

Credit risk of SMEs: Attitudes of Czech and Slovak Entrepreneurs

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Abstract—The aim of this paper is to define significant credit risk factors, quantify attitudes and evaluations of entrepreneurs in the SME segment and compare the attitudes of Czech and Slovak entrepreneurs in relation to such factors as the gender and the level of education of the entrepreneur, and the age of the company. Our research showed that Czech entrepreneurs evaluated the attitude of the commercial banks to lending to the SME segment more positively in comparison to their Slovak counterpart. This trend was also reflected when we compared the opinions of entrepreneurs by the gender, the level of education, and the age of the company. Despite of the fact that entrepreneurs in both countries agreed with the opinion that a better understanding of credit conditions improves an access to credit, the level of knowledge of credit conditions low in both countries. We found that there are statistically significant differences in the knowledge of credit conditions in relation to all monitored factors. Only 30.24% of the Czech and 33.79% of the Slovak entrepreneurs agreed with the opinion that credit conditions are transparent. No statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia were identified in relation to the gender and the level of education of the entrepreneur.

Keywords—attitudes of entrepreneurs, credit risk, Czech Republic, SMEs, Slovakia.

I. INTRODUCTION

Strong and prosperous market economy requires the existence of the strong middle class. Its decisive representatives are individual entrepreneurs and small and medium-sized enterprises (SMEs). This is a segment of the corporate sector, which generates a significant proportion of added value with a significantly high share of total employment. Therefore, it is necessary to pay attention to all aspects of management of small and medium-sized enterprises.

Most of the authors agree that the development of SMEs is one of the basic preconditions for healthy economic development of the country.

Small and medium-sized enterprises have a number of specific features related to their smaller size, lower level of diversification, low capital strength, more limited markets and higher risk. On the other hand, they are more flexible, have closer contact with customers and can quickly adapt to new

customer needs (Belás et al., 2015a).

The most important factor supporting the development of small and medium enterprises is the improvement of the access to capital (Belás et al., 2015b), while the limited access to finance is a major problem for many SMEs operating in the European Union (Ozturk and Mrkaic, 2014).

In this paper we examine the important attributes of credit risk. The main contribution of our paper is a presentation of the analyses of the opinions of individual entrepreneurs and the comparison of their evaluation of the important credit risk factors in relation to such factors as the gender and the level of education of the entrepreneur, and the age of the company.

The structure of the article is as follows. Theoretical part defines credit risk and its importance for companies, operating in the segment of SMEs. The next section presents the research methodology and data we worked with. The forth section we present the results of the research. The main conclusions of our research are summarised in the last part of the paper.

II. THEORETICAL BACKGROUND

Modern literature primarily evaluates the credit risk from the bank's perspective. Most of the authors state that the credit risk is caused by the variability of the incomes, which comes out of the lending activities of the banks. At its core is the probability, that the counterparty may be unwilling or unable to meet its commitments under the loan agreements. Mejstřík et al. (2008) claims the credit risk to be the biggest risk faced by each bank, and states that the asymmetry of information, inclination to negative selection and the moral hazard are the significant sources of this risk. Credit risk is mentioned as the oldest out of all financial risks in commercial bank (Holton et al, 2013).

SMEs are along with other bank clients on the other side of the credit relations. One of the most significant outcome of the credit risk is a financial gap. This term interconnects the financial risk, the knowledge and the transparency of the bank's credit conditions and the presentation of the company's accounting data in the loan obtaining process. This term describes a situation when a sizeable share of economically significant SMEs cannot obtain financing from banks, capital markets or other suppliers of finance. OECD (2006), International Finance Corporation (2013), Bain & Company, Inc. and the Institute of International Finance (2013), Sobeková, Sipko, and Solík (2014), European Association of Craft, Small and medium-sized Enterprises (2007) similarly

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state that SMEs are influenced by the financing gap.

A lot of authors, including Kundin and Erecgovac (2011), Ozturk and Mrkaic (2014) agree with the opinion, that the limited access to external forms of financing, including bank loans, mostly caused by the higher level of risk in comparison to larger enterprises, higher level of indebtedness and the limited ability to provide collateral, is a substantial disadvantage of the segment of the small and medium-sized enterprises. These predispositions force the banks to provide loans to SMEs under less favourable lending conditions also in the situations, when SME provides a reasonable, profitable and viable business plan. Possibility to provide higher collateral significantly improves credit conditions (Petr, 2012). Mercieca et al. (2009) also confirm that the access to finance is necessary for growth and further development of SMEs authors. Ardic et al. (2012) based on a cross-country confirmed a positive relation (connection) between SMEs access to finance and their growth. The same result was presented by Gambini and Zazzaro (2013), who also stated that bank loans provide smaller businesses the opportunity to grow, but also can alleviate their problems. Mueller and Zimmermann (2009) declare in their study that lack of access to finance is great constraint especially for smaller companies.

Weak capital power and credit degree belong to the most important problems of the financing of SMEs (Cheng et al., 2012). Hanedar et al. (2014) based on the research conducted in 27 countries with the developing economics in Asia and Central Europe stated, that micro and small firms do not have enough assets to use it as collateral, so they have to rely on micro credit or informal institutions as the financial sources, and that collateral requirements are more pronounced for the medium-sized enterprises. Positive fact is, that the authors did not identify the impact of collateral on the loan prices, so it may seem that collateral does not reduce the interest rate of the loans.

III. AIM, DATA AND METHODOLOGY

The aim of the paper was to define significant credit risk factors and quantify attitudes and evaluations of entrepreneurs in the SME segment. The comparison of the intensity of these factors in the Czech Republic and Slovakia is a partial objective.

Using the method of expert estimation, we have defined the null hypotheses, which assumes that there are statistically verifiable differences between the researched factors (gender, education of the entrepreneur, age of the company), and four alternative working hypotheses, and assigned them with the abbreviations H1, H2, H3 and H4. The alternative hypotheses assume the nonexistence of statistically verifiable differences between the researched factors. Statistically significant differences between the designated groups of entrepreneurs were compared through Pearson statistics at significance level of 5%. If the calculated p-value was lower than 5%, we reject the null hypothesis and the alternative hypothesis was adopted. The calculations were made through the free software available at:
<http://www.socscistatistics.com/tests/ztest/Default2.aspx>.

H1: Entrepreneurs in both countries consider lending criteria of commercial banks to be tuff. This view is shared by at least 50% of entrepreneurs in both countries. There are no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

H2: Entrepreneurs are not thoroughly familiar with the conditions under which commercial banks provide loans. Less than 40% of the entrepreneurs in both countries agree with the opinion, that entrepreneurs are well acquainted with the credit conditions. There are no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

H3: Better knowledge of credit conditions improves the access to credit. This view is shared at least 60% of entrepreneurs in both countries. There are no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

H4: A maximum of 40% of entrepreneurs in both countries agree with the view that credit conditions are transparent. There are no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

To support this objective, we conducted two surveys of the opinions of entrepreneurs in the Czech Republic and Slovakia.

The survey of the quality of business environment was carried out in the first half of 2015 through a questionnaire on a sample of 1,141 respondents in the Czech Republic. The method of choosing companies was as follows. We randomly selected a total of 1650 companies from the Albertina database. These companies were contacted via email, where the business owners were asked to complete a questionnaire, which was placed on the website: https://docs.google.com/forms/d/1U9coaC5JRL0N2QOOO6Xb8j3mnaZXdSM47Kugt4EDGFo/viewform?usp=send_form. If these companies had not responded to our mail, we addressed them by telephone.

The structure of the respondents was as follows: 75% men, 25% women; 48% of respondents reported that they have secondary education, 34% had the university degree and 18% reported that they have secondary education without graduation; 65% of the total number of companies are micro enterprises, 27% are small enterprises and 8% are medium-sized enterprises. 62% of companies' owners stated that the company exists for more than 10 years, 21% of them stated that they operate a maximum of five years and 17% of them reported that the company belongs to an interval of five to ten years of existence.

Respondents were representing the following sectors: trade (33%), manufacturing (23%), construction (14%), transport (6%), agriculture (3%), other services (39%).

The research focused on the actual situation in Slovak

business environment was carried out in 2016. The questionnaire called Financial Risks of SMEs in Slovakia was distributed online and is available on the link <https://docs.google.com/forms/d/1Fhob6avbfQq4DcaYG44mxNYyohzcqZWDICXkUgFbNq4/viewform?c=0&w=1>.

Research data were collected by three specific ways. First of all a random selection of the appropriate companies was made from the free database of Slovak companies available on www.vsetkyfirmy.sk. The selected companies were contacted by our research team by email. In case that the selected company did not reply on the email, it was contacted by phone. The questionnaire was also placed on the specialized economic web-portals, focused on the SMEs. Finally, the sample of companies selected by the team experts was contacted directly by the researchers. The total number of 438 questionnaires was collected during the research. This number of respondents fulfills the requirements for stochastic selection.

The structure of the respondents was as follows: 70% men, 30% women; 29% of respondents reported that they have secondary education, 65% had the university degree and 6% reported that they have secondary education without graduation; 66% of the total number of companies are micro enterprises, 22% are small enterprises and 7% are medium-sized enterprises, and 7% are large enterprises. 48% of companies' owners stated that the company exists for more than 10 years, 29% of them stated that they operate a maximum of five years and 23% of them reported that the company belongs to an interval of five to ten years of existence.

Respondents were representing the following sectors: services (39,74%) trade (22,83%), construction (13,01%), manufacturing (10,05%), agriculture (4,79%), transport (4.11%), culture and media (2.05%), healthcare (1,83%), IT (1,6%)."

In accordance with the recommendation of the European Commission no. 2003/361 / EC we separated microenterprises employing 0-9, small enterprises (10-49 employees) and medium-sized enterprises (50-249 employees) within the category of SMEs in the questionnaires of both surveys.

IV. RESULTS AND DISCUSSION

64% of the entrepreneurs from the Czech Republic and 58% of their colleagues from Slovakia confirmed, that the importance of credit risk recently increased. In this context it is clear that banks have tightened conditions for lending due to the rise of credit risk. Only 41% of Czech and 33% of Slovak entrepreneurs, who took part in our research, confirmed that the bank accepts their needs and and try to address them.

Table 1 presents the perception of small and medium entrepreneurs of the bank's attitude to financing their needs.

TABLE I
EVALUATION OF THE APPROACH OF COMMERCIAL BANKS TO SMEs IN THE LENDING PROCESS

Commercial banks apply excessively tuff criteria during the process of granting a business loan	Total number of respondents CZ/SK	Males CZ/SK	Females CZ/SK	UD CZ/SK	OE CZ/SK	10+ CZ/SK	10- CZ/SK
	1141/438	861/305	280/133	392/285	749/153	705/211	436/227
1. Completely agree	87/67	66/44	21/23	22/39	65/28	56/38	31/29
2. Agree	443/203	346/152	97/51	130/137	313/66	275/112	168/91
Total: 1+2	530/270	412/196	118/74	152/176	378/94	331/150	199/120
%	47/62	48/64	42/56	39/62	50/61	47/71	46/53
Z score: p-value	0	0	0.0102	0	0.0131	0	0.0767

Explanation: CZ – the Czech Republic, SK - Slovakia, UD – university degree, OD – other level of education, 10+ - the company older than 10 years, 10- - the company younger than 10 years.

The values of the test criteria (p-value) confirmed, that the evaluation of Czech or Slovak entrepreneurs of the approach of commercial banks to SMEs in lending process significantly differs. Entrepreneurs in Slovakia in comparison to Czech counterparts more intensively agreed that criteria that banks apply during the process of business loan provision are excessively tuff (p-value = 0). Statistically significant differences were found when we compared males in the Czech Republic and Slovakia (p-value = 0), females (p-value = 0), entrepreneurs with higher education (p-value = 0), and entrepreneurs with the other level of education (p -value = 0.0131) and the companies operating for more than 10 years (p-value = 0).

The results of our research allows us to reject the hypothesis H1. We found that only 47% of the entrepreneurs in the Czech Republic rated criteria as banks very tuff. We also found that there are statistically significant differences in the affirmative responses of the entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

TABLE II
KNOWLEDGE OF THE CREDIT CONDITIONS BY THE ENTREPRENEURS IN THE CZECH REPUBLIC AND SLOVAKIA

SME entrepreneurs are thoroughly acquainted with the conditions under which banks provide loans.	Total number of respondents CZ/SK	Males CZ/SK	Females CZ/SK	UD CZ/SK	OE CZ/SK	10+ CZ/SK	10- CZ/SK
	1141/438	861/305	280/133	392/285	749/153	705/211	436/227
1. Completely agree	19/23	17/16	2/7	10/14	9/9	14/9	5/14
2. Agree	312/132	239/96	73/36	88/88	224/44	218/71	94/61
Total: 1+2	331/155	256/112	75/43	98/102	233/53	232/80	99/75
%	29/35	30/37	27/32	25/36	31/35	33/38	23/33
Z score: p-value	0.0139	0.0238	0.2420	0.0024	0.3898	0.1770	0.0041

Explanation: CZ – the Czech Republic, SK - Slovakia, UD – university degree, OD – other level of education, 10+ - the company older than 10 years, 10- - the company younger than 10 years.

The results of our research allows us to confirm the first part of H2. We found that only 29.01% of Czech and 35.39% of Slovak entrepreneurs expressed the opinion that they fully understand the credit conditions The second part of H2 was rejected. We found that there are statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

TABLE III
BETTER KNOWLEDGE OF CREDIT CONDITIONS IMPROVES THE ACCESS TO CREDIT

Better knowledge of credit conditions can help the entrepreneurs to improve the access to credit and get lower interest rates.	Total number of respondents CZ/SK	Males CZ/SK	Females CZ/SK	UD CZ/SK	OE CZ/SK	10+ CZ/SK	10- CZ/SK
	1141/438	861/305	280/133	392/285	749/153	705/211	436/227
1. Completely agree	114/70	82/47	32/23	27/40	87/30	68/34	46/36
2. Agree	644/220	477/155	167/65	221/139	423/81	374/114	270/106
Total: 1+2	758/290	559/202	199/88	248/179	510/111	442/148	316/142
%	66/66	65/66	71/66	63/63	68/73	63/70	72/63
Z score: p-value	0.4902	0.6818	0.3125	0.9045	0.2757	0.0477	0.0088

Explanation: CZ – the Czech Republic, SK - Slovakia, UD – university degree, OD – other level of education, 10+ - the company older than 10 years, 10- - the company younger than 10 years.

The results of our research allows us to confirm H3. We found that the view that the better understanding of credit conditions improves the access to credit was shared by 66.43% of Czech and 66.21% of Slovak entrepreneurs. We also found that there were no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

TABLE IV
HOW DO ENTREPRENEURS EVALUATE THE TRANSPARENCY OF CREDIT CONDITIONS

The conditions under which banks provide loans to SME entrepreneurs are transparent.	Total number of respondents CZ/SK	Males CZ/SK	Females CZ/SK	UD CZ/SK	OE CZ/SK	10+ CZ/SK	10- CZ/SK
	1141/438	861/305	280/133	392/285	749/153	705/211	436/227
1. Completely agree	13/19	10/12	3/7	4/8	9/11	9/4	4/15
2. Agree	332/129	265/98	67/31	121/92	211/37	221/62	111/67
Total: 1+2	345/148	275/110	70/38	125/100	220/48	230/66	115/82
%	30/34	32/36	25/29	32/35	29/31	33/31	26/36
Z score: p-value	0.1738	0.1868	0.4413	0.3843	0.6241	0.7114	0.0091

Explanation: CZ – the Czech Republic, SK - Slovakia, UD – university degree, OD – other level of education, 10+ - the company older than 10 years, 10- - the company younger than 10 years.

The results of our research allows us to confirm H4. We found that only 30.24% of Czech and 33.79% of Slovak entrepreneurs agreed with the statement that conditions under which banks provide loans to SME entrepreneurs are transparent. We also found that there were no statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia in relation to the gender, level of education of the entrepreneur, or the age of the company.

The research by Economic & Social Research Council (2010) confirms that the credit crisis and ensuing recession have led to both a tightening of loan approval thresholds (due to the crisis in financial markets) and an increase in default risk (due to the ensuing recession), contributing to the poorer availability of credit.

The knowledge of the credit conditions and their transparency are the important problems. According to European Association of Craft, Small and medium-sized Enterprises (2007) due to higher risk awareness of the finance sector and the needs of Basel II, many SMEs will be confronted for the first time with internal rating procedures or credit scoring systems by their banks. The bank will require

more and better quality information from their clients and will assess them in a new way. Both up-coming developments are already causing increasing uncertainty amongst SMEs. In order to reduce this uncertainty and to allow SMEs to understand the principles of the new risk assessment, SMEs demand transparent rating procedures – rating procedures may not become a “Black Box” for SMEs: the bank should communicate the relevant criteria affecting the rating of SMEs, the bank should inform SMEs about its assessment in order to allow SMEs to improve.

In this context owner-managers must become more aware about the need for transparency towards investors. SME owners will have to realize that in future access to external finance (venture capital or lending) will depend much more on a transparent and open exchange of information about the situation and the perspectives of their companies. In order to fulfill the new needs for transparency, SMEs will have to use new information instruments (business plans, financial reporting, etc.) and new management instruments (risk-management, financial management, etc.) (European Association of Craft, Small and medium-sized Enterprises, 2007). Higher-quality, lower-cost information is a key to unlocking more sources of finance for SMEs (Bain & Company, Inc. and the Institute of International Finance, 2013).

V. CONCLUSION

The aim of this paper is to define significant credit risk factors, quantify attitudes and evaluations of entrepreneurs in the SME segment and compare the attitudes of Czech and Slovak entrepreneurs in relation to such factors as the gender and the level of education of the entrepreneur, and the age of the company.

The basic conclusions of the research can be summarized as follows. Czech entrepreneurs evaluated the attitude of the commercial banks to lending to the SME segment more positively in comparison to their Slovak counterpart. This trend was also reflected when we compared the opinions of entrepreneurs by the gender, the level of education, and the age of the company. Despite of the fact that entrepreneurs in both countries agreed with the opinion that a better understanding of credit conditions improves an access to credit, the level of knowledge of credit conditions low in both countries. We found that there are statistically significant differences in the knowledge of credit conditions in relation to all monitored factors. Only 30.24% of the Czech and 33.79% of the Slovak entrepreneurs agreed with the opinion that credit conditions are transparent. No statistically significant differences in positive answers among entrepreneurs in the Czech Republic and Slovakia were identified in relation to the gender and the level of education of the entrepreneur.

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