THE IMPORTANCE OF ENSURING THE SOLVENCY OF THE BANKING IN OVERCOMING THE DIFFICULTIES ARISING FROM THE FINANCIAL CRISIS

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Abstract:

Degree of coverage of risks represents the key to success and survival on a dynamic and innovative financial market. For this reason, is important for bank management, maintaining balanced structure of assets which are weighted to the risk, as well as ensure a proper connection between equity capital and attracted resource. The purpose of the article is to present a method used in the banking activity in order to reduce the effects of the risk of insolvency. Thus, we used the specific modalities for the determining of solvency indicators in order to establish the degree of capitalization of the bank.

Key words: *risk of insolvency, weighted assets, requirements by capital, indicators of solvency, profitability*

1. Introduction

Solvency risk represents the risk of not having at your disposal the required own funds to cover the eventual losses (Dedu, 2008). This risk occurs both because of insufficient available own funds and because of the manifestation of the different types of risk (credit risk, market risk, currency risk).

Although the regulations of Basel II have contributed to improving the process of risk-control and to the correct allocation of the bank's capital, they don't succeed, however, through putting them into practice, to avoid the effects of the financial crisis that started in the period 2007-2008. For this reason, in January 2009, the Basel Committee issued a consultative package of documents aimed to improve and strengthen the Basel II (Basel Committee on Banking Supervision, 2009).

Pillar 1, which refers to the modification of the minimum capital requirements, includes:

- processes of re-securitization (securitization represents a financial operation for recovery of receivables by an investment vehicle which acquires and distributes them in order to guarantee the issuance of securities) involve situations in which the exposure basics come from a securitization exposure. Exposures resulting from re-securitisation require higher requirements of capital, which causes the banks to analyze very carefully the implications of investment in assets which are securitized;

- increased requirements of capital corresponding for exposures from securitization.In view of the fact that the rating in the case of a exposure of securitization evaluated at AAA, is based on a guaranty issued by bank, lead to a situation in which the bank can no longer benefit from the auto-guarantees. In fact, the bank can no longer benefit from a lower weighting of risk over the exposure arising from the securitization;

- taking into account the operational minimum criteria in the calculation of weighting coefficients for activities of securitization;

- extending of the principles of the prudential evaluation toward the "banking book". This measure refers in fact at the importance given by the Basel Committee, to the activity of evaluation, which should be extended over the structural transactions from "banking book" (assets which are less liquid are recorded in the structural balance as "banking book").

In practice of banking requires permanent monitoring of large exposures major for main clients, for unique debtors, as well as exposure for persons who are in special relationships with bank or for the personnel of the financial institution.

2. Weighting of the assets in order to determine indicators of solvency

The degrees of risk in the case of banks will be established on the basis of the two options available to the national supervisory authorities.

According to the first option, the banks in the country will receive a lower degree of risk with one category compared to the degree of risk assigned to that country. Also, there is a maximum limit by 100% of the degree of risk for a bank, with the exception of financial institutions from the countries rated under the B-, where the maximum limit is established at 150%.

Table 1. The degrees of risk used for weighting the balance sheet assets

Exposure for central authorities and central banks		AAA at AA-	A+ at A-	BBB+ at BBB-	BB+ at BB-	Under B-	Unrated
		0 %	20%	50%	100%	150%	100%
Exposure for banks	Option 1 standard	20%	50%	50% (20% current)	100%	150%	50%
	Option 2- exposure	20%	20%	20% (ditto	50%	150%	20%

	on short-term			now)		
Exposure to:	Corporations	AAA at A	A+ at A-	BBB+ at BBB-	Under BB-	Unrated
		20%	50%	100%	150%	100%
	Retail	75% (100% current)				
	Mortgages on homes	35% (50% current), only in certain conditions				
	Mortgages on commercial space	100% (ditto); with the approval of the Central Bank and under certain conditions may apply a risk weighting by 50%.				

Source: Seminar "Management of risk in perspective of Basel II" 3rd Edition, organized by the FinMedia in February 22, 2006

According to table no. 1, in the case of portfolio of credit for the retail segment, in Romania, the degree of risk was established at 75% compared with 100% for risk of credit. For loans secured with real estate mortgages, the degrees of risk are established at 35%, respectively 50 %, and it can maintain at these percentages, only when certain conditions are fulfilled.

Basically, in the case of the standardized approach, financial institutions are responsible for the quality of the ratings stipulated by external agencies of rating. Thus, banks must ensure an appropriate level of own funds and conduct an efficient management of risk.

Basel II does not provide a ceiling of the country because there are cases in which an economic operator can have a higher rating than the country in which it operates (Treapat, 2011).

The second option which is available to the national supervisory authority refers to the approach based on the internal rating. This approach is based on the probability of default (PD) for a debtor or for a group of debtors. Probability of incapacity of payment involves the emergence of at least one of the following events (Mihai, 2003):
✓ debtor is unable to pay all its obligations towards the bank;
✓ debtor recorded outstanding that exceeding 90 days;
✓ debtor has been declared bankrupt;
✓ production of a credit event which leads to apparition of a loss for the Bank, such as the use of specific provisions or restructuring of the debtor's activity who is delaying its obligations towards the bank.

According to the internal rating approach (IRB) banks can use their own estimates regarding of the financial stability of their clients, in order to assess the risk of their portfolios. Based on these estimates shall be determined minimum requirements of capital. The basic element of the IRB approaches is that banks have systems internal of rating through which are differentiate debtors from the portfolio, depending on the risks involved.

3. Determining of indicators of solvency

The rules relating to the level of rate of solvency of the bank follows to ensure the bank with sufficient capital from own funds in order to absorb losses results by the trading but also to control the degree of indebtedness through the requirement that the indicator of indebtedness will not fall below a certain minimum threshold (Badea; Socol; Dragoi; Driga, 2010).

The risk of insolvency, in the case of a Bank, appear as a result of poor quality of portfolio of loan and, therefore, at the level of central of the bank it calculates a series of indicators of solvency through which it pursues to avoid the situation of bankruptcy. These specific indicators show the extent in which the bank's funds cover losses from the current activity.

Based on the data from the consolidated balance sheet from the Bank "B", as well as from the specific calculation formulas, it can determine the following indicators of risk of insolvency:

The ratio of solvency (RS) represents ratio between of own funds and the assets weighted according to risk.

$$RS_{1N} = \frac{FP_1}{A_p} \cdot 100 = \frac{5449,7}{40740} \cdot 100 = 13,38\% \quad (1)$$

$$RS_{1N+1} = \frac{FP_1}{A_p} \cdot 100 = \frac{5716,8}{40310} \cdot 100 = 14,18\% \quad (1)$$

$$RS_{1N+2} = \frac{FP_1}{A_p} \cdot 100 = \frac{6453}{40776} \cdot 100 = 15,83\% \quad (1)$$

where:
RS_1 - represent the ratio of solvency for each calculation period (N, N + 1 and N + 2);
FP_1 – represent own funds by level 1, respectively social capital and the result carried forward from each time period (N, N + 1 and N + 2);
A_p – represent the bank's total assets multiplied with a weighting of risk of credit specific for each category of assets in conformity with the internal ratings within the bank.

The indicator of solvency (IS) represent the ratio between own capital and risk-weighted assets.

$$IS_{2N} = \frac{CP}{A_p} \cdot 100 = \frac{6601,4}{40740} \cdot 100 = 16,20\% \quad (2)$$

$$IS_{2N+1} = \frac{CP}{A_p} \cdot 100 = \frac{7103,6}{40310} \cdot 100 = 17,62\% \quad (2)$$

$$IS_{2N+2} = \frac{CP}{A_p} \cdot 100 = \frac{7546,3}{40776} \cdot 100 = 18,51\% \quad (2)$$

where:

IS – represent indicator of solvency;

CP - represent capital own for each period of calculation (N, N + 1 and N + 2);

A_p – represent the assets weighted according to risk within each period.

Ratio of equity capital represents the ratio between the own capital of the bank and the total value of the assets.

$$RCP_N = \frac{CP}{TA} \cdot 100 = \frac{6601,4}{69402,8} \cdot 100 = 9,52\% \ (3)$$

$$RCP_{N+1} = \frac{CP}{TA} \cdot 100 = \frac{7103,6}{73612,4} \cdot 100 = 9,65\% \ (3)$$

$$RCP_{N+2} = \frac{CP}{TA} \cdot 100 = \frac{7546,3}{76745,7} \cdot 100 = 9,83\% \ (3)$$

where:

RCP – represent rate of equity capital;

CP – represent equity capital for the years N, N + 1 and N + 2;

TA - total assets for those three periods.

Because the rate of equity capital recorded a value more than 6%, for all periods taken into account, result that bank "B" it is well capitalized.

The ratio between equity capital and capital social determine in order to establish the degree in which the financial institution it is capitalized.

$$\frac{RCP}{CS_N} = \frac{CP}{CS} \cdot 100 = \frac{6601,4}{2119,7} \cdot 100 = 311,43\% \ (4)$$

$$\frac{RCP}{CS_{N+1}} = \frac{CP}{CS} \cdot 100 = \frac{7103,6}{2357,4} \cdot 100 = 301,33\% \ (4)$$

$$\frac{RCP}{CS_{N+2}} = \frac{CP}{CS} \cdot 100 = \frac{7546,3}{2880,7} \cdot 100 = 261,96\% \ (4)$$

where:

CP- represent own capital;

CS – represent social capital.

The ratio between equity capital and capital social exceeds value by 150% in all three periods in which it made the analysis of the risk of insolvency, situation which indicates a good capitalization of the bank "B".

Net patrimony or the difference between banking assets and sources attracted and borrowed, represents another specific indicator of the bank's solvency.

Pn_N = TA - Sai = 69402, 8 - 62801, 4 = 6601, 4 mil RON   (5)

Pn_{N+1} = TA - Sai = 73612, 4 - 66508, 8 =7103, 6 mil RON   (5)

Pn_{N+2} = TA – Sai = 76745, 7 – 69199, 4 = 7546, 3 mil RON (5)

where:

Pn – represent net patrimony;

TA – represent total assets;

Sai – represent attracted and borrowed sources.

The positive value recorded for this indicator is deemed appropriate in accordance with the rules of the bank.

Important to note is that in the process of risk management, these indicators are relevant only when are in connection with the analysis of indicators which expressing the bank's financial performance.
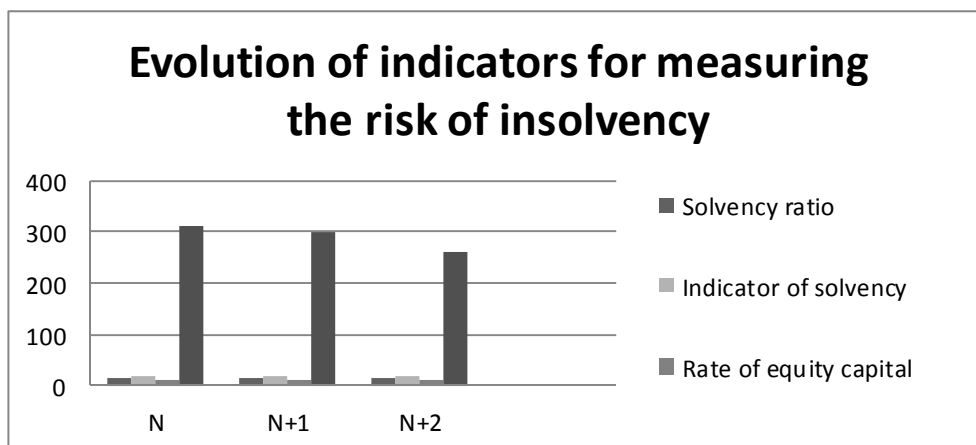
In table no. 2 are presented the indicators for measuring the risk of insolvency for the three periods considered (N, N + 1, N + 2).

Table 2 Centralizing of indicators for measuring the risk of insolvency

Current number	Indicators	U/M	Years			Coefficients		
			N	N+1	N+2	N+1/N	N+2/N	N+2/N+1
1.	Solvency ratio	%	13,38	14,18	15,83	1,06	1,18	1,11
2.	Indicator of solvency	%	16,20	17,62	18,51	1,09	1,14	1,05
3.	Rate of equity capital	%	9,52	9,65	9,83	1,01	1,03	1,02
4.	Ratio equity capital/social capital	%	311,43	301,33	261,96	0,97	0,84	0,87
5.	Net patrimony	mil. RON	6 601,4	7 103,6	7 546,3	1, 08	1, 14	1, 06

Source: The consolidated balance sheet of the commercial bank "B" at 31.12.N, 31.12. N + 1, 31.12. N + 2

Figure 1 Evolution of indicators for measuring the risk of insolvency

Source: Centralizing of indicators for measuring the risk of insolvency from the table 2

According to the analysis of data from the table no. 2 and fig. no. 1 it observe in the three periods taken into account, the bank "B" register a significant level of capital and because the bank it is better capitalized exposure to the risk of insolvency is reduced.

The ratio of solvency and indicator of solvency as well as the net patrimony registered an ascendant trend compared to previous periods instead the ratio between equity capital and capital social presents a tendency of decrease.

According to the rules and regulations in force, the value of the indicator of solvency cannot be less than 8%, but this should be considered a minimum requirement, if we consider the volatile environments in which unfolds the bank's activities. Thus, from prudential reasons, is more appropriate requirement of capital adequacy which shall be weighted according to risk, with a higher percentage of 8% (Greuning; Bratanovic, 2004).

And in Romania the ratio between capital and risk-weighted assets must be at least 8% as a result of the application of the principles accord of Basel II, but so far January 2007 this report was more restrictive, respectively by 12%, because it was considered that in our country the risk of loss of capital was higher than in other countries.

In figure no. 2 it presents the evolution over time of the indicator of solvency for the Bank "B" depending on the value of the assets.

Figure 2 Evolution of the indicator of solvency for bank "B" during periods 31.12.2003-31.12.2011
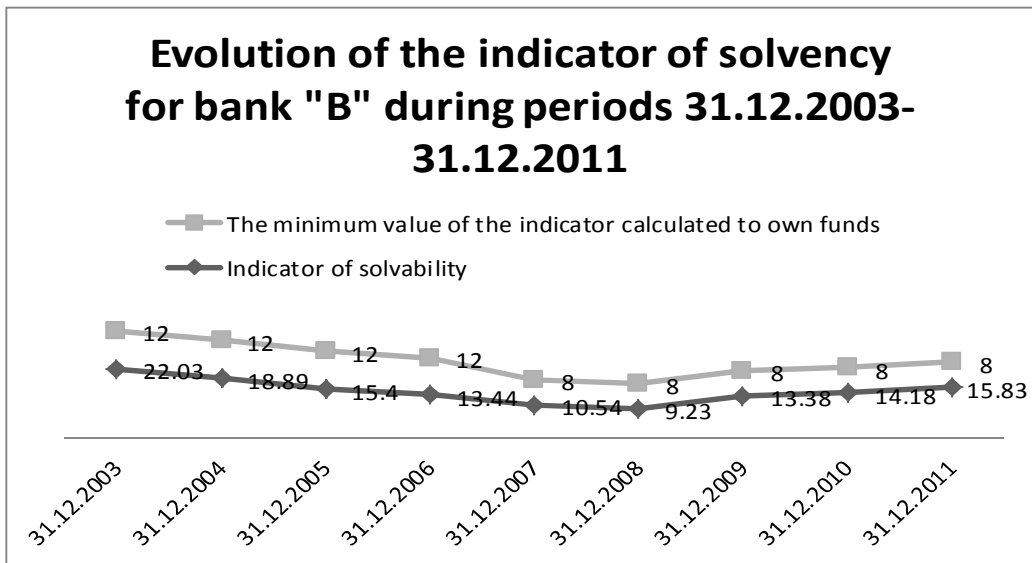
Source: The research undertaken within the bank "B" and the data obtained from the Centralizing of indicators for measuring the risk of insolvency from the table 2

4. Conclusions

Risk of insolvency requires monitoring the evolution of the base of capital in concordance with the structure of risk assets from the balance sheet in order to maintain a certain level of adequacy of capital that satisfy to the interests of the bank and its clients.

In assessing the risk of insolvency it takes into account the agreement of Basel II but and estimates internal of bank relating to proper capitalization, as well as the establishment of limits over which may be affected the profitability of the bank.

Capital allocation aims the budgeting of the own funds on the lines of activity taking into account the criterion of profitability. Thus, ensure a more efficient way of establishing the limits of exposure to risk and may be developed strategies to adjust the prices according to the connection between profitability and risk.

The principles underlying the capital allocation process are:

✓ acceptance or rejection of transactions carried out by a financial institution is done on the basis of economic capital required to cover the risk involved   and depending on the expected profit;

✓ the bank calculates the requirements of capital for all types of risks involved respectively for the market risk, for credit risk and for operational risk.

Very important is that the financial institution to hold enough capital to cover any losses resulting from the apparition of various types of risks with which it faced.

Relating to bank "B" we can observe that in all three periods considered (N, N + 1, N + 2), the respectively institution is stable, with good prospects and in the future on financial market. The "B" bank's exposure at the main types of risks fit into acceptable limits, ensuring the conditions for high profitability.

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