

AN ASSESSMENT AND MANAGEMENT OF CREDIT RISK IN BALTIC STATES' BANKS

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Abstract

Recently rapid development of the Baltic States was evidently influenced by the increase of lending rate. In such conditions especially actual is the evaluation of the banks' credit risk and the commercial banks stability.

The aim of the research is to examine the aspects of assessment and management of the credit risk in the Baltic commercial banks.

Management of the credit risk is a keystone of risk management in the banking area. Finance institutions have to be able to govern the credit risk at the level of whole lending base as well as at the level of individual borrowers and concrete credit form.

Modern credit risk management theory establishes four credit risk dimensions that define the credit risk value:

1. Probability of Default – disability of the borrower to meet his engagements; the probability of borrower's insolvency during the contract period;
2. Exposure at Default;
3. Loss Given Default;
4. Maturity – the time left until debt coverage.

The change for the worse of the macroeconomic situation in the Baltic States (economic development quick rise, growth of the unemployment level, still high inflation level) influenced the borrowers' insolvency negatively. Quick fall of the lending base quality could be observed especially well in the Latvian commercial banks.

Keywords: credit risk, banks, risk management, borrower's insolvency, lending base quality, loss given default.

Introduction

The rapid development of the Baltic States has been evidently enhanced by the increase of lending rate. The evaluation of banking credit risk and the stability of commercial banks is especially topical in such conditions. Considering the last 30 years in banking industry, it is possible to conclude that the credit risk was the cause of banks' problems in Switzerland, Spain, the United Kingdom, Norway, Sweden, Japan, the USA. The depth of banking crisis varied depending on the credit risk concentration. Thus only small banks suffered in Switzerland, the United Kingdom, and the USA in the banking crisis of 1998-2000, but all banking system was influenced in Spain, Norway, Sweden, Japan and the USA in the banking crisis of the 1980ties. The state support was necessary in certain cases to improve the situation.

Any business is connected with the risk. The higher the risk, the bigger the profit is. In order to avoid potential losses, the risk should be evaluated properly. As a matter of fact, any market assessment is relative, it is impossible to foresee everything; however, the maximum potential damage should be identified for each risk.

In conditions of tough competition, inconsiderate policy of risks and stability could result in the crisis of the commercial bank system of the Baltic States. The object of the research is commercial banks operate in the Baltic states as financial institutions on the legal basis. The subject of the research is the credit portfolio of the Baltic commercial banks that is the main source of the credit risk.

The aim of the research is to examine the aspects of the credit risk assessment and management in the Baltic commercial banks.

The objectives of the research are the following:

- to evaluate the credit risk assessment practice, including assessing borrower's solvency evaluation models;
- to assess the credit portfolio of the Baltic commercial banks.

The sources of information are the laws of the Republic of Latvia, the Republic of Estonia, the Republic of Lithuania, the EU directives, the rules of supervising institutions of the Baltic states, the rules and decisions of the central banks of the Baltic States, scientific literature, the statistic data of the Baltic States, the proceedings of the scientific conferences, the Internet resources.

Results of the research

1. Credit risk and entrepreneurship

In the conditions of the financial crisis business activities are risky and connected with overcoming uncertainty in the face of inevitable choice; in the conditions of uncertainty there is an opportunity to carry out quantitative or qualitative assessment of the probability of achieving a favourable result, as well as failures and deviations from the target.

At the present situation it is worth examining a mutual dependency between the risk and profit. If entrepreneurs are ready to take risks in the conditions of uncertainty, it means that alongside the risk of having losses, there can be additional income, and it concerns banking business as well.

The analysis of the risk classification of different authors shows that banking risks can be divided into internal, external and operational risks. External risks are not linked with a bank's activities, but internal risks are caused by insufficient concern of the banking management. An operational risk combines internal and external risks; it results from inadequate or unprofessional activities of employees, shortcomings of procedures and policies, problems in technological processes and from external events. [Kudinska M., 2008]

Commercial banks account for 90% of the financial system of the Baltic States. **Credit risk** is the basic risk of loss that banks face in their asset transactions, consequently the assessment and forecast of this risk in the Baltic States is of utmost importance. The studies of the credit risk became topical in the 80ties of the previous century due to the banking crisis in several European countries, Japan and the USA. Later the importance of this issue was strengthened by the banking crisis of the 2nd half of 2008 and the beginning of 2009 in several banks of the USA, European countries as well as the Baltic States.

In the majority of banks, different kinds of loans (mortgage loans, consumer credits) have resulted in the credit risk. However, banks increasingly face the credit risk due to other financial instruments, for example:

- banker's acceptance;
- security and bails;
- deals with derivatives;
- settlement of transactions for the deals with prepayment and pre-delivery. [Kudinska M., 2001]

2. Theoretical aspects of credit risk assessment and management.

Credit risk management is the keystone of risk management in the banking area. Financial institutions have to manage credit risks at the level of credit portfolio, individual borrowers, and settlements of transactions. The main aim of the credit risk management is to maximise a bank's risk-adjusted rate of return by maintaining expected level of losses within acceptable parameters and decreasing the dispersion of these losses. The credit risk management system should be linked with other financial risks particularly the market risk. The credit risk management involves several participants. The most important ones include legislative power, supervising institutions, shareholders, the board, financial managers, internal audit, external audit, community, banking associations.

The modern risk management theory determines four credit risk dimensions that define the credit risk value.

1. Probability of Default; it is the disability of the borrower to repay his/her loan; the probability of borrower's insolvency during the contract period;
2. Exposure at Default (EaD);
3. Loss Given Default (LDD);
4. Maturity (M). [Kudinska M., 2005]

External rating and internal scoring systems are used to calculate the Probability of Default and a borrower's insolvency. Scoring is used to determine a company's or a borrower's credit ability and financial stability according to the scoring scale that is based on certain data of a company's performance or a potential borrower.

According to the Financial and Capital Market Commission's (FCMC) External credit assessment institution recognition regulations, there are three recognized external credit assessment institutions: *FitchRatings*, *Standard&Poor's Ratings Services*, *Moody's Investors Service Ltd*. Analysing Estonian and Lithuanian legislative documents, the authors did not succeed in finding officially recognized credit rating agencies in these countries. As the above mentioned institutions are one of the major credit rating agencies worldwide, the authors have summarized the available data on credit ratings assigned to the Baltic States in Table 1.

Table 1: Credit ratings of the Baltic States (as on 24.02.2009)

Rating agencies	Latvia		Estonia		Lithuania	
	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term
<i>FitchRatings</i>	BBB-	F3	A-	F1	BBB+	F2
<i>Standard&Poor's Ratings Services</i>	BB+	B	A	A-1	BB+	A-2
<i>Moody's Investors Service Ltd</i>	Baa1	n/a	A1	n/d	A2	n/a

Sources: created by the authors and based on <http://www.fitchratings.com>; <http://www.moodys.com>; <http://www.standardandpoors.com>, 2009.

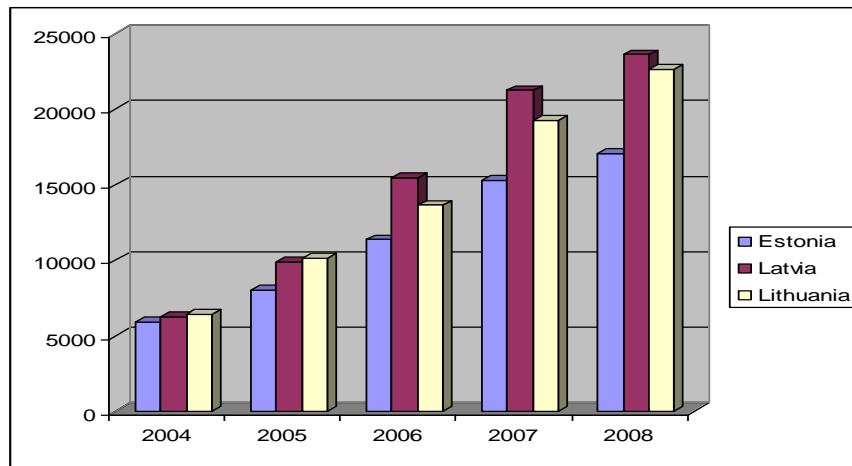
In order to determine the value of the credit risk, it is necessary to know the measure of the risk of loss in the transaction, i.e. Exposure at Default (EaD). Exposure at Default depends on the profile of the risk of loss in the transaction (product type). In the case of classical bank loan settlements, Exposure at Default equals the total sum of a borrower's loan commitments. Exposure at Default of loans, securities, collaterals, guarantees, acceptances, unused credit lines, credit letters is the full balance sheet value of financial instruments.

To become aware of the risk concentration in the system and to determine the ability of commercial banks to absorb losses caused by the potential shock in the conditions of the economic crisis, the institutions that regulate financial markets use stress testing method. Stress testing is carried out by central banks. Such credit risk parameter as the share of revenues of non-performing loans (RNL) in the balance of total loans is used. Stress tests involve different the credit risk increase scenarios, starting from 1 till 20% of share of RNL in the balance of total loans. The test results show the amount of RNL share growth which the existing equity of commercial banks could absorb.

1. Assessment of the Baltic States' Credit Portfolio

Lending transactions are the most popular services provided by commercial banks, and the main risk here is the credit risk. To assess the credit risk, it is necessary to analyse credit portfolio.

The total amount of lending base quality in million EUR given by the Baltic commercial banks is shown in Fig.1. It is possible to conclude that the amount of lending base quality in 2004 was almost equal. Starting from 2005 Latvia becomes a leader increasing lending base quality by 57% and 56% in 2005 and 2006 respectively in comparison with the previous year. From the year 2006 Lithuania takes the leading position. Typically, the growth rate of lending base quality in 2008 decreased sharply. It is inevitably the consequence of the crisis in the Baltic States that became aggravated in the fourth quarter of 2008. At this moment lending transactions almost did not occur.



Source: created by the authors from <http://www.fktk.lv>; <http://www.lb.lt>; <http://www.bankofestonia.info>, 2009

Figure 1: Lending base quality in the Baltic States (mill. EUR)

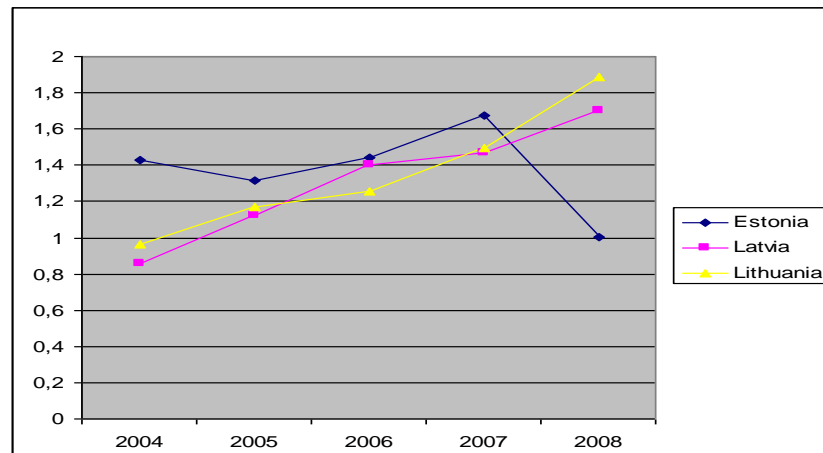
The lending base quality of the Baltic banks was the most essential part of assets, and obviously, the main source of asset increase. The share of lending base quality in the assets of all Baltic banks has increased during that period. The biggest share is in Estonia, and in 2008 lending base quality accounted for 80% of all assets.

One of the credit risk factors in the banking system is the time-limit of the loan. 60% - 70% of all loans are given for the time period that is longer than 5 years. Basically these are mortgage loans in exchange of collateral. Besides, the time-limits become more extended that has a favourable effect on the development of the country and improves the welfare of the population, but increase banks' risks. According to the statistic data of the Baltic central banks, in the time period from 1995 to 2000 long-term loans accounted for only 3% - 20% from total lending base quality.

The ratio between deposits and loans is an important indicator of the stability of banks. Continuous cash flow makes it possible for banks to give new loans with low interest rates and provide customers with money payments at the end of the deposit period.

The analysis of the lending base quality in the Baltic commercial banks reveals the strategy of the stability of Estonian commercial banks. In 2007 and 2008, when Latvian and Lithuanian residents spent their savings thus decreasing the amount of deposits by 5-6%, Estonia promoted savings. Estonians were the first who started enthusiastic advertising campaigns offering accumulation insurance and Pension Scheme, 3rd level. Estonian commercial banks increased deposit amount by 86% in comparison with 2007.

The analysis of loan-deposit ratio shows that Estonia has "1", meaning that stable cash flow is ensured and loans are secured by deposits. The situation is critical in Lithuania, where lending base quality almost twice exceeds deposit amount. The reduction of deposit amount, as in Latvia and Lithuania, leads to the lack of sufficient liquid assets, which, in its turn, slows down giving loans since banks have not enough money to give as loans. The rapid slowdown of lending destabilizes and hampers economic development.



Source: created by the authors from <http://www.fktk.lv>; <http://www.lb.lt>; <http://www.bankofestonia.info> , 2009

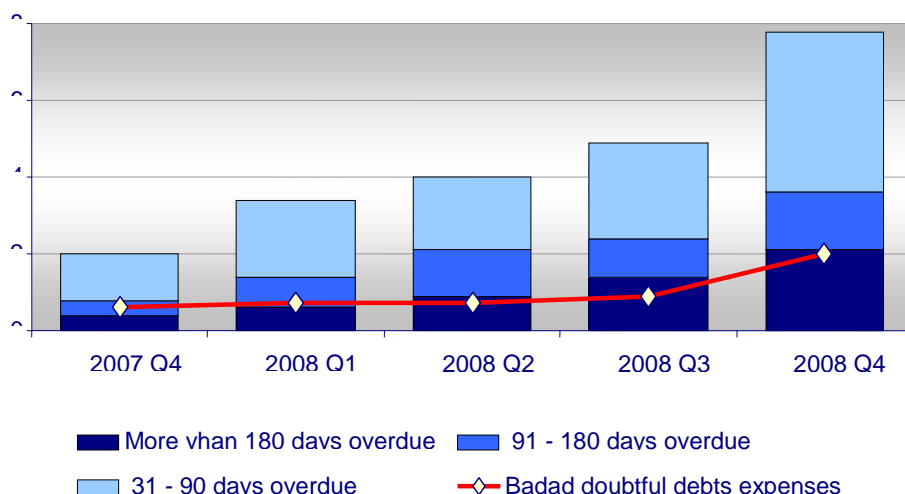
Figure 2: Ratio between loans and deposits in the Baltic states

The marking of assets is an important part of the lending process and the credit risk management. The credit risk should be incorporated in the price of credit product, i.e. credit price should cover average potential loss as a result of the credit risk. Recession has caused the rapid increase of debtors and banks inevitably work on reducing the credit risk. Consequently, the interest rate is raised by banks.

The reserves enhance the ability of banks to overcome the losses. The appropriate amount of reserves is determined by the following features: lending history, collaterals, the quality of lending directives and procedures, the previous experience in administrating losses, credit portfolio growth, changing debts, changes in economic environment. According to the legislation of the Baltic States, assets are classified into standard assets, monitoring assets, substandard assets, doubtful and lost assets. Banks accumulate savings for doubtful debts. Thus to improve the liquidity and provide banks with additional financial resources for lending purposes, in 2008 the Bank of Latvia gradually decreased the compulsory amount of reserves: the banks' liabilities with the maturity of more than two years - from 8% till 3%, and other liabilities from 8% till 5%; the Estonian bank decreased the compulsory amount of reserves from 6% till 4%.

The deterioration of the macro-economic situation in the Baltic States in 2008 (sharp slowdown of economic development, the increase of unemployment rate, continuously high inflation level etc.) influenced borrowers' solvency. The rapid decline of the credit portfolio quality was evident, especially in Latvian commercial banks. The share of loans with delayed payments (payments of the principal sum and/or interest) increased from 6.8% at the end of 2007 till 15% at the end of 2008, including the share of loans with delayed payments of more than 90 days in credit portfolio at the end of December, 2008, reached 3.6% or LVL 599 millions (at the end of 2007 – 0.8%). As the quality of credit portfolio was diminishing, banks' reserves created in the reference year for doubtful debts quadrupled, i.e. increased by LVL 284 millions, and at the end of the year reached LVL 367 millions. At the end of 2008 reserves accounted for 2.2% of banking credit portfolio (see Fig. 3).

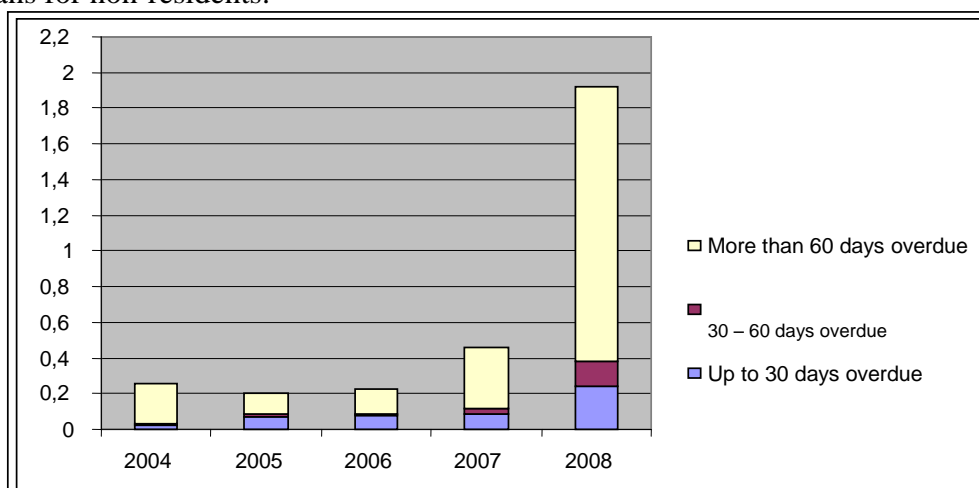
At the end of 2008, the total credit portfolio of Latvian commercial banks was distributed in the following way: 94.8% of the credit portfolio was estimated as standard assets, 3% as monitoring assets, but 2.2% as substandard, doubtful and lost assets (cf: December 31, 2007 - 99.2%, 04%, 04%, respectively). The ratio between reserves and loans, which were estimated as substandard, doubtful and lost, was 92.5% at the end of December (cf: December 31, 2007 – 129.8%).



Source: Home Page of the Bank of Latvia <http://www.bank.lv>, 05.04.2009

Figure 3: Loans with delayed payments of more than 30 days and reserve in % from credit portfolio (in Latvian commercial banks as on 31.12.2008)

At the end of the year, the majority of loans with delayed payments for more than 90 days concentrated in loans which were given to residential households for obtaining property, and loans that were given to dealings with real estate, processing industry, construction, as well as loans for non-residents.



Source: created by the authors from <http://www.bankofestonia.info>, 2009

Figure 4: The ratio between delayed payments and credit portfolio in Estonian commercial banks (as on 31.12.2008, %)

The analysis of the quality of Estonian credit portfolio permits to conclude that delayed loans account for 1.92% of the total credit portfolio, having increased by three times in comparison with the year 2007 (see Fig. 4). The increase of the delays occurs on the basis of the increase of long-term delays, since they accounted for 1.53% of the total delays that is by 1.20% more than in 2007 (see Fig. 4).

The analysis of the credit portfolio of the Baltic commercial banks shows that in 2008 in the period of recession, the credit risk of Baltic commercial banks has increased essentially.

Conclusions and Recommendations

Conclusions:

1. The credit risk management is the main issue of the risk management of the commercial banks. Its aim is to maintain risk and, respectively, losses at the required level, gaining maximum profitability.
2. Summarizing the findings of various authors regarding the credit risk assessment models, it could be concluded that they require the identification of Probability of Default, Exposure at Default and Loss Given Default.
3. One of the most important tools in maintaining the credit risk at the required level is the qualitative analysis of a potential borrower. The authors concluded that the Baltic commercial banks use rating and internal scoring systems for that purpose. According to the estimation of three recognized rating agencies, Latvian financial institutions have the lowest rank.
4. In terms of lending base quality, Latvian commercial banks took the leading position in the time period of the last three years. It could be explained by the rapid pace of building, construction and lending, respectively. Lending base quality increased due to giving loans to non-residents as well.
5. As borrower's solvency weakens, the Baltic commercial banks reconsider the pricing mechanisms of loans, which is reflected in gradual rise of average interest rate.
6. The analysis of credit portfolio quality in terms of payment delay permits to conclude that the biggest amount of delayed payments has occurred in Latvian commercial banks, that in 2008 accounted for 15% from the credit portfolio, and the majority of delayed payments concentrated in property loans.
7. The credit risk limitation system depends on supervisory institutions and determination of internal limitations. The limitations determined by supervisory institutions are based on legislative documents of the Baltic States and are uniform in Latvia, Estonia, Lithuania. The internal limitations of commercial banks refer to the specific branch of industry, geographic area or loan type. The amount of limitations and their adoption in a commercial bank is a secret.
8. The analysis of the credit portfolio of commercial banks shows that during the recession period of 2008, the credit risk of the Baltic commercial banks has increased substantially.

Recommendations:

1. The legislative documents regulating the business activities of banks, insurance companies, investment and pension funds should be strictly specified in order to manage these institutions effectively.
2. The government of the Republic of Lithuania could establish a uniform institution for the purpose of supervising financial organizations, so that the Bank of Lithuania could delegate the part of their functions to this institution, thus concentrating more on the main task – ensuring price stability.
3. The supervisory institutions of the Baltic states should work on a uniform credit risk assessment methodology taking into account the existing standards and theoretical credit risk assessment models.
4. The supervisory institutions of the Baltic commercial banks should establish a uniform statistic data system that will assess banking credit portfolio profitability and quality features according to the single criteria and in single currency (e.g. EUR).
5. Develop and use scoring or internal rating systems for the purpose of assessing a potential borrower objectively and fixing the relevant price of the credit product.
6. The supervisory institutions of the Baltic commercial banks should determine uniform requirements of compulsory reserves and capital sufficiency.

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