THEORETICAL NOTIONS ABOUT BANK RISKS

Prof. Constantin ANGHELACHE PhD *(actincon@yahoo.com)*
Bucharest University of Economic Studies / „Artifex" University of Bucharest
Lecturer Marian SFETCU PhD *(sfetcum@yahoo.com)*
„Artifex" University of Bucharest
Gyorgy BODO Ph.D Student *(gyorgy.bodo@yahoo.com)*
Bucharest University of Economic Studies
Doina AVRAM Ph.D Student *(doina.avram@gmail.com)*
Bucharest University of Economic Studies

Abstract

In this article, the authors try to solve the theoretical aspects of banking risks. Risk is a spontaneous occurrence that occurs under certain circumstances. Banking requires an inventory of all these issues to be identified, assessed, predicted and as far as possible possible to take measures that can at least be diminished if they do not eliminate these risks. In this study, the authors try to clarify the aspects of banking risk that can decisively influence the evolution of a business. For example, certain unforeseen events can occur, act and determine many trajectories that the decision-maker did not consider. Multi-dimensional risk management, because these are many and presents as a system, involves identifying them, assessing the financial risks they produce and, as a consequence, providing for a certain management strategy. The banking system is exposed to two-way risks. The first is that certain elements that may have negative effects on the normal evolution of the envisaged strategy may appear in the banking company's management. Secondly, it is the risk that the bank's clients are facing, which must be carefully analyzed, identified and laid down in the bank documents, the allocation of funds to eliminate, as far as possible, the effects or, more precisely, the risks that may arise in the system customers. In order to talk about the risks of banking, the authors set some criteria, make some classification of these risks depending on the exposure or the characteristic of the banking system. Summing up a series of issues, the authors summarize the features, principles and possibilities of identifying, measuring the effects of banking risks. Knowing these risks is an objective necessity for any manager, in particular, but also for any worker in the banking system, who must consider the possibility of the risks we have recalled.

Keywords: *bank risk, risk matrix, exposure to risk, nature of risk, risk management*

JEL Classification: *G21, G33*

Introduction

In this article, the authors have been preoccupied with the gradual establishment of the definition of the notion of banking risk, the classification of bank risks by several criteria, the possibility of quantifying bank risks, establishing econometric models by which bank risks are analyzed in the perspective of control, and , finally, to determine the measures that are required to diminish, if not eliminate, the effects of bank risks.

We know that banking risks are inevitable. Therefore, in this article, the authors attempt to identify the existing or potential banking risk categories, the extent to which they can be quantified, and then the possibility that the risks, viewed as a succession of possible events that each have a certain degree of risk, to be even controlled.

It is noted that we often encounter in the banking system the notion of contamination, which means that if a customer has more than one credit and one of them is late in reimbursement, contamination and other client credits can be interpreted and analyzed as having a maximum level of risk. In fact, if a bank gives more than one successive loan to a client, it will carefully study the past credit history to identify potential risk items.

The authors deal with the classification of banking risks, and to this end, limiting only to some of them, since the range of risks is sufficiently extensive, they start from the fact that the banking risks go from the risk exposure of a bank. In this respect, a bank's exposure to risk must be seen from two points of view, namely that the bank is both a debtor and a creditor, that is, attracts deposits and provides loans. Attracting deposits has a certain degree of risk, lending presents another degree of risk.

In this regard, we can speak of three segments in which the outlook for the emergence of risks is highlighted and can be identified. Thus, the first are the customers. They carry risk ratings for the bank, and therefore the study of credit is extremely important. Secondly, for a bank, the partner banks with which the bank considers interbanking may be risk-creating for that bank. And then, it comes to the risks of the capital or financial market that can be correlated with the bank we are considering.

Risk factors can be internal factors and external factors, so we can appreciate each element and then, by conjugation, reach the conclusion we want.

Another classification criterion would be the nature of the risk in the sense that it may be pure risks or speculative risks.

If we interpret the bank risks according to the characteristic of the bank in question, we distinguish between financial risks, environmental risks or risks of delivery. Within each of these risk groups we encounter a number of other sub-risks or risks that the authors accurately.

In the specialized literature we meet criteria for classification and detailed approaches, but this article summarizes the most important business-specific classification criteria in Romania.

Literature review

Agoraki, Delis and Pasiouras (2011) analyze whether banking regulations have an independent effect on banks' risk, or whether their effect is channeled through the market power held by banks. Albort-Morant and Ribeiro-Soriano (2016) provide insight into the nature and trends of research on business incubators. Aikaterini-Foteini, Girardone and Nankervis (2008) analyze the impact of alternative financial and banking structures on the overall efficiency of banks. Awdeh et al. (2011) studied the impact of capital requirements on banks' risk, showing that larger banks tend to hold smaller capital and have better capabilities to control risks, mainly through diversification. Anghel, M.G. and collaborators (2016) address issues related to the typology of risks and methods of risk analysis and management in economic activity. Anghelache, Anghel, Popovici and co-workers (2016) highlight a number of difficulties faced by economic agents that could not be identified at the time of the analysis, evaluation and approval of loans but emerged with the implementation of the contract. Anghelache, Anghelache, Anghel, and Niţă 2016) present the defining elements of the risks, in general and of the banking ones, in particular, insisting on the implications of the development of the financial markets on the methods of their management. Chen and Wu (2014) are studying bank credit growth in emerging markets before, during and after the 2008-2009 financial crisis, using bank data in this regard, focusing on the role of the bank's owner. Crété (2012) is conducting a series of research on bank business activity. Hakens and Schnabel (2010) propose a banking model with imperfect competition in which creditor access to credit is improved when banks are able to transfer credit risks. Hernández-Cánovas and Martínez-Solano (2010) study the relationship between banks and SMEs in the European continental banking system.

Research methodology, data, results and discussions

The business system is generally exposed to uncertainties that may have a greater or lesser impact on the business. Depending on the degree of impact on the business, these events may influence the way in which the business is conducted, with more or less favorable consequences. These uncertainties are in fact the risk factors that can influence the way a business evolves, so some unforeseen events, for which reason it is very important to have a serious concern for those who run a business in terms of risk management and control.

The ability to manage the above mentioned uncertainty elements results in a company's vulnerability, which can be defined as its sensitivity to various risk factors. In other words, to what extent the company's results depend on various risk factors. If we look at a firm's business as a system, we can formulate vulnerability as described by the variance of the input factor <alpha> that will cause a variation of the <R> results. The lower the input variance causes a significant variation in output, we can say that the vulnerability is higher, and vice versa, if a significant variation in input does not cause a significant variation on the output, we can say that the dependence / „sensitivity" respectively, is smaller. This factor represents the impact of risk on banking activity.

On the other hand, another feature of the risks is the frequency with which they occur. A frequently occurring risk factor can create more negative effects than one that appears sporadically.

By combining the two factors we can draw the „Risk Matrix", which is a basic theoretical element in risk management.

Impact / Effect (Y)	High (3)	3	6	9
	Medium (2)	2	4	6
	Low (1)	1	2	3
		Low (1)	Medium (2)	High (3)
		PROBABILITY (X)		

Note: The figure and color represent the degree of severity (impact) on the business.

Acest sistem de gestionare multidimensională a riscurilor este larg răspândit în mediul de afaceri şi, cu precădere, în sistemul financiar bancar. Impactul mai multor factori este modelat prin simulări reduse la efecte masărabile si comensurabile

This multidimensional risk management system is widespread in the business environment and, above all, in the banking financial system. The impact of several factors is modeled by reduced simulations to measurable and commensurable effects

Thus, any firm or entrepreneur and banking institutions must consider risk management, identify them and try to shape their impact on the business plan. Knowledge of risks and their predictability is an essential function in banking institutions and is a characteristic feature of the institution. Financial institutions spend significant resources on modeling risk management processes, building statistical and mathematical models that provide clear indications of the evolution of some indicators to alert management to the imminent occurrence of less desirable situations that impact on business performance , with effect on profitability.

Banking risk can be considered as a complex of events that have negative effects on the bank and which, through their complexity and interdependence, causes the occurrence of adverse events or, worse, triggering events in the chain that may have disastrous effects on the institution .

Going further on the hypothetical thread we can see that banks are influenced (interdependent) within the banking financial system, which has been facilitated both by the technological evolution and the opening of the markets. Interconnection is achieved both at asset and passive level, and is not limited to financial institutions, involving both investors, the company and even individuals. The more complex the network is, the more difficult it is to model the system, overlapping the continuous change of the network schema and link parameters.

Thus, maladministration of risk in some banks may have an impact on the entire financial-banking system (at the regional, national, regional, global), which triggered the recent financial crisis. The fall of some banks (caused by improper risk management - neglecting impacts) that has spread to other players on the market, leading to global expansion.

The main players who were affected by the global crisis triggered in 2008 were financial institutions that suffered the biggest losses. Banks, which are the main financiers of the economy, through the shock suffered, have further transmitted the effect to the economy, triggering a domino effect. This phenomenon has been defined as „systemic risk", a risk that can affect a large part of the economy of a country, area or sector in the economy, a context in which effects propagate in the chain.

In other news, risk is regarded as a succession of possible events that each have a certain degree of risk. If these events are analyzed separately, their interpretation does not lead to an overall outcome of the risk situation, which is why risk analysis should be made by correlating all the events that generate the risk. By linking the risks, a chain of risky events is identified, and they will be analyzed together, even if at first sight they are not interdependent.

In the banking system, the concept of „contamination" is used, which means that if a client has several credits and one of them is late, by contamination, all client credits will be treated (classified) at the maximum risk level.

Thus, grouping and classification of banking risks is necessary and useful because many risks share common traits and their analysis / management can only be correlated both through the understanding of the process of action and the assimilation of some modeling procedures and techniques .

The objective of bank risk management is to minimize the risks faced by the institution so as to maximize the value of the business. Thus, some analysts believe that bank risk management is part of financial management, along with strategic planning and financial forecasting, accounting and reporting systems, internal audit and control. But this approach can be considered as a narrow perspective, in fact risk management needs to respond to new challenges, both in terms of internal processes and the business environment in which it operates.

• **Banking risk classification based on exposure to risk**

Risk exposure to a bank should be viewed from two perspectives: the bank is both a debtor and a creditor, that is, attracts deposits and gives / provides loans, and this on two or even three different segments (1) partner banks (3) capital markets / investment (financial). Thus, the „domino effect" of a financial institution's collapse is greater because it affects both bank clients (businesses and individuals) and partners (other financial institutions), so the exposure is significantly higher.

From this point of view, we can consider that a first exposure classification is determined by the source of the risk factor:

- Internal risks are caused by causes exclusively related to the management of the internal processes of the banking institution. Thus, significant risk causes may arise from improper business management, unfounded management decisions, and risks due to frauds caused by internal staff.
- External risks are those risks that are generated by the business environment and their impact on the business.

Another classification criterion refers to the nature of the risk. Thus, we can distinguish between:

- The pure risk, those risks that only cause losses. Knowing these risks is important from the point of view of strategic management to reduce the negative effects on results and maximize profit.
- The speculative risk is, as a rule, a risk assumed by knowledge managers. They know that these operations can cause losses, but they can also lead to gains. In the hope of winning, managers predict the future evolution of some business items (eg exchange rate developments, share value, and so on).

Knowledge and, above all, careful follow-up of the business environment can give significant indications to experienced managers to engage in risk-taking operations. Thus, this factor is strongly influenced by the subjective factor of the decision-maker, but the technological evolution offers more and more analytical tools and data sources (big data), which help to make decisions based on more and more criteria objectives.

• **Classification of bank risks according to banking characteristics**

In the following we will analyze the risk classification from the point of view of the specificity of the banking operations, which can be grouped into the following major categories of risks:

- Financial risks, the more important because they have a major and direct impact on the bank's performance indicators, and which can cause the most serious consequences until bankruptcies. Such risks are associated with current transactions / banking transactions and refer to: *Credit risk* or insolvency risk. This refers to the risk associated with the non-reimbursement of loans to customers, with a direct impact on the deterioration of the bank's assets. This factor is also associated with the *Recovery Risk* that relates to the probability of recovering part of the debt by capitalizing the collateral under real market conditions. This risk involves the greatest operational effort to analyze and track credits, so the bank can react quickly to major events involving the client portfolio; *The liquidity risk* or the financing risk refers to the probability of repaying the loans borrowed by the bank. Due to interconnection, this risk is in fact a credit risk for those who have granted the loan (depositors or creditors); *The risk of bankruptcy* or the risk of capital / the risk of indebtedness is associated with the likelihood that own funds will be insufficient to cover losses caused by bad business management; *The market risk* or variation in financial assets is determined by the evolution of the business environment in which the business is conducted. The most significant are interest rate risk, exchange rate risk, sovereign risk (associated with the country).
- Environmental risks, usually determined by external factors, which can have a significant impact on the bank's performance and on which the bank can not intervene (can not control or have limited control): *The economic risk* is associated with the evolution of the business environment in which the bank operates, but also its customers / partners. Adverse developments in business conditions may negatively impact the bank's performance; *Sovereign or country risk* is associated with the probability of piracy from international activities due to events wholly or partly dependent on foreign government control. Country risk is quantified by ratings given by rating institutions for a country's performance, stability and prospects, political factors, natural factors, and so on; *Competitive*

risk is associated with the likelihood of maintaining the competitive advantage of specific banking products / services, as products can be easily copied by competitors; *The risk of fraud* can be differentiated in internal or external causes depending on the cause of the trigger. It expresses the likelihood of committing thefts or actions contrary to the interests of the bank; *The legal risk* refers to the stability / predictability of the legal context established by the regulations in force. By unfounded and untimely decisions, the political factor through their decisions can negatively influence this risk, or even trigger systemic risks.

- Performance risks are those that are determined by the specific operations of financial-banking services and can be grouped into: *The strategic risk* expresses the likelihood of adopting a wrong strategy by the management, or by ignoring the context, assumed too high risks (unrealistic results); *The new product's risk* is associated with innovation in the banking sphere, and reverberates to the likelihood that the new product will not have the expected impact or be missed by the market at its estimated value; *Operational risk* refers to the impossibility of the bank not being able to provide banking services or to be able to carry out the transactions in which it is involved in time or effectively; *Technological risk* is associated with the level of technological evolution that, through new IT & C systems, is putting pressure on technological innovation and new distribution products or channels; *Reputational risk* is, in fact, the confidence that customers have in that financial institution and is a major selection criterion for customers. However, reputational risk is also the main channel of contagion through which the system risk is manifested (the distrust of depositors in one or more banks spreads); *Personal risk* is determined by causes that are associated with family needs, changes in social status, changes in working conditions, etc. of infivizers who run business operations.

In the literature we can find other classification criteria and more detailed approaches, but the above are a synthesis of the most important classification criteria specific to the banking and business environment in Romania.

Conclusion

From the banking risk study, we can draw theoretical and practical conclusions.

Theoretically, the first conclusion is that the activity of any bank is subject to banking risks. This aspect is undoubtedly the result that a bank must have in its management strategy a precise point on the analysis of the risks that may arise in the activity carried out.

The second conclusion is that banking risks can be identified, can be measured, but there is a need for much concern and understanding to determine the effect of a risk, and how this risk will be controlled, diminished or, most positively, eliminated.

Another conclusion that emerges from this study is that the banking risks are associated, so one is the element of determining the occurrence of another.

In this context, we conclude that bank risks need to be known and interpreted as a system of banking risks that may appear on the financial market. Another conclusive aspect is that bank risks are triumphant. In this respect, the banking activity is subject to the specific risks of the bank's activity, the customers come at their own risk, which they can tranship to the bank, and thirdly it results that the capital market or the financial and non-financial market are accompanied by specific risks that, and these in the bank's relations with these institutions can be transferred to it.

Finally, the last conclusion we can draw from this material is that there are a multitude of risks that are more or less well defined but which each have specific characteristics to be considered whenever we analyze the activity banking.

The issue of bank risks is of particular importance for ensuring an efficient management of the banking system.

References

1. Agoraki, M.E., Delis, M.D., Pasiouras, F. (2011). Regulations, competition and bank risk-taking in transition countries, *Journal of Financial Stability*, 7, 38–48
2. Albort-Morant, G. and Ribeiro-Soriano, D. (2016). A bibliometric analysis of international impact of business incubators. *Journal of Business Research, 69* (5), 1775-1779
3. Aikaterini-Foteini, V., Girardone, C. and Nankervis, J. (2008). Efficiency across alternative financial structures, Bank types and size classes: a comparison of the OECD countries. *International Journal of Banking, Accounting and Finance, 1* (2), 168-188
4. Awdeh, A. et al. (2011). The Effect of Capital Requirements on Banking Risk. *International Research Journal of Finance and Economics*, 66, 133-146
5. Anghel, M.G. et al. (2016). Theoretical considerations regarding risk analysis models. *Romanian Statistical Review, Supplement*, 9, 64-72
6. Anghelache, C., Marinescu, R.T. et al. (2016). Banking Risk evaluation Model based on BASEL Committee. *Romanian Statistical Review Supplement*, 5, 150-158
7. Anghelache, C., Anghel, M.G., Popovici, M. et al. (2016). Significant aspects regarding the analysis of bankruptcy risk. *Romanian Statistical Review, Supplement*, 9, 81-87
8. Anghelache, C., Anghelache, G.V., Anghel, M.G. and Niţă, G.(2016). *General Notions on banking Risks*, Romanian Statistical Review Supplement, 5, 13-18

9. Chen, G. and Wu, Y. (2014). Bank Ownership and Credit Growth in Emerging Markets During and After the 2008-2009 Financial Crisis A Cross-Regional Comparison. *International Monetary Fund* in its series IMF Working Papers
10. Crété, E. (2012). Analysis of banking activity by business line, Quarterly selection of articles - *bulletin de la Banque de France*, 26, Summer, 53-64
11. Hakens, H. and Schnabel, I. (2010). Credit Risk Transfer and Bank Competition. *Journal of Financial Intermediation, 19* (3), 308-332
12. Hernández-Cánovas, G. and Martínez-Solano, P. (2010). Relationship lending and SME financing in the continental European bank-based system. *Small Business Economics, 34* (4), 465-482