

IMPACTS OF FINANCIAL CRISIS ON SME FINANCING

The Finnish evidence

Dr. Jari Huovinen, Confederation of Finnish Industries EK

Abstract

The Confederation of Finnish Industries (EK) has monitored closely the impacts of the financial crisis on SMEs. EK is the leading business organisation in Finland with about 16 000 member companies, of which 96 per cent are SMEs. Through longitudinal financing surveys EK investigated the prevalence of financing difficulties and solvency problems among SMEs in different phases of the crisis. Altogether 10 surveys were conducted between November 2008 and January 2011. This research paper presents the main findings of these surveys.

The sample of this panel study comprises of a total of 2 000 SMEs in Finland. The data was gathered through a random sampling from the database maintained by Confederation of Finnish Industries. Limited companies employing less than 250 employees from manufacturing, construction, retail and wholesale trade and other services were selected for the sample. Depending on the survey, 347 - 617 SMEs participated in the research which was 19-26 per cent of all firms selected for the sample. The data represents the employer organisations with 5 to 249 employees.

The findings revealed that the peak of the crisis was reached in September 2009, when 10 per cent of SMEs reported major financing difficulties and 21 per cent had solvency problems. The prevalence of financing difficulties was five times higher than before the crisis when only 2 - 3 per cent of firms were not able to get the finance they applied for. In addition, the incidence of solvency problems increased dramatically compared that to 2008, being around 6 - 8 per cent. Due to these changes, the demand for short-term financing increased rapidly whereas long-term investments were postponed in many SMEs.

Currently, although the situation has improved, as much as 4 per cent of SMEs still suffer from financing difficulties. Thus, it is estimated that in the near future the share of SMEs having major problems to obtain finance might be permanently higher than in the end of 2008 and is going to stabilise around 4-6 per cent. Moreover, the high incidence of solvency problems (15 per cent of all SMEs) restrains the recovery. Although the number of bankruptcies has not yet increased dramatically, the number of business restructuring proceedings has increased 13 per cent in January - March 2011 compared to January - March 2010.

Despite of some minor deficiencies of the data, this research paper offers some useful insights on SME financing in Finland. Alongside with the survey data conducted by EK, official financing databases maintained by Bank of Finland and Statistics Finland were used in trying to formulate a comprehensive picture on access to finance of SMEs during the crisis.

1 Introduction

In Finland most firms are micro or small-sized. Nearly 99 per cent of the total of 270 000 firms have less than 50 employees. In addition, the share of medium-sized firms is relatively low in Finland, only roughly 1 per cent of all firms (e.g. Ministry of Employment and the Economy, 2011).

The last three years have been a challenging time period for the export-oriented Finland and the Finnish SMEs. According to the EK's financing surveys, first impacts of global crisis were experienced among the Finnish SMEs in September 2008, since the demand of products and services started to decrease very rapidly. In the majority of SMEs orders or reservations were postponed (47%) or cancelled (24%) at the end of 2008.

By sector, demand decreased most in manufacturing and construction: two thirds of the enterprises were affected by postponed orders or reservations. In terms of size, demand weakened especially in medium-sized enterprises. Firms relying heavily on export activities and international operations faced most severe immediate difficulties.

Due to the global crisis, Finland experienced an abrupt decline in the value of exported goods and services. For example, in the first quarter in 2009 the total value of exported goods was 35 per cent lower compared to that of the first quarter in 2008 (Finnish Customs, 2009a). Annually, the decline was 31 per cent in 2009 (Finnish Customs, 2009b). Although the value of goods started to rise again in 2010, it was still far behind on the figures reached in 2008.

During the crisis, EK has closely monitored the impact of the financial and economical crisis on the operation of SMEs. Through longitudinal financing surveys EK investigated the prevalence of financing difficulties and solvency problems among SMEs in different phases of the crisis. In this paper, the key findings of the panel study are presented.

The rest of the paper is organised into four sections: first, theoretical starting points and the statistics concerning SME finance are presented in more detail. Secondly, the data and research methodology are described. This is followed by outlining the findings of the study. Finally, the main conclusions are drawn.

2 Theoretical Background

In the start-up phase entrepreneurs typically use their own savings or rely on financial support from their family members (e.g. Hussain et al. 2006). The need for external finance usually increases as the firm size grows and external finance is often a more important prerequisite for growth in small firms than in large companies (e.g. Beck and Demirguc-Kunt 2006). Moreover, the cost of loans could be higher in those new small firms where the owner-managers lack previous entrepreneurial experience and/or where the firm has no track record indicating its performance (Wright et al. 1997). For example, according to Voordeckers and Steijvers (2006) the length of bank-borrower relationship may decrease the collateral requirements.

This study examined the impacts of the financial crisis on SME financing with the help of contingency theory. The contingency theory links the factors describing the local environment to the different situations of the ventures (Gilad & Levine 1986; Littunen 2001; Huovinen and Littunen 2008). In this study, the situational factors were divided in 1) factors describing firm size and industry and 2) factors describing macro-economic environment and changes in the immediate surroundings.

Obviously, the crisis affected the revenues and profitability of firms and hindered the availability of finance for SMEs. A lack of working capital has also increased the demand for short-term loans. Based on the estimation made by EK, in 2007 the share of short-term loans of all SME loans was 21 per cent compared that to 30 per cent in 2009 and 26 per cent in 2010. The impact of the crisis can also be seen in the statistics provided by the Bank of Finland. The share of new business loans up to 1 million Euros of all new business loans has decreased from 27 per cent in 2007 to 14 per cent in 2009¹ (Table 1).

Table 1. Share of new business loans up to 1 million EUR of all new business loans (Bank of Finland)

Year	Loans up to EUR 1 million		Loans over EUR 1 million		Total	
	EUR (million)	%	EUR (million)	%	EUR (Million)	%
2010	7,761	14,4	45,963	85,6	53,724	100,0
2009	9,944	19,6	40,905	80,4	50,850	100,0
2008	11,881	21,9	42,486	78,1	54,368	100,0
2007	11,576	27,1	31,122	72,9	42,698	100,0

The drop in the SME share of new business bank loans could be explained by tightened credit conditions as well as by the strong government response to the crisis which increased the availability of public finance. This led to many SMEs applying for public financing instead of traditional bank loans. For example, the number of new SME clients of the state-owned financial institution Finnvera increased 12 per cent in 2009. Furthermore, SME finance granted by the Finnish Funding Agency for Technology and Innovation increased 15 per cent reaching 200 million euros.

3 Data and Research Methodology

EK is the leading business organisation in Finland having 15 700 member companies of which 96 per cent are SMEs. It represents manufacturing and service firms of all sizes (Table 2).

Table 2. SME member companies in EK

Firm size	N	%
< 10 employees	7341	48,8
10-49 employees	5806	38,6
50-249 employees	1910	12,7
Total	15057	100,0

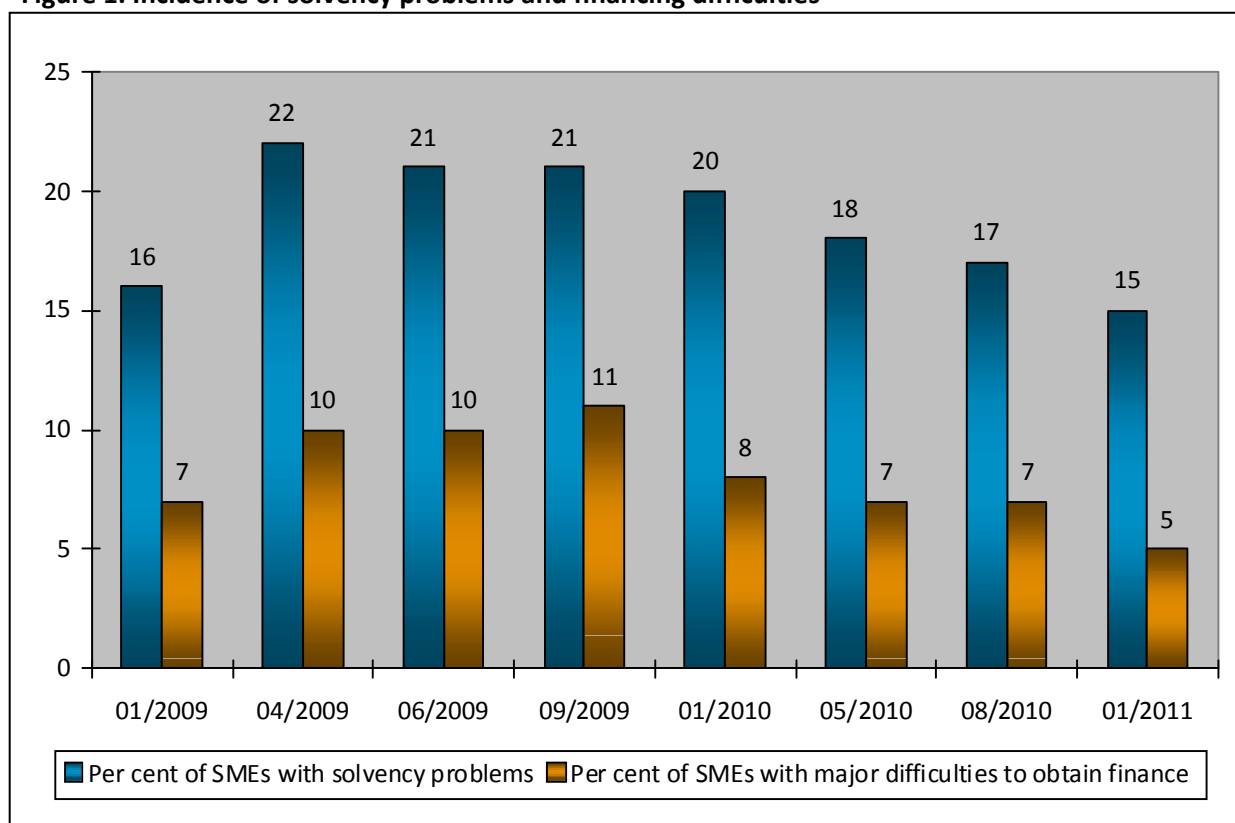
¹ According to Bank of Finland "The MFI data collection scheme was revised as of June 2010, and hence the figures published are not totally comparable with earlier observations. The differences may be due to improved data collection accuracy, revised statistical definitions (e.g. extending the definition of overdrafts and credit card credit to include revolving credits) and the collection of detailed data from all MFIs."

The sample of this panel study comprised of a total of 2 000 SMEs in Finland. The data was gathered through a random sampling from the database maintained by EK. Limited companies employing less than 250 employees from manufacturing, construction, retail and wholesale trade and other services were selected for the sample. Depending on the survey, between 347 and 617 SMEs participated in the research which accounted for 19-26 per cent of all firms selected for the sample. The data represents the employer organisations with 5 to 249 employees. The main method in analysing the data was a logistic regression analysis.

4 Main Findings

The findings revealed that a peak in the crisis was reached in September 2009 when 10 per cent of SMEs reported major financing difficulties and 21 per cent had solvency problems. The prevalence of financing difficulties was five times higher than before the crisis when only 2-3 per cent of firms were not able to get the finance they applied for (EK and Ernst & Young, 2008). In addition, the incidence of solvency problems increased dramatically compared to that of 2008, being around 6-8 per cent. Due to these changes, the demand for short-term financing increased rapidly whereas long-term investments were postponed in many SMEs. In Figure 1 the development of solvency problems and financing difficulties are presented.

Figure 1. Incidence of solvency problems and financing difficulties



A more detailed picture of the financing difficulties was gained by conducting a logistic regression analysis. Table 3 presents the logistic regression models used to describe the data in 2009, 2010 and 2011. Dependent variable in all models was firms with no financing difficulties vs. firms having financing difficulties at least to some extent. Independent variables were industry and firm size (see Appendix 1).

**Table 3. Logistic regression analyses
(Dependent variable: no financing difficulties vs. financing difficulties)**

Variable	01/2009		04/2009		06/2009		09/2009	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Industry								
Industry (1)	0,486	0,242**	0,064	0,229	0,518	0,228**	0,154	0,226
Industry (2)	0,392	0,318	0,125	0,286	-0,078	0,325	-0,381	0,333
Firm size								
Firm size (1)	-0,096	0,307	-0,214	0,285	0,035	0,303	-0,238	0,284
Firm size (2)	-0,001	0,276	-0,067	0,258	0,015	0,271	-0,143	0,256
Constant	-1,017	0,267**	-0,514	0,252**	-0,834	0,270**	-0,562	0,248**
Hosmer-Lemeshow test	0,714		0,978		0,889		0,908	
Df	4		4		4		4	
N	485		503		471		497	

Variable	01/2010		05/2010		08/2010		01/2011	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Industry								
Industry (1)	0,478	0,237**	0,359	0,275	0,258	0,315	0,317	0,313
Industry (2)	-0,346	0,343	-0,007	0,374	0,812	0,383**	0,455	0,383
Firm size								
Firm size (1)	0,256	0,305	0,990	0,379**	0,688	0,393*	0,922	0,424**
Firm size (2)	0,147	0,280	0,575	0,346*	0,107	0,359	0,633	0,393
Constant	-1,018	0,274**	-1,606	0,343**	-1,631	0,359**	-2,180	0,396**
Hosmer-Lemeshow test	0,912		0,987		0,989		0,986	
Df	4		4		4		4	
N	463		378		347		377	

**p<0,05, *p<0,10

Of the logistic models, the Hosmer-Lemeshow test indicating the reliability of the analysis was good and the logistic regression models explained the location of the observations in the examined groups rather well. Of all observations, 64-80 per cent was classified correctly by the logistic regression models.

The logistic regression analyses revealed some statistically significant differences on the incidence of financing difficulties between industries and firm sizes. As expected, financing difficulties were most frequent in manufacturing firms where the need of external finance is usually greater than in service firms operating mainly in domestic markets.

However, contrary to expectations, no statistically significant differences were found between firms in different size categories in 2009. In 2010, especially many micro firms had still severe financing difficulties, whereas a number of medium sized firms had started to recover from the crisis.

Based on the evidence, it seems that the stimulus package launched by Finnish government (including e.g. counter-cyclical loans and guarantees granted by Finnvera) helped many micro and small firms at the early stages of the crisis to get the needed finance which banks were unable or unwilling to grant them.

5 Conclusions

Overall, public financing has played an important role in ensuring employment in SMEs during the financial crisis in Finland. According to EK's rough estimation, without public financing the number of job losses could have been twice as high as the actual realized job losses in 2009. In practice, this means that over 20 000 positions were maintained with the help of finance granted by public organisations such as Finnvera and Centre for Economic Development, Transport and the Environment².

Currently, although the situation has improved, still 4 per cent of SMEs suffer from financing difficulties (EK, 2011). It is estimated that in the near future the share of SMEs having major problems in obtaining finance might become permanently higher than at the tail end of 2008, and is going to stabilise around 4-6 per cent. Moreover, the high incidence of solvency problems (17 per cent of all SMEs) restrains the recovery. Although the number of bankruptcies has not yet increased dramatically, the number of business restructuring proceedings has increased 13 per cent in January-March 2011 compared to January - March 2010.

Despite of some deficiencies of the data, this research paper offers some useful insights on SME financing in Finland. Alongside with the survey data gathered by EK, official financing databases maintained by Bank of Finland and Statistics Finland were used in trying to formulate a comprehensive picture on access to finance of SMEs during the crisis.

References

Beck, T. & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: access to finance as a growth constraint. *Journal of Banking & Finance* 30 (11), 2931-2943.

EK (2011). PK-yritysten toimintaympäristö. Kysely kilpailukyvyn neljästä ulottuvuudesta (In Finnish).

EK and Ernst & Young (2008). Kasvun ajurit 4: miten kasvu rahoitetaan? PK-yritysten ja kasvuyritysten vertailu (In Finnish).

Finnish Customs (2009a). Tavaroiden ulkomaankauppa yritysten kokoluokittain tammi-maaliskuussa 2009 (In Finnish).

Finnish Customs (2009b). Tavaroiden ulkomaankauppa yritysten kokoluokittain vuonna 2009 (In Finnish).

Gilad, B. & Levine, P. (1986). A behavioral model of entrepreneurial supply. *Journal of Small Business Management* 24 (4), 45-53.

Hussain, J., Millman, C. & Matlay, H. (2006). SME financing in the UK and in China: a comparative perspective. *Journal of Small Business and Enterprise Development* 13 (4), 584-599.

² Estimation is based on EK's financing surveys and the answers given by the managers and the owners of firms with 10-249 employees. When formulating the estimation, weighting coefficient was used to ensure the generalization of the results for the total population of SMEs.

Finnish Customs (2009a). Foreign trade of goods by enterprise size. January-March 2009.

Finnish Customs (2009b). Foreign trade of goods by enterprise size. Annual publication 2009.

Huovinen, J. & Littunen, H. (2008). The influence of personal background and local environment on the phenomenon of habitual entrepreneurship. 1st Inter-ICSB Online Publication.

Littunen, H. (2001). *The birth and success of new firms in a changing environment*. Jyväskylä Studies in Business and Economics. Doctoral dissertation. Jyväskylä: Jyväskylä University Printing House and ER-Paino Ky, Lievestuore.

Ministry of Employment and the Economy (2011). *Yrittäjyyskatsaus 2011* (in Finnish). MEE Publications, Employment and entrepreneurship 34/2011.

Voordeckers, W. & Steijvers, T. (2006). Business collateral and personal commitments in SME lending. *Journal of Banking & Finance* 30 (11), 3067-3086.

Wright, M., Robbie, K. & Ennew, C. (1997). Venture capitalists and serial entrepreneurs. *Journal of Business Venturing* 12 (3), 227-249.

Appendix 1. Independent variables used in logistic regression analyses

Variable	
Industry	
Industry (1)	1=Manufacturing / 0=Services
Industry (2)	1=Construction / 0=Services
Firm size	
Firm size (1)	1=Firms with less than 10 employees / 0=Firms with at least 50 employees
Firm size (2)	1=Firms with 10 to 49 employees / 0=Firms with at least 50 employees