ANALYSIS OF ECONOMIC IMPACT OF THE FINANCIAL RISK

DIANA NICOLETA ROŞIORU, LECTURER *

Abstract: *Indebtedness has two fundamental features for a company: on one hand the obligation to regularly pay certain interests, which means financial expenses, which will diminish the results, and on the other hand the use of credits may cause a surplus of profitability, which if it is greater than the cost of the borrowed capital, makes the company to be in advantage.*

The profit obtained by using credits appears as such as a retribution for the risk assumed upon contracting them. The cost of borrowed capital is lower than the cost of the company's equity, which fact results from the possibility of fiscal deduction of the indebtedness related financial expenses, which justifies the use of indebtedness as a possible way to increase profitability. But the increase of the indebtedness means an increase in financial risk, which generates the attitude of shareholders to increase profitability requirements, also, the lenders are becoming increasingly sensitive to the risk related to the company's indebtedness and calls for increasingly higher interest rates.

Keywords: *financial risk, market risk, interest, interest rate, currency risk, liquidity risk, credit risk, operational risk.*

1. Introduction

Companies use for carrying on their activity both equity capital and borrowed capital. There is an optimal funding policy, whereby, benefiting of an optimal level of indebtedness, the financial risk is highlighted and accepted by both the shareholders and the creditors and other partners from the company's external environment.

The financial risk occurs when loans are not generating financial efficiency, i.e. the economic rate of return obtained by using loans is lower than the interest rate on loan capital

* WALES UNIVERSITY ROMANIA

The **financial risk** is defined as "the variability of result indicators, under the incidence of the company's financial structure"[1]. It is determined by the "policies of enterprise's financing through equity capital or through loans"[2]

Financial risk analysis takes into account both the study of probability of its occurrence and his influence on the company's economic - financial performance.

It outlines several *main directions* having the character of generality, towards which actions must be taken in order for the financial risk to be decreased:

- Increase of the rotation speed of economic assets by increasing the rotation speed of all the patrimonial elements as well as by increase of the weight of current assets, which may be restored more quickly through turnover;

- Increase of the volume of economic activity that would lead to increased turnover and to achieving a higher commercial return;

- Increase of production capitalization degree by promoting an active marketing policy for achieving a better positioning on the market;

- Establishing an appropriate financial structure wherein the increased leverage to generate in time a higher and a growing level of economic profitability;

- Monitoring the level of economic performance that dynamically would have to increasingly take distance of the cost of borrowed capital in order to decrease the likelihood of occurrence and manifestation of the financial risk.

By promoting an optimal ratio between equity capital and the borrowed capital, it is possible the indebtedness to be used as a way for the performance to be increased. The condition required to obtain a higher return on the equity capital is that through a good asset management a higher efficiency to be produced than the cost of borrowed sources; otherwise, the occurrence and manifestation of financial risk will be imminent.

[1] I.Stancu – Finanțe, Editura Economică, București, 1996., pag. 376
[2] T. Hada – Finatele agenților economici din România, Editura Intelcredo, Deva, 1999, pag.207

2. Analysis and decrease of financial risk

Analysis of risks in the banking environment

Monitoring the banking risks means to identify, assess and control the risk management policies and practices of a bank, which allow problems faced by a bank to be detected and the banking risk management consists of the overall bank risk management methods meant to their limiting, division and funding as well as to reducing the risk exposure of each bank.

The lending activity is identified as the core business of banking entities, and the credit risk, as the most important of the various threats that can strike the outcomes of the banking financial intermediaries. In terms of credit risk, it must be assessed by comparison with the benefits that the bank expects to obtain from granting the loans, the most important function of the banking management being the function of control and analysis of the credit portfolio, whereas poor quality of the loans is one of the main causes of bankruptcy.

The **market risk** is a key component of the financial risk management system in the case the credit institution is operating in developed financial markets, and currently the most popular method for measuring the market risk is the indicator Value-at-Risk. Value-at-Risk is a measure of the maximum potential changes in value of a portfolio consisting of more financial instruments, with a given probability and a given time horizon. It attempts to answer the question: how big can the potential loss of a bank be, the loss being calculated with a given probability of x%, on a given time horizon?

Interest rate analysis is of particular importance as the unexpected changes in interest rates can cause significant changes in the profitability of a bank and in the market value of its capital by the net interest income increasing or decreasing depending on the cash flow characteristics of the bank's assets and liabilities. The interest rate risk should be managed so as to obtain an interest margin as high and stable as possible over time and the bank's profitability and capital value not to significantly change as a result of unexpected change in interest rates depending on the characteristics of the cash -flows generated by the bank's assets and liabilities**.**

The **currency risk –** a market risk component - arising from market fluctuations of the exchange rate, expresses the probability that a variation in the exchange rate on the market to negatively influence the bank interest margin.

In terms of liquidity risk, arising from the maturity mismatch between the asset items and the liability items, an extremely important task of the management of a bank is to correctly estimate and cover the liquidity needs, as profitability of a bank may be adversely affected on long term if the bank has in its portfolio too many liquid assets as compared to its needs, but on the other hand too less liquidity can create major financial problems or even bankruptcy in case of small banks.

Due to the ongoing development of the economy, the globalization and the expansion of economic activities, the international financial market and also the European market are in a complex and continuous process of adapting products and services, due to the existing competition. In these conditions operational risk has become an increasingly more important element for credit institutions, which are obliged to redefine their products and services in order on the one hand to enter new markets and on the other hand due to more frequent use of innovative financing products such as: secure products, structural products. The Basel Committee defines the operational risk as the risk of losses generated by inadequate or defective internal processes, by people and systems or by external events, focusing on the causes of losses in order to differentiate operational losses from the losses generated by other risk categories

Ensuring the adequate liquidity is one of the most important objectives of the management of any banking institution. In order to have a permanent control over liquidity the National Bank of Romania regulates the country's banking liquidity by the NBR Norm 1/2001, as subsequently amended and supplemented, whereby the manner of calculation of the liquidity ratio is defined as the ratio between effective liquidity and necessary liquidity. In order the banks not to be in difficulty to procure the necessary resources in order to meet their commitments at a given time, they have to face the liquidity risk. The art of transforming the short maturity resources into long maturity investments and to face the liquidity crisis in a short time and at low prices is specific for the bank management. This requires the bank management to address the three aspects of liquidity risk, which we presented below in this chapter, namely: protection against liquidity risk, liquidity risk measurement and liquidity risk management. Analysis of liquidity requires the banks' management not only to continuously review the liquidity situation, but also to examine how the funding requirements may evolve in different situations, including in adverse conditions, so that in its supervision, the Basel Committee has focused on how the banks manage their liquidity in general.

3. The financial crisis and its impact

Since Romania joined the European Union, a new stage of evolution of the Romanian banking system began. The European integration process is equivalent to the development of Romania's reform, taking into account the existing model of European states.

Some modern economic theories reject the idea of a general theorizing of economic and financial crises, according to which the crises can be integrated in a generally valid model, considering that every financial crisis is unique, each representing in fact a historical accident caused by factors specific in a certain social, economic and political conjuncture.

According to these theories crises can not be anticipated so that their negative effects to be brought to minimum.

The credit crisis that erupted in the US in August 2007 led to the bankruptcy of some of the largest banks in the world, and its effects are now being felt on the European financial market.

After the bankruptcy of Lehman Brothers, the takeover of Merrill Lynch by Bank of America and the nationalization of American International Group (AIG), the US government adopted the "Economic Stabilization Law" meant to save the US financial system from collapse.

The international economic crisis has also produced large fluctuations on the economic market of Romania, affecting both the stock market and the forex market. However, the Governor of the National Bank gave assurances that Romania's banking system is stable, explaining that the foreign banks holding participations on the Romanian market can not bring out their money in any conditions.

Impact of global financial crisis on the Romanian financial system is relatively limited concluded the members of the National Financial Stability Committee (CNFS), who analyzed the impact of the international crisis on the financial institutions, markets and infrastructure as well as on the real economy in Romania.

The economic, monetary environment and the financial banking environment are permanently subjected to a fierce competition, new hitherto unknown risks appear, with particular manifestations. In these circumstances it is very difficult to present some form of risk or to attempt a precise definition of it, given the contemporary world characteristic, namely uncertainty.

According to these facts the risk is addressed in different ways by some experts, different opinions expressed in literature at home and abroad being found.

Professor Gheorghe Manolescu believes „that the concept of risk is inextricably linked to the concepts of profitability and flexibility. The result of the company is subject to unforeseen events which accompany its activity in all areas. The risk translates into earnings variability, thus affecting the return on assets and consequently the return on the invested capital"[3].

3.1. Credit risk

The risk of lending is the probability that commercial banks to register losses arising from the insolvency condition of the customer debtors. At the level of the assembly of the commercial banks, this risk is systemic in nature, its level does not result from the mere sum of credit risk levels faced by individual components of the commercial banking system, it is the „synergistic" result of the effects propagated on the entire system.[4].

Lending activity is the core business of the banking entities, and credit risk is the most important of the various threats that can strike outcomes of the banking financial intermediaries. Its manifestation intensity is measured by the deterioration / improvement in loan portfolio quality through the state of solvency of debtor customers.

Given the fact that in the process of lending to the economy the banks must filter the businesses and to promote the efficient, reliable and legal ones, boosting as such that effective activities be carried on by all those who make use of bank credit, the calculation of the creditworthiness indicators is a quite important milestone in making decisions. The banks must assess the risks that they deal with in crediting a business, investigate the loan reason and identify the refund sources that depend on the conduct of the business they credit.

[3] Gh. Manolescu-Managementul financiar, Editura Economică, Bucureşti, 1995, p.169.
[4] I.L. Popa, B. Dima, - Analiza Sistemului Bancar Comercial, Editura Mirton, Timişoara 2004.

The analysis methods currently used by banks are based on a number of concepts and techniques that constitute the center of gravity in the technical and quantitative analysis of lending. Thus, banks show a greater dependence in making their decision on granting the credit on the applicant's creditworthiness indicators and guarantees, but these indicators do not always express the reality and even if they would expresses the said reality, it would have to only be a business card of the company, and the security would have to be viewed as a precautionary measure, and not as a certainty of loan recovery by its harnessing.

In the current circumstances wherein the global economic crisis is also felt in our country, all the principles and methods of a thorough analysis of granting the loans by taking as smaller risks as possible by the lenders are subject to pressure from domestic and international economic environment.

3.2. Market risk

The market risk is a key component of the financial risk management system in the case the credit institution is operating in developed financial markets. The market risk is defined as the risk of losses arising for balance sheet and off balance sheet items as a result of changes in market prices (Isaic - Maniu, I., 2006: 76).

The main categories of risks that lead to changes in financial markets, and that actually determines the market risk are: *the interest rate risk* - by variation of the trends and the level of interest rates; *the currency risk* – by the variation of exchange rate and thus of the value rendered in the national currency of different external assets and liabilities; *the risk regarding the price of shares* – which corresponds to loss or lack of earnings that may result from changes in the value of shares held by the credit institution.

Starting 1998, the regulatory institutions require the banks with extensive trading activities to constitute a capital reserve for ensuring against significant losses, which could affect their stability. The volume of this reserve, known as the capital requirement for market risk covering is directly proportional to an indicator reflecting the risk of the portfolio. Currently market risk is measured in terms of value-at-risk (VaR).

For categories of risk factors to which the credit institution uses an internal model the capital requirement will be determined according to the relation:

$$Ct = max(VaRt)$$

where:

Ct – capital requirement afferent to the business day t;

VaRt – value-at-risk afferent to the business day t;

K –multiplication factor;

VaRt-i – value-at-risk afferent to the business day t-i;

RSt – capital requirement.

In order to determine the value-at-risk afferent to the business day „t" the items by financial instruments (only the instruments afferent to the portfolios for which the advanced method is used) from the trading book by the end[5] of the business day t-1 shall be used, using the methodology validated by the National Bank of Romania.[6]

3.3. Interest rate risk

As defined by some authors (I.L. Popa, B. Dima) the **interest rate** is the cost of „old" and „new" financial resources, allocated by the banking and non-bank financial intermediaries, as part of the financial intermediation process.

The **interest** is the amount due to the owner of the capital upon the reimbursement of a granted loan or the price of the use of capital, as well as the remuneration of the risk the relevant loan implies.

The main indicator of asset and liability management is the **net interest margin**. The objectives of the assets and liabilities management consist in increasing the bank's incomes from the investments, in close liaison with the decrease of the costs of the attracted sources, while an acceptable risk is maintained and the regulations in force on capital adequacy and bank's liquidity are complied with.

The assets and liabilities management, which involves the collection

[5] The items initiated during the day for which VaR is determined shall not be taken into account.

[6] The capital requirement associated with a non business day will be equal to the requirement associated with the lasr business day. The multiplication factor afferent to a business day is obtained by adding the minimum multiplication factor and the additional multiplication factor for the relevant business day. The minimum multiplicative factor shall not be less than 3; determination by National Bank of a multiplicative factor of more than 3, must be justified by showing the reasons (and their importance) that contributed to the adjustment of the minimum factor. Additional factor is determined depending on the back-testing results.

and use of funds, is the financial core of a bank.[7] Accordingly, the assets and liabilities management includes strategic planning and implementation and control processes that affect the volume, diversity, maturity, interest rate sensitivity, quality and liquidity of assets and debts of a bank. The main objective of asset and debt management is to produce a flow of net interest income, which flow is stable, large, of high quality standards and growing. This is achieved by obtaining an optimum combination and level of the assets and liabilities and of the financial risk.[8]

The interest rate is for any banking company the main negotiating element with its customers and the interest rate risk is due to the fluctuations in interest rate

3.4. Currency risk - a component of market risk that arises from the market fluctuations of the exchange rate.[9]

Exchange risk (exchange rate risk) can be defined as the risk of losses arising from the evolution of the exchange rate. It is closely related to interest rate risk.10

Currency risk expresses the probability that a variation in the exchange rate on the market to negatively influence the bank interest margin.

Currency risk can be assessed by means of two basic indicators, namely the *individual currency position*, which is calculated for each currency and the *global currency position,* which implies the advantage of a global image over the Bank's currency exposure and the disadvantage of cancellation situation by currencies, which in fact must be managed.

3.5. Liquidity risk

Liquidity risk, also called funding risk, is the risk that an enterprise to encounter difficulties in procuring the funds needed to meet the commitments related to financial instruments. The financial risk may result from an inability to quickly sell a financial asset at an amount close to its

[7] Greuning H.v., Brajovic Bratanovic J. – Analyzing and Managing Banking Risk, A Framework for Assessing Corporate Governance and Financial Risk, Editura Irecson, Bucureşti, 2004 – Op.cit., p.44
[8] Greuning H.v., Brajovic Bratanovic J. – Analyzing and Managing Banking Risk, A Framework for Assessing Corporate Governance and Financial Risk, Editura Irecson, Bucureşti, 2004 – Op.cit., p.44
[9] Norm of the National Bank of Romania No. 17 of 18.12.2003 on the organization and internal control of credit institutions and significant risk management and the organization and conduct of internal audit activities of credit institutions, published in the Official Gazette Nr. 47 of 20.01.2004.
[10] C.Basno, N.Dardac – Op. Cit., p.19

fair value.[11]

Liquidity risk is the probability that the bank will not be able to honor payments to customers, due to deviation of the proportion between the long-term investments and short-term ones and lack of correlation with the structure of the bank's liabilities.[12].

Long-term investments are generally higher than the long-term resources of the bank and therefore the banks are facing less desired circumstances such as:

a)not to be able to honor its short term commitments;

b)have the resources with short maturity, while large investments have long maturity;

3.6. Operaţional risk

Due to the ongoing development of the economy, the globalization and the expansion of economic activities, the international financial market and also the European market are in a complex and continuous process of adapting products and services, due to the existing competition.

In these conditions the *operational risk* has become an increasingly more important element for credit institutions, which are obliged to redefine their products and services in order on the one hand to enter new markets and on the other hand due to more frequent use of innovative financing products (e.g.: secured products, credit derivatives, structural products.[12]

Conclusions

Given Romania's new status as a full member of the European Union, but also in the context generated by the international financial crisis, the National Bank of Romania acted, together with other Romanian authorities for the purposes of coordinating and integrating the national policies in the European framework.

The evolution of the international economic environment in 2007 was marked by events with destabilizing impact on the banking environment and capital markets, which culminated with the mortgage credits „subprime" crisis in the United States.

This crisis has emerged as a result of a liquidity excess, a low rate of return of funds, the placement of funds in financial instruments with

[11] Chernobai A., 2007:2
[12] BCBS, 2001:25

increased profitability and implicitly with increased risk, an insufficient insurance against risks.

With the global economic crisis hitting among European countries, the Romanian banking system is also exposed to direct or indirect reactions of the crisis. So that the credit institutions in the Romanian banking system no longer have a major role in crediting the companies, but still remain the main source for the population. The crediting has been oriented to SMEs and to companies working in the field of trade and services.

We can conclude that:

- Developments in domestic lending will increasingly depend on the ability of banks to raise resources internally; the lending process must be continued on prudential grounds because the risks of lending, in these uncertain economic conditions, may increase from one period to another;
- Banks must find new lending opportunities that to also operate in this time of crisis, contributing to the exit from the created deadlock. As lending opportunities we recommend: SMEs and companies that so far used to finance externally; population with a high degree of solvency; societies through which infrastructure projects are carried out.

In order to ensure the viability of a banking institution, the banking management must monitor both the performance of the banking institution, i.e. the bank profitability, and the liquidity risk. Between banking profitability and liquidity a close interdependence exists, the profitability of the banking institution depending on the bank's ability to create liquidity and on its ability to place them on the market.

To limit the impact of financial crisis on the Romanian economy and thus on the banking system, we believe that the following prerequisites are required:

- Taking constant prudential and administrative measures by the central bank in order to curb the increase of bad credits granted to the private sector and to support lending in domestic currency to the detriment of lending in foreign currency.
- Putting the minimum reserve requirements at a high level enables gradual adjustment of liquidity in the banking system, depending on the evolution of the market conditions.
- Maintaining the ratio overdue and doubtful receivables / equity capital at a low level.

- Maintaining the secured level of deposits (per person and per bank) established at the credit institutions at a value that to encourage deposits from both individuals and legal persons and to avoid panic, which once installed, would lead to massive withdrawal of amounts deposited in the banking system.
- Changing the rules on provisioning, in order for the restructuring or rescheduling process of non-performing loans to be continued (under the current rules, the customers can not be helped in case of restructuring or rescheduling without the bank to have profitability and solvency problems). Keeping on the current level of provisions affects the liquidity and profitability, and prudential indicators of the bank.
- An effective anti-crisis measure is to reduce the interest rates of monetary policy and contributing to investment increase.

Romania must adjust its macroeconomic policies to the new context created by the international financial crisis, so that Romanian economy's vulnerability to international financial turmoil involves the need of recalibrating the economic policy mix consistent with the challenges posed by them. Such a rebalancing of the macroeconomic policy package is primarily aimed at gradually reducing the current account deficit, the external imbalance being the main source of vulnerability of the economy to liquidity crunch and to the deterioration of the international financial market.

We can say that a strong, stable and viable economy automatically lead to the existence of a sound and efficient banking system.

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www.bnro.ro Banca Națională a României

www.insse.ro Institutul Național de Statistica

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