Management of Credit Trades and Risk Management in Banks of Slovakia: How to Measure the Real Credit Risk?

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Abstract

The aim of this study is to analyze the credit risk, assess the real risk level of credit trades and the creditworthiness of the client using the internal ratings approach. This involves the practical application of financial theories, credit-, rating analyses and creating a rating model, in order to evaluate the acceptable primary recoverability on credit trades, focusing on commercial banks in Slovakia in euro area. The purpose is to execute an investment credit proposal for a fictional business entity in order to assess its ability to repay the bank loan from primary business sources. This paper refers to the analyses and rating models, which are progressive managerial tools for credit risk management in banks and the support of decision-making in a global environment. The credit trade proposal presents the applicable general methodology and creative solutions for effective credit management in practice in order to decrease potential financial risks and losses.

Key words: Credit trade proposal, Creditworthiness, Risk analysis, Credit rating analysis, Rating model

1. Introduction

In this study, issues concerning the modern financial sector are considered: financial stability, liquidity and credit risk, overexpansion of the financial sector and financial markets, financial instruments innovations, virtual trades, global risk regulation and the efficiency of supervision. The research question is: What are the major critical problems faced by the global economy and euro area and what are their causes? This study also identifies and examines the reasons for changes in financial stability, represented by the regulation rules Basel III and focuses on credit risk management in medium-term and long-term financing and the rate of return for banking sectors in the global environment. European companies often obtain external financing for investments from the banking system (Polouček et al., 2006). In order to better assess the borrower's credit risk commercial banks in Slovakia employ the internal ratings approach (Internal Ratings-Based approach - IRB approach) based on their own bank defined criteria and values, in the framework of Basel II and Basel III.

This paper presents a credit proposal developed using the internal ratings approach, for use in the banking practices of businesses to streamline loan financing and minimize credit risk. The investment decision-making and provision of investment loans, from the perspective of creditors or clients - debtors are permanent complicated, risky, but sophisticated processes in uncertain global macroeconomic conditions.

Previous empirical studies (Stavárek, 2004; Stavárek, Šulganová, 2009; Lepetit, et al., 2008) dealt with the analysis and investigation of the relationship between selected macroeconomic indicators, considering the financial stability of economies, competitiveness, efficiency and profitability of commercial banks. The macroeconomic framework, monetary policy and credits availability at a credit market in relation to the amount of capital allocated, risks and bank liquidity was surveyed and analyzed by Brissimis and Delis (2009) and Hume and Sentence (2009). Pricing and market interest rate has a considerable influence on the volume of loans provided and lending rates, and this mutual relationship between interest rates and the credit market in the context of global changes was analyzed by Degryse et al. (2012) and Jorge (2009). Jorge concluded that the response of credit markets to changes in the interest rate (especially a decrease) with considerable delay can be influenced by the amount of equity in the commercial banks.

The differences in the quantitative impact of macroeconomic factors among banking sector and loan categories are evident in Louzis, Vouldis, and Metaxas's (2012) study.

An important presumption for the stability, rate of return and competitiveness of commercial banks is the efficient management of their assets-and-liabilities structure (Bobáková, 2003) and especially the management of credit transactions within the risk management framework. Credit transactions represent, on one hand, one of the basic business activities and are one of the most important items of the earning assets; i.e. they create approximately 50% of all assets in the balance of the European banks. However, on the other hand, bank credit portfolios are exposed to high risks that can result in considerable financial losses and affect financial stability. Therefore, the control measures by central regulatory authorities generally require a diversification of the credit portfolio of banks based on the determination of rules of credit engagement (Revenda et al., 2009). The price, value of a bank's assets depends on demand and supply, and market conditions in economic environment. Ochotnický, Lajzová, Kiseľáková (2011) stated that, while making decisions regarding resources allocation toward active transactions, banks must take into account the risks associated with active transactions, (expressed by a general rate of return) and credit transaction prices, (expressed by interest payments), especially through the management of credit transactions prices and price competitiveness. Commercial banks aim to achieve the requested profitability of the credit portfolio on a consistent and long-term basis, in accordance with the bank's adopted objectives and strategies, through credit risk management, accent Dietrich and Wanzenried (2011).

One of the main risks that affect the financial stability of the commercial banks in connection with business activities is credit risk. The credit risk of banks is one of the main specific problems in banking sector at the management of banking credit transactions for the existence of the potential risk of banking credit portfolio (Polouček et al., 2006; De Haas et al., 2010). Furthermore, Polouček et al. (2006) stated that improper credit risk management is considered as the one of most important, leading causes of bank crises. Polouček et al. (2006), Hellwig (1995), and De Haas et al. (2010) are of the opinion that banks tend to have a cautious approach toward the assessment of credit risk and the provision of credit transactions during periods of economic growth. Consequently, the quality of the credit portfolio will decrease, and this will become evident in a period of a recession through an increase in the amount and the share of classified credits (non-performing loans), as emphasized by Marcucci and Quagliariello (2009). Therefore, credit risk management for credit portfolios is one the most important tasks that ensure the financial liquidity and stability of the banking sector, considering the increased sensitivity of banks to credit risks and changes in the prices of financial instruments during a financial crisis, what is stated by Liao et al. (2009), Ebnother and Vanini (2007).

The risk associated with dynamic movements in the credit markets is considered a credit risk (Kiseľáková, 2010). The efficient management of this risk using management models has became a pillars of modern banking management, within the framework of Basel II and Basel III. Financial institutions are developing newer and more progressive procedures and creating effective positions (credit risk managers) to increase the efficiency of banking risk management (Polouček et al., 2006; Ramke, 2006; Aebi et al., 2012). Simultaneously, they seek newer approaches (advanced approaches), new financial instruments for the transfer of financial risks, what is emphasized by Sivák, Gertler, and Kováč (2009).

Thus, this study focuses on the preparation of a credit proposal and the practical application of credit trade – (investment loan) to a business entity, which includes the business, financial, credit and rating analyses, and rating model of a client in the credit transaction. The main research tasks are: (1) to analyze the risk level of the transaction and the client and to only provide credit transactions with acceptable levels of risk to the commercial bank as a lender - creditor, (2) to identify and quantify main potential risks and their external (macroeconomic and sectoral) and internal (microeconomic) effects.

Every credit proposal for a bank credit transaction is comprehensive, intricate, and coherent and several pages long document, in which multiple organizational units of the bank at various levels of management are involved. The proposal for a new credit transaction is processed and analyzed by several bank employees, analysts, specialists, and managers. In this study, the credit proposal and created rating model is considerably simplified and involves new credit transaction lending – (i.e. an investment loan) for a fictional potential corporate client of commercial bank in Slovakia as a member of the European Union (EU), belonging to the medium-sized corporate segment and company based in the Slovak Republic. This corporate client is not listed on stock markets, and still uses external financing from the banking system or EU funds.

The model proposal is divided into two parts: (1) Management summary of the credit transaction and Characteristic of the client (business description, relationships etc.) and (2) Practical application of analyses and rating models, risk summary, credit rating analysis, the final rating model, and the final decision regarding the credit transaction.

2. Methodology and Methods

The main aim of this study is to analyze the real risk level of credit trade and the creditworthiness of the client using the internal ratings approach – for the practical application of credit proposal. In order to evaluate the acceptable primary recoverability on credit trade and to minimize credit risk with a focus on commercial banks in Slovakia, empirical financial, credit, and rating analyses, business forecasting plan and the creation of a business rating model. For this study, data were collected from specialized economic and scientific literature, and electronic information sources. Additionally, statistical data were obtained from Statistical Office (SO) of Slovakia, Slovak banking association (SBA), Eurostat, the European Central Bank (ECB), and the European banking federation (EBF). Available analytical data were taken from the National Bank of Slovakia (NBS), analyses of the Slovak financial sector, and bank's internal directives. The banking sector in Slovakia is considered as stable sector in euro area (according to the Index of Bank Soundness, 2012) and consists of 29 commercial banks with good performance, profitability, liquidity and capital adequacy on long-term basis.

From the perspective of banks as creditors a rating represents process of determining the credibility of a client and expressing it according to a fixed scale, rating class (Kašparovská et al., 2006). The measurement, system of segmentation and risk management in commercial banks using an internal ratings approach is fundamental to the assessment of client's reliability according to their ability to repay the loan, including interest and fees, duly and on time (credibility, the credit quality of debtor). The value of a client's credibility represents the final determination of the quality of legal status, and personal, financial and economic attributes and features of the client, which are important indicators of the client's reliability and willingness to repay obligations to the bank on a fixed date, as per the agreed terms (Kašparovská et al., 2006). Rating processes are calculated in internal rating models according to the dynamic developed using internal banking mathematic algorithmic rules/software programs (using newest information and communication technologies) to manage and achieve credit quality, integrity and feedback and to minimize financial losses for the creditors. According to Ross et al. (2008), the process of credit scoring involves assessing the well-known important "five Cs" of credit: Character, Capacity, Capital, Collateral, and Conditions, used in the banking business practice in many countries.

2.1 Credit proposal and rating model specifications

In assessing credit transactions risk the following must be addressed through a quantitative and qualitative analysis, the process known as "*due diligence*" (Polouček et al., 2006):

Management summary and characteristics

- Evaluate the client's reliability based on the bank's past experience with the client.
- Evaluate the quality of management, the outcome of past decisions and the ability to adapt to changes.
- An assessment of the shareholders based on realized investment shares and equity interconnections between companies in order to identify failure opportunities in this group with mutual economic links between businesses.
- Evaluate the client's supplier-customer relations, the competitiveness of the client, client's position and market position, and sales opportunities.

The application of financial and credit analysis, business plan forecasting and creating a rating model, which involves:

- An analysis of the client's equity situation, the structure of assets and liabilities, and their value according to commercial banks.
- Detailed analysis of the client's history, income statements and financial situation from financial statements.
- An assessment of the client's financial discipline in relation to the bank, the state, and other creditors and the amount and eligibility of claims from preferential creditors (such as Tax Authorities, and Social Insurance Agency).

- The present, past and mainly future profitability assessment of the client's business activities.
- A feasibility assessment of the presented business plan for the next period in terms of the primary sources of repayment, executed by comparing the profits/losses, achieved in previous periods.
- An assessment of the business plan's strengths and weaknesses, consequential risks, and critical aspects of the client's business.
- An assessment of the share of client's own resources in the business plan implementation.
- An evaluation of the client's supplier-customer relations and their impact on cash flow.
- A risk assessment of the client and the industry in terms of bank's resource allocation.
- An assessment of the amount, market price and the quality of collaterals, as a secondary source of repayment in case of default.

2.2 Specification of standard credit coefficients and patterns

The standard credit coefficients and patterns, which are generally obtained by analyzing financial statements (Zalai et al., 2006; Ross et al., 2008) and are investigated by commercial banks in Slovakia for the risk analysis of credit transactions in credit proposals and rating models, are as follows:

- *coefficients of liquidity*: liquidity coefficient (current ratio), quick coefficient (cash ratio), quick ratio
- *coefficients of efficiency:* inventory turnover ratio, inventory turnover days, account receivables turnover ratio, account receivables turnover days, liabilities turnover ratio, liabilities turnover days, revenues-to-assets ratio, gross income margin
- *coefficients of financial burden/debt:* debts on total assets (total indebtedness ratio), long-term capital to total assets, debt- equity ratio (credit indebtedness)
- *coefficients of coverage*: Earnings before interest, taxes, depreciation and amortization (EBITDA), coverage ratio, times interest coverage (earned) ratio, interest burden
- *coefficients of return, profitability ratios*: return on total assets (ROA), return on equity (ROE), return on sales (ROS), profit margin, return on investments (ROI).

Specific attention is devoted to the measurement of market value ratios, (earnings per share (EPS), price-earnings ratio (PE) ratio, and market-to-book ratio) if the company has activities and trades in capital markets, and cash flow ratios, and Economic Value Added (-EVA) indicators.

2.3 General Credibility rating model score and risk specification

The assessment of clients after their segmentation according to their credibility and the level of risk are presented in following Table 1:

Table 1: General credibility rating model and range in points

Rating class of client	**Range in points (in ascending order)**	**Final assessment of credibility**	**Level of risk**
A	81-100	Top priority clients	Low risk
B	61-80	High potential clients	Heightened risk
C	41-60	Average clients	Predominant risk
D	21-40	Low priority clients	High risk
E	0 - 20	High risk clients	Very high risk

Source: author's research and elaboration based on the internal directives of banks in Slovakia (available data, minimum to maximum score)

Table 1 indicates that the rating class A, comprising top priority clients with low risk, has the best assessment and rating class E, comprising high risky clients, has the worst assessment, based on credit process and credit and rating analysis. According to banking business practices in Slovakia, the minimum score for the potential provision of commercial loans to clients is an average score of 51-55 points, i. e., the rating class C for all segments of clients.

Based on the internal ratings approach used by commercial banks in Slovakia to assess the credit risk of borrowers a general credibility rating model was created and applied in this study, which is described in the credit transaction's management and in the practical applications of the credit proposal.

This approach is used to emphasize and highlight the importance of the practical application of rating models in assessing the primary returns on credit transactions from client's business sources, and tin streamlining credit financing of businesses in practice in order to assess and to minimize the real credit risk and potential losses.

3. Results and Discussion

3.1 Practical application of a credit trade proposal for an investment loan for a corporate entity

The model proposal is divided into two parts: the first part includes the management summary of the credit transaction, characteristics of the credit transaction, characteristics of the client; the second part comprises the practical application of analyses and the rating model, risk summary, application of credit and rating analysis, rating model and the final assessment of the credit transaction, in the following sections.

I. Management summary of the Credit Transaction:

- Legal entity client's name/Borrower: MEAT, Ltd. Prešov (limited partnership)
- Company identification registration number: 31 687 955
- Address: Main Street 95, 080 01 Prešov, Slovak Republic
- Company registration date: 1st January 2005
- Owner's capital: 25,000 EUR
- Industry Classification code: SK NACE Rev.2, section C, Industry - Manufacturing, code 10.1 Food industry - Production, processing and preserving of meat and meat products
- Scope of business: production, processing and sale of fresh and frozen meat and meat products; retail of meat and meat products, of food and beverages; brokerage in sales and services

Terms and conditions of the loan:

- Loan amount / currency: 330,000 EUR
- Product type/Type of facility: investment loan
- Purpose of funding: real estate reconstruction (plant), purchase of a new machine technology
- Maturity: 4 years (medium term loan)
- Interest rate: 5.5 % p. a.
- Processing loan fee: 0.01% of the loan amount, i.e. 33,300 EUR
- Loan repayment: quarterly, 16 installments of 20,625 EUR each
- Date of drawing*:* 21st December 2013
- Date of repayment: 20st December 2017
- Client's rating on 31/12/2012: C/56 points (average client)
- Client's rating on 31/12/2013: C/52 points (average client)
- Previous loan exposure: 0
- Current exposure: 0, the client does not draw any loans in other commercial banks
- Proposed exposure to bank (new): 330,000 EUR
- Sources of financing: internal banking sources
- Collateral of the loan: lien of creditor according to the lien agreement on movable assets (new machinery technology), and commercial bill from the company's owner
- Repayment plan (Table 2):

Table 2: Parameters of the investment loan with the same amount of principal repayment

Loan amount:	**330,000.0 EUR**
Annual interest rate (p.a.):	5.5%
Annual fees:	40.0 EUR
Date of drawing:	21st December 2013
Period of loan:	4 years
Frequency of statements:	quarterly

Total loan fees (EUR)	160.0
Quarterly loan's principal (EUR)	20,625.0
Principal loan amount (EUR)	330,000.0
Total interest paid on the loan	45,375.0
Total loan payment	375,535.0
Loan's principal is repaid in	4th year of lending
Loan overpayment amount (EUR)	45,535.0

Source: author's elaboration of the information on http://www.financnik.sk

II. Characteristics of the client, and the bank-client relationships

The client's company was established on 1st January 2005, as per a current extract from the Companies Register. A bank has newly acquired this client as an entrepreneur as well as an individual, and has a keen interest in retaining this client because of the relatively high average annual turnover of his business. In order to apply for a new investment loan, the client has established a business account, to which at least 60% of the revenues will be directed, and consequently, there is an assumption that the client will use other bank products (cross-selling). The client had opened a business account at another bank, where he obtained and easily repaid a short-term operating loan of 95,000 EUR in 2010, but was not satisfied with the banking fees of banking products. The bank, providing the new investment loan, will become the client's main bank, and the client will direct a predominant part of the revenues from his business activities to this account. The bank expects to gradually establish a stable relationship with the client and therefore, use other bank products for the client's company. The client has submitted a completed bank application for a medium-term investment loan for innovation activities, and a business plan for an investment project, due to the lack of his own medium and long term resources. The characteristics of the client are as follows:

- *Owners and Management:* The owner of two-thirds of the company under the memorandum and managing director of MEAT, Ltd. Prešov possesses a college education and practical experience in the field of business. His son is a shareholder who owns one third of the company, and has a university degree in management, finance and marketing, and sufficient practice. Management activities are conducted by seven business representatives. This company does not trade on capital markets (with securities).
- *Business model of the company – (scope of business, and market position in the industry):* The company was founded in 2005 with an intention to become in food industry a competitive meat processing company within the EU market, with the ability to face international competition, negative market developments, and to provide its consumers with a broad portfolio of high quality meat products. The main business activity is the production; processing and marketing of fresh and frozen meat, and meat products; curing; retail and brokerage in sales and services in the food area. The company holds a valid certificate of quality ISO 9001:2000 for the manufacture, processing, and sale of meat and meat products and is capturing the market with its modern business strategy. MEAT, Ltd. has its own production facilities and technology for the production and processing of meat and traditional meat products, as well as a wide network of retail stores across Slovakia. The client has built long-term supplier-customer relationships, contracts and networks in the Slovak Republic. Restaurants and hotels, food canteens, school canteens, and retail stores in the region of Prešov and Košice are amongst its stable customers. From the beginning, the client has built a reputation in the regional producers market, which is constantly being consolidated, and the client would like to enter the international market. The client's strengths and competitive advantages are its flexible, fast, and quality services, quality homemade products and a targeted marketing strategy, what is the advantage over other chain stores. It has other advantages such as long-term contracts with customers, the ability to adapt quickly to the market requirements based on market research for new products, favorable price relations, quality of meat, and traditional meat products made with original recipes. The weaknesses of the client are the lack of financial resources, insufficient production technologic level, and the risk of increasing competition from large-scale producers, rising production costs and product prices, and the pressure of compliance with the tightening EU standards. One of the goals of the company is to provide even greater accessibility to its products throughout the territory of the Slovak Republic and gradually gain a strong position in the EU market.

III. Characteristics of the credit transaction and loan purpose, Capital budgeting

The client has requested a special-purpose investment loan in the amount of 330,000 EUR for the realization of its investment project with a total budgeted cost of 480,000 EUR for reconstruction, modernization, and technological adaptations in its production plant and facilities, and for purchase of the new innovative machine technology.

Total budgeted cost of the investment project:	***480,000 EUR***	***100 %***
Investment loan requested:	***330,000 EUR***	***68.75 %***
Client's own funds:	***150,000 EUR***	***31.25 %***

The required investment loan of EUR 330,000 represents 68.75% of the total capital investment, and the requirement of at least 30% of the client's own resources (client capital contribution) for the investment project has been met. The return on the investment loan will be secured from earned income and depreciation, which are reflected in the business plan - the projection (forecasting) seems realistic for a four year term.

A detailed breakdown of the total budgeted cost and works, certified by a competent person, and a timetable of the investment project form part of the business plan and company's financial plan annex (in the loan application).

The primary objective of the investment project is to improve the production of meat products by modernizing and expanding the production facility, implementing technological changes such as electrical installation and air conditioning, and the purchase of a new machine technology to produce innovative meat products. Another objective of the project is to streamline the overall operation, save the facility's energy and meet the environmental, sanitary, food and veterinary standards of the Slovak Republic and the EU.

3.2 Practical application of analyses of the credit transaction and creating a rating model

The remainder of the model credit proposal is presented in the following sections:

IV. Financial, credit and rating Analysis of the Credit Transaction

- *Management summaries on Risks, Performance and Profitability*

Table 3: Analysis of the credit transaction risks (in thousands of EUR) – simplified

Indicator/year	**2012**	**2013**	**Index 2013/2012**
Revenues	16,787	19,732	1.18
Operating profit	224	247	1.10
Net profit	207	207	1.00
Assets	1,712	2,311	1.35
Equity	84	161	1.92
Total debt	1,627	1,650	1.01
Working capital	1,166	1,811	1.55
Operating cash flow	298	341	1.14
Bank loans	*0*	*330*	
EBITDA	299	538	1.80
Interest coverage	0	42.36	-
EBITDA coverage indicator	0	1.61	-
Short-term account trade receivables turnover (in days)	12.07	18.55	1.54
Short-term liquidity	0.66	1.16	1.76
Current ratio	0.81	1.37	1.69
Total debt (indebtedness) on equity %	19.3	10.2	0.53

Source: author's calculations and processing of adjusted client's financial statements and general indicators

The empirical *trend analysis* of economic and financial indicators and coefficients based on the audited financial statements provided by the client, indicates a positive trend of sales growth and the annual revenue growth with an index of 1.18 (in relation to the trend of modest cost reduction), documented in Table 3.

In the assessment of liquidity and the ability to pay obligations it is noticed that low values improve annually, which is a positive sign of improving liquidity and trend to stability. In the *debt analysis*, despite the lack of client's own financial resources, low equity, and resources obtained through a bank loan, the debt ratios are reasonable, and a downward trend in the total debt to equity ratio is evident. The client currently does not receive loans from other commercial banks.

In the upcoming period the client will initiate in terms a new investment project for strategic development and obtain financial resources, in the amount of 400,000 EUR from non-refundable EU funds (Operational Program Competitiveness and Economic Growth in Slovakia), which will contribute to an increased international competitiveness, a better market position in the EU and will not harm the debt position.

The profitability analysis indicates that the company's financial management - is efficient and a steady increase in profitability, revenues and net income, and cash flows from business activities, is expected.

The balance sheet analysis indicates a positive trend in assets (index of 1.35), a favorable equity position, and an adequate financial structure with a higher share of external financial sources. The turnover and the structure of receivables and trade liabilities is less favorable due to the impact of the global crisis on the ability to pay.

Risks arising from the global crisis really exist and may result particularly in the firing of employees, pressure to save costs, and streamline retail operations, reduced demand, limited production, and competitive pressures due to price changes of products and services in the open market.
The environmental analysis - has been submitted and is satisfactory, the client complies with all legal standards.

There is *credit risk* in the scope of business in this industry and in having to respect all EU standards (sanitary, veterinary, environmental, manufacturing, quality, etc.). The risks that can arise are indebtedness, less equity and relatively low liquidity. Despite these factors, the client has a stable trend for the key economic indicators and fair values for indicators of coverage.

- *Sales and business plan* – (*prognosis, prediction and projection of the basic development trends of economic and financial indicators): -* credit analysis and credit risk, the client's ability to repay the loan, loan interests, bank fees, and the real primary return on the required loan is calculated in Table 4.

Table 4: Projection of the business plan (in thousands of EUR) - selected data

Indicator/year	2014	2015	2016	2017
Revenues	21,113	22,168	23,499	24,909
Operating profit	319	341	366	389
Net profit	247	268	289	310
Assets	2,357	2,428	2,500	2,575
Equity	235	316	402	496
Total debt	2,121	2,111	2,097	2,079
Working capital	1,421	1,372	1,321	1,248
Operating cash flow (net profit + depreciation)	347	369	390	419
EBITDA	434	454	480	504
Interest coverage	18.67	25.33	29.87	52.75
EBITDA coverage indicator	4.50	4.85	5.19	5.69
Short-term account trade receivables turnover (in days)	17.69	17.35	16.86	16.39
Short-term liquidity	1.10	1.17	1.25	1.37
Current ratio	1.30	1.39	1.48	1.62
Net debt on equity %	105.12	52.25	20.50	0

Source: author's calculations and processing of client's adjusted financial statements and general indicators

The findings regarding the primary returns on the investment loan, positive trends of development in business - (the *average annual growth rate of sales 6%, the average annual growth rate of net profit 7.5%, and assets 2.7%), and adequate financial ratios and main coverage ratios, including EBIDTA coverage indicator* **–** *are acceptable in these macroeconomic conditions.*

Conclusions: At the time of loan repayment is expected that the client will have generated sufficient resources, i.e. sufficient cash flow, net profit and depreciation for the repayment of principal and credit obligations. The primary return on credit transaction, i.e. client's ability to repay the loan, including interest, from his own resources, and the business activities, has been demonstrated for a four year term in 2014-2017.

- *The credit rating, rating analysis and rating model* (according to internal banking mathematic algorithmic rules and principles/or software program model) to assess the client's creditworthiness, level of risk from the credit transaction, rates of return and collateral are calculated in Table 5.

Table 5: Rating model with the requested investment loan-parameters

		Evaluation date	31.12.2013
Client	**MEAT, Ltd. Prešov**		
Company registration number	31 687 955		
SK NACE Rev.2	Food industry 10.1		
Legal form	Limited company		
Financial analysis on:	31.12.2013		
Number of days	365	**Location**	Prešov, Slovakia
Total bank commitment (including off-balance sheet) in thousands of EUR:			330
Loan commitment	**330**	Overdue loans	0
Off-balance sheet	0	Number of days of delay	0
Evaluation of main financial indicators (Capacity):		**Evaluation of qualitative indicators (Character** in points):	
ROA-return on total capital/assets	9.12%	**Large and medium entrepreneur**	
ROE-return on equity	128.27%	Business plan	15 p.
ROS-return on sales	2.72%	Owners structure	30 p.
Commitment of total assets	0.12	Market position and level of supplier-customer relationships	30 p.
Short-term account trade receivables turnover (in days)	18.55	Audit (IAS/IFRS)	20 p.
Maturity of trade liabilities (in days)	28.23	Export oriented	5 p.
Quick ratio	0.38	**Small entrepreneur**	
Cash ratio	1.16	Stability and credibility of the company	-
Current ratio	1.37	Trends in business	-
Financial (credit) debt of equity	2.05	Level of accountancy and information availability	-
Total indebtedness	0.71	Business position and level of supplier-customer relationships	-
Interest coverage (modified)	42.36		
Total time of net liabilities repayment(years)	**3.83**		
Evaluation	**Points**	**Rating class**	**Weight**
Financial indicators	36		70%
Qualitative indicators (recalculated)	16		30%
Warning signals (+, -)	+		
	Points	**Rating class**	
Final rating of the client	**52**	**C**	

Source: the author's research and the own creating and processing of available documents from commercial banks and fictional client

Note: IAS/IFRS –International Accounting Standards/International Financial Reporting Standards

According to the final evaluation of creditworthiness and final rating of the client, the client is categorized as a class C rating, i.e. an average client that has predominant but acceptable risks. The client demonstrates positive or more precisely, stable trends in key financial and qualitative indicators.

The final impact of the early warning signals is positive (the client is not presented in management, financial warning signals and operating warning signals). The client's manufacturing program may be adversely affected by external factors (exchange rate changes, changes in the prices of inputs and outputs, progressive consequences of the crisis, etc.) and by increasing competition, which could affect its financial results in the future. Increased attention to all effects and risks monitoring is necessary.

V. Legal analysis of the client and the transaction, collateral

- Legal verification was performed on the submitted documentation and legal conditions for credit transaction were determined to ensure legal clarity of contractual documentation, quality of primary and secondary return assurance for the credit transaction under pledge agreements on movables (collateral adequacy).
- A "default" clause (probability of default) is included in the contract documents with the client: the credit claim is in default if the client (the debtor) is bankrupt, or is not paying off, the principal amount, (in whole or in part), or interests for more than 90 days.

VI. Decision-making criteria for loan transactions

- The client has no overdue obligations to preferential creditors.
- The client has more than two years of business history and substantial experience in the segment/sector.
- The financial situation of the client is acceptable, especially with regard to profitability, revenues, cash flow and key financial indicators.
- The shareholders' equity of the client's business was positive at the end of the previous year.
- Net profit for the last financial year was positive.
- Credit rating of the past year was A, B, or C **(C).**
- The client will be able to generate sufficient funds to repay the proposed investment loan and in full and in due time (in four years).
- The loan is secured by a sufficient quality and amount of collateral.

The quality of the credit transaction approval decision, i.e. proposition to approve commitment limit (exposure) of active transactions for the client, is dependent on the following:

- competence at the bank's branch: relationship manager and branch manager
- competence at the head of the analytical centre: manager of the analytical centre
- competence at the Small and medium-sizes enterprises (SMEs) Corporate Credit Committee: credit risk manager
- risk management department's statement: corporate credit risk manager, head of risk

VII. Final decision in the credit process and conditions

- The investment loan proposal, in the amount of 330,000 EUR with a maturity of four years at an interest rate of 5.5% p.a.is approved.
- Conditions of the approval are listed in the managerial summary of the credit transaction, on the basis of submitted originals of invoiced work and other loan documents.
- Monitoring of the client and the transaction will be done semi-annually and annually throughout the life of the loan.
- The interest rate is 5.5% p.a. and the structure of interest rate calculation is as follows:

Date	**6M EURIBOR** (by ECB)	**Margin**	**Risk premium**	**Total interest rate**
December 2013 (calculated prediction of ECB	0.546	3.95	1.004	5.5 % p. a.

Based on the results of financial, credit and rating analysis, the credit transaction could be provided to the client, with acceptable levels of risk, by a commercial bank in the Slovak Republic, following the general methodology stated in the prepared credit proposal and created general rating model. This methodology can be realistically applied, developed and used in banking practice for businesses to streamline loan financing.

3.3 Discussion

These are some general suggestions and recommendations for overcoming crisis situations in business management practice and the implications for corporate governance (from the companies' point of view):

- investigation of the current business model (the whole value chain from production to sales), to decrease capital demands
- rigorous management, analysis and control of corporate financial flows (the market value of the company) through effective management information systems
- stricter monitoring and enforcement of claims, receivables and payments from customers through modern financial instruments
- effective management and monitoring of insurance and risk diversification
- review new investment projects, with the exception of environmental and product innovations, and education, and implement only reasonable and realistic investment projects with acceptable profitability, rate of return, and risk (measured using dynamic methods of measurement)
- use competitive advantages, to gain market flexibility and reevaluate of asset's efficiency
- introduction of real business plans in relation to real conditions and market developments, focusing on the core business (using f.e. outsourcing for other activities)
- diversification of business and commercial activities and finding new markets
- optimization of business processes (i.e. decreasing costs by using effective methods) and implementing savings measures
- companies' use of their own funds as the main stream of funding and reserves.

The amounts of capital possessed by a commercial bank reflect the concepts of capital adequacy of its own sources are a measure of its financial power. It must be pointed out that the existing regulations regarding capital adequacy, such as Basel II, were insufficient in practice, since they failed to protect commercial banks as creditors against insolvency during the global financial crisis of 2007-2009 and the ensuing debt crisis. Therefore, the central regulators reworked the existing rules and new reforms for the control of capital was approved in September 2010, i.e. the enhancement of world capital standards under the name Basel III, in effect from 2013 to 2019. Basel III requires banks, inter alia, to hold at least 4.5% (twice the previous level) of common equity (Tier 1), in the form of risk-weighted assets. The minimum share of common equity to cover the losses from credits and other toxic investments was increased to 7% for all banks, including banks in the U.S. The Basel commission for bank supervision will spread out the fulfillment of new requirements for capital adequacy and obligatory minimum amount of liquidity till 2019, so as to moderate the impacts on the banking sector and financial markets. The main question is how the new rules will influence the costs, credit availability and banks' rate of return in the long-term period. The aim of these new regulations is to strengthen global macroeconomic and financial supervision, and to moderate instability effects. Potential solutions against future debt crises in the euro area must be considered: toward a European banking union, fiscal union or central bank supervision?

4. Conclusions

In this study, credit risk as one of critical problems of financial stability, the real risk level of credit trade, and creditworthiness of the client was analyzed using practical application of financial, credit, and rating analyses and creating a rating model, with a focus on commercial banks in Slovakia. This methodology can be realistically developed, innovated and applied in the banking practice of businesses to streamline loan financing in other countries of the EU. No final rating models, based on practical experience and theoretical assessments, have been developed for banking credit management. The results indicate significant economic relationships between the various determining factors of stability in real financial practice and the implications for economic governance for providing performing loans with primary recoverability. The factors of financial stability and decreasing risks (liquidity and effective credit risk management and capital allocation) indicate features similar to that of banking sectors in other countries of the EU, in context of proceeding impacts of global crisis based on the existence of common relationships and dependences. These can be applied at the building of resistance and prevention to risks and competitiveness of banking sectors to crises.

Main findings: Bank credit transactions must be effectively managed to enable the bank to achieve an optimum creditor position for its client in terms of contractual conditions, and primary and secondary returns on the credit transaction and to set the transaction's price at a level that provides a satisfactory financial viability and expresses the risk level and related management costs; the overall client's profitability to the bank is also considered.

Credit proposals and rating models developed, using the internal ratings approach, represent the general applicable methodology and creative solutions for effective credit management in practice in order to decrease potential financial losses and risks. This is consistent with majority of previous findings including Polouček et al. (2006), Kašparovská et al. (2006), and Sivák et al. (2009) and Ross et al. (2008). One of the results of this study is the knowledge that the rating analyses and models represent progressive management tools to manage the credit risk of banks, support decision-making, quality improvement and continuous improvement of credit processes. They are also a tool to improve the performance, profitability and financial stability of global banking systems. The importance of the practical applications of rating models in the loan financing of businesses in practice, is based on more efficient credit risk assessment, and granting credit transactions only to customers with acceptable levels of risk, quality assurance and price of the loan, who can repay duly and on time.

The study also identifies a need for the constant application of new advanced approaches (according to Sivák et al., 2009) to continuously improve the management of bank credit processes, cost-efficiency and innovative and modern solutions to minimize the real credit risk and losses due to continuous globalization changes and competitive pressures. It is still necessary to apply more effective models of credit risk regulation, stiffer internal rating systems, and quality techniques to mitigate risks, implement proactive monitoring and risk prevention, streamline the management of quality bank credit transactions, and minimize bank's credit risk. One of the major trends in banking, in addition to the rules of international regulation of Basel III, is the diversification of risks within the risk management and establishment diversified loan portfolios to ensure adequate liquidity, profitability of the banking sector and acceptance of risks involved in the real economy. These facts can be associated with findings of Polouček et al. (2006) and with studies by Ebnother and Vanini (2007, Haas et al. (2010), Liao et al. (2009), Marcucci and Quagliariello (2009). In this interesting and dynamic field are still many opportunities for further scientific research, scientific and economic debate with the newest knowledge in managerial practice.

It was not possible to deal with other indicators within the banking business and to cover all the changes and dependencies between them, in this study. Despite the changes in regulations, commercial banks will have to realize their potential by offering higher quality and prices of products and services utilizing of their competitive advantages and new strategies (Frankovský, Ištvaníková, Štefko, 2009). It is necessary to direct the banking sector to a more efficient, active and high-quality management of liquidity and rate of return, management of high-quality of balance sheet structure, interest policy and net interest margin, and credit risk, in response to the expected development of interbank interest rates on financial markets and to promote banking sector competitiveness, growth and financial stability in the succeeding period. From the aspect of strategic development and consolidation and integration of processes, the processes of cross-border mergers and acquisitions and risk controlling implemented on an international scale, must also be implemented in the economy of the Slovak Republic in the European Union.

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