CONTRIBUTION TO IMPROVEMENT OF CREDIT ANALYSIS TEHNIQUES

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Abstract: *The main purpose of the credit analysis is to identify the risks related to lending transactions, to lay down conclusions about the probability of repayment and recommendations for the type and structure which suits best the client's needs. Moreover, one final concern of the lending entity is to maximize its profits from each transaction. Thus, this paper is concerned with measuring the risk/return ratio for a lending entity.*

Key words*: credit analysis, risk, rating, lending*

INTRODUCTION

Credit is any on-balance or off-balance sheet exposure towards a specific legal entity or person (loans, guarantees, letters of credit, or any derived instruments) which is made available under precisely defined conditions and repayment terms.

Creditworthiness represents the ability and willingness of a borrower (determined on the basis of financial statements, business plans and other relevant qualitative and quantitative data) to fully repay due amounts in a timely and agreed upon manner, or to eliminate the need for the bank to pay any amount on borrower's behalf to a third party.

Creditworthiness is expressed through a rating determined on the basis of financial reports analysis and other relevant information about the borrower, and consists of financial rating, qualitative rating and overall combined rating (customer rating).

The customer rating represents, in statistical terms, the probability that a borrower will default within the period of one year.

Credit risk represents the probability that a borrower will default, that is, unwillingly or willingly fail to comply with his obligations. It is also the risk of a decline in the credit standing (creditworthiness) of a borrower.

Collateral instruments are any suitable rights (mortgage over real estate, pledge over a movable property or any other tangible or intangible assets) or guarantees which a borrower (or any third party on behalf of the borrower) places at the disposal of the bank for the purpose of recovery of any due and unpaid amount by the borrower in case of its default

CHARACTERISTICS OF CREDIT ANALYSIS

The main characteristics of the credit analysis:

- credit analysis consists of quantitative and qualitative analysis of a company's capacity to pay the debts or to establish the way in which the company can repay the bank the amount borrowed and the interest or to pay to other creditors the amounts owed;
- the purpose of credit analysis is to identify, evaluate and diminish the risks which lead to the company's incapacity to pay all the debs towards its creditors;
- credit analysis involves examination of the existing connection between the performance and the capability of management and the functional relations between assets, liabilities and equity of the company as they are shown in the balance sheet and the results as they are shown in the income statement and the cash-flow statement

The evaluation of a company's financial statement offers a clear image about the probability that the company can repay the debt and the interest. The analysis should contain the detailed knowledge about the client, his commercial activities, his management capacity and his beliefs. One should know what client needs to manufacture and sell his products and services and what risks are generated during this process. Also, one must know the local conditions in which the business unfolds the economic environment, the local and political conditions, practices and rules of the client's sector; all these are parts of the whole creditworthiness of the client.

The lending activity has a subjective character, but at the same time one can establish some objective elements including the management history and company's past activity. Information is the most important instrument of the credit analysis. Decisions for a credit approval can not be taken only with the help of credit guide or other analytical techniques. The analyst should prove a clear judgment and should take care not to forget any important details.

THE USE OF CREDIT ANALYSES FOR THE EVALUATION OF MANAGEMENT PERFORMANCE

All loans are loans to management. This means that the bank gives a loan only if it has full trust in the management's ability to face the repayment of the loan.

The capacity of management to successfully finalize the whole conversion cycle through which the assets generate cash and maximum incomes, proving that:

- the entire activity of the company is characterized by continuously;
- the assets' conversion is finalized successfully and the cash which is generated is enough for the loan repayment

The assets' conversion shows the entire process through which a company uses cash to generate more cash. Cash is used to acquire raw materials and to produce goods/ services which are going to be sell. The main objective to develop an activity is to generate more cash at the end of the cycle comparing with the cash from the beginning. This is possible when a good which the market needs is produced and an added value is resulted. The purpose of all managers is to make this cycle as shorter as they can and without any interruption. The analysis of this process contributes towards the establishment of the company's capacity to discharge all the obligations regarding all persons involved in this activity cycle.

The capacity of management to administrate well the investment's financing in assets in a way in which the creditors' risk is minimum.

RISK ANALYSIS

The type of activity and the competitive environment where the company develops the activity is very important for the decision to invest in assets, for the decisions of financing and for the company's profits. The risk analysis is made to understand the competition situation of the company and the company's strategy. The risk analysis is made to appreciate the volatility of the projections for the future earnings before interest and taxes (EBIT).

The bank expects that the loan amount and the interest will be paid. The bank assumed risk is the incapacity of the company to reimbursement totally or partially the entire amount; this risk is the consequence of the uncertain capacity of the client to pay the debts. The analysis has three main objectives which must be used during a company / project analysis:

Identification of all risks - all risks regarding management, project, society, industrial field and economy which could affect the company activity and its capacity of repayment. This is possible with the help of information. When we have more information we can understand better the risks of the activity and the way in which we can reduce them. The aim of the credit analysis is to identify the questions and after that to find the answers.

Risk evaluations - is the way in which we can decide in what way and how much the activity would be affected by the risks. Generally, the risk of business is generated by the quality and the efficiency of the assets, the risk of performance in a consequence of the

Profit and Loss account analysis and the financial risk is done by the way in which the assets are financed by the liabilities. The management risk is a result of the capacity of management to control the other three risks presented before.

The risks diminish – following the risks understanding, the bank wishes to minimize the risks. We must find a balance between the risk and the profit – this can be realized through the structure of the credit contract (terms, conditions, etc.), guarantees and adequate contractual clauses. The net risk after diminution represents the element which is going to be financed by the bank and it has to be reflected in the price of the transaction.

THE RATING SYSTEM AND RATING RULES

The evaluation of a customer's creditworthiness is the foundation of all Credit Risk Management. For the performance of such credit analysis, a Rating System that depicts creditworthiness in the form of one-year default probabilities has been developed for the banks.

The customer rating System forms the basis not only for making risk-oriented credit decisions, but also for:

- Credit conditions (interest, security)
- Credit monitoring (Reporting, Watch list, early warning instruments)
- Credit risk trading (securitization of claims => Credit risk reduction)
- Risk management
- Capital requirements (regulatory capital requirements acc. to Basel I and II)
- Portfolio analyses (steering of the credit portfolio)

Credit Standing describes the future ability of bank's customers to repay the capital, interest and fees on their debts in a timely fashion.

Approved Customer rating: final result of the rating / credit evaluation process; results in the assignment of a customer to a particular rating category on the master scale.

Rating represents the distillation of various quantitative and qualitative factors into one numerical figure; objective and forward-looking evaluation of the significant opportunities and risk factors of a company; mathematical description of the 1-year probability of default.

Rating System comprises all methods, processes, controls, data, IT systems, handbooks and regulations that serve to determine and assign internal ratings and to quantify default probabilities

Rating Model the logic governing the calculation of the ratings based on qualitative and quantitative customer data.

The immediate and wider goals of the Rating System may be summarized as follows:

- to analyze systematically the financial statements and determine the financial rating as the basis for establishing the creditworthiness of a customer;
- to integrate qualitative factors, warning signals and overruling indicators systematically into the process of analyzing customer credit quality;
- to identify the crucial factors and factor combinations (weighting) of financial (balance sheet, profit and loss, etc.) and qualitative criteria to ensure maximum discriminatory power (i.e., ability of a rating process to distinguish between good and bad customers) for the rating model;
- to calculate the 1-year expected default frequency (= probability of default, PD) for each customer;
- to standardize the procedure and the required steps for determining a customer's creditworthiness;
- to build up a risk-appropriate pricing system based on a sufficiently fine-tuned rating scale;

- to quantify credit losses by calculating the expected losses (standard risk costs);
- to calculate the economic capital at risk for each individual customer (Value at risk);
- to implement risk-adjusted yield evaluation;
- to provide risk-appropriate credit portfolio management.

A rating system serves solely to evaluate a customer's credit standing as represented by his probability of default. Collateral is not taken into consideration in the rating process!

The Master Scale contains:

- the rating classes
- the rating categories
- the 1-year probability of default (PD) for each rating category in percent
- the currently valid matrix for converting external ratings into internal ratings

The conversion matrix from external credit standing into internal rating categories is not fixed, but rather subject to changes over the course of the macroeconomic cycle, and is adapted as required.

Events which trigger a Credit Evaluation are:

- Credit application
- Prolongation
- Receipt of financial statements
- Credit review
- Credit-quality relevant change in the soft facts and warning signals (debt servicing problems)
- Credit- quality relevant change in the Customer Rating Overruling
- Credit- quality relevant change in a rating group (for customer ratings which are influenced by the ownership or group factors).

Customer Rating Process: in the standard case the Approved Customer Rating corresponds with the Stand Alone Rating. There is only a difference if the credit standing of the customer is influenced by the ownership structure. In that case the Stand alone Customer Rating and the Approved Customer Rating is not equal.

The Financial Rating: based on historical balance sheet and income statement figures (“hard facts”), the financial rating is calculated.

The Financial Rating consists of two static and three dynamic financial ratios as well as a size component. The algorithm for calculating the Financial Rating is summarized below:

Profit and Loss Related Ratios:

- Debt Coverage – 24%;
- ROI – 23%;
- Interest Coverage – 15%;

Balance Sheet Related Ratios and Size:

- Equity Ratio – 17%;
- Liquidity – 17%;
- Size – 4%.

Qualitative Rating: the Qualitative Rating is established by evaluating certain qualitative characteristics ("soft facts“). The following factors are applied:

- Management: Education, experience and competence and information willingness;
- Accounting and information systems: Accounting, planning and quality of planning;
- Equipment and systems: Technological level of equipment;

- Market and market position: Market development and market position.

Combined Customer Rating: the Combined Customer Rating is derived by combining the Financial and the Qualitative Rating of the customer.

The weighting of the financial and qualitative factors is dependent upon the size of the company, defined by turnover.

Warning Signals and Negative Information: In addition, warning signals and negative information are taken into consideration by the rating system and are systematically incorporated into the Customer Rating. Warning signals and negative information, to the extent that they affect creditworthiness, may influence the rating in one of three different ways, depending on the strength of the respective warning signals / negative information:

The Combined Customer Rating must be downgraded by at least a predetermined number of rating categories;

Determination of the "best possible" customer rating, i.e. a worse customer rating is possible.

Assignment of a predefined rating category to the customer: If a company has an external rating, this should be utilized in the credit evaluation process in addition to the internal rating, particularly if the rating agency has access to better information than the bank. In such cases, the external rating may lead to either an improvement or a lowering of the customer rating.

By taking into consideration any applicable overruling and/or external ratings, the Modified Customer Rating is converted into the Stand-Alone Customer Rating.

If the customer is part of a group the group rating may in certain circumstances be applied as the Approved Customer rating.

The Rating Sheet provides a condensed overview of the credit evaluation process, showing the main evaluation criteria and the resulting values. The reasons for any overruling are also documented on the Rating Sheet.

CONCLUSIONS

The customer rating is an essential prerequisite for lending. The credit application must, therefore, contain a brief written comment on the most important quantitative and, in particular, qualitative factors that affect the customer's credit standing. This verbal comment is required, as the Rating Sheet itself (which must be attached to the application) shows only the numerical scores of individual qualitative factors, without any explanations.

The Financial Rating is calculated based on final or, in exceptional circumstances – interim or preliminary financial statements.

The rating quality of the utilized financial statements determines whether a Calculated Financial Rating is accepted as the (final) Financial Rating.

The financial statements of customers must be obtained twice a year and analyzed immediately upon receipt.

The importance of qualitative factors has been significantly increased by their systematic integration into the rating process. Due to the strength of their influence on the Rating, it is particularly important that qualitative factors are evaluated objectively and without prejudice.

The Qualitative Rating evaluates a company in terms of its business environment and the organizational effectiveness of its business model. It serves to depict those aspects of business potential and risk that are not contained in the historical financial statements.

The qualitative rating and the financial rating form a logical unit. Any significant divergence must be critically examined, as well as any discrepancies of a long-term nature (e.g. consistently poor financial rating in spite of the ongoing positive evaluation of qualitative factors).

All applications must contain a concise and convincing written analysis of the qualitative factors. In practice external ratings are typically applicable only for international customers and groups.

The rating itself is obtained by requesting a report from the respective credit rating agency S&P, Moody's or Fitch via Dept. 8813/Business Information Research or credit agency. If the rating agencies listed above have assigned different ratings to a given customer, the lowest rating in accordance with the bank internal Master Scale must be applied. The Approved Customer Rating is the determining factor for all decisions and analyses.

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