

Conclusions

Asset-backed financing is an important segment of the credit sector. A registered pledge plays an important role in stimulating the availability of credit.

This improves the terms on which credit is granted. Banks, like any other business in the market, try to recover their costs from their customers and to make a profit. The higher their costs and risk are, the higher price is charged from banks' customers. Polish enterprises point out, that the biggest problem is not an access to financing, but costs of financing. They include not only the fees, but also they are time-consuming and demand a lot of effort that is connected with a long registration process. Also the cost of taking alternative security and the costs of enforcement procedures should be taken into consideration.¹

Various deficiencies in the legal system that affect registered pledge increase the cost of credit, and this is likely to have significant impact on the Polish economy as a whole².

A reform of the current system should be driven by the economic objective of reducing the cost and increasing the availability of credit.

Bibliography

1. Mójak J., Wido J. *Zastaw rejestrowy i rejestr zastawów: komentarz*. Wydawnictwo prawnicze LexisNexis, Warszawa 2004
2. Rajchel A. *Zastaw rejestrowy jako rzeczowe zabezpieczenie kredytu bankowego*. „Ostoja”, Kraków 2001
3. Horosz P. *Zastaw rejestrowy na papierach wartościowych dopuszczonych do publicznego obrotu*. Zakamycze, Kraków 2005
4. Skorek B. *Zastaw na akcje w „Pozegąd ustawodawstwa gospodarczego”* nr 11 z 2001 r., s.18
5. Kaczmarek T.T. *Zarządzanie ryzykiem w przedsiębiorstwie eksportującym*. Wydawnictwo ODDK Gdańsk 2001
6. European Bank for Reconstruction and Development report „The impact of the legal framework on secured credit market in Poland”. www.nbp.com.pl
7. Adams P., Utz C. *Security of Payment and Adjudication: A UK Perspective*, The Arbitrator & Mediator, December 2002
8. ustawa o zastawie rejestrowym i rejestrze zastawów z dnia 6 grudnia 1996r. (Dz.U. 96.149.703 z późn. zm.)
9. ustawa prawo bankowe z dnia 29 sierpnia 1997 r. (Dz.U. 02.72.665 z późn. zm.)
10. Rozporządzenie Ministra Sprawiedliwości z dnia 30 grudnia 1997 r. w sprawie wysokości opłat za informację, odpisy i zaświadczenia wydawane przez Centralną Informację o Zastawach Rejestrowych (Dz.U. 98.2.4)

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THE ESSENCE OF THE CREDIT RISK MANAGEMENT IN COMMERCIAL BANK

Abstract: The essence and the nature of the credit risk present at banking activity have been extensively explored in the literature. Considerations taken in this paper are focused on the risk management of the individual transaction. However it seems that hypercompetitive environment of XXI century requires the creation of the integrated model of credit risk management including mutually related transaction risk and total risk management processes. Thus this paper presents the model involving complex credit risk management.

Key words: credit risk management, credit risk, commercial bank.

Introduction

Increasing business risk, globalization processes and the intensification of the competitiveness that complicate considerably the activity conditions for companies and financial institutions make banks identify properly the individual phases of risk management. The commercial banking activity is strictly associated with the risk. In the scientific literature credit risk is still treated as the most typical kind of the risk occurring in banking activity. On the account of negative consequences of the credit risk, the

¹ European Bank for Reconstruction and Development report „The impact of the legal framework on secured credit market in Poland”, s. 4, www.nbp.com.pl

crucial area determining the success of each bank is the efficient model of credit risk management that identifies all threats in an appropriate way.

1. The essence of risk management in financial institutions

The risk management in business refers generally to determination of the events that form a threat for the company financial result and planning of security package aiming at the reduction of negative effects of risk occurred. With the increase of the complicity level of business the risk management extends to include new, unknown areas of company activity.

The risk management in financial institutions is often assigned to independent organizational unit that reports directly to management and performs the elementary tasks and functions related to risk management¹. However the management can not manage the risk independently. However it should determine the strategic goals and ensure through supervision that the defined tasks are completed. Central risk management provides many advantages including the independent and integrated view of all risk types and understanding that only net values² can be subject of management and specialized personnel is able to obtain better results on capital markets. However the enterprises seldom measure and manage the total company risk. The firms mostly imply the micromanagement on individual risk exposures³, mainly because of high costs⁴, current central risk management or legal constraints⁵.

Risk management can be defined as a distinct process that is a set of activities⁶. This process is divided into the followings phases⁷:

- definition, identification, and classification of a firm's risk exposure and the source of risk (risk factors),
- analysis and quantification of the risk exposure,
- allocation of (risk) capital,
- decision (ex ante),
- limitation of risk taking to ensure a constant risk,
- risk controlling,
- performance evaluation (ex post)

Analysis and quantification of the risk exposure, that is, the understanding of the relationship between and the measurement of how much the cash flows and the value of a firm are affected by a specific source of risk. An exposure profile relates unexpected changes in a risk factor to unexpected changes in the firm's value⁸, which is the foundation for being able to analyze the impact of risk management on the firm's value. So far, many banks concentrate on this passive risk measurement step which is only a requirement for being able to actively influence firm value.

¹ In practice the function of senior risk-management is created as an important part of the bank quality management, Cf. Shimko D., Humphreys B., Voting on values. „Risk Magazine“, December 1998, p. 33.

² Additionally it enables the identification and compensation of interactions in credit portfolio.

³ Cf. Hommel U., Pritsch G., Notwendigkeit des unternehmerischen Risikomanagements aus Shareholder-Value-Sicht. in: Achleitner A., Thomy G. (eds.) Handbuch Corporate Finance, Ergänzungslieferung, Köln, p. 1-21.

⁴ It refers mainly to high IT costs. Without efficient IT system many functions can not be performed on time.

⁵ Such legal constraints refer to multinational companies and can involve the restrictions related to capital transfer between different countries.

⁶ In the literature the term of „management“ is defined in the institutional and functional understanding. Likewise in this definition the risk management is treated as a process that is the enhancement of actions. Cf. Damodaran A. Corporate finance-Theory and Practice. J. Wiley&Sons, New York 1997, p. 795-796; Schroeck G., Risiko- und Wertmanagement in Banken - Der Einsatz risikobereinigter Rentabilitätskennzahlen. Deutscher Universitätsverlag, Gabler, Wiesbaden 1997, p. 23-25.

⁷ Cf. Schroeck G., Risk Management in Banking and Value Creation in Financial Institutions, J. Wiley & Sons, Inc., Hoboken, New Jersey 2002, p. 26-28.

⁸ Cf. Smith C., Corporate Risk Management: Theory and Practice. „The Journal of Derivatives“, Summer 1995, p. 21-30.

Allocation of risk capital to the business as common currency of risk that is comparable across business units and risk types and that is commensurate with the risk taken and the allocation of a charge reflecting the cost of capital.

Decision *ex ante* of whether a new transaction should be accepted from a portfolio perspective and consideration of whether the risk taking is compensated appropriately from a risk-return perspective.

Limitation of risk taking to ensure a constant risk profile by "mitigation" risk is the actual management of risk and, therefore, what people commonly refer to when they use the term risk management. In order to "mitigate" risk, various instruments and policies can be applied, such as, complete avoidance of risk, reduction of risk, transfer of risk and limitation of risk¹.

The risk control usually includes control of documentation and control of all activities conducted during the risk management process especially it refers to supervisory measures that enable the comparison of the actions and planned benchmarks. Moreover it is important to recognize the reasons of the deviations that occur in the risk management process².

In order to link risk-management actions to the overall corporate goal, *ex post* performance evaluation should be accomplished. Management has to develop strategic goals for the various risk areas that are commensurate with the ultimate firm objective to maximize firm value. The goal of risk management should, therefore, be to identify any uneconomic risk taking, that is, to ensure that any risk management activity is consistent with value maximization. The goal should be to find the optimal balance between risks and expected returns by concentrating on the competitive and comparative advantages of the firm redefining the role of risk management from "pure" hedging to a more differentiated activity in light of the goal of value maximization³.

Some authors consider that the primary goal of risk management is to measure risks in order to monitor and control them. This capability serves some important functions. They include⁴: the implementation of strategy, the development of competitive advantages, measurement of capital adequacy and of solvency, support for decision making process, support for pricing decisions, reporting, the risk control and management of transaction portfolio.

Risk management plays a central role in financial intermediation and is therefore an integral part and a key area of the business of banking⁵ and is viewed as one of the most important corporate objectives⁶. Risk management is the determination of the tools and techniques that are necessary in the implementation of bank strategy. The literature distinctly distinguishes the asset and liabilities management.

Risk management is the determination of the tools and techniques that are necessary in the implementation of bank strategy. The literature distinctly distinguishes the asset and liabilities management. Management of assets and liabilities focuses on management of interest and liquidity

¹ Cf. among others Schroeck G., *Risk Management...*, op. cit., p. 27. Cf. among others Schulte M., *Integration der Betriebskosten in das Risikomanagement von Kreditinstituten*, Band 18, Wiesbaden 1994, p. 26; Pfeifer U., *Management Bankbetrieblicher Erfolgsrisiken unter besonderer Berücksichtigung des Zinsänderungsrisikos*, Berlin 1991, p. 22.

² In banking literature control is defined as the surveillance actions referring to the present, embedded in company processes and taken by persons dependant on some processes or by automata. Cf. Borys G., *Zarządzanie ryzykiem kredytowym w banku*, PWN, Warszawa 1996, p. 136.

³ Schroeck G., *Risk Management...*, op. cit., p. 27-28.

⁴ Bessis J., *Risk Management in Banking*, J. Wiley & Sons, New York 2001, p. 23.

⁵ Merton C., *On the application of the continuous-time theory of finance to financial intermediation and insurance*. The Geneva papers on Risk and Insurance, 1989, p. 225-262.

⁶ According to Meridian research more than 400 biggest multinational banks and insurance companies expend 2,063 million USD for technologies related to implementation of tools for risk measurement. Cf. Williams D., *Risk technology spending: An update*. "Risk management Research Brief, Meridian Research", June 1999, p. 1.

risks at the global level¹. It can be considered as a subset of risk management². The risk management includes other important risks related to bank activity such as credit risk and interest rate risk. Figure 1 presents the „pyramid“ of risk management. Risk management is both a top-down and a bottom-up process. Analysis of the Figure 1 indicates that the highest level of pyramid is the determination of the most important goals in the area of income amount and the identification of risk limitation. At the top level, target earnings and risk limits are defined. From top to bottom the global goals are translated into signals to business units, and to managers in charge of transactions with customers.

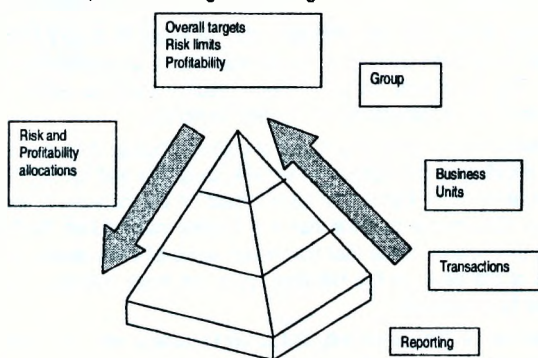


Figure 1. The pyramid of risk management

Source: Bessis J., Risk Management in Banking. J. Wiley&Sons, New York, 2001, s. 32.

These signals include target revenues, risk limit and guidelines with respect to business unit policies. The monitoring and the reporting of risks are bottom-up oriented, starting with transactions and ending with consolidated risks, revenues and volumes of transactions. Without special devices to conduct signals both up and down the pyramid, there should be a missing link between global orientations and the actual operations conducted at the business unit levels, and down to individual transactions. Two specific organizational devices are required to transfer signals to business units and to collect information and aggregate it for comparison with global targets. They include: transfer pricing system³ and the capital allocation system⁴.

The monitoring and the reporting of risks are bottom-up oriented, starting with transactions and ending with consolidated risks, revenues and volumes of transactions. The aggregation is required for supervision purposes and to compare, at all levels where decisions are made, objectives and realizations. In the end, the process involves the entire banking hierarchy from top to bottom, in order to turn global targets into business unit signals, and from bottom to top, to aggregate risks and profitability and monitor them.

¹ Bitner J., Successful bank asset-liability management. J. Wiley & Sons, 1992, p. 83. The major areas of asset-liability management include: measurement and monitoring of liquidity and interest rate risks, financing and control of the balance sheet (liquidity constraints, debt policy, capital adequacy ratio and solvency), the hedging programmes, for both liquidity and interest rate risks.

² Bessis J., Risk Management..., op. cit., p. 23.

³ The system exists in all institutions. They are internal prices used to transfer resources across business units. The transfer price serves as a reference for setting customers' rates and for the calculation of the margin. It represents the internal valuation of the cost of making the funds available. Without such reference, there will be no basis to identify the margins generated by business units. Cf. Kimball R., Economic profit and performance measurement in banking. „New England Economic Review“, July/August 1998, p. 41.

⁴ Capital allocation system serve the purpose of allocating risks to transactions, or portfolios of transactions. At various levels of aggregation such as business units, product lines or counterparties.

2. The essence of credit risk

The banking literature distinguishes many classifications of credit risk. Each of them has some advantages and disadvantages. However the approach developed by Robin Kendall emphasizing that there should be no hierarchy of importance among approaches towards particular bank risks¹, seems to be crucial mainly because of the complexity of the bank role in modern economies and especially on account of simultaneous and mutual interaction between the particular kinds of risk and the bank performance.

The wide interpretation of the bank risk implicates the necessity to consider this kind of risk in many dimensions. Bank risk is often defined by the adverse impact on profitability of several distinct sources of uncertainty². The risk in bank context is mainly result of each transaction or each business decision that include some level of uncertainty with regards to income.

Credit risk is paramount in terms of the importance of potential losses. In case of banking there are two main determinants deciding on bankruptcy of the bank: credit risk and liquidity risk. Excess credit risk generates the substantial credit losses that have impact on the increase of liquidity risk and in consequence insolvency. Occurrence of credit risk and liquidity risk induces the bankruptcy of the bank when the market participants notice that the market value of bank assets is not sufficient to secure global liabilities of the bank. In the literature there are many definitions of credit risk that involve different areas of its occurrence.

Credit risk is the risk that customers default, that is fail to comply with their obligation to service debt³. In the object context of the risk, the risk of individual transaction and the overall risk are considered⁴. The risk of individual transaction depends on the amount of possible losses (equal to maximal credit value including interests, diminished on the value of potential security package) and the likelihood of loss occurrence.

Delay in payments can result in entirely or partially loss of borrowed money. Credit risk is also the risk of client's credit worthiness decrease. However it should be emphasized that such decrease does not assume the occurrence of delay in payment. Philip Best⁵ defines this kind of risk as the possibility of loss in case when the company that is also the bank client stops its repayments or when the market conditions make the debt payment impossible. According to Gerhard Schroeck credit risk is the risk that arises from any nonpayment and rescheduling of any promised payment or from credit migrations of loan and that gives rise to an economic loss to the bank. The risk understood in this context refers to all balance and off-balance assets that include all credit exposures, credits and the instruments of capital market.

Total credit risk depends on the value of individual credits, the likelihood of default and the interdependence among particular credits. The smaller the interdependence among particular credits the smaller likelihood of the situation when the factors affecting the default of given credit arrangements influence the default of others, increasing overall risk. There is significant correlation between the risk of individual transaction and the total aggregated risk. To reduce the aggregated risk it is necessary to start with reducing the risk of individual transaction⁶.

¹ Kendall R., Zarządzanie ryzykiem dla menedżerów. Praktyczne podejście do kontrolowania. Liber, Warszawa 2000, p. 89

² Bessis J., Risk Management..., op. cit., p. 5.

³ Bessis J., Risk Management..., op. cit., p. 5.

⁴ Wiatr M., Systemy szacowania indywidualnego ryzyka kredytowego. Doświadczenia banków zagranicznych i polskich in: Jaworski W. (eds) Banki w Polsce, Poltext, Warszawa 2001, p. 278; Zawadzka Z., Zarządzanie ryzykiem w banku komercyjnym. Poltext, Warszawa 1999, p. 27; Brakensiek T., Die Kalkulation und Steuerung von Ausfallkrisiken im Kreditgeschäft der Banken. Bielefeld

⁵ Best P., Wartość narażona na ryzyko, Dom Wydawniczy ABC, Kraków 2000, p. 15.

⁶ Dębski W., Ryzyko bankowe „Bank i Kredyt”, 1994, No 10, p. 36.

It should be emphasized that negative results in the area of widely understood credit activity refer to negative consequences of credit portfolio influence on bank position¹. In this meaning in banking literature the increase of credit costs, insolvency and the bankruptcy of the bank, additional expenditure for getting financing, increased bank supervision, alternative costs and loss of bank reputation are considered as the important consequence of credit risk occurrence.

Moreover, what Wojciech Grabczan² emphasizes, irregular credit requires greater administrative and organizational engagement than the regular one. However, irregular credits are the source of substantial costs related to creation of appropriated reserves. Additional expenditures for getting funds are associated with situation when the bank must refinance at higher costs because of credit portfolio with higher risk elements. Moreover bank with credit portfolio of low quality is not able to evolve the active development policy, react quickly enough to changes in environment especially competitive environment.

The results of excess credit risk for the activity of commercial bank make the proper credit risk management that should involve risk identification, analysis, steering and control, extremely important management tool in banking.

3. Credit risk management model

Credit risk management definitions that are present in the literature can be often directly adopted as an essence of credit risk management. At present the credit activity of commercial banks is still a significant part of their financial operations. It is one of the broad fields of financial services provided by banks.

The risk along with its negative consequences affecting the security and profitability of the bank, that accompany the credit activity, make many authors separate the credit risk management specificity as its formal definition. M. Fritz and T. Wandel define the credit risk management concept as very close to the credit risk policy from the functional point of view. The purpose is to project the structure of contracts made, to affect them and to prevent the possible loss risk. Basic elements of risk management are risk identification and analysis, and also credit risk operation³.

The interesting definition of risk management was presented by Grażyna Borys⁴, who treats the bank's credit risk management concept as a complex of activities, which are meant to optimize relations among credits volume, profit and credit risk. The fundamental elements of credit risk management process include risk analysis, operation, control, financing and administration.

According to the literature, a bank manages credit risk incorporating the following elements⁵: credit policy, internal regulations and detailed procedures, internal reporting system, credit activity supervision mode in the credit department, bank's credit activity internal control and internal system of bank's units and personnel assessment.

It is important to stress, that the bank's credit activity is affected by a total of decision processes. Each credit should be a subject of versatile analysis that results in the decision of credit allowance. The activity correctness and also the convenience and acceleration of the credit decision process require the presence of many procedures and rules. Credit policy principles should determine some standards and parameters establishing credit and loan types, their life length, desirable borrower profile, credit department personnel work style, credit allowance procedures, and types of legal security preferred by the bank. Therefore credit policy principles should be stated by the bank's

¹ It refers mainly to credit activity reflected in the balance sheet of the bank.

² Grabczan W., *Jak przewyżyc trudne kredyty*. Warszawa 1994, p. 23.

³ Fritz M., Wandel T., *Qualitatives Kreditrisikomanagement*. „Die Bank”, No 11, 1991, p. 620.

⁴ Borys G., *Zarządzanie ryzykiem kredytowym w banku*. PWN, Warszawa 1996, p. 48.

⁵ Turlej J., *Polityka kredytowa banku jako instrument zarządzania ryzykiem kredytowym w banku komercyjnym*. „Bank i Kredyt” 1996, No 7-8, 1996, p. 65.

supervisory board and the responsibility for their realization should be laid on the bank's board of directors¹.

Credit policy is the basic element of credit risk management, and all of the internal regulations and procedures derive from this policy and represent its detailed resolutions².

The development of portfolio management for banking transactions is one of the newest field of risk management. Many new factors tend to change the nature and the impact of portfolio management. They include³:

- the willingness to make diversification effects more explicit and subject to quantitative measures,
- the belief that there is a significant potential to improve the risk-reward trade-off through management of the banking portfolio as whole, rather than focusing only in individual banking transactions,
- the emergence of new instruments to manage credit risk- credit derivatives,
- the emergence of the loan trading market, where loans, otherwise illiquid, can be rated, priced, listed and sold across an organized market.

The model of credit risk management in universal commercial bank, shown on Figure 2, was elaborated on the basis of literature studies and empirical research. It is very important to isolate mixed processes of individual transaction risk management and aggregated credit risk management. This approach is strictly linked to the major caution regulations of the New Capital Agreement and regulations on credit risk. In this context, the strategy of proceedings towards credit risk should derive from the mission and vision that are stated and realized in the bank. The basic elements of credit risk management in the elaborated scheme include: credit risk analysis, operation and monitoring. It should be stressed, that the individual transaction risk affects the level of global aggregated credit risk. Thus, the analysis range was given the risk assessment of a individual transaction that mostly incorporates credit worthiness evaluation processed with instruments of economic and financial analysis. In this area the credit worthiness evaluation may among others include expert and point approaches. Also the credit risk measurement methods recommended in the New Capital Agreement should be pointed out and isolated. They include: standard method (where risk weight depends on the rating given by the external agency), internal ratings basic method (where some of the risk parameters are determined by the supervisory board), and internal ratings advanced method (where all the risk parameters are determined by the bank independently). The credit risk analysis proposals, included in the New Capital Agreement, raise some doubts, which are identified by the Bank Supervision Commission mainly as ⁴ the abandonment of the OECD affiliation criteria for the criteria based on the acknowledged agencies (ECAI) ratings during the determination of risk weight in countries under transformation (Poland, Czech Republic, Hungary). The consequence of this approach may be the further consolidation of separation between highly developed and undeveloped bank systems. Moreover those methods, even in the simplified form, are recognized as too complex. There are also some doubts on practical application (reliability and application range) of the acknowledged agencies (ECAI) ratings in the corporate receivables portfolios. Nevertheless Polish banks will soon be obliged to obey caution regulations proposed by the Basel Committee.

¹ The bank credit policy rules should be determined by special credit policy council consisted of the persons of high positions in bank. The propositions of credit policy should be submitted to management of the bank for discussion and approval. Cf. Among others: Turfej J., Polityka..., op. cit., p. 67; Lewandowski D., Bezpieczne zarządzanie ryzykiem kredytowym w banku komercyjnym. Olympus, Warszawa 1994, p. 13-15.

² Turfej J., Polityka..., op. cit., p. 65.

³ Bessis J., Risk Management..., op. cit., p. 29.

⁴ Iwonicz-Drozowska M., Zarządzanie finansowe bankiem, PWE, Warszawa 2005, p. 136.

The significant element of credit risk management in the discussed scheme is the aggregated credit risk analysis, which mostly concentrates on credit portfolio analysis, portfolio quality, and aggregated credit risk quantification and modeling.

The aggregated credit risk analysis also refers to the credit portfolio structure and quality. Its primary goal is to evaluate the share of particular credit types and the place where they are granted. The analysis requires the determination of acceptable unitary concentration of both credits and borrowers. It is also important here to determine the quality of all receivables derived from credit agreements and other bank's active operations realization¹.

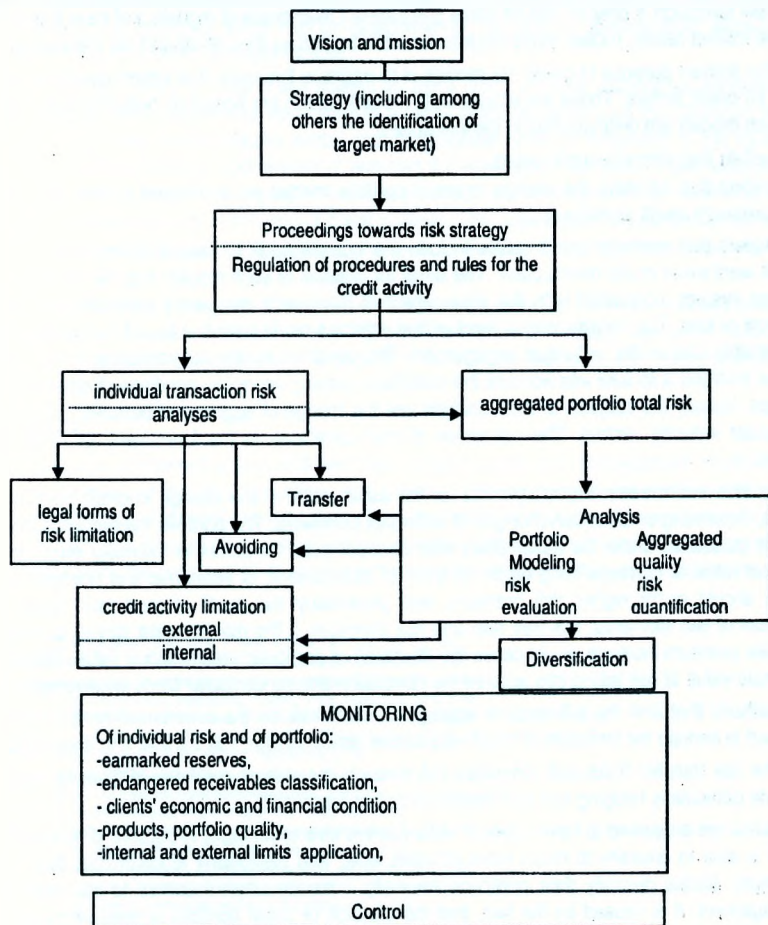


Fig.2 Credit risk management model

Source: Own elaboration

¹Cf. Wysocki M., Polityka kredytowa banku komercyjnego. Twigger, Warszawa 1999, p. 72.

However it should be emphasized, that at present credit risk management techniques are not a subject for such rapid and radical changes that affected techniques related to market risk quantification and operation. The introduction of modern credit risk management methods is a slow process, though credit risk is the most typical kind of bank risk. Moreover there are few banks in Polish bank system that have in their disposal the adequate databases, constructed from own experience and derived from sufficiently long time series. Yet the quantification of credit risk becomes an important element of financial institutions management. The development of quantitative methods, especially models, is incomparably lower in the field of credit risk. Some views in the literature indicate that quantitative methods of assessing credit risk are purely of theoretical character and the purpose for their formation is only to present some complicated mathematical models and have little to do with actual market needs. Indeed those models are often treated as theoretical and not implicative¹.

The primary purpose of credit risk models is to estimate the value that inform about the amount of loss on credit activity. Those are econometric models, which are based on historical data. Two types of such models are distinguished in the literature²:

- models that estimate credit losses,
- models that estimate the change in credit portfolio market value, caused by the deterioration of borrower's credit worthiness.

Models that estimate credit losses include the quantification of losses derived from the loss of credit worthiness of the bank's client. The basis for creation of such models may be the internal credit ratings system, connected with the assessment of borrower's insolvency probability and assumed amount of loss. The construction of models that estimate credit losses is based on the measurement of possible loss on the individual engagement. The condition for the determination of total losses or global portfolio is to take into account the correlation among economic condition of different borrower groups. Usually the subjects of such analysis are the linkage of aggregated borrower groups through particular industry sectors. The estimation of that correlation is the fundament for building a risk model.

Besides econometric models provide for the assessment of the change in credit portfolio market value, depending on condition changes of individual borrowers. The portfolio market value (defined as PV) is calculated under the assumption, that discount rates for particular borrower engagement are interest rates of corresponding credit. In case of deterioration of economic and financial condition there should occur higher risk premium, and particularly the credit interest rate. Credit interest consists of two elements: risk-free rate and risk premium. If the risk-free rate stayed at stable level the risk premium increase would cause the decrease of particular credit market value. Those models estimate value at risk taking into account the correlation among particular credit engagements.

Methods that limit the influence of aggregated credit risk on the commercial banks' activity were defined to contain the limitation of credit receivables concentration, risk transfer and diversification.

The risk transfer limits and eliminates risk through the sale or purchase of financial rights. They include particularly hedging and also insurance policy purchase³.

Banks are supposed to have superior skills (competitive advantage) in portfolio diversification. The bank is able to diversify at much more effective level, and particularly at lower cost than individual investors. Banks diversify their portfolios internally – mostly when it comes to the credit portfolio management. It is caused by the fact, that the creation of credit portfolio is determined not only by

¹ Cf. Kuryłek W., Modelowanie ryzyka portfela kredytowego. „Bank i Kredyt” 2003, p. 66.

² The review of elementary econometric models is included in the paper: Kuryłek W., Modelowanie ryzyka portfela kredytowego. „Bank i Kredyt” 2003, p.72-79. Cf. also Iwanicz-Drazdowska M., Nowak A., Ryzyko bankowe. SGH, Warszawa 2001, p. 40.

³ Other elements used in risk reduction approach can be mentioned here except for diversification that is not an element of risk transfer.

external factors, but also internal. The construction of optimal credit portfolio may incorporate the optimization method, based on stock portfolio¹.

It allows the portfolio structure determination from two points of view: rate of return and risk and may make a determinant of global concentration limits for different elements of credit portfolio.

It should be stressed, that the bank practice broadly incorporate diversification as it allows for the decrease of risk without raising any additional cost². Credit portfolio diversification is one of the most important elements of aggregated credit risk limitation. Thus the elementary mechanism of credit risk limitation is credit portfolio diversification through the limitation of division, sector and branch credit concentration³. The limits of credit engagement concentration towards individual borrower, particular industry sectors and branches, which may be determined on the basis of diversification, allow to form the preferable credit portfolio structure directly.

The commercial banks in Poland are obliged to apply limits of credit receivables concentration, what include the determination and verification of internal limits, dependent on the character of their activity, and especially on the industry sector and geographical position. According to the figure, the most typical and characteristic instruments of reducing the aggregated risk include diversification and limitation of credit activity. The important element of credit risk management is monitoring of the individual transaction and the monitoring of credit portfolio. The organization control processes ensure that the procedures related to credit activity in the area of identification, analysis and steering will be followed.

Thus, the credit risk management model in commercial bank should embrace classical phases of risk management. However, it should involve not only the traditional analysis, operations and control of individual transaction but additionally it should identify these elements from the perspective of overall credit portfolio.

Conclusions

Considerations presented above indicate that modern credit risk management model should include the elements of analysis, operations and control of individual credit risks both at the scale of individual borrower and for total credit portfolio. Thus the essence of credit risk management requires the identification and recognition of mutual aspects connecting these two important areas of risks that can be the base for the construction of credit risk management model in the commercial bank.

Literature:

1. Besie J., *Risk Management in Banking*, J. Wiley & Sons, New York 2001, p. 23.
2. Best P., *Wartość narażona na ryzyko*. Com. Wydawniczy ABC, Kraków 2000, p. 15.
3. Bitner J., *Successful bank asset-liability management*. J. Wiley & Sons, 1992, p. 83.
4. Borys G., *Zarządzanie ryzykiem kredytowym w banku*. PWN, Warszawa 1996, p. 48.
5. Brekensiek T., *Die Kalkulation und Steuerung von Ausfallrisiken im Kreditgeschäft der Banken*. Bielefeld.
6. Damodarar A. *Corporate finance: Theory and Practice*. J. Wiley&Sons, New York 1967, p. 795-796.
7. Dębski W., *Ryzyko bankowe*. „Bank i Kredyt”, 1994, No 10, p. 36.
8. Elton E., Gruber M., *Modern portfolio theory and investment management analysis*. New York University 1991, p. 20-32.
9. Fritz M., Wanciel T., *Qualitatives Kreditrisikomanagement*. „Die Bank”, No 11, 1991, p. 620.
10. Grabczan W., *Jak przetrwać trudne kredyty*. Warszawa 1994, p. 23.
11. Hommel U., Pritsch G., *Nachwendigkeit des unternehmerischen Risikomanagements aus Shareholder-Value-Sicht*. In: Achleitner A., Thomy G. (eds.) *Handbuch Corporate Finance*. Eigenzungsleierung, Köln, p. 1-21.
12. Iwarcz-Drazdowska M., Nowak A., *Ryzyko bankowe*. SGH, Warszawa 2001, p. 40.
13. Iwarcz-Drazdowska M., *Zarządzania finansowa bankiem*. PWE, Warszawa 2005, p. 136.
14. Jawciak W., *Banki polskie u progu XXI wieku*. Poltext, Warszawa, p. 271-310.

¹ This is Markowitz' model – a classical model for optimizing the stock portfolio. This model can be also used for optimization of credit portfolio. Cf. Elton E., Gruber M., *Modern portfolio theory and investment management analysis*. New York University 1991, p. 20-32; Jaworski W., *Banki polskie u progu XXI wieku*. Poltext, Warszawa, p. 271-310.

² Nowakowski J., Jagiełło R., *Optymalny portfel kredytowy jako czynnik warunkujący bezpieczeństwo banku komercyjnego*. „Bank i Kredyt” 1998, nr 5, p. 70.

³ Strahl D., *Gałąziowa koncentracja kredytowa jako element zarządzania ryzykiem bankowym*.

15. Kardaś R., *Zarządzanie ryzykiem dla menedżerów. Praktyczne podejście do kontrolowania*. Liber, Warszawa 2000, p. 89.
16. Kimball R., *Economic profit and performance measurement in banking*, 'New England Economic Review', July/August 1998, p. 41.
17. Kuryłek W., *Modelowanie ryzyka portfela kredytowego*, 'Bank i Kredyt' 2003, p. 72-79.
18. Lewandowski D., *Bezpieczne zarządzanie ryzykiem kredytowym w banku komercyjnym*. Olympus, Warszawa 1994, p. 13-15.
19. Marton C., *On the application of the continuous time theory of finance to financial intermediation and insurance*. The Geneva papers on Risk and Insurance, 1989, p. 225-262.
20. Nowakowski J., Jagiełło R., *Optymalny portfel kredytowy jako czynnik warunkujący bezpieczeństwo banku komercyjnego*, 'Bank i Kredyt' 1998, nr 5, p. 70.
21. Pfeifer U., *Management Bankbetrieblicher Erfolgsrisiken unter besonderer Berücksichtigung des Zinsänderungsrisikos*, Berlin 1991, p. 22.
22. Schroeck G., *Risiko- und Wertmanagement in Banken - Der Einsatz risikobereinigter Rentabilitätskennzahlen*, Deutscher Universitätsverlag, Gabler, Wiesbaden 1997, p. 23-25.
23. Schroeck G., *Risk Management in Banking and Value Creation in Financial Institutions*, J. Wiley & Sons, Inc., Hoboken, New Jersey 2002, p. 26-28.
24. Schulte M., *Integration der Betriebskosten in das Risikomanagement von Kreditinstituten*, Band 18, Wiesbaden 1994, p. 26.
25. Shimko D., Humphreys B., *Voting on values*, 'Risk Magazine', December 1998, p. 33.
26. Smith C., *Corporate Risk Management: Theory and Practice*, 'The Journal of Derivatives', Summer 1995, p. 21-30.
27. Strąś D., *Gałęziowa koncentracja kredytowa jako element zarządzania ryzykiem bankowym*.
28. Turle J., *Polityka kredytowa banku jako instrument zarządzania ryzykiem kredytowym w banku komercyjnym*, 'Bank i Kredyt' 1996, No 7-8, 1996, p. 65.
29. Wiatr M., *Systemy szacowania indywidualnego ryzyka kredytowego. Doświadczenia banków zagranicznych i polskich* in: Jaworski W. (ed.) *Banki w Polsce*. Poltext, Warszawa 2001.
30. Williams D., *Risk technology spending: An update*. 'Risk management Research Brief, Meridian Research', June 1999, p. 1.
31. Wysocki M., *Polityka kredytowa banku komercyjnego*. Twigger, Warszawa 1999, p. 72.
32. Zawadzka Z., *Zarządzanie ryzykiem w banku komercyjnym*. Poltext, Warszawa 1999, p. 27.

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ПРИНЦИПЫ ПОСТРОЕНИЯ СИСТЕМЫ УПРАВЛЕНЧЕСКОГО УЧЕТА ИЗДЕРЖЕК.

Keywords: records management, finance accounting, costs.

Несмотря на то, что переход к рынку был провозглашен десятилетие назад, все же трудно было все это время называть отечественную экономику рыночной. Да и сейчас с уверенностью нельзя сказать, что построение рыночных экономических отношений с успехом завершено. Есть целые области экономики, где до рынка еще далеко. Но процесс приближения белорусской экономики к рыночной все же идет. А раз так, то перед белорусскими предприятиями встают проблемы, которые характерны для многих предприятий, работающих в новых условиях. И, прежде всего проблемы управления. Рыночная экономика - это прежде всего конкуренция. Конкуренция - это постоянная борьба за рынок сбыта, за потребителя, а следовательно, это борьба за качество и низкую себестоимость. Грамотное управление себестоимостью - один из ключей к рынку. Чтобы получить этот ключ предприятию необходимо внедрять управленческий учет. Именно поэтому тема управленческого учета в условиях современной экономики не только интересной, но и актуальной для всех предприятий белорусской экономики, перспективной во всех отношениях.

Переход к рыночным отношениям совершенно по-иному определяет место предприятия в экономике. Эффективность его работы во многом зависит от управленческой деятельности, обеспечивающей реальную экономическую самостоятельность предприятия, его конкурентоспособность и положение на рынке. Процесс управления предусматривает своевременное получение руководителями достоверной информации, необходимой для принятия решений. Формирование и предоставление такой информации является главной задачей управленческого учета, возникновение и развитие которого происходит непосредственно с потребностями менеджмента. На определенном этапе экономического развития традиционный бухгалтерский учет перестает удовлетворять более усложненные