Debt Maturity and Relationship Lending: An Analysis of European SMEs

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Abstract

This paper examines the association between bank debt maturity and relationship lending using a unique survey sample of 3366 SMEs from 19 European countries. Our results indicate that stronger firm-bank relationships lengthen the maturity of bank loans, being this association dependent on the country-specific heterogeneity. We show that SMEs in high competitive banking markets are more likely to use short-term debt, and hence to have liquidity problems, than those in a low competitive banking environment. The knowledge of how the institutional environment shapes the relationship lending might help to understand how current institutional changes, such us Basel II, might affect the SME-bank relationship and the access of the small firms to the bank debt.

1 Introduction

Empirical work from different markets (Angelini *et al*., 1998, in Italy; Harhoff and Körting, 1998, in Germany, Degryse and Van Cayseele, 2000, in Belgium; Petersen and Rajan, 1994, and Berger and Udell, 1995, in the US; Hernández-Cánovas and Martínez-Solano, 2005, in Spain) shows a large cross country variation in the effect of the relationship lending on the SMEs' bank debt. This evidence suggests that the specific characteristics of the country where the contracting takes place might drive the effect of the relationship lending on the capital structure of small firms. However, variations in the results may arise as well from differences in sample selection, variables definition and estimation method between the papers, making necessary one analysis of the association between relationship lending and SMEs capital structure using of a cross-country sample.

Up to the best of our knowledge, we are not aware of any paper which uses a cross-country sample of SMEs and examines whether the effect of the relationship lending on their capital structure effectively depends on the cross-country heterogeneity. To fulfill this gap in the literature we use a unique sample of 3366 SMEs from 19 European countries and analyze the effect of the relationship lending on debt maturity while controlling for the cross-country heterogeneity. We use the concentration – number of banks the firm has credit lines with – and the flow of soft information between the firm and the bank to proxy for the existence of the relationship lending.

The analysis of this association gains special relevance for the small and medium-sized enterprises (SMEs) for several reasons. First of all, bank debt is the key element of the unstable capital structure of the small firms, and relationship lending plays a fundamental role in the negotiation of those contracts. In the second place, the liquidity risk (Diamond, 1991) associated to the use of short-term debt is more pronounced for small firms due to their limited access to alternative financing sources. Third, the knowledge of how the institutional

environment shapes the relationship lending might help to understand how current institutional changes, such us Basel II, might affect the SME-bank relationship and the access of the small firms to the bank debt. Fourth, In Europe the existing evidence shows that debt maturity depends on firm and country-specific characteristics and that relationship lending influences the availability and terms (interest rate and guarantees) of bank debt. However, the way relationship lending affects debt maturity for European SMEs remains still unexplored. Finally, it is well known that information asymmetries play a key role in determining the maturity of debt contracts for small firms (Scherr and Hulburt, 2001; Ortiz-Molina and Pena, 2004) and that the literature on relationship lending suggests that stronger firm-bank relationships reduce the information asymmetries (Petersen and Rajan, 1994). Therefore, we conjecture that stronger relationships, i.e. lower information asymmetry, should be associated with debt of longer maturity.

The only previous related work by Ortiz-Molina and Pena (2004) examined the effect of relationship lending on debt maturity using a sample of small firms from the U.S. market, but without controlling for the institutional environment. As a consequence, our sample of 3366 SMEs from 19 European countries allow us to make two contributions to the financial intermediation literature. On the one hand, we analyze the effect of relationship lending on debt maturity for European SMEs. And on the other hand, we examine whether that effect depends on the institutional environment where the contracting takes place.

Our results indicate that stronger firm-bank relationships lengthen the maturity of bank loans. More specifically, SMEs borrowing from one bank have debt of longer maturity than those doing so from two or three banks, while those borrowing from two or three banks have loans of longer maturity than firms working with more than three banks. However, once we control for the country-specific heterogeneity the relationship lending indicators become statistically insignificant, suggesting that the country-specific environment shapes the

relationship lending and its effects. In short, we find that SMEs in low competitive banking markets benefit more from close relationship lending than those in a high competitive banking environment.

The rest of the paper is organized as follows. Section 2 reviews the literature. Section 3 discusses the data and method. Section 4 presents the results, and section 5 concludes.

2 Theory and hypotheses development

Theory and empirical evidence suggest that the relationship lending between banks and firms is shaped to a large extent by the institutional environment where the contracting takes place. For example, Petersen and Rajan (1995) and Boot and Thakor (2000) focused on the degree of concentration of the banking sector, i.e. the level of competition among banks According to Petersen and Rajan (1995), concentrated banking markets reduce the degree of inter-bank competition, making more expensive for the firm the process of seeking and changing lenders. Given this lack of flexibility, small firms can credibly convey to a long monopolistic banking relationship, where the bank has a bargaining power to set the conditions under which the financing takes place. As a consequence of this hold up situation, banks can extract rents over some periods after the financing has been granted. In this way they can compensate the screening and monitoring costs taken on at the beginning of the relationship. Therefore, Petersen and Rajan (1995) predict that banks are more likely to invest in relationship lending in concentrated credit markets than in more competitive environments. In contrast, Boot and Thakor (2000) show that bank competition could make relationship lending more attractive for banks because it provides a better shelter against price competition. Their argument is that concentrated credit markets provide (external) monopoly power which substitutes for relationship lending because this is an instrument to deliberately

create (internal) bank monopoly power. Hence, a more concentrated banking market – with less competition – could render relationship lending either more or less desirable.

Using a sample of large firms from 20 European countries, Ongena and Smith (2000) reports the existence of large cross-country variations in the average number of bank relationships per firm. They find that firms maintain more bank relationships, on average, in countries with inefficient judicial systems, poor enforcement of creditor rights, unconcentrated but stable banking systems and active public bond markets. These results show the existence of heterogeneity in the European financial system that seems to contradict the standard description of being "bank-dominated".

In addition, research by La Porta et al. (1997, 1998) and Demirguc-Kunt and Maksimovic (1998, 1999) reports an association between firm financing and institutional factors such as the legal environment, the banking sector structure and the economic situation. In Europe, Hall et al. (2004) conclude that there are variations in both SME capital structure and the determinants of capital structure among the European countries, while Antoniou et al. (2006) identify several common factors that have substantial impact on the debt maturity of the firms in three major European countries (France, Germany and the UK), but the nature and the magnitude of these factors are country dependent reflecting the influences of the financial environment, regulations, and corporate governance traditions of the country in which the firm operates.

Thanks to the large sample of SMEs from 19 European countries we are able to control for country specific characteristics when analyzing the effect of relationship lending on debt maturity as well as to examine whether there are variations in that effect between the European countries of our sample. The knowledge of how the institutional environment shapes the relationship lending might help to understand how current institutional changes,

such us Basel II as well as the monetary and economic integration, might affect the SME-bank relationship and the access of the small firms to the bank debt.

Financial theory suggests that asymmetric information plays a main role in determining the association between relationship lending and debt maturity for the SMEs. According to Diamond (1991), Rajan (1992) and Ortiz-Molina and Pena (2004) debt maturity reduces the risk associated with the loan contracts because the banks can review the firm's performance more frequently and, if necessary, vary the terms of the debt contracts before losses have accumulated. On the other hand, several authors (Petersen and Rajan, 1994; Berger and Udell, 1995; Harhoff and Körting, 1998) have pointed out that firms could receive better terms on their debt contracts if they establish a close relationship lending because this would improve the flow of information. Therefore, we conjecture that SMEs which establish relationship lending should obtain bank debt of longer maturity.

The evidence of the influence of relationship lending on debt maturity is sparse and limited to the US market. Hester (1979) finds that firms who previously borrowed from a bank receive shorter loan maturities, but if a relevant bank officer felt that this borrower had been a highly profitable customer to the bank in the past, the loan is for a longer maturity than loans to other individuals. The evidence provided by Ortiz-Molina and Pena (2004) indicates that longer, more concentrated and broader firm-bank relationships are not associated with longer debt maturities for small businesses. Our paper contributes to this line of research allowing also the comparison between the U.S. and the European markets.

3 Data and method

3.1 *Sample selection*

Firm specific variables are obtained from the 2002 ENSR Survey on Small and Medium-Sized Enterprises, Observatory of European SMEs, provided by the EIM Business

and Policy Research in the Netherlands.[1] From the 7669 checked and approved interviews that are available in the ENSR Survey 2002, we selected the 3366 observations that contain information about the debt maturity of the individual firms. In table I we provide the distribution of the sample by countries and sectors. The number of firms per country ranges from 47 in Liechtenstein, to 314 in Italy. As for the nine activity sectors considered in the survey, the lowest representation corresponds to the Repair and Hotels/Catering industries with 82 and 176 observations respectively, whereas 486 and 607 firms belong to the Manufacturing and Construction industries respectively. In fact, Table I shows that in our sample the latter, in terms of percentage of firms, are the main activities in 10 out of nineteen countries (Austria, Denmark, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Norway, Spain, and the UK).

To assess the impact of bank-firm relationships on bank-debt maturity while controlling for firm-specific characteristics and country heterogeneity we estimate regressions in the following form:

$$\text{Maturity}_i = \alpha_0 + \beta_1 \text{FBR}_i + \beta_2 \text{FSC}_i + \beta_3 \text{Country}_i + \varepsilon_i \qquad (1)$$

Where i index firm i; $Maturity_i$ is the bank-debt maturity for firm i; FBR_i represents the set of variables measuring firm-bank relationship; FSC_i is a vector of firm-specific characteristics; $Country_i$ is a vector of country dummies, and ε_i is the residual.

[1] The 2002 ENSR Survey on SMEs uses a Computer Assisted Telephone Interviewing (CATI) system to collect data from entrepreneurs and managers within SMEs, all being independent private enterprises with less than 250 employees in all sectors of industry in Europe. The survey was conducted from April-August 2001. To arrive at sufficiently reliable conclusions at the level of size classes within individual countries more than 100 interviews for each size class-country combination were carried out, finally resulting in 7699 completed interviews. The overall design and implementation of the stratification, the questionnaire and the fieldwork were done in close collaboration between staff from EIM Business & Policy Research in the Netherlands, partners in the ENSR network and Intromart.
See http://europa.eu.int/comm/enterprise/enterprise_policy/analysis/observatory_en.htm for further information.

3.2 *The variables*

3.2.1 The dependent variable

To create the dependent variable we utilize the ENSR Survey in which managers are asked the term for the largest loan the firm has received from any bank during the last 3 years. The answers are categorized as follows: (1) less than 1 month, (2) 1 to 6 months, (3) 6 months to 1 year, (4) 1 to 3 years, (5) 3 to 5 years, and (5) 5 years or longer. Using these answers we build a dummy variable, bank-debt maturity, which is given a value of one when the debt maturity is equal to or less than one year and zero otherwise.[2] Table II, panel A gives an overview of debt maturity by country ranked in ascending order. The average ranks from 4.16 (Italy), the shortest average maturity, to 5.50 (Norway) the longest. In panel B debt maturity is shown by firm size. Small firms have on average shorter debt maturity (4.70), while large firms have on average longer debt maturity (5.10).

3.2.2 The explanatory variables

In this section we describe the explanatory variables utilized in our posterior analysis of debt maturity. Table III provides detailed definitions of all the variables.

Firm-bank relationship variables

There are several definitions provided in the literature on relationship lending. However, all these definitions focus on one basic dimension being private information. Relationship lending deals with borrower-specific information available only to the intermediary and the customer. Berger et al. (2001) distinguish between two kinds of flows of private information inside a firm-bank relationship. On the one hand, firms provide the bank

[2] We also build a dummy variable which equals one if the term of the largest loan is less than or equal to three years, and zero otherwise. As a robustness test, we rerun all our analyses using this specification as well. Results are qualitative the same.

with hard information. This is easily observable, verifiable and transmittable data about the firm that may include financial statements and a detail description of present and future projects. However, as stated by Berger et al. (2001), this type of easily observable, verifiable, and transmittable data seems to be antithetical to relationship lending. On the other hand, banks can also obtain soft information – or qualitative information. This is gathered by interaction between the loan officer and the firm's manager and refers to manager capacity, integrity, and the quality of firm projects. This kind of information appears to be very important in relationship lending, since small businesses usually are lacking reliable hard information.

Given the important roll of soft information in relationship lending, we create a dummy variable to proxy for soft information. Respondents of the ENSR survey are asked what type of information they regularly present to their bank(s). When the bank obtains qualitative (soft) information from the respondent our dummy takes on the value of one and zero otherwise. Consistent with the relationship lending literature, we expect the coefficient on this variable to have a negative sign indicating that firms that provide soft information to their banks have loans of longer maturity.

Our second measure of private information is the number of banking relationships. The existence of several intermediaries lending money to the firm reduces the privacy and value of the information because each bank will obtain similar data when they screen and/or monitor the firm (Cole, 1998; Carletti, 2004). Moreover, if banks are equally informed about the firm quality, managers may have more flexibility to change lenders, reducing the expected duration of the relationship and the incentive of the bank to invest in the acquisition of private information (Chan et al., 1986; Bhattacharya and Thakor, 1993). Therefore, we expect firms working with fewer banks to be more likely to get relationship lending and, therefore, to have loans of longer maturity. We obtain from the ENSR survey the number of banks the firm has

credit lines with: (1) only one bank, (2) two or three banks and (3) four banks or more. This allows us to define three dummy variables: exclusivity, two-three relationships and more than three relationships, which take on the value one when the firm maintains one, two or three, or more than three banks relationships respectively and zero otherwise. In order to avoid the dummy tramp, we include only the first two dummy variables in our model, expecting them to appear with a negative coefficient. This would indicate that firms with more concentrated – closer and stronger – banking relationships are more likely to obtain long term debt.

Table IV and V give an overview of the banking relationship variables by country and firm size ranked in ascending order. Table IV, panel A shows that firms in Northern Europe, such as Denmark, Great Britain and the Netherlands among others, have fewer banking relationships than firms in countries such as Spain, Italy, and Portugal. For example, 78% of the firms in the UK maintain only one bank relationship, while 21% uses 2 or 3 banks and only 0.8% deals with four or more banks. This in contrast to Spain where only 23% has one bank relationship compared to 42% with two or three bank relationships, and 38% with four or more.

Panel B shows the number of banking relationships by firm size. Less than 10% of micro and small firms are involved with more than three banks, while for medium size firms this is more than 23%.

Table V describes the information in possession of banks by country and size. The majority of firms (82%) provide their bank(s) with some form of balance sheet and/or income statement. Other forms of information disclosure are less common. Surprisingly, 371 out of 3290 firms (11%) do not provide information at all to their bank(s). Of these 371 firms 79% are very small firms (with fewer than 10 employees). We also observe considerable cross-country variation. The release of soft information ranges from 57.93% in Norway to 1.09% and 8.22% in France and Italy respectively.

Consistent with the findings of Von Rheinbaben and Ruckes (2004), it seems that firms in some countries shape their relationship with banks using two dimensions: the number of creditors and the amount of confidential information given to the creditors. For example, it is interesting to notice how firms in Italy deal with many creditors, but they disclose little private information; whereas firms in Norway disclose a substantial amount of private information, but they reduce the severity of information leakage by restricting themselves to a small number of creditors.

3.3.1. Firm and country level variables

To account for sample heterogeneity we also include several firm specific control variables in our model. We use the number of employees to proxy for firm size. This variable ranges from 1 to 3, with higher values indicating the larger firm. The variable age reflects the number of years that the firm has been in operation. It ranges from 1 to 4, with higher values for older businesses.[3] The variable debt is the total amount of firm liabilities to all its banks and used to proxy for firm leverage. It ranges from 1 to 6, with higher values indicating higher indebtedness. To proxy the firm's financial access we include the variable availability, which equals one when the firm received all the loans requested from its bank(s) in the last 3 years and zero otherwise. Finally, we also include nine sector dummies to control for differences across industries.

Table VI shows the existence of significant differences at the firm level among the 19 countries in our sample. For example, Switzerland has the most firms in the upper level of age, size and debt. Whereas German businesses are among the smallest, UK firms have less debt, and Italian firms are the youngest. As for the availability, 95.73% and 93.18% of the

[3] The values are assigned as follows: A firm in operation for less than 2 years is coded a 1, between 2 and 6 years is coded a 2, between 6 and 10 years is coded a 3, and 10 years or longer in operation is coded 4.

small firms in Finland and Liechtenstein respectively, received all the loans they requested from their bank(s) in the last 3 years, whereas this percentage falls to the 80% in Iceland.

In addition to the existence of asymmetric information, debt maturity decision depends also on the financial and legal environment as well as the economic situation in which the contracting takes place. Since countries have very different financial, legal and economic environments, debt maturity and the effect of relationship lending on it could vary significantly across countries. To control for this cross-country heterogeneity, we include 19 country dummies.

4 Results

4.1 *Relationship lending, bank debt maturity and cross country heterogeneity*

Table VII, model 1 presents the analysis of the effect of the firm-bank relationship indicators on debt maturity while controlling for firm-specific characteristics. To avoid the dummy trap we exclude the variable more than three relationships. The results show that the number of banking relationships affects the firm's probability of getting long-term debt whereas the transmission of soft information doesn't. The coefficients on the variables exclusivity and two-three relationships are negative and statistically significant at the 1% and 5% level respectively, being the former larger in magnitude. This implies that there exist advantages associated with the establishment of a close (concentrated) relationship between lender and borrower, which might reduce the risk faced by the lender and therefore improve the readiness to lengthen the maturity of the loans.

The control variables age and debt are statistically significant at the 1% level, size is at the 5% level and availability at the 10%. Consistent with existing empirical evidence, we find that older, more indebted and financially healthier firms are more likely to get long-term debt.

The positive coefficient on the size variable indicates that larger firms are more likely to use short-term debt. [4]

In model 2 we include the eight industry dummies. The results remain the same. Wholesale Trade is the only sector with a statistically significant coefficient ($\alpha = 0.05$), indicating that firms in that sector of activity are more likely to use short-term debt than businesses belonging to the sector of other service industries, which is our base category.

Model 3 includes the eighteen country dummies. We don't include a dummy for The Netherlands, which we use as our base category. The results show the existence of significant cross-country differences in bank-debt maturity for SMEs. This is consistent with the findings for large publicly traded companies as reported by Demirgüç-Kunt and Maksimovic (1999) and Fan *et al*. (2003), and for SME, as shown by Hall et al. (2004) and Antoniou et al. (2006). A particular interesting finding is that the firm-bank relationship variables, exclusivity and two-three-relationships, become statistically insignificant. This suggests that the relationship lending is not orthogonal to cross-country heterogeneity, confirming our expectations and the evidence presented by Ongena and Smith (2000) in which country-specific characteristics are important determinants of the number of banking relationships.

Theory as well as empirical evidence suggests that the degree of concentration of the banking sector, i.e. the level of competition among banks, might be the most important country specific characteristic affecting the SME-bank relationship. Petersen and Rajan (1995) predict that banks are more likely to invest in relationship lending in concentrated credit markets because the reduced degree of inter-bank competition allows them to extract rents. On the other hand, Boot and Thakor (2000) show that bank competition could make relationship lending more attractive for banks because it provides a better shelter against price

[4] Scherr and Hulburt (2001), and Heyman et al. (2003) report similar results.

competition. Hence, a more concentrated banking market – with less competition – could render relationship lending either more or less desirable.

To assess whether the degree of banking concentration does impact the effect of relationship lending on debt maturity for SMEs and how, from the Conference on Bank Concentration and Competition we obtain the fraction of banks assets held by the three largest commercial banks in each country (banking concentration). Using the median of that measure (0.54) we split the sample between low and high competitive banking systems – we define low (high) competitive banking systems as those where the banking concentration is above (below) the median – and we run our basic model for each group. The results reported in model 1, Table VIII, show that firms borrowing from two or three banks in low competitive markets are more likely to use long-term debt than firms borrowing from more than three banks. In model 2, firms maintaining an exclusive banking relationship in high competitive markets are more likely to use short-term debt. Although, the result are marginal significant and do not hold for all relationships defined in our regression, the evidence suggests to be consistent with Peteresen and Rajan´s (1995) argument that SMEs in low competitive banking markets benefit more from a close relationship lending.

5 Conclusion

This paper examines the association between bank debt maturity and relationship lending using a unique survey sample of 3366 SMEs from 19 European countries. In Europe, the existing evidence shows that debt maturity depends on firm and country-specific characteristics and that relationship lending influences the availability and terms (interest rate and guarantees) of bank debt. However, the way relationship lending affects debt maturity for European SMEs as well as whether there are variations in that influence among countries remain still unexplored.

We first examine the effect of relationship lending on debt maturity while controlling for firm specific characteristics. Our results indicate that stronger firm-bank relationships lengthen the maturity of bank loans. More specifically, SMEs borrowing from one bank have debt of longer maturity than those doing so from two or three banks, and these firms, in turn, have loans of longer maturity than firms working with more than three banks. However, once we control for the country-specific heterogeneity the relationship lending indicators become statistically insignificant.

To understand how the country-specific environment shapes relationship lending we examine whether its influence on debt maturity differs according to the degree of competition in the European banking systems. Consistent with Petersen and Rajan´s (1995) arguments we find that SMEs in low competitive banking markets benefit more from a close relationship lending than those in a high competitive banking environment.

Therefore, the evidence we present in this paper indicates that the establishment of a close relationship lending might influence the capital structure of the European small firms. However, we show that the relevance of that effect and whether it benefits or harms the SMEs depends to a large extent on the institutional factors of the country where the contracting takes place. For example, SMEs in countries with high competitive banking sectors are more likely

to use short-term debt, and hence to have liquidity problems, than those others in countries with a lower degree of competition.

Considering the central role of bank debt in SMEs capital structure and the importance of the SMEs in the GDP and job creation of Europe, our evidence suggests that the policy makers should take into account the effect that the current transformations in the European countries, such as Basel II as well as the economic and monetary integration, will have on the firm-bank relationship. However, our paper constitutes only the first step of this analysis. Further contributions are required to extent our analyses to other countries and credit conditions (interest rate and guarantees), as well as to a different set of country specific characteristics, such as legal environment and economic development.

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Table I. Distribution of the firms by country and sector

	Main activity									
Country	Manufacturing	Construction	Wholesale Trade	Retail Trade	Hotels/ Catering	Repair	Transport/ Communications	Business Services	Other Service Industries	Total
Austria	28 (13.79)	55 (27.09)	20 (9.85)	13 (6.40)	11 (5.42)	8 (3.94)	36 (17.73)	22 (10.84)	10 (4.93)	203 (100)
Belgium	22 (9.61)	23 (10.04)	73 (31.88)	40 (17.47)	13 (5.68)	4 (1.75)	26 (11.35)	16 (6.99)	12 (5.24)	229 (100)
Denmark	12 (12.64)	35 (35.71)	14 (14.29)	6 (6.12)	5 (5.10)	3 (3.06)	12 (12.24)	5 (5.10)	6 (6.12)	98 (100)
Finland	27 (16.07)	21 (12.50)	16 (9.52)	18 (10.71)	2 (1.19)	1 (0.60)	59 (35.12)	7 (4.17)	17 (10.12)	168 (100)
France	29 (10.21)	34 (11.97)	15 (5.28)	62 (21.83)	24 (8.45)	10 (3.52)	30 (10.56)	43 (15.14)	37 (13.03)	284 (100)
Germany	23 (10.85)	26 (12.26)	16 (7.55)	32 (15.09)	19 (8.96)	6 (2.83)	14 (6.60)	40 (18.87)	36 (16.98)	212 (100)
Greece	23 (12.99)	14 (7.91)	25 (14.12)	67 (37.85)	15 (8.47)	1 (0.56)	17 (9.60)	8 (4.52)	7 (3.95)	177 (100)
Iceland	60 (29.85)	21 (10.45)	33 (16.42)	19 (9.45)	5 (2.49)	8 (3.98)	11 (5.47)	12 (5.97)	32 (15.92)	201 (100)
Ireland	25 (20.33)	25 (20.33)	16 (13.01)	12 (9.76)	6 (4.88)	1 (0.81)	20 (16.26)	11 (8.94)	7 (5.69)	123 (100)
Italy	82 (26.11)	35 (11.15)	30 (9.55)	35 (11.15)	20 (6.37)	8 (2.55)	16 (5.10)	30 (9.55)	58 (18.47)	314 (100)
Liechtenstein	12 (25.53)	1 (2.13)	5 (10.64)	5 (10.64)	4 (8.51)	1 (2.13)	7 (14.89)	5 (10.64)	7 (14.89)	47 (100)
Luxembourg	11 (10.19)	17 (15.74)	16 (14.81)	15 (13.89)	13 (12.04)	2 (1.85)	16 (14.81)	10 (9.26)	8 (7.41)	108 (100)
Netherlands	24 (14.29)	24 (14.29)	20 (11.90)	36 (21.43)	5 (2.98)	2 (1.19)	22 (13.10)	27 (16.07)	8 (4.76)	168 (100)
Norway	20 (12.12)	60 (36.36)	19 (11.52)	13 (7.88)	6 (3.64)	4 (2.42)	20 (12.12)	10 (6.06)	13 (7.88)	165 (100)
Portugal	20 (13.51)	8 (5.41)	18 (12.16)	37 (25.00)	4 (2.70)	3 (2.03)	18 (12.16)	37 (25.00)	3 (2.03)	148 (100)
Spain	85 (35.42)	22 (9.17)	14 (5.83)	32 (13.33)	12 (5.00)	3 (1.25)	25 (10.42)	29 (12.08)	18 (7.50)	240 (100)
Sweden	29 (21.80)	16 (12.03)	6 (4.51)	5 (3.76)	2 (1.50)	8 (6.02)	46 (34.59)	9 (6.77)	12 (9.02)	133 (100)
Switzerland	17 (13.60)	13 (10.40)	32 (25.60)	7 (5.60)	7 (5.60)	3 (2.40)	29 (23.20)	9 (7.20)	8 (6.40)	125 (100)
UK	58 (26.01)	36 (16.14)	15 (6.73)	15 (6.73)	3 (1.35)	6 (2.69)	19 (8.52)	32 (14.35)	39 (17.49)	223 (100)
Total	607	486	403	469	176	82	443	362	338	3366

The table reports the number of firms by country and sector and the row percentage (in parentheses).

Table II Overview of debt maturity by country and firm size

Country	N	Average	< 1 month	1 to 6 months	6 to 12 months	1 to 3 years	3 to 5 years	> 5 years
Panel A: Debt Maturity by Country								
Italy	314	4.1592	11	49	30	85	67	72
Greece	177	4.1751	2	26	39	34	24	52
France	284	4.2535	23	32	20	51	91	67
UK	223	4.4081	11	7	28	58	72	47
Portugal	148	4.4324	4	19	14	32	30	49
Liechtenstein	47	4.7021	3	1	5	11	5	22
Switzerland	125	4.7600	1	7	17	22	27	51
Sweden	133	4.8045	8	6	5	25	30	59
Luxembourg	108	4.8981	2	5	9	18	26	48
Belgium	229	4.9563	9	12	7	34	57	110
Ireland	123	4.9756	1	4	10	22	31	55
Netherlands	168	5.0000	11	7	6	14	39	91
Spain	240	5.1083	0	6	20	38	54	122
Finland	168	5.2202	1	5	3	26	45	88
Germany	212	5.2264	4	3	6	27	60	112
Austria	203	5.2956	0	9	6	26	37	125
Iceland	201	5.3234	1	3	3	27	32	131
Denmark	98	5.4898	0	2	2	9	18	67
Norway	165	5.5030	3	3	2	12	25	120
Total	3366		95	208	234	571	770	1488

Number employees	N	Average	< 1 month	1 to 6 months	6 to 12 months	1 to 3 years	3 to 5 years	> 5 years
Panel B: Debt Maturity by Firm Size								
0-9	1711	4.6984	58	112	126	334	443	638
10-49	949	4.9115	21	58	69	147	195	459
50-249	706	5.0637	16	38	39	90	132	391
Total	3366		95	208	234	571	770	1488

Table II gives an overview of firm debt maturity by country and firm size ranked in ascending order. Data is obtained from the 2002 ENSR survey on small and medium-sized enterprises, observatory of European SMEs, provided by the EIM Business and Policy Research in the Netherlands, in which managers are asked the term for the largest loan the firm received from any bank during the last three years. Firm size is measured by the number of employees. The averages are calculated by categorizing the debt maturity variable such that less than one month equals 1, 1 to 6 months equals 2, 6 months to 1 year equals 3, 1 to 3 years equals 4, 3 to 5 years equals 5, and 5 years or longer equals 6.

Table III. Description of variables and data sources

Variable name	Description and source
Dependent variable:	
Bank debt maturity[1]	An indicator of the firm's debt maturity measured as a dummy variable that takes on the value one when the debt maturity is equal o less than one year 1and zero otherwise.
Country and industry dummies	
Industry dummies$_9$[1]	Nine industry dummies indicating the firm main activity. Each variable takes on the value one if the firm belongs to one of the following sectors: Manufacturing, Construction, Wholesale Trade, Retail Trade, Hotels & Catering, Repair, Transport & Communications, Business Services, and Other Service Industries; and zero otherwise.
Country dummies	Nineteen country dummies.
Firm-Bank Relationship:	
Soft information[1]	Dummy variable that takes on the value one when the bank usually obtains qualitative (soft) information from the firm and zero when it gets hard information: (1) Balance Sheet and Profit & Loss statement, (2) budget for next year(s), (3) financial plan and cash flow forecast, and (4) information on unpaid invoices.
Exclusivity[1]	Dummy variable that takes on the value one when the firm has credit lines with one bank.
Two-three relationships[1]	Dummy variable that takes on the value one when the firm has credit lines with two or three banks.
More than three relationships[1]	Dummy variable that takes on the value one when the firm has credit lines with more than three banks.
Banking Sector Structure:	
Banking Concentration[2]	A measure of the degree of concentration of the banking sector, calculated as the fraction of assets held by the three largest banks in the country, averaged over the period 1995-1999.
Firm Specific Characteristics:	
Employees[1]	An indicator of the firm size, which takes on the values: 1 when the firm has less than 9 employees, 2 when the number of employees is between 10 and 49, and 3 when the firm has more than 49 employees.
Age[1]	A measure of the number of years that the firm has been in operation, which takes on the values: 1 when it has been less than 2 years, 2 when it has been between 2 and 5 years, 3 when it has been between 6 and 10 years, and 4 when it has been more than 10 years.
Debt[1]	A measure of the amount of liabilities to all of the firm's banks, which takes on the values: 1 when the liabilities amount to less than 89485 U.S. dollars, 2 when they do between 89486 and 447422, 3 when they do between 447423 and 894846, 4 when they do between 894847 and 2684539, 5 when they do between 2684540 and 4474232, and 6 when the liabilities are above 4474233 U.S. dollars.
Availability[1]	An indicator of the financial situation of the firm, which equals one when the firm got all the loans it needed form its bank in the last 3 years and zero otherwise.

Data Sources:
[1] 2001 ENSR Survey on SMEs.
[2] Conference on Bank Concentration and Competition. Data available at: http://www.worldbank.org/research/interest/confs/042003/data.htm

Table IV. Overview of number of bank relationships by country and size ranked in ascending order

Panel A. Number of bank relationships by country

Country	N	Average	1 bank relationship	2 or 3 bank relationships	4 or more bank relationships
Denmark	98	1.2245	77	20	1
UK	223	1.2287	174	47	2
Netherlands	168	1.2619	125	42	1
Norway	165	1.2667	125	36	4
Sweden	133	1.3609	84	41	5
Finland	168	1.3869	107	57	4
Iceland	201	1.4577	116	78	7
Ireland	123	1.5691	65	46	12
France	283	1.5830	136	129	18
Liechtenstein	47	1.5957	22	22	3
Germany	211	1.6351	91	106	14
Luxembourg	108	1.6852	47	48	13
Switzerland	123	1.6911	49	63	11
Austria	203	1.7291	72	114	17
Belgium	229	1.7380	88	113	28
Greece	175	1.9086	47	97	31
Portugal	145	1.9655	32	77	33
Italy	313	1.9681	77	169	67
Spain	233	2.1631	51	93	89
Total	3349	1.6324	1591	1398	360

Panel B. Number of bank relationships by firm size ranked in ascending order

Number employees	N		1 bank relationship	2 or 3 bank relationships	4 or more bank relationships
0-9	1706	1.5234	918	683	105
10-49	944	1.6451	428	423	93
50-249	699	1.8813	245	292	162
Total	3349	1.6324	1591	1398	360

Table V. Overview of information in possession of bank by country and size

Panel A. Information in possession of banks by country

Country	N	Balance /income	Budget	Pro-forma	Inventory	Unpaid invoices	Qualitative (Soft info)	No info
Austria	203	193	58	73	38	86	50	5
Belgium	227	198	45	63	46	52	38	22
Denmark	98	88	18	23	11	8	11	4
Finland	163	131	29	17	11	5	26	25
France	276	251	20	19	4	4	3	19
Germany	210	190	20	22	11	21	20	17
Greece	177	172	49	46	49	16	31	2
Iceland	199	151	57	29	43	40	15	39
Ireland	122	95	33	41	16	23	13	14
Italy	292	266	66	34	17	34	24	16
Liechtenstein	47	33	9	8	4	8	6	12
Luxembourg	104	84	16	12	3	8	12	16
Netherlands	166	139	43	38	30	58	18	17
Norway	164	62	37	31	29	16	95	31
Portugal	148	122	16	17	11	16	15	24
Spain	222	161	22	22	7	8	29	39
Sweden	133	104	56	47	35	18	31	16
Switzerland	124	109	39	31	17	20	13	10
UK	215	152	58	59	36	36	32	43
Total	3290	2701	731	632	418	477	482	371

Panel B. Information in possession of banks by firm size

Number employees	N	Balance /income	Budget	Pro-forma	Inventory	Unpaid invoices	Qualitative Soft-info	No info
0-9	1658	1264	249	205	145	179	177	293
10-49	938	822	229	207	148	167	147	55
50-249	694	615	253	220	125	131	158	23
Total	3290	2701	731	632	418	477	482	371

Table VI. Firm specific characteristics by country

Country	Age		Employees		Debt		Availability	
Austria	3.7488	(203)	1.8867	(203)	2.4079	(152)	0.9140	(186)
Belgium	3.7851	(228)	1.7948	(229)	2.5617	(162)	0.8884	(206)
Denmark	3.6837	(98)	1.9796	(98)	2.3830	(94)	0.8737	(95)
Finland	3.7321	(168)	1.9405	(168)	2.3958	(144)	0.9573	(164)
France	3.7817	(284)	1.4437	(284)	1.5106	(188)	0.9185	(270)
Germany	3.6745	(212)	1.3679	(212)	1.6444	(45)	0.9115	(192)
Greece	3.4972	(177)	1.8023	(177)	2.2966	(118)	0.8750	(160)
Iceland	3.5124	(201)	1.5274	(201)	2.0791	(177)	0.8000	(195)
Ireland	3.7317	(123)	1.9024	(123)	2.3590	(78)	0.8908	(119)
Italy	3.3217	(314)	1.4682	(314)	1.7940	(199)	0.8475	(295)
Liechtenstein	3.7660	(47)	1.5106	(47)	2.2903	(31)	0.9318	(44)
Luxembourg	3.5278	(108)	1.6574	(108)	2.0159	(63)	0.8750	(104)
Netherlands	3.4702	(168)	2.0060	(168)	2.2623	(122)	0.8816	(152)
Norway	3.6606	(165)	1.9273	(165)	2.5864	(162)	0.9188	(160)
Portugal	3.3311	(148)	1.9054	(148)	2.1948	(77)	0.8357	(140)
Spain	3.2667	(240)	1.5625	(240)	2.0169	(59)	0.9039	(229)
Sweden	3.7218	(133)	1.9774	(133)	2.4462	(130)	0.8952	(124)
Switzerland	3.7920	(125)	2.0640	(125)	3.3286	(70)	0.8261	(115)
UK	3.3274	(223)	1.3857	(223)	1.4413	(179)	0.8517	(209)
Total sample mean	3.5736	(3365)	1.7014	(3366)	2.1680	(2250)	0.8829	(3159)
P-value	<0.01		<0.01		<0.01		<0.01	

Means and number of observations (in parenthesis) are reported by country. P-value of an ANOVA is also provided to test cross-country mean differences. Table II contains a complete description of each variable.

Table VII. Regression of bank-debt maturity on firm-level and country country-level variables.

	(1)	(2)	(3)
Constant	0.4038	0.2272	-1.2152**
	(0.4088)	(0.4504)	(0.5613)
Firm-Bank Relationship:			
Soft information	-0.0204	0.0033	0.2846
	(0.1749)	(0.1771)	(0.1948)
Exclusivity	-0.5965***	-0.4994**	0.3365
	(0.2299)	(0.2324	(0.2632)
Two-three relationships	-0.4635**	-0.4017*	0.0502
	(0.2302)	(0.2328)	(0.2469)
Firm-Specific Characteristics:			
Size	0.2526**	0.3104***	0.3866***
	(0.1020	(0.1050)	(0.1103)
Age	-0.2332***	-0.2312***	-0.1507
	(0.0852)	(0.0865)	(0.0935)
Debt	-0.4478***	-0.4812***	-0.3441***
	(0.0712)	(0.0727)	(0.0744)
Availability	-0.3247*	-0.3202*	-0.3722*
	(0.1802)	(0.1827)	(0.1926)
Industry dummies:			
Manufacturing industry		0.0761	
		(0.2516)	
Construction		-0.2422	
		(0.2718)	
Wholesale trade		0.6135**	
		(0.2662)	
Retail trade		0.3826	
		(0.2577)	
Hotels / catering		-0.3922	
		(0.4295)	
Repair		0.1543	
		(0.4258)	
Transport / communications		-0.4567	
		(0.2892)	
Business services		-0.0050	
		(0.2933)	
Country dummies			
Austria			-0.7430
			(0.4527)
Belgium			-0.3137
			(0.4238)
Denmark			-1.2785**
			(0.5866)
Finland			-1.2925**
			(0.5402)
France			0.8860**
			(0.3463)
Germany			-0.2832
			(0.6096)
Greece			1.4005***
			(0.3614)
Iceland			-1.6799***
			(0.5847)
Ireland			-0.2012
			(0.4752)

Italy			1.2333***
			(0.3454)
Liechtenstein			0.9875
			(0.6079)
Luxembourg			0.0213
			(0.5031)
Norway			-1.9926***
			(0.6642)
Portugal			0.8299**
			(0.4113)
Spain			0.4567
			(0.5007)
Sweden			-0.4579
			(0.4411)
Switzerland			0.5525
			(0.4592)
UK			0.5879*
			(0.3529)
Industry dummies:			
Manufacturing industry			
Construction			
Wholesale trade			
Retail trade			
Hotels / catering			
Repair			
Transport / communications			
Business services			
Observations	1912	1912	1912
R^2	0.0332	0.0463	0.1138

*, **, ***: Significant at the 10%, 5%, 1% level

Table VIII. Regression of debt maturity by competition		
	LOW COMPETITIVE	**HIGH COMPETITIVE**
	(1)	**(2)**
Constant	-0.5353	-1.0235
	(0.8229)	(0.6292)
Firm-Bank Relationship:		
Soft information	0.3265	0.2129
	(0.2834)	(0.2727)
Exclusivity	-0.4282	0.7601**
	(0.4162)	(0.3409)
Two-three relationships	-0.7336*	0.4616
	(0.4059)	(0.3141)
Firm-Specific Characteristics:		
Size	0.3399**	0.4528***
	(0.1708)	(0.1466)
Age	-0.1101	-0.1586
	(0.1637)	(0.1152)
Debt	-0.3688***	-0.3402***
	(0.1090)	(0.1052)
Availability	-0.2699	-0.4703*
	(0.3027)	(0.2537)
Country Dummies:	0	
Austria	0	-1.3413***
		(0.4129)
Belgium	-0.4396	0
	(0.4367)	
Denmark	-1.2868**	0
	(0.5878)	
Finland	-1.3211**	0
	(0.5431)	
France	0	0.3116
		(0.2779)
Germany	0	-0.8465
		(0.5718)
Greece	1.2699***	0
	(0.3749)	
Iceland	-1.7114***	0
	(0.5886)	
Ireland	-0.5465	0
	(0.4792)	
Italy	0	0.7266***
		(0.2816)
Liechtenstein	0	0.4492
		(0.5738)
Luxembourg	0	-0.5459
		(0.4627)
Norway	-2.0402***	0
	(0.6799)	
Portugal	0	0.3004
		(0.3708)
Spain	0	-0.0151
		(0.4608)
Sweden	-0.5042	0
	(0.4457)	
Switzerland	0.4823	0
	(0.4690)	
UK	0	0
Observations	1057	855
R^2	0.10	0.09
*, **, ***: Significant at the 10%, 5%, 1% level		