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The Model to Evaluate Risk Factors of Exporter-Provided Trade Credit

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When country's home market is quite small, companies develop exports in order to achieve greater sales volume and profit. Export is one of the ways to survive and develop business for companies of small open-economy countries. Such a tendency especially became evident during economic decline, when consumption in home market shrank. Recent Lithuania's economic growth is based on increasing exports, as well.

On the other hand, estimation of trade credit risk factors is getting more and more important for exporting companies as the most popular settlement mode in the world is trade on an open account. Exporters, aiming to be the first in rivalry struggle and make a contract with a customer, have to propose the most beneficial conditions to the customer they can, i.e. to provide the customer with a trade credit.

Exporter, when providing a trade credit for a foreign customer, takes a risk to lose financial resources. Risk of provided trade credit is evaluated on purpose to avoid the risk, i.e. the factors determining credit non-repayment and factors envisaging the risk are identified. One of the main factors determining trade credit risk is customer's insolvency, therefore designing a model to evaluate trade credits risk factors it is essential to analyse what predicts customer's ability to repay the trade credit given.

Two approaches may be found in literature: evaluation is based on the analysis of financial indicators or on the analysis of both financial and non-financial indicators. Usually only financial indicators are used. In a traditional credit analysis mainly a company's accounting data is used aiming to assess if the company is able to generate cash enough to meet its liabilities.

The research done shows, however, financial assessment is insufficient and does not give complete view about a company's business. In literature researches are found to be aimed at choosing such non-financial indicators that would be able to predict a company's insolvency, though a systematic approach to the use of certain indicators is scarce, especially which of them should be used to evaluate foreign customer's reliability in the case of export.

Providing a foreign customer with the credit, an exporter incurs impact of the foreign country environment forces, as well. This is true because, when an exporter provides a trade credit, crediting relations bind subjects from two different countries and those subjects are both affected by different countries' forces. Country risk evidences for the exporter as the customer is another country; here country risk is understood as the manifestation of forces that affect customer only in the home business environment (customer's home country). These forces may circumvent the exporter from getting repaid or affect customer in such a way that the latter will become insolvent.

Keywords: *trade credit risk, insolvency, financial analysis, non-financial indicators of trade credit risk, country risk.*

Introduction

Rising competition in global economy incites companies to give their customers the most beneficial payment conditions. Assessment of exporter provided trade credit risk factors does not lose its importance, since an open account is the most popular payment condition in international trade. The abundance of given trade credits may even cause insolvency and bankruptcy of the exporter itself (Arslan, Karan, 2009). Despite this importance literature on modelling of the trade credit risk in the case of export is scarce. Though there is a plenty of credit risk assessment models, they are designed mainly for banks, other financial institutions that assess the risk of locally traded loans, bonds, and derivatives or the risk of portfolio of such instruments (Altman, Saunders, 1998; Gordy, 2000; Croughy, Galai, Mark, 2000; Lakstutiene, Breiteryte, Rumsaite, 2009; Jijie, Bobalca, 2009; Mileris, Boguslauskas, 2010, 2011 and others). Evaluation of foreign debtor's credit risk for banks or other financial institutions is also somewhat different from the trade credit risk evaluation in the case of export; the difference is reasoned by a distinct scale and type of business, period of investment.

Assessing the trade credit risk, it is essential for an exporter to estimate which foreign customer is reliable enough that trade credit granting would be a success.

For many years financial evaluation and control of a company's activities was deemed to be the only and completely correct way to examine the business effectiveness and credit risk, as well. Therefore, a traditional credit risk analysis was oriented toward

accounting data (balance-sheet, income statement, cash-flow statement), aiming to settle if a company is able to generate flows sufficient to meet its liabilities.

Financial indicators were a modelling basis since the very first attempts to describe and evaluate debtor's insolvency risk mathematically. Since then financial indicators are used as a core and starting-point to evaluate the current situation, and their variations trend is used to forecast solvency of a debtor in such a kind of models (Altman, 2002; Scott, 2005; Fernandes, 2005; Hazak, Manasoo, 2010 and others).

Financially oriented business analysis is essential, though on the other hand it has shortcomings, for example, non-financial indicators that are substantial for business success are skipped from the analysis, as well as future-oriented data is; also financial measures are said to analyse the results, and not causes.

Accounting data does not reflect company's intellectual resources and its potential, though namely management's and other employees' proactive temper, creativity and other characteristic features decide successful business. Therefore it is crucial to include other, non-financial, data into the analysis of insolvency risk factors of a customer. Possibilities to assess customer's reliability basing on non-financial data were addressed by R. Pike, N. Cheng (2001), M. Bardos (1998), T. Shumway (2001) and others. In other authors' view business success is mainly determined by characteristics, competencies, attitudes of a management team and other employees (Erhardt, Werbel, Shrader, 2003; Wilson, Summers, Hope, 2000; Pridotkiene, Dapkus, 2010 and others).

The exporter, providing foreign customer with a trade credit, faces two groups of risk factors: internal factors that condition customer's insolvency and external customer's business environment factors. External customer's business environment factors (country risk) make a part of export risk, incurred by the exporter. Country risk may be the cause why the customer cannot settle with the exporter, and therefore customer's insolvency should be assessed in the context of country risk (Pridotkiene, Snieska, Snieskiene, 2006).

An existing lack of researches on trade credit risk factors and their evaluation made a background for this paper.

The object of the research is factors of exporter provided trade credit risk.

The aim of the paper is to design an exporter- provided trade credit risk model on the basis of the risk factors' analysis.

Systemic and comparative analysis of published scientific researches was used to achieve the aim of the paper.

In the first sections of this conceptual-nature paper the exploration level of an exporter provided trade credit risk evaluation is reviewed, and in the last section our suggested model combines meaningful groups of the risk factors.

The significance of financial indicators when evaluating customer's insolvency risk

For the purpose to examine current customer's business situation, it is necessary to select proper financial indicators. When analysing financial statements, a company's past and current financial situation and business effectiveness are evaluated, and the most probable financial situation in the future is an aim of analysis, as well.

Analysis of financial indicators is performed in the three main layers: a company level, two or more companies' level and an industry level. However, comparing a company's financial data to industry data, it is necessary to take into account possible problems: inaccuracies may be related to data presentation, as some sources give industry data in average values, while others give medians or average data but only of part of industry's companies (Melicher, Norton, 2003).

S. Scott (2005) also conveys the same attitude. To his opinion accounting standards may be different even inside an industry, and such situation is more incident in those countries, where strict standards are not compulsory, and only general accounting principles are applied (for example, outside EU). Because of different application of standards unequal values of financial coefficients are present.

We favour such approach of S. Scott (2005), as, indeed, in one industry companies of different sizes and business complexion may be involved, therefore the comparing may be complicated: some companies may be niche producing enterprises, others may be trading and producing enterprises, and still others may be only producers, oriented towards global market. Capital of the companies may come from different sources, as well: local, international or multinational.

In the present models of debtor's insolvency risk in addition to accounting data often market coefficients, such as market value of asset or stock, are used (Kealhofer, 2003; Shumway, 2001). However, E. I. Altman's (2002) and J. E. Fernande's (2005) attitudes should be taken into account: if market coefficients are involved into the debtor's insolvency risk analysis, the application of such models is limited, as market coefficients are improper to be used in modelling insolvency of debtors, whose stock is not traded in stock exchange. Therefore, we will line up from market coefficients in further analysis of customer's financial risk indicators.

Besides financial coefficients scientists also use other financial indicators, such as change in net profit, absolute sales volume and others (Carling *et al*, 2007). Company's size, usually expressed in natural logarithm of asset, is included into the analysis, as well. However, the research made by E. Bernhardsen (2001) showed that company's size indicator is insignificant if asset value is less than 8000 Norwegian crones[*].

In the analysed models of insolvency risk evaluation (Ohlson, 1980; Altman, 2002; Scott, 2005; Fernandes, 2005; Carling *et al*, 2007; Bernhardsen, 2001) data basis is made of financial indicators, and their selection is subjective. The selection of indicators depends on the characteristics of analysed companies, ease of access to data and researcher's choice. The indicators selected in those models are modelled using the methods of a

[*] The amount is about 3500 LTL, when recalculated in 2001 year's Norwegian crone and Lithuanian litas exchange rate.

discriminant analysis, decision trees, a neural network and other various statistical techniques. Models, developed by E. I. Altman (from 1976 through 2002) and based on a discriminant analysis, are considered as traditional and are widely used. E. I. Altman's models are periodically applied and their solidity is tested in various countries, distinct industries. Though there are researches where reliability of traditional discriminant models is questioned: sometimes models, based on newer techniques, like neural networks, outperform traditional ones in the classification of companies to solvent and insolvent (Ince, Aktan, 2009).

Influence of non-financial indicators when evaluating customer's insolvency risk

In the evaluation process of customer's insolvency risk, besides financial data non-financial data, like partner-company's age, frequency of contracts, marketing channel length and other non-financial indicators, is used (Pike, Cheng, 2001). One of the most often non-financial indicators in the evaluation of customer's insolvency risk is *company's age*, i.e. period of a company's active performance in the market until current moment (Bardos, 1998; Shumway, 2001).

M. Peel, D. Peel, and P. Pope (1986) relate financial success with a company's management characteristics. The authors included into the analysis both financial and three non-financial management team related indicators, when forecasting insolvency of UK companies'. The three indicators were the resignation and appointment of directors, decrease in share capital owned by a management team and time period from the end of a financial year till the announcement of financial statements and changes in these periods.

Erhardt *et al.* (2003) researched a company's financial strength using one qualitative indicator, namely *diversity of management team*. The scientists maintained that diversity of management team may be treated in two approaches: one is diversity in gender, age, race and ethnic differences and another is diversity in knowledge, education, values, perception and personal characteristics. Underlying diversity in Erhardt *et al.* (2003) research it was demographic characteristics, namely gender and age.

The authors found that diversity in a management team creates a competitive advantage for a company, since such a management team is distinguished for greater mental outfit, creativeness and innovativeness. Knight *et al.* (1999), however, claim that a management team consisting of different genders is slower and cumbersome in decision-making, it cannot react to competitors' action as quickly as needed. Therefore it would be incorrect to state unanimously that diversity in management team determines business success. Though, on the other hand, variety of management opinions, competencies and characters may help to make creative and successful decisions.

Market share is another one more important non-financial indicator in debtor's insolvency risk analysis (Bardos, 1998). Indeed, the greater market share has a company, the bigger its sales volume is and the company is more stable. Again, the market share itself does not ensure the company will have profit. This indicator is useful in the analysis of customer's non-financial indicators, but it must be used taking into account customer's competitive strategy and aspects of a certain market structure.

R. Pike and N. S. Cheng (2001) distinguished one more important non-financial indicator, namely *frequency of contracts*. In our opinion, analysing reliability of a customer, frequency of contracts is not as significant as *payment timeliness* (keeping of payment terms) is, as N. Wilson *et al* (2000) maintain, too. In this case a risk level may be measured as deviation from payment period agreed: the bigger deviation is, the greater risk arises and contrary, if payment is made to the earlier agreed date, the risk level is decreased.

Analysing researches of various authors on non-financial indicators of debtor's insolvency risk, we found it incomplete and suggest involving more non-financial indicators that would be helpful in giving more thorough view to a foreign customer's business situation.

It is reasonable to supplement the analysis of customer's non-financial data with the indicator, which reflects payment timeliness not only with the exporter, namely *timeliness of customer's repayments to the bank*. Banks play a special role in a company's business, since they usually finance working capital at least partially, give other financing and loans. If a company's history of repayments to the bank is clean, it is presumable that financial flows of the company are steady enough, and the company itself is stable. Timeliness of customer's repayments to the bank may be evaluated as a comparative part of overdue repayments in overall repayments.

One more indicator has influence on customer's business stability and credibility, and it is *customer's evolvement into judicial proceedings as defendant* (Pridotkiene, Dapkus, 2010). If a company is involved into judicial proceedings with government institutions, then it either doesn't pay taxes or offend some other laws, what threatens with penalties or activity sanctions. If a claimant is other company, judicial proceedings may be related to the violation of a contract (late payments, undelivered products, and other) or claimants proprietary rights may be violated, and again it threatens with penalties, forfeit, etc. In any case, if a company is involved into judicial proceedings as defendant, its reliability is questioned. To evaluate the risk, number of judicial proceedings or their value may be assessed.

Other suggested indicator that could provide with information about customer's credit liabilities policy is *ownership of customer's business*. Company's stock may belong to government or private persons. Following D. Gramlich (2002), credit risk of government owned companies is proximately related to sovereign credit risk. In some Eastern countries debts of government owned companies to foreign creditors may be simply annulled by the president's decisions, basing such decision on a threat to country's economy.

Customer's cultural environment has a definite influence on local companies' business culture and attitude towards exporter (Pridotkiene, Snieskiene, 2011). Obviously, country's cultural features evidence to an exporter through communication with a customer, as different attitude towards business systems, communication, working culture unrolls.

Following Pridotkiene and Dapkus (2010), the analysis of country's cultural risk should be moved to the company level and analysed through a foreign customer, evaluating the influence of country's cultural environment on the customer's business system. That's why indicator of *business culture match*, which conveys different attitude to business culture, should be involved into the customer's credit risk analysis. The indicator could be evaluated as the coefficient of management cultural nearness, with the value between 0 and 1: the minimal gap between a foreign customer and an exporter country culture (valued as 0) or maximal gap (valued as 1) with all possible vales in between.

Country risk influence on exporter incurred trade credit risk

Country risk has an impact on the abilities of a foreign customer to make timely repayment of trade credit. Because of a government's political decisions or unexpected political events payment of a foreign customer may be postponed or cancelled at all. As Pridotkiene (2011) found in her research, Lithuanian exporters, having trading relations with Eastern European markets (outside EU), rarely provide trade credits for customers there. Expert evaluation showed that on the whole exporters consider Eastern European countries more risky than Western markets. Recent situation in Byelorussia may serve as an example, when any payments in foreign exchange from the country to foreign suppliers were prohibited by the president's decision.

A country's economical situation has influence on foreign customer's credibility, as well: if an economy is in decline, probability for the companies in that country to become insolvent increases. Changing exchange rate, which is treated as a country's financial risk measure, may cause losses to an exporter, as well. Therefore, some authors claim country risk not only a very important risk factor for the exporter provided trade credit, but also essential when estimating credit riskiness (Maxwel, 2003; Wilson, Summers, 2002; Chi, Tang, 2006).

Usually country risk has the following expression (Hoti, MacAleer, 2004):

$Yt = f(X, ut; \beta)$,

here Y – vector of dependent variables, X – vector of independent variables, u – error vector, β – vector of unknown parameters, $t = 1,\ldots,n$ – number of observations.

Country risk may be assessed applying various methods and designing a proper model or using already existent models. However, position that one of the most simple and reliable ways to evaluate country risk is the use of sovereign ratings, maintained by some researchers (Baker, Mansi, 2002; Pridotkiene, Snieska, Snieskiene, 2006), is also reasonable.

In the light of economic crisis changes in sovereign ratings of even economically stable and reliable countries convey that getting and maintaining a sovereign rating increase transparency of macroeconomic policy. Such argument may be reasoned by the fact that during the process of rating estimation, agencies evaluate many factors: macroeconomic ones, as well as financial and political (depending on the agency).

Sovereign ratings are expressed in qualitative measures (risk categories); therefore, depending on the result desired, they may be involved into the customer's insolvency analysis in qualitative expression, or a method which could convert a qualitative expression into a quantitative one is needed. Rating transition matrices can be used to solve that question. Another method to express qualitative ratings quantitatively which is used by some researchers is by assigning linearly varied value to rating separate categories. For example, the highest rating would be assigned the largest or least number (according the model requirements), which means minimal risk.

Structural elements of an exporter-provided trade credit risk factors' evaluation model

Referring to the analysis made the risk factors of an exporter-provided trade credit should be assessed by the following stages:

1) formulation of the goal;
2) assessment of factors determining foreign customer's insolvency:
   - estimation of customer's internal factors that include the assessment of financial and non-financial indicators,
   - estimation of customer's external business environment factors through the country risk analysis;
3) estimation of risk factors' significance;
4) selection of a method to assess credit risk;
5) classification of customers and decision making to reach the goal set.

The structure of the suggested model is presented in Figure 1.

The goal of trade credit risk factors assessment is formulated referring exporter's needs: the goal may be to assess the insolvency risk of present and new customers, strength of customer's country risk impact, also to set credit period and limits.

In further trade credit risk analysis we suggest to split foreign customer's risk factors into two groups (internal and external factors) and analyse them separately. The greatest attention should be paid to financial analysis of customer business. Referring to the research made, we suggest selecting financial indicators from the main groups: liquidity, profitability, capital structure, effectiveness. If there is a need, other financial indicators should be involved into analysis. On the other hand, there is a plenty of already tested models to assess financial strength of a company, therefore, it is quite acceptable to select a proper one and apply it to forecast foreign customer's probable insolvency. When selecting a model to apply, its solidity, type of necessary data and ease of use should be considered.

Having an integrated view to a company, it is evident that company's insolvency risk is reflected not only by financial, but by non-financial factors, as well. The latter include company's age, management shift, market share, historical data on payments timeliness (both to the exporter and bank), ownership type, differences in business culture and other significant factors.

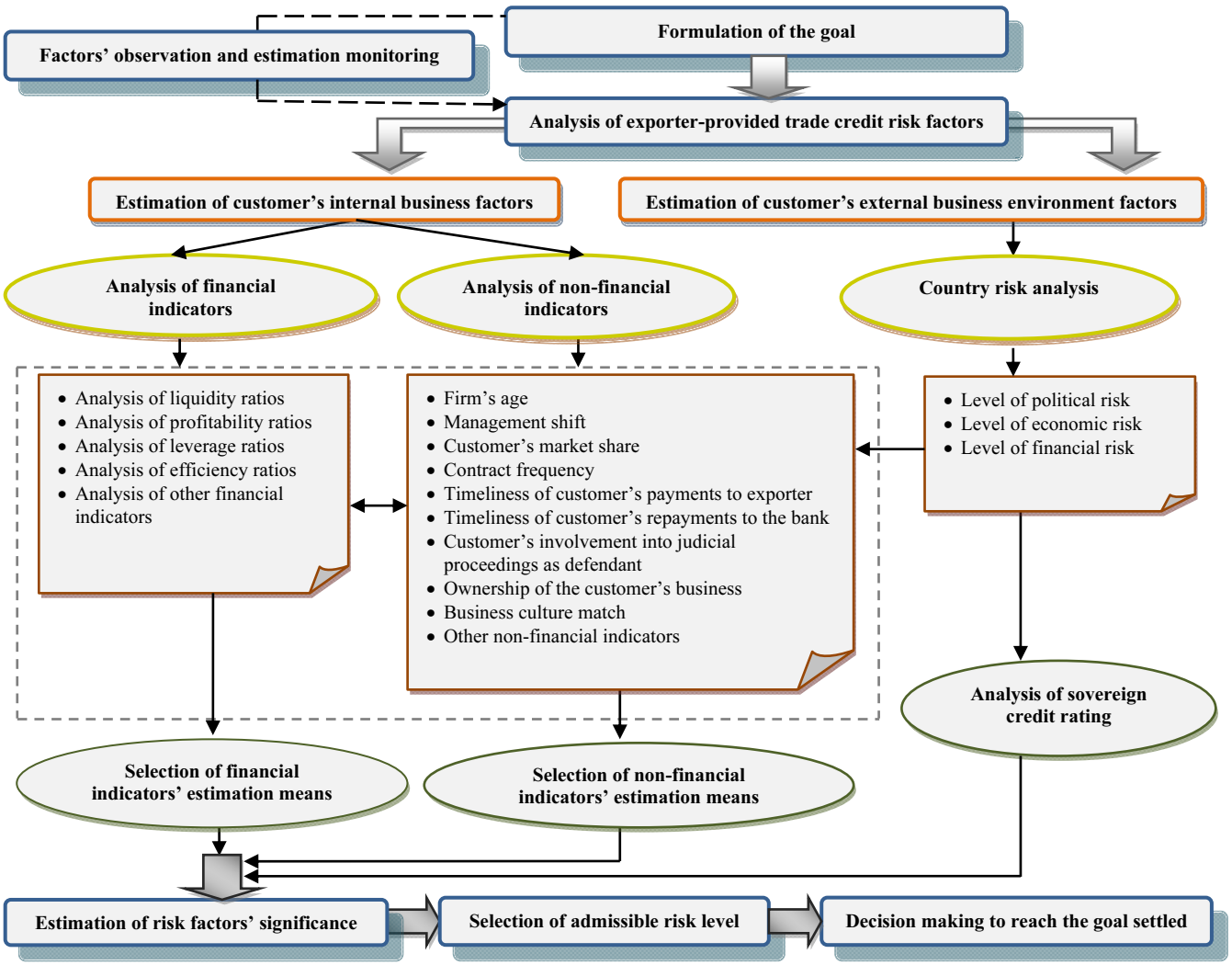

Figure 1. The structure of the model of an exporter-provided trade credit risk factors' estimation

Influence of external factors on foreign customer's insolvency evidences through country risk. We suggest assessing country risk using sovereign ratings given to countries by sound international credit rating agencies. Sovereign ratings should be integrated in either qualitative or quantitative values.

In the next stage significance of all insolvency risk factors have to be estimated. The significance of the risk factors may be estimated using various techniques: using expert evaluation or analysing statistical data from bankrupt and successful companies.

When analysis of all trade credit risk factors is done, admissible risk level has to be set. The decisions depend mostly on management's propensity to take risk. Obviously, in crediting decision making macroeconomic situation in importer's country and financial situation of both trade partners have much of impact. If economy is growing in export market, then sales volume in the market is increasing, the customer itself has strong position in the market, and then the exporter will be willing to take greater trade credit risk. Otherwise admissible level of risk to the exporter is moving in opposite direction, and the exporter will be less willing to risk.

In the last stage decision is made to reach the goal set referring the results of the risk analysis. For example, if the goal was formulated as "To provide trade credit, or not?" crediting decision will be made considering analysis of the risk factors and admissible risk level.

The proposed model of exporter-provided trade credit risk factors' estimation has reversible link; it is market by dotted line in the structure. The reversible link is in the stage of factors observation and estimation monitoring. If there is a change in some risk factor(s), control observation and monitoring must be applied in order to evaluate changed conditions and their influence on other risk factors, as well. For example, changes in customer's environment external risk factors may affect customer's financial and non-financial factors and indicators, therefore these indicators must be re-examined and reassessed. Changes in financial and non-financial indicators affect reciprocally and continuously: changes in non-financial indicators cause changes in financial indicators, and vice versa. And though changes in financial indicators are thought to be an outcome of changes in non-financial indicators, but changed financial indicators also initiate changes in non-financial indicators.

Conclusions

1. When evaluating trade credit risk factors from an exporter's view, it is necessary to perform an integrated analysis that includes assessment of foreign customer's financial and non-financial indicators and the foreign country's risk analysis.

2. Systemic comparative analysis of literature showed that financial indicators are very important and should be selected from the main groups of indicators: liquidity, profitability, capital structure, effectiveness. Indicator of company's size in asset expression is used very often, as well.

3. The literature research disclosed a tendency that in evaluation of foreign customer's insolvency risk also non-financial indicators are of high importance. The researched non-financial indicators include company's age, management shift, decrease in management owned share capital, timeliness of financial statement announcement, variety in management team, customer's market share, frequency of contracts.

4. We suggest enriching the analysis of foreign customer's non-financial indicators by the following indicators: *timeliness* of customer's payments to exporter, timeliness of customer's repayments to the bank, customer's evolvement into judicial proceedings as defendant, ownership of customer's business, business culture match.

5. When analysing country risk, all components of the risk must be evaluated: political risk, which may determine foreign customer's insolvency and also possibilities to make payment; economic risk, which shows economic strength of not only the economy itself, but also of its economic subjects; and financial risk, which reveals foreign country's provision with foreign exchange. When evaluating country risk, sovereign ratings are reasonable to use.

6. All three analysed groups of exporter provided trade credit risk indicators influence on each other's changes in a time perspective, therefore we suggest, under the change of any risk factors, to apply control factors' monitoring and perform evaluation of the change impact on exporter's incurred trade credit risk.

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Eksportuotojo teikiamo prekinio kredito rizikos veiksnių vertinimo modelis

Santrauka

Daugelį metų įmonės veiklos finansinis vertinimas ir kontrolė buvo laikomi vieninteliu ir visiškai teisingu būdu veiklos efektyvumui įvertinti, valdymo sprendimams priimti ir rinkos poreikiams patenkinti. Todėl ir tradicinė kredito analizė buvo orientuota į firmos apskaitos duomenis (balansą, pelno (nuostolių) ataskaitą, pinigų srautus), norint nustatyti, ar firma yra pajėgi generuoti pakankamai lėšų, kad padengtų įsiskolinimus.

Finansiniai rodikliai sudarė modeliavimo pagrindą nuo pat pirmųjų bandymų matematiškai aprašyti ir įvertinti skolininko nemokumo riziką. Ištirtuose modeliuose finansiniai rodikliai naudojami kaip atskaitos taškas esamai situacijai įvertinti, o jų kitimo tendencijos taikomos skolininko mokumo ateities prognozėms sudaryti.

Nors finansiškai orientuota įmonės veiklos analizė yra svarbi, tačiau ji yra neišsami dėl šių priežasčių: neįvertinami svarbūs nefinansiniai rodikliai; į analizę neįtraukiami į ateitį orientuoti duomenys; finansiniai matai turi tendenciją analizuoti rezultatus, o ne priežastis. Apskaitos duomenyse neatsispindi įmonės intelektualūs ištekliai, jų potencialas, nors būtent vadovų ir darbuotojų iniciatyvumas, kūrybiškumas ir kitos savybės lemia sėkmingą įmonės veiklą. Todėl į skolininko nemokumo veiksnių analizę būtina įtraukti ir kitus duomenis. Užsienio pirkėjo galimybes atsiskaityti taip pat neabejotinai lemia ir jo šalies rizika.

Tyrimo objektas – eksportuotojo teikiamo prekinio kredito rizikos veiksniai.

Straipsnio tikslas – atlikus eksportuotojo teikiamo prekinio kredito rizikos veiksnių analizę, pasiūlyti šių rizikos veiksnių vertinimo modelį.

Tyrimo tikslui pasiekti taikoma sisteminė ir lyginamoji publikuotų mokslinių tyrimų rezultatų analizė.

Norint nustatyti pirkėjo veiklos situaciją, reikia tinkamai pasirinkti finansinius rodiklius. Analizuojant finansines atskaitas, siekiama įvertinti buvusią ir esamą įmonės finansinę situaciją ir veiklos rodiklius, nustatyti, kokia gali būti labiausiai tikėtina įmonės finansinė situacija ateityje. Jau esamuose skolininko nemokumo rizikos modeliuose dažnai naudojami ne tik apskaitos duomenys, bet ir rinkos koeficientai, pavyzdžiui, turto ar akcijos rinkos vertė ir kt. Tačiau reikia atsižvelgti į E. I. Altman (2002) ir J. E. Fernandes (2005) nuomonę, jog, naudojant rinkos koeficientus skolininko nemokumo rizikos modeliuose, ribojamas tokių modelių taikymas, nes rinkos koeficientai netinkami naudoti modeliuojant skolininkų, kurių akcijomis neprekiaujama VP biržose, nemokumą. Be finansinių koeficientų, autoriai naudoja ir kitus finansinius rodiklius, pavyzdžiui, grynojo pelno pokytį (Ohlson, 1980), bendruosius pardavimus absoliučia išraiška (Carling et al, 2007) ir kt. Taip pat dauguma autorių nagrinėtuose tyrimuose į analizę įtraukia firmos dydžio, paprastai matuojamo turto (išreikšto natūriniu logaritmu) rodiklį.

Vertinant prekybos partnerio nemokumo tikimybę, be finansinių duomenų, naudojami tokie rodikliai: įmonės pirkėjos gyvavimo trukmė, komercinių sandorių dažnumas, pardavimo kanalo ilgis ir kt. (Pike, Cheng, 2001). Vienas iš tyrimuose dažniausiai naudojamų nefinansinių rodiklių, vertinant skolininko nemokumo riziką, firmos amžius, t. y. aktyvios veiklos trukmė nuo įsteigimo iki einamojo momento (Bardos, 1998; Shumway, 2001). Įmonės vadovybės duomenis su finansine sėkme sieja ir kiti autoriai (Peel, Peel, Pope, 1986; Erhardt et al., 2003; Hambrick et al., 1996 ir Knight et al., 1999). Kaip vienas iš svarbesnių nefinansinių rodiklių vertinant skolininko nemokumo riziką, išskiriamas *rinkos dalies matmuo* (Bardos, 1998). R.

Pike ir N. S. Cheng (2001) išskyrė dar vieną eksportuotojo požiūriu svarbų nefinansinį skolininko vertinimo rodiklį – *sandorių dažnumą*. Straipsnio autorių manymu, kalbant apie pirkėjo patikimumą, reikia atsižvelgti ne tiek į sandorių dažnumą, kiek į *atsiskaitymų savalaikiškumą.* Pirkėjo įmonės stabilumui ir kreditingumui taip pat turi įtakos *dalyvavimas atsakovu teismininuose procesuose* (Pridotkienė, Dapkus, 2010).

Atlikus mokslinių darbų analizę, eksportuotojo pirkėjo nefinansinių rodiklių analizėje siūloma naudoti šiuos pagrindinius nefinansinius rodiklius: pirkėjo įmonės aktyvios veiklos trukmę (firmos amžius); direktorių kaitą; vadovams priklausančio akcinio kapitalo sumažėjimą; finansinių ataskaitų paskelbimo punktualumą; įmonės vadovų įvairovę (lyties ir amžiaus požiūriu); pirkėjo užimamą rinkos dalį; sandorių dažnumą; pirkėjo atsiskaitymų su eksportuotoju savalaikiškumą; pirkėjo atsiskaitymų su banku savalaikiškumą; pirkėjo įmonės dalyvavimą atsakovu teismininuose procesuose; pirkėjo įmonės nuosavybės formą; verslo kultūros suderinamumą; pirkėjo oficialaus ir pašto adreso tapatumą; interneto puslapį ir jo savybes; bendravimo punktualumą; elgesį derybų metu; kitus tyrėjo požiūriu reikšmingus rodiklius.

Nors šalies riziką galima vertinti taikant įvairius metodus,r formuojant atitinkamą modelį ar taikant jau esamus įvairių autorių sudarytus modelius, tačiau taip pat priimtina kai kurių autorių (Baker, Mansi, 2002; Damodaran, 2003) pozicija, jog vienas iš paprasčiausių ir patikimiausių būdų šalies rizikai įvertinti – pasinaudoti šalies kredito reitingais.

Remiantis atliktais literatūros tyrimais, pateikiama eksportuotojo teikiamo prekinio kredito rizikos vertinimo modelio schema, kurioje pateikti rizikos veiksnių vertinimo etapai ir jų tarpusavio sąryšis. Rizikos veiksniai vertinami šiais etapais: tikslo formulavimo; vidinių (finansinių ir nefinansinių rodiklių) ir išorinių (šalies rizikos) veiksnių vertinimo; rizikos veiksnių reikšmingumo nustatymo; kredito rizikos vertinimo metodo parinkimo; pirkėjų klasifikavimo ir sprendimo priėmimo nustatytajam tikslui pasiekti.

Prekinio kredito rizikos veiksnių vertinimo tikslas formuluojamas atsižvelgiant į eksportuotojo esamus poreikius: tai gali būti esamo ir naujų pirkėjų mokumo rizikos vertinimas, pirkėjo šalies rizikos poveikio stiprumas; taip pat gali būti analizuojamas kredito laiko ir dydžio ribų nustatymas. Tolesnėje prekinio kredito rizikos analizėje, vertinant pirkėjo vidinius rizikos veiksnius, pagrindinis dėmesys tenka pirkėjo finansinių rodiklių analizei. Remiantis atliktais literatūros tyrimais, siūloma finansinius rodiklius pasirinkti iš pagrindinių finansinių rodiklių grupių: likvidumo, pelningumo, kapitalo struktūros, veiklos efektyvumo. Esant poreikiui, tyrėjas į analizę gali įtraukti ir kitus finansinius rodiklius. Remiantis kompleksiniu požiūriu į įmonės veiklą ir atliktais tyrimais, buvo nustatyta, kad pirkėjo nemokumą, atsirandantį dėl vidinių rizikos veiksnių, atspindi ne tik finansiniai, bet ir kiti kiekybiniai bei kokybiniai rodikliai: firmos veiklos trukmė (amžius), direktorių kaita, užimama rinkos dalis, atsiskaitymų su eksportuotoju (taip pat ir pirkėjo banku) savalaikiškumo istoriniai duomenys, įmonės nuosavybės tipas, verslo kultūros skirtumai ir kt. reikšmingi rodikliai. Šalies rizika lemia išorinių veiksnių įtaką eksportuotojo skolininko nemokumui. Ją siūloma vertinti atsižvelgiant į tarptautinių kredito reitingo agentūrų suteiktus kredito reitingus, įtraukiant juos į rizikos vertinimo procesą arba kokybine, arba kiekybine išraiška, pavyzdžiui, priskiriant tiesiškai kintančią skaitinę reikšmę.

Kitame etape nustatomas visų nemokumui įtaką darančių rizikos veiksnių reikšmingumas. Rizikos veiksnių reikšmingumas gali būti nustatomas įvairiais metodais: apklausiant ekspertus arba atliekant surinktų statistinių duomenų apie bankrutavusias ir sėkmingai veikiančias įmones analizę vienu iš statistinės duomenų analizės metodu.

Atlikus visų prekinio kredito rizikos veiksnių analizę, priimamas sprendimas dėl priimtino rizikos lygio, kuris priklauso nuo to, kiek įmonės vadovybė yra linkusi rizikuoti. Paskutiniame etape pagal gautus rezultatus priimamas sprendimas nustatytam tikslui pasiekti.

Pažymėtina, kad šis eksportuotojo prekinio kredito rizikos veiksnių modelis yra grįžtamojo pobūdžio. Modelyje tai pateikta kontrolinio veiksnių stebėjimo ir vertinimo etapu. Pasikeitus kuriam nors rizikos veiksniui (ar veiksniams), reikia atlikti kontrolinį veiksnių stebėjimą ir iš naujo įvertinti ne tik pasikeitusias sąlygas, bet ir jų poveikį kitiems rizikos veiksniams. Pavyzdžiui, pasikeitę pirkėjo išorinės verslo aplinkos veiksniai gali paveikti ir pakeisti pirkėjo finansinius ir nefinansinius rodiklius. Todėl rekomenduojama šiuos rodiklius vertinti iš naujo.

Finansinių ir nefinansinių pirkėjo rodiklių pokyčiai veikia abipusiškai ir nenutrūkstamai: nefinansinių rodiklių pokyčiai sąlygoja finansinių rodiklių pasikeitimus, ir atvirkščiai. Nors tariama, kad finansinių rodiklių pokyčiai yra nefinansinių rodiklių pasikeitimo rezultatas, tačiau finansinių rodiklių pasikeitimas savo ruožtu sąlygoja naujus nefinansinių rodiklių pokyčius.

Raktažodžiai: *prekinio kredito rizika, nemokumas, finansinė analizė, nefinansiniai prekinio kredito rizikos rodikliai, šalies rizika.*

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