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Assessment of the credibility of key business clients

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Abstract

The economic recession brings problems often affecting the existence of enterprises and organizations. The growing problem of increase in the number of claims after maturity affects many enterprises. One of the tools for the management of customer receivables is regular assessment of the credibility of current and potential customers. The subject of the article is the proposal of the methods for assessing the credibility of key customers in the manufacturing enterprise.

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1. Introduction

Every enterprise, regardless of the business plan, exposes to different types of risks when doing business, and one of them is the credit risk of customers. "The fundamental for success in this field is an early identification of risk fields and acceptance of appropriate decisions to increase possibility of the success of enterprise." (Vodak, Soviar, Lendel, 2013). This issue is discussed not only in the environment of the financial institutions, but also in the context of non-financial organizations. If the customers do not fulfil their payment terms agreed in the company contract, these problems pass on the enterprise itself. Undervaluing of the solvency of the customer for verification to obtain their current and future claims many times leads enterprise to unpleasant financial situation. There are currently methods and ways of evaluating the creditworthiness of its business partners, especially in the banking

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sector, but less in area of enterprises providing other than financial services. „Continuously increasing competition and technical progress has caused that individual trade businesses begin to direct their efforts towards consumers“(Krizanova, Majerova, Kliestik, Majercak, 2013). Also “most leaders of the fastest growing companies consider innovation to be the source of their strongest competitive advantage; more organizations consider it a strategic priority. Due to technological advances, organizations have porous boundaries and collaborate externally to innovate” (Gupta, Agarkhedkar, Sahney, 2015). It is important, however, for these enterprises to monitor the creditworthiness of their customers, because customer with the good financial stability is the safest way to generate profit at the moment. On the other hand, customer with low mark of the creditworthiness represents a risk of future losses. In the credit management, there are performed the analysis of solvency, and payment discipline of customers that are the basis for decisions about cooperation. ”The key how to control risk lies in adaption effective policies, procedures, and controls.“ (Virlanuta, Moga, Ioan, 2008).

2. Theoretical background and methods

An increase in the number of different financial (cash) help belongs to today's trends. Some clients are able to repay this type of commitments, others, however, not. Objective reflection of credit risk of counterpart (customer, client) is, for example, rating or credit scoring.

Rating depends on the probability of whether the counterparty does not pay in time its commitment and the rate of return, which indicates the percentage of the principal that the creditor gets back in the event of failure of the counterparty. In general, rating is seen as an independent assessment, which aims to identify, on the basis of a comprehensive analysis of a variety of known entity risks rated, how this entity is able and willing to get on time and in full to all its payable liabilities. (Vins, Liska, 2005) The rating system is based either on rating agencies (standardized approach) or on internal ratings. The latter can be performed via an internal rating based approach or an internal rating advanced approach (Altman and Sabato, 2005). Rating is done by a private rating agency, which grants business partner (debtor) with corresponding rating mark expressing entity's ability to meet individual commitments. Its purpose is both to convey information to users (lender of foreign capital) and on the other hand, to make business partners visible in order to bring them cheaper product. Initial rating agencies made the evaluation of a specific bond instruments. Then, they started to adapt to market requirements and the needs of investors, and thus began to focus on other subjects of evaluations. Today, rating is done in states, cities, enterprises, banks, etc. (Sedlacek, 2009) According to the purpose, rating is external or internal. Major rating agencies include, for example, D&B (Dun & Bradstreed), Standards & Poor´s, Moody's, Fitch Ratings, Capital Intelligence, Japan Bond Rating Institute, CRA Rating Agency (Czech Republic).

In comparison with standard rating there are various products of **scoring** on the market, that use the mark of rating, but in fact it does not meet the definition of rating and belongs more to the category of scoring (also referred to as ranking, internal rating). Scoring represents creditworthy models made up of ratio indicators and are based on the financial data of the entity evaluated. The subject of the scoring assessments is mainly business companies. (Sedlacek, 2009) Scoring models are based on quantitative analysis of financial data of the entity evaluated under the creditworthiness of the entity is estimated. Data collection is made in stable form so as to be usable as a database in the evaluation system. Particular importance is paid to the previous results of operations of the entity and do not include the non-quantifiable information. The output of the scoring assessment is similar to the output rating with the difference that there is no possibility of subjective opinion. (Sedlacek, 2009) Additional information we can get and apply by using quantitative soft computing prediction models. They usage „ into financial area as reliable and accurate prediction models can be very helpful in management decision-making process.„ (Falat, Marcek, Durisova, 2016)

2.1 Difference between rating and scoring

Rating and scoring are the tools to measure the financial health of the enterprise. The aim of both is to estimate the future development in the sense of ability to repay their obligations in full. The following table describes their fundamental differences:

Table 1. Main difference in the formation of the rating and scoring

	Scoring	Unauthorized external rating (information rating)	Authorized external rating (rating agencies)	Bank rating
Customer	business partner	business partner	enterprise	bank
Source of information	public data and third party information	public data and third party information	public and internal enterprise information, third party information	public, private and sometimes internal enterprise information, third party information
Depth of information	low	Medium	large	medium to large
Time of assessment	several hours	several hours or days	several days or months	several days
Assessment procedure	standardized	standardized with individual elements	individual	standardized or individual with key customers
Rating model	scoring	mathematical and statistical	mathematical and statistical	mathematical and statistical
Form of result management	semaphore, score	rating categories	rating categories	at least 8 rating categories under Base II
Time horizon	short-term	medium-term	long-term	long-term
Purpose	decision on credits and financial transactions with a low risk factor	decision on credit with a high risk factor, sectorial analysis	references to business partners, evaluation of emission securities	decision on credit, risk premium and conditions of the credit

2.2 Sources of information for evaluation of credibility

The starting base for the evaluation of financial health and stability of businesses is the financial statement of the enterprise. It is part of the financial accounting and provides retrospective information about the results of enterprise profit and its financial condition. Information display of value point of economic activity provides financial statements (balance sheet, profit and loss statement, cash flow statement). (Alexy, 2005, p. 42) Statistics, analysis, comparison and development of various industries and others provide next useful information how to build the model of customer evaluation e.g.: Statistical Office of the Slovak Republic – SLOVSTAT, Finstat, Yearbook TOP TREND. Economic theory offers a variety of models, tools and techniques for financial evaluation of enterprise entities. Their objective is to identify problems, strengths and weaknesses of value processes in enterprises based on financial data obtained, thus evaluate their financial health and stability. These include Analysis of ratio indicators as well as rating and scoring models (index of overall company performance, Cekia – cra ranking, Aspect global rating, Rating model Credit Research Foundation (CRF)) Also information about "expressed relations among costs, prices, level of sales and profit are very helpful" (Durisova, 2011) .

3. Suggestions and discussion

By analyzing the existing state of evaluation of customer credibility in a particular enterprise ZET (the enterprise does not wish to be named) it was found that it is not possible to use existing forms of models drawn up by global rating agencies for the following reasons:

- lack of key customers to create rating scale based on regression analysis,
- insufficient depth of enterprise data (cash flow, innovativeness, references, payment discipline to another supplier, bank rating),
- Statistical Office SR does not provide a monthly update of data on the development of the sector,

- difficulty of quantifying sector risks,
- difficulty of quantifying sector innovation,
- need for external consultancy to create software,
- price demands and other.

For the needs of this enterprise we have proposed, therefore, based on the reasons mentioned above, evaluation model of credibility customers. The proposal is based on models of scoring cards intended for banks and other financial institutions that make regularly review of the solvency of their current and potential customers. The reasons for the scoring evaluation are that they are designed for small and large enterprises, there are publicly available data, time saving, have standardized evaluation procedure, are low cost and have the possibility of rapid changes in the model (indicator, evaluation scale).

Design of the model consists of the following sub-proposals:

A. Model of scoring card

„Traditional forms of enterprise performance measurement are based on financial indicators, which are based on accounting statements." (Tokarcikova, Ponisciakova, Litvaj, 2014). Constituting an essential basis for the creation of other proposals is just a proposal of the card model itself, thus ***selection of relevant data sources, selection of appropriate indicators and setting their weights.***

Table 2. Determination of the opt. values of ratio indicators

Indicator	Optimum value
Cash asset ratio	0,2 - 0,6
Quick asset ratio	1,0 - 1,5
Collection period	30 days
Return on equity	0,20 – 0,40
Return on assets	0,20 – 0,40
Return on sales	0,20 – 0,40

Table 3. Determination of the optimum values of indebtedness indicators

Indicator	Optimum value
Leverage	till 30%
Debt turnover	30 days

Debt ratios are based on the assumption that the less indebted companies the risk of default is less than in the insolvent entities

Table 4 An overview of non-financial indicators

Indicator	Optimum value	Weight of category	Points	Evaluation
Internal payment discipline	0,2 - 0,6	60%	X	60% x X
Length of business relationship	1,0 - 1,5	40%	X	40% x X
Return on sales	0,20 – 0,40			

In addition to financial indicators we included to the model also two non-financial indicators. Non-financial indicators are calculated only for entities that are actual key customers of the company. If the potential customer is assessed, the assessment will make on by trade references, which will be requested from potential customers.

Table 5. Determination of the optimal values for non-financial indicators score

Indicator	Optimum value
Internal payment discipline	more than 10 years
Length of business relationship	more than 10 years

B. Model proposal for comparison of the subject evaluated with competitors

It is a good way how to analyze the credibility of customers. It is not only calculation of their creditworthiness, but a comparison of the subject evaluated with competitors. The evaluator thus obtains a picture of the subject evaluated towards competitors

For the competitive comparison we recommend:

- find at least three biggest competitors of the subject evaluated,
- selection of competitors from a country where the subject operates, namely the Slovak Republic,
- if the subject evaluated has no competition in Slovakia, find competition in the Czech Republic or another country,
- calculate the creditworthiness of the subject evaluated and competitors with the proposed model,
- comparison only on the financial score,
- assign mark according to the proposed model of evaluation,
- create own opinion on the position of the subject evaluated.

C. Proposal for scoring card

The objective of scoring card is to express the credibility of the customer in the form of mark that objectively tells about his financial situation. There is a proposal of the evaluation model in this sub-chapter by applying the methodology Credit Research Foundation. The overall risk score of the customer evaluated is calculated as the sum of financial and non-financial score. Then, based on the evaluation scale the mark is assigned to final value of the score calculated. Evaluation scales is based on CRF methodology. The lower limit of the scale is 1.0 and the upper limit of 5.0, and the range of intervals is from 0.79 to 0.80.

Table 6 Evaluation scale

Lower limit	**Upper limit**	**Mark**	**Description**	**Lower limit**
1.00	1.8	A	The subject evaluated is financially stable. Ability to repay commitments is very high.	1.00
1.81	2.6	BB	The subject evaluated is financially stable. Ability to repay commitments is high.	1.81
2.61	3.4	B	The subject evaluated is relatively stable. Ability to repay commitments is average.	2.61
3.41	4.2	CC	The subject evaluated is partially stable. Ability to repay commitments is reduced.	3.41
4.21	5.00	C	The subject evaluated is poorly stable. Ability to repay commitments is uncertain.	4.21
1.00	1.8	A	The subject evaluated is financially stable. Ability to repay commitments is very high.	1.00

Customer with the mark A has the highest creditworthiness and the lowest probability of failure to meet its commitments to suppliers. If the customer is assigned a mark C, it is a customer with low creditworthiness and high probability of failure to pay commitments. The subject evaluated is assigned the mark C where:

- it is in bankruptcy, restructuring,
- maturity of liabilities towards enterprise is more than 100 days.

The evaluation of the creditworthiness of each customer on a regular basis, the company can also get more valuable information about:

- actual numbers of key customers,
- changes in the number of key customers,
- numbers of customers enrolled in specific creditworthy categories,
- changes in the classification of customers into creditworthy categories.

Where data obtained are interconnected with data on revenues, costs and profit margins, which are evaluated by Sales Support – Pricing and calculations, evaluation will be given to enterprise on:

- revenues received and expenditures incurred for specific categories of creditworthiness,
- change in revenues and costs for specific categories of creditworthiness,
- profit margin obtained of various categories of customers,
- overview of the category with the highest and lowest revenues,

overview of the categories with the highest and lowest costs.

D. Proposal for card visualization

BASIC INFORMATIONS ABOUT SUBJECT (COMPANY´S CUSTOMER)	
Name of the company : **Legal form of the company :** **Year of establishment** **NACE:** **Costumers of the company**	
EVAULATED SCORES	**WIEIGHT:**
FINANCIAL SCORES : **LIQUIDITY RATIOS** **RENTABILITY RATIOS** **LEVERAGE** **+ figures: Bart graphs selected values (ratios) for last 3-4 years** **+ remarks**	**80 %** **30 %** **40 %** **30 %**
NON- FINANCIAL SCORES **+ figures: Bart graphs selected values (ratios) for last 3-4 years** **+ remarks**	**20%**
TOTAL SCORES **FINAL EVALUATION MARK**	
Remarks: **Date of processing:** day,.month,,year	

Figure 1. Visualization of financial indicators in time

It is processed into a form that gives evaluator clear information without the need for a longer thinking, or searching for additional information. Since there are other staff (traders) working with the outputs of scoring cards, simplicity of visualization is also important for them as they do not deal with the issue of evaluation. They are only interested in the final result, that mark of customer creditworthiness. ”These pieces of information can be used in many areas of decision–making and managing” (Hitka & Potkany, 2009). A graphical representation of development of specific financial indicators in time is a good complement to the proposed scoring card. The advantage is that using graphical expression the evaluator pays proper attention not only to current state of financial indicators, and therefore financial health, but also to their development in previous reporting periods. In case of the implementation of the proposed solution of reliability evaluation of customers is a good way to work with a model from Microsoft Excel. Enterprise may opt for regular evaluation at shorter intervals (quarterly), extending and graphical representation of the model outputs on:

- evaluation of the development of key customers,
- evaluation of number and change in the number of customers in each category of creditworthiness,
- expressing dependencies among economic data, revenue, costs, profit margin to individual creditworthy categories,
- development of outcomes in time.

In this case, processing in Excel will not be sufficient, but it will be necessary to propose a software solution in cooperation with the staff of the Department of Information Technology for the development and production of software solutions for enterprise ZET. This “requires constant improvement and expansion of knowledge, skills, formation of professional skills of employees” (Kucharcikova, 2011).

4. Conclusion

„All kind of advantages, which increase an enterprise’s competitiveness and profit levels, are welcomes by mostly subjects in business environments.” (Tokarcikova, 2011) “The global economy has built many businesses in a position in which it is asked to effectively manage liquidity and funding, due to the current situation “ (Chodasova-Tekulova, 2013). Mainly due to the instability of financial flows, liquidity is getting to the forefront of the financial management, which is also described in this contribution. From an economic point of view the solution presented in this article provides the possibility to achieve the planned profit by early identification of customers with high level of insolvency. The economic benefit is the actual reduction in operating costs and human capital as a result of automation model. The model is designed so that it is easy to evaluate not only the credibility of existing customers, but also the reliability of the potential the enterprise wants to reach, or they may require that business relationship.

“People are just carriers of new knowledge, ideas, thoughts, experiences and skills that contribute to their personal growth and to the growth of the performance and competitiveness of the entire organization.” (Kucharcikova, Durisova, 2014, Kozubíková,2015). Since every business relationship brings another level of risk, contribution to society is to divide key customers into five quality categories based on the level of risk considering inability to pay commitments. Another benefit in the categorization of customers is the ability to set the deposit system and due dates of invoices for each creditworthy categories. Introducing a new method of evaluation is expected to decrease the time of preparing the documents for the evaluation to calculation of the final mark itself. The reduction in calculation time will be affected mainly by the proposed automation model for the calculation. Consistent comparison of subjects evaluated is certain benefit for the enterprise, when customers are evaluated according to the same criteria and the subjective view of the evaluator is eliminated.

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