The Impacts of Financial and Economic Crisis on Czech Exporters: Bank Transmission Channel.[1]

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Abstract

This paper discusses the impacts of the financial and economic crisis on Czech exporters. Although the consequences of the crises affected this group of enterprises through various transmission channels, this study concentrates on the changes in credit policy of banks. What are the reasons for Czech banks not having felt the direct impacts of the financial crisis? Did Czech banks change a credit policy in terms of lower credit availability for domestic enterprises? The answers to these questions are to be sought in the paper.

Keywords

Financial crisis, Economic crisis, Credit policy, Export financing, Czech banking sector

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1. Introduction

Competitiveness of export-oriented enterprises can be deemed as a necessary prerequisite for the successful development of a small open economy like the Czech Republic in the context of the globalization. Apart from various factors that influence the competitiveness of Czech exporters the financial ones have gained growing importance nowadays. The reasons are to be sought in the current financial-economic problems in the world markets.

In the last three years the world economy has been formed and substantially determined by the effects of the financial crisis, which has turned to the economic crisis. Although the financial crisis broke out in the summer 2007 in the United States of America and was originally limited merely to the American financial (mortgage) market, the high degree of internationalization, mutual interdependence and other aspects of globalization caused that the financial crisis had expanded from the USA to other parts of the world very quickly.

Its impacts on individual states and regions were of different intensity. Whereas the developed markets in the Western Europe felt the harsh consequences of the investments of big European banks into the so called toxic assets based on structured products of American banks, the Czech banking system stayed practically isolated from these negative phenomena (Singer, 2010).

The Czech banking system has kept the distance from the problems in the international financial markets thanks to its characteristics discussed in sections 3.2. and 3.3. However, it was not possible to avoid the impacts of the real economy crisis. The data of the World Bank (2010) showed the decrease in the world real GDP growth from 5.2 % in 2007 to -0.6 % in 2009, in the Czech Republic this indicator took the value of 6.1 % in 2007 and -4.2 % in the following year. These figures prove that the development of the Czech economy is closely linked to the macroeconomic development abroad.

A competitive position of export-oriented enterprises is inter alia dependent on the conditions under which they are able to obtain financial resources for their foreign trade activities. With regards to the fact that these financial means are traditionally gained through financial intermediaries – banks, the question arises whether, to what extent and through which channels has the financial crises penetrated into the Czech banking sector. In the paper we also ask the question what are the reasons for Czech banks not having felt the direct impacts of the financial crisis. Has their strategy been more successful than the strategy of the

Western European banks affected by the crisis or are there other factors playing their roles? The answers to these questions are to be sought inter alia in the historical development of the Czech banking sector and in its traditional business orientation, as well as their strategy which are to a great extent determined by foreign parent banks.

Direct or indirect impacts of the financial crisis on the banking sector must have reflected in the credit policy of banks that provide financing of commercial activities to non-financial export enterprises. Beside these aspects it is necessary to take into consideration the consequences of the economic crisis, which has been imported to the Czech economy from abroad. The fall in the foreign demand for Czech goods and services has caused to the Czech enterprises the problems in sales, which have ultimately reflected in the deteriorated economic indicators analyzed by banks when considering the application for the credit. The question is how the combination of negative impacts has shown in the Czech banks' credit policy.

The aim of this paper is to identify and analyze the ways through which the 2007 financial crisis combined with the economic crisis penetrated into the Czech export sector. The attention is given also to the consequential changes in the banks' policies and their effects on export financing of Czech business enterprises.

The paper is organized as follows. In the first section the model of the effect of the financial and economic crisis on banks and exporters in the Czech Republic is described. Further the hypotheses concerning the transmission of the world financial and economic crisis into the Czech banking sector are set, including the subsequent transfer of this crisis into the relation between a bank and a Czech exporter. Last but not least the sources dealing with this issue are identified.

The second section is devoted to the financial crisis and the banking sector in the Czech Republic. This part clarifies the reasons for the indirect impacts of the financial crisis on Czech banks and further it identifies the areas of the crisis occurrence in the domestic banking market.

The third part follows the identified channels of crisis transmission into the Czech banking system and seeks answers to the questions how the changes in the banks' policies affect the availability of financial resources for domestic enterprises' foreign trade transactions. It takes into consideration the limitation flowing from the bank supply side, but it also respects the factors on the demand side, which are to a high extent determined by the economic crisis effects.

2. Model and data

Compared to other developed countries the financial structure of the Czech enterprises is to a higher degree dependent on credits provided by banks (Černohlávková, 2004). This fact is connected with the relatively limited historical experience in using capital markets for business financing.

Except for the enterprises, the scope of which is for the purposes of this study limited to non-financial companies realizing foreign trade transactions, financial intermediaries – the banks - play the key role in the model. In the view of the connections considered in section 3 of this paper it is necessary to give regard to the characteristic features of the Czech banking sector, which is controlled by the multinational companies with their registered offices in the developed European countries. Under the term bank shall be deemed on the one hand commercial banks, which represent the core of the banking sector, on the other hand banks controlled by the state designed for a specific purpose, e.g. Česká exportní banka, a.s. (Czech Export Bank).

The impacts of the financial and economic crises on individual entities are highly interconnected and complex. Their common feature is the fact that their effects are negative. For the purpose of the transmission channels analysis it is necessary to make certain simplifications and to distinguish the direct impacts from the indirect ones. For instance the influence of the high exchange rate volatility on the firms oriented to foreign trade or the fall in the demand for Czech goods and services in the foreign markets can be considered as direct impact. Despite the fact that this study aims at the indirect impacts of the crisis on the domestic companies, which become evident in the changes in the banking sector (i.e. at the supply side), the direct impacts cannot be omitted completely.

The financial crisis in the Czech Republic has not shown its effects directly. The domestic bank institutions in most cases controlled by West European parent companies have become the transmission channel. The parent banks were in comparison with the Czech subsidiaries compelled to solve the negative consequences of their investment policy from the pre-crisis years by means of accepting the rescue capital packages to strengthen their liquidity. Following the above mentioned facts this study will verify the hypothesis on the indirect impact of the financial crisis on the Czech banking sector (1st hypothesis).

The development in the international financial markets must necessarily have influenced the strategies applied by international banks. Apart from the fact that they had to secure their liquidity and stabilize the economic situation, they revised their strategies related to the provision of credits. The strategy of subsidiary companies is usually determined by their parent companies (Černohlávková, 2004) and therefore the changes found their expression also in behaviour of Czech banks as to the credit financing of Czech companies, including exporters.

The financial crisis has reflected in the development of the credits provided to Czech exporters by way of the changes in the domestic banks' credit policy. So the negative relation between the changes in this policy and the growth in the credits provided in the Czech Republic can be presumed (2nd hypothesis).

The model presumes working with qualitative as well as quantitative data. Whereas the qualitative data are drawn from articles by reputable authors or institutions dealing with the issue of banking and credit financing, the quantitative data are of a secondary character and are drawn from the databases of prominent domestic as well as foreign institutions (Czech National Bank, European Central Bank).

3. The Czech banking sector and the world financial crisis

3.1. Historical development of the Czech banking sector

In order to assess the presumed indirect impact of the financial crisis on the Czech banking sector, it is necessary to describe its basic features. Prior to defining these features it is important to know its history, which to a large extent contributed to its positive characteristics. There were many fundamental changes to the Czech banking sector after 1990 (Bárta & Singer, 2010). At present, the Czech banking sector seems to be very sound, above all because of its sufficient capitalization, and it seems to become very stable, which can be proved by its development in the financial crisis in last two years. Also the fact that Czech banks are controlled by foreign financial institutions plays the key role for the general transformation and current stability of the Czech banking sector.

Transformation of the Czech banking sector after 1990 was considerably problematic and quite costly from the point of view of taxpayers. The development of the Czech banking sector transformation has been described in numerous studies (e.g. Havel, 2004; Tůma, 2003; Weill, 2003; Hájková, Hanoušek, & Němeček, 2002; Dědek, 2001; Matoušek, 2001), therefore for the purposes of this article only basic facts concerning the transformation process with focus on the privatisation of big banks, which are classified in accordance with the methodology of the Czech national bank (Czech National Bank, 2010b), will be given.

For the initial periods of the transformation it was necessary to create a net of commercial banks, in the scope of which the transformed and newly established enterprises could obtain financing. The number of banks operating in the Czech market rose relatively fast in the first years of the transformation period. This was the consequence mainly of very liberal attitude of the regulatory bodies for financial market when granting licences for banks. In 1995 approximately 55 banks existed in the Czech banking sector and thus problems of some banks, mainly those smaller ones, began to appear relatively soon, which had negative impact on the credit capacity for Czech firms (Černohlávková, 2004).

It is possible to divide the presence of the foreign banks in the Czech banking sector into two stages, the first being the development since the beginning of the 90's, when some of foreign banks began to operate in the Czech market in connection with liberalisation of the banking sector. This entry was mostly realised through establishing branches and subsidiaries (Černohlávková, 2004). The second stage came at the end of the 90's, when it appeared obvious that inadequately dispersed and non-transparent ownership of Czech banks and connected ineffective state control began to be unsustainable for the Czech banking sector. The efficiency, competitiveness and finally profitability of Czech banks were relatively weak under the general macroeconomic view. These facts led to the need of seeking strong and strategic investors that could stabilise Czech banks and lead the Czech banking sector to sustainable growth. In January 1998 the privatisation process started by the state selling 36 % of the shares in the Investiční a poštovní banka (Investment and Postal Bank) to Nomura International. This was followed by the sale of the majority of shares in Agrobanka to General Electric Capital Services in June 1998. In 1999 almost 66 % of shares in Československá obchodní banka a.s. were privatized and gained by today's KBC. After that, in 2000 52 % of the shares in Česká spořitelna a.s. went to the Austrian Erste Bank and finally in 2001 the rest of the state shares in Komerční banka a.s. was sold to French Société Générale (Bárta & Singer, 2004). The share of these privatised big banks on the whole Czech banking sector is shown in Table 1 and Table 2.

Nevertheless, the privatisation process of the Czech banking sector cannot be always considered as entirely successful. Some foreign financial institutions tried to make use of the gaps in the financial sector regulation, which was not strict enough and had no clearly determined competencies (Černohlávková, 2004). As an example we can mention Nomura International and the case of Investment and Postal Bank, which resulted in the arbitration with the Czech Republic and which was terminated for the time being in 2009. The Czech Republic incurred considerable costs to cover losses flowing from the malfunction of the

Czech banking sector in order to reach soundness of Czech banks. The costs of this privatisation project are estimated to CZK 100 billion (Havel, 2004). The analysis of the Czech Ministry of finance provides information that the costs of this privatisation project were even CZK 370 billion (Ministry of finance, 2004). The privatisation of big Czech banks was almost finished in 2001 and the Czech banking sector could take the path of traditional universal banking using the experience of the foreign banks without any government interventions into bank decision-making process.

Between 1999 and 2000 the Czech economy was slowly recovering from the recession, which influenced positively the development of the Czech banking sector in the following years (Jílek & Jílková, 1999). This development can be illustrated by sudden improvement in the non-performance credit development from approximately 23 % in 2003 to approximately 5 % of the total number of provided credits (Bárta & Singer, 2004). It was also very important that the privatisation of Czech banks led to gradual improvement of the financial services rendered by commercial banks. They also extended their activities and increased the offered scope of products of good quality, for example the services related to financial derivates, syndicated loans, factoring and forfaiting and other. The most important fact in the transformation and privatisation process was that the attitude to risk changed within the bank policy as well as within the bank regulation, which is one of the key determinants to the Czech banking sector.

3.2. Characteristics of the Czech banking sector in the time of crisis

The basic feature of the Czech banking sector in the times of crisis is the fact that Czech banks are owned by international financial institutions. The business strategy and financial policy of Czech banks are thus determined by the decisions that are taken within foreign parent banks. These decisions are subsequently implemented into the basic business strategy of domestic banks. The French bank Société Générale (owning Komerční banka a.s.), Austrian Erste Bank (owning Česká spořitelna a.s.), Belgian KBC (owning Československá obchodní banka, a.s.) and Italian UniCredit Group (owing UniCredit Bank Czech Republic a.s.) belong to the main foreign parent banks.

According to the Czech National Bank methodology these banks are classed as "big banks", since their balance sum is higher than CZK 200 billion (Czech National Bank, 2010b). Table 1 shows the development of the number of banks according to the ownership. It is evident that 80 % of banks are banks with dominant foreign participation.

Number of banks according to the ownership						
			31.12.2007	31.12.2008	31.12.2009	30.6.2010
All banks (to date)			37	37	39	40
Bank structure according to the ownership						
in it	Banks with dominant Czech participation	All	8	7	7	8
		Banks with state participation	2	2	2	2
		Banks with dominant Czech participation	6	5	5	6
	Banks with dominant foreign participation	All	29	30	32	32
		banks with dominant foreign participation	15	14	14	14
		Branches of foreign banks	14	16	18	18

Table 1: Number of banks according to the ownership. Source: Czech National Bank (2010b)

In Table 2 all assets and financial liabilities of all banks (in the whole and related to common clients, i.e. retail and corporate clients except for central banks and credit institutions) and all assets of big banks in the Czech Republic are recorded. The data confirm that big banks hold approximately 57 % of assets of retail and corporate clients (except for central banks and credit institutions). The table also provides important information on Czech banks having relatively high ratio of very liquid assets to all assets.

All banks and big banks and big banks in the Czech Republic (all assets and all financial liabilities)				
	31.12.2007	31.12.2008	31.12.2009	30.6.2010
All banks				
Assets (all)	3 750 649	4 044 477	4 094 626	4 205 518
- assets to clients	1 850 932	2 100 740	2 123 254	2 144 362
Financial liabilities (all)	2 929 247	3 086 841	3 190 797	3 254 899
- financial liabilities to clients	2 459 891	2 597 133	2 727 999	2 802 658
Very liquid assets/all assets (%)	23,97	23,06	25,31	27,01
Big banks				
All assets	2 315 245	2 327 479	2 361 651	2 430 180
- to clients	1 044 920	1 127 970	1 107 306	1 099 794
All financial liabilities	1 805 199	1 772 154	1 837 799	1 883 860
- to clients	1 578 023	1 581 647	1 660 111	1 693 123
Very liquid assets/all assets (%)	24	24,08	30,02	30,95

Table 2: All banks and big banks - all assets and all financial liabilities (in million CZK). Source: Czech National Bank (2010b)

In the connection with foreign ownership of Czech banks it was crucial in times of crisis that in the scope of their business strategy they were able to generate revenues mainly from dynamically developing traditional retail banking of predominantly very conservative character. An example of this approach is the specific 5-years project for KB a.s., which is being prepared in Société Générale in Paris and which expects traditional conservative bank policy of KB a.s. (Societe Generale, 2010). To the contrary, the management of the portfolio of securities and financial instruments affected by the development of the financial innovations (e.g. financial derivates) was concentrated just in the capital market departments of parent banks in the international financial centres.

The fact that Czech banks are owned by international parent banks is, together with the historical experience of the Czech banking sector from the 90's (Černohlávková, 2004; Bárta, Singer, 2004), crucial for the Czech banking sector having maintained stable and sustainable development. This development allowed its relatively moderate reaction to the existing global financial crisis and led to the direct impacts of the global financial crisis on Czech banks being practically negligible. The successful development of the Czech banking sector is determined by the following factors: (i) sufficient liquidity, (ii) sufficient volume of external sources in the form of clients' deposits, (iii) negligible portion of foreign currency credits, i.e. credits provided in other currencies than Czech crowns, (iv) nearly zero portion of toxic assets in the balance sheets of Czech banks, and (v) stable capitalization and increasing profitability of the Czech banking sector (Singer, 2010). All features described are covered in the traditional conservative banking model. Many economists have named erosion of traditional conservative banking model as one of causes of the world financial crisis. Nevertheless, the Czech banking sector has been keeping this traditional banking model of its business activity which could be demonstrated by Fig. 1 in section 3.3.4. (the development of credits and account receivables to non-financial clients and households) and by a very small share of classified loans (Czech National Bank, 2010b).

3.3. Main characteristics of the Czech banking sector

3.3.1. Sufficient liquidity, relative isolation and sufficient volume of sources

The Czech banking sector disposed of sufficient liquidity before the outbreak of the global financial crisis as well as in the course of it. Czech banks have always had enough external sources in the form of clients' deposits to finance their business activities. From this point of view, Czech enterprises, including the export enterprises, have not suffered from insufficient bank credit availability. The problem for Czech enterprises is the indirect impact of the financial crisis. Czech banks became much more prudent in their approach to risk in reaction to the following stage of crisis, the economic crisis.

Apart from sufficient liquidity the relative isolation is a relevant feature of the Czech banking sector. Czech Republic has maintained its own currency and it has relatively low interest rates thanks to the stable and low inflation rate (measured by CPI). These facts do not compel Czech citizens or Czech firms to transfer their savings abroad. The Czech banking sector is thus relatively isolated from foreign banking sectors and has enough own sources to finance not only export activities. The relative isolation and sufficient liquidity in the Czech banking sector are confirmed by the development of clients' deposits to provided credits. In 2008 the ratio of clients' deposits to credits was the highest in the EU. Reports of the Czech National Bank and the European Central Bank regarding financial stability in the Czech Republic showed that this ratio reached in the Czech Republic almost 140 % in 2009. Only Belgium with the ratio almost 135 % and the Slovak Republic with the ratio almost 120 % were in comparable position. Other European Union countries were under the level of 100 % and the average ratio of clients' deposits to provided credits in the whole European Union reached approximately 90 % (the Euro-zone refers the same ratio).

Last data, recorded in Table 2, confirm this fact. Table 2 shows that the ratio of all assets to all financial liabilities of all banks moves around 77 %. Further, the ratio of retail and corporate clients' assets to financial liabilities of these clients moves even around 65 %.

3.3.2. Negligible portion of foreign currency credits

In terms of liquidity mentioned in section 3.3.1., Czech banking sector is relatively separated from foreign countries with other currencies, especially euro. The fact that Czech banks did not provide foreign currency credits in a higher extent was an important factor characterizing the Czech banking sector in the times of crisis. This fact was i.a. influenced by the policy of parent banks towards domestic banks. Czech banks were not dependent upon proper function of derivate and other forward markets when securing their exchange rate risk.

Negligible portion of foreign currency credits is closely connected with two key indicators, the first being the low gross external debt of Czech banks (in % of GDP), second being their net external position (in % of GDP) (Czech National Bank, 2010). The gross external debt of the Czech banking sector is one of the lowest in the European Union. At the end of the year 2008 this indicator reached the level of 10 % which is similar to Poland and Slovak Republic.

For example in Germany and France this indicator is above 50 %, in Austria and Denmark above 100 % and in Belgium above 150 % and in United Kingdom this indicator is above 200 %. The average gross external debt in European Union moved around 100 %, which was approximately ten-times more than in the Czech Republic.

The indicator of the net external position of the Czech banking sector was approximately +7 % of the Gross domestic product of the Czech Republic at the end of the year 2008. There are only two countries with a positive level of this indicator (the Czech Republic and Slovenia) among Eastern European countries (Czech National Bank, 2010).

3.3.3. Minimal portion of toxic assets and stable capitalization and profitability

A negligible portion of toxic assets was another relevant feature of the Czech banking sector. The portion of toxic assets in the total assets of big Czech banks amounts to less than 1 % (Singer, 2010), which evidences that the Czech banking sector is very sound and not burdened by the costs related to the re-evaluation of toxic assets in the balance sheets as it was common in numerous banks in the USA and Western Europe. It must be noted that the Czech banking sector did not need any financial injection.

Finally, it is necessary to state that the Czech banking sector has been well capitalized and profitable. The conservative model has brought to Czech banks the advantages represented by relatively stable revenues from financial activities. They have been able to generate long-term stable revenues mainly through their business portfolios. They could also realize the net profit in difficult times when the costs of risk were increasing. The year 2009 was not an exception.

As per the data of the Czech National Bank the capital adequacy of big Czech banks moved around 12.84 % at the end of the year 2009 and their profit reached approximately CZK 60 billion, which is just c. by 30 % higher value than in the year before (Czech National Bank, 2010). It must be added that the profit increases of Czech banks were influenced by a number of extraordinary transactions without which the profits would have stayed at 2008 level.

3.3.4. Development of credits and account receivables

The stable development in the Czech banking sector is confirmed also by the situation in the field of credit provision. In Fig. 1 the development of credits and account receivables to non-financial clients and households can be seen. The number of credits provided to non-financial enterprises has been declining since the collapse of Lehman-Brothers in the autumn 2008. This downturn was much less serious than the decline between 2001 and 2003 which followed the dot-com bubble and terroristic attack in the USA. In the middle of the year 2010 the short-term downward trend changed and nowadays it is expected that positive development in credits and account receivables to non-financial clients should continue (Singer, 2010a; Czech national bank, 2010a). It must be added that in the case of the development in credits and account receivables to households no relevant changes occurred in the times of the crisis, which confirms again the resistance of the Czech banking sector in the times of world financial and economic crisis.

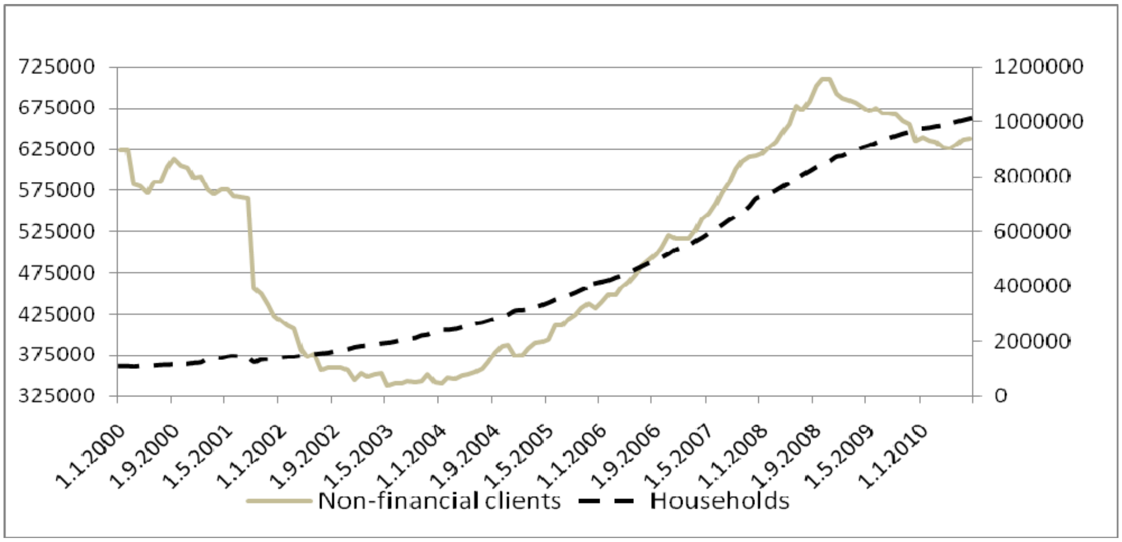

Fig. 1: Credits and account receivables to non-financial clients and households in million CZK (non-financial clients – left axis and households – right axis).
Source: Data come from the Czech National Bank (2010a)

4. The impacts of the financial and economic crises on exporters

The Czech Republic is a small economy with annual gross domestic product amounting to CZK 3,627.2 billion in 2009 current prices (Czech Statistical Office, 2010). The disadvantages flowing from the restricted economic size are compensated by a higher openness towards foreign countries. But this increases the dependence of the Czech Republic on the economic development abroad, mainly in the European Union countries, which are the places of destination for more than ¾ of the domestic export. Czech exporters are thus influenced by (i) the availability of the credit financing provided by banks, (ii) the changes in the macroeconomic characteristics in the foreign markets, and (iii) the exchange rate volatility, mainly the volatility of the CZK/EUR and CZK/USD exchange rate.

The business enterprises in the Czech Republic traditionally finance their activities, including export activities, by employing the services of the financial intermediaries, mainly banks. According to Demirguc-Kunt and Levine (1999) in a certain country the financing system is used depending on (i) income per capita, (ii) legal system, (iii) capital markets activity, (iv) shareholder rights protection, (v) accounting standards, (vi) corruption rate, and (vii) explicit deposit insurance. Bank-based system is in principle applied in the countries with lower income per capita, with continental law tradition, with lower capital markets activity, in the countries with lower shareholder rights protection, lower accounting standards, higher corruption rate and with explicit deposit insurance. The fact that the Czech enterprises gain financial sources rather from the banks than at the capital markets is confirmed by the Czech National Bank studies.

Grešl and Jakubík (2010) analyzed the model of the bank financing of Czech enterprises in the times after the global financial crisis outbreak. They came to a conclusion that the relationship banking model is relevant for the Czech business enterprises, mainly for the smaller and younger firms in the technology and knowledge demanding industries. They also proved that the financing model selection is a result of strategic decision-making process with the aim to make use of the bank specialization and cost reduction. The same study points out that the single relationship lenders are regularly big banks. According to the literature the application of the single relationship banking model is connected with a simpler approach to the credit financing (Elsas & Krahnen, 1998).

In the connection with the credit provision in the developed economies of the Organisation for Economic Cooperation and Development (OECD) it was proved that banks that were compelled to accept capital assistance from governments in relation with the 2007 financial crisis reported slower growth in credits than the banks that did not need this assistance (Aisen & Franken, 2010). The Czech Republic is an example of a country where the state capital assistance was not provided to the banking institutions. The average monthly real growth in credits was here between October 2008 and May 2009 in comparison with the period between July 2005 and July 2007 higher than in other OECD countries, e.g. Austria, Germany, Belgium, and France, i.e. in the countries of the registered offices of domestic banks owners.

Although Beck, Demirguc-Kunt and Maksimovic (2003) based on the research including 74 countries states that export enterprises (and big companies) gain financing from banks more probably than other groups of enterprises, contemporary financial and economic crises caused that even export enterprises cannot rely on good availability of credit from commercial banks. The decline in the volume of credits provided by Czech banks in times of financial crises can be unambiguously evidenced by the development of credit provided to this group of enterprises.

A range of empirical studies deals with the issue of the influence of bank crisis on the export. For example Iacovone and Zavacka (2009) verified that the negative impact of the financial crisis occurred mainly by those export enterprises (industries) that are to a large extent dependent on external financing, i.e. non-equity financing. Kannan (2010) came to an interesting conclusion when analysing the growth of real value added in the times after financial crises connected with economic recession. In his study he proved that industries dependent on external financing grow in the post-crisis period slower than in the time of recovery following only economic recession.

Although the global financial crisis has not left the direct consequences for the domestic banking system, its certain aspects appeared as tightening of conditions for new credits provision determined by parent banks. The changes in the credit policy were focused primarily on non-interest credit conditions. The increased requirements for credit security, i.e. collateral requirements or restriction in the amount of provided financing, are examples of these changes (Czech National Bank, 2010). Grešl and Jakubík (2010) confirm this information stating that the banks active in the Czech Republic responded to the financial crisis in following ways: (i) restriction in new credits provision, (ii) higher interest rates, and (iii) tightening of non-interest conditions (required collateral, equity financing ratio).

Detailed data illustrating the changes in the bank credit policy are provided by European Central Bank (ECB). Researches are carried out regularly on quarterly basis on the panel of senior loan officers of more than 100 banks in the euro area countries. Although the Czech Republic is not a euro area member state, these data can be deemed appropriate for Czech conditions as well. The reason is (i) the fact that only data reflecting supply side factors, i.e. factors affecting the banks, will be used, and (ii) the fact that domestic banks are members of a group of companies controlled by multinational companies from euro area countries.

Using the results of the ECB researches it is possible to describe the character and changes in the bank credit policy in various periods and to point out how the financial crisis influenced these fields. The ECB research (European Central Bank, 2007) analyzing the second quarter 2007 and the prospects for the following quarter clearly presents that the banks expected no problems in this period, i.e. in the period right before the outbreak of the American mortgage market crisis in summer 2007. Just the opposite, the standards for credit and credit lines approvals continued in net easing during the second quarter 2007. The reasons were (i) positive expectations regarding the general economic activity, (ii) positive development in industry or firm-specific outlook, and mainly (iii) the competition in the corporate credit market. Easing credit terms and conditions led to (i) lower margins on the provided credits,

(ii) extension of the maturity of credits and credit lines, (iii) provision of the credits of higher amount, and (iv) eased covenants. The banks expected only mild tightening in credit assessment standards in that time.

The financial crisis, which expanded rapidly to the rest of the world, reflected in the credit assessment standards and in the credit terms and conditions. The research realized at the end of September 2008 (European Central Bank, 2008) assessed the credit financing in the third quarter 2008 in comparison with the preceding quarters. An overwhelming majority of banks reported tightening of the standards for assessment of credits and credit lines provided to business enterprises. All indicators in question are stated as factors contributing to this tightening, i.e. (i) costs related to bank's capital position, (ii) access to market financing, (iii) expectation regarding general economic activity, and (iv) industry or firm-specific outlook. Last two factors were mentioned as the main contributors to such a situation. As to the changes in the terms and conditions of credits and credit lines provision, dramatic tightening of these terms and conditions for business enterprises occurred. This meant mainly (i) increasing margins on average loans and (ii) increasing margins on riskier loans. Nevertheless, also other terms and conditions were tightened, i.e. (i) restrictions on the size of loan or credit line, (ii) tightening of collateral requirements, (iii) tightening of required covenants, (iv) increase in non-interest rate charges, and (v) shortening the credit maturity. As to the type of the debtor, the terms and conditions for large enterprises were tightened more than the terms and conditions for small and medium sized enterprises.

It flows from the European Central Bank research that the financial crisis culminated in the last quarter 2008. Onwards 2009 the banks still reported tightening credit terms and conditions and credit provision standards, but the portion of these banks was slowly decreasing in the course of time.

Last available data in the time of writing this article assessed the first quarter 2010. Generally, there were more banks reporting mild tightening of the standards for credit application assessment than those reporting their improvement. Looking at the individual factors in question it can be stated that mainly expectations regarding general economic activity and industry of firm-specific outlook became the net contributors to the mild tightening of the criteria, which shows higher risk perception of the debtors compared to the pre-crisis times. On the other hand, the access to market financing counteracted the other factors in terms of the improvement in the applied standards. Although the changes in terms and conditions for approving loans or credit lines to enterprises still contributed to mild general tightening of the terms and conditions for the debtors, judging from the development in the course of time their contribution to the tightening showed a downward trend.

Negative aspects of the development in last years reflected in the volume of credits provided in the Czech Republic. Considering only selected types of credits used for foreign trade financing[2], since September 2002 up to November 2008 the growth in their volume occurred. Since autumn 2008 the Czech credit market has felt the consequences of global financial and economic crises and the volume of provided credits dropped significantly. The least credits were provided in January 2010. Since that time the Czech credit market has been experiencing relatively fast growth in provided credits at least to the March 2008 level. The absolute value of the difference between the top and the bottom value of the volume of provided credits amounts to CZK 56,466 million. The development of the credits provided in the Czech Republic is illustrated by the Fig. 2.

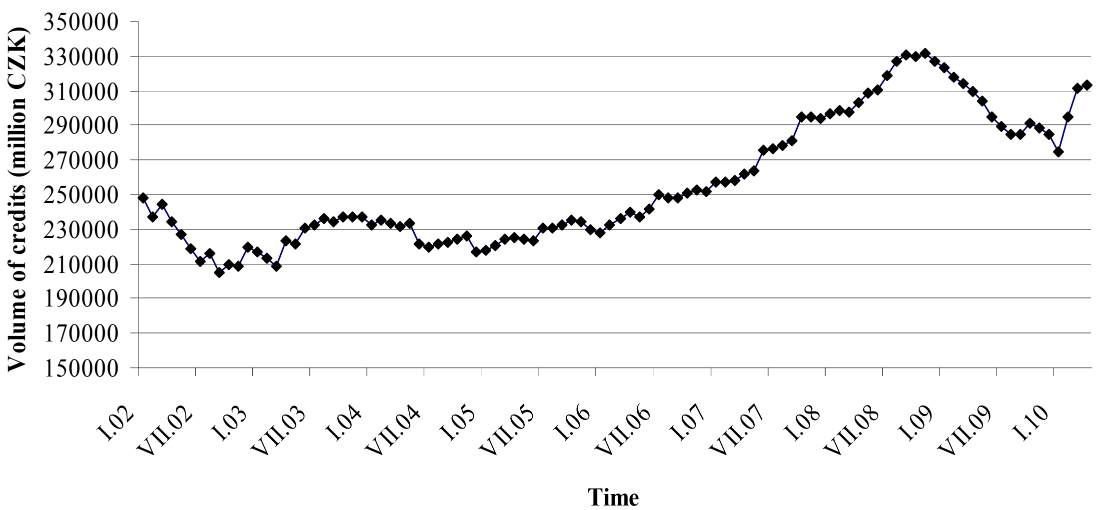

Fig. 2. Development of credit volume in million CZK between 2002 and 2010. Note: Data come from the Czech National Bank (2010a).

Apart from the volume of provided credits the interest rates at which the banks provide new credits to non-financial enterprises can be assessed. The total interest rates consist of two basic elements: (i) reference interest rate, (ii) margin. Whereas the reference interest rate regards the costs of sources gained at the interbank market, the margin regards the debtor risk, territory risk, the risk of the provided credit product and profit. Fig. 3 below shows that the

[2] Export credits, import credits, other operation credits and credits for business receivables according to the Czech National Bank categorization.

development of the total credit interest rate approximately copies the development of the interbank interest rate. Since half of the year 2007 slow decrease in credit margins was obvious, which was presumably a consequence of the credit boom accompanied by the increase in the market competition level. In the autumn 2008 the first symptoms of the financial crisis appeared in the Czech Republic. The CZK interbank interest rate (PRIBOR, i.e. Prague Interbank Offered Rate) responded to the diminution in the key interest rates announced by the Czech National Bank by equivalent decrease. Although the total interest rate began to decrease as well, its reduction was relatively smaller than the decrease in the reference interest rate. Relative increase in margins reflects the increased perception of risk linked to the provision of credits to business enterprises.

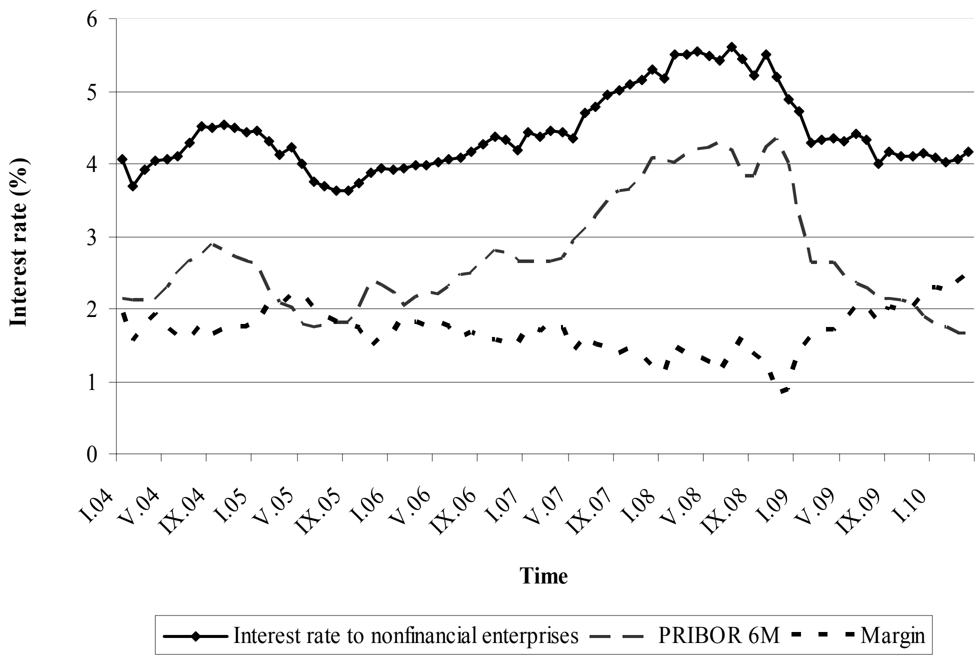

Fig. 3. Development of interest rates between 2004 and 2010. Note: Data come from the Czech National Bank (2010a).

Unfortunately, available data do not allow distinguishing the influence of the decreased availability of credit financing from the influence of the decrease in the demand for financing caused by decreased demand for goods and services of business enterprises in a scientifically satisfactory manner.

The decrease in credits caused by the restrictions in bank offer and the decrease in demand of enterprises can be approximately distinguished by the introduction of an additional indicator – non-domestic new orders. If we compare the development in the respective credit type to the development in ratio of credits to non-domestic new orders (see Fig. 4), we can notice that in the period between autumn 2008 and January 2010 both variables show similar tendencies. It can be thus stated that the decrease in credit activities in this period was caused by the development in foreign demand for domestic goods and services. Similar conclusion can be reached if the development of new orders for Czech exporters in the numerator was replaced by direct export sales. This implies that the decrease in credit activity was caused rather by the decrease in demand than by restrictions on the bank offer side.

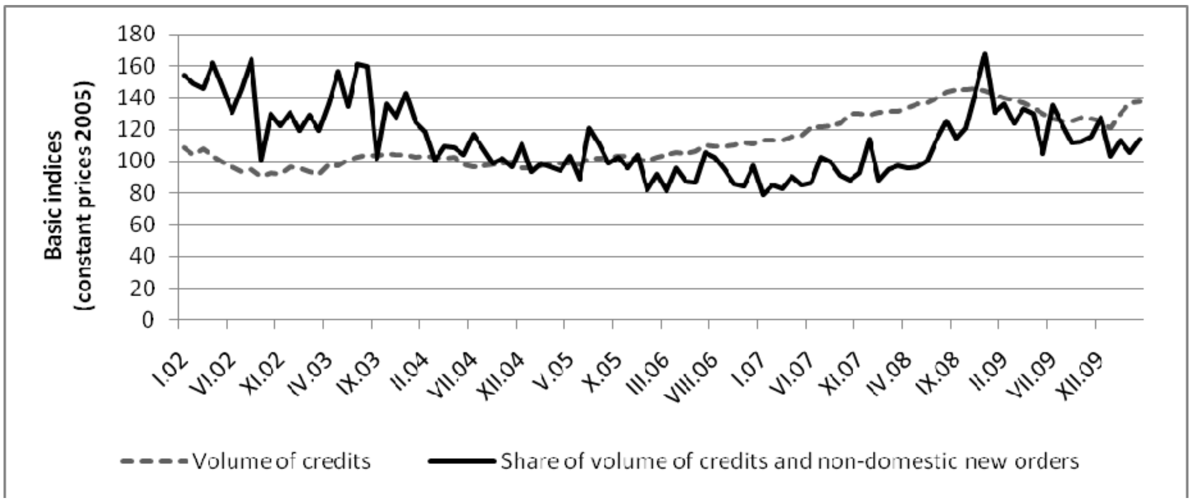

Fig. 4. Comparison of the credit volume development and share of volume of credits and non-domestic new orders between 2002 and 2010 (basic indices with constant prices 2005). Note: Data come from the Czech National Bank (2010a) and the Czech Statistical Office (2010).

The changes in standards for the credit application assessment and in interest and non-interest terms and conditions, with the help of which the domestic commercial banks (and their owners) managed the impacts of the financial crisis, contributed to the deterioration of the competitive position of the enterprises, including the export enterprises. A certain possibility to mitigate these negative impacts is represented by measures taken by the Czech government within the framework of the rescue package supporting the economy at the beginning of 2009.

Selected support instruments were designed for domestic exporters and aimed at improving the availability of export financing. Individual measures were realized through state institutions for the export support. In the Czech Republic these were namely Česká exportní banka, a.s. (Czech Export Bank, CEB) and Exportní garanční a pojišťovací společnost, a.s.

(Export Guarantee and Insurance Corporation, EGAP). Also amendments to the Act on insuring and financing export with state support were a part of these changes.

The measures taken by CEB concentrated on two basic areas: (i) strengthening capitalisation and (ii) creation of a centre for providing services to small and medium-sized enterprises. The need of the bank capital increase was connected to capital adequacy requirements, which limit the volume of provided credits in relation to risk-weighted bank capital. The purpose of the second measure was to provide effective support to the export enterprises that were hit by the impacts of the financial and economic crises. The access to credit financing was prepared for direct exporters as well as for the enterprises that participate in the export indirectly, i.e. through sub-deliveries for a Czech exporter (Czech Export Bank, 2010).

Whereas commercial banks restricted the credit provision because of the direct and indirect impacts of the financial crisis, as to CEB the year 2009 belonged to rather successful ones. The volume of the concluded credit agreements rose by CZK 4,600 million in comparison with the year 2008, i.e. from CZK 20,513 million to CZK 25,109 million. The majority of the export supported by CEB destined for territories connected with higher risk, i.e. to the territories that became non-financeable for the commercial sector (Czech Export Bank, 2010).

EGAP provides credit insurance products widely used by CEB as well as by commercial banks in the Czech Republic. Similarly to CEB, in 2009 EGAP noted an increased demand for the insurance on the part of exporters as well as individual banks, which usually have the political and non-marketable risks insured by EGAP. Whereas in 2008 insurance agreements in the volume of CZK 43,033 million were concluded, in the following year this volume reached CZK 61,817 million (Export Guarantee and Insurance Corporation, 2010). The increase in EGAP insurance capacity in 2009 is connected inter alia with the following facts: (i) the banks providing export credit financing (state as well as commercial) required the debtors to provide additional security instruments apart from the common ones (bills of exchange, pledges and mortgages), (ii) the price as well as non-price terms of insurance agreements were temporarily made more favourable. Thanks to the latter for example the following occurred: (i) reduction in the amount of the self-retention for export credits up to mere 1 %, (ii) removing the condition of the self-retention for the insurance of unfair calling of the guarantee, (iii) reduction in the insurance rates of selected products, and last but not least (iv) simplification of processes for small and medium-sized enterprises as to the insurance of credits for pre export financing and the guarantees (Export Guarantee and Insurance Corporation, 2009).

The measures mentioned in the preceding two paragraphs are not the only ones to be taken in the Czech Republic to overcome the impacts of the financial and economic crisis on Czech exporters. Judging from the volume of credits provided by domestic banks in the second half of the year 2009 it is obvious, that the realized anti-crisis measures in connection with other factors contributed to improvement of situation in the domestic credit market.

5. Conclusion

The objective of this paper was to analyze the impacts of the financial and economic crisis on Czech exporters. Although the consequences of the crisis affected the selected group of enterprises through various transmission channels, this study analyzed only the impact of financial crisis (on domestic exporters) through the changes in credit policy of banks.

It flows from the study that despite the Czech banking sector not having been hit by the consequences of the global financial crisis directly, bank loans were provided to the domestic business enterprises under less favourable conditions. The reason for Czech banks remaining sound is necessary to seek in the development of domestic banking, which was influenced by the privatisation process and by transfer of the ownership of banks to the hands of foreign parent banks. Crucial decisions, including the investment decisions, are taken at the level of the parent banks, and therefore Czech banks had no problems with their liquidity after the outbreak of the crisis in the international financial markets. Also application of the conservative model of banking contributed to this development.

Domestic non-financial enterprises (including exporters) were, however, influenced by a worse access to credit financing, which remained also in the times of the financial and economic crises crucial for fund raising. The changes in the credit policy of Czech banks, which were made under the influence of parent banks, reflected in the decline in provided credits only to a limited extent. The downturn in the credit activity in the Czech Republic was influenced more by the foreign demand decrease. In 2010 the situation seems to be improving. This is also thanks to the measures taken by Czech Export Credit Agencies (ECAs). The Czech Export Bank has improved the availability of credit financing for Czech exporters and the Export Guarantee and Insurance Corporation has taken the measures to eliminate a credit risk by making the insurance conditions more favourable.

Certain limits to this study are represented by the application of researches assessing the changes in the credit assessment standards and changes in credit terms and conditions in the euro area to the Czech banking market. Nevertheless, we assume that regarding the fact that the domestic bank policies are strongly affected by the policies of parent banks from the euro area this simplification can be used. It is also difficult to distinguish the impacts of the financial crisis on financing the exporters from the impacts of the economic crisis.

The issue of transmission channels for financial and economic crises is much broader than the scope of this paper. Remaining transmission channels, e.g. exchange rate volatility or decrease in the demand for goods and services abroad, and their impacts on exporters and on their possibilities of obtaining credit financing from banks represent interesting matter for a further research.

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