Significant aspects regarding the analysis of bankruptcy risk

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Abstract

From the theoretical and many time practical point of view, an economic agent always faces the risk of bankruptcy. This may have negative consequences, with complex implications on the entire activity of the economic agent, as well as on other entities which are in contact with that economic agent. The bankruptcy risk may be defined as the impossibility of companies of facing a financial-banking transaction, respectively its incapacity of reimbursing in time the borrowed sums of money in the commonly agreed conditions with the third parties, based on o credit contract. It may be the result of some difficulties which couldn't be identified initially at the moment of analysis and at the moment of evaluation and credit approval but appeared once the contract was implemented.

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Introduction. Literature review

As one can notice, financial-banking institutions are most interested in establishing the bankruptcy risk for the economic agents they give credit to. The estimation of the bankruptcy risk is necessary in the process of giving bank loans. Estimation of the bankruptcy risk is necessary both in the process of giving bank loans an in the process of undergoing the loan contract. In order to avoid potential losses, banks analyze a series of general elements which concern the bank loan applicant, the objectives for which the loan is taken, the reimbursement period, interest payment and bank commission, as well as the offered warranties and ways of recovering the loan.

The process of bankruptcy risk diagnosis consists of the evaluation of the economic agent solvency. This is defined as the company capacity of facing the outstanding debts which result from the previous contractual

commitments, either from current operations which are a condition for continuing the activity, or from levies of binding nature.

Bankruptcy risk evaluation may be made with the help of the flows analysis in the financing chart. Likewise, such an analysis may be made according to two conceptions regarding balance sheet elaboration: material and functional.

Ai (2010) analyzes the correlation between quality of information and risk on the long run. Ang, Chen amd Xing (2006) develop on the downside risk, presenting a correlation between stocks with a certain covariation with market and market decline. Anghelache, Manole, Anghel and Soare, D.V. (2016) present an econometric approach on the operational and insolvency risks, a previous paper by Anghelache, Manole, Anghel, Stanciu, Soare (2015) deals with the analysis of bankruptcy risk. Anghelache (2010) presents the analysis of performances and risks in the financial-banking field. Bansal (2007) and Hansen, Heaton and Li (2008) analyze some aspects on the long-run risks. Holló and Nagy (2006) analyze the efficiency of the banking system in the EU. Norden and van Kampen (2015) analyze the loan as source of financing for small and medium enterprises. Skiadas (2013) develops on aversion to small risks. Taylor (2003) studies the attitude towards risk in the case of mutual fund tournaments. van Binsbergen, Graham and Yang (2010) research the debt cost. Wehinger (2012) analyzes the passage towards alternative financing methods.

Static analysis of bankruptcy risk based on the company balance sheet

Financial- material balance sheet is, basically, a static analysis in which value and financial solvency are of high priority. This type of analysis represented, for a long period of time, the only way of risk evaluation.

From the material point of view, assets and liabilities consist of two major groups of elements:

- A relatively permanent group (with a period longer than a year), consisting of capital asset and permanent asset;
- A mobile group (with a period shorter than a year), consisting of current assets and short-term obligations

According to material theory, a company is creditworthy if the following financial equities are complied with:

Non-current asset = Permanent capital

Current Asset= Operating debts

Inequity: Permanent capital> Non-current assets requires the use of working capital, important indicator in financial evaluation of the company, representing the part of the permanent financial resources which ensures the financing of current assets which are permanently renewed.

The main operational instruments used in the financial analysis in order to investigate the bankruptcy risk are working capital and operating rates.

Analysis of economic agent solvency with the help of working capital

The working capital represents a margin of safety of the company, imposed by the differences between the sums of money to be paid and the sums of money to be received, as well as by the gap which may appear between the period when assets turn into money and the medium period in which debts become due.

The working capital may be determined in two different ways, as follows:

- Starting from elements in the superior part of the balance sheet

Working capital = Permanent capital – Non-current assets

Working capital = Equity + Long-term debts - Non-current assets

- Starting from element at the basis of the balance sheet

Working capital = Current assets - Short term Obligations

The existence of a positive working capital demonstrates the fact that at the level of the economic agent there is a long term equilibrium. It is worth mentioning the fact that the positive value of the working capital should not be oversized due to long-term loans as they call for costs superior to short-term external financial sources.

A negative value of the working capital reflects the impossibility of the analyzed economic agent to ensure a surplus levy of long-term financial necessities coverage.

A realistic evaluation of the working capital significance for the financial equilibrium of an economic agent requires the consideration of a medium duration of assets and liabilities which, in practice, are not equal but as an exception. So, if current assets become liquid faster than obligations, it means that the economic agent has the capacity to provide his financial equilibrium. On the contrary, if the current assets become liquid slower than the short term obligations (so the period in which assets turn intoliquidities in a period longer than the period of paying the obligations), the maintenance of a financial equilibrium requires a positive and high value working capital.

For a better characterization of a long-term equilibrium state of an economic agent, we may use his own working capital as an analysis instrument, this representing an indicator which allows for the evaluation of the actual company possibilities to ensure an equilibrium state exclusively based on his own funds.

The economic agent's own working capital = Own capital - Non-current assets

The existence of an own positive working capital demonstrates the fact the analyzed economic agent is in a state of a long term financial equilibrium realized on his own capital. A negative value of this indicator is a real reason of concern to the management of the economic entity only in the cases in which it is prolonged for a longer period of time.

The bankruptcy risk analysis with the help of the working capital may be completed with the determination of other two indicators:

- The necessary of the working capital
- The net cash flow

The necessary of the working capital can be calculated as a difference between the short-term assets and short-term liabilities.

The necessary of the working capital = The short-term assets - Short-term liabilities

The necessary of the working capital = Stocks + Receivables + Regularization Assets – Current liabilities Regularization liabilities

The necessary of the working capital reflects the value of assets on the short term, such as stocks and receivables, which are financed from sources on the short term.

The correlation between the working capital and the necessary of the working capital is presented with the help of net cash flow, indicator which reflects the financial situation of the economic agent, both on the long and short time.

Net cash flow = Working capital - The Necessary of the working capital

A positive value of the net cash flow reflects a state of financial equilibrium at the level of economic entity. Such a value of net cash flow is a direct consequence of a financial surplus in the course of the analyzed exercise and implicitly of a profitable company activity.

A negative value of net cash flow reflects a monetary deficit at the end of the financial exercise, deficit appeared as a consequence of a non-profitable activity of the economic agent which was covered by foreign sources on the short term.

The Analysis of bankruptcy risk with the help of solvency ratios

The solvability ratios realize a reportof accomplishable assets in relation to obligations which are due in order to evaluate the bankruptcy risk.

The solvency ratios are significant in the case of a comparison between companies in the same sector or between ratios of the same company at different moments of time. These ratios are linked to another concept representative for the analysis of company risks, namely liquidity concept.

Liquidity is defined as the degree in which an asset can be turned rapidly and with no additional costs into immediate cash means of payment, visible bank accounts.

From the practical point of view, the solvency ratios with large applicability are:

The ratio of general solvability (RGS)

This indicator compares the potential liquidities associated to current assets- as a whole to the obligations due under a year- as a whole. The ratio of general solvability is calculated as following:

$$R_{SG} = \frac{Current\ assets}{Short\ term\ obligations}$$

The ratio of general solvability allows for the evaluation of the degree in which short term obligations are covered by the existent current asset at the level of the economic agent. A unitary ratio reflects a fully correspondence between current assets and corresponding sources. A value over this ratio indicates the existence of some assets of a bigger value than that of short term obligations and, consequently, the use of a part from the permanent capital for financing the exploitation cycle.

The ratio of general solvency is equivalent to the so-called "ratio of working capital", calculated as a report between permanent capital and non-current asset

$$R_{FR} = \frac{Permanent\ capital}{Non\ current\ asset}$$

This fraction is over 1 when covering current assets involved permanent capital in addition to short-term obligations.

The ratio of general solvency does not allow for a definitive estimation of solvency on short term. Its significance has an increasedmargin of approximation due to the big number of variables: the nature of the activity sector, the structure of the current assets, the ratio of assets rotation, the ratio of assets and stocks rotation, the intensity of the activity seasonality etc.

Ratio of partial solvency (RPS)

From the perspective of this indicator, the stocks are excluded from the value of current assets, they being considered the element with the highest uncertainty degree from the point of view of value and its liquidity.

$$R_{SP} = \frac{Current\ assets - stocks}{Short - term\ obligations}$$

$$R_{SP} = \frac{Claims\ +\ placements\ +\ availabilities}{Short - term\ obligations}$$

The ratio of partial solvency expresses the capacity of the economic agent to honour his short-term obligations from claims and liabilities. This indicator, whose value is usually under 1, should be analysed and interpreted with caution, by taking into account some detailed aspects regarding the structure of claims (number of clients, their percentage in the whole total of claims). In economic theory it is considered that a value of partial solvency between 0,8 and 1 is an optimal situation for the sovancy of the analysed economic agent.

Immediate solvency ratio (ISR)

Immediate solvency ratio is an indicator which relates the most liquid elements of non-current asset to short term obligations taken by the analysed economic agent.

$$R_{SI} = \frac{Placements + availabilities}{Short - term\ obligations}$$

Scientific studies consider that a value of immediate solvency ratio above level 0,3 shows a favourable situation of the analysed economic agent.

The analysis and interpretation of immediate solvency ratio involve the evaluation of other information concerning the activity conditions of the economic agent. Thus, even from the theoretical point of view, a high value of immediate solvency ratio indicates a liquidity, respectively a high solvency, it may as well have other meanings, such as a less performant use of resources by the economic agent.

Financial autonomy ratio (FAR)

$$R_{AF} = \frac{Medium\ and\ long\ time\ obligations}{Equity}$$

From the point of view of institutions which give loans, the value of this indicator should be under 1.

The rate of total debts coverage (non-current solvency)

$$R_{AP} = \frac{Equity}{Total\ liabilities} * 100$$

The rate of medium and long term debts coverage

$$R_{APML} = \frac{Equity}{Medium\ and\ short - term\ liabilities} * 100$$

of an economic agent solvency implies, according to some specialists in the field, comparing accounting net asset to the liabilities total. Thus, there are financial banking institutions which require that the level of the net accounting asset to be ¾ out of the whole value of the liabilities.

Conclusions

Of the methods presented, the solvency evaluation using the ratio method is often considered less significant because of the general evaluation of liquidity, therefore of solvency, without taking into account the degree in which the objectives were attained, therefore the liabilities. The instruments and the methods of analysis presented in this article allow for complex studies on the financial company situation and its perspectives of evolution in the future. Likewise, a clear picture of the situation at a certain time creates a favourable context to take decisions which prove their efficiency and efficiency in the course of time.

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