What determines the decision to apply for credit? Evidence for Eurozone SMEs

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Abstract
This study examines the decision by firm owners to apply, or not, for intermediated debt. Based on a sample of SMEs in 9 European countries over the period 2009-2012, we examine firm characteristics, institutional and cultural factors, along with time, industry and year variables. We focus our analyses in two distinct groups of firms, those that applied for debt and firms that did not apply for fear of rejection. We find evidence that firm age, size and existing debt capacity matter, as do bank and liquidity conditions. We provide evidence for the first time that national culture correlates to the decisions to apply or not for credit. Policy implications of these findings are discussed.

Keywords: Entrepreneurial finance, Discouraged borrowers, Intermediated debt, Financial crisis, Europe

JEL Codes : G3

Introduction

The ability of firms to access finance is a recurring theme in the small and medium sized enterprise (SME) literature, and it has featured even more prominently in recent years (e.g. Holton et al., 2011). The onset of the economic recession, combined with the banking crisis has resulted in a very difficult business and financing environment for small firms. This is of particular interest to the policy makers concerned with stubbornly high rates of unemployment, as SMEs are an important source of job creation and account for over 60% of employment in many economies (e.g. Ayyagari et al. 2009). Adequate supply of finance for small firms is therefore a pressing concern.

During the current crisis, governments around the globe have introduced or accelerated a number of initiatives in an attempt to stimulate growth and investment by and in the sector, such as the Small Firms Jobs Act in the US and the Merlin agreement in the UK. Within the EU, various government initiatives have either been established or expanded, focusing on provision of exports credits, capital supports and enhancing access to operating capital for SMEs. In a number of peripheral euro area countries, government programs aiming at supporting credit supply to the SMEs have been set with explicit numerical targets for banks lending. Although the need for, and efficacy of such schemes is not apparent, they remain a cornerstone of government policy in most Western countries as government seek to promote employment creation and growth.

Concentration of initiatives on the supply side ignores the complex, multifaceted issues involved in the demand for, and supply of finance to SMEs. The literature on SME financing is often neatly characterized as 'supply side' or 'demand side' studies. The former is polarized into arguments suggesting oversupply (De Meza and Webb, 1987) or undersupply (Stiglitz and Weiss, 1981) of external finance. Demand side studies typically examine determinants of debt ratios or choice of external finance. Previous studies indicate the importance of many micro- and macroeconomic factors in determining resourcing of the sector, including firm-level factors (e.g. Sogorb Mira, 2005; López-Gracia and Sogorb-Mira, 2008), owner characteristics (Hussain and Matlay, 2007; Salazar, 2007), macroeconomic factors, institutional factors (Beck and Demirguc-Kunt, 2006), and cultural aspects. These studies typically examine determinants of debt ratios, choice of external finance (debt or equity), and aspects of financial management.

Whilst 'supply side' and 'demand side' studies dominate the SME financing literature, they generally do not give a completely accurate picture of the subject. Although it is a pertinent question, studies have only recently begun to examine whether firms require finance but are reluctant to ask for fear of refusal. Kon and Storey's (2003) seminal paper provided a theoretical basis for this issue, and it has been addressed by a number of researchers in empirical studies (Han et al., 2009). Notwithstanding the difficulty in ascertaining discouragement precisely (discouragement is not directly observable), it has been evidenced as a significant issue. One would expect levels of discouragement to be even greater in times of financial crisis resulting in a credit crunch, at which time small businesses may be particularly vulnerable (Udell, 2009).

This study investigates these perennial issues by examining the decision to apply for bank debt, or not apply for fear of refusal in relation to firms with adequate funding. We seek to add to the literature by investigating not only potential firm characteristic determinants, but also institutional, regulatory and cultural factors. We therefore aim to inform policy debate about intervention in SME financing markets, and whether such intervention is justifiable or needed.

Previous Literature on Access to Finance

SME financing is a multifaceted issue, influenced not only by country-level, institutional and regulatory factors, but also by micro level characteristics. This is reflected in a broad literature on the subject. Issues initially addressed in the literature concerned the adequate supply of finance, as debate polarized between over and under supply (De Meza and Webb, 1987, Stiglitz and Weiss, 1981). Subsequent studies investigated demand-side issues (e.g. Mac an Bhaird and Lucey, 2010), initially single-country (Michaelas et al., 1998), followed by multi-country (Hall et al., 2004). Other studies considered included institutional, regulatory, legal, macroeconomic and cultural issues. A number of stylized facts have emerged from theories of capital structure

tested in these papers. This evidence forms the basis for this empirical study examining potential determinants of discouragement in applying for investment finance.

It is widely accepted that firm characteristics are an important determinant of finance (e.g Mateev et al, 2013). In general, larger, older firms are likely to have greater reserves than younger, smaller firms. They are also likely to have greater access to finance, primarily because of reduced opacity over time, thereby reducing agency concerns. Additionally, older firms have established relationships with one or more banks, and these reputational effects result in easier access to bank debt. These borrowers are also more likely to apply for finance, given past experience (if it was successful). We hypothesise:

H1: Larger, older firms have a greater probability of applying for bank debt

This is, of course dependent on the present financial conditions in the firm. Businesses in financial distress will likely experience a much more difficult external financing environment than their well-resourced counterparts, notwithstanding age or size. Firms experiencing reduced profitability, along with decreasing financial slack will likely have a greater need for increased amounts of external finance, but will have more difficulty in accessing the required amount especially with banks using financial statement based lending technologies. This, in turn, means that firms experiencing financial distress are reluctant to apply for bank loans because of perceived reluctance of banks to advance debt[1]. This suggests:

H2: Firms with decreasing debt/assets ratios have a greater probability of applying for bank debt

H3: The perception of the willingness of banks to provide bank debt is negatively related to debt applications

Additionally, firms experiencing increasing profitability are likely to be reducing debt burdens, rather than seeking additional debt. From previous evidence, it is reasonable to infer that increased profitability results in increased liquidity, and therefore reduce the need for external finance (Vos et al, 2007). On the other hand, firms experiencing decreasing profitability are facing increasing demand for external sources of funding, but can be discouraged from applying for debt, especially from institutions, like banks, which use financial performance assessments of applicants as a basis for advancing finance.

H4: Firms with decreasing profitability have a greater probability of applying for bank debt.

Regarding increased concentration of banking markets, Han et al. (2009) find that low risk borrowers are less likely to be discouraged in concentrated markets than in competitive markets and that, in concentrated markets, high risk borrowers are more likely to be discouraged the longer their financial relationships. Thus we propose that:

H5: Greater concentration of the banking market is negatively related to the probability of applying for bank debt.

We also consider the effect of cultural factors on the decision to apply for debt, or not apply for fear of rejection taking the following four of Hofstede's measures into account:

Power Distance: Power distance scores inform us about *dependence* relationships in a country. It is defined as the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally. (The way power is distributed is usually explained from the behaviour of the *more* powerful members – the leaders rather than those led). In those countries with a high power distance score, there is more deference to authority. Banks could be thought of as being the more powerful organisations, with SMEs being the weaker, subordinate organisations (After all, the SMEs go to the banks requesting funding – banks are in the position of authority). Chui et al (2002) find that higher degrees of Schwartz and Sagiv's (1995) 'mastery' (which could approximate Hofstede's power distance) are associated

[1] You could also hypothesise that, given the macroeconomic environment and prevailing credit crunch that banks have significantly reduced lending, and therefore firms are reluctant to apply (given the perception abroad in the land that 'banks aren't lending'. And they aren't!)

with lower debt ratios. Additionally, in small power distance states "subordinates expect to be consulted". This suggests that SMEs in small power distance states may have a more consultative role with the banks – that they can at least bargain or negotiate their debt agreements with the banks. Therefore, one would arguably expect that this gives them access to higher levels of debt, or at least to negotiate for loans – much more than it does in higher power distance countries. It is hypothesised, therefore, that there is an inverse relationship between power distance and applications for debt.

H6: There is an inverse relationship between power distance and the probability of applying for debt.

Individualism: Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself and his immediate family. Collectivism as its opposite pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty.

Gleason, Mathur and Mathur (2000) argue from Hirshleifer and Thakor (1992) that cultures with high individuality tend to be associated with managers/owners looking after their own interests and enhancing their reputation. Therefore, they are likely to choose lower debt in order to maximise success. Personal freedom is an important component of the individualist pole, suggesting that SME owners do not wish to have high levels of debt. Additionally, as "autonomy is the ideal", this suggests that firm owners in highly individualistic societies will finance the firm with equity as much as possible. Thus, we hypothesise:

H7: There is an inverse relationship between individualism and the probability of applying for debt.

Masculinity: "A society is called masculine when emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life" (Hofstede and Hofstede, 2005: p.120).

De Jong and Semenov (2002) argue that the degree of masculinity is synonymous with support for competitive processes and outcomes and associated with greater stock market depth. This suggests the possibility that Hofstede's (2001) measure of the degree of masculinity might well have implications for the capital structure of SMEs by influencing the appetite of owner-managers for debt and possibly for long-term rather than short-term debt. SME owners pursuing growth may have a greater appetite for debt, and greater disregard for agency considerations. Therefore, we hypothesise:

H8: There is a positive relationship between masculinity and the probability of applying for debt.

Uncertainty avoidance: Uncertainty avoidance is the extent to which the members of a culture feel threatened by ambiguous or unknown situations. It is well established in the literature that SME owners desire to avoid uncertainty, and have an overriding goal to retain control of the firm. Additionally, Chui et al (2002) find that higher degrees of 'conservatism' (which could approximate Hofstede's uncertainty avoidance) are associated with lower corporate debt ratios. In addition, Gleason et al (2000) argue that because higher debt leads to greater risks of corporate bankruptcy, higher uncertainty avoidance should lead to lower levels of debt in corporate capital structures. Therefore, we hypothesise that:

H9: Uncertainty avoidance is negatively related with the probability of applying for debt.

Data and Methodology

Data

Our sample is based on the "Survey on the access to finance of SMEs" (SAFE), which consists of a questionnaire administered to a number of companies in the European Union, conducted on behalf of the European Commission (Directorate General Enterprise and Industry) and the European Central Bank (ECB). We worked with the first five waves (from the first semester of 2009 till the first semester of 2011). The companies in the sample were randomly selected from the Dun & Bradstreet database of firms. The sample is stratified by firm size class, by economic activity[2] and by country[3]. For many of the survey waves, the smallest countries of the

[2] At the 1-digit level of the European NACE-Nomenclature

euro area were not included in the survey "for efficiency reasons" (namely, Cyprus, Luxembourg, Malta, Slovakia, and Slovenia) and that is why for the sake of comparability, homogeneity and coherence we exclude them for all the waves of the sample. The number of firms in each of these strata of the sample was intentionally modified in the survey to increase its accuracy by activity and size class. The companies we work with are micro (1 to 9 employees), small (10 to 49 employees) and medium-sized firms (50 to 249 employees). The interviews were conducted through internet questionnaire or on paper, via fax, or (predominantly) by telephone. The person interviewed in each company was a top level executive (general manager, financial director or chief accountant). Full details on the survey and its administration are available from the ECB.

Variables

There are different versions of the questionnaire used for the survey. For the sake of homogeneity, we have only considered the items that were present in all the semesters' surveys.[4]
Our dependent variable is the survey item: *With respect to Banks' loans (either new or renewal): did you apply for them over the past 6 months, or not? 1: Applied, 2: No, because of possible rejection, 3: No, because of sufficient internal funds, 4: No, for other reasons, 9: DKNA.* The firm-semester observations for the last two responses were excluded because of insufficient information provided. Thus we find ourselves with three categories : firms that did not apply as they judged themselves to have sufficient funds (our base case), those that did and those that did not reply for fear of refusal.
Dependent and independent variables are described in table 1.

Methodology

We use a multinomial logit regression. This is similar to a logistic analysis but is appropriate for the case of more than two categories of the dependent variable which in addition, cannot be ordered in any meaningful way, as it is our case. As noted our main categories will be 1: Applied, 2: No, because of possible rejection and 3: No, because of suffic internal funds. The categories 4: No, for other reasons and 9: DKNA were excluded from the analysis, DKNA for obvious reasons and 4 due to inherent uncertainty as to what the answer represents.

The multinomial logit model assumptions are that: 1) data are case specific; that is, each independent variable has a single value for each case. So, there is no need for the independent variables to be statistically independent from each other; however, collinearity is assumed to be relatively low, as it becomes difficult to differentiate between the impact of several variables if they are highly correlated 2) assumption of independence of irrelevant alternatives (IIA): this assumption states that the odds of preferring one class over another do not depend on the presence or absence of other "irrelevant" alternatives. As all the potential responses are suitably collected in the questionnaire for our dependent variable, we argue that this assumption should not be much of a problem, as if we should add one more category the responses to the already existing categories should not change perceptibly.

One of the issues that merit a mention is that for computing multinomial logit, the regression needs one of the categories to be declared as the outcome base, and thus, the sign of the coefficients of the explanatory variables so calculated can be interpreted as the positive or negative influence that that independent variable exerts within a specific category *compared* to the one of the base variable. This is important feature to be taken into account, as we shall see later in the results section. In our case, we selected the category: 3: *No, because of sufficient internal fund*, as our base outcome, as this is the only one in which the offer of funds has absolutely no influence in its value.

Our *first* set of 10 firm characteristic variables includes the number of employees (SIZE), age (AGE), access to finance as most pressing problem (ACCESS), change in turnover (ΔTURNOVER), change in debt/assets ratio (FINSLACK), no financial debt (NODEBT), increase in need for bank loans (NEEDS), change in level of capital (CAPITAL), change in credit history (CREDHISTORY), and perception of willingness of banks to provide loans (WILLING). These are presented in vector (1).

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[3] The four largest euro area countries Germany, Spain, France, and Italy have a larger number of observations. Within these the survey is representative of the distribution of firms, but not necessarily elsewhere.

[4] Nevertheless, we run the regressions for those excluded variables we considered of some importance and that were present only in one or two of the waves, and the results were coherent with the ones of the more similar variable or concept present in all the surveys and that do enter the regressions as a explanatory variable.

Firm = F(SIZE, AGE, ACCESS, ΔTURNOVER, FINSLACK, NODEBT, NEEDS, CAPITAL, CREDHISTORY, WILLING) (1)

Our macroeconomic variables in vector (2) include Gross Domestic Product (GDP), and government bond yields (10YEAR).

Macro = M(GDP, 10YEAR) (2)

We include two regulatory variables in vector (3). These include regulatory quality (REGQUAL), and the quality of contract enforcement (CONTRACT).

Regulatory = R(REGQUAL, CONTRACT) (3)

We also include a vector of banking industry variables, including the rate of recovery under bankruptcy (BANKRUPTCY), the degree of concentration in the banking sector (HERFINDAL), availability of private sector credit (PRIVATECREDIT), and a measure of the prime rate of lending (BANKRATE). This is represented in the vector:

Banking = B(BANKRUPTCY, HERFINDAL, PRIVATECREDIT, BANKRATE) (4)

Our cultural variables are from Hofstede's (2001) measures of the degree of masculinity (MASC), the degree of individuality (INDV), the degree of power distance (POWD) and the degree of uncertainty avoidance (UNCA).

Culture = C (MASC, INDV, POWD, UNCA) (5)

We use four industry sectors including industry (IND), construction (CON), trade (TRADE), and services (SER). These are presented in vector (6).

Ind = G(IND, CON, TRADE, SER) (6)

We use five time dummies, representative of each iteration of the survey, and we also use 9 country dummies.

Our 'omnibus' model can therefore be represented by:

$$Apply_t^i = \delta_0^i + Firm + Macro + REgulatory + Banking + Culture + Ind + Year + Country + \xi_t^i \quad (6)$$

Results

'Base' model

Looking at the base case variables first, we find some consistent results. In all cases we find that larger companies are significantly more likely to apply and are less likely to be discouraged. This is consistent with the findings of Lawless, Holton, and McCann (2012) and Holton, Lawless, and McCann (2012) that older and larger firms are less likely to be rejected older firms are significantly less likely to be discouraged across all models. It is also consistent with the findings of Chakravarty and Xiang (2012) who analyse word bank data for

developing and emerging market firms. The findings of Artola and Genre (2011) suggest that younger and smaller firms suffer most when credit conditions dis-improve.

Companies who indicated that access to finance was a problem were more likely than the base case to apply, but the discouraged borrower hypothesis is indicated by the consistent finding that the magnitude of this variable is always greater for discouraged. In other words companies who find access to finance a problem are more likely to be discouraged than they are to apply. Consistent with the importance of cash flow increased turnover matters. It enters negatively in all cases, suggesting that rising turnover decreases the need to apply and decreases discouragement. It is however insignificant in the omnibus models, and significant only in the banking, regulatory and external models. Firms with financial slack are less likely to apply and less likely to be discouraged. This finding is consistent and significant across the broad range of results, with the exception of discouraged borrowers only in the culture model. Firms with a need for capital are both more likely to apply and more likely to be discouraged. The effect is significant across models and the magnitude is noticeably greater for applying firms. Credit history is important for discouraged borrowers, an improvement in same acting, as we might expect, to reduce discouragement. This finding is consistent and significant across models.

A perception of bank willingness to lend also acts as we might expect in terms of significantly reducing discouragement. However it also seems to act to reduce applications. This finding is unexpected.

Augmented models

Moving to the different models, we first examine a number of models where we add potential explanatory variables across domains. We separately examine banking, regulatory, macroeconomic and cultural variables. Evidence from Mauro (1995) stresses the importance for smaller firms of the external environment.

Turning to the *banking* variables, we find that the Herfindal index, our proxy for competition in the banking market, enters negatively, indicating that greater concentration in the banking market adversely affects the decision to apply. This echoes the finding of Han et al (2009) . However, greater concentration also reduces the odds of firms not applying, a contradictory result. We find that the loan rate enters positively for both applying and more so for not applying. This suggests that higher rates discourage borrowers, unsurprisingly, and that discourages applications. Brown et al. (2011) note that high interest rates serve both as a credit availability signaling mechanism and as a screening mechanism. It is entirely probable that this dual role is reflected here with higher quality projects being put forward for application by firms knowing that there is credit rationing. Poorer quality project firms respond to this credit rationing by not applying knowing the combination of poorer quality of their projects and lower credit availability will impact on them. We find that a higher rate of recovery of loans has no impact on the decision to apply but marginally reduces the incidence of discouragement. This is consistent with the findings in Brown et al. (2011)

Examining further *regulatory* variables we find these to impact only on the decision to apply, and that this does not map to the omnibus models. Increased regulatory quality and increased contract enforcement reduce the likelihood of applying for a loan. Both Vitols (1998), Wieneke and Gries (2011) stress the importance of regulatory quality (albeit mainly in the financial sector) as a context for firm credit. In a developing county setting Chakravarty and Xiang (2012) find little impact from regulatory or institutional quality variables on discouragement.

Macroeconomic variables show that higher government bond yields (reflecting financial sector stress as suggested by Lawless, Holton, and McCann (2012)) increase discouragement. This effect persists in the omnibus models. Although statistically significant the magnitude of the GDP per capita variable is effectively zero. A similar finding, of the relative unimportance of country macroeconomic development, is found in Chakravarty and Xiang (2012). The ratio of private credit to GDP does not appear to impact. This is contrary to the finding in Lawless, Holton, and McCann (2012). Overall, the effect of the macroeconomic variables suggests, potentially, that these acts as prior sensoring mechanisms for other variables, such as overall banking sector variables. Thus, macroeconomic stress translates into SMEs financing environments via more direct channels relating to banking sector overall supply of credit conditions and firms' own factors determining the SMEs demand for credit and propensity to apply for credit.

Analysis of the *cultural* variables yields some very interesting insights. With respect to individualism, we confirm a negative sign for the applied group as SMEs' managers tend to be more conservative and borrow less in high individualist countries. With respect to the discouraged group, there is no a priori expectation because the fear of rejection does not seem to be linked with individualism. In fact, more individualistic agents may well decide to "do their own thing". In this context, we note that individualism is inversely related to herding. In a context where there is a pervasive "gloom" regarding finance a more individualist agent (or one in a country exhibiting higher degrees of individualism) might well decide to go against the prevailing notion, and reject the "there is no point in applying" meme. See Beckmann, Menkhoff, and Suto (2008) for further details on this. This would result in a negative relationship, which we find here in reputational banking (the case especially salient for Europe and for SMEs in particular). Rejection is a negative signal for future capital raising capacity, hence more individualist SMEs might opt for more ex-ante secured channels of funding and this can appear to be an ad hoc correlate to rejection of the 'there's no point in applying' view.

Regarding masculinity, we observe a positive relationship for the group that applied for finance as hypothesised. For the discouraged group, we have an expectation of a negative relation, as discouragement should be overcome, to some extent, by the risk and competitive element of masculinity. We do not find this, finding instead that greater masculinity is associated with a higher, not lower, incidence of non-application.

Regarding uncertainty avoidance, we do not find a significant relationship for the 'applied for finance' group. We do not expect a particular sign in the discouraged group: avoidance of risk by the part of the debtors should not influence the probability of rejection by the part of the creditors. The negative sign found in the regression could indicate perhaps that a degree of self censoring is at work, with greater uncertainty avoidance resulting in earlier and higher thresholds for investment, resulting in increased confidence in application for finance. (for some evidence congruent on this see Islam and Kantor (2005), Huang (2008) and Carmona, Iyer, and Reckers (2011))

Conclusion and Policy Implications

The policy implications that flow from these findings are clear. First, major determinants of the application decision operate at a firm level. These are generally not under the control of government or policy organizations and are thus not amenable to first order control. Second, macroeconomic variables seem to mainly operate via the bond yield, again more a target of government action than a policy variable, and potentially via the link between macroeconomic environment and the banking sector environment, as is consistent with the nature of the current crisis reflected in the data. Reducing the pressures of the current crisis on sovereign yields will not induce more applications but will reduce discouragement (resulting indirectly in more applications). This is pivotal to the current monetary policy debate that is focusing on alleviating the malfunctioning of the transmission mechanism for overall euro area monetary policy as, in part, the means for normalizing the operations of the SMEs credit markets. Third, banking concentration, an issue that government can address, has a double edged effect. Banking openness to lending also has this effect, but credit history (which can be improved at a national level by better bankruptcy resolution laws) does impact on discouragement. Finally, national culture, slow if not invariant to change, matters. Governments, in short, can do little overtly to reduce discouragement.

Table 1 : Variables Included

Variable	***Description***	***Measure***
SIZE	Firm size	Defined by number of employees[5], categorical variable, 1:Micro, 2:small, 3: Medium
AGE	Firm age in years	1: < 2 years, 2: 2 to 4 years, 3: 5 to 9 years, 4: > 10 years.
ACCESS	Dummy indicating whether the firm perceives access to finance as its most pressing problem.	1 financing is the most important problem, 0 otherwise
Δ TURNOVER	Change in firm turnover in the past 6 months.	1:Decreased, 2: remained unchanged-3: increased
FINSLACK	Change in debt/assets ratio over the past 6 months.	1:Decreased, 2: remained unchanged-3: increased
NODEBT	Dummy variable indicating whether firm has financial debt	0=debt; 1=nodebt
NEEDS	Categorical variable indicating need for bank loans in past 6 months.	1:Decreased, 2: remained unchanged-3: increased
CAPITAL	Categorical variable indicating firm's own financial capital level in past 6 months.	1:Decreased, 2: remained unchanged-3: increased
CREDHIST	Categorical variable indicating firm's credit history in past 6 months	1:Decreased, 2: remained unchanged-3: increased
WILLING	Firm's perception about bank's willingness to provide loans in past 6 months	1:Decreased, 2: remained unchanged-3: increased
GDP	Gross Domestic Product	Natural log of level of GDP per capita, current € terms.
BANKRUPTCY	A measure of the extent of average recovery of credit under bankruptcy	Percentage (Source: World Bank Doing Business Database)
REGQUAL	A composite measure of overall quality of regulation and enforcement	Index (Source: World Bank Doing Business Database
HERFINDAL	A measure of concentration in banking	Herfindal index for credit institutions, (Source: ECB)

[5] Turnover and sales were also used as measures of size, with similar results.

CONTRACT	A composite measure of ease of contract enforcement	Index (Source: World Bank Doing Business Database
BANKRATE	Bank lending rate	Bank overdraft rate for new business, non-financial corporations, all maturities, Annualised APR, average of 6 months of survey period (source Eurostat)
PRIVATECREDIT	Private Sector Credit	Ratio of private sector credit to GDP, ratio variable (Source World Bank)
MASCULINITY	A measure of masculinity	Natural log of index (source: www.geert-hofstede.com)
INDIVIDUALITY	A measure of individuality	Natural log of index (source: www.geert-hofstede.com)
POWERDISTANCE	A measure of power distance	Natural log of index (source: www.geert-hofstede.com)
UNCERTAIN	A measure of uncertainty avoidance	Natural log of index (source: www.geert-hofstede.com)

TABLE 2. Results for the multinomial logit for the base model.

"APPLIED" GROUP	**Coeff.**	Sig	Did not apply for debt for fear of refusal	**Coeff.**	Sig
SIZE	0.251			-0.326	
	(9.220)	***		-(5.560)	***
AGE	0.006			-0.186	
	(0.190)			-(3.910)	***
ACCESS	1.092			1.682	
	(16.410)	***		(18.510)	***
TURNOVER	-0.001			-0.102	
	-(0.030)			-(1.940)	*
FINSLACK	-0.254			-0.113	
	-(7.810)	***		-(2.030)	**
NO DEBT	-0.646			-0.267	
	-(4.140)	***		-(1.020)	
NEEDS	1.120			0.473	
	(29.170)	***		(7.360)	***
CAPITAL	0.074			-0.150	
	(1.890)	*		-(2.180)	**
CREDHIST	-0.015			-0.177	
	-(0.350)			-(2.500)	**
WILLING	-0.167			-0.971	
	-(4.530)	***		-(12.660)	***
INDIVIDUALISM	0.018			-0.023	
	(1.490)			-(1.200)	
MASCULINITY	-0.005			0.045	
	-(0.580)			(3.210)	***
POWER DISTANCE	0.000			0.070	
	(0.020)			(2.860)	***
UNCERTAINTY AVOIDANCE	0.025			0.006	
	(2.810)	***		(0.390)	
10YEAR BOND YIELD	0.090			0.107	
	(3.250)	***		(2.630)	***
GDPPER CAPITA	0.000			0.000	
	-(3.290)	***		-(1.830)	*
HERFINDHAL	-2.400			-3.847	
	-(2.430)	**		-(1.940)	*
PRIVATECRED	-0.003			-0.008	
	-(1.030)			-(1.410)	
BANK RATE	0.038			0.018	
	(5.420)	***		(1.560)	
CREDIT RECOVERY	0.004			0.000	
	(1.140)			-(0.080)	
REGULATORY QUALITY	0.121			0.402	
	(1.300)			(2.160)	**
CONTRACT ENFORCEMENT	0.027			0.056	
	(0.850)			(0.890)	
CONSTANT	-5.682			-8.312	
	-(2.970)	***		-(2.16)	**
Number of observations	11393			11393	
Chi2	3384			3237	
P-seudo R2	0.162			0.155	
Log-likelihood	-8733			-8807	

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