstand such turbulences than in the outset of the most recent economic downturn.

The key risks for the stability of the national financial system are posed by both external and internal factors. Given that the recovery of the Lithuanian economy in the past period was to a significant extent affected by the grown of export, the key risk sources should be considered the overall slowdown in the global economy, the protracted sovereign debt crisis of some euro area countries, and the loss of the Lithuanian competitiveness that could be realised under a scenario where the increase in wages would be larger than the increase in labour productivity. The economic standing and the fiscal status of Scandinavian countries hosting the parent banks of banks in Lithuania, is healthy and robust. However, if a certain imbalance were to form (large indebtedness of the private sector, growth in real estate prices), unfavourable situation of the economic and/or financial market, the Scandinavian banks could experience losses, and this could adversely affect the performance of the host banks operating in Lithuania. The continuing development of interest rates could also influence their operation: if the interest rate will remain low, the country's finance sector would earn lower profits and its possibilities to increase its resistance on account of its internal reserves would be very limited. The low interest rates, which have prevailed for a long time, also create incentive to invest in riskier assets. Besides already identifies risks, some negative impact may be produced by the worsened financial situation of municipal institutions and the unbalanced operations of credit unions in Lithuania.

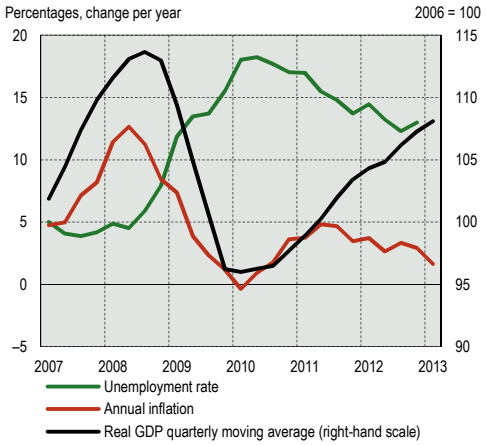
A stress testing exercise carried out by the Bank of Lithuania showed that the banks are sufficiently capitalised and resilient to possible shocks. In case of realisation of risks, the banks would suffer some losses; however, due to the significant capital reserve none of the Lithuanian banks would infringe the capital adequacy requirement. The stress testing showed that in the case of economic disturbance and the GDP decrease being 15.9 p.p. until the end of 2014, the weighted capital ratio of the banking sector would decrease to 12.1 per cent and would still remain higher than the required minimum. The results of the adverse stress testing showed that the weighted capital adequacy ratio of the banking sector would reach the required minimum level if the economic growth by the end of 2014 would decrease by 22.6 per cent from the most likely scenario. **The Lithuanian banking sector has sufficient liquidity reserves to withstand deposit withdrawal; however, different banks are prepared to a different degree.** The liquidity risk test results showed that the average liquidity ratio of the banking sector would remain higher than the required value even if 13.6 per cent of deposits are withdrawn, i.e., twice as much as the largest annual decline in the history of the past two decades.

Irrespective of the better preparedness of the banking sector to withstand shocks, the overall conditions remain challenging. It is of utmost importance that the banking sector is not only capable of absorbing the previous shocks, but is also adequately prepared to face any new systemic risks and ensure sufficient credit availability for the real sector under the least favourable conditions. Respective amendments to the Law on the Bank of Lithuania, complying with the European provisions set by the European Systemic Risk Board, were initiated with a view to reducing the likelihood of the systemic risk and strengthening the resilience of the financial sector. The amendments were designed to grant to the Bank of Lithuania much wider authorisations in enforcing the macro-prudential policy, i.e., in restricting the systemic risk and applying macro-prudential policy measures in respect of participant of the financial market designed for prevention of overly speedy growth in credit, real estate price bubbles and other imbalances.

ASSESSMENT OF THE SITUATION OF FINANCIAL STABILITY

The growth of the Lithuanian economy remains one of the fastest in the EU; however, the unemployment rate is decreasing at a slower pace.

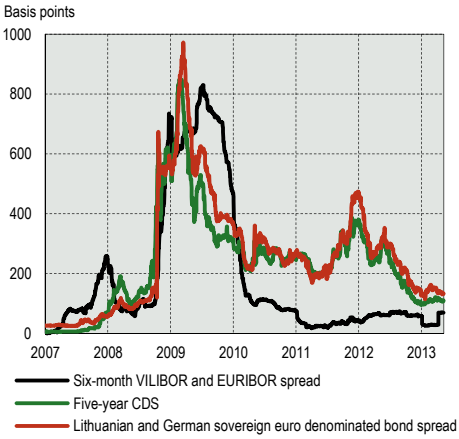
Chart 1.Development of the key economic indicators of Lithuania.



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The risk reflecting indicators remain at the pre-downturn level.

Chart 2. Development of the national risk indicators.



Sources: Bloomberg and Bank of Lithuania calculations.

The stability of the Lithuanian financial system may be affected by both external and internal factors.

Table 1. The current level of the key risks to the stability of the Lithuanian financial system and its movement.

Key risks and challenges to the stability of the Lithuanian financial system	Present level and change*
Decline in foreign demand	→
Enhanced sensitivity to certain risks in Scandinavian countries	→
Long-term low interest rates in financial markets	→
Worsened financial situation of self-governance institutions	↑
Misbalanced operation of credit unions	↑

* The present level is indicated in colour (red — large, orange — average, light orange — small importance); the directions of the arrows indicate the probable change in the importance of risk in the future.

The situation in the international financial markets remains uncertain. The expansionary monetary policy implemented by the main world's central banks' eased the situation of the financial systems. Nevertheless, the recovery of economy is not yet prominent. There are apprehensions that in view of the prevailing uncertainties monetary policy measures will not suffice and the need for structural reforms will remain significant. By implementing reforms, the recovery of the global economy will take longer, which would in its own turn cause less demand in national export.

In the course of the past years the Lithuanian economy was growing fast. Export was the main driving force for the further development of the economy, which was caused by rapidly increasing competitiveness in open to foreign trade sectors due to the flexibility in wages. Nevertheless, it was the slow pace in the recovery of domestic demand — private consumption and domestic investment — that still prevented the activity of the Lithuanian economy to reach the pre-crisis levels (see Chart 1). Private consumption was largely limited by only a slight increase in disposable household income and the desire of the households to repay the financial obligations assumed before the economic downturn. The recovery of domestic investment was largely subdued by persisting uncertainty concerning the further development of the global economy. The demand in investment in the period of recovery was also limited by the earlier accumulated excessive production capital: considerable volumes of capital accumulated during the economic upturn became excessive in respect of the demand at the time.

With the number of orders remaining stable, the financial status of the private sector was improving and its ability to repay loans improves. In view of the rapid increase in the sale revenues of non-financial corporations and their moderate development (the level of production capacity utilisation was close to the historically highest level); the business sector has been operating at a profit for the past several years. With the production and service demand remaining stable, corporates in some economic activities started feeling shortage of qualified labour force; therefore the unemployment rate started gradually decreasing and household income returned to growth. The strengthening financial position of the private sector — the major borrower from banks — increased its ability to repay the loans, therefore the quality of the loan portfolio of banks was improving. In view of a certain decrease in the lending risk and price, the banking sector loan portfolio entered the growth path. The loan portfolio in 2013 is expected to grow by 1–5 per cent in line with the pace of growth of the Lithuanian economy.

The developments at the turn of 2013 proved that the Lithuanian financial system and its infrastructure is capable of withstanding significant shocks and should be assessed as sufficiently stable. Within the period surveyed the operations of several deposit-taking financial institutions were halted having found that the risk assumed thereby was managed inappropriately. Despite that, the uncertainty in the financial system was short-lived (see Chart 2), the infrastructure of the national financial market was operating reliably and ensured a smooth settlement process. The assets of other participants of the financial system — insurance companies, pension funds (PF) and collective investment undertakings (CIU) — were increasing, as was their activity, and the indicators at the regulated equity market were improving.

The capital accumulated in the banking sector at the moment would enable the sector to withstand even after experiencing significant loss. Even in the case of a highly unlikely significant shock (see Table 1), the capital adequacy ratio of the banking sector in Lithuania would remain above the minimum requirement. Still, the domestic and foreign markets remain very challenging and the financial system should assess the risk assumed with a huge degree of responsibility and conservatively.

I. STATUS AND PROSPECTS OF THE FINANCIAL SYSTEM

BANKING SECTOR

NOTE: The findings of the annual on-site inspection of *AB Ūkio bankas,* carried out in December 2012–January 2013, showed that the financial statements and the reports for regulatory authorities filed by the bank did not show fairly its standing, therefore, for the purpose of the overview of the banking sector's performance indicators, the data of *AB Ūkio bankas* were not included (for more on the suspension of the operation of *AB Ūkio bankas*, see Annex 1).

Banks' assets and funding

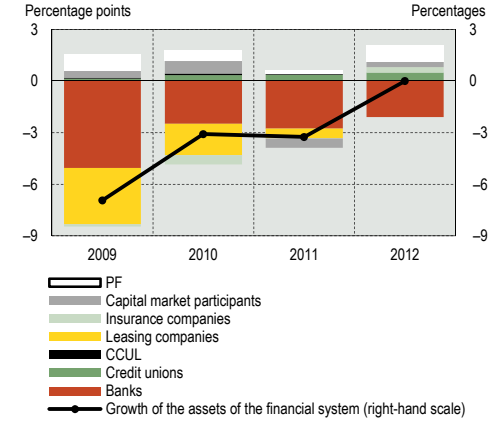
The suspension of operations of *AB Ūkio bankas* early in 2013 did not produce any major effect upon the Lithuanian financial system. In February 2013, the operation of *AB Ūkio bankas* was suspended, with subsequent revocation of its licence. In terms of deposit holdings the Bank ranked fourth in Lithuania and was holding 7.2 per cent of the entire banking market, however, no other major changes in the volumes of deposits potentially affecting the banking sector or its individual participants took place within the reporting period.

In view of the sluggish activity in the credit market in 2012 changes in the banking sector were just marginal.[1] During the first six-month period of the last year the assets in the banking sector were decreasing, with a reverse trend in the second half of the year, therefore the gross change was insignificant. In 2012 it was negative and accounted for –0.7 per cent. In Q1 2013, the annual growth in the assets augmented to 2.4 per cent. The annual growth in loans — the banks' largest asset item in 2012 accounted for 2.0 per cent, and reached 4.1 per cent in Q1 2013. This increase of the loan portfolio was due to slightly eased crediting conditions and the increasing demand in borrowing in view of the improving economic situation and more optimistic expectations concerning the future. As regards investment, the most notable increase was recorded for investment in Lithuanian Government Securities (GS) and non-resident corporate bonds. The effect of contributors on the increase of the assets was abated by the decrease of fund holdings in the Central Bank. Part of the funds were used to repay the loans: in view of the reallocation among the banks of insurance benefits transferred to depositors of the bankrupt *AB bankas SNORAS*, the banks were decreasing the surplus of disposable funds by repaying subordinated loans, decreasing their liabilities to parent banks, and liabilities other than deposits.

The increasing lending to non-financial enterprises and financial institutions reflected more optimistic expectations on the part of corporations, while the moderate fall in lending to individuals demonstrated a persistently sluggish consumption by residents. The number of orders for production and performance of works was increasing and non-financial enterprises consequently received more revenues, financing an ever increasing part of their operations by borrowed funds. Lending to non-financial enterprises was growing at a moderate pace. In 2012, the annual increase rate of loans to non-financial enterprises accounted for 2.1 per cent, and in Q1 2013 it accelerated to 1.7 per cent (see Chart 4). The lending by the banking sector to the general government resulted in the annual increase of loans to government institutions in Q1 2013 by 53.2 per cent. Such growth should be assessed carefully, because in February 2013 one bank granted a large loan to the central government. More prominent growth was recorded in lending to financial institutions, where the annual increase in Q1 2013 was 66.8 per cent. This increase was caused by a leap in lending to host leasing companies. Despite some improvement in their financial standing and growing confidence, households remained cautious.

In 2012, for the first time since the beginning of the crisis the assets in the financial system were not decreasing.

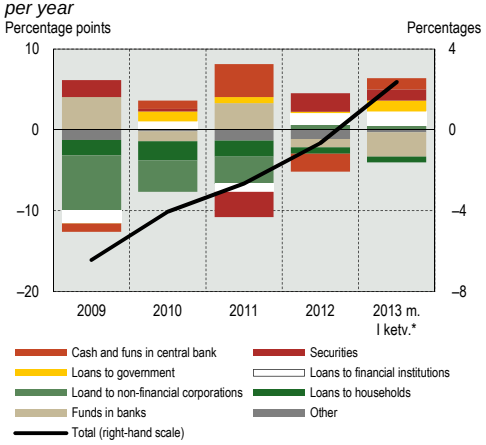
Chart 3. Annual change in the assets of the Lithuanian financial system participants



Sources: the ISC, the LSC, Lithuanian Leasing Association, Association of Lithuanian banks and Bank of Lithuania.calculations.

In 2012, the change in the assets of the Lithuanian banking sector was negative.

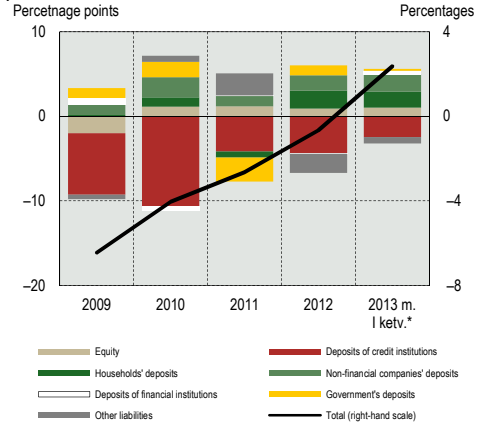
Chart 4. Factors of the development of the banks' assets per year



Source: Bank of Lithuania calculations.
** excluding changes in assets of AB Šiaulių bankas during March 2013.*

The persisting increase in deposit holdings and the sluggish recovery in crediting enabled banks to reduce their liabilities to parent banks.

Chart 5. Dynamics of banks' assets funding sources per year

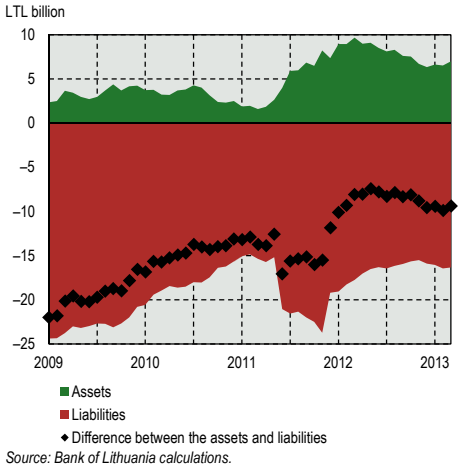


Source: Bank of Lithuania calculations.
** excluding changes in assets of AB Šiaulių bankas during March 2013.*

[1] Not taking into account the change in the assets of *AB Šiaulių bankas* in March 2013.

The financial dependency of Lithuanian banks on parent banks was decreasing.

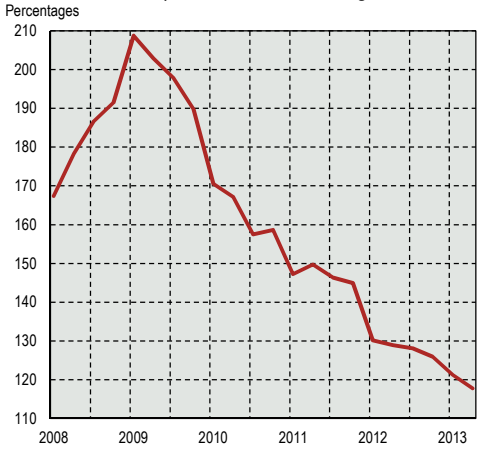
Chart 6. Assets and liabilities in parent banks of banks operating in Lithuania



Source: Bank of Lithuania calculations.

The growing resilience of the banking sector to external factors is also reflected in the loan-to-deposit ratio.

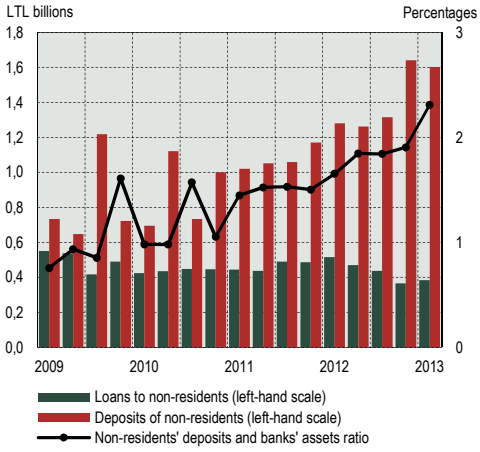
Chart 7. Loan-to-deposit ratio of the banking sector



Source: Bank of Lithuania calculations.

In the banking sector the non-resident loans and deposits accounted for only an insignificant part.

Chart 8. Development of non-resident loans and deposits



Source: Bank of Lithuania calculations.

In Q1 2013, the amount of loans granted to households decreased by 2.3 per cent, however this decrease was notably slower than in 2011 (in 2011, the loans to households portfolio shrank by 6.1%). The commercial banks surveyed by the Bank of Lithuania expect a 1–5 per cent growth in the loan portfolio in 2013.

Following some decline early in 2012 (essentially due to deposit withdrawal by the private sector), the deposit holdings in banks were further increasing up to the end of the year. The decrease in the deposit holdings at the beginning of the year was affected by a number of seasonal factors: the beginning of the heating season and the increased need for funds following the holiday season. Afterwards the deposit holdings were steadily increasing and in 2012 rose by 9.6 per cent, while in Q1 2013[2] the annual growth amounted to 8.3 per cent (see Chart 5). In 2012, deposits accounted for 64.9 per cent of all liabilities of banks, which is a record figure in the past five years. The main contributors to this increase in deposit holdings in the banks were households, non-financial enterprises and the general government. This relatively fast increase in the deposit holdings could have been caused by still cautious expectations regarding the future and the related need to accumulate some reserves for contingencies. Besides, households remained rather conservative, they avoided assuming any additional risks or using alternative investment instruments.

The on-going growth in deposits and the slow recovery in crediting activities enabled the banks to reduce their liabilities to parent banks (see Chart 6). Although in 2013 the liabilities to parent banks slightly increased, this did not change the prevailing declining trend. Since the outset of the economic downturn, net liabilities to parent banks (the difference between the liabilities of banks and their assets in parent banks) decreased three times. The possibilities in case of emergency to attract funds from relatively high-rated parent banks, still available to the host banks in Lithuania, strengthens their resilience to adverse developments and the stability of their operations. On the other hand, in view of the significant dependence of the national banking sector on parent banks, any unfavourable changes in the economic and/or financial markets situation would impair the access of the Lithuanian banking sector to financial resources and negatively affect the stability of the financial system. The growing resilience of the national banking sector is also reflected in the decreased loan-to-deposit ratio (see Chart 7).

Non-resident loans and deposits in the banking sector accounted for only a small share (see Chart 8). Loans to non-residents account for less than 1 per cent of all loans, and during 2012 it further decreased. Although they increased by more than one third, deposits of non-residents still accounted for less than 2.5 per cent of all liabilities of the banking sector. Moreover, the deposits were rather diversified by countries of origin.

In the past years the assets concentration of the banking sector was changing unevenly. The bankruptcy of *AB bankas SNORAS* and the elimination of its loans from the national banking sector did have a significant effect upon the increase of the concentration of the banking sector. Immediately after the leap the concentration in the banking sector started to moderately decrease (the bank assets became more evenly distributed in the sector), however, the bankruptcy of *AB Ūkio bankas* early in 2013 triggered one more material change in the concentration (though much less significant than the first one). Within the past two years these two developments counterweighted the expansion of smaller banks and branches of foreign banks in Lithuania and caused a relatively significant increase in the concentration (a comparison of Q1 2011 and 2013 shows that the Herfindahl-Hirschman index[3] (HHI) increased by 454 points and was recorded as being 1,984).

[2] Not taking into account the change in the assets of *AB Šiaulių bankas* in March 2013.

[3] Herfindahl-Hirschman index is one of the most frequently used market concentration measures. This index is computed as follows: $HHI = \sum_{b=1}^{B} x_b^2$, where x_b — the bank's b market share by assets, B — number of banks. The larger the value, the higher the concentration. In practice, the index value between 1,000 and 1,800 shows average concentration.

Box 1. Shadow banking

Shadow banking, otherwise referred to as the shadow banking sector, is defined as a credit intermediation system embracing entities and activities not inherent to the conventional banking system.[4] The main shadow banking sector entities are the following: money market funds and investment funds of other types (or products with deposit-like characteristics); investment funds that provide credit or are leveraged; finance companies and securities entities providing credits or credit guarantees, or performing liquidity and/or maturity transformation without being regulated as banks (e.g., leasing or factoring companies), insurance and reinsurance undertakings which issue or guarantee products, securitisation, securities lending and repo.

Shadow banking performs important functions in the financial system: offers investors alternatives to bank deposits, they channel resources towards specific needs more efficiently due to increased specialization, and create alternative funding sources, etc. This sector may become particularly useful when traditional banking or market channels become temporarily impaired; then the sector offers risk alleviation and diversification opportunities. But it can also pose potential threats to long-term financial stability by creating a greater number of unknown risk sources. Furthermore, the shadow banking sector may adversely affect the traditional banking sector. The risk created by the shadow banking sector may be grouped as follows: vulnerability of the sector in case of a sudden massive deposit withdrawal, arising because the shadow banking sector financing methods are similar to the deposit-based activities of banks; build-up of high (hidden) leverage that can increase the fragility of the financial sector and be a source of systemic risk; a possibility to circumvent regulation or supervision applied to banks by breaking the traditional credit intermediation process into legally independent structures acting together; failures of sector participants that can lead to contagion and spill-over effects upon the banking sector, as activities of the two sectors are often closely linked. The types of risk mentioned are inherent to the banking sector as well; therefore it is regulated and supervised. The regulation, supervision or restrictions of the shadow banking sector is not so stringent or not applied at all. The European Commission and other international institutions agree that the entities operating in the sector and their activities should be subjected to more stringent supervision. At the same the aim is not to impede its development provided the shadow banking sector does not impose any systemic risk, as it is important source of funding, especially at times of decreased crediting by banks.

Shadow banking in Lithuania

As in the other EU States, the scope of shadow banking in Lithuania is significantly smaller than in the USA.[5] According to the data available to the Bank of Lithuania, in 2010 liabilities of the shadow banking sector accounted for about one tenth of the liabilities of all banks, i.e., nearly LTL 8 billion. About 90 per cent of this amount is represented by the liabilities of companies engaged in traditional activities, such as leasing or factoring. These companies are not distinguished by their aggressive development or excessive risk taking and they often operate as subsidiaries to banks therefore the risks assumed are usually reflected in the banks' balance sheets. There is a much greater concern, especially in terms of consumer protection, linked to the activities of companies providing **small (fast) consumer loans**. Small consumer loans are popular not only in Lithuania, but also in many other countries. They have become an alternative to borrowing from banks and other credit institutions. The USA supervisory authorities, where small consumer loans appeared earliest were among pioneers to regulate the consumer loan market. Other countries are currently searching for methods for more stringent regulation of this market, or have already put some measures in place.

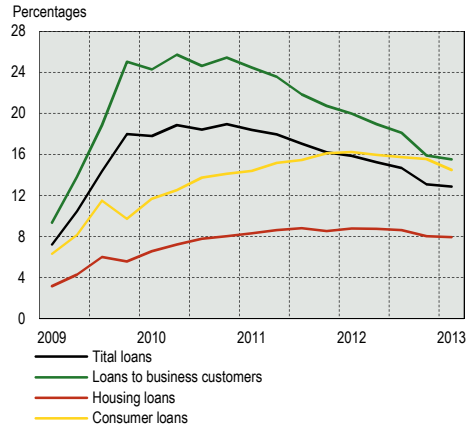
In Lithuania the small consumer loan market is still at its early stage and therefore rapidly growing. During 2012 the portfolio of loans of the type grew by 2.6 times (from LTL 83.2 million to LTL 214.6 million). The small consumer loan market is highly concentrated — three companies providing this kind of credit hold nearly 75 per cent of the entire market. Also, this market is distinguished for extremely high consumer loan interest rates (an average annual interest rate exceeds 100%), while the loan amount is below LTL 750. The principal criteria in assessing the creditworthiness of an applicant are his credit history, the age of the credit recipient and his income. Often irresponsibly, without having properly assessed the possibilities to repay such loans, credit is obtained by young people. In 2012, persons under 25 years of age concluded 36 per cent of all small consumer loan contracts, they also accounted for similar percentage of all loans overdue. It is likely that borrowers are not aware of the consequences arising in case of their default on credits, and most often do not anticipate that their failure to repay the loan will negatively affect their credit rating and ability to obtain a loan in the future, for instance get a mortgage loan. This problem at least partly could be addressed by financial education.

The new legislation regulating the small consumer loan market seeks to address the issues related to the assessment of the paying capacity of borrowers and the disclosure of relevant information. The consumer credit market first began to be legally regulated as of 1 April 2001, the effective date of the Law on Consumer Credit of the Republic of Lithuania. Still, the major issues in this case faced by all countries, including Lithuania, is an inadequate assessment (or no assessment whatsoever) of the borrowers's ability to repay the loan, and an inappropriate or insufficient disclosure of information. The Bank of Lithuania responded to the problem by approving the Regulations on the Assessment of Solvency of Recipients of Consumer Loans and Responsible Lending. Further, the Bank of Lithuania approved the Guidelines on advertisment of financial services, one Section whereof specifies the requirements for advertisment of consumer credit. Also, the Bank of Lithuania imposes sanctions upon violators of the Law on Consumer Credit of the Republic of Lithuania. According to the new Regulations on the Assessment of Solvency of Recipients of Consumer Loans and Responsible Lending that will come into effect as of 1 July 2013, a provider of consumer loan is considered compliant with the responsible lending principle where in concluding a consumer loan agreement, an average payment by the borrower, consisting of a partly repayment of the principal and the interest, computed by dividing the total of the payment of the principal and the interest by the duration of the credit (considering all liabilities to all financial institutions) accounts for no more than 40 per cent of sustainable income of the borrower. This requirement is expected to limit the possibilities to assume new liabilities for persons without regular income and therefore often encountering difficulties in repaying the loans.

[4] European Commission. *The Green Paper. Shadow Banking.* 2012-03-19, COM (2012) 102 final, Brussels.
[5] Late in 2012, the liabilities of the American shadow banking sector accounted for 95 per cent of the banks' liabilities and, respectively, 18 per cent in the EU (Source: "Trends Risk Vulnerabilities". *European Securities and Market Authority,* No. 1, 2013).

In view of the improving abilities of the private sector to repay its credits and the write-off by banks of certain loans, the quality of the loan portfolio was improving.

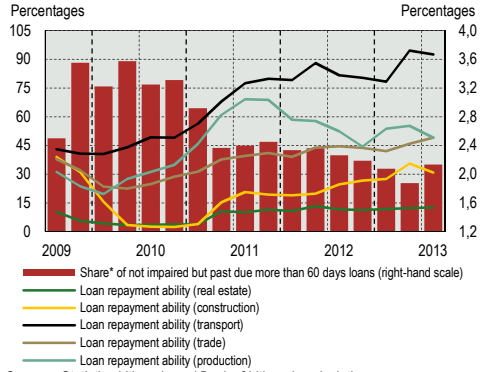
Chart 9. Non-performing loans of the banking sector



Source: Bank of Lithuania calculations.
Note: excluding data of AB Ūkio bankas *and* AB bankas Snoras.

With the improving financial situation, non-financial enterprises found it easier to repay their loans.

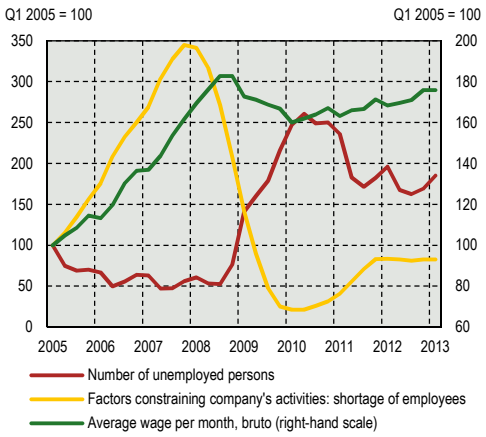
Chart 10. Loan repayment abilities of non-financial enterprises and the share of their overdue loans in the banking sector loan portfolio



Sources: Statistics Lithuania and Bank of Lithuania calculations.
** As comapred to total laon portfolio.*
Debt servicing capacity is a ratio of profit before taxes, amortization and depreciation to financial debts (all non-financial corporations)
Note: names of some economic activities are abbreviated.

The number of employees and the wages were increasing.

Chart 11. Development of the shortfall in labour force, the number of the unemployed and the wages



Sources: Lithuanian Labour exchange, Statistics Lithuania and Bank of Lithuania calculations.

Quality of the loan portfolio and the financial standing of borrowers

With the financial standing of the largest borrowers strengthens and the interest rates remain low, the ability to repay loans and the quality of the banking sector loan portfolio improved. In 2012, the ratio of non-performing loans of the banking sector to the entire loan portfolio decreased, and in first quarter of 2013 was recorded at 12.9 per cent (see Chart 9). Several factors had an effect on the improvement of the banking sector's loan portfolio. First, the relative loan repayment burden eased (the debt repaying ability increased) due to lowered interest rates and a stronger financial status of the borrowers. Second, not expecting to recover part of the previously granted loans, banks wrote them off by reducing their special provisions. Unless the economy suffers from some significant shocks, the quality of the loan portfolio in the future should further improve in view that the growing economy and the abilities of corporates and citizens to discharge their previously assumed financial obligations to banks are increasing.

One of the major contributors to the decrease in the share of non-performing loans was the loans granted to non-financial enterprises. On the one hand, the number of non-performing loans was decreasing due to the write-off of some previously granted loans (especially in fourth quarter 2012) by reducing the banks' special provisions. Further, the financial standing of non-financial enterprises for the past several years has been improving. With the demand for production and/or services remaining high the sale revenues generated by non-financial enterprises in 2012 were rapidly increasing. The growth of the pre-tax profits that halted for a short time at the turn of 2012, in 2012 significantly accelerated. And specifically so in the second half of 2012, the growth in pre-tax profits improved the profitability indicators (capital return ratios and profits on sales were growing). Two thirds of all non-financial enterprises were operating profitably and the share of those encountering financial difficulties was further decreasing. This allowed some more optimistic outlook for the future, and, following a break of one year and a half the economic sentiment indicator of non-financial enterprises became positive. Loans to companies engaged in industrial, trade, transport, construction and real estate (RE) activities made up the largest share of banking loans to non-financial corporations. The financial standing of most of the above mentioned companies significantly improved during 2012 and they found the fulfilment of assumed financial obligations increasingly easier (see Chart 10). However, the financial standing of companies related to RE remained poor, which made the banks very cautious in lending to these activities.

The increased demand for a labour force created preconditions for the improvement of the financial standing of households. With the demand on local and foreign markets growing, companies of some economic activities started feeling a shortage of labour force of required qualification. A more intensive competition for labour force was not only reducing the number of unemployed, but also raised the average net monthly wages (see Chart 11). Despite the improving financial standing, households were still refraining from assuming new financial obligations and reducing the ones already assumed. This behaviour could have been caused by the uncertainty, although slightly subdued, concerning the future development of the economy. In view of the decreasing financial obligations assumed and the interest rates charged for them, also the improving financial standing of households, the abilities to repay the debts were improving (see Chart 12). Therefore the quality of loans by the banking sector to households (the share of non-performing housing loans as compared to other loans was the smallest) also started to improve.

The financial assets managed by households were growing. In the course of the past several years the consumer confidence indicator was rapidly improving. Still, during Q1 2013 it remained negative, and a

somewhat low consumer confidence level could be a factor suppressing the consumption and/or investment on the part of households, encouraging their striving to accumulate some precautionary reserves. The largest share of the financial assets of households (two thirds) was represented by their equity in non-financial enterprises (essentially — unquoted shares) and deposits in the banking sector. However, the same period was distinguished for a rapid increase in cash, also equity in insurance undertakings and pension funds (PF). The cash holdings by residents were increasing basically due to the bankruptcy proceedings initiated against *AB bankas SNORAS*, since about one third of the insured deposits eligible to be compensated returned to the banking sector with some time lag. Besides, life insurance benefits were, at the end of 2012, paid to residents who ten years ago concluded life insurance contracts benefiting from the then-effective tax relief. The increase in the net equity of residents in PFs was mainly caused by the increase in the number of participants of the 2nd and 3rd pillar pension funds and the appreciation in 2012 of the assets held by the funds. By increasing their financial assets households were also improving their loss absorption capacity in case of emergencies in the future.

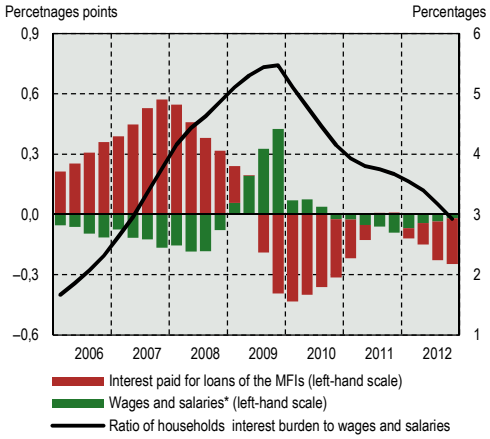
In early 2013 the Republic of Lithuania Law on the Bankruptcy of Natural Persons entered into force, which provides individual solvency recovery principles, creating preconditions for individuals whose financial status has basically deteriorated, within a reasonable time, according to their ability to satisfy creditors at the end of this period, be dismissed from further debt repayments. Thus, they allow individuals to escape poverty and restore their solvency, as well as ensure the satisfaction of creditors' requirements, thus seeking to achieve a fair balance between the interests of creditors and depositors. On the one hand, it is also important because of the unfavourable circumstances so far, residents will have the opportunity to restore its solvency. On the other hand, it increases the credit risk of banks. A few months after this Law entered into force is not enough time to be able to draw conclusions about the banking sector's possible potential losses and changes in lending conditions.

Although households were increasingly frequently borrowing with fixed interest rates for a long term; nevertheless the majority was still borrowing for a variable interest rate, thus remaining sensitive to interest rate fluctuations. In the beginning of 2013, about 70 per cent of new loans to households were issued at interest rates fixed for a shorter than one year period, which is by 14 p.p. less than at the beginning of 2009. This approach by households was prompted by several factors: first the decreasing difference between the interest rates fixed for short and long term; second, the persisting low short-term interest rates assumes their rise in the future; therefore, part of households rushed to fix the interest rates for longer periods. With the share of loans issued at interest rates fixed for a longer than one year period, the sensitivity of households to any increase in interest rates is diminishing.

The increasing debt of the local government was causing concern regarding its ability to properly discharge its financial obligations in the future. Income tax of residents remained the most important source of revenues for municipal institutions. Still with the growth of employment being sluggish and corporates unwilling to raise wages quickly, many municipalities lately generated less income than incurred expenditures. The increasing budget deficit was forcing municipalities to borrow more; however the assuming of larger obligations still being restricted by limits imposed by the general government. Some municipalities, however, started using alternative instruments for financing their activities, for example, trade credit, which is disregarded when establishing the debt limit (see Chart 13**Error! Reference source not found.**). At the end of 2012, the outstanding financial obligations of local government to non-financial enterprises (usually owned by the same

The relative burden of the interest paid to banks was decreasing

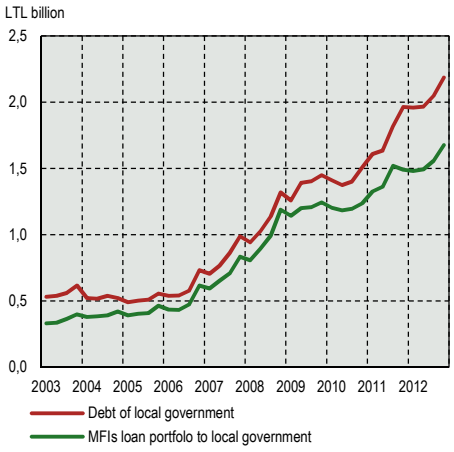
Chart 12. Development of the ratio of the payment burden of interest on banking loans to households ratio and the wages and salaries



Sources: Statistics Lithuania and bank of Lithuania calculations.
** Total economy of Lithuania notwithstanding debt to MFI's holding.*

Although accounting for merely 3 per cent of all loans by the banking sector, the financial obligations assumed by local government are rapidly increasing.

Chart 13. Development of the indebtedness of the local government

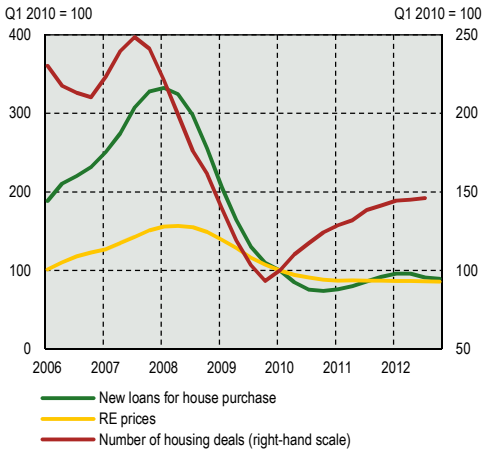


Sources: Statistics Lithuania and Bank of Lithuania calculations.

With the housing prices remaining nearly unchanged, the activity in the real estate market is on the rise.

Chart 14. The development of the new housing loans, adjusted for the change in the real estate prices, and housing transactions

(four-quarter moving average)



Sources: State Enterprise Centre of Registers and Bank of Lithuania calculations.

municipalities) accounted for LTL 0.9 billion, making up one third of all financial liabilities of the local government. In the course of the past several years the indebtedness of municipalities increased quite tangibly. Should this trend continue, it may increase the credit risk for the banking sector, also the uncertainty concerning the financial sustainability of the general government in view of the growing indebtedness.

Although prices of real estate remained in the past several years broadly unchanged, the activity in the market is gradually recovering. With the financial standing of households gaining strength the possibilities to acquire own housing (housing affordability index) improved materially. This contributed largely to the raise of activity in the RE market (see Chapter 14). In 2012, the number of transactions in the real estate market, also of issued construction permits and the newly built housing units went up. However, the acquisition of own housing is now to a smaller extent financed by bank loans: in 2008, more than half of housing units transferred under purchase-sale transactions were secured by pledging the property, while in 2012, this share decreased twice. Not anticipating any major changes in terms of prices in the real estate market potential buyers were rather cautious in assessing a potential acquisition of housing, and more frequently they were funding the acquisition transaction from own resources.

Box 2. Problems of formation and management of non-performing loans in Lithuania

The share of non-performing loans in the Lithuanian banking system remains quite significant (13.1% according to 2012 end-of-year data). This may become a significant obstruction to the growth of a new loan portfolio and a more rapid economic recovery. The non-performing loan administration costs may increase the interest rate for new loans, thus potentially lessening the demand for such loans. In view of positive economic changes the principal factors causing an overly slow pace in reducing the number of non-performing loans lie in the legal and regulatory environment, as was noted by the IMF in its survey of the situation in Central and Eastern Europe.[6]

Having regard for the ability of the borrower to further discharge its obligations, credit institutions normally choose, or rather, are forced to choose, one of the two alternative approaches towards non-performing loans: 1) an operative solution, i.e., loan restructuring (basically, the extension of the term of the loan or part thereof, temporary deferral of repayments, capitalisation of accrued interest); 2) a long-term process, i.e., legal restructuring and/or loan recovery (which is essentially a bankruptcy procedure, seizure or sale of pledged assets). In the first case the expediency of the decision depend solely on the successful outcome of the negotiations between the transaction parties, while in the second case more stakeholders are involved in the process then facing challenges of the legal and regulatory environment becoming inevitable. The most frequently arising challenges are the following:

- shortcomings in the regulatory environment, pertaining to corporate restructuring (unacceptability of restructuring processes);
- problems related to delays in the bankruptcy proceedings (inefficiency in performance by bankruptcy administrators, other parties in the proceedings and courts, protracted and often unreasonable appeal procedures);
- shortcomings of the procedures related to the taking over of the pledged assets (lengthy terms for auctions, groundless appeal procedures);
- fraudulent bankruptcies.

Legal restructuring in Lithuania has remained a rather unpopular and scarcely relied on process. In case an entity (its owners) fails to reach a composition with creditors concerning the restructuring of the debt, there is still a possibility to initiate the restructuring of the entity's operations by applying to court. In the course of this process all payments according to loan agreements are suspended, which opens ways, within judicial proceedings, to proceed with the restructuring of the entity's operations alongside with the restructuring of the debts by agreeing on new terms for the discharge of the obligations. Restructuring of enterprises is an appropriate and necessary alternative to avoid the bankruptcy of the enterprise and enable it to restructure its operations and restore its solvency. Moreover, it is a possibility for creditors, and banks among them, to suffer less loss than in the case of the entity's bankruptcy. Although the currently effective legal regulation provides for reasonable preconditions for restructuring processes[7], so far creditors find it hardly acceptable in view of the risk of abuse, while the entities, as borrowers, find restructuring a complex process; as a result, bankruptcy is a frequently opted for solution.

[6] *European Banking Coordination "Vienna" Initiative; Working Group on NPLs in Central, Eastern and South-eastern Europe*, March 1, 2012.
[7] On 1 October 2010, an updated version of the Law on Restructuring of Enterprises was affected according to which the restructuring procedure became much simpler, as its initiation does not require consent on the part of creditors.

Such lengthy and often inappropriately conducted bankruptcy processes are largely caused by a number of overly liberal conditions for filing appeals which partly paralyses the operation of the judicial system. Better specialisation of courts and judges could improve litigation procedures and make judging appeals more efficient. A significant obstacle is a poor performance of bankruptcy administrators, and an overly complex procedure for replacing the participants of the process in view of indications of their inactivity or partiality. Such lengthy bankruptcy proceedings prevent the creditors, a large part whereof is represented by credit institutions, from expediently exercising their claim rights; this eventually resulting in freezing of regulatory capital and restriction of the development of crediting activities.

Sale of the borrowers assets (whether or not they are pledged) is one of the most important stages in the assets recovery procedure (taking over of assets) essentially affecting the cost of the entire process. The current legal regulation of the assets recovery (taking over) by creating preconditions for protracting all procedures may materially violate the interests of the creditor, and in another case — those of the borrower. Further to the amendments already made facilitating more expedient and easier accessible auction procedures[8], it is absolutely necessary to create legal regulation preconditions for more expedient execution of property sale auctions that should also be called at more frequent periodicity.

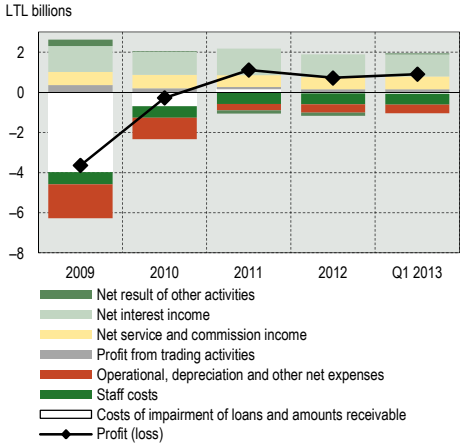
Specifically prominent in the period of the economic downturn became the problem of fraudulent bankruptcies, where following the bankruptcy of an entity its operations are continued in the name of another company, and the claims of the bankrupt company, after it is removed from the register, are written-off. The insufficient control over fraudulent bankruptcies and the possibility to avoid liability create conditions for getting rid of debts, thus incurring unreasonable loss for creditors. In such cases credit institutions suffer less damage than other creditors, since their claims are normally secured by pledged property; however, the negative outcomes of fraudulent bankruptcies affect credit institutions through other creditors of the entity undergoing bankruptcy procedure. As of 1 October 2013, amendments to the Law on Bankruptcy of Enterprises are coming into effect, largely expanding the scope of regulation of fraudulent bankruptcy and putting in place some presumptions in the presence whereof any bankruptcy will be considered fraudulent. The optimal regulatory environment creating a framework for an efficient (in terms of time and costs) entity restructuring procedure, and, in an extreme case — for a bankruptcy procedure is one of the conditions facilitating the growth of economy, attractiveness of the country for investors and ensuring the efficient operation of the national financial system. The Bank of Lithuania supports all initiatives intended to implement targeted changes of the legal, tax and other regulatory environment ensuring an appropriate regulation of the processes referred to above. The Bank of Lithuania is ready to contribute to the drawing up of different proposals concerning amendments to laws and encourage taking advantage of the technical assistance offered by international experts (e.g., IMF) in developing such proposals.

[8] Since the beginning of 2013, residents may register online, and thus participate in auctions, submit their bids for the assets auctioned and monitor the course of the auction in real time mode.

Profitability and efficiency

The decrease of profits from crediting activities was partly offset by larger income from services and commissions and the improved results of trading activities.

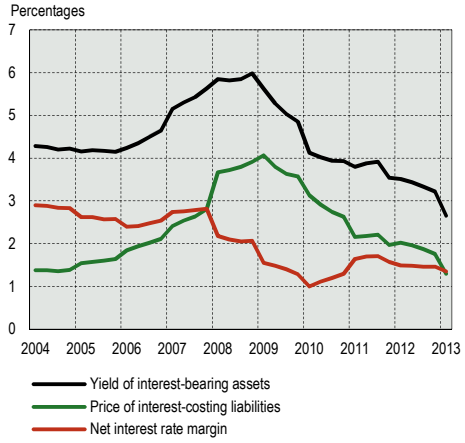
Chart 15. Annual movement in the structure of income and expenditure of the banking sector



Source: Bank of Lithuania calculations.

One of the main reasons for the decrease in profit margins of the banking sector is the decline in the net interest margin.

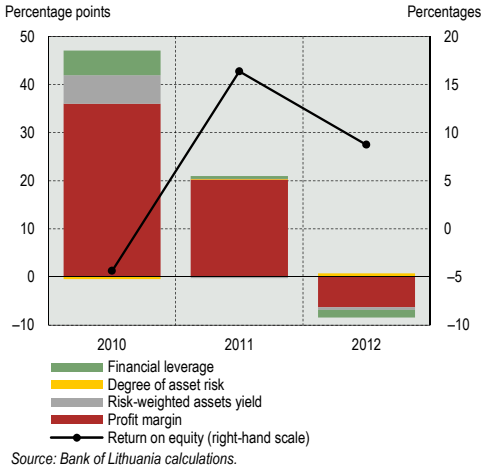
Chart 16. Development of the net interest margin



Source: Bank of Lithuania calculations.

A major contributor to the decrease in the return on equity in 2012 was a lower profit margin.

Chart 17. Factors affecting the development of the return on equity



Source: Bank of Lithuania calculations.

In 2012, the banking sector's profit (LTL 721.7 million) was by more than one third behind the year on year indicator (35.6%). The major cause for the reduction in the banks' profit was changes in the impaired loan losses. Certain changes took place in the structure of the banks' revenues: net interest income was on the decline, which was compensated by higher income from services, net commission income and income from trading activity (see Chart 15).

In 2012, differently from 2011, the banking sector did suffer some loss due to loan impairment. In 2012, the banking sector incurred LTL 51.3 million in expenses, and in 2011, by way of reversal of the previously recognised loan impairment, the banking sector recorded LTL 164.4 million in revenues.

In 2012 and early 2013 the banks' net interest income decreased due to the lower net interest margin. In the course of the year the average net interest margin, indicating the difference between the interest that banks gain for invested assets (loans, debt securities, funds in banks, etc.), and interest that banks pay to their creditors (depositors, etc.), decreased from 1.58 per cent to 1.46 per cent, and down to 1.35 per cent in Q1 2013 (see Chart 16). The low interest rates on deposits, prevailing mostly due to the excessive liquidity in the market and low main interest rates, restricted the possibilities for banks to reduce their interest expenses. Thus, interest income was decreasing at a faster pace than interest expenses. During the year the interest income decreased by LTL 292.9 million, and the interest expenses dropped by LTL 170.6 million.

The reduction in income from interest-generating activities was compensated by an increase in fee and commission income and better results of the trading activity. In view of the recovering economic activity the share of the banking sector's fee and commission income in 2012 was steadily rising, and reached 24 per cent in Q4, (21% in 2011), while the net income of the type (income less expenditures) in the course of the last year increased by 10 per cent and accounted for LTL 608 million. Tangible recovery in financial markets and relatively successful investment performance did have an effect upon an increase of profit from trading and other financial activity. The profit surged by 1.5 times and was recorded at LTL 171.5 million. A major contributor was the profit from operations in foreign currency that augmented by one-third.

The change in the return on equity of the banking sector in 2012 was negative, as the reflecting ROE indicator nearly halved to 8.7 per cent. The greatest contributor (6.3 p. p.) to this negative change in the return on equity was a decline of the profit margin (see Chart 17), quite detrimental was also the decreased ratio of bank's assets to shareholders' equity (financial leverage). This ratio was falling due to both the moderate decrease in the banks' assets and the tangible increase of the shareholders' equity. The ratio of the level is rather low for the banking sector; therefore in the long run the banks will likely have to look for additional profit enhancement sources (see Chart 18).

With lower income and higher expenditures, the banking sector's efficiency decreased. The ratio of income to expenses in one year worsened by 11 p. p. Operating expenses increased by 3.7 per cent: staff costs by 1.0 per cent, and general and administrative expenses jumped by 7.0 per cent.

Capital adequacy

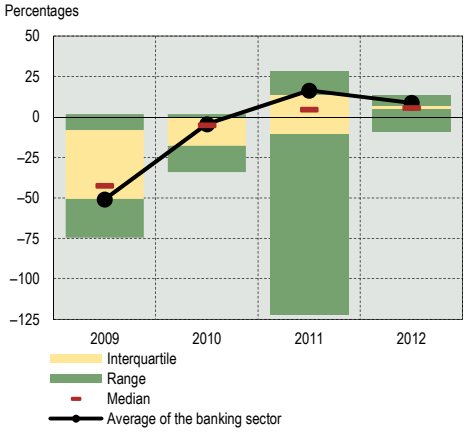
The average banking sector capital adequacy ratio in 2012 rose by 0.5 p.p. and was recorded at 14.4 per cent (see Chart 19). This indicator well exceeds the 8 per cent minimum ratio required by the Bank of Lithuania. The capital adequacy ratio of individual banks fluctuated between 11.6 per cent and 22.5 per cent. Furthermore, the adequacy ratio of the highest quality (Tier I) capital accounting in Lithuanian banks for the major part of the capital increased in the course of the year from 11.9 per cent to 13.7 per cent. Also in 2012, the range of the capital adequacy ratio broadened. This increase, to a major extent, was recorded due to higher capital adequacy ratios of certain individual banks. In Q1 2013, the average capital adequacy ratio of the banking sector rose by 1.2 p.p. and was recorded at 15.6 per cent, its range remaining broadly unchanged.

Last year the capital requirement for absorption of credit risk was moderately growing (3.5%), also the capital requirement for absorption of market risk increased (6.4%). The operational risk did not have any significant effect upon the development of the capital requirement. With the loan portfolio growing the capital requirement for absorption of credit risk increased most on account of the loans to entities. The growth in the capital requirement for the absorption of market risk was mostly prompted by the increasing risk related to debt financial instruments and the foreign exchange risk.

The banking sector will have to adjust to the new capital requirements designed to strengthen the banks' capitalisation level. In 2013, the European Commission, the Council and the Parliament agreed on concerning the Capital Requirements Directive IV (CRD IV), and the Capital Requirements Regulation (CRR), implementing Basel III principles for effective bank supervision. Due to the high quality of Tier I capital of the banks, the implementation of the new requirements to the banks' capital adequacy ratio would change only marginally. According to the calculations of the Bank of Lithuania, the capital adequacy ratio would decrease by 1.8 p.p. — down to 11.8 per cent (see Chart 20), and would still remain significantly above the minimum required for Tier I capital (4.5%), provided under the new standards of the CRD IV.

The average return on equity in the banking sector in 2012 reached 8.7 per cent. In the course of the year the return on equity indicator dropped nearly twofold in addition to a significant narrowing in its range.

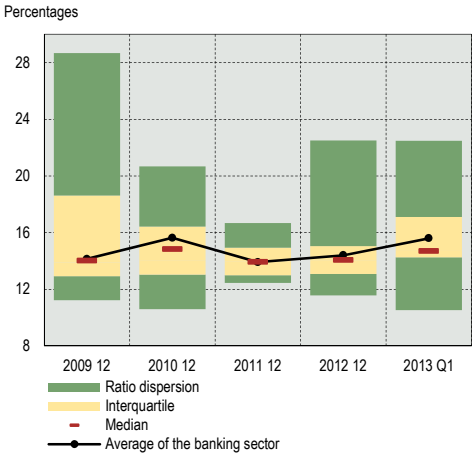
Chart 18. Development of the return on equity



Source: Bank of Lithuania calculations.

The capital adequacy indicator of the banking sector remained above the required standard.

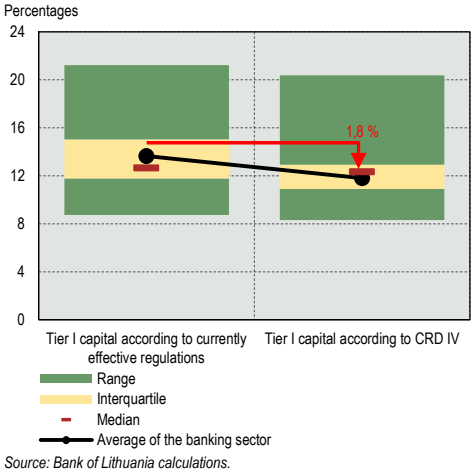
Chart 19. Dispersion of the banking sector's capital adequacy ratio



Source: Bank of Lithuania calculations.

The implementation of the new requirements of the CRD IV for Tier I capital would decrease the capital adequacy ratio by 1.8 per cent, still leaving it way above the minimum capital requirement of 4.5 per cent.

Chart 20. Dispersion of the banking sector's Tier I capital adequacy ratio in 2012

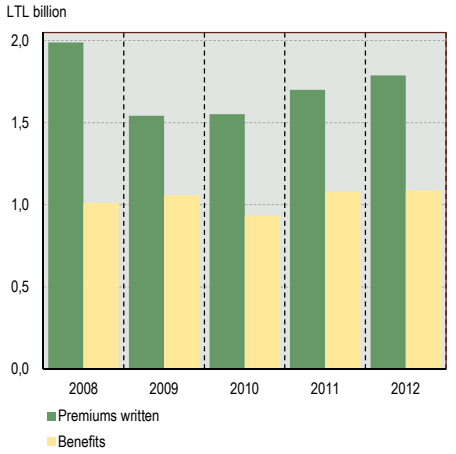


Source: Bank of Lithuania calculations.

INSURANCE UNDERTAKINGS SECTOR

In view of the economic recovery the value of the premiums written was increasing.

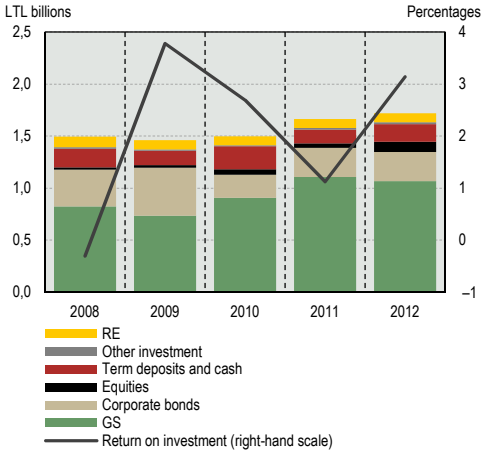
Chart 21. Development of the insurance premium written and benefits paid



Source: Bank of Lithuania calculations.

The investment portfolio of insurance companies was relatively conservative

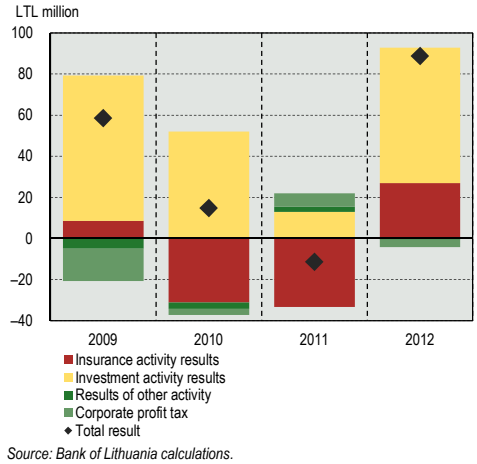
Chart 22. Investment portfolio of insurance companies and its return



Source: Bank of Lithuania calculations.

In 2012, the insurance sector profit was largely affected by the sector's investment performance

Chart 23. Performance of the insurance market



Source: Bank of Lithuania calculations.

The year 2012 for the insurance market was a year of steady growth. In 2012, insurance companies reported premiums at LTL 1.8 billion, a rise of 5.2 per cent per year, i.e., slightly less than in 2011 (see Chart 21).

After a contraction in the first quarters of 2012, by the end of the year the insurance sector returned on the rise path and recorded an annual increase of 2.5 per cent. The most important contributor was the increase at the end of the year in the volumes of the life insurance, under which the investment risk is borne by the policyholder. Due to changes in the taxation environment initiated ten years ago, the volumes of insurance benefits in 2012 tangibly increased. In 2002, insurers, seeking to take advantage of the last opportunities to benefit from tax relief, were extremely active in concluding life insurance contracts. At the end of 2012 the ten years term for which most contracts were concluded expired, causing this surge in disbursement of insurance benefits (16%, or LTL 390 million). Having received the insurance benefits policyholders in most cases did not conclude any new insurance contracts. Within the period considered policyholders were more often opting for more conservative and traditional life insurance products, i.e., in view of the prevailing uncertainty policyholders were opting for life insurance of guaranteed, though lower, investment return.

No such significant changes took place in the non-life insurance market. This market was on a moderate growth pace throughout the year resulting in a 6.6 per cent rise in 2012. Similar to previous years, to a large extent this growth was caused by an increase in volumes of insurance groups related to insurance of vehicles. Contrary to life insurance, benefits in respect to non-life insurance decreased (6.2%), largely due to a significant reduction in the amounts of benefits in respect to crop insurance.

The growing investment value resulted in increasing of insurance companies assets. In 2012, the assets of insurance companies increased by 7.8 per cent, and were valued at LTL 3 billion. Insurance companies were mostly investing in long-term and low-risk, and at the same time, low yield, investment units (see Chart 22). In the period reported, the investment of insurance companies grew by 2.5 per cent and accounted, at the end of the year, for LTL 1.6 billion. The composition of the investment portfolio held by insurers remained broadly unchanged with the largest share invested into GS of the Republic of Lithuania, corporate bonds and term deposits in banks. The investment of life insurance companies, where the investment risk is borne by policyholders, is more risk-prone; nevertheless, during 2012 the value of the investment grew by 22 per cent and reached nearly LTL 0.9 billion.

Last year insurance companies registered in Lithuania earned record high profits (LTL 88.7 million), although a year ago the performance of insurance sector companies was loss-incurring (see Chart 23). Out of 11 insurance companies registered in Lithuania, 8 were operating profitably. The operating results of life insurance companies were by nearly LTL 9 million better than those of non-life insurance companies, and the return on equity (RoE) indicator of life insurance companies was by 9.3 p.p. higher. Same as in previous periods the largest losses were incurred due to operating losses of state capital *UAB Būsto paskolų draudimas* engaged in credit insurance activities, which in their turn were caused by insured events, namely default of housing loan recipients on their obligations to banks.

Insurers earned their profits by successfully performing both in insurance and the investment areas. In 2012, in view of the growing insurance market volumes, the revenues from insurance activities of companies have increased and the efficiently implemented changes in insurance risk management slowed down the growth in costs. As the

investment portfolio of insurance companies is normally long-term and hold to maturity, currently the yield of securities redeemed is higher. It follows that the prevailing low interest rate environment did not produce any more tangible effect upon the performance results of insurance companies. However the low interest rates prevailing for some time were causing more concern to life insurance companies that offer conventional life insurance with guaranteed return.

Insurance companies have sufficient capital to discharge their obligations. One of the main indicators of financial stability of the insurance market — solvency ratio — was sufficiently high and was recorded at 2.7 (the solvency requirement is considered met when the solvency ratio is higher than 1).

Box 3. UAB Būsto paskolų draudimas: challenges in its activities

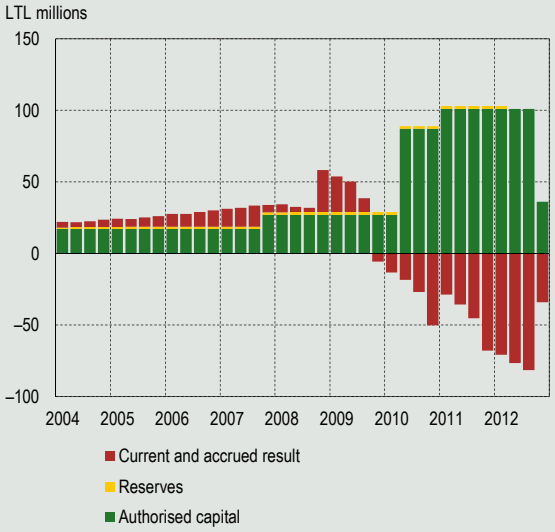
In 1998, with a view to partly resolve the housing funding problem and revitalize the real estate market the Government of the Republic of Lithuania passed a decision to establish *UAB Būsto paskolų draudimas* (BPD) as an insurer of housing loans; the purpose whereof was to make housing more affordable to households receiving regular income, but not able to accumulate the required amount or not having any initial down payment. In 2000, this company concluded a first housing credit insurance agreement and more than 47,000 households already used the services of the company to date. As of Q1 2013, the company was managing more than 35,000 effective housing loan insurance agreements making up 22 per cent of all housing loan contracts.

While initially established to address social problems and create more favourable conditions to acquire housing for State-supported residents, the company gradually evolved into a commercial profit-seeking entity: apart from the insured State-support housing loans the BPD started insuring also commercial housing loans. In 2003–2011 as many as 75 per cent of all insured housing loans were commercial loans which in value were on average twice as high as the State-supported loans. As a result the major part of the loss incurred by the company was related to the insurance of commercial housing loans (96% of all insured events were related to insured housing loans of commercial nature). In the period of an immensely buoyant economic growth, the company assumed the insolvency risk of other households for which the housing loan insurance was an instrument to acquire more expensive housing or even engage in speculation in real estate.

The largest operational risk was accumulated by BPD in 2005–2008. In that period households could borrow from banks at favourable terms: easier requirements for loan collateral and income of borrowers, lower loan interest margins. Moreover, banks tended to lend to customers that have insured the housing loans with BDP and thus reduced their credit risk. They could offer such customers even more favourable borrowing terms: lower interest margins, less stringent requirements for loan-collateral ratio. This environment created conditions for irresponsible borrowing and an overly fast growth of credit. With loans covered by insurance incentives to assess the actual loan repayment abilities significantly abated while simultaneously credit became more accessible. Loans accounting for 95 per cent or more of the market value of the pledged real estate were offered at specifically attractive interest rates. Credit also became accessible for low-income individuals that could not accumulate a down payment.

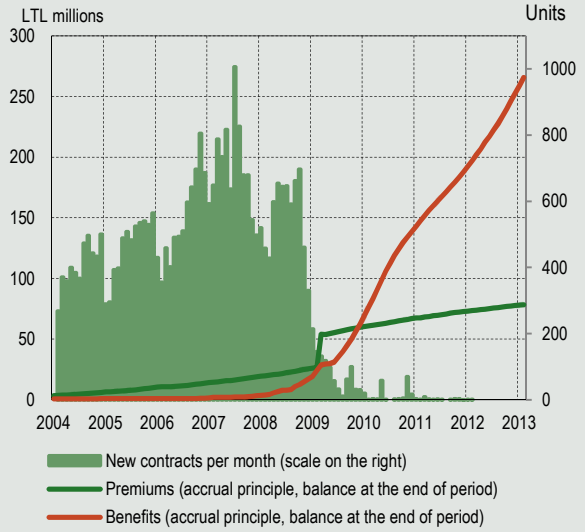
With the start of the economic recession in 2009, the earlier insufficiently assessed insurance activity in the pre-crisis period turned into a threat for the continuation of the operations. With the start of economic slowdown the volumes of overdue payments surged, especially among lower-income customer groups. As the prices of real estate fell, the cases where the outstanding loan was bigger than the value of pledged property became frequent due to fairly high loan-to-value ratio. In addition to these factors low insurance premiums that prevented from accumulating sufficient reserves to cover the loss and the absence of reinsurance contracts complicated the situation further. Thus the entire risk was borne by BPD. Besides, because of considerably lower volumes of issued new housing loans and, at the same time, insured loans (see Chart B), BPD lost its principal source of income — insurance premiums from new insured customers. As a result, a relatively small capital of the company started shrinking and in 2010 the Ministry of Finance of the Republic of Lithuania was forced to initiate the first increase of the authorised capital by LTL 60 million (see Chart A). In 2011, the authorised capital was additionally increased by LTL 50 million (in 2011 — LTL 36 million, and LTL 65 million in 2012 were allocated to cover the accumulated loss). At the end of 2012, the authorised capital of BPD accounted for only LTL 36 million; therefore in 2013 it was additionally increased by LTL 30 million. In case, as anticipated, the company continues to incur losses, it will need additional capital injections.

Chart A. Development of the own capital of BPD



Source: Bank of Lithuania calculations.

Chart B. Development of BPD premiums and contributions as well as the new insurance contracts



Source: Bank of Lithuania calculations.

Note: the break in premiums' series in 2009 was caused by accounting policy changes.

The continuity of the operations of *UAB Būsto paskolų draudimas* remains very dubious. It is obvious that the operating model of the company is not sustainable and needs to be essentially reorganised. Currently, BPD is no longer an actively operating company as it has not been concluding any new insurance contracts since March 2012, and only making insurance benefits payments to banks (see Chart B). The payments are related to the assumed long-term obligations and only a small part of such payments is recovered from insured customers. An additional area of activity of the company is the sale of real estate objects taken over from insolvent customers, which, at current low market liquidity conditions is rather limited.

As of 1 April 2013, insured events were recorded in respect to insured housing loans worth LTL 400 million, accounting for[9] 5.95 per cent of the total own capital of the banks operating in Lithuania. Hypothetically, even if the operations of BPD were halted and the banks recognised all the loss thus incurred (LTL 400 million), such developments would not have any significant impact on the banking system (according to the data as of Q1 2013, the banking sector capital adequacy ratio would decrease from 15.61% to 14.67%). However, the impact on individual banks would vary.

[9] Value of loans at the time of conclusion of the insurance contract.

SECURITIES MARKET

Although in 2012, the international environment remained unfavourable, the securities market activity increased. The number of listed companies on AB NASDAQ OMX Vilnius slightly decreased (two companies were removed), but no major changes are expected for 2013. In 2012, following a lengthy break, one company launched an IPO, and was admitted to the equity trading list on the Warsaw exchange. With the improving market situation in 2013 more companies may launch IPO. Still a worrisome fact is that it was not the first company that chose a foreign, rather than Vilnius stock exchange. More incentive measures are necessary in order to increase, or at least to maintain, the current volume of the regulated market and to attract more large investors.

The continuing tensions and uncertainty in the global financial markets as well as the on-going euro area's debt crisis caused investors to be cautious; however, the regulated equity market indicators started improving. Trading on the AB NASDAQ OMX Vilnius was sluggish, still the value of the OMX index surged by nearly 19 per cent (in 2011 the year on year fall was 27%) (see Chart 24), which was one of the best results in the EU. In 2012, the share price of every second company increased. It seems likely that this year the index growth will be more moderate unless the situation on the European and global markets would considerably improve.

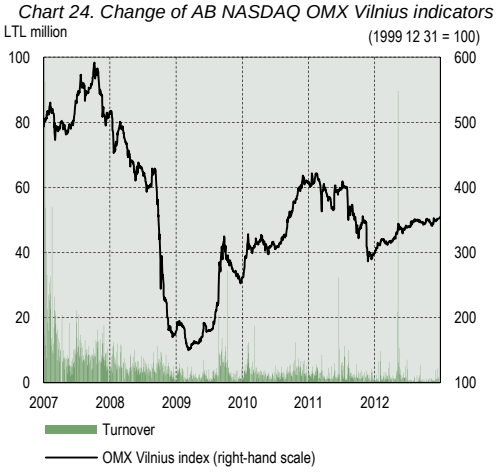
In 2012, the assets managed by 2nd pillar pension funds grew significantly (by 17.8%), despite an only marginal increase in the number of participants (i.e., 1.27%) (see Chart 25). This growth due to positive return on investment was significantly higher than in previous years; however, the ageing society and the decreasing number of new participants in the labour market had an impact on the growth in the number of participants of the PF system which was more moderate. Fluctuations in the global financial markets did not affect the results of the 2nd pillar pension funds and their unit value on average grew by 11.2 per cent: in 2012 the value of equity PFs augmented by as much as 13.1 per cent, that of medium equity share pension funds by 12.2 per cent, small equity share pension funds — 10.9 per cent, and conservative investment PF recorded an increase in their unit value by 6.5 per cent. Investment by PFs in Lithuanian GS increased from LTL 978.9 million to LTL 1,207.0 million. An important factor that in 2014 will affect the number of participants and assets managed by 2nd pillar pension funds will be the on-going nationwide pension reform.

In 2012, the value of the assets managed by the 3rd pillar pension funds increased by 15.7 per cent and the number of participants increased by 8.3 per cent, their figures being the highest since the launch of the system's operations (see Chart 26). Despite the growth of the past years, compared to Western European States, private pension accumulation in Lithuania remains at a very low level, as the number of participants in the 3rd pillar pension funds is less than 3 per cent from those participating in the 2nd pillar pension accumulation. With the significant uncertainty concerning the prospects of the European and global economy persisting any tangible increase in the number of participants and the assets value is unlikely. The development of this market could be promoted by public education emphasising the importance of the supplementary pension accumulation.

The value of the assets managed by collective investment undertakings (CIU) registered in Lithuania grew by more than one fourth (25.2%); still, in the background of cautious expectations, these subjects were withdrawing from the market (the number decreased by 9.9%). The growth of the assets was on account of positive investment returns in real estate sector and private capital CIUs. Similar trends were observable also in the foreign markets CIU offered in Lithuania: in 2012, the value of the assets managed by CIUs increased by 9.3 per cent, though the number of participants decreased by 1.8 per cent.

The continuing tensions and uncertainty in the global financial markets, as well as the on-going euro area's debt crisis, caused investors to be cautious; however, the regulated equity market indicators started improving.

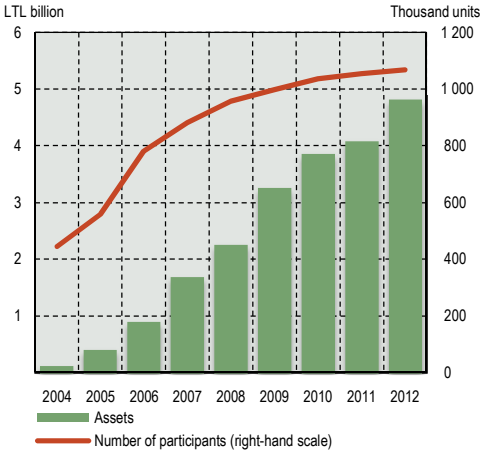
Chart 24. Change of AB NASDAQ OMX Vilnius indicators



Sources: AB NASDAQ OMX Vilnius and Bank of Lithuania calculations.

In 2012 the value of the 2nd pillar pension funds increased significantly (17.8%), although the number of participants grew only marginally.

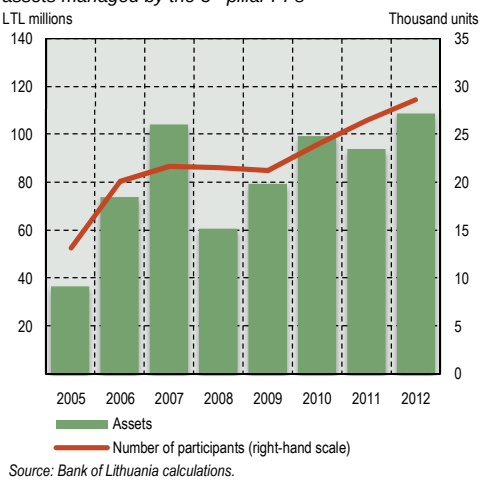
Chart 25. Changes in the number of participants and the assets managed by 2nd pillar PFs



Source: Bank of Lithuania calculations.

In 2012, the assets managed by 3rd pillar PFs and the number of participants reached the highest level since the outset of the system's operation.

Chart 26. Changes in the number of participants and the assets managed by the 3rd pillar PFs

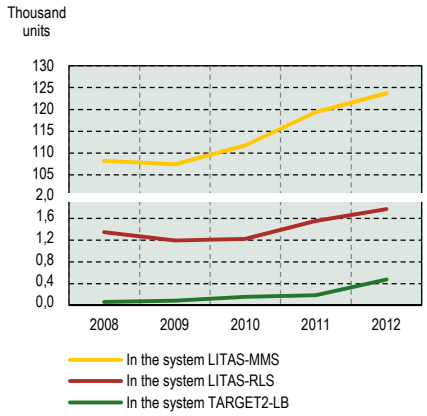


Source: Bank of Lithuania calculations.

FINANCIAL MARKET INFRASTRUCTURE

The number of payments processed through the national payment systems was increasing.

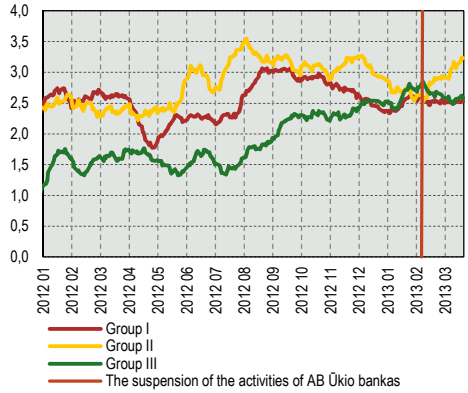
Chart 27. Development of the average daily number of operations



Source: Bank of Lithuania calculations.

The suspension of the activities of AB Ūkio bankas did not have any significant impact upon the operations of the financial infrastructure and its participants.

Chart 28. Development of the liquidity ratio logarithm (moving 20 days average)



Source: Bank of Lithuania calculations.

In Lithuania, the systemically important financial market infrastructure consists of the payment systems operated by the Bank of Lithuania, and the Securities Settlement System (SSS) operated by AB Central Securities Depository of Lithuania (CSDL). The Bank of Lithuania operates three payment systems: the real-time gross settlement in litas system LITAS-RLS, and the designated time payment system LITAS-MMS processing retail payments, as well as the real-time euro settlement system TARGET2-LIETUVOS BANKAS. The latter is part of the TARGET2 system operated by Eurosystem and is referred to as a component system of TARGET2.

Last year all the three payment systems processed nearly 32.5 million payment orders, their value amounting to nearly LTL 0.9 trillion which is 7.7 times more than the national GDP. Besides, starting with 2009, the number of payments executed was steadily growing (see Chart 27). The systems were processing the payment operations of not only customers (natural and legal persons), but also of financial institutions, as well as operations of the central bank, also were executing settlement for securities transactions. This only evidences that payment systems are extremely important to a modern financial system, and any malfunctioning, even a short-term one, would have a negative impact not only upon each payer initiating a funds transfer to another credit institution, but also to the entire financial system.

The payment systems operated by the Bank of Lithuania worked reliably and ensured a smooth execution of inter-bank payments. In 2012, the availability of the payment systems[10] was very high — from 99.95 per cent to 100 per cent. The systems were operating without any critical incidents that could significantly disrupt the operation of the systems. Seeking to maintain a high confidence level, the Bank of Lithuania is devoting specific attention to the reduction of the operational risk of the systems and ensuring their business continuity.

The suspension of the activities of *AB Ūkio bankas* did not have any major impact upon the operation of the Lithuanian financial market infrastructure and its participants. The suspension of *AB Ūkio bankas*' participation in the LITAS-RLS system did not affect the liquidity of other participants of the system. This is clearly reflected by the liquidity ratio of system participants, i.e., the lowest daily ratio of the balance of the participant's settlement account and the value of the payment order submitted for execution by the participant. Following the suspension of the activities of *AB Ūkio bankas*, the 20 days moving average of the liquidity ratio logarithm of two bank groups[11] remained stable (above 2.5)[12], while the ratio of the group to which *AB Ūkio bankas* belonged started rising (see Chart 28).

Although the euro[13] is the principal currency used in settlement for securities transactions executed at the Stock Exchange, the risk that participants of the system would encounter any liquidity problem or the operation of the systems would be disrupted is non-existent. In 2012, settlement for securities transactions in euro accounted for 82.2 per cent of the total number of settlements, which however represented only 26.9 per cent in terms of value. Considering the activities of the payment system TARGET2-LIETUVOS BANKAS such amounts should be considered as small ones. In 2012, the average daily value of funds transfers related to settlement for securities transactions made up only 0.6 per cent of the average daily value of all

[10] Ratio of the time for which the system was available to users and its operating time, according to a pre-defined schedule.
[11] Participants of the LITAS-RLS system are divided into three groups: Group I includes banks whose larger share of the authorised capital (more than 50%) is managed by foreign parent banks or financial institutions, except foreign bank branches (these are *AB* SEB bank, *AB* DNB bank, Swedbank, *AB*, and *AB Citadele bankas*); Group II includes banks whose larger share of the authorised capital (more than 50%) is managed by domestic parent banks or financial institutions (*AB Ūkio bankas* (data before 12-02-2013), *AB Šiaulių bankas*, *UAB Medicinos bankas* and *AB bankas FINASTA*); Group III includes foreign bank branches (*Nordea Bank Finland Plc* Lithuania branch, *Danske Bank* A/S Lithuania branch and AS UniCredit Bank Lithuanian branch).
[12] If a liquidity ratio logarithm is < 0, it shows an occurrence of the situation where the funds held in a settlement account were not sufficient to execute the payment orders submitted.
[13] Participants of the SSS may choose litas or euro as the currency of settlement for securities transactions. For the purpose of settlement, securities are transferred via the SSS, and related funds transfers in litas — in the LITAS-RLS system, and in euro — in the system TARGET2-LIETUVOS BANKAS. Unless the participants indicate differently all settlements for stock exchange transactions are performed in euro.

payments processed by the system.

More about the integration of the financial market infrastructure and the projects most relevant for the Bank of Lithuania and the financial institutions operating in the country read in Annex 3.

Box 4. The impact of the use of different payment instruments upon the costs of the payment services

It was estimated in the study on the Social and Private Cost of Retail Payment Instruments published by the ECB in 2012[14] that the costs to society of providing retail payment services are substantial and, with reference to 2009 data, on average, they amount to almost 1 per cent of GDP for the EU countries. Half of the social costs are incurred by banks, a bit less incurred by merchants and small part of social costs is incurred by central banks and cash-in-transit companies. The social costs of cash payments represent the largest share — nearly half — of the total social costs. The Study of the Costs of Payment Services in 2011, carried out by the Bank of Lithuania, produces similar results[15]: the costs incurred by banks in relation to domestic payments accounted for 0.51 per cent of the GDP, and the major part thereof (31%) was comprised of cash handling operations.

The experience and the assessments[16] carried out by other countries have shown that significant savings on the part of society could be achieved by replacing cash payments by payments made using other, more efficient payment instruments (e.g., debit cards). This is because the costs structure of cash operations and card payments is different. A large part of the costs related to card payments is comprised of fixed costs; therefore with a number of operations increasing, the costs per operation decrease. And conversely, in the case of cash operations, a larger part of the costs is comprised of variable costs. Having replaced part of cash payments with card payments the social costs of payment cards would increase, however the social costs of cash operations would decrease by a larger amount. Thus the society could achieve some savings due to such change in the payment method. An illustration of the structure of costs of operations in cash and payment cards is presented in Charts A and B.

Chart A. Changes in the number of operations of cash payments and card payments

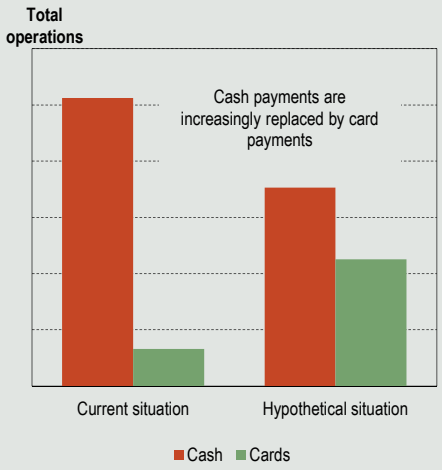
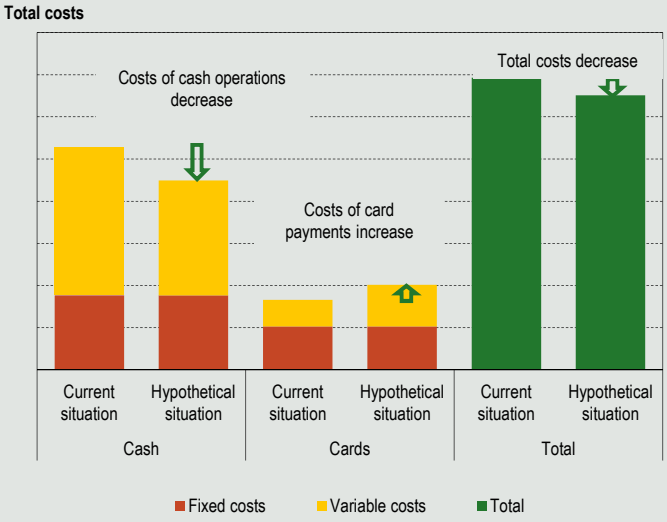


Chart B. Changes in costs related to cash payments and card payments



Source: Bank of Lithuania.
Note: the charts are drawn on the basis of the evaluation of the impact on the overall payment services costs of the cash payments replacement by card payments carried out by the central banks of the Netherlands and Hungary.

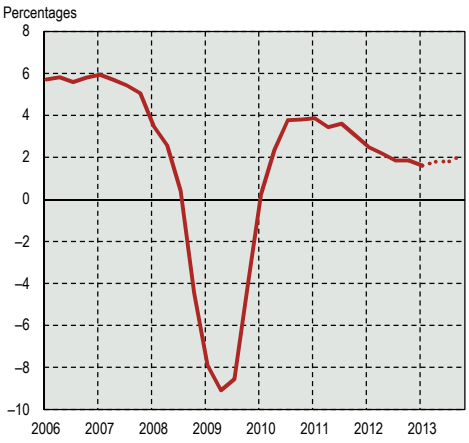
The social costs of payment services could also be reduced by a more frequent initiation of credit transfers by electronic means.[17] According to the data of the survey on payment service costs, the bank's costs related to one paper-based credit transfer is four times as high as those of[18] an electronic credit transfer. In the Lithuanian banking sector, a major part of credit transfers (87%) is initiated electronically. Transfer of the rest of the payments to an electronic environment could offer additional savings to the public.

[14] European Central Bank. "The Social and Private Costs of Retail Payment Instruments: A European Perspective". *Occasional Paper Series* No. 137, September 2012 (http://www.ecb.int/pub/pdf/scpops/ecbocp137.pdf?6992959a898ead9e1dcb9441e21efa94).
[15] The findings of the study are presented on the website of the Bank of Lithuania: http://www.lb.lt/mokejimo_paslaugu_sanaudu_tyrimas.
[16] De Nederlandsche Bank. "Social Costs of POS Payments in the Netherlands 2002–2012: Efficiency Gains from Increased Debit Card Usage". *Occasional Studies* Vol.11/No.2 (2013) (http://www.dnb.nl/en/binaries/SC_tcm47-288179.pdf).
[17] Those are payments initiated by electronic means, such as internet banking programme, or software installed in the payer's computer or mobile telephone.
[18] Those are the payments initiated by submitting at client service offices filled out payment order forms. In some cases (e.g., when paying for utility services) the payment is effected in cash.

II. RISKS AND CHALLENGES FOR THE FINANCIAL SYSTEM

The demand in the main foreign trade markets is gradually recovering.

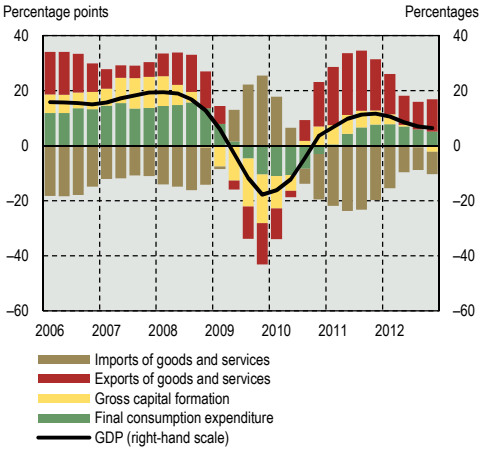
Chart 29. Development of the foreign demand index per year



Sources: Bloomberg, Consensus economics and Bank of Lithuania calculations.

The impact of foreign demand on the Lithuanian economy is material.

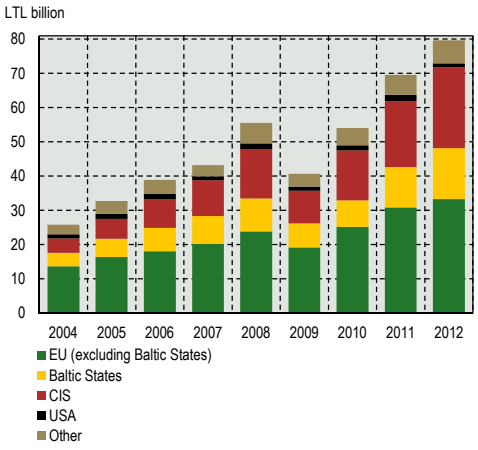
Chart 30. Factors of the development of the nominal GDP computed by expense method



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Principal export markets for Lithuania are the EU and the CIS

Chart 31. Development of the Lithuanian export market



Sources: Statistics Lithuania and Bank of Lithuania calculations.

This Part of the Review covers the main risks to the national financial system created by the existing economic realities and possible risk transmission channels. These are not the developments actually projected by the Bank of Lithuania, the real development of economic and financial systems may not necessarily be realised.

RISKS TO THE FINANCIAL SYSTEM

Decline in foreign demand

Lithuania is a small open economy; in 2012 its foreign trade (import and export) accounted for 167.0 per cent of the national GDP. With the economy in decline, export was one of the major factors contributing to the recovery of the national economy. The development of the economy of the main foreign trade partners does have a significant impact upon the demand for the production and services offered by Lithuanian companies (see Charts 29, 30 and 31), which in its own turn shapes the development of the financial standing of business and households. Taking into regard the current situation in the global money and capital markets, as well as the standing of the real economy, three major reasons may be distinguished, potentially causing a decline in the demand of the Lithuania export for goods and services:

1) abrupt and sizeable decline in the growth of the global economy;

2) protracted sovereign debt crisis in some euro area states;

3) loss of competitiveness of Lithuania, where the increase in wages would surpass the enhancement of labour productivity.

With the overall situation worsening the first to be adversely affected would be the companies more focused on foreign trade (see Chart 32 and Table 2). In the long term the contracting export volumes would be also detrimental to economic activities not engaged in foreign trade. In the face of a decline in production and/or demand for services, the uncertainty concerning the economic performance would only increase, entities would contract their investment and lay-off part of lower productivity workers and/or cut down wages. The cases of insolvency among entities and households would become more frequent. Due to the abrupt decline in foreign demand, the loan portfolio of banks could deteriorate.

Another contributor to the slowdown in the growth of economy related to the changes in the demand in export markets would be the changes in lending, as with interest remaining low, banks will be increasingly refraining from assuming risk. This, in its own turn, may trigger self-realisable expectations: with the quality of the loan portfolio worsening, the credit volumes, consumption and/or investment would contract; therefore the economy would not grow at a desired fast pace, and in view of the worsening of the private sector's financial standing its debt repayment abilities would deteriorate.

Abrupt and sizeable decline in the growth of the global economy

The recovery of the global economy is still very fragile, and its development is much slower than expected The prognoses published by the IMF in April 2013 forecast that the global GDP will grow by 3.3 per cent, i.e., at nearly the same pace as in 2012, and will accelerate in 2014 only (see Chart 33). As compared to January, the values for nearly all main economy growth indicators are lower. This less-than-favourable development of the global economy was determined by the on-going problems in the euro area, and a slightly higher than earlier projected fiscal consolidation in the USA. The pickup of the economy in other regions was also slower than expected. The overall uncertainty concerning the global economy development outlook was even more

aggravated by a slowdown at the beginning of 2013 of the economic development of China and Russia.

Recession in the euro area is deepening and will most probably linger. The turmoil in Cyprus, that burst out in the middle of very complicated negotiations concerning international assistance, the protracting political ambiguity after the elections in Italy, problems in Portugal concerning the fiscal austerity measures declared unconstitutional, clearly reflect that the overall situation in the euro area is at least so far not improving. The euro area states receiving assistance have started showing some fatigue because of the fiscal consolidation that has been implemented for several years already and the relevant fiscal reforms, and the growing unwillingness on the part of the larger States to continue providing assistance to new States facing the crisis. Moreover, there still have not been taken sufficient decisions concerning a stronger integration of the euro area to rein the continuing crisis in the region. These factors altogether may cause a deeper and a longer-lasting than currently predicted recession in the euro area.

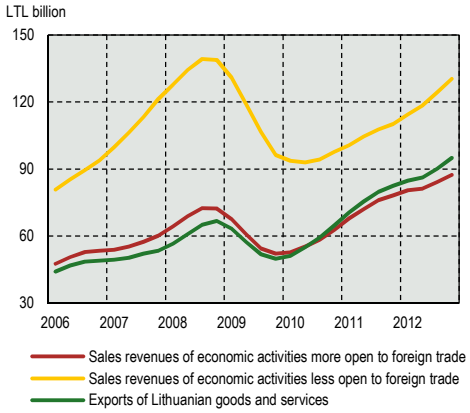
The economic situation in the USA is significantly more favourable. After the downturn in 2008–2009, the GDP of the USA was rising about 2 per cent per year. The situation in the American labour market is also improving, and in March 2013 the national unemployment level fell to the lowest in four years (7.6%). Besides, some improvement was recorded in the financial standing of the private sector alongside the recovering RE market: the number of housing deals has been increasing for two years in a row, and the housing prices are also rising. A major source of concern is the further course of finances of the American government sector. Starting from 2013, some higher than expected fiscal consolidation was recorded and the national government sector deficit in the course of the next decade will account for 3.3 per cent of the GDP per year. This situation is not sustainable and some deficit-reducing solutions will be most probably required in the longer term. And such solutions could have a negative impact upon the development of economy in the entire world.

The development of the Russian market — the Lithuanian export market – is rapidly slowing down. In Q4 2012, the GDP of Russia was rising only 2.2 per cent per year, i.e., twice as slow as in the first half of the year. In the beginning of 2013, the economy of Russia was growing much slower, and in April the Ministry of Economic Development became the first institution that significantly reduced the prognosis for the growth of the Russian GDP (from 3.6% to 2.4%). Although the representatives of the national authorities claim that the main reason is the poor condition of the euro area economy, it is likely that the growth of economy is slowing down also due to internal factors (in particular, significantly lower investment into reserves upon the end of the reserve restoration cycle), also due to the oil prices on the international markets that have not been rising for the past two years. The fairly poor most recent economic indicators (lower oil price) actually only increase the risk that the economic development of the country will be even slower than currently anticipated.

With a view to stimulating the economic recovery, the main central banks of the world have been for four years already pursuing a very expansionary monetary policy. In the foreseeable future central banks are not expected to essentially change this direction in policy. However, the exceptionally expansionary conventional and special monetary policy measures increase a risk of an excessive rise in asset princes. Any abrupt fluctuations in asset prices could again increase the instability in the global financial markets. Furthermore, with some market participants being used to extremely low interest rates that have been effective for a fairly long period of time, their financial standing could considerably deteriorate in case central banks decide to complete this stage of expansionary monetary policy. This would slow down the global economic growth.

Changes in the demand in foreign markets affect the possibilities of non-financial enterprises to earn income

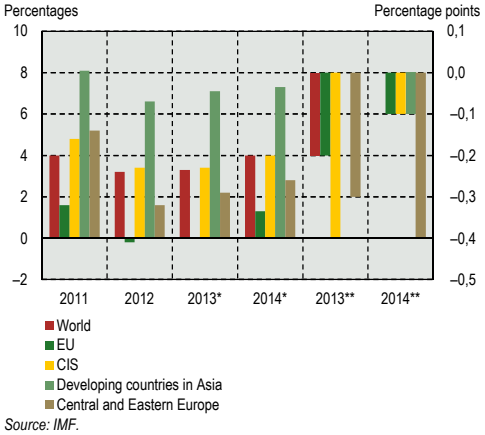
Chart 32. Development of the sale income of non-financial enterprises and the export of Lithuanian goods and services



Sources: Statistics Lithuania and Bank of Lithuania calculations.
Note: more open to foreign trade economic activities include manufacturing, transportation and storage, fishery and forestry, mining and quarrying.

The most recent prognoses show apprehensions for a slowdown in economic growth

Chart 33. Economic growth forecasts for the different regions of the world



Source: IMF.
** forecast of April 2013*
*** difference between forecast of April 2013 and January 2013 (right-hand scale)*

Activities focused on foreign trade remain extremely important for the Lithuanian economy and the banking sector

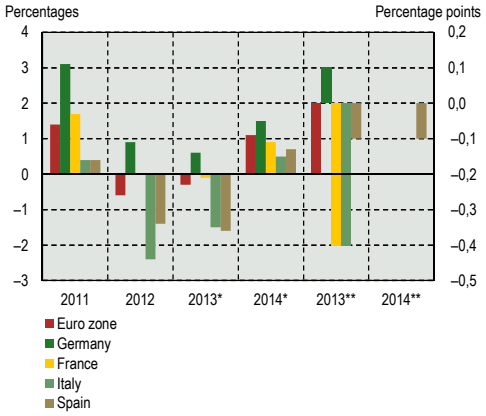
Table 2. The importance of mainly foreign trade oriented economic activities for the Lithuanian economy (compared to all non-financial enterprises)
Percentages

	2009	2010	2011	2012
Value added (at factor cost)	30.6	34.3	29.9	24.6
Sales revenues	35.2	39.1	41.5	40.1
Number of employees	24.8	25.1	25.8	26.5
Wages and salaries	38.1	39.4	40.1	39.
Material investment	18.9	21.3	27.7	32.
Liabilities to the banking sector	27.2	26.0	25.7*	N/A

Sources: Statistics Lithuania and calculations of the Bank of Lithuania.
** Q3 2011*
Note: foreign trade oriented economic activities include manufacturing industry, transport and warehousing, forestry and fisheries, mining and quarrying.

As no rapid solution of euro area problems is expected, economic downturn is projected in 2013

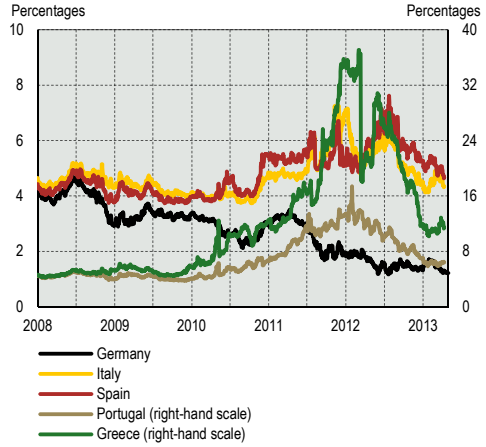
Chart 34. Forecasts of the growth of economy of euro area and its selected States



Source: IMF.
** forecast of April 2013*
*** difference between forecast of April 2013 and January 2013 (right-hand scale)*

For some euro area governments the debt price has increased

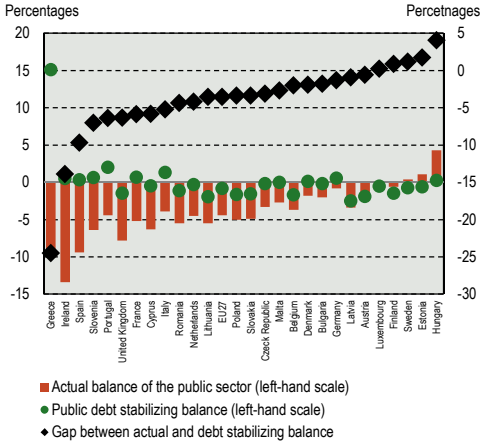
Chart 35. Yields of 10-year sovereign bonds of selected euro area countries



Sources: Bloomberg and Bank of Lithuania calculations.

For some euro area countries the reduction of the public sector deficit continues to remain a relevant problem

Chart 36. The financial standing of the public sector of EU Member States in 2011 (in relation to the GDP).



Sources: Eurostat and Bank of Lithuania calculations.

Protracted sovereign debt crisis in some euro area states

The recession in the euro area, which started in Q3 2012, is deepening now, and the developments in Cyprus early in 2013 only added to the uncertainty in the financial markets and subdued the earlier, somewhat improved moods concerning the prospects of the region. The over-indebtedness of Southern euro area states appear difficult to tackle and have been for some time negatively affecting the real sector (see Chart 34).

Referring to the historical experience it may be concluded that the recovery of the most over-indebted euro area states will be a time-taking process, as the problems are inveterate and structural reforms are difficult to implement. In view of the close trade and financial relations between the states of the region this situation adversely affects the growth of the economy in neighbouring states. For instance, in Q4 2012, the GDP of as many as 10 euro area states was lower than a year ago. Any financial problems arising in one state may produce a spill-over effect upon other states of the euro area and the EU Member States, especially if their problems and economic situation are comparable.

The increased risk premia and a slowdown in the economic activity and excessive indebtedness impair the government sector's abilities to discharge their financial obligations, and at the same time stimulate the economic growth. For that reason some states turn overly risky for investors (see Chart 35). The balance sheet of the most over-indebted euro area states is negative and in order to stabilise the increase of the public sector's debt (to maintain the debt-to-GDP ratio constant), under the scenario where the economy grows slower than the interest rates in respect of the debt, a fiscal surplus is required. For instance, in order to stabilise the public sector debt in Greece in 2011 (it accounted for 170.6% of the GDP), the fiscal surplus had to account for around 15 per cent of the GDP, while actually the balance sheet of the government sector accounted for about 10 per cent deficit of the GDP (see Chart 36). This gap between the actual balance sheet of the government sector and the balance sheet that would make it possible to stabilise the debt shows that the sovereign debt and its burden are uncontrollably increasing. Furthermore, it shows the worsening abilities of the states to properly manage in the future their assumed financial obligations or contribute to the stimulation of the economy, as an ever increasing share of public sector revenues is allocated for the repayment of the debt. This situation also adversely affects the quality of the assets of the banking sector of the EU Member States (e.g., because of problem sovereign securities held), also the wish and abilities to finance the private sector and thus contribute to the sustainable growth of the economy.

If realised, this kind of risk would produce only a limited direct impact upon the stability of the operations of banks, the major participants of the Lithuanian financial system. First, both banks operating in Lithuania and their parent banks are directly loosely related to financial institutions operating in Southern euro area states. Second, the sovereign securities of the Southern euro area states, held by banks operating in Lithuania, account for only a very small share in relation to their assets.

Loss of the competitiveness of Lithuania, if the increase in wages were to surpass the growth in labour productivity

Apart from external factors that may cause a decline in the demand of the Lithuanian export, such decline may be prompted also by internal reasons. Since 2004, the resources allocated for wages and the average wages have been increasing significantly faster than the labour productivity (see Chart 37). This gap between the growth in wages and the labour productivity was diminishing the competitiveness of the Lithuanian export in foreign markets due to the increased pressure on prices, as export became more expensive and less attractive on foreign markets, and the real exchange rate of the litas went up. With the national

currency (and euro) strengthening, the relative attractiveness of import increased as did the negative foreign trade balance which was financed by funds borrowed from abroad. With the start of the economic downturn, the situation evolved. With the stringent saving measures introduced, the wage level in the country (both due to reduction of wages and the decrease in the number of employees) was declining faster than the labour productivity. Accordingly, the competitiveness of Lithuanian export increased and thus improved the foreign trade balance indicators. The measures contributed significantly to the growth and recovery of the economy since the uncertainty concerning the development of the economy in the future decreased.

Where the increase in wages exceeds the increase in labour productivity and the latter remaining unchanged due to restricted investment, the competitiveness of the Lithuanian economy in international markets may decline. Unless the deep-rooted long-term unemployment and/or employee re-qualification problems are properly addressed, non-financial enterprises may soon start facing a shortage of labour with appropriate qualification. With the demand for such a labour force increasing while its supply remains limited, wages would increase irrespective of labour productivity, and as a result the competitiveness of Lithuania in the international market could decline. Furthermore, a factor adding to the decline in competitiveness may be an administrative increase in wages. In addition, sluggish investment hardly contributes to the growth of the Lithuanian economy, and the capital formation lately only marginally exceeds capital consumption. This would decrease the economic activity and, in view of an enhanced credit risk, would produce an indirect, however, significant impact upon the financial system.

Enhanced sensitivity to certain risks in Scandinavian countries

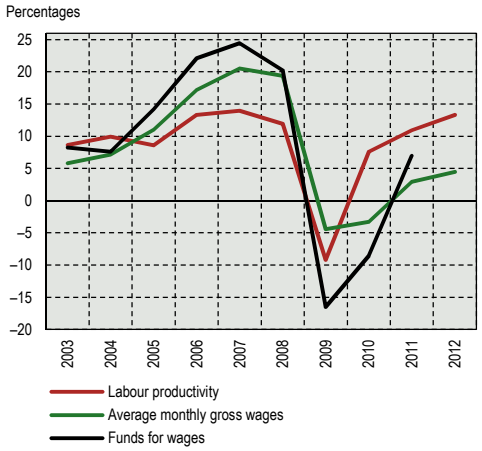
About 90 per cent of the assets of the Lithuanian banking sector are managed by Scandinavian bank groups. Scandinavian banks view the Baltic market as local, and in case the host banks encounter any need for financing, parent banks provide financing and strengthen their capital (see Chart 38). In addition, the host banks operating in Lithuania and their customers benefit directly (lower interest rates, safe and stable performance) from the currently prevailing overall favourable assessment of the Scandinavian countries in the international markets. On the other hand, should the parent banks encounter any financial difficulties, problems could also arise for their host companies.

With the sovereign debt crisis in the euro area deepening, the uncertainty in the financial markets was growing, and investors focused on Scandinavian countries were significantly less affected by the crisis and showing relatively good economic indicators. On the one part, in view of that situation the borrowing of the public, as well as the private sector (including also the financial sector) became less expensive, but the search for a “safe haven” strengthened the exchange rates of some countries national currencies. This in its own turn weakened the possibilities to compete in the international goods and services markets, almost 40 per cent of which is represented by the euro area market. Partly for this reason slower economic growth and higher unemployment are projected for Sweden in Q2 2013. Should these projections be confirmed, investors’ outlook towards Scandinavian countries would become more cautious.

The private sectors of Sweden, Denmark and Norway are some of the most indebted (financial obligations in relation to GDP) in the entire EU (see Chart 39)**.** Any changes in the economic activity would produce a significant impact upon the debt repayment abilities. Furthermore, should the expectations concerning the future become less optimistic, the pattern of the real estate market that has been aggressively growing for the past several years may be modified and the real estate

If the increase in wages surpasses the rise of labour productivity, the competitiveness of Lithuanian export would decline.

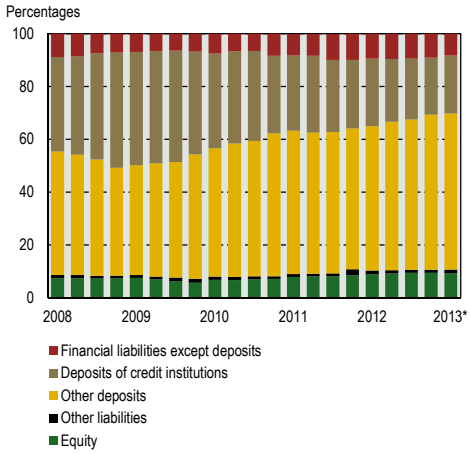
Chart 37. Development of labour productivity and wages per year



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The liabilities of the banking sector to credit institutions are decreasing, although they remain sizeable.

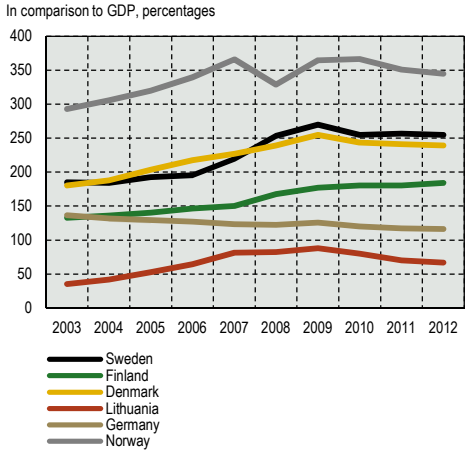
Chart 38. Changes in the structure of banks’ liabilities



Source: Bank of Lithunia calculations.

The indebtedness of the private sector of Nordic countries is relatively high

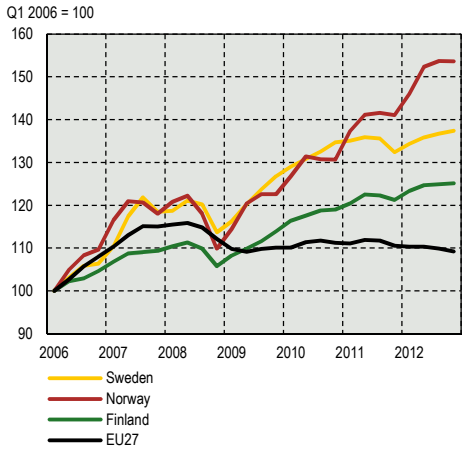
Chart 39. Development of the private sector’s financial obligations’ ratio to the GDP



Source: Thomson Reuters, Eurostat and Bank of Lithuania calculations..

The rise in housing prices in the Nordic States is exceptionally fast.

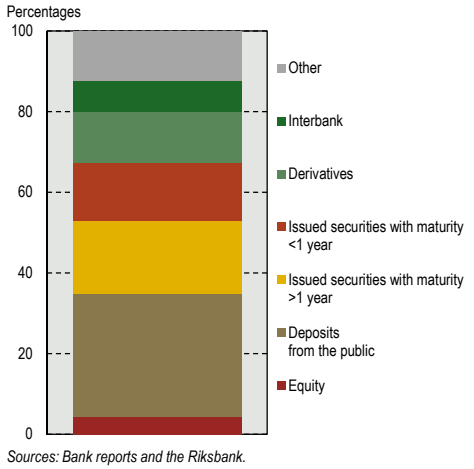
Chart 40. Development of the housing price index



Sources: Eurostat and Bank of Lithuania calculations.

A relatively large part of the financing structure of the largest Swedish banks is made up of funds drawn from the monetary and capital markets.

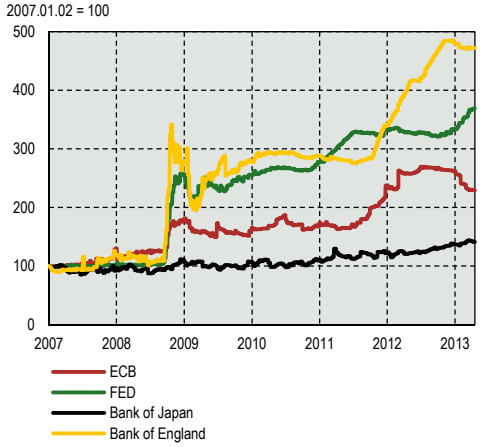
Chart 41. Liabilities and equity of the major Swedish banks in September 2012.



Sources: Bank reports and the Riksbank.

With a view to stimulating economic growth, central banks are implementing unconventional monetary policy measures.

Chart 42. Development of the assets of the major central banks of the world



Sources: Bloomberg and Bank of Lithuania calculations.

prices may start falling (see Chart 40). Because of this, households' consumption would decrease. If the other economic sectors would be unable to offset it, it would be necessary to decrease the volume of business operations due to a drop in demand. The banking sector of these states would incur additional losses due to the decreased value of collateral. However, some countries have already initiated some initiatives. For instance, with a view to restricting the excessively speedy development of the RE and lending market, the Swedish financial systems supervisory authorities have already introduced more stringent requirements to banks in granting housing loans.

The parent banks in Sweden finance a significant part of their operations by issuing securities or by borrowing in the international financial markets in foreign currencies (often for a short time from the USA money market funds). Lately this type of funding became comparable in volume to the amounts of deposits attracted in the local market (see Chart 41). As a result, these banks become increasingly dependent upon and sensitive to the evaluations prevailing in the international markets. On the other hand, any possible difficulties for parent banks in attracting resources for funding their operations are outweighed by several material factors. First, the Central Bank of Sweden (*Riksbank*) operates in principle unlimited possibilities of providing financial assistance to other banks (in the national currency, though). Second, compared to other EU states, the macroeconomic indicators of Sweden and other Scandinavian countries are well-balanced, and the fiscal status of these countries still remains one of the most advantageous (highest international credit ratings, declining yield of long-term sovereign bonds, and the price of CDS is lower than that of the yields of Germany's credit default swaps).

Any adverse development of the macroeconomic and/or financial markets situation in the Scandinavian countries may impair the access to financial resources for the Lithuanian banking sector. Liabilities to parent banks remain sizeable and account for about one fourth of all liabilities of the banks operating in Lithuania. Any difficulties in funding of their activities encountered by parent banks could produce a direct negative impact upon the financial stability of banks operating in Lithuania. The most direct manifestation of such an impact would be restricted possibilities (in terms of amounts and the price) to obtain any funding from parent banks. The indirect impact may manifest itself through the withdrawal of deposits from banks with depositors in Lithuania dubious about the sustainability and stability of the operations of the banks operating in Lithuania (in this case, of their controlling foreign institutions). On the other hand, the Lithuanian banking sector became less dependent upon funding from foreign states. Since the outset of the economic downturn net financial liabilities to parent banks decreased nearly three times (see Chart 6), and the significance of deposits collected in the domestic market as the key banking sector financing source is increasing.

Long-time prevailing low interest rates in the financial markets

The world's main central banks are implementing an expansionary monetary policy. The main interest rates were not amended since July 2012 (in May 2013 the ECB cut the main interest rate by 0.25 p.p. — up to 0.5%), and remained close to zero (see Chart 42). With this measure nearly exhausted and the national economies still not showing any signs of faster recovery, many central banks turned to unconventional monetary policies. The central banks of the USA, England and Switzerland initiated quantitative easing, i.e., purchase from banks of financial instruments (mostly — debt securities). As a result, the assets of central banks were increasing, and the monetary base in those states since 2009 increased by more than 3 times. With the growth of economy remaining sluggish, some central banks announced their intentions to implement expansionary monetary policy measures. For example, in April

2013 the Central Bank of Japan vowed to achieve a 2 per cent inflation target in two years by doubling the monetary base.

The monetary policies enforced by the ECB embraced both conventional and unconventional measures. Currently the ECB has set the main interest rates at the lowest level in the history of the Eurosystem, and, in addition, initiated some unconventional measures (provision of long-term liquidity to banks, expansion of the list of assets eligible as collateral). With a view to easing the turmoil in securities markets, in May 2010 the Eurosystem launched the Securities Markets Programme which was continued by the programme of secured bonds issued by banks launched in October 2011. In September 2012 the programme for the Outright Monetary Transactions was implemented (not yet activated by publishing this review). In the end of 2012, as compared with 2009, the monetary base of the Eurosystem was about 1.5 times larger; still, lately it has been decreasing due to the early repayment by banks of liquidity loans. Such decisions did led to some stabilisation, in the second half of 2012, in the euro area financial markets, liquidity increased and the interest premia for sovereign securities

decreased materially. Nonetheless, the uncertainty remains significant, and the forecasts show that in 2013 the euro area economy will be in downturn (this could be a decline in the growth of the euro area economy for the second year in succession if projections come true). Therefore, in the near term the Eurosystem monetary policies are expected to remain expansionary, and the interest rates will most probably remain low.

The structure of the banking sector's assets and liabilities create the direct dependence between interest rates and the net interest income. That is, with the interest rate increasing so does the net interest income, and vice versa (see Chart 43). Low interest rates are not conducive to the banking sector's profits, which in its own turn impairs the sector's abilities to increase its capital (and at the same time its resilience to contingencies). With the return on capital indicators decreasing, investment in the Lithuanian financial sector loses its attractiveness, and seeking to at least to stabilise the profit rations, there is a risk that fees for other services provided by banks may increase. In addition to the banking sector that in terms of its assets account for the largest part of the financial system, a significant impact by the low interest rates is produced upon the insurance sector and PF. A material share of the assets of insurance companies and PF is represented by long-term investment in debt securities.

The long-time prevailing low interest rates may increase the credit risk and loss in the future. The decrease of capital ratios could lead to a rise in the pressure on the part of investors to increase profits. Searching for yield would cause investment into higher-risk assets. The risk raised by low interest rates affects the participants of the Lithuanian financial system in other ways. For instance, the particularly low interest rates paid for deposits cause changes in their structure with rapidly increasing share of short-term deposits. As a result, the banks face a growing need to have more liquid funds, which significantly diminishes their abilities to earn profits. In addition low interest rates could act as a certain credit risk postponement factor. Some debtors, under normal circumstances unable to execute debt liabilities, currently, with the significantly reduced interest rates, execute all, or at least part of, liabilities in accordance to the loan agreement. In the future, when interest rates rise, execution of such liabilities can become much more difficult and this would add to the increase in credit risk losses.

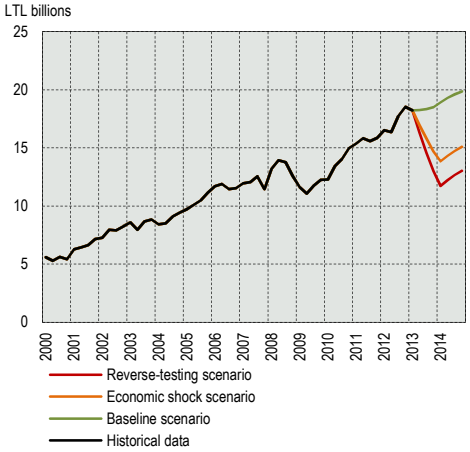
The Lithuanian banking sector is becoming increasingly sensitive to any decrease in interest rates.

Chart 43. Change in the net interest income of the banking sector in case of a decrease of the interest rate by 1 p. p.

Source: Bank of Lithuania calculations.

The risk of external demand would manifest itself through a contraction in export volumes.

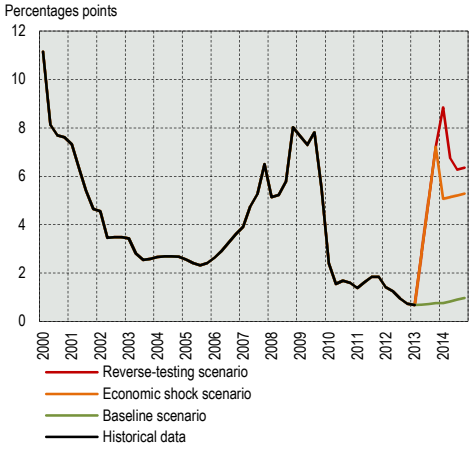
Chart 44. Development of exports under different scenarios (chain-linked volumes, seasonally adjusted)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Higher risk premia would turn into higher interest rates in litas.

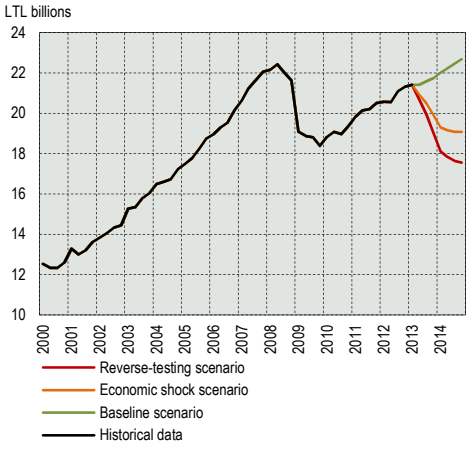
Chart 45. VILIBOR movement under different scenarios



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Adverse shocks would impact the entire economy.

Chart 46. GDP development under various scenarios (chain-linked volume, seasonally adjusted)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

STRESS TESTING

Credit risk stress testing

The Bank of Lithuania performed credit risk stress testing to evaluate the resilience of the banking sector to unfavourable changes in the macroeconomic environment. The major aim of the tests was to estimate the potential size of unexpected losses and to find out if the banking sector has enough capital to cover these losses. It should be underlined that stress testing results are not forecasts. On the contrary, this is the analysis of unlikely occurrences, so the presented findings are conditional.

The Bank of Lithuania conducts credit risk stress tests based on simulations of a conditional probability of default and the consistent information multivariate density optimizing methodology.[19] These methods are used to assess credit default risk for different borrower groups; meanwhile, the probability of losses of a specific bank depends on the structure of that bank's loan portfolio. At the same time, likely changes in interest income, commission income, and operational expenses are taken into account. Interest income simulation is based on the loan portfolio composition by currency and projections of interest rate changes under the scenario. Commissions and operational expenses are computed taking into account the entire macroeconomic situation: they decline under the economic shock scenario. A decrease in commissions reflects shrinking demand for financial services, while the decline in operational expenses can be explained by growing saving initiatives of banks. Macroeconomic indicators are estimated by applying the structural macroeconomic model of the Bank of Lithuania. A more detailed description of stress testing is available in the Bank of Lithuania's Financial Stability Review for 2008.

The results received should be treated with caution and considering the assumptions made. When performing stress testing, low probability scenarios are used, i.e. scenarios which are considered highly unlikely or extreme. In such a context, market participants, national authorities or supervisory institutions may adopt extraordinary measures so that a number of known laws and regularities may no longer be applicable. This fact restricts simulation; standard *status quo* assumptions are therefore made, which allow achieving objectivity. The banks' loan portfolio structure remains unchanged during the test period. The size of the banking loan portfolio at a gross value does not change; i.e. new loans offset the portfolio amortisation. During economic shocks banks do not pay dividends and do not increase their capital by using any instruments. Changes in risk-weighted assets depend only on changes in the loan portfolio quality. An assumption is made that bank supervision authorities and government institutions do not take any actions to reduce adverse economic shock effects. Moreover, strategic decisions of banks and their impact on the capital adequacy of the banking sector are excluded. The assumptions made are static, and therefore this assessment is not meant to imitate potential events in a realistic way. However, the above assumptions can guarantee objectivity and clarity. Furthermore, based on the history of the recent crisis, such assumptions have also practical grounds, because during an economic shock practical possibilities of banks to make any changes on their own considerably decrease.

The data of the following banks were used for stress testing: *AB* Swedbank, *AB Citadele bankas*, *AB DNB bankas*, *AB SEB bankas*, *UAB Medicinos bankas*, and *AB Šiaulių bankas*.[20] The data of all the banks were analysed separately, while the present review contains only

[19] See Segoviano Basurto, M. A., Padilla P. *Portfolio Credit Risk and Macroeconomic Shocks: Applications to Stress Testing Under Data-Restricted Environments.* IMF Working Paper, No. 06/283, January 2007.

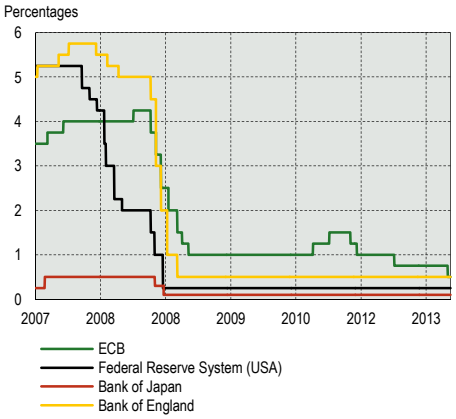
[20] Foreign bank representatives and branches weren't tested, because the credit risk of these banks is managed at the level of the parent banking group. The assessment of the value of the portfolio of *AB Šiaulių bankas* was performed by taking into account the data as of the end of 2012, excluding the transferred assets and liabilities of *AB Ūkio bankas*. The transferred portfolio of the bank is being assessed in detail, aiming to estimate its true quality.

aggregated data. For tests, only unaudited data of the Lithuanian commercial banks were used, collected for the purposes of supervision of credit institutions. The reported period extends from the second quarter of 2013 to the end of 2014.

Tests were conducted considering the risks discussed in this section. Special attention is paid to the aspects which are measurable in quantitative terms and may have immediate significant financial consequences, and therefore are considered part of the systemic risk for the financial sector. The foreign demand risk, the environment of low interest rates in other countries, and the possibility of a jump in risk premiums are of key importance to stress testing. The mapping of risks and likely channels for their pass-through is presented in Table 3. Foreign demand has a direct impact on export decline, while the environment of low interest rates is seen as a result of low interest rates in the euro area. Chart 47 shows very low historical ECB interest rates which, however, continue to be the highest among interest rates set by other central banks. An assumption is made, that during the stress test this rate decreases to 0.25 per cent. This decrease can have a direct impact on banks' interest income, but there would be no significant improvement in lending requirements in Lithuania because of risk premiums which may go extremely high during the economic shock. This was the situation in 2009, when the Lithuanian market interest rates were very high regardless of a continuous decrease in the euro area interest rates.

Although the ECB main interest rate is very low, it is still higher than the main interest rates of the Federal Reserve System and the Bank of Japan.

Chart 47. Main interest rates of central banks



Source: Bloomberg.

Table 3. Matching of analysed risks and impact channels during the stress testing exercise

Channels for market impact \ Risks		Decrease of foreign demand	Decreasing ECB interest rate	High risk premiums
Direct impact	Export	✓		
	Euro interest rates		✓	
	Litas interest rates		✓	✓
Interim impact	New loans		**Impact close to zero**, as a large share of the decrease in the price of lending would be offset by a higher margin with banks trying to get compensation for the lost interest income.	**A considerable decrease is likely** in new litas loans.
	GDP	**A decrease in GDP,** because the fall in exports triggers a considerable fall in income, and eventually, because of economic interrelations, impacts the entire economy.	**Overall impact is insignificant**, because of a limited possibilities to borrow for new investments or consumption.	**GDP goes down** because of a considerable increase in the lending price.
Ultimate impact	Bank interest income		**Interest income in banking sector decrease.** The Lithuanian commercial banks maintain open euro exposures, hence, even a small change in interest rates have considerable effect on banks' income.	**Bank's income increases** because a significant share of loans has been issued with variable interest rate linked with VILIBOR.
	Customer default risk	**The probability of default** increases because of funding difficulties due to the loss of income.	**The default risk decreases** because of a decline in the amount of interest paid by customers.	**The default risk rises noticeably** because the interest amount to be paid by a customer may grow a few times.

Table 4. Shocks applied in stress testing

Shock	Shock level compared with the baseline scenario
Change in exports at chained volume	–26.9 per cent
Change in ECB interest rates	up to 0.25 per cent
Change in VILIBOR	Initial increase of +6.5 p. p. and a long-term change of +4.3 p. p.

Table 5. Shock impact on key macroeconomic variables (percentages; deviation from the baseline scenario at the end of the year)

	Economic shock scenario		Reverse-testing scenario	
	2013	2014	2013	2014
GDP at chained volume	–8.5	–15.9	–12.6	–22.6
Consumption at chained volume	–5.0	–13.3	–7.4	–19.0
Investment at chained volume	–12.9	–25.3	–17.6	–33.9
Wages	–2.1	–10.3	–3.2	–15.0
Price level	0.0	–0.4	–0.1	–0.6
Unemployment level	1.9	5.3	2.8	7.5

Table 6. Key results of stress testing (percentages)

	Value observed at the end of 2012	Reverse-testing scenario	Economic shock scenario	Likely developmen without shocks
Weighted capital adequacy ratio of the banking sector at the end of 2014	14.4	8.6	12.1	17.7
The median of capital adequacy ratios of banks at the end of 2014	13.9	7.3	11.0	18.6
Minimum value of capital adequacy ratios of individual banks during the testing period	12.8	4.2	8.9	13.9
Likely special provisions[21] at the end of 2014	5.4	13.1	10.0	4.1

Table 7. Development of the banks' income (expenses) components under various scenarios (percentages)

	Reverse-testing scenario	Economic shock scenario	Likely development without shocks
Change in net interest income compared to 2012	2.6	3.0	0.4
Change in net commission income compared to 2012	–13.1	–8.7	0.2
Change in administrative expenses compared to 2012	–12.7	–7.8	2.4
Change in risk-weighted assets compared to 2012	–6.9	–4.7	–0.2

The following three scenarios were analysed during the stress tests:

- **The baseline scenario** was analysed using official forecasts of the Bank of Lithuania, prepared in February 2013. No shocks have been employed under this scenario. The results of the baseline scenario are used to compare the results of the other two scenarios.

- **The economic shock scenario** was constructed considering the risks described in this section and impact channels in Table 3. As mentioned before, a decline in foreign demand, a reduction of the key ECB interest rates and rapid growth of risk premiums for the Lithuanian market present the main pass-through channels. Shock sizes were based on historical data (starting from 1997). The shocks were calibrated in such a way that their realisation probability was very low, but still likely: it was estimated that the probability of the realisation of the economic shock scenario is up to 1 per cent. The size of analysed shocks is presented in Table 4 and Charts 44 to 46, while the assessment of their potential impact on key macroeconomic indicators is presented in Table 5.

- **Reverse-testing** is performed under the same conditions as in the case of the previous scenarios, but in reverse order. First of all, calculations are made to find out the banks' losses for the banking sector's weighted average of capital adequacy to fall to 8 per cent. Then, the calibration of the development of macroeconomic indicators, which could lead to such losses, is performed. Due to a different way of analysis, this scenario should not be directly compared with the economic shock scenario. However, it offers better understanding of the size of a shock at which the shock turns into a problem in terms of systemic risk.

The stress test results suggest that banks are well capitalised and quite resistant to adverse shocks. None of the banks has violated the requirement of capital adequacy ratio. Such good results can be explained by the fact that banks, which are actively operating at the present time, have considerable capital reserves.[22]

Stress testing showed that none of the banks have failed to meet the capital adequacy ratio. The capital adequacy ratio development is presented in Chart 48. The findings indicated that under the economic shock scenario the weighted average of the capital adequacy ratios within the Lithuanian banking sector would be about 5.6 p. p. lower than under the likely economic development (see Table 6). The diagram of the capital adequacy development factors is presented in Chart 49. It may be noted, that most of the loan quality changes would be offset by income from other banking activities.[23] The results of reverse-testing showed that the size of shocks should be higher by 35 per cent, compared to the economic shock scenario. Deviations of key macroeconomic variables are presented in Table 5 for comparison. According to the reverse-testing scenario, the minimum capital adequacy requirement set by the Bank of Lithuania would not be met by three banks if the weighted capital adequacy ratio for the banking sector fell to 8 per cent.

Under the economic shock scenario, credit risk losses of the banking sector may go up to LTL 2.3 billion. In such an event, the ratio of special provisions and gross value of loan

[21] Percentages, compared to gross loan value.
[22] *AB Ūkio bankas* was not included in stress testing due to the moratorium on its operations.
[23] Other income from banking activities includes net interest income, commissions, operational expenses, and assets amortization.

portfolio would nearly double to make up 10 per cent. In comparison, this indicator was 5.2 per cent at the end of 2012, while historically the highest value of this indicator was 8.9 per cent. The ratio of non-performing loans and loan portfolio would also grow considerably, up to 23 per cent (currently, it is 13.3%).

Net interest income of banks reacts significantly from the start of the shock. It should be noted, that the impact of interest rates shock on income is of two directions. On the one hand, the euro interest rate declines, and the litas interest rate goes up. Currently, euro loans are prevailing in Lithuania. These loans make up about 68 per cent of total loans to residents. However, it should be noted that the euro interest rates are close to zero and there is little room for them to decline sharply. On the other hand, the litas interest rates may increase considerably. The final impact on a specific bank depends on the positions held by the bank during the economic shock. Gross impact on the banking income is positive and could account for 8.6 per cent of total net interest income. At the beginning of a shock, this impact has the greatest effect, while the influence of other factors peaks in subsequent periods.

Economic activities related to real estate, construction, and transport are the most sensitive to the economic shocks considered. This is basically in line with the trends of the crisis in 2009. The change of the non-performing loan indicator in these sectors, compared with the baseline scenario, is higher by 20 p. p., and in some cases may even jump by more than 40 p. p. It is obvious that banks holding larger positions in these sectors must have higher capital to cover potential losses. It also can be mentioned that the impact of the customer default risks comes into play smoothly although with a lag. Probabilities of risks are the highest in the third quarter of 2014.

Liquidity risk stress testing

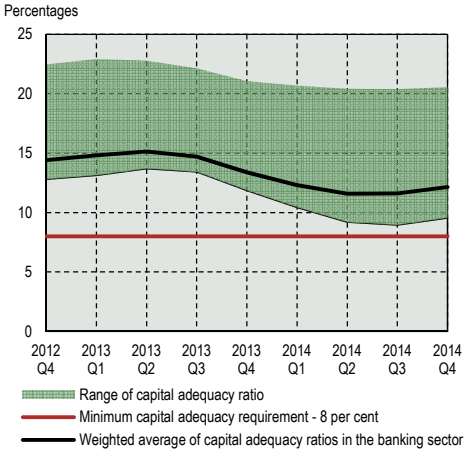
The Bank of Lithuania carried out **liquidity risk stress tests** to assess the resilience of domestic banks to short-term negative liquidity shocks, i.e. unexpected and sizeable decrease in banks' financial resources. It covered all commercial banks operating in Lithuania, excluding foreign bank branches which did not use deposits to finance their activities, and banks where activity financing through customers' deposits is of secondary importance.[24]

It was assumed that upon the start of deposit withdrawals, banks will sell their liquid assets. The value of the most liquid assets (cash, funds held with the central bank, EU banks and banks in the countries with higher credit ratings, as well as with other credit institutions) would remain unchanged, foreign securities would be sold at a price 10 per cent lower than the market price, while other liquid assets (e.g., Lithuanian government securities) would be sold at a price lower by 35 per cent compared to the market price. It is assumed that banks would not have possibilities to raise other financial resources to offset the liquidity shock-caused decline in assets. Most likely, foreign parent banks would provide short-term financing to fully offset the contraction of deposits; however, this was not taken into account during the liquidity stress testing exercise. The purpose was to perform tests of the resilience of the banking system which is operating without the support of parent banks under extremely adverse market conditions. For example, if sensitivity increases to some types of risks in Scandinavian countries. Likely actions by the central bank and government authorities aimed at improving the banking liquidity positions were not taken into account either.

The magnitude of shocks chosen for the liquidity risk stress tests was similar to that described in the Financial Stability Review of 2012, i. e. a

None of the banks have failed to meet the capital adequacy requirement.

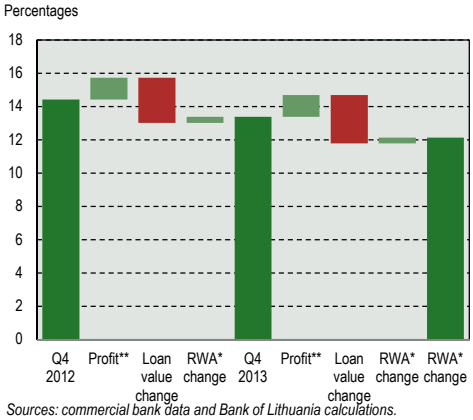
Chart 48. Development of the range of capital adequacy ratio under the economic shock scenario



Sources: commercial banks' data and Bank of Lithuania calculations.

Changes in loan value have negative effects on capital adequacy ratio, but they are partially offset by income from other banking activities.

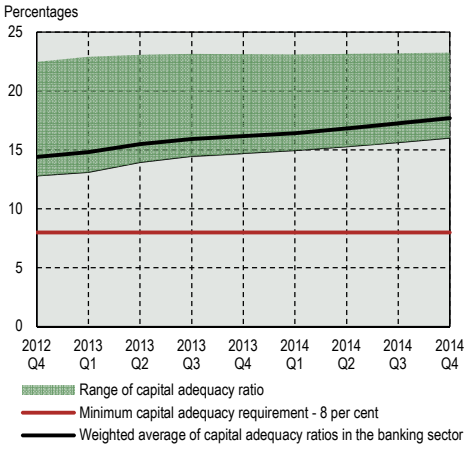
Chart 49. Factors for the capital adequacy ratio development under the economic shock scenario



Sources: commercial bank data and Bank of Lithuania calculations.
**RWA is risk-weighted assets revalued using conservative approach*
***Profit is net income from interest and commissions, excluding operational expenses and taxes..*

With static assumptions, the capital adequacy ratio would grow under the baseline scenario.

Chart 50. Development of the range of capital adequacy ratio under the baseline scenario

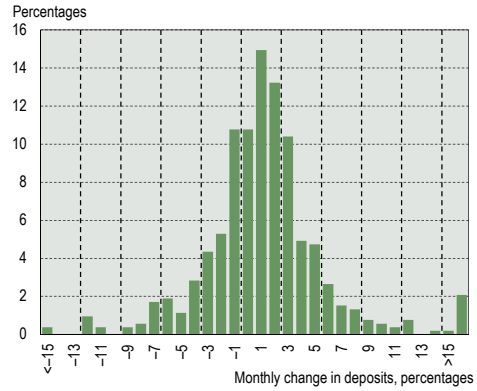


Sources: commercial banks' data and Bank of Lithuania calculations.

[24] AS SMP Bank's Lithuanian branch, AS UniCredit Bank's Lithuanian branch, BIGBANK AS branch, Lithuanian branch of *Pohjola Bank plc*, Lithuanian branch of *Scania Finans Aktiebolag*, Vilnius branch of *Skandinaviska Enskilda Banken* AB, Lithuanian branch of *Svenska Handelsbanken* AB, AB bankas FINASTA.

Based on recent deposit developments, a probability for deposits to abruptly decrease by 15 per cent does not exceed 1 per cent.

Chart 51. Distribution of relative deposit changes in banks since October 2008.

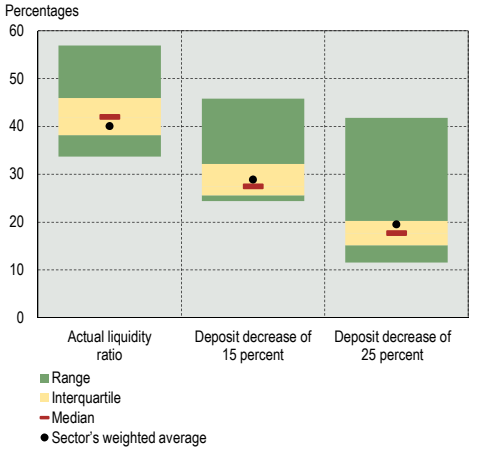


Source: Bank of Lithuania calculations.

Note: The analysis of deposit changes in all the banks considered in liquidity risk stress testing showed that there were 2 months when decrese in deposits exceeded 15 per cent.

The capability of the banking sector to absorb negative deposit shocks is good although the banks' liquidity positions are quite heterogeneous

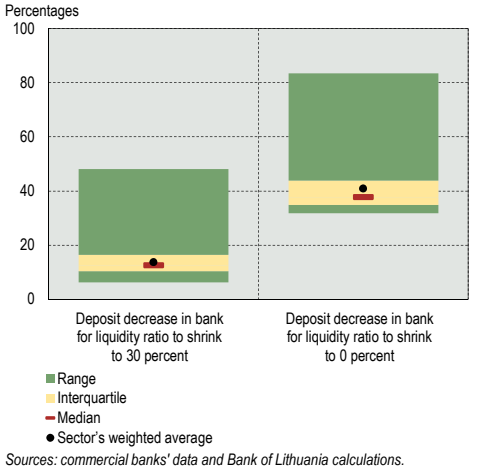
Chart 52. Range of the banking sector's liquidity ratio under the deposit contraction shock



Source: Bank of Lithuania calculations.

In case deposits decline by 13.6 per cent, the liquidity ratio of the banking system would stay above the established 30 per cent limit.

Chart 53. Possible range of deposit decrease in reverse-testing scenarios



Sources: commercial banks' data and Bank of Lithuania calculations.

contraction of deposits by 15 and 25 per cent in a period up to 1 month.

Historical monthly deposit changes of the entire banking system show that the largest decrease in deposits of non-financial enterprises was 6.3 per cent and was observed in October 2008 following the uncertainty in financial markets and concerns regarding the financial standing of some Swedish banks operating in the Baltic region. The comparison of deposit changes in banks since 16 November 2011 revealed that a relative deposit decline after suspending operations of *AB Ūkio bankas* and some credit unions was within the same range as after the suspension of the operations of *AB bankas SNORAS*. Historical data imply that the probability of shock of a deposit decline by 15 per cent is below 1 per cent (see Chart 51).

According to data of Q1 2013, the capability of the banking sector to absorb severe negative deposit shocks is good, although the individual banks' liquidity positions are quite heterogeneous. In the event of a 15 per cent fall in deposits of non-financial sector, the average ratio of the liquid assets of the banking sector to the current liabilities, would decline to 28.8 per cent, and in the event of a 25 per cent fall – to 19.5 per cent (see Chart 52). The wide range of the liquidity ratio[25] stems from the existing gap between subsidiary banks (with lower liquidity ratios, since their liquidity risk is managed on a centralised basis on a group scale), local capital banks (with higher liquidity ratios), and one foreign bank branch (its actual liquidity ratio is high and the quality of liquid assets is especially good).

The results of the liquidity risk back-testing revealed that, based on the data for the first quarter of 2013, the holdings of liquid assets in banks would be sufficient to withstand a 41 per cent deposit decline (see Chart 53). During the liquidity risk back-testing a relative decline of deposits in each bank was estimated for the liquidity ratio of an individual bank to remain above the required 30 per cent. The test showed that the average liquidity ratio for the banking sector would still be at or above 30 per cent after the entire banking sector suffers a 13.6 per cent decrease in deposits. Taking liquidity into account, the most vulnerable bank would still meet the liquidity requirement, if deposits with it abruptly declined by 6.3 per cent. It was also estimated how much deposits with banks would have to shrink for all liquid assets of banks to be utilised, i.e. for the liquidity ratio to come to zero. In some banks, deposits could decline from 31.8 to 83.4 per cent for all the reserves of the bank's liquid assets to be exhausted.

CHALLENGES TO THE FINANCIAL SYSTEM

Worsening of the financial standing of municipal institutions

Growing debts of the government sector have raised concerns about the ability to meet the assumed financial liabilities in case of adverse developments in the future. This has a direct (the banking sector provides funding for part of the general government debt) and indirect (assessment in international markets) influence on the stability of the financial system in Lithuania. In the wake of the economic downturn, the government sector was facing decreasing revenues and growing financial liabilities simultaneously, and the absence of considerable financial reserves contributed to an increased demand for borrowing. In nearly four years after the start of the economic downturn, the general government's debt doubled, and the debt-to-GDP ratio jumped to 40.6 per cent.

The local government's demand for borrowing continues to increase. Following the start of the economic recession, the borrowing need of the municipalities noticeably grew because of the decrease in the

[25] Liquidity ratio is the ratio of a bank's liquid assets and current liabilities. The Bank of Lithuania has set the liquidity requirement for commercial banks – their liquidity ratio may not be lower than 30 per cent.

number of the employed and the wages for them, which led to a decline in personal income tax revenues (one of the most important income sources of local governments) (see Chart 54). At the same time the need for financial resources to finance social security contribution have increased. All this led to the growth of local government budget deficits (in 2012, the budget deficit of all municipalities in Lithuania made up LTL 0.3 billion) and increased demand for borrowing.

Continued debt growth makes banks more conservative regarding their lending to local government and enterprises controlled by it. Because of the economic recession and the shortage of funding resources, municipalities began to intensively use trade credits provided by non-financial corporations, by extending the payments terms for services provided by local government-controlled enterprises. The change in the debt financing sources by municipalities was the result of the limits set by the central government. When they became too low for a number of municipalities, the need for alternative financing instruments, which were not included in the debt limits, grew. Hence, municipalities manage to stay within the debt limits raised recently by not paying for goods and/or services to non-financial enterprises; however, their credit risk and borrowing limits are higher. Furthermore, the banking sector is more conservative not only towards lending to municipalities (difference between interest rates narrowed, see Chart 55), but also towards municipality-controlled enterprises, which use borrowed funds from banks to finance (indirectly) trade credit from municipalities. The sustainability of the financial standing of some municipal-enterprises in Lithuania raises doubts, as a considerable share of their assets is made up of amounts receivable, and, very likely, these amounts are owed by municipalities which control them (see Chart 56).

Mixed views prevail regarding repayment of municipal debts. However, exceeding the limits set for municipal debt is restricted by effective legal acts, and the set borrowing procedures are under supervision of control institutions (municipal controller, control and audit services). In addition, the government representative in a municipality has the right to suspend any legal act found out to be illegal and infringing upon public interest (e.g. exceeds debt limits). The central government does not have an obligation to provide financial support to local government institutions encountering financial difficulties, although it is not forbidden to do so.

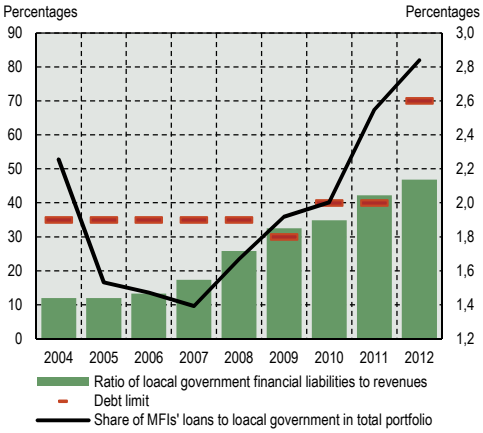
In 2011, a quarter of all municipalities exceeded the set debt limit of 40 per cent.[26] In 2012, this limit was increased up to 70 per cent; however, more than a half of municipalities exceeded the previous (40%) limit. The ability of individual municipalities to repay their debts, which is viewed as the ratio of received revenues and debt, varies. In 2011, total financial liabilities of the local government accounted for 42.2 per cent of received revenues, a double increase from the start of the economic downturn. The share of loans to the local government within the loan portfolio of the banking sector is below 3 per cent; consequently, the non-balanced debt growth cannot pose systemic risk to the financial system stability at the moment. However, increasing debt limits, growing borrowing, and use of additional debt financing instruments may compromise the sustainability of the financial situation of the public sector and erode the confidence in it.

Imbalanced operation of the credit union sector

The economic slowdown and subdued bank lending activities along with lower interest rates on deposits gave a boost to the activities of credit unions. Although the latter make up only an small share of the entire financial system (about 2% of the assets), their

The ratio of local government debt and revenues has been growing for a several consecutive years.

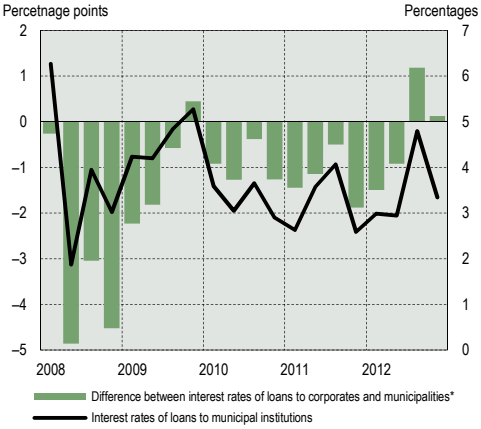
Chart 54. Development of local government debt



Sources: Laws of corresponding years on general and local government budget financial indicators, Statistics Lithuania and Bank of Lithuania calculations.

From the beginning of 2011, interest rates on lending to municipalities started increasing.

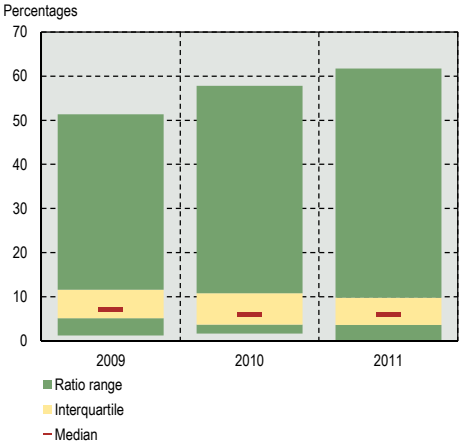
Chart 55. Development of interest rates on loans to municipalities and municipal enterprises and difference between them and interest rates on loans to corporates



Source: Bank of Lithuania calculations.
** municipalities and theri owned enterprises.*

Amounts receivable make up a significant share of assets of some municipal enterprises.

Chart 56. Amounts receivable by municipal enterprises vs. their assets

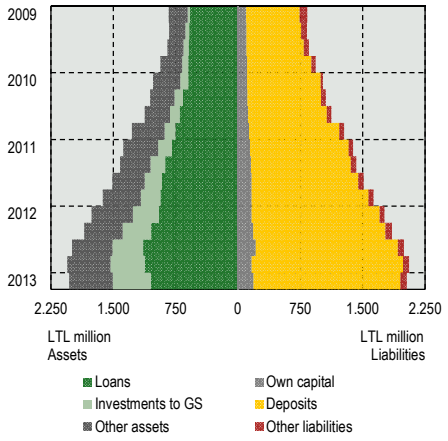


Sources: State Property Fund and Bank of Lithuania calculations.

[26] The debt limit for a municipality is the highest allowed ratio of the current period debt and the revenues approved for the period (excluding special aid granted to the municipality from the state budget and remuneration of gross aid to be repaid to the state budget).

Contributors to the development of the balance structure credit unions.

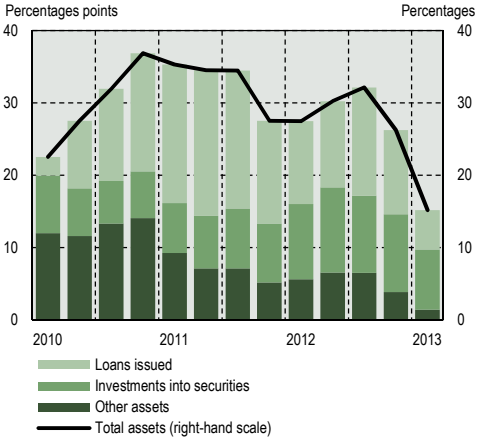
Chart 57. The development of credit unions' assets and liabilities



Source: Bank of Lithuania calculations.

The assets of credit union in recent years have been unique in particularly rapid growth due to the increase in loans to associated members.

Chart 58. Factors of the development of the assets of credit unions



Source: Bank of Lithuania calculations.

development was especially rapid (annual asset growths was about 30%) in recent years, while deposits of the residents were often used to finance loans and debt securities of the Lithuanian government (see Chart 57). Furthermore, credit unions have competitive advantages over banks in the deposit market as their contributions to *VĮ Indėlių ir investicijų draudimas* (deposit and investment insurance) fund are two times lower compared to banks.

Remarkably fast asset growth in some credit unions has hampered the implementation of the cooperative principle, which is the key principle for activities of credit unions, revealing the absence of a long-term and sustainable strategy regarding their activities. Some members of credit unions tend to fully abandon common economic and financial activities for a short-term financial gain (both from deposits and borrowing side). Offering interest rates on deposits, which are considerably higher than in banks, credit unions undertake higher risk, but their ability to perform adequate risk evaluation raises doubts, and their reserves for covering potential losses are formed based on too optimistic approach. Recently, especially intensive funding of the credit unions' associated members (related entities) has been observed, as well as acquisition of debt securities (see Chart 58). It shows imbalances in the management of credit, market or interest rate risks, although the situation in credit unions regarding these risks varies considerably.

Low interest rates prevailing since the beginning of the economic slowdown have continued to contribute to the development of credit unions, but economic growth and tightening of monetary policy is to send the price for funding resources up. It may create serious obstacles for the competitiveness of credit unions and ability to attract deposits by offering higher interest rates (basically the only way to compete with rivals) and lead to migration of financial resources as well as potential liquidity or even solvency problems. From the end of 2012 to the beginning of 2013, after having evaluated the situation in some credit unions, the Bank of Lithuania has taken measures to improve it. For more detailed information about existing imbalances in the activities of credit unions and the measures to be taken to remove them, see Annex 2.

III. STRENGTHENING OF THE RESILIENCE OF THE FINANCIAL SYSTEM

PRUDENTIAL REGULATORY MEASURES

Risk mitigation in the activities of credit unions The Bank of Lithuania has set the following prudential and some other new requirements to ensure sustainable development of credit union activities and related risk management, as well as the protection of depositors' interests:

- The liquidity ratio was pegged to the annual deposit growth rate to limit unsustainable deposit growth and incentives to invest the deposits into riskier loans;
- New capital adequacy ratios were established to regulate the concentration of loans to legal entities and related risks undertaken by credit unions;
- New requirements were added to the maximum exposure ratio;
- Liquidity coverage ratio was introduced to boost the resilience of credit institutions to short-term liquidity risk;
- Credit unions were instructed to publish their financial information to ensure higher transparency and availability of information;
- To improve the management structure, credit union executives, whose qualifications raise doubts, or candidates to executive positions, who do not meet minimum requirements, will have to take a special exam.

The Bank of Lithuania has also initiated amendments to the Law on Credit Unions to set higher requirements for credit unions' own capital, number of members, and management when founding a credit union, and also to specify other measures necessary to ensure safe and reliable operations of credit unions. To this aim, a work group was formed in March 2013 by the order of the finance minister of the Republic of Lithuania to propose improvements to legal act regulating activities of credit unions. The group includes experts from the Finance Ministry of the Republic of Lithuania, Bank of Lithuania, and heads of associations of credit unions and the Central Credit Union of Lithuania.

Encouraging responsible borrowing. In order to encourage responsible lending practices among credit institutions, to ensure market discipline and transparency of operations The Bank of Lithuania approved the following requirements:

- To ensure uniform principles of responsible lending to all consumer credit recipients the Provisions on Evaluation of Borrowers' Creditworthiness and Responsible Lending Regulations were approved, under which the average amounts of repayments of the principle and interest (debt-to-income ratio) by the recipient of a consumer credit (considering total liabilities) cannot exceed 40 per cent of his income;
- To ensure transparency the new procedure has been adopted for calculating the annual ratio of the total price of consumer credit;
- To prompt credit recipients to more responsibly assess their credit repayment ability the guidelines for advertising financial services have been appended;
- To improve financial education, an initiative was launched to provide to the public the objective and trustworthy information about personal finance management (the source is the newly presented website *Pinigų bitė* available at www.pinigubite.lt).

Reducing risk of banking activities. To ensure effective management of internal control and various types of risks the Provisions for the Organisation of Internal Control and Risk Assessment (Management) as well as the General Provisions for the Internal Capital Adequacy Assessment Process were updated. Banks were instructed to

inform customers about potential changes in interest rates, foreign currency exchange rates, and to conduct analysis of creditworthiness of loan beneficiaries under scenarios when these changes occur. The changes were approved to implement the European Systemic Risk Board's recommendation for lending in foreign currencies.

Aiming to increase transparency and discipline in the market, from the end of 2012 the financial indicators of individual credit institutions, as well as prudential requirements for operations, began to be announced.

IMPLEMENTING MACRO-PRUDENTIAL POLICY IN LITHUANIA: STRATEGY, MACRO-PRUDENTIAL INSTRUMENTS

The global financial crisis showed how much should be paid by states and, eventually, by tax payers, for financial instability. Its negative consequences can be observed both in the financial sector and real economy. To find a solution for reducing the probability and effects of financial crises, attempts are made to reconstruct the previous institutional and regulatory system for the supervision of the financial system, and macro-prudential policy is one of the key reform packages. Strengthening of macro-prudential policy and supervision is especially relevant in the EU at the present time. It would help to counteract the widespread interaction of the problems of the financial sector and public finances, as this interaction affects not only the financial system, but also investments, employment, and economic growth.

The responsibility for the macro-prudential oversight of the EU financial system lies with the European Systemic Risk Board (ESRB). To avoid wide-scale financial problems, the ESRB issues public and non-public recommendations and warnings regarding the implementation of macro-prudential policy and reducing systemic risk, intended for EU Member States and entire EU, the European Commission, national supervisory authorities or three European supervisory authorities. The ESRB underlines the importance of balancing the need for consistency of the EU-wide macro-prudential policy system with specificities of national macro-prudential instruments. It is recommended that the ESRB should be informed in advance of macro-prudential instruments proposed at the national level, which may have significant effect at cross-border level.

To ensure the above-mentioned consistency, the ESRB issued a recommendation[27] more than a year ago to Member States about the macro-prudential policy mandates and embedding them in national legislation. In the opinion of the ESRB, the national central banks should have a leading role in macro-prudential oversight regarding their institutional and financial independence and accountability to national parliaments. In view of such recommendations by the ESRB, the Lithuanian financial sector supervision and regulation structure, and expertise of the Bank of Lithuania in the area of financial stability analysis, assessment and prudential supervision of financial institutions, a proposal was submitted to the Seimas of the Republic of Lithuania to have the function of macro-prudential policy development and implementation embedded in the Law on the Bank of Lithuania. The draft law establishes that the Bank of Lithuania on its own initiative, or when implementing the ESRB recommendations and warnings, should pursue macro-prudential policy at the national level. The Bank of Lithuania should monitor, assess, and do its best to limit the macro-prudential risk for the stability of the domestic financial system; in doing this it will have the possibility to cooperate with the ECB and other national and international institutions.

A clear legal framework will improve the transparency of the risk reducing process and accountability, as the Bank of Lithuania will be given

[27] Recommendation (ESRB/2011/3) of the European Systemic Risk Board of 22 December 2011 on the macro-prudential mandate of national authorities.

the mandate to make public and non-public statements on systemic risk, while reports about the progress in implementing macro-prudential policy will be presented to the Seimas of the Republic of Lithuania. Considering this, the ultimate objective of the macro-prudential policy is difficult to evaluate in quantitative terms, the accountability may be described as intermediate objectives targeting or public explanation of the motives for the application of macro-prudential instruments. In implementing macro-prudential policy the Bank of Lithuania would issue legal acts and recommendations, and apply macro-prudential policy instruments to participants of the financial market.

Establishing a mechanism for macro-prudential policy

Having received the macro-prudential policy mandate, the Bank of Lithuania plans to formulate 5 key intermediate objectives and apply at least one instrument for reaching each of them. These intermediate objectives would help achieve the ultimate objective of macro-prudential policy — to contribute to the protection of the stability of the financial system, including the strengthening of the financial system's resilience and reducing the emergence of systemic risk, and thus seeking to ensure sustainable contribution of the financial sector to economic growth. Identifying intermediate objectives of macro-prudential policy contributes to the transparency of the policy, its efficiency, and accountability of an institution which is to implement it; it also helps choosing necessary instruments based on economic logic. Intermediate objectives and instruments will be subject to regular and immediate, if necessary, revision.

The Bank of Lithuania plans to identify the following intermediate objectives of the macro-prudential policy (see Table 8):

1. Mitigate excessive credit growth and too high leverage. Too rapid credit growth is one of the factors leading to a financial crisis. It may be further strengthened by high leverage and, for example, a high ratio of a loan and the value of collateral used for the loan (loan-to-value ratio) available in the market. One of the key objectives of macro-prudential policy is to regulate capital and collateral requirements so that excessive risk taking in the period of economic growth would decrease. In an environment of economic growth, both incentives for borrowers to take excessive risk and banks' aim to increase their income and/or market share under the market pressure (by investors, competition factors etc.) by unduly easing lending requirements. On the other hand, after the economic growth starts decelerating, attempts should be made to reduce the negative impact of abrupt tightening of lending requirements on enterprises and households. Counter-cyclical capital buffers accumulated in good times and used to cover losses arising during economic recession increase creditor confidence in the solvency of financial institutions, stimulate lending and contribute to balanced growth of the economy. To this aim, programs promoting responsible lending and financial literacy to support adequate risk management are also important.

2. Reduce excessive asset and liability mismatch in the financial sector, and liquidity risk. This objective is raised to limit the use of short-term liabilities to finance long-term assets. Too large share of short-term financing within the liabilities structure during economic recession adds to an increase in liquidity problems of a financial institution. Credit crunch and fire sales during massive withdrawal of deposits and other cases of funding discontinuation contribute to an increase in the contagion risk. Seeking to avoid it, banks would have to use stable funding resources for financing a larger share of their non-liquid assets and accumulate larger holdings of high quality liquid assets to cover short-term liabilities. Two new requirements have been embedded in CRD IV directive and CRR regulation: the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR).

3. Limit direct and indirect exposure concentration of financial

Table 8. Envisaged intermediate objectives and instruments

OBJECTIVE I. Mitigate excessive credit growth and too high leverage:
• Counter-cyclical capital buffer
• Sectoral capital requirements
• Leverage requirement
• Limiting loan-to-value and debt-to-income ratios
OBJECTIVE II. Reduce excessive asset and liability mismatch in the financial sector, and liquidity risk:
• Liquidity coverage ratio (LCR)
• Net stable funding ratio (NSFR)
• Limiting loan-to-deposit ratio
OBJECTIVE III. Limit direct and indirect exposure concentration between financial institutions:
• Large exposure restrictions
OBJECTIVE IV. Limit excessive risk taking of systemically important financial institutions, and reduce moral hazard:
• Capital surcharges to systemically important financial institutions
• Systemic risk buffer
OBJECTIVE V. Strengthening resilience of the financial market infrastructure:
• Increased disclosure

institutions. Direct concentration risk arises due to large lending volumes in financial institutions, for example, lending to real estate or public sectors, other financial institutions or related enterprises. Indirect concentration risk arises inside of a financial system mainly due to interconnectedness of financial institutions and contagion risk. Too deep interconnectedness could be avoided by introducing large exposure restrictions. It would also help to limit the previous risk — negative contagion effects due to fire sales.

4. Limit excessive risk taking of systemically important financial institutions and reduce moral hazard. To strengthen resilience of systemically important financial institutions an effective mechanism for recovery and resolution should be built up. It will help to avoid moral hazard which leads to too high risk taking supported by expectations of government guarantee in case of failure, and help to resolve systemically important institutions without government support. Capital surcharges and long-term operational results oriented compensation systems will be used for limiting operational risk in systemically important financial institutions.

5. Strengthening resilience of the financial market infrastructure. Two ways are available to achieve this objective: direct reduction of risks arising from the financial system infrastructure or limiting moral hazard arising due to complicated institutional structure of financial institutions. The main directions of activity are related to supervision of the infrastructure of the financial market, the objective of which is to promote stable and efficient operation of this infrastructure. Also, the legal system should be overviewed, especially in payment, settlement and clearing systems. On the EU level a lot of attention is paid to the initial margin and haircut requirements in performing clearing via the central-counter parties. Financial institutions should also increase disclosure that the public and market participants could better assess the risks related to a concerned institution or its services. Such transparency would increase the confidence in the domestic financial system and strengthen its resilience.

Macro-prudential policy in Lithuania

Currently, the Bank of Lithuania partly pursues macro-prudential policy by following the Responsible Lending Regulations approved by the Resolution of the Board of the Bank of Lithuania of 1 September 2011, which aims to promote responsible lending practices of credit institutions, market discipline, and a well-balanced development of the financial sector. The Responsible Lending Regulations underlines two important macro-prudential policy instruments: the loan-to-value ratio (LTV) and debt-to-income ratio (DTI). To ensure efficiency of macro-prudential policy, an additional set of necessary instruments will be assessed.

Along with the macro-prudential mandate to be acquired, a macro-prudential policy strategy is being developed in Lithuania to be used to implement the above mentioned intermediate objectives. These intermediate objectives will specify the ultimate macro-prudential policy objective to be embedded in the Law on the Bank of Lithuania, and identify the instruments necessary to achieve these objectives, as well as link the ultimate objective, intermediate objectives, and instruments. Intermediate objectives and instruments will be subject to a periodic or immediate, if needed, revision. The strategy of macro-prudential policy would not only be approved, but also enacted by using LTV and DTI instruments. The Bank of Lithuania will control the use of macro-prudential instruments or recommend other persons to take appropriate measures.

In addition to LTV and DTI, instruments specified in the EU level legislation such as CRD IV directive or CRR regulation, are envisaged to apply. They represent majority of instruments to be applied. The effects of introducing other instruments, in particular, instruments which reduce market liquidity risk, maturity mismatches for assets and liabilities (e.g.

limiting loan-to-deposit ratio) are also to be analysed. It is envisaged to set ratios for the monitoring and management of systemic risk and for adopting adequate decisions on the application of macro-prudential instruments. After being granted the macro-prudential policy mandate, the Bank of Lithuania will also take part in the preparation and implementation of the recovery and resolution plans of credit institutions and deposit guarantee schemes. Under the Financial Sustainability Law of the Republic of Lithuania, the Bank of Lithuania already provides conclusions on the use of measures to strengthen financial stability, participates in the Council of the State company Deposit and Investment Insurance, and takes other actions to increase credibility of the financial system.

Macro-prudential instruments

Active and aggressive lending to the private sector, primarily the real estate sector, had a huge effect on the development of the domestic economy. Imbalances emerged in the national economy, which led in the beginning (2004 to 2007) to unsustainable economic growth, and later to economic recession.

The Lithuanian banking sector is consistent with a traditional model of banking operations since loans to businesses and households make up the largest share of its assets, and domestic deposits and funds of parent banks account for the largest share of its liabilities. The Bank of Lithuania embedded the required limits for DTI and LTV ratios[30] in the Responsible Lending Regulations of 2011. Alongside these instruments, additional instruments are specified in the proposal prepared by the European Commission of July 2011[31] on CRD IV and CRR (see Table 9): **countercyclical capital buffer** and **systemic risk buffer** requirements and the possibility to tighten **sectoral capital requirements**; also, an optional **leverage** requirement.

DTI shows a maximum share of the income that the borrower may allocate to pay a periodic loan instalment (a portion of the principal amount and interest). The key objective for using DTI as a macro-prudential policy instrument is limiting excessive credit growth. The primary objective for using this instrument was credit risk management by limiting a probability of customer defaults. Limiting DTI creates reserves of disposable income in household budgets, which help to ensure the sustainability of household finances. It is an effective instrument for reducing probability of a household default, and eventually the banking system's losses. Moreover, limiting DTI may have direct effect on credit growth because stricter requirements applied to the debt-to-income ratio limit high risk lending.

DTI is most frequently used with LTV, as both ratios are intended for the management of the same type of risks, and complement each other in limiting risks: DTI reduces the default risk, and LTV reduces the amount of loss. DTI also complements other macro-prudential instruments, such as countercyclical capital buffer, since the DTI limit has a direct effect on credit risk by reducing probability of household defaults; and one of the goals of applying countercyclical capital buffer is to accumulate sufficient reserves for covering potential banking losses considering economic cycle developments.

DTI may be used both for the existing loan portfolio and new loans. In accordance with the Responsible Lending Regulations, this instrument can be applied only for new loans. In certain cases, DTI may be used only for special sectors or special loan portfolios to avoid negative consequences for general economic development. For example, stricter DTI for loans in

Table 9. Key macro-prudential instruments specified in CRD IV and CRR

Instruments	Time dimension [28]	Sectoral dimension [29]
Counter-cyclical capital buffer (CCB)	x	
Systemic risk buffer		x
Capital surcharge for systemically important institutions		x
Sectoral capital requirements	x	
Limiting the ratio of equity and total assets (leverage)	x	x
Liquidity coverage ratio (LCR)		x
Net stable funding ratio (NSFR)		x

[28] Time or cycle dimension — it has to be taken into account when comparing and monitoring financial and economic indicators (for ex., the credit-to-GDP ratio, leverage ratio in the financial, corporate, and household sectors, asset prices) which would help to determine emerging systemic risk.
[29] Parameter for a sector or for direct or indirect interrelations of financial institutions. To reduce the contagion risk the monitoring of concentration, balance indicators, financial institution collapse possibilities and their potential impact on the systemic risk should be performed.
[30] DTI should not exceed 40 per cent and LTV should not be higher than 85 per cent (exception for the LTI limit may be applied only when the repayment is secured by the guarantee of an enterprise providing coverage for state-supported housing loans).
[31] In 2013, a consensus was achieved between the European Commission, the Council, and the Parliament regarding CRD IV and CRR. These documents are expected to come into effect on 1 January 2014.

foreign currencies can be applied both to manage risks caused by this type of loans and leave general crediting volumes unchanged. DTI may vary depending on loan size and income type.

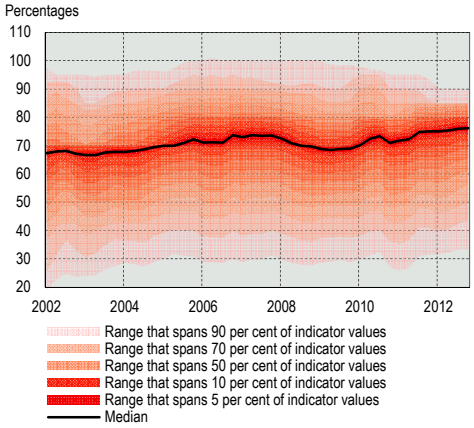
LTV shows a maximum loan amount to be issued to a borrower in exchange for a mortgaged asset unit (-s) of a respective value. Major aims for applying LTV are limiting of excessive credit growth by limiting the level of indebtedness of borrowers, and reducing potential loss given default. Maximum LTV primarily has a direct effect on the growth of credit volume, and an indirect effect on the real estate price level via feedback effects (through a decrease in the demand and the number of real estate transactions). Second, fixing a minimum rate of loan-to-asset ratio, the losses incurred by banks as a result of a real estate price decrease may be limited.

This instrument is good for limiting both too rapid lending growth and the demand for loans intended for investments into real estate, which also make huge upward pressure on property prices. Limiting LTV along with other prudential instruments represents an effective way for reducing systemic risks arising due to the cyclical characteristics of the real estate market. The Responsible Lending Regulations provides for the loans issued to the same borrower for purchasing more than one residential property objects to be applied stricter LTV limits. The provision is intended to reduce possibilities for speculative investments which make higher pressure for real estate prices compared with household investments into real estate as a permanent home.

Financial market development and behaviour of credit institutions were significant factors of a rapid increase in housing prices in Lithuania's real estate market, and because of this the growth of housing prices is closely related to changes in the behaviour of banks, such as lowered requirements for loan collateral (LTV, see Chart 59), borrower's income (income-to-debt ratio), and finally to reduced loan interest margins. Since mid-2004, when the boom of housing prices started, LTV could have been considerably tightened[32] (compared to the existing requirement, which is 85%) to contain the growth of real estate prices (see Chart 60). The IMF research revealed[33] an impact of 8 to 13 per cent on real estate prices from a 10 p. p. increase in LTV when imbalances prevail. And that an increase in LTV usually results in a drop in the number of real estate transactions in the market with a 3-month lag, while the impact on prices comes with a 6-month lag[34].

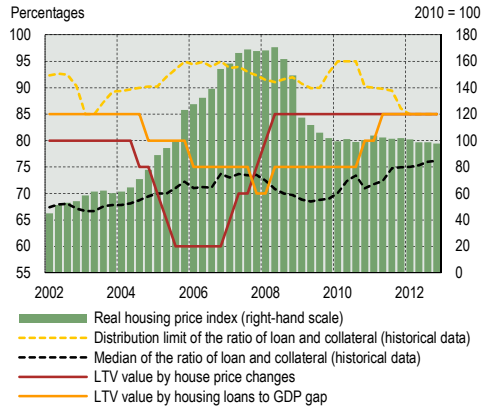
LTV limits may apply to both the existing loan portfolio and new loans, but normally this instrument is used for new loans. LTV may be set as a base value to maintain sustainable credit growth with the aim to address the pro-cyclicality. LTV requirement should be tightened (eased) when the credit growth is too strong (too weak) and/or during the formation of a real estate price bubble. LTV may be differentiated by types of mortgaged property, its geographical location; in some cases different value LTV may be used for different (by size, purpose, and currency) loan portfolios. For example, a higher LTV may be applied with regard to loans for purchasing the second or subsequent unit of real estate, for loans for which commercial property or land is used as collateral. Under the Responsible Lending Regulations higher LTV requirements are applied to loans for purchasing land lots, and loans issued to purchase real estate outside the EEA.

*Chart 59. Distribution of LTV ratio for new loans**



Source: Bank of Lithuania calculations.
**Data covers around 60 per cent of the banking sector's housing loans portfolio.*

Chart 60. Likely LTV requirement changes depending on the unsustainable housing price or credit growth



Sources: Statistics Lithuania and Bank of Lithuania calculations.
Note: LTV value was calculated based on housing price changes within 2-year period, adjusted for inflation and long-term trend.

[32] During the period from 2002 to 2012, hypothetical level of LTV requirement was set based on these formulas

- $LTV_t = 100 - S_0 - c \times max\{(BKI_t^{r,detr}/BKI_{t-8}^{r,detr} - 1), 0\}$, where LTV_t — LTV requirement for quarter t, S_0 — minimum down-payment for housing loan, c — percentage of the positive change in housing prices considered when setting LTV, $BKI_t^{r,detr}$ — housing price index, excluding inflation and long-term trend impact.
- $LTV_t = 100 - S_0 - 5 \times \max\{k_t, 0\}$, where k_t is an integer, such that $((L_t/Y_t) - (L_t/Y_t)^{tr}) \geq 2k_t$, where L_t – value of housing loans, Y_t – GDP, tr indicates the long-run trend. Values used for calculations in Chart 60 are $S_0 = 15\%$ and $c = 40\%$, minimum allowed LTV ratio is 60 per cent, maximum ratio is 85 per cent, and LTV changes are made with intervals of 5 p. p.

[33] Crowe C. W. *How to Deal with Real Estate Booms: Lessons from Country Experiences*, IMF Working Paper No. 11/91.
[34] Deniz I., Heedon K. *Do Loan-to-Value and Debt-to-Income Limits Work? Evidence from Korea*, IMF Working Paper No. 11/297.

A countercyclical capital buffer would be set for Common Equity Tier 1 capital (CET1). One of the major objectives for setting this buffer is to ensure stable credit supply given surfacing crisis of the financial system and/or the period of economic recession following excessive credit growth. This buffer is planned to be accumulated in the time of favourable economic environment. Contrary to other capital requirements, the requirement to have this buffer may be cancelled, if signs of a systemic crisis appear, to create conditions for credit institutions to use accrued capital for loss amortization and support of credit supply to mitigate an economic downturn. It should be noted that by eliminating this reserve requirement during the credit supply drop, banks can continue to hold the capital level by not using it for additional crediting. This instrument differs from others in that it is intended more for fighting consequences rather than reasons of a systemic crisis; though alongside the major objective the countercyclical capital buffer requirement may have effects on excessive credit growth. Credit institutions would be forced to increase their capital base and credit price or reduce their asset positions, which could lead to a decrease in the credit demand and credit supply.

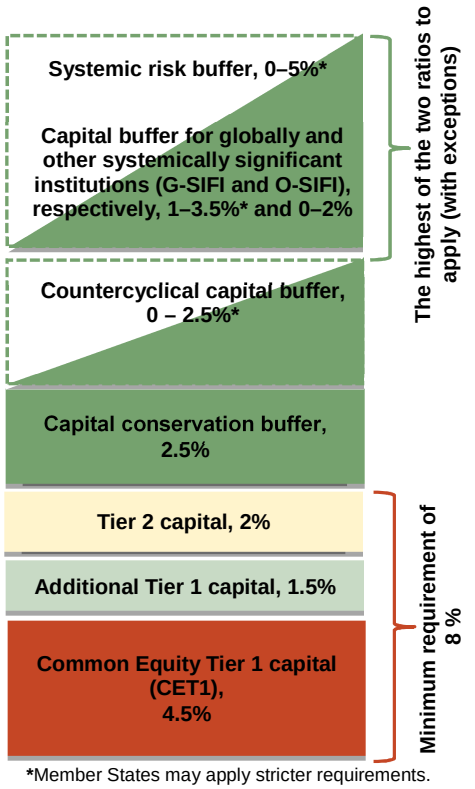
The countercyclical capital buffer requirement would be set as an add-on to already existing requirements for core and additional own capital, as well as for the capital conservation buffer (see Chart 61). CRD IV specifies the recommended rate for this buffer to be between 0 and 2.5 per cent, and, if necessary, countries are allowed to impose even higher buffers; moreover, transition periods for maximum rates have been established (see Chart 62). CRD IV contains a provision for credit institutions to be given at least a 12-month transition period (by granting derogations), if a decision is taken to raise the capital buffer requirement. The countercyclical capital buffer requirement may be cancelled without delay.

The research by the Bank of International Settlements[35] revealed that the deviation of the credit to GDP ratio from its long-term trend is one of the best indicators which help to decide when this requirement has to be introduced. It is expected at the same time that national institutions will not apply this indicator mechanically, but assess all the information which can signal about increasing systemic risk and the necessity to introduce the countercyclical capital buffer requirement. Based on this indicator and calculations of the Bank of Lithuania (see Chart 63) maximum (2.5%) countercyclical capital buffer for the Lithuanian banking sector might have been set in the third quarter of 2005, after the signs of unsustainable credit[36] growth were observed.

So far no indicators have been specified, which will prompt cancelling of this instrument. The size of losses incurred by the banking sector or an increase in non-performing loans and tightening of lending requirements may be among such indicators. Cancelling the countercyclical capital buffer should be fast and considerable in terms of volume, as this instrument may be less effective if applied gradually.

The requirement for systemic risk buffer may be established for the entire financial sector or its part, and intended to limit or reduce potential systemic risk in a long run considering the peculiarities of national financial developments. Systemic risk buffer would be set for Common Equity Tier 1 capital (CET1). Although no limits are applied with regard to the size of this buffer, if a Member State decides to impose a requirement for a systemic risk buffer (with such right being provided for as of 1 January 2015) of over 3 per cent for all exposures or over 5 per cent for domestic and third country exposures, a prior approval of the European Commission to be prepared in accordance with the ESRB and

Chart 61. Capital buffer structure under CRD IV



*Member States may apply stricter requirements.

Chart 62. Schedule for introducing maximum countercyclical capital buffer and minimum capital conservation buffer rates under CRD IV

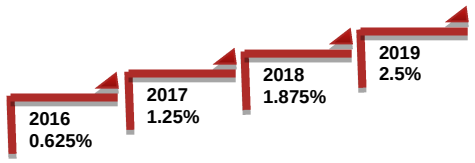
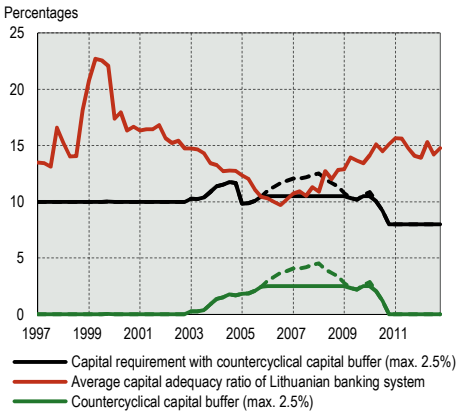


Chart 63. Possibilities for countercyclical capital buffer requirement to be applied in Lithuania



Source: Bank of Lithuania calculations.
Note: As of 1 January 2005, 8 per cent capital adequacy ratio is applied. By that time a 10 per cent ratio was used.

[35] Drehmann M., Borio C. E. V., Gambacorta L., Jimenez G., Trucharte C. *Countercyclical Capital Buffers: Exploring Options*. BIS Working Paper 317, 2010.
[36] Credit is determined as loans of other monetary financial institutions (MFIs) to non-financial corporations and households.

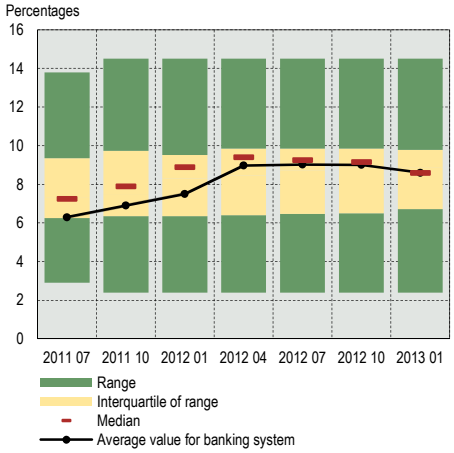
European Banking Authority (EBA) opinions will be needed.

Contrary to other common capital buffer requirements, **sectoral capital requirements** may be imposed on a specific type of assets or a sector judged to show signs of an emerging systemic risk. This instrument may be used to estimate different risk weights for specific sectors (e.g. construction and real estate sector) or specific loan portfolios (e.g. loans in foreign currencies). The other way is to impose higher capital requirements for these sectors, but then the problem of accurate estimation of risk weights may come up.

By imposing sectoral capital requirements attempts are made to strengthen the resilience of the banking sector to risks posed by individual sectors and increase the ability to absorb potential losses. In addition, this instrument allows reducing of unwelcome credit growth in respective sectors of economy. A deviation from the long-term trend of credit to GDP could be one of the indicators showing excessive credit growth in a sector, but contrary to the countercyclical capital buffer, it could be calculated only for certain shares of the loan portfolio rather than for the entire loan portfolio.

The leverage ratio is defined as the ratio of a bank's own capital (core capital) and balance sheet and off-balance sheet[37] positions (disregarding the risk weights). It is an additional instrument to the capital adequacy ratio, but, opposite the capital adequacy ratio, the leverage ratio covers exposures at their fair value, rather than at risk-weighted value. This type of estimation allows for better comparability and eliminating potential calculation deficiencies arising in cases where risk weights are estimated by employing internal approaches which may be too optimistic.[38] A simple and transparent way of calculation is a major advantage of the leverage compared to other instruments.

Chart 64. Development of leverage of Lithuanian banking sector



Source: Bank of Lithuania calculations.

The major goal for imposing this instrument is lowering the level of debts of banks[39] and increasing the ability to absorb potential losses. The leverage ratio also has some signs of the regulation of pro-cyclicality of the banks' debt level. In an economic upswing, limiting the leverage ratio can hamper the growth of credit volume and asset prices, and it will help avoid forced reduction of the debt level and lending volumes during the period of an economic slowdown. It should be noted that the leverage ratio is not binding in the meaning of CRD IV, but the European Commission in 2016 is to consider the possibilities and need to have it embedded as a binding instrument as of 1 January 2018. Any EU Member State may use it as a macro-prudential instrument. It should be noted that the leverage ratio is normally not high within the Lithuanian banking sector: on 1 January 2013, it was 8.65 per cent (see Chart 64). The recommended minimum is 3 per cent.

The liquidity coverage requirement (LCR) is imposed to raise the resilience of credit institutions to a short-term liquidity risk. Credit institutions will have to accumulate an adequate amount of high quality assets to meet net cash outflows for 30 days. The purpose of imposing **the net stable funding ratio (NSFR)** is to ensure that credit institutions hold sufficient resources of stable funding to finance less liquid assets in the long run. The LCR ratio is expected to be imposed as of 2015, while NSFR is planned to be used from 2018.

From the perspective of macro-prudential policy, imposing these instruments would help the financial sector avoid losses arising due to fire sales, related settlement problems, and potential spillover effect. These instruments have a direct downward effect on excessive credit growth as loans are not considered high-liquidity assets and their growth makes the LCR indicator shrink. Also, the NSFR is expected to ensure that stable funding sources instead of cheaper, but less stable ones, are used to finance this type of assets. It should be noted that that the Lithuanian financial institutions are now in compliance with the LCR and NFSR indicators.

[37] Conversion factors shall be applied to off-balance sheet positions.
[38] When setting risk weights such risk factors as negative adjustments to real estate prices, etc. may be underestimated.
[39] Leverage is explained as the ratio of assets to own capital, generally used to show an amount of assets per one monetary union of the capital. This indicator is opposite to the leverage coefficient of a bank, and is often referred to as the own capital multiplier.

Box 5. Banking union

The banking union[40] is the EU countries' response to the financial crisis of 2008 and 2009. The union is aimed at restoring confidence in the financial system of the euro area, to ensure its stability and create conditions for effective solution of problems that euro area banks face. It is a very significant step towards stronger European Economic and Monetary Union and further development of the EU integrated financial market. The banking union should consist of three major building blocks (see Table A):

1. **A single banking supervision mechanism**
2. **A single recovery and resolution system**
3. **A single deposits insurance scheme**

Table A. Building blocks of the Banking Authority

	STEPS	AIMS	ENFORCEMENT DATE	OPERATION PRINCIPLES
I.	**A single banking supervision mechanism**	To ensure supervision of systemically significant and troubled EU banks	12 months after approval	The ECB takes over the supervision of the major EU banks. The ECB may at any point take over the supervision of banks which will be directly recapitalised by using the funds of the European Stability Mechanism (ESM)
II.	**A single bank recovery and resolution system**	To create an effective mechanism for the recovery and resolution of troubled institutions which are financed by contributions of private market participants	The European Commission is expected to submit its proposal in mid-2013.	Fully harmonised system for crisis management and restructuring of financial institutions at EU level; a single recovery and resolution institution and a recovery and resolution fund to be financed by the private sector shall be established
III.	**A single deposits insurance scheme**	To ensure protection of funds kept by depositors in EU countries and strenghten the confidence in the EU banking system	The date for the European Commission to submit its proposal has not been set	A single, larger and more reliable insurance system shall be created to replace individual national deposit insurance schemes

At the end of 2012, the European Council adopted a strategic decision to srengthen the banking supervision in EU countries by entrusting the task to the Frankfurt-based ECB. The first important step was made in the beginning of 2013 as an agreement was reached between the European Parliament, European Council, and European Commission[41] on a single banking supervision mechanism. Currently, intensive negotiations are also under way over a directive which is partially to harmonize the bank recovery and resolution principles in individual countries. If an agreement is achieved it would be another step towards a single banking restructuring institution that would ensure effective and decisive solving of problems emerging in the bankng system. The third component of the banking union — a single insurance system — is associated with potentially high expenses for the member-states of EU and therefore leads to a lot of discusssions. Considering this, European countries are expected to adopt a directive to harmonize to the maximum the conditions for deposit insurance systems in different countries, but the implementation of the idea regarding a single system for deposit insurance will be postponed until deeper fiscal integration in the EU is reached.

Preconditions for creating a banking union

Up till now the European Economic and Monetary Union has been following two basic principles — an independent monetary policy pursued by the ECB to ensure price stability and partial coordination of fiscal policy. Financial institutions have taken business opportunities to operate on a cross-border level, while the activities of supervisory authorities have been limited by national jurisdictions. In the wake of the financial crisis, the lack of coordination of national efforts in solving the problems of financial institutions have contributed to the instability of the euro area's finacial sector. The vulnarability of financial markets had increased furher because of the negative contamination loop: governments encountering financial problems had limited possibilities to aid domestic banks, which had invested in risky assets, and the worsening situation of banks had become even more threatening for public finances. Under such circumstances, a decision was taken to set up joint institutions for banking supervision, bank restructuring, and deposit insurance, which could strengthen market control, boost confidence of investors in a single EU financial system, and breal the damaging link between banks and governments.

Step one: single banking supervision

First, in the middle of next year, the ECB will take over the supervision of nearly 150 major and systemically important euro area banks. These banks control about four fifths of the euro area's banking assets. Also, the ECB will take over the supervision of banks which have received government aid, and, at least, another three major domestic banks. In Lithuania, after the introduction of euro, first of all, AB SEB bankas, AB DNB bankas, and AB Swedbank will come under the oversight of the ECB. The supervision of smaller financial institutions will be left to the Bank of Lithuania, however, the ECB will have the right to intervene with them at any time and receive necessary information about important supervision decisions of the Bank of Lithuania. National supervisory authorities will remain important despite

[40] The European Council, European Commission, Eurogroup, and ECB approved the idea of a banking union in mid 2012.
[41] The agreement has yet to be ratified by the European Parliament (most likely it will be done in early July 2013).

extended responsibilities of the ECB (the specifics regarding effective cooperation, information spread, and task distribution has yet to be finalised and are expected to be unveilled by mid 2013). The ECB has been given a wide mandate, including both the supervision of individual banks, and responsibility over the systemmic (macro-prudential) risk. To ensure the transfer of its expertise, the ECB, will seek for centralisation to be well balanced, and neither too deep nor too shallow. Higher risk banks will be supervised more closely, and the oversight of less risky banks will be less intensive. Having in mind that there are over six thousand banks operating in the euro area and that the expansion of the ECB's expertise capabilities may take some time, the cooperaion with national supervisory authorities during the transition period will be important in both banking supervision and bank recovery and resolution areas.

Lithuania, just as other EU countries that have not introduced euro yet, has the possibility to join the single banking supervision mechanism on a voluntary basis. A coordinated approach towards the control of emerging risks and a higher lieklihood of stricter assesment of banking problems are viewed as advantages of the single banking supervision system. However, until the issues of bank resolution fund and deposit insurance schemes are solved there are some serious concerns regarding the sharing of potential bank aid expenses and participation of non-euro area countries in the decision-making process. Lihuania is interested in the stability of the European financial sector and associates its participation in the single banking supervision system with its membership in the Euro area.

Step two: a joint bank recovery and resolution system

EU countries are expected to come up to a halfway agreement on the directive on the restructuring and resolution of troubled banks in the first half of 2013, under the Irish presidency over the EU council. Lithuania therefore will take over the responsibility to finalise trileteral consultations between the European Parliament, European Council, and the European Commission. At the same time the directive on bank recovery and resolve will form the basis for a joint bank restructuring institution, setting the grounds for effective bank restructuring model by the end of 2013. The single oversight without a capability to effectively restructure troubled banks operating in several countries is insufficient for solving the associated problems of the financial sector and public finances. Joint co-ordinated actions and adequate amounts in the restructuring fund are needed to ensure systemic risk prevention in the euro area. Therefore, the second step in creating the banking union is considered a highly important part of the effective supervision and regulation system of the financial sector. The European Commission has to submit a proposal on setting up a joint resolution institution by mid-2013.

Step three: a single deposit insurance scheme

An agreement on the directive on the deposit insurance scheme, intended to harmonize national deposit insurance conditions in EU countries to a maximum extent, is also expected to be reached until mid-2013. However, the decision on a joint deposit insurance fund for the entire EU, which would boost confidence in the deposit insurance system, is possible only after an agreement on deeper fiscal integration in the EU is reached.

A joint deposit insurance fund would provide grounds for wider risk diversification and would finally stop speculations regarding the governments' ability to fulfil its commitments regarding the repayment of insured deposits. On the other hand, having such a fund created may require a significant amount of financial contributions by the member states during a crisis, which makes countries treat such a possibility with caution. Another important issue is the size of the existing insurance fund. Some financially stronger countries with more effective supervision in place tend to retain individual deposit insurance schemes and stand only for a single bank resolution fund. Nonetheless, this type of a model does not allow creating an efficient risk diversification system, fails to provide solution to the issue of deposit insurance for banks operating in a few countries, and leads to higher fund administration costs. There are many proposals on how to solve the current problem, but coming up with a common denominator may take time. One of potential solutions would be keeping the national deposit insurance systems in place, but instructing them to have their commitments reinsured with an international deposit insurance fund. In the event that a national insurance system runs short of funds, a deficient amount will be provided by the international deposit insurance system. To avoid moral hazard, national contributions to the international insurance fund could grow depending on the usage of the fund resources. Another option is to create an entirely new joint deposit insurance system, the contributions to which may depend on the deposit amount in domestic banks. Governments could decide themselves what to do with contributions currently accumulated in the funds.

Creating the banking union is a challenging, but extremely important political agreement for better transparency and creditability of the euro area's financial system. Despite a very ambitious goal to agree on all three components, the progress made in pursuit of a single bank supervision mechanism and discussions on a harmonized bank recovery and resolution system show that the very first steps towards a stronger financial system have been made with confidence.

ANNEXES

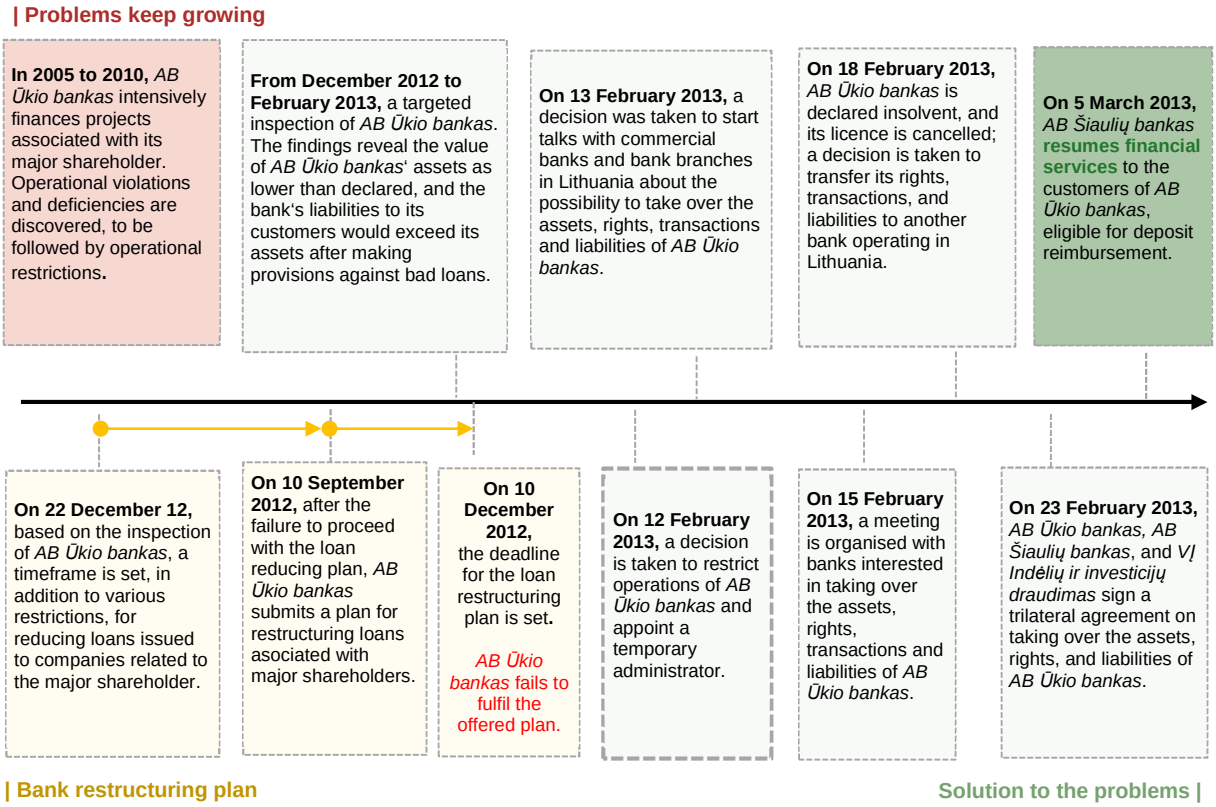
Annex 1. Suspension of the activities of AB Ūkio bankas

This Annex provides the information on the increase in risks in the operations of *AB Ūkio bankas*, the decision of February 2013 on imposing a moratorium on the bank's operations, proposed options for the bank's restructuring, and a description of the final decision to transfer part of the assets, rights, transactions and liabilities of *AB Ūkio bankas* to another bank operating in the country.

A summary of the resolution process of the problems of *AB Ūkio bankas*

- Before the moratorium on its operations, *AB Ūkio bankas* was the fourth largest bank in Lithuania by the amount of deposits (LTL 3.3 billion), with a market share of 7.2 per cent.
- On 12 February 2013, the operation of *AB Ūkio bankas* was suspended and a temporary administrator was appointed, due to the drawbacks that were discovered in the bank's operations, the failure to form required provisions, and fears of a pending default.
- On 18 February 2013, after the bank was declared insolvent and, referring to the evaluation of the temporary administrator-proposed options, a decision was adopted to transfer part of **AB Ūkio bankas' assets, rights, transactions and liabilities to another bank operating in the country.** Later *AB Šiaulių bankas* took over the LTL 2.7 billion insured share of *AB Ūkio bankas'* liabilities.
- The good quality assets were lower than the insured liabilities to the bank's depositors by LTL 800 million. The gap in the assets during the takeover, therefore, was covered by *VĮ Indėlių ir investicijų draudimas,* a government controlled enterprise.
- On 18 April 2013, after analysing the temporary administrator's interim report on the financial situation of *AB Ūkio bankas*, the Bank of Lithuania took a decision to apply to the court on instigating bankruptcy proceedings.
- On 2 May 2013, the court ruled to initiate bankruptcy proceedings for *AB Ūkio bankas* and appointed a bankruptcy administrator for it.
- Following the best international practice the most effective way to resolve the problems were chosen that allowed to avoid a negative reaction of the financial markets.

Chart A. Chronology of the actions of AB Ūkio bankas



The nature of the problems that led to the insolvency of *AB Ūkio bankas*

The major problems of *AB Ūkio bankas* were related to loans issued to entities controlled by or related to the major shareholder for which it had failed to perform proper assessment of the undertaken risk. Various sanctions and operational restrictions had been applied to *AB Ūkio bankas* as a result of discovered violations and deficiencies. The bank had been instructed to stop lending to entities related to the major shareholders and forbidden to provide support; a higher (10%) individual capital adequacy ratio had been set for it. Extra measures had been taken based on data collected during the inspection in 2011. To reduce the risk associated with the major shareholders, *AB Ūkio bankas* had also been instructed to ensure that the companies controlled by it significantly reduce in the nearest time the amount of loans (exposures) issued to entities related to the bank's major shareholders. The reduction had to be made in accordance with the schedule submitted by the bank itself and approved by the Board of the Bank of Lithuania. Also, *AB Ūkio bankas* had been requested to keep continuously informing the Bank of Lithuania about its activities.

Having considered the situation, the Bank of Lithuania launched a target inspection which was completed in February 2013. The inspection revealed that the value of assets held by *AB Ūkio bankas* was lower than the declared one, and if special provisions against bad loans had been made, the bank's liabilities to its customers would have exceeded its assets. The findings also showed that loans related to the major shareholder made up the biggest portion of the assets misrepresented in the financial accounts of *AB Ūkio bankas*. It was concluded that a substantial fund injection into the bank's capital was the only way to ensure operational continuity of *AB Ūkio bankas*. But even after repeated requirements, the Bank of Lithuania was not presented with the data showing the readiness and capability of *AB Ūkio bankas'* shareholders to improve the bank's financial situation. The management of *AB Ūkio bankas* confirmed information about the shortage in capital needed to ensure the bank's operations and that the major shareholder was not able to increase it to the necessary level. A potential decrease in the value of *AB Ūkio bankas'* capital and insolvency risk was also confirmed by UAB KPMG Baltics, independent auditors.

Resolution to bank's problems

On 12 February 2013 the Board of the Bank of Lithuania adopted a decision on imposing a moratorium on the operations of *AB Ūkio bankas* and appointed a temporary administrator. The decision was taken after identifying the real threat of default by *AB Ūkio bankas* and legal violations (the failure to form required provisions, ignoring restrictions on investments into the capital of its companies), recent year trends that may pose a risk, and the failure to carry out instructions of the supervisory authority. Other statutory enforcement measures could have been insufficient for resuming stable operations of the bank and ensuring protection of the interests of its creditors and the public.

On 13 February 2013 the temporary administrator was instructed to interview banks operating in Lithuania regarding their potential interest in taking over the assets, rights, transactions, and liabilities *AB Ūkio bankas*.

On 15 February 2013 a meeting was arranged with the banks which responded to the invitation take over the assets, rights, transactions, and liabilities of *AB Ūkio bankas*.

On 18 February 2013 the Bank of Lithuania's Board, after taking into consideration the findings of the temporary administrator, according to which the bank's liabilities exceeded the bank's assets and it was impossible to restore operational stability and confidence, ruled to revoke its licence and approve the temporary administrator's proposal to transfer the assets, rights, contracts, and liabilities of the bank to another bank operating in Lithuania. The decision was taken to protect the interests of *AB Ūkio bankas'* depositors, other customers, and society as a whole, and after considering the monetary resources needed for the transfer of the bank's assets, rights, transactions, and other liabilities to another bank, as well as a possibility for the majority of the bank's depositors to get access to their funds and some financial services in a short time.

The other options for the *AB Ūkio bankas* resolution, which were discussed, but seemed less effective, were as follows:

1) participation of the government in bank capital;

2) bankruptcy of the bank;

3) founding of a temporary bank: insured liabilities and good quality assets are to be moved to the new bank under government control for some time.

On 23 February 2013, following intense negotiations between *AB Ūkio bankas*, *AB Šiaulių bankas* and the government-controlled deposit insurance company *Indėlių ir investicijų draudimas*, a trilateral agreement was signed on the transfer of some of *AB Ūkio bankas*' assets, rights, transactions, and liabilities. Based on the Law of the Republic of Lithuania, regulating the conclusion and enforcement of a contract, *AB Ūkio bankas'* liabilities to its depositors, the amount of which could not exceed the amount to be repaid to the depositors by government-controlled *Indėlių ir investicijų draudimas* in case of the bank default, were transferred to *AB Šiaulių bankas*. In the Republic of Lithuania, as in any other EU Member State, a deposited amount is remunerated up to EUR 100,000 (LTL 345,280), if a credit institution becomes insolvent.

On 18 April 2013, based on an interim report about the financial situation of *AB Ūkio bankas*, submitted by the temporary administrator and showing that the bank's net assets compared to its liabilities were lower by LTL 1.2 billion, the Bank of Lithuania took the decision to apply to the court for bankruptcy proceedings to be initiated.

On 2 May 2013, the court ruled to initiate bankruptcy proceedings against *AB Ūkio bankas* and appointed a bankruptcy administrator.

Transfer of the insured liabilities

The temporary administrator recommended in its findings, presented to the Board of the Bank of Lithuania, to transfer *AB Ūkio bankas'* good assets and all insured liabilities to other bank operating in the country and start bankruptcy proceedings**.**

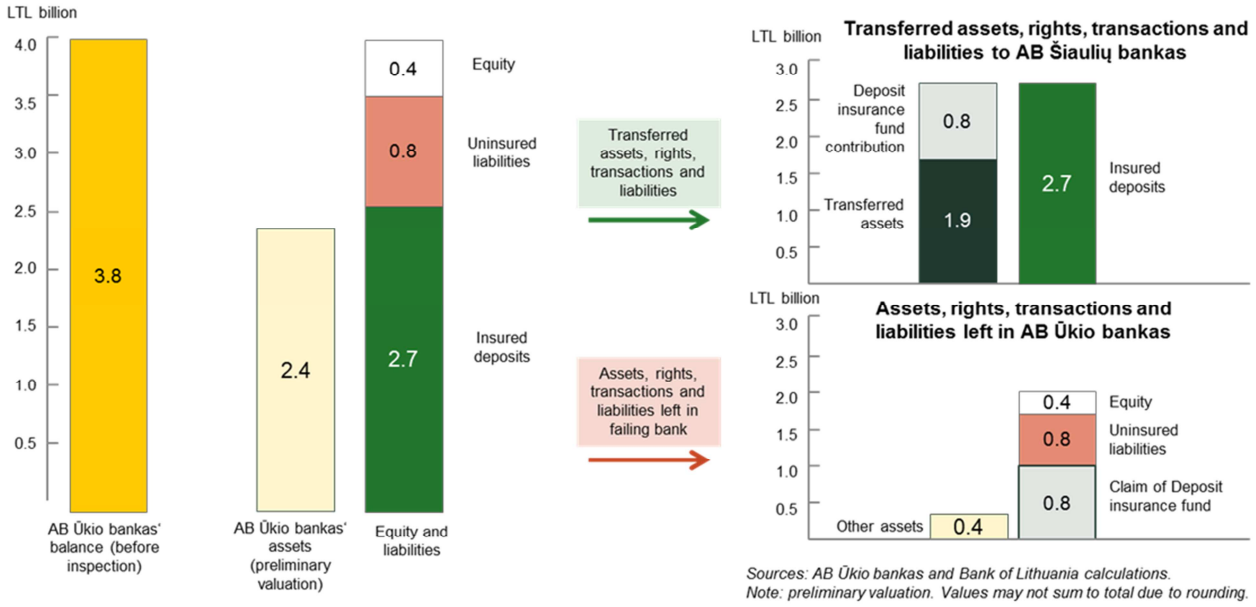
AB Šiaulių bankas was the only domestic bank which expressed the wish to take over *AB Ūkio bankas'* assets, rights, contracts, and liabilities. Before the deal with *AB Šiaulių bankas* was made, the European Bank for Reconstruction and Development, one of the major shareholders of *AB Šiaulių bankas*, injected LTL 69 million litas (in the form of a subordinated loan) into its capital.

Under the agreement on the transfer of assets and liabilities to *AB Šiaulių bankas*, LTL 2.7 billion in guaranteed deposits and LTL 1.9 billion in good assets were moved to the latter, while the funds of *Indėlių ir investicijų draudimas* were used only to cover the difference between the good assets and total insured liabilities, which made up LTL 0.8 billion. After covering the sum, which did not exceed potential remuneration in case of bankruptcy, *VĮ Indėlių ir investicijų draudimas* became a creditor of *AB Ūkio bankas* and therefore the goal is to try to recover its funds during the bankruptcy proceedings. *VĮ Indėlių ir investicijų draudimas* took part in the trilateral agreement after receiving the government loan with an annual interest rate of 2.801 per cent, and is expected to repay the loan by 1 February 2019. The loan will be repaid by using the funds recovered during the bankruptcy proceedings and the funds collected as the deposit insurance contributions by credit institutions (in 2012, the amount collected totalled almost LTL 175 million).

***AB Ūkio bankas* bankruptcy procedures**

After the temporary administrator prepared an interim financial report for *AB Ūkio bankas*, a decision was taken on 18 April 2013 to apply to the court on instigating bankruptcy proceeding. Under the Republic of Lithuania Law on Enterprise Bankruptcy and other legal acts regulating bankruptcy proceedings, the creditors of the bank shall have the right, after the initiation of bankruptcy proceedings against *AB Ūkio bankas,* to file their claims to the court-appointed bankruptcy administrator, to be subsequently confirmed by the court and satisfied in accordance with the statutory procedure and fixed order by using the funds received from the sales of *AB Ūkio bankas'* assets. Creditors will also have the right to make claims to the funds recovered from the bank's debtors and other entities for damages caused by their illegal actions. On 12 February 2013, the Prosecutor General's Office announced the beginning of a pre-trial investigation into large-scale asset embezzlement at *AB Ūkio bankas,* referring to the findings of the inspection by the Bank of Lithuania during which allegedly suspicious dealings were made at *AB Ūkio bankas* during the period from 2005 to 2012.

Chart B. Transfer of AB Ūkio bankas' assets, rights, contracts, and liabilities



Sources: AB Ūkio bankas and Bank of Lithuania calculations.
Note: preliminary valuation. Values may not sum to total due to rounding.

Establishing the value of transferred assets

Proper determination of assets value is one of the key factors for splitting the bank. To ensure the interests of all creditors of *AB Ūkio bankas*, the following provisions laid down in the Law on Banks of the Republic of Lithuania and some additional provisions intended to protect the interests of *AB Ūkio bankas'* creditors were included in the agreement on the transfer of *AB Ūkio bankas'* assets, rights, contracts, and liabilities to *AB Šiaulių bankas*.

1) The assets of *AB Ūkio bankas* shall be transferred based on preliminary evaluation performed by UAB KPMG Baltics. To have a more accurate and precise evaluation of the assets and liabilities, a detailed final evaluation of the transferred assets and liabilities shall be made after signing the agreement. In case the final evaluation reveals higher value of the transferred assets compared with the preliminary evaluation, *AB Šiaulių bankas* will have to remunerate to *AB Ūkio bankas*, i.e. to its creditors, the difference in the value determined during the preliminary and final evaluations. The assets of LTL 1.9 billion of *AB Ūkio bankas* were transferred to *AB Šiaulių bankas* with liquid assets (securities and cash) making up the largest share of it.
2) To ensure protection of the financial claims of *AB Ūkio bankas'* creditors, four purchase options were proposed as safeguards for determining the asset value during the transfer of the bank's assets and liabilities. Their purpose was to ensure the right of *AB Ūkio bankas* and the bank's creditors to objective evaluation of assets and fair remuneration for the transferred bank assets. Options offer an opportunity to creditors of *AB Ūkio bankas* to sell four different portfolios of assets (real estate, riskier loans, and assets of *AB Ūkio bankas'* subsidiaries engaged in real estate development and leasing operations, and insurance activities) transferred to *AB Šiaulių bankas* in nine months after signing the agreement. In the event these portfolios are sold at a higher price compared to the price set after the final evaluation, the difference will be paid out to creditors of *AB Ūkio bankas*.
3) In the event that the value of assets transferred to *AB Šiaulių bankas* increases in two years, some of the value increase will have to be paid out to creditors of *AB Ūkio bankas*.

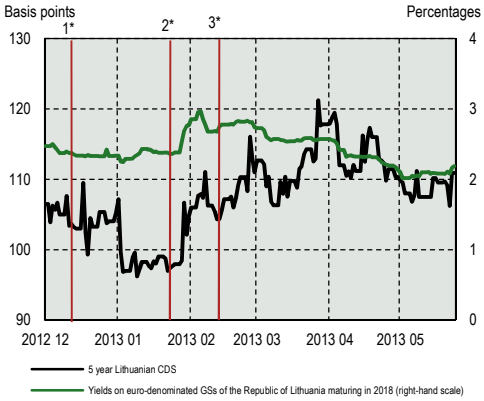
Response of the financial market

The suspension of *AB Ūkio bankas'* activities had no systemic impact on the banking sector because of the amount of liabilities to credit institutions, which made up only LTL 1.7 million. Only a few credit unions had their funds deposited with *AB Ūkio bankas*; other banks had no deposits with this bank. The problems of this bank had insignificant effect on real economy in Lithuania, as the amount of not guaranteed deposits held by companies of Lithuanian residents and households was rather low, amounted to around LTL 160 million. Changes in interbank interest rates and yields on the Lithuanian government securities also show only limited impact on the financial markets.

IMF evaluation

In its annual report about the situation in Lithuania[42], published in March 2013, the IMF gave positive assessment for actions taken by the national authorities to deal with the problems of two insolvent domestic banks and two credit unions. In the opinion of the IMF, decisive actions by the national authorities boosted the overall soundness of the entire financial market. The IMF also noted that the Lithuanian banking sector currently has sufficient reserves of capital and liquid assets.

Chart C. Development of the CDS of the Republic of Lithuania and yields on Lithuania's government securities



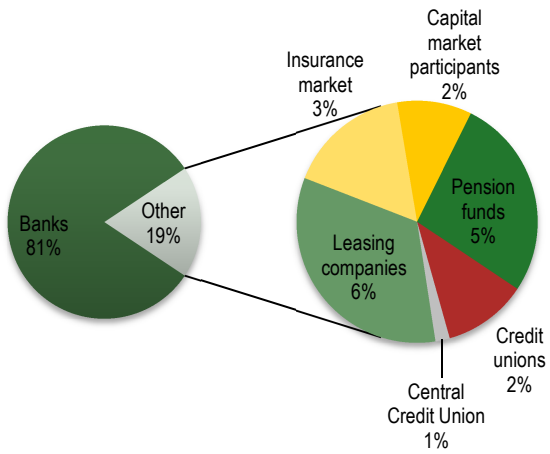
Sources: Bloomberg and Bank of Lithuania calculations.
**1 – moratorium on operations of National Credit Union; 2 – cancelling the licence for Švyturio taupomoji kasa credit union; 3 – moratorium on operations of AB Ūkio bankas.*

[42] IMF Executive Board Concludes 2013 Article IV Consultation with Republic of Lithuania, Public Information Notice (PIN), No. 13/34, March 28, 2013, available online at http://www.imf.org/external/np/sec/pn/2013/pn1334.htm.

Annex 2. Developments of the credit unions sector

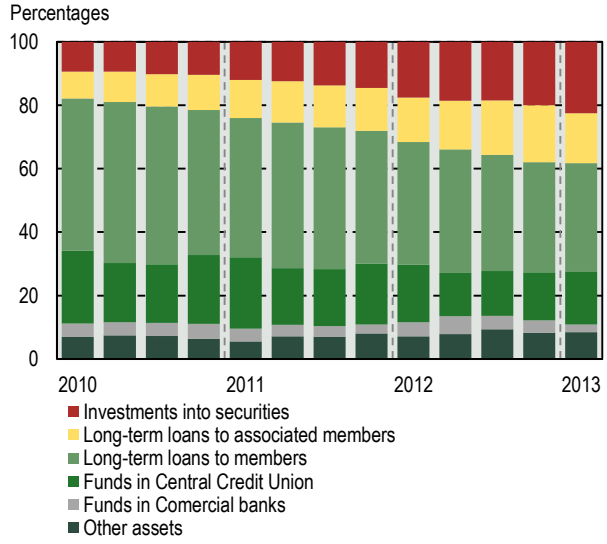
With the start of financial crises and subsequent economic slowdown accelerating development of credit unions raises doubts about long-term sustainability of their activities. The activities of credit unions are based on the idea of cooperation. United by common interest, preferences, and professional interests, community members redistribute their savings among themselves in the form of loans. The cooperative principle means a democratic representation of members of a credit union. Hence, they have the right and duty to participate actively in credit union's activities not only by making economic and commercial decisions, but also by building up prospects of its activities. Equality among the members in taking decisions has to ensure the mechanism of self-regulating and reliable activities at the same time. However, an increasing number of signs imply that the idea of cooperation has not been implemented duly, and that the mechanism of self-regulation, which is characteristic of credit unions, is not working properly. Future prospects are quite often exchanged by shareholders of credit unions for short-term financial benefits, who do not have any long-term operational strategy. In 2012, assets of credit unions, excluding the Central Credit Union of Lithuania, accounted for 2.2 per cent (see Chart A) of the Lithuanian financial system's assets. Over a year assets of credit unions increased by a quarter, i.e. the biggest increase among the participants of the Lithuanian financial system. Considering the above, the annex is to evaluate fast development of credit unions lately and its role in the stability of the Lithuanian financial system.

Chart A. Composition of the Lithuanian financial system in 2012



Sources: Association of Lithuanian banks, AB NASDAQ OMX Vilnius, Statistics Lithuania and Bank of Lithuania calculations.

Chart B. Development of credit unions' asset structure



Source: Bank of Lithuania calculations.

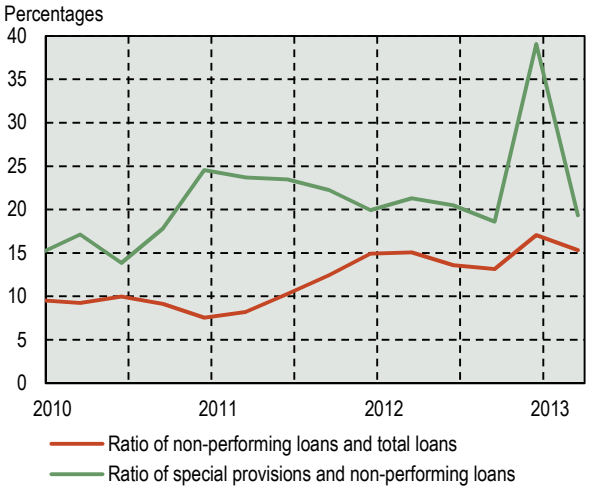
The start of financial crises and subsequent economic slowdown was followed by a decrease in interest rates as many central banks adopted expansionary monetary policy. However, a relatively conservative approach that prevailed at that time led to rather slow recovery of household consumption (and borrowing), as well as increase in savings (with the aim to accumulate reserves for contingency). Having in mind that risk for deposits with banks and credit unions was of the same level (deposits of banks and credit unions are both insured by the government), but the difference in interest rates (return on financial assets) between these two types of deposits is rather large, some individuals rushed to boost their savings in credit unions. Most likely, credit unions are attractive mostly because of high interest rates, as the range of their financial services is relatively limited compared with banks. Consequently, the underlying idea of cooperation in the activities of credit unions seems to be difficult to embody.

Deposits collected from members of credit unions represent the largest share (87.1%) of the financing sources of credit unions. In the first quarter of 2013, deposits in credit unions grew year on year by 14.6 per cent. The biggest impact on their increase had the growth of households' time deposits. As a higher return on financial assets is the major cause of attractiveness of credit unions for mobile depositors, the assumed liquidity (or even default) risks of credit unions increases. Changes in the perception of risk and/or rate of return can lead to the situation in which depositors take their savings back despite of their status of shareholder, which may hamper the ability of credit unions to finance their activities. This is especially relevant for the rapidly growing credit unions, which often attract financial sources at a higher price than other credit unions. It is reasonable to presume that depositors of such credit unions are also more sensitive to unfavourable changes in interest rates; consequently, these credit unions would be the first to face difficulties financing their operations, if interest rates start going down.

Investment trends of credit unions' assets raise concerns. Low bank interest rates supported competitive advantages of credit unions increasing their financial resources; however, trends of acquired assets show the growth of undertaken risk. Although lending to households accounts for the largest share of credit unions' loan portfolio, rapidly growing lending to enterprises, i.e. to associated members of credit unions, indicates that credit unions may undertake risk that can be insufficiently assessed (see Chart B). The long-term sustainability of such a trend in the development of credit unions' assets gives rise to doubts concerning the self-regulation mechanism and adequate assessment of undertaken risk (potential losses). After all, higher income volatility or the use of less liquid instruments to ensure loan repayment is typically characteristic for enterprises. Moreover, credit unions continue to increase lending to domestic market-oriented

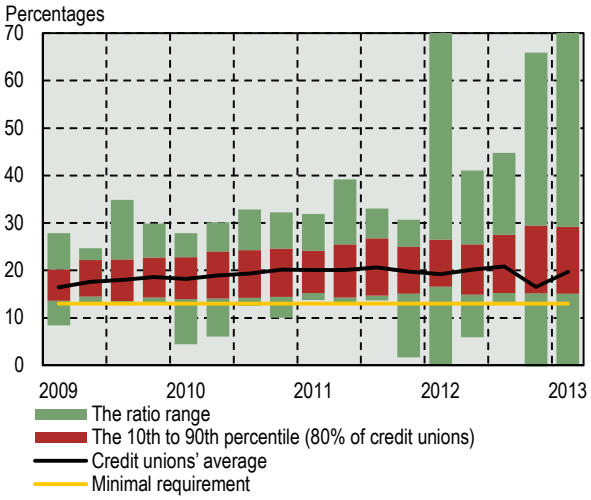
economic activities: Loans to real estate, construction, and commercial companies make up nearly half of the credit unions' loan portfolio to non-financial corporations, and operational results of such companies are highly sensitive to business cycle. The weaker financial situation of the companies engaged in the above economic activities (e.g. the possibilities for real estate and construction companies to repay loans currently are the lowest compared to the companies in other economic activities) can lead to considerably higher losses for credit unions due to decreasing quality of their loan portfolios. Furthermore, a rapid increase of the share of government securities in the structure of credit unions' assets began in 2009, often exceeding the required holdings of liquid funds. On the one hand, increasing share of government securities contributes to the improvement in the liquidity of credit unions and possibilities to properly proceed with their short-term liabilities. On the other hand, the market risk (fluctuation of asset value) is assumed, the co-operative principle is ignored, and yields on government securities sometimes are lower than the price of funds used for their acquisition; consequently, the pressure to incur loss is growing.

Chart C. Development of non-performing loans as a share of the loan portfolio and the ratio of special provisions and non-performing loans



Source: Bank of Lithuania calculations.

Chart D. Development of the capital adequacy ratio of credit unions



Source: Bank of Lithuania calculations.

The assessment of the quality of loan portfolio by credit unions' is too optimistic. Credit unions are not conservative enough in their approach towards credit risks they undertake, thus for potential losses they have formed relatively low provisions. There are two main reasons for this: 1) ability of credit unions to boost their capital and form proper provisions against potential losses are limited; 2) very often their technical and administrative capabilities are not sufficient to make proper risk assessment. Furthermore, with loans twice as expensive compared to bank loans, credit unions are unlikely to attract less risky customers. At the beginning of 2013, the share of non-performing loans in credit unions declined to 15.4 per cent, but the upside trend remained (see Chart C), though the share of non-performing loans in loan portfolios of banks has been decreasing for the last four years. Moreover, the amount of special provisions against potential losses stemming from non-performing loans in credit unions is twice as low compared to banks. The range of non-performing loans and total loans ratio among credit unions is wide, with many of them having this ratio well below the average of the entire sector of credit unions and only in case of few credit unions this ratio compares to banking sector's average.

Persistent period of incurred loses curtail credit unions' possibilities to strengthen their capital base and resilience against adverse developments. Nearly half of all credit unions incurred losses in the first quarter of 2013. The major source of income of credit unions is net interest income, while largely they incur operational expenses, related to increasing wages and the number of staff. Also, the share of the expenses related to impaired loan losses has been gradually increasing. However, credit unions differ from other financial system participants as profit is not the main purpose of their activities. With their operations based on the cooperative principle, credit unions primarily seek to satisfy the saving and borrowing needs of its members, while profits earned are generally used to finance the development of their activities.

Because of relatively inadequate risk management and slow accumulation of provisions against potential losses, credit unions become sensitive even to insignificant adverse changes in the financial market or economy. Some credit unions comply with minimum risk mitigating requirements only with a narrow reserve (see Chart D); but it may turn out that if a proper risk assessment is conducted, these minimum requirements would not be met. The formation of larger provisions against potential losses in some credit unions is hampered by a relatively weak capital base and protracted period of incurred losses. Credit unions could increase their operational profits by focusing on the liquidity management (e.g. in some credit unions the government securities make up to 98% of assets) and being more responsible when estimating the fund raising needs based on potential investment directions. Most likely, some credit unions have only short-term goals oriented into quick financial gain and do not have any long-term and sustainable operational strategy. The main source of financing for such credit unions are mobile depositors searching for short-term gain only, who ignore the cooperative principle, also such a source is sensitive to both interest rates on deposits and developments which have impact on the entire sector of credit unions.

The inspection of credit unions conducted by the Bank of Lithuania at the end of 2012 confirmed doubts about sustained operations of credit unions and increasing demand for stricter prudential measures for them. The Bank of Lithuania has made attempts to strengthen the supervision of these monetary-financial institutions by setting higher minimum prudential requirements and introducing other quality requirements (e.g. an exam for managers of credit unions). For more detailed information please refer to "Strengthening of the resilience of the financial system", the third chapter of the review. In 2013, credit unions will continue to receive increased attention; the Bank of Lithuania will concentrate on the assessment of their activities, sustainable and competitive environment, and the protection of depositors of credit unions as non-professional participants of the financial market.

Annex 3. Integration of the financial market infrastructure

Seeking more efficiency of cross-border payments and settlements for financial instruments in euros in the EU, the integration of the financial market infrastructure (FMI) has been promoted and pursued. The integration of FMI may appear in a few ways. First, building of a single technical platform is one of the most popular ways. Payment system TARGET2, the ESES platform of the Euroclear group[43], and the Eurosystem's project TARGET2-Securities (T2S) are the prime examples. Users of a single technical platform have to implement uniform standards for operational processes and information processing. Second, the standardization of operational processes and information processing is a way for the integration of FMIs itself, creating equal conditions for FMIs activities and interactions between FMIs in a competitive environment. SEPA project is an example of such integration. Competitive conditions are the key factor for higher efficiency. The need of a few FMI operators using a single technical platform arises from a huge amount of fixed expenses for the FMI's operations; accordingly, a few FMIs using the same technical instruments means an increase in the number of transactions which eventually allow reaching a large scale economy.

The integration of FMI may be facilitated by merger of separate FMIs, although it also may lead to the formation of a monopolistic environment. The consolidation runs on the level of ownership of the managers of FMIs. It facilitates the transfer of operations of related FMIs to one technical platform. On a legal level, separate FMIs remain only because of requirements arising from national law systems.[44] However, when competing FMIs or potentially competing FMIs go to the hands of a single entity, there is a risk of market monopolization. Transactions regarding changes in the ownership of the managers of FMIs usually are made after competition authorities issue permits to them.

The integration of FMIs contributes to reducing payment and settlement costs, and provides both more opportunities and more challenges to financial institutions which are the users of FMI. For a financial institution when choosing FMI it is important to assess potential benefits and costs of the implementation of standards. One of the biggest concerns of overseers of FMIs is the oversight of an FMI used by domestic financial institutions when the FMI operates in another country or when a technical platform from another country is used for the FMI's operation. Furthermore, a decision of financial institutions to use other FMI may cause concerns of competent national authorities regarding a newly emerged risk or a decrease of the level of services for customers of financial institutions.

SEPA and T2S, which are related to the integration of FMI, will remain the most relevant projects for financial institutions operating in Lithuania and the Bank of Lithuania in the nearest future. SEPA (*Single Euro Payments Area)* is a single euro payments area, where all cashless retail euro payments are treated as domestic payments regardless of the place of residence of the payer and receiver. SEPA covers all EU Member States, as well as Iceland, Lichtenstein, Norway, Monaco, and Switzerland. It includes the standardization of operation environment, obligations and rights, and technical requirements for using payment instruments (credit transfers, direct debit, payment cards etc.). Following the entry into force of Regulation (EC) No 2560/2001 of the European Parliament and the Council, establishing technical and business requirements for credit transfers and direct debit operations and amending Regulation (EC) No 924/2009 (SEPA Regulation), SEPA credit transfers and direct debit became *de facto* mandatory for all payment service providers in the EU. Euro area countries have to implement the requirements under SEPA Regulation by 1 February 2014, while non-Euro area countries must do it by 31 October 2016 or in one year after the introduction of the euro given that the euro introduction date is prior to 31 October 2015.

The fundamental objective of the TARGET2-Securities (T2S) project is to build up a single technical platform for CSDs to transfer the processing of securities settlements to. The platform will run in accordance to harmonized procedures and allow efficient processing of both domestic and cross-border securities settlements in euro and non-euro/other currencies. Joining T2S project is voluntary and depends on the decision of CSDs to be made after considering potential benefits, costs, and the opinion of market participants.

SEPA

The SEPA implementation decisions became especially relevant for Lithuania after the country decided to seek to introduce the euro in 2015. After the introduction of euro the currently used credit transfers and direct debit[45] in litas will

[43] A group of companies, including central securities depositories from the United Kingdom, Ireland, France, Belgium, the Netherlands, Sweden, and Finland, which are operating as a central securities depository.

[44] For example, securities issued in an individual country may be registered only with the CSD founded in that country. Therefore this country has a central securities depository operating in it, although the depository may share technical instruments with the CSDs from other countries. However, a regulation on the operations of CSDs at EU level is to be adopted for the issuers to be allowed to choose a CSD for the registration of securities issues.

[45] Interbank direct debit, debit transfers when making payments for agricultural production or based on executive documents.

have to be replaced by analogous SEPA instruments. Moreover, the activities of the payment system LITAS-MMS operated by the Bank of Lithuania for retail payments in litas will be terminated or will have to be restructured to meet SEPA requirements. The implementation of SEPA creates a possibility for payment service providers to choose the most acceptable method to initiate SEPA payments to other payment service providers in the EU and receive such payments from them. Such methods could include direct or indirect participation in an FMI which executes clearing of SEPA payments (hereinafter referred to as SEPA clearing house) or correspondent relations with one or a few banks having access to the SEPA clearing house. Such SEPA clearing houses will compete among them for attracting more participants and more intensive payment flow. At a national level, each bank may choose the method for making SEPA payments on its own or take a joint decision on using SEPA clearing house together. Such SEPA clearing house may also be in another country. It means that national FMIs for retail payments may cease its operations. It happened already in Luxembourg and is expected soon to be the case in Finland.

A decision of banks operating in one country to process SEPA payments by using different methods may have a negative impact on the level of payments processing services. The number of interbank payments in national currency within one country is higher than the number of payments made to other countries; therefore, with most of the banks using the same SEPA clearing house the service level depends only on the clearing houses and the readiness of banks to use them. Most of banks and foreign bank branches operating in Lithuania have their parent or headquarter banks in Scandinavian countries. Hence, their choice may depend on the policy of the parent or headquarter bank. If after the introduction of euro most of the banks in Lithuania were processing payments by using different methods (via parent or headquarter banks), it could be difficult to keep the payment service level not lower compared to the currently existing when domestic payments are made in litas. This issue has been included into the agenda for the preparation for the SEPA. The Bank of Lithuania seeks SEPA implementation to not have negative impact on the level of providing payment services to individuals and businesses in Lithuania.

Creating a national SEPA clearing house could be one of the ways to preserve the existing payment service level; but such clearing house will operate in a competitive environment. Lithuanian banks with parent banks and foreign bank branches, and also domestic banks without parent banks and small payment service providers (credit unions, payment and electronic money institutions) will have a possibility to choose a method for processing SEPA payments in the entire EU. Their choice will depend not only on the offered service level, but also on financial conditions for payment processing. When taking the decision on the need to create a SEPA clearing house, the Bank of Lithuania will take into account the conditions it can offer and possibilities to survive in this competitive environment.

The format of the FMI oversight will depend on the SEPA payments processing methods to be chosen by Lithuanian market participants. The oversight of national SEPA clearing house would be continued based on the existing FMI oversight practice. In case Lithuanian market participants use SEPA clearing houses operating in any other country, the Bank of Lithuania will take part in their joint oversight, for which good international practice already has been formed and experience has already been accumulated. If a huge flow of SEPA payments, which includes domestic and cross-border payments[46], was processed by using correspondent relations, i.e. via parent banks and other banks providing this type of services, the oversight of FMIs would be more complicated. It should be focused on the reliability and efficiency of correspondent relations and reliability of correspondent banks. SEPA clearing houses used by correspondent banks and links between them would also be subject to oversight. Key issues to be faced by the Bank of Lithuania, when performing the oversight of such a scheme, would be dealing with receiving information and the possibility to make an influence.

TARGET2-Securities

The T2S project, together with the new regulation of activities of CSDs[47] at the EU level will create grounds for fiercer competition within the securities settlement market. The core of the T2S project is a single technical platform to be used by many CSDs in Europe and to be accessed by participants of these CSDs. To ensure smooth operation of the T2S platform many technical components have to be standardized and operational practices harmonized. A single technical environment will also facilitate the building of links between CSDs.[48] Along with the provisions on the regulation on CSDs this will provide the possibility for competition among CSDs by attracting other participants of CSDs who, due to uniform standards, will actually experience no additional costs for transition to another CSD.

The connectivity to the T2S platform price has to be paid by both the connecting CSDs and market participants, although the benefits will mostly be indirect and difficult to estimate. Costs are easier to estimate, as the largest share of them is related to the preparation of technical instruments necessary for the connection. In addition, the adoption of standards and new market practice would have their price as well. Because of a small number of settlements, connection costs and their payback is a very sensitive issue to CSDs and market participants in small markets, including Lithuania. However, using the same technical platform as major market participants and operating in accordance with the same standards, the settlement costs for participants from other countries, investing into securities held in Lithuania's CSD, will

[46] The breakdown of SEPA payments into domestic and cross-border payments is conditional. In applying SEPA, such a breakdown would not be used. However, given that domestic payments are payments between banks of one country, they may be executed in the SEPA area via correspondent banks in other countries, and these banks may use different SEPA clearing houses.

[47] On March 2012, the European Commission put forward a proposal concerning the regulation of the European Parliament and the Council on improving securities settlement in the European Union and on CSDs, amending Directive 98/26/EC. This regulation is expected to be adopted until the end of 2013.

[48] An interface between CSDs is an entirety of legal and technical instruments, which creates the environment for processing securities settlements between participants of these CSDs.

go down. Separated from the European securities settlement infrastructure, the Lithuanian securities market, with its specific standards may lose potential investors in the competition with other similar size markets connected to T2S. Even though it is very difficult to evaluate the indirect benefits of being connected to T2S and potential losses of not being connected, the Lithuanian CSD took the decision to join the project.

After the Lithuanian CSD is connected to T2S, changes will occur in the oversight of the Lithuanian securities settlements infrastructure. With many CSDs using the same technical platform, the authorities responsible for oversight conduct the so-called joint oversight. The work for organising the joint oversight of T2S has already began following the initiative of the ECB, with the oversight to be focused on aspects related to the operation of the T2S platform. Some of the issues related to the securities settlement are within the competence of the securities market supervising authorities; the ECB and ESMA therefore are to take the leading role in the oversight of T2S. The Bank of Lithuania will participate in joint oversight of T2S, and will perform independent oversight of the securities settlement outside of T2S.

Annex 4. Key financial stability indicators

(percentages)

Financial stability indicators	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Capital adequacy										
Capital adequacy[1, 2]	13.3	12.4	10.3	10.8	10.9	12.9	14.2	15.6	13.9	14.4
Tier 1 capital adequacy[1, 2]	11.1	10.2	8.9	7.8	7.7	10.2	10.4	11.6	12.0	13.7
Capital-to-assets ratio [1]	10.5	9.5	7.9	7.6	7.9	9.2	7.9	8.9	10.7	11.7
Asset quality										
Ratio of non-performing loans to total loans (excluding interbank loans)[3]	10.1	9.2	–2.5	0.7	2.9	...	...	...	...	...
o/w loans to businesses[3]	...	...	0.57	1.04	1.18	...	...	...	...	...
o/w loans for house purchase[3]	...	...	0.57	0.54	0.60	...	...	...	...	...
o/w consumer loans[3]	...	...	1.37	1.90	1.49	...	...	...	...	...
Ratio of non-performing loans to total loans (excluding interbank loans)[4]	...	...	...	...	...	4.55	19.29	19.67	16.27	13.09
o/w loans to businesses	...	...	...	...	...	5.64	26.17	25.46	20.51	15.88
o/w loans for house purchase	...	...	...	...	...	1.94	5.64	8.09	8.56	8.04
o/w consumer loans	...	...	...	...	...	5.23	13.84	19.70	16.45	15.56
Ratio of impaired loans to total loans (excluding interbank loans)[4]	...	...	...	...	...	3.41	15.77	16.72	13.77	10.96
o/w loans to businesses	...	...	...	...	...	4.37	21.99	22.50	18.14	14.01
o/w loans for house purchase	...	...	...	...	...	1.31	3.94	5.70	5.99	5.64
o/w consumer loans	...	...	...	...	...	2.66	6.44	10.70	10.96	10.16
Ratio of non-impaired loans overdue for more than 60 days to total loans (excluding interbank loans)[4]	...	...	...	...	...	1.14	3.53	2.95	2.50	2.12
o/w loans to businesses	...	...	...	...	...	1.27	4.18	2.96	2.38	1.87
o/w loans for house purchase	...	...	...	...	...	0.63	1.70	2.38	2.57	2.41
o/w consumer loans	...	...	...	...	...	2.57	7.40	9.00	5.49	5.40
Ratio of loan impairement losses to total loans (excluding interbank loans)[5, 6]	0.81	0.86	0.89	0.89	0.74	1.20	7.16	7.92	6.87	5.34
o/w loans to businesses[6]	...	...	1.03	1.07	0.89	1.46	9.71	10.19	9.02	6.49
o/w loans for house purchase[6]	...	...	0.22	0.23	0.30	0.41	1.81	3.03	3.28	3.10
o/w consumer loanss[6]	...	...	1.62	1.51	1.18	2.44	7.58	11.74	11.74	10.00
Ratio of loan impairement losses and non-performing loans [2, 3, 5, 6]	33.8	39.9	146.5	92.5	72.2	26.5	37.1	40.6	40.6	40.8
Income and profitability										
Return on equity [1, 7]	13.37	13.52	13.58	20.29	25.93	13.54	–48.42	–4.72	15.23	8.71
Return on assets [7]	1.26	1.20	1.04	1.32	1.71	1.01	–4.23	–0.34	1.38	0.99
Ratio of net interest income to total income	46.3	48.1	50.8	52.0	55.8	62.2	50.4	49.5	58.0	52.9
Ratio of profit (loss) on sale of securities and foreign exchange operations to total income	10.8	8.6	8.3	9.0	8.1	3.2	14.1	8.1	4.8	9.6
Ratio of staff costs to total non-interest expenses	41.0	40.5	41.2	41.4	43.6	42.4	39.8	38.7	41.1	39.8
Liquidity										
Liquidity ratio (ratio of liquid assets to current liabilities)[8]	42.4	41.7	42.9	41.9	43.5	39.0	49.9	42.8	44.1	40.8
Ratio of liquid assets to total assets [8]	27.7	28.3	26.9	24.1	21.9	18.6	23.7	24.1	24.4	25.3
Ratio of current liabilities to total liabilities [7]	72.4	74.2	67.5	61.9	54.2	51.4	50.5	60.8	60.8	68.5
Three-month VILIBOR and EURIBOR spread, basis points[9]	59	49	5	7	230	700	320	49	30	49
Ratio of deposits to total loans (excluding interbank loans)	107.6	102.5	88.2	77.8	66.4	53.5	66.9	77.9	79.9	82.5
Ratio of short-term liabilities to banks to total liabilities to banks [10]	81.8	70.7	60.3	51.0	37.0	39.8	41.1	42.5	33.9	47.4
Assets										
Ratio of loans (excluding interbank loans) to assets	60.6	64.0	67.3	70.9	74.1	79.6	72.8	71.4	68.4	71.2
Ratio of loans to households to total loans (excluding interbank loans)	18.0	23.8	28.3	35.2	39.2	40.0	43.9	42.9	43.5	43.1
Ratio of loans to non-financial corporations to total loans (excluding interbank loans)	64.9	59.1	51.7	53.3	51.3	52.3	50.4	47.7	46.5	45.4
Ratio of debt securities to assets	14.6	11.4	11.4	11.4	9.1	6.7	9.2	10.0	7.2	7.0
Ratio of government debt securities to assets	11.9	9.3	7.9	8.4	4.4	3.2	5.9	6.8	4.5	4.8
Ratio of government debt securities to total securities	81.2	82.2	69.7	73.7	48.0	47.8	64.0	68.2	62.4	68.3
Ratio of loans to non-residents to total loans (excluding interbank loans)	2.2	1.0	1.4	1.8	2.0	2.3	3.1	4.1	1.4	0.7

Financial stability indicators	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
Liabilities										
Ratio of liabilities to assets	90.2	91.3	92.8	92.9	92.7	92.4	94.0	92.8	91.3	90.5
Ratio of deposits to total liabilities	72.3	71.9	64.0	59.4	53.1	46.1	51.8	60.0	60.0	64.9
Ratio of resident deposits to total deposits	93.9	92.4	90.6	91.3	91.3	94.6	94.7	93.6	95.6	96.2
Ratio of household deposits to total deposits	54.9	51.3	51.7	55.0	56.9	63.1	60.3	57.4	58.2	55.9
Ratio of deposits of private non-financial corporations to total deposits	31.4	33.6	36.1	32.3	31.0	27.7	27.7	29.5	33.0	34.0
Ratio of liabilities to banks to total liabilities	22.8	22.5	30.6	32.5	37.7	47.0	40.8	33.7	33.5	30.3
Ratio of liabilities to banks of the parent bank group to total liabilities to banks	...	...	78.9	88.3	92.6	94.7	95.4	92.0	94.4	95.4
Ratio of liabilities to banks of the parent bank group to total liabilities	...	...	24.1	28.7	34.9	44.5	39.0	30.9	31.6	28.9
Ratio of liabilities to banks of the parent bank group to total liabilities to non-residents	...	...	66.1	71.5	77.0	85.3	84.3	77.1	82.4	84.3
Assets and liabilities of non-residents										
Ratio of non-residents' assets to total assets	11.0	15.6	16.1	16.5	14.8	11.9	17.4	16.9	14.2	13.8
Ratio of non-residents' liabilities to total assets	25.1	26.1	33.9	37.3	42.0	48.3	43.5	37.2	35.0	31.0
Ratio of net non-residents' liabilities to assets	14.1	10.6	17.8	20.8	27.2	36.4	26.1	20.4	20.8	17.2
Foreign exchange rate risk										
Ratio of foreign currency denominated assets to total assets [11]	49.1	57.2	61.7	55.9	57.3	64.5	72.9	71.2	65.9	65.2
Ratio of foreign currency denominated loans to total loans (excluding interbank loans) [11]	54.6	58.3	65.8	52.8	55.6	64.6	73.9	74.0	72.4	72.4
Ratio of foreign currency denominated liabilities to total liabilities [11]	46.0	45.5	51.6	51.9	56.2	63.3	61.6	57.0	53.1	50.9
Ratio of foreign currency denominated deposits to total deposits [11]	29.8	30.0	33.3	27.0	26.6	29.0	34.0	33.5	29.2	29.2
Ratio of net open position in foreign currency to regulatory capital [1, 2]	10.80	–1.88	–0.96	–1.39	–2.43	0.39	0.84	0.44	0.62	0.35

Source: Bank of Lithuania calculations.

Notes: 1) The indicators were calculated based on individual supervisory financial statements of banks (i.e. statements consolidated on international and cross-sectorial levels have not been used) and cover all the banks operating in the country and foreign bank branches, unless otherwise stated; 2) from early 2008, financial data have been compiled using EU FINREP statements. This may have an impact on the value of some indicators. It must be taken into account when a longer time series is analysed; 3) a short-term period is a period of up to one year; 4) 2012 – excluding data of AB Ūkio bankas.*

[1] Excluding foreign bank branches.
[2] Based on the Rules for the Calculation of Capital Adequacy approved by Resolution No. 138 of 9 November 2006 of the Board of the Bank of Lithuania.
[3] From the end of 2005 to 2008, non-performing loans were defined as loans with regular payments overdue for more than 60 days (this indicator is also used to cover impaired loans overdue for more than 60 days.)
[4] Starting from June 2008, non-performing loans are defined as the sum of the impaired loans (for which specific provisions are made) and those non-impaired loans that are overdue more than 60 days. The new definition of non-perferming loans is not comparable with the previous one.
[5] Up to 2004, special provisions cover provisions against general portfolio risks.
[6] Special provisions cover provisons against assets measured on consolidated and individual basis.
[7] Net profit (loss).
[8] Definitions of liquid assets and current liabilities are available in the Rules for the Calculation of Liquidity Ratio as approved by Resolution No. 1 of 29 January 2004 of the Board of the Bank of Lithuania.
[9] End-of-period data.
[10] Up to the end of 2007 the indicator covers funds from banks and other financial corporations. From 2000 to 2007, funds from financial corporations and funds from banks and financial corporations declined from 10 to 3 per cent.
[11] The major share of loans and liabilities denominated in foreign currency is in euro. Foreign exchange risk should be assessed taking into account the currency board regime and the fixed litas and euro exchange rate.

Annex 5. Key performance indicators of non-financial corporations

(percentages)

Economic activity[1]	Profitability[2]		Share of profitable corporations[3]		Financial leverage[4]		Debt servicing capacity[5]		Bankruptcy probability[6]	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Forestry and fishing	8.3	6.8	72.5	66.6	29.8	29.0	416.6	334.1	3.8	4.2
Mining and quarrying	31.1	16.5	72.1	62.5	108.5	88.1	70.7	60.6	0.0	0.0
Manufacturing	3.7	3.3	67.0	67.1	93.0	95.4	57.7	55.2	2.6	3.0
Energy supply	1.5	3.1	51.1	50.1	38.8	51.4	73.1	59.9	0.0	0.3
Water supply	3.0	3.2	48.3	43.9	36.2	35.5	73.2	83.9	1.9	1.8
Construction	1.3	2.9	53.0	55.2	148.5	121.2	19.8	35.5	4.4	4.3
Wholesale and retail trade	2.8	2.7	67.0	66.4	143.3	145.3	43.9	45.8	2.0	2.1
Transport and storage	6.4	5.7	67.9	67.1	58.5	55.4	87.9	94.5	2.6	2.1
Accommodation and catering	4.4	3.1	52.6	51.4	201.8	213.9	17.2	15.3	3.8	4.1
Information and communication	10.3	9.3	61.9	62.4	63.7	69.9	78.9	77.1	1.4	0.9
Real estate operations	16.8	21.5	50.0	58.0	127.5	133.3	13.2	12.2	2.2	1.6
Professional. scientific and technical activities	32.2	35.0	60.6	62.3	20.4	15.0	58.7	90.7	1.3	1.1
Education	7.9	–0.6	59.5	49.5	40.6	45.7	177.2	58.5	0.8	1.4
Total	**4.4**	**4.3**	**61.6**	**62.1**	**71.7**	**71.9**	**45.3**	**46.2**	**2.5**	**2.5**

Sources: Department of Enterprise Bankruptcy Management under the Ministry of Economy, Statistics Lithuania, and Bank of Lithuania calculations.

[1] Names of some economic activities are abbreviated.
[2] Ratio of profit before taxes to sales during the period.
[3] The share of profitable corporations in the total number of corporations on average per annum.
[4] Ratio of liabilities to equity at the end of period.
[5] Ratio of profit before taxes, amortization and depreciation during the period to financial debts at the end of the period.
[6] Ratio of the number of initiated bankruptcy procedures during the year to the number of corporations at the end of the period.

Annex 6. Net financial assets of Lithuania's economy

(Q4 2012; the figure in brackets shows the change compared to the Q4 2011; LTL billions)

	Net financial assets												
	Non-financial corporations	Central bank	Other monetary financial institutions	Other financial intermeidaries[1]	Financial auxiliaries	Insurance corporations[2]	Central government	Local government	Social security funds	Households	Non-profit institutions	Other parties	Total
Non-financial corporations		–3.6 (0.8)	16.1 (0.6)	7.3 (0.6)	0.2 (0.1)	–0.4 (–0.1)	11.5 (–0.1)	2.8 (–0.1)	0.6 (0.0)	35.3 (1.0)	0.1 (0.0)	28.6 (3.3)	98.5 (6.2)
Central bank	3.6 (–0.8)		5.9 (–1.7)	0.0 (0.0)	0.0 (0.0)		5.5 (2.1)			6.7 (1.4)		–20.9 (–0.8)	0.9 (0.2)
Other monetary financial institutions	–16.1 (–0.6)	–5.9 (1.7)		–4.1 (–0.6)	4.6 (–0.1)	0.3 (0.0)	–2.4 (0.2)	–1.5 (–0.2)	–0.9 (0.0)	3.6 (3.0)	0.5 (0.0)	23.8 (–2.5)	1.9 (0.9)
Other financial intermediaries[1]	–7.3 (–0.6)	0.0 (0.0)	4.1 (0.6)		0.0 (0.0)	0.2 (0.0)	–0.1 (0.0)	0.0 (0.0)		–0.1 (0.2)	0.0	0.3 (–1.4)	–2.9 (–1.1)
Financial auxiliaries	–0.2 (–0.1)	0.0 (0.0)	–4.6 (0.1)	0.0 (0.0)		0.0 (0.0)	2.0 (–0.3)			2.3 (–0.8)		0.0 (0.1)	0.4 (–1.0)
Insurance corporations[2]	0.4 (0.1)		–0.3 (0.0)	–0.2 (0.0)	0.0 (0.0)		–2.1 (–0.5)		0.0 (0.0)	7.3 (1.1)	0.0 (0.0)	–4.7 (–0.6)	0.4 (0.2)
Central government	–11.5 (0.1)	–5.5 (–2.1)	2.4 (–0.2)	0.1 (0.0)	–2.0 (0.3)	2.1 (0.5)		–0.2 (0.0)	–8.4 (–2.3)	3.5 (0.6)	0.0 (0.0)	40.5 (9.1)	20.9 (6.0)
Local government	–2.8 (0.1)		1.5 (0.2)	0.0 (0.0)			0.2 (0.0)		–0.1 (0.0)			0.1 (0.0)	–1.2 (0.3)
Social security funds	–0.6 (0.0)		0.9 (0.0)			0.0 (0.0)	8.4 (2.3)	0.1 (0.0)		0.3 (–0.3)			9.2 (2.0)
Households	–35.3 (–1.0)	–6.7 (–1.4)	–3.6 (–3.0)	0.1 (–0.2)	–2.3 (0.8)	–7.3 (–1.1)	–3.5 (–0.6)		–0.3 (0.3)			–1.7 (–0.2)	–60.6 (–6.5)
Non-profit institutions[3]	–0.1 (0.0)		–0.5 (0.0)	0.0 (0.0)		0.0 (0.0)	0.0 (0.0)					0.0 (0.0)	–0.6 (0.0)
Other parties	–28.6 (–3.3)	20.9 (0.8)	–23.8 (2.5)	–0.3 (1.4)	0.0 (–0.1)	4.7 (0.6)	–40.5 (–9.1)	–0.1 (0.0)		1.7 (0.2)	0.0 (0.0)		–65.9 (–7.1)
Total	–98.5 (–6.2)	–0.9 (–0.2)	–1.9 (–0.9)	2.9 (1.1)	0.4 (1.0)	–0.4 (–0.2)	–20.9 (–6.0)	1.2 (–0.3)	–9.2 (–2.0)	60.6 (6.5)	0.6 (0.0)	65.9 (7.1)	

Source: Bank of Lithuania calculations.

[1] Other financial intermediaries, excluding insurance corporations and pension funds.

[2] Insurance corporations and pension funds.

[3] Non-profit institutions serving households.

Note: a positive figure shows how much net financial assets the sub-sector indicated in the column (financial assets exceed financial liabilities) has in the subsector shown in the row, and a negative figure shows net financial liabilities (financial assets are lower than financial liabilities). For example, in the fourth quarter of 2012, financial assets of households in other monetary financial institutions (basically in commercial banks and credit unions) exceeded their liabilities by LTL 3.6 billion (i.e., households held net financial assets in other financial institutions), while net financial assets held by non-financial enterprises in other monetary financial institutions were negative. i.e., financial liabilities of corporations exceeded their financial assets in other monetary financial institutions.

Annex 7. Financial system of Lithuania

	2009					2010					2011					2012				
	number	assets				number	assets				number	assets				number	assets			
		LTL millions	Share, %	Annual change, %	Compared to GDP %		LTL millions	Share, %	Annual change, %	Compared to GDP %		LTL millions	Share, %	Annual change, %	Compared to GDP %		LTL millions	Share, %	Annual change, %	Compared to GDP %
Banks	**17**	**84,240**	**82.7**	**–6.1**	**91.5**	**20**	**81,707**	**82.9**	**–3.0**	**85.7**	**20**	**78,971**	**82.6**	**–3.4**	**74.2**	**20**	**74,259***	**80.5***	**-6.0***	**65.6***
Banks. excluding foreign bank branches	**9**	**69,065**	**67.8**	**–6.3**	**75.0**	**9**	**66,533**	**67.5**	**–3.7**	**69.8**	**8**	**63,542**	**66.5**	**–4 .5**	**59.7**	**8**	**58,280***	**63.2***	**-8.3***	**51.5***
Foreign bank branches	**8**	**15,175**	**14.9**	**–5.5**	**16.5**	**11**	**15,174**	**15.4**	**0.0**	**15.9**	**12**	**15,429**	**16.1**	**1.7**	**14.5**	**12**	**15,979**	**17.3**	**3.6**	**14.1**
Credit unions	**67**	**933**	**0.9**	**17.4**	**1.0**	**68**	**1,277**	**1.3**	**36.9**	**1.3**	**74**	**1,629**	**1.7**	**27.5**	**1.5**	**77**	**2,058**	**2.2**	**26.4**	**1.8**
Centrral credit union	**1**	**205**	**0.2**	**49.4**	**0.2**	**1**	**310**	**0.3**	**51.3**	**0.3**	**1**	**355**	**0.4**	**14.2**	**0.3**	**1**	**370**	**0.4**	**4.4**	**0.3**
Leasing companies	**9**	**8 437**	**8.3**	**–25.6**	**9.2**	**9**	**6,584**	**6.7**	**–22.0**	**6.9**	**10**	**6,035**	**6.3**	**–8.3**	**5.7**	**10**	**5,814**	**6.3**	**-3.7**	**5.1**
Insurance market	**15**	**3,340**	**3.3**	**–1.8**	**3.6**	**13**	**2,783**	**2.8**	**–16.7**	**2.9**	**11**	**2,819**	**3.0**	**1.3**	**2.7**	**11**	**2,987**	**3.2**	**6.0**	**2.6**
Life insurance companies	**6**	**1, 850**	**1.8**	**20.4**	**2.0**	**5**	**1,277**	**1.3**	**–31.0**	**1.3**	**5**	**1,562**	**1.6**	**22.3**	**1.5**	**5**	**1,778**	**1.9**	**13.8**	**1.6**
Non-life insurance companies	**9**	**1,489**	**1.5**	**–20.1**	**1.6**	**8**	**1,506**	**1.5**	**1.1**	**1.6**	**6**	**1,257**	**1.3**	**–16.6**	**1.2**	**6**	**1,209**	**1.3**	**-3.8**	**1.1**
Capital marke participants	**126**	**1,424**	**1.4**	**43.3**	**1.6**	**127**	**1,993**	**2.0**	**40.0**	**2.1**	**117**	**1,622**	**1.7**	**–18.6**	**1.5**	**122**	**1,842**	**2.0**	**13.6**	**1.6**
Financial brokerage companies	**10**	**41**	**0.0**	**–23.8**	**0.0**	**9**	**40**	**0.0**	**–3.4**	**0.0**	**10**	**29**	**0.0**	**–27.3**	**0.0**	**10**	**25**	**0.0**	**-14.0**	**0.0**
Management companies	**13**	**77**	**0.1**	**–6.2**	**0.1**	**12**	**83**	**0.1**	**6.9**	**0.1**	**14**	**76**	**0.1**	**–8.7**	**0.1**	**14**	**78**	**0.1**	**3.3**	**0.1**
Open-ended investment companies	**35**	**447**	**0.4**	**15.6**	**0.5**	**38**	**601**	**0.6**	**34.6**	**0.6**	**30**	**512**	**0.5**	**–14.8**	**0.5**	**33**	**641**	**0.7**	**25.2**	**0.6**
Foreign collective investment undertakings	**68**	**858**	**0.8**	**82.5**	**0.9**	**68**	**1,269**	**1.3**	**48.0**	**1.3**	**63**	**1,005**	**1.1**	**–20.8**	**0.9**	**65**	**1,098**	**1.2**	**9.3**	**1.0**
Pensiion funds	**38**	**3,342**	**3.3**	**44.6**	**3.6**	**38**	**3,955**	**4.0**	**18.4**	**4.2**	**39**	**4,175**	**4.4**	**5.6**	**3.9**	**39**	**4,917**	**5.3**	**17.8**	**4.3**
2nd pillar pension funds	**29**	**3,262**	**3.2**	**45.0**	**3.5**	**29**	**3,856**	**3.9**	**18.2**	**4.1**	**30**	**4,081**	**4.3**	**5.8**	**3.8**	**30**	**4,808**	**5.2**	**17.8**	**4.3**
3rd pillar pension funds	**9**	**80**	**0.1**	**30.5**	**0.1**	**9**	**99**	**0.1**	**24.8**	**0.1**	**9**	**94**	**0.1**	**–5.3**	**0.1**	**9**	**109**	**0.1**	**15.7**	**0.1**
FINANCIAL SYSTEM	**273**	**101 919**	**100.0**	**-6.3**	**110.7**	**276**	**98,610**	**100.0**	**–3.3**	**103.5**	**272**	**95,605**	**100.0**	**–3.1**	**89.9**	**280**	**92,247***	**100.0**	**–3.5***	**81.5***
Securities capitalisation	**—**	**14,906**	**—**	**24.2**	**16.2**	**—**	**18,816**	**—**	**26.2**	**19.7**	**—**	**15,462**	**—**	**–17.8**	**14.5**	**—**	**16,195**	**—**	**4.7**	**14.3**
Listed shares	**—**	**11,116**	**—**	**23.5**	**12.1**	**—**	**14,570**	**—**	**31.1**	**15.3**	**—**	**10,839**	**—**	**–25.6**	**10.2**	**—**	**10,329**	**—**	**–4.7**	**9.1**
Listed debt securities	**—**	**3 790**	**—**	**26.5**	**4.1**	**—**	**4,246**	**—**	**12.0**	**4.5**	**—**	**4,623**	**—**	**8.9**	**4.4**	**—**	**5,865**	**—**	**26.9**	**5.2**

Spurces: ISC, LSC, Association of Lithuanian Banks. AB NASDAQ OMX Vilnius. Statistics Lithuania, and Bank of Lithuania calculations.

* Excluding data for *AB Ūkio bankas*.

GLOSSARY

Collateral: (e.g. by **credit institutions** to central banks) pledged and otherwise transferred assets which serve as a guarantee for a loan repayment, as well as a **guarantee** (e.g. of credit institutions) for a redemption of assets sold (e.g. to central banks) under repo deals.

Credit institution: i) a company, which is to receive deposits and other repayable funds from the public and to grant credits for its own account; or ii) a company or any other legal person, other than those referred to the point i that issue payment instruments as electronic money.

Credit risk: the risk that a counterparty will not settle the full value of an obligation — neither when it becomes due, nor at any time thereafter. Credit risk includes replacement cost risk and principal risk, as well as the risk of the failure of the settlement bank.

Debt security: a promise on the part of the issuer (the borrower) to make one or more payment(s) to the holder (the lender) on a specified future date or dates. Such securities usually carry a specific rate of interest (the coupon) and/or are sold at a discount to the amount that will be repaid at maturity. Debt securities issued with an original maturity of more than one year are classified as long-term.

EURIBOR (euro interbank offered rate): the rate at which a prime bank is willing to lend funds in euro to another prime bank, The EURIBOR is calculated daily for interbank deposits with a maturity of one week and one to 12 months as the average of the daily offer rates of a representative panel of prime banks, rounded to three decimal places.

European Systemic Risk Board (ESRB): independent EU body responsible for ES macro-prudential oversight. The ESRB contributes to the prevention or mitigation of systemic risks to financial stability in the Union that arise from developments within the financial system. It takes into account macroeconomic developments, so as to avoid periods of widespread financial distress.

Financial stability: a condition in which the financial system, comprising financial intermediaries, markets and market infrastructures, is capable of withstanding shocks and the consequences of financial imbalances and in which the likelihood of disruptions in the financial intermediation process, which are severe enough to significantly impair the allocation of savings to profitable investment opportunities, is low.

General government: central, regional and local government authorities as well as social security funds. Excluded are government-owned entities that conduct commercial operations, such as public enterprises.

General government debt: total gross debt at nominal value at the end of the year, consolidated between the public sector.

Gross domestic product (GDP): a measure of economic activity, namely the value of an economy's total output of goods and services, less intermediate consumption, plus net taxes on products and imports, in a specified period, GDP can be broken down by output, expenditure or income components. The main expenditure aggregates that make up GDP are household final consumption, government final consumption, gross fixed capital formation, changes in inventories, and imports and exports of goods and services (including intra-euro area trade).

Insurance policy-holder: a person who has applied to an insurrer for making an insurance agreement or who has been offered by an insurer to make an insurance agreement, or who has made an insurance agreement with an insurer.

Insurer: a person that has the right to engage in insurance acts.

LITAS-MMS (payment system): the payment system for making retail payments. The system was launched on 29 January 2007. It is maintained and operated by the Bank of Lithuania.

LITAS-RLS (real-time settlement system): the real-time payment system operating since 29 January 2007. The system is maintained and operated by the Bank of Lithuania, LITAS-RLS participants — Lithuanian commercial banks operating in Lithuania and many foreign bank branches, LITAS-RLS operates each day, with the exception of holidays set out in the legal acts of the Republic of Lithuania, Credit transfers are accepted to the system from 7:45 and processed until 16:00.

MFIs (monetary financial institutions): these include the Eurosystem, resident credit institutions (as defined in EU law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The later group is mostly composed of **money market funds** investing in short-term and low-risk instruments with maturity of one year and below.

Securities settlement system (SSS): a system which allows the transfer of securities, either free of payment (FOP) or against payment (delivery versus payment).

Systemic risk: the risk that can impair the functioning of the financial system by considerably negatively affecting financial stability and impairing economic growth. that the inability of one participant to meet its obligations in a system will cause other participants to be unable to meet their obligations when they become due, potentially with spillover effects (e,g, significant liquidity or credit problems) threatening the stability of or confidence in the financial system. That inability to meet obligations can be caused by operational or financial problems.

VILIBOR (Vilnius Interbank Offered Rate): an average interbank interest rate for which Lithuanian commercial banks are willing (ready) to lend funds in litas to other banks. The Bank of Lithuania calculates the VILIBOR index based on the quotes (lending interest rates) published by domestic commercial banks. Calculated and announced are overnight, one week, two weeks, one month, three months, six months, and one year VILIBOR, VILIBOR is computed on the basis of the mentioned maturity interest rates announced by no less than five banks. These banks have to perform operations within the interbank deposit and loan market and be its major participants. Each maturity VILIBOR is calculated in the following way: the highest and lowest interest rates of a respective term are excluded from the calculation, and the arithmetic average of the rest interest rates of a respective maturity is derived.