

TOOLS AND METHODS TO PREVENT THE RISK OF BANKRUPTCY OF THE INSURANCE COMPANIES

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Abstract:

We may appreciate, according to the data for 2008, that the negative impact caused directly by the financial crisis for the insurance industry in Romania has been quite limited until now, consisting mostly in the reduction of the clients' trust, especially of those clients with life insurances.. The global financial crisis led to a significant public distrust in the financial institutions, affecting to a large extent the main insurance companies. Therefore, it is necessary to review the set of the prevention and safety measures imposed by the Insurance Supervision Committee.

Key words: margin of solvency, guarantee fund, technical reserves

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The risk of bankruptcy

Different economical agents are only assuming risks according to the anticipated return. In this context we must introduce the notion of "risk management". Overall, it involves minimizing losses, respectively additional expenses in case of risk.

The risk of bankruptcy can be defined as the inability of companies to deal with a financial transaction, or inability to pay financial obligations on time, conditions set by third-parties according to a lending contract. It can be the result of difficulties which initially could not be identified but have shown themselves.

Therefore, the diagnosis process of the bankruptcy risk may consist of evaluating the company's capacity to deal with the third parties' commitments, so the evaluation of the company's solvency.

Solvency ratios are important when comparing between the companies in the same sector or between the rates realised by the same company at different times. These rates are related to another representative concept for the company's risk analysis or the liquidity concept.

Overall, liquidity is defined by the degree to which an asset can be quickly converted, without additional expenses in means of immediate payment in cash or demand deposits.

To analyze the risk of bankruptcy, liquidity sings are those which assess a financial condition thereof, characterized by the current assets in the short term of the short-term outstanding expenses (taxes, paying suppliers, reimbursement by other creditors that make up total debt, current liabilities of the company respectively). In this category are the current rate, rapid rate and the stock of trust [1].

Risk is often a relatively difficult phenomenon to predict and detect, the events that may arise in a situation at a moment is a challenge even for the most experienced visionaries, because the future is mostly unknown.

They can be made based on events and the string of past and present events, estimates, assumptions, forecasts of future events which involve a certain risk, sometimes difficult to define, and in some cases impossible to measure accurately, because the nature of the concept is abstract.

The risks of the insurance company

In developed countries, the insurances have become an important part of the national economy, because the insurance companies, brokerage companies, by the added value created, provide jobs, participate in the capital offer on the financial market and by the amounts offered to the insured, contribute to restoring destroyed or damaged property and thus increase GDP. [3]

Some experts emphasize certain aspects of insurance industry:

- ❖ Service providing industry;
- ❖ Financial intermediary;
- ❖ Financial activity.

The insurance industry offers to the insured persons a specific intangible product in exchange for the received insurance fees, thus taking

responsibility for the insured risks, and ensuring safety for the cases agreed in the insurance contract.

Information on business performance, especially about its profitability, are useful for assessing potential changes in economic resources that the firm will be able to control in the future and to anticipate the ability to generate cash flows with the existing resources.

The company performance may be influenced by its financial risk. Financial risk is defined as "the variability of results indicators under the company's financial structure" [4].

The financial risk comes out from the company's ownership structure or from the use of financial instruments.

One of the main risks the company is exposed to is the operational risk, which concerns the costs structure as fixed and variable costs. This division results in a lower or higher structure depending on the outcome of the production and sales results, and for the insurance companies, only on the policies sales and investments they make.

The risk of bankruptcy is the result of the insolvency of the company and may cause even its demise. Solvency crises do not always lead to bankruptcy. Most times, companies ensure their survival, but even in this case there are specific costs involved that can affect future work.

Profit obtained by resorting to the use of derivative financial instruments (DFI) appears as a reward for the risk assumed upon their contracting. [2]

Insurance is a system of economic relations involving a large number of individuals and legal entities in establishing a monetary fund, while being threatened by the same dangers regarding their existence and work, dangers that are probable, possible but uncertain

From a financial point of view – insurance is constituted between a financial intermediary and the insured persons that pay repeatedly the insurance fees and the individuals or legal entities that need supplementary financial resources.

In the "Theory on economical development (Study on profit, capital, share and juncture cycle)", J. Schumpeter argues that if the risks are not taken in consideration on economic plan, they may become a source of loss, on one hand, and income source on the other hand (Fig.1). Lower risk decisions may be chosen, but in this case the benefit would be lower as well.

In the Fig.1 it can be seen that the risk do not provide the lowest profit and the higher the risk, quite contrary the higher the risk, the higher the profit then.

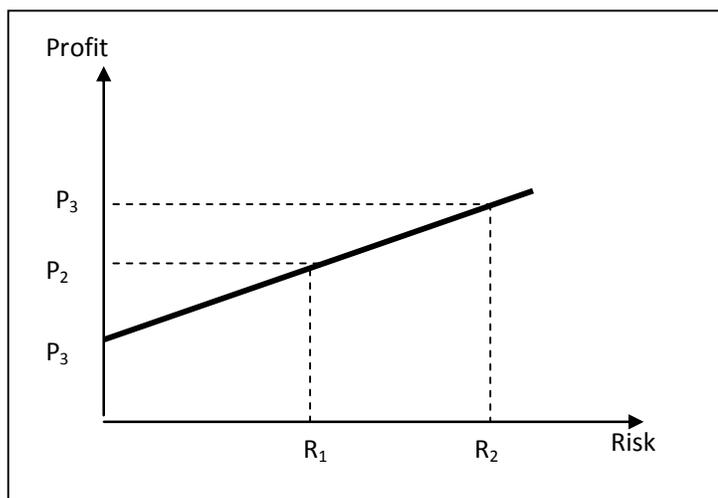


Fig. 1 – Relationship between profit and risk

In order to protect the insured individuals' rights and to promote the financial stability in the insurance sector, it has been created the Insurance Supervision Committee, which is integrated in the global insurance supervisors system by affiliation to I.A.I.S. ISC is constantly following the implementation of the best practices and endeavors to constantly intensify the activities designed to provide an efficient protection of the insured individuals' interest.

In the following we provide a brief description of the main ISC's tasks: to apply the insurance legal framework impartially, honestly and promptly; to protect the insurance products consumers; to encourage the creation of new healthy insurance markets; to promote the need of a better service for the public interest. ISC's activity started on July 2nd, 2001[7], [15].

In order to fulfill these legal tasks, ISC elaborates orders and applies regulations regarding the use of methods and instruments, according to the insured individuals' interest, for preventing the financial risks of the insurance companies.

The regulation instruments

These regulation instruments [7] can be:

- **Expense reserves** – total amounts registered in the insurance company's accountability for obligations related to the damages not covered on the date of booking;
- **Prudential margin** – the amount of any additional provision coming out of the inherent uncertainty in establishing the technical reserves existing in the company's accounts;
- **Technical reserves** – total reserves for damages and for the unexpired risks as well
 - The gross technical reserve meaning the technical reserve calculated before cession in reinsurance;
 - The net technical reserve meaning the technical reserve calculated after cession in reinsurance;
 - Reserves for unexpired risks meaning the fee reserve plus any other adjustment needed to cover some supplementary payments, including future expenses.
- **Margin of solvency** at disposal [16].

Solvency is the ability to cope with the economic unit due obligations resulting either from prior commitments contracted or compulsory levies.

The main tools used in statistical analysis patrimonial operational risk of bankruptcy are working capital and liquidity rates. [11], [12]

According to economic theory, a firm is solvent if there is financial equality:

Fixed assets = permanent capital;

Net current assets = operating Debts.

Compliance with these equalities implies perfect regularity in terms of receipts and payments, which in economic and financial practice not usually happen. Therefore there is a need to build up a reserve that can handle "the rhythm irregularities" book called "working capital" (working capital asset).

In this case, there is inequality:

Permanent capital > Fixed assets,

The difference is just that a revolving fund.

Working capital is an important indicator in assessing the financial situation of the company, representing the permanent financial resources that ensure financing of current assets that are constantly renewed.

The insurance companies authorized to deal with general insurances, must maintain permanently a margin of solvency at their disposal, according to their line of activity, at least equal to the minimum margin of solvency calculated by the ISC.

The solvency margin at disposal is represented by the set of active elements, free of charges, except the intangible ones.

The solvency margin at disposal is decreased with the value of the shares directly owned by the insurer.

Except the elements above, when calculating the solvency margin at disposal, other elements can be taken in consideration, as well.

At the end of year 2008, the average solvency margin for insurance companies was more than 2 for general insurances and larger than 3.5 for life insurances, taken into account that the minimum level required by the legal regulation is 1 according with the EU law.

On the April, 2013, the Romanian Parliament ratified, in the common assembly of the two Chambers, the ASF - the Financial Supervisory Authority. The new structure will begin its activity in May and it will take over the attributions and functions of CNVM - the Romanian National Supervisory Commission of the Stock Exchange Securities, CSA - the Insurance Supervisory Commission and CSSPP - The Private Pension System Supervisory Commission, authorities that will be dissolved and transformed into the parts of the new organization. [9]

Now, at the request of FSA, the insurance / reinsurance company is bound to determine and communicate within 48 hours since the request of the following:

- the calculation of the solvency margin, the minimum solvency margin and the security fund;
- the liquidity indicator;
- the technical situation of raw reserves for each category of technical reserves and the class of insurance they practiced;
- the assets admitted to cover raw technical reserves. [9]

Safety fund

One third of the minimal solvency margin of the insurer is the *safety fund*. The minimal value of the safety fund for general insurances should be at least the equivalent in national currency (lei) of 2.2 million euro at the date of reporting. If the insurer subscribes one or more risks from the general insurances[6], the minimal value of the safety fund should be at least the equivalent in lei of 3.2 million euro at the date of reporting. In the particular case of the mutual companies the minimal value of the safety fund is decreased with one quarter. Agencies and branches in Romania of companies with head offices abroad EU, should deposit one quarter of their minimal safety fund as a guarantee, which will be taken into calculation for the safety fund. The assets used as collateral for the minimal solvency margin should be deposited in Romania up to the level of the safety fund.

Insurance companies have to calculate continuously the available solvency margin, the minimal solvency margin and the safety fund, based on data from financial reporting and to transmit to the ISC, a half-yearly and an annual report on the available solvency margin, the minimal solvency margin and the security fund.

Guarantee fund

The guarantee fund [7] regulates both the special procedures to pay the amounts owed to the creditors and the procedures of financial recovery [6] and insurance companies' bankruptcy.

This fund is created from the following financial sources:

Calculation of the amounts owed as a contribution to the establishment of the Fund shall be made by insurers, separately for general insurances and, respectively, for life insurances, based on their monthly account registrations, by applying a percentage, which shall be transferred monthly, to the total amount of gross premiums earned from direct insurance business and the coinsurance, that is established by decision of the ISC Council.

If there is a decision to open insolvency proceedings due to an irrevocable legal order rendered against an insolvent insurance company, then the fund manager is entitled to disburse payments from the fund due to insurance creditors, according to the governing law. On the basis of lists of potential insurance creditors are entitled to receive the due amounts from the fund, and the Special Commission has to publish the measures taken, including potential insurance creditors whose claims have been determined

after the verification of damage files and that can be recovered by payment amounts from the disposal of the Fund.

Allowances/compensations are to be paid to the insurance creditors, individuals and/or legal entities, according to the conditions stipulated in the insurance contracts.

If the Fund availabilities are not enough to cover the amounts due to the insurance creditors, their claims will be honored along the Fund supplying with the financial resources provided by the law, within a maximum period of three years from lists publication. ISC can increase anytime the percentage share provided.

The recovery of the Fund claims is made by making use of the goods and/or rights and income of the insurance company [7].

Guarantee Fund is entitled to register and recover in case of bankruptcy of the insurance / reinsurance society indebted, all amounts paid to the creditors as payments made as a result of insured risks occurred after the time opening of bankruptcy proceedings. [7]

The scores method to prevent the risk of bankruptcy

In recent years, due to the dynamism of financial-economic activity of companies, it was established itself as an objective necessity of knowledge as accurate information on the risk of bankruptcy at some future time.

This has resulted in the development of other methods of bankruptcy risk prediction scores method has been called, which has seen an important recognition that uses statistical methods for the analysis of financial statements, based on a set of indicators.

Scoring method is to provide predictive models for assessing the risk of bankruptcy of a company. This method is based on statistical method to find which forecasting variables are given certain weights so that their sum to give a global indicator is the Z score.

All studies of bankruptcy risk prediction for business are based on initial contribution of Beaver (1966) and Altman (1968) and J. Argenti (1976) in the event of bankruptcy risk analysis. Followed and other authors have developed models based on scores method: The Conan and Holder (1970 -1975), The Central Bank balance sheets of France (1977-1979), the French Commercial Credit Method, Method 'credit - men "or" security - analysis"[12],[13].

Romanian authors have developed models based on the scores method and Romanian authors such as [8] The Manecuta and Nicolae Model (1996), Model B - Bailesteanu (1998), The method of score function - Paul Ivonicu, and Model A - Ion Anghel (2000).

Conclusions

Bankruptcy risk was and is a sensitive domain in which experts have decided to research and elaborate a mathematical model to answer the question "Is the company heading for bankruptcy or not?". The ability to predict future difficulties that an economical agent might face or another was and is highly appreciated by investors and lenders if overcome, in infancy, insolvency. CSA protects the insured of the insurance society's bankruptcy. Through models which resemble the scores method, we try to anticipate their bankruptcy risk.

Bibliography

1. Troie, Zaharia, Roman, Hurduzeu- *The statistical analysis of the economic activity and the financial management of the company*, www.ase.ro
2. "Insurance, A Risk financing Tool", in the C. Arthur Williams, Richard M.Heins, *Risk Management and Insurance*, 5th edition, McGraw-Hill Insurance Series, New York, 1985;
3. D.S. Hansell, *Introduction to Insurance, Practical Guide*, LLP, London, 1996;
4. Iosif, Gherasim, Crisan –*Insurance System in Romania*, Tribuna Economică, 1997;
5. Stere Popescu - "Economic, financial and banking risk", 1997
6. Law no. 32/2000 on insurance companies and insurance supervisors;
7. Law no. 403/2004
8. Gheorghe Dumitrescu, Research studies on the risk of bankruptcy; Models and methods for forecasting, Romanian Statistical Review nr. 4 / 2010
9. Law no.139/2013;
10. Edward I. Altman– Financial ratios, discriminant analysis and the prediction of corporate bankruptcy, The Journal of Finance, nr.4, September Ordin nr. 3115/2005.

- 11.** Irina ISAIC-MANIU – *Statistical characterization of the risk - Concepts, Techniques, Applications*, Editura ASE, Bucuresti, 2006
- 12.** Cohen, D., 2007, „Incorporating default risk into Hamada’s Equation for application to capital structure”, MPRA Press, <http://mpra.ub.uni-muenchen.de>
- 13.** Dangl T., Zechner J., 2006, „Credit risk and Dynamic Capital Structure Choice”, Vienna Univesity Press, www.creditrisk.com
- 14.** Caouette, J.B., Altman, E.I., Narayanan, P., *Managing Credit Risk, The Next Great Financial Challenge*, John Wiley&Sons, 1998
- 15.** Insurance Supervisory Commission Reports
- 16.** Order no. 4/2007