

Do the types of financial system, corporate governance system and legal system of the borrower's country influence the interest rate spread of syndicated loans?

Nuno Moutinho

email: nmoutinho@ipb.pt
Instituto Politécnico de Bragança
Campus de Santa Apolónia
5301-857 Bragança

Carlos Alves

CEMPRE - Faculdade de Economia do Porto
email: calves@fep.up.pt
Faculdade de Economia do Porto
Rua Dr. Roberto Frias
4200-464 Porto

Francisco Vitorino Martins

email: vmartins@fep.up.pt
Faculdade de Economia do Porto
Rua Dr. Roberto Frias
4200-464 Porto

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Abstract

The companies' choice of financing sources seems to be determined by a set of conditions related not only to their characteristics and situation, but also to the institutional environment – in particular regarding available information and the effective protection of investors' rights – in which they operate. In this way, the characteristics of the borrower's country may be relevant in determining the cost of syndicated bank financing. The purpose of this study is to analyse if the type of financial system, the type of governance system and the type of legal system of the countries influence the cost of financing obtained by their borrowers through syndicated loans.

Using data of 85.220 tranches, corresponding to 53.103 syndicated loans, 25.511 borrowers from 122 countries during 2000-2012 period, we find that borrowers pay lower spreads when they belong to countries with a bank-based financial system, which is in accordance with the existence of more relationship lending. As for the governance system, borrowers from continental countries have lower interest rate spreads on their financing, suggesting that “inside” control of companies' life by banks yields lower costs of financing than “outside” control in a market relationship context. Lastly, considering the countries' legal system, we verify that borrowers from civil law countries achieve cheaper financing than borrowers from common law countries, while borrowers from socialist countries are those with the most expensive financing. Borrowers from German civil law countries have the lowest spreads, followed by French civil law and Scandinavian civil law. Our results suggest that the borrower's country is an important issue in loans and that its financial system, governance system and the protection of investors' rights are determinants of the companies' spreads.

Extended abstract

Companies need equity and, generally, also debt in order to invest and also to carry on their daily production activity. Equity financing is obtained through retained earnings and new equity issues. Debt financing, on the other hand, can be obtained not only through traditional bank loans, but also through institutional non-banking loans (vg, leasing or factoring), private investors (market issue of bonds or other debt securities) or loans from other entities (shareholders, government agencies or others).

Corporate finance manuals have long indicated that companies should choose a capital structure that maximizes their value, and also explain as a company's cost of capital falls, the number of projects with positive net present value increases and so do the opportunities the company has to create value. Therefore, companies should choose sources of capital that allow them to minimize their weighted average cost of capital and, *ceteris paribus*, maximize their value.

There are, however, institutional constraints that prevent companies (or, at least, some of them) from permanently choosing optimal sources of financing. In reality, bond and stock markets, for example, are out of the grasp of small and medium sized companies (Beck et al., 2008). Bank loans, on the contrary, are used by all companies, regardless of their size. This makes banks the main source of debt financing for companies (Gorton and Winton, 2003; Drucker and Puri, 2007), especially in developing countries (Ayyagari et al., 2012).

Economic theory also indicates that the cost of debt capital for each company depends on two fundamental variables: maturity and risk. In reality, the term structure of interest rates is only rarely horizontal. Frequently, to different maturities correspond different interest rates. Therefore, even for high quality issuers, different issue maturities carry different levels of cost of debt. Furthermore, still in accordance with the teachings of corporate finance manuals, to the risk free interest rate must be added a risk premium. For this reason, *ceteris paribus*, issuers with different risk levels must bear different interest rates.

However, just as institutional factors may interfere with a company's access to different financing sources, so they may affect the cost of each of these sources. That is, the cost of debt capital may reflect not only risk and maturity, but also the effect of institutional factors.

There is plenty of literature on the implications of the institutional environment of the country where the company has its business in its choice of financing¹. However, there is far less

¹ There are other important institutional considerations beyond fiscal differences between countries, since these have long been documented in literature as having great significance, both in determining the optimal capital structure, and in the weighted average cost of capital.

literature, and far less conclusive, on the impact of that same institutional environment on the conditions of financing. This study intends, as explained below, to contribute to bridge that gap.

In fact, several studies that analyse the capital structure in various jurisdictions provide evidence of the importance of country-specific factors. Among these, the principal that have been presented are differences in the institutions (Fan et al., 2012; Booth et al., 2001; Demirgüç-Kunt and Maksimovic, 1999), legal environment (Demirgüç-Kunt and Maksimovic, 1998; Rajan and Zingales, 1998; La Porta et al., 1997, 1998; Bancel and Mittoo, 2004; Fan et al., 2012), the financial system (Lopez-Iturriaga and Rodriguez-Sanz, 2007; Rajan and Zingales, 1995; Demirgüç-Kunt and Maksimovic, 1996; De Jong et al., 2008), enforcement (Lopez-Iturriaga and Rodriguez-Sanz, 2007; La Porta et al., 1998; De Jong et al., 2008), protection of shareholders' rights (De Jong et al., 2008) and protection of debtholders rights (De Jong et al., 2008; Giannetti, 2003). Generally, these studies suggest or provide evidence that the institutional factors of the borrower's country that pertain to the effective protection of the rights of investors are important to explain the companies' choice of financing mix.

In the same sense, abundant literature indicates that the rational choice of a source of financing depends, among other factors, on the information available to investors and the ability these have to monitor the company's life (Diamond, 1984; Fama, 1985; Denis and Mihov, 2003), as well as the ability of debt holders to enforce their rights – law enforcement – (Bae and Goyal, 2009; Qian and Strahan, 2007; Safavian and Sharma, 2007). On the other hand, available information and the protection of investor rights are different in different countries, so that the choice of optimal capital structure and financing source should differ among countries, reflecting other factors beyond the intrinsic characteristics of companies (Ayyagari et al., 2012). In accordance with this hypothesis, Demirgüç-Kunt and Maksimovic (1999, p. 296) consider that “*given that the amount of information available to investors and their ability to protect their investments depend on the financial and legal institutions, the financial structure of companies should be systematically different from country to country*”. In the same sense, Diamond (1993) and Flannery (1986) suggest that higher levels of information asymmetry between managers and shareholders are reflected in the use of higher levels of debt and, consequently, in a more leveraged capital structure. Information asymmetry can, therefore, be an important constraint that influences the optimal mix of equity and debt capital in a company (Titman et al., 2003).

In this manner, the companies' choice of financing sources seems to be determined by a set of conditions related not only to their characteristics and situation, but also to the institutional environment – in particular regarding available information and the effective protection of investors' rights – in which they operate (La Porta et al., 1997, 1998; Demirguc-Kunt and

Maksimovic, 1996, 1998, 2002, 2008; Cheng and Shiu, 2007; Lopez-Iturriaga and Rodriguez-Sanz, 2007; Utrero-González, 2007; Bianco et al., 2005; Giannetti, 2003; Titman et al., 2003; Booth et al., 2001; Rajan and Zingales, 1995).

Concluding, abundant literature indicates that the institutional environment of the country where the company is located has an impact in the company's choices in terms of financing sources. However, there is far less literature, and far less conclusive, on whether these institutional factors have an equally great impact on the conditions of financing from each of those sources, namely in the costs of that financing.

Recently, some papers have appeared studying the costs of debt financing in this perspective, seeking to find whether there are relevant differences between financing costs for companies in different countries. In this sense, Carey and Nini (2007) conclude that, regardless of nationality of lender or borrower, loans are cheaper (that is, have lower spreads) when issued in Europe than when issued in the USA. Houston et al. (2007) have also found that loan spreads depend on the borrower nationality and that syndicated loans to European companies are cheaper than those granted to American companies. Both studies find evidence that companies prefer banks in their domestic market, which (possibly due to lower information asymmetries) is reflected in lower financing costs. Carey and Nini (2007) find evidence that when the borrower issues outside its domestic market, it tends to do so in Europe because funding is cheaper, whereas Houston et al. (2007) conclude that large companies pay lower interest rates when they borrow abroad. Lastly, Houston et al. (2007) conclude that European lenders have no competitive or regulatory advantage over North-American ones.

These works provide enough evidence to imply that the characteristics of the borrower's country may be relevant in determining the cost of syndicated bank financing. The purpose of this study is to verify whether specific factors common to various countries influence the cost of financing obtained by their borrowers through syndicated loans.

In particular, this study analyses the influence of three distinctive characteristics of countries: the type of financial system (and its level of development), the type of governance system and the type of legal system. In order to analyse the financial system, we use the works of Levine (2002) and Demirguç-Kunt and Maksimovic (2001) to separate countries with market-based systems from those with bank-based systems, but we also control for the country's level of financial development, calculated according to Levine (2002) and Beck and Levine (2002).

The reasoning behind this study is that in countries with a bank-based financial system, there is a close and long-term relationship between financing banks and borrowers, which potentially allows them to mitigate the information asymmetry and facilitate the control and assessment of

management quality and, consequently, may materialize in lower financing costs than those in market-based economies. In fact, financial institutions in bank-based financial systems gather private information on the borrowers and can, therefore, adequately monitor the company (Levine, 2002). Furthermore, those institutions can, and often do, influence management, thereby being able to improve the efficiency of investments and their relevance to economic growth (*vide*, among others, Levine, 2002). In the same line of reasoning, Rajan (1992) refers that the banking relationship that manifests in successive loans through time may be seen as the repetition of informed debt or inside debt from the same lender (bank), whereas debt raised in the market may be seen as arm's length financing or outside debt, in which case the lender has less information about the borrower. In this way, since companies from countries with a bank-based financial system have a closer relationship with financing institutions, – relationship lending – and the information asymmetry tends to be lower, it is to be expected that borrowers in these countries can obtain financing with lower spreads.

On the other hand, a more prominent capital market promotes a more efficient capital allocation, supplying risk management tools and stimulating the performance through performance-based remuneration and compensation schemes (Levine, 2002). In addition, since monitoring has costs, bank financing may be more expensive than market financing (Chakraborty and Ray, 2006) and provide informational advantage to banks that have a relationship with a company. These can, then, use this advantage to demand higher interest rates, disproportionate to the company's level of risk (Sharpe, 1990; Rajan, 1992).

Therefore, if banks promoting syndicated loans have to compete with these markets in market-based financial systems, there may be consequences to the costs of financing when compared with other countries. From this perspective, we would expect financing costs to be lower in market-based financial systems than in bank-based systems.

Note, however, that some literature suggests the importance of analysing and controlling the influence of the level of development of a country's financial system in the costs of financing (Demirguç-Kunt and Levine, 2001). This literature identifies countries classified as having a bank-based system, with lower banking development indicators than others with market-based systems. The suggestion is, therefore, that the country's level of financial development should be controlled for when analysing the influence of financial system in financing costs. This shall be done in this study.

There are, therefore, reasons to think that, *ceteris paribus*, borrowers from countries with bank-based financial systems may bear different financing costs than borrowers from countries with market-based financial systems. As mentioned, the extant literature presents basis to admit this

possibility, but does not answer the question of whether it is, in fact, verified, even though plenty suggests that bank-based systems lead to lower financing costs to firms with higher information asymmetry problems. There is, therefore, no evidence that allows the clarification of whether or not there is a difference in these costs, what its magnitude or signal is, and whether it exists for all issuers, or specifically for those with less public information on their level of credit risk. This study works to help bridge that gap.

Another dimension in this study is the corporate governance model characteristic of the borrower's country. In effect, among others, Shleifer and Vishny (1997), Schmidt and Tyrrel (1997) and Franks and Mayer (1997, 2001) consider that there are two predominant corporate governance systems and classify countries with, on the one hand, an anglo-saxon governance system and, on the other hand, countries with a continental governance system.

The anglo-saxon system is a market-oriented governance system, where property is dispersed, the controlling shareholders are institutional investors, and the capital market is large and liquid. The continental governance system is based on bank financing, property is concentrated in government, families, banks or companies and the capital market is small and illiquid (Alves, 2005; Cernat, 2004; Cuervo, 2002; Schmidt and Tyrrel, 1997).

Therefore, with banks having a more active and relevant role in corporate governance in the continental system, one of two effects may occur. On the one hand, they may gather more information and, as a consequence, be in a condition to finance the companies without added premium due to information asymmetry. On the other hand, they may use the "power" obtained from this more relevant role to charge higher interest rates and fund companies in worse conditions than the market would.

On another angle, it is known that the anglo-saxon governance system is based predominantly on the disclosure of (audited) information to the market, in the market's discipline and corporate control effect and in aligning interests through variable remuneration mechanisms. Therefore, debt financing may become cheaper, leading to the conclusion that, all else being equal, borrowers from countries with different governance systems may bear different levels of debt financing costs. It is, consequently, important to analyse this issue empirically and find out which effect is the strongest. This is also a goal of this study.

Finally, countries may be classified according to their legal system (La Porta et al. 1997, 1998). This divides countries between those with civil law, in which courts only apply formal laws (that is, approved by the parliament, or by the government or administrative authorities, under legislative authorization), and those with common law, where law is also created or perfected by judges, insofar as a decision made in a case affects the laws applied in future cases. In this case,

contrary to what happens in civil law countries, judges have the authority to make law, establishing a precedent based on moral standards.

Thus, apart from the importance of the financial and corporate governance systems, it is also important to verify if the type of legal system, as defined by La Porta et al. (1997, 1998), is relevant for bank financing. The legal system allows us to identify different levels of investor protection and efficiency in contract execution. Common law countries tend to ensure higher protection of shareholder and debtholder rights, whereas French civil law countries give weaker protection levels, with German and Scandinavia civil law countries presenting intermediate levels of protection (La Porta et al., 1998). As for law enforcement, German and Scandinavian countries are presented, in the literature, as the most efficient, and French civil law countries as the least efficient (La Porta et al., 1998).

La Porta et al. (2000) report that in countries with more creditor rights bank loans are more common, whereas in countries with more shareholder rights companies tend to use the capital market more. According to La Porta et al. (1997, 1998), countries with common law legal systems present more shareholder protection than countries with civil law legal systems, so the former tend to have more equity than long-term loans. Therefore, it is to be expected that in the countries with civil law systems there tends to be more relationship lending. In countries with more creditor rights protection we expect borrowers to tend to have more bank loans, at lower costs. As such, it would not be surprising if borrowing companies in countries with common law systems contracted loans with lower interest rates². Consistent with La Porta et al. (1997) and Demirgüç-Kunt and Maksimovic (1998), Beck et al. (2002) show that the legal system influences the type of debt financing obtained by the company and that companies from common law countries get higher levels of financing.

The costs of debt financing, according to some literature, depend (apart from other factors) on the issuer's country and the place of issue or placement of the loan. In fact, Carey and Nini (2007) conclude that, *ceteris paribus*, syndicated loans are cheaper when placed in Europe than in the USA. Houston et al. (2007) find that loan spreads vary from country to country and depend on the borrower nationality. They find, also, that syndicated loans granted to European companies are cheaper (that is have lower spreads) than those granted to north-american companies. Both studies find evidence that companies tend to seek financing with banks in their

² La Porta et al. (1997, 1998) support that a better legal protection allows companies to obtain financing at better conditions, so that countries with better legal protection have more outside financing. In terms of financing, it is important to know the rules relating to the respect for loan security and the possibility to obtain assets in case of default. Countries with weak investor protection, measured by legal rules and the quality of law enforcement, have a less developed capital market and companies end up using banks as the source of funding.

domestic market, and that this fact is reflected in lower financing costs. Carey and Nini (2007) also show that when the borrower obtains its loan outside its country, it tends to issue in Europe because it is cheaper, while Houston et al. (2007) conclude that large companies pay lower interest rates when they borrow abroad³. There is, then, evidence that financing costs are influenced by the borrower nationality, but the placement of the loan, and that the remuneration demanded by lenders to compensate them for similar risk level and type may be different in different countries or, at least, in different continents (Europe and USA).

As for why this happens, Giannetti and Laeven (2012) consider that domestic banks have informational advantages (that is, they face less information asymmetry before the borrower) in evaluating credit risk for companies in their own country, they have a better understanding of the political and economic risks of their own country, and they are influenced by the familiarity that comes with geographic proximity and cultural affinity with those companies. In a similar way, Agarwall and Hauswald (2007) find that the proximity to the borrower facilitates the gathering of private information by local banks, which gives them a competitive advantage toward foreign competitors and allows them to conquer a largest share of the local market. Dass and Massa (2009), also in accordance with these results, support that geographic proximity improves the bank's ability to monitor the company's managers and, therefore, improves the company's governance. In this context, Petersen and Rajan (2002) find evidence of a differentiation in loan interest rates according to geographic distance between the borrower's headquarters and that of the lending bank in the USA, and that the distance effect has been increasing through time. However, in small companies the distance may devalue the credit relationship, since it makes the relationship with the bank less intense and leads to higher interest rates. Finally, Degryse and Ongena (2005) find that banks that are geographically close to small companies have lower costs in gathering information and monitoring credit, so they can attribute better conditions to their clients, when compared to those offered by banks that are farther away. Interest rates fall with the distance between the company and the lending bank, and increase with the distance between the company and the competing banks.

In summary, the above mentioned literature seems to indicate that geographic proximity allows a decrease in information asymmetry between lender and borrower and that, *ceteris paribus*, this materializes in lower financing costs. No wonder, therefore, that the choice of the source of financing (along with the conditions of that financing) is equally dependent on the information made available to investors and their ability to monitor the company (Diamond, 1984; Fama,

³ Giannetti and Laeven (2012) presented evidence that in periods of financial crisis, banks prefer to finance domestic borrowers, a phenomenon known as the fly home effect, which appears to suggest that the proximity to the domestic market increases the lenders' knowledge and decreases the costs of monitoring and negotiation. Berger et al. (2003) show that domestic banks tend to be the principal financiers of small businesses and the most informationally opaque borrowers in their own countries.

1985; Denis and Mihov, 2003). Thus, so the capital structure and the main sources of financing tend to differ from country to country, regardless of intrinsic company characteristics (Demirgüç-Kunt and Maksimovic, 1998).

The importance of information leads to the hypothesis that regulatory matters are determinant in the costs of financing. However, Houston et al. (2007) support that European creditors do not have a competitive and regulatory advantage, so this issue would not be the reason for the lower spreads verified in syndicated loans in this continent⁴. However, a lot of literature provides evidence that a determinant factor in the costs of debt financing is the creditors' ability to uphold their rights (Bae and Goyal, 2009; Qian and Strahan, 2007; Safavian and Sharma, 2007).

Ayyagari et al. (2012) state that the information made available, investor rights and their effective protection vary from country to country. Accordingly, companies' financial choices are determined by a set of factors related not only to the characteristics of the company itself, but also the institutional environment it operates in (La Porta et al., 1997, 1998; Demirguc-Kunt and Maksimovic, 1996, 1998, 2002, 2008; Cheng and Shiu, 2007; Lopez-Iturriaga and Rodriguez-Sanz, 2007; Utrero-González, 2007; Bianco et al., 2005; Giannetti, 2003; Tan et al., 2012; Booth et al., 2001; Rajan e Zingales, 1995). An efficient institutional environment – in what concerns information asymmetry and the effective protection of investor rights – may contribute to mitigate the opportunistic behaviour and information asymmetry problems between managers, shareholders and debtholders. Therefore, the institutional environment may have an impact not only on the financial choices of companies, but also on the conditions of financing.

In this study, we analyse the importance of the financial, governance and legal systems to determining syndicated financing costs. The underlying goal is to answer the following questions: *Does the type of financial system of the borrower cause differences in the costs of financing through syndicated loans? How does the level of financial development of the country interfere with the answer to the above question? Do differences in governance systems imply differences in the cost of financing through syndicated loans? Is a country's legal system determinant in the costs of financing through syndicated loans?* This means that we intend to produce empirical evidence that allows us to know how the financial, governance and legal systems influence (and if they do) the cost of financing through syndicated loans. The sample

⁴ Hao et al. (2012) analyse how differences in banking regulation and supervision in 49 countries affect the prices of loans within the country and abroad and find evidence that domestic creditor charge lower interest rates in countries with a higher degree of integration between banking and commerce (defined as the possibility of banks participating in the capital of non-financial companies and vice-versa) and verify that the price advantage disappears in countries with a high level of bank concentration.

used was obtained from the Dealscan database, by Thomson, and concerns 89 128 loans tranches, corresponding to 54 195 loans of 26 308 non-financial borrowers from 122 countries, in the period between 2000 and 2012.

This work presents several contributions. Firstly, the extant literature is mainly concerned with the behaviour of companies in various countries in terms of capital structure, whereas this research analyses the impact of the borrower's country's characteristics in financing costs. Secondly, it analyses the influence of specific factors in the borrower's country, classifying them according to financial, governance and legal systems, factors which, to our knowledge, have not yet been studied. Thirdly, there have been studies investigating how the costs of bank loans to borrowers are influenced by a proximity relationship with lenders. This relationship lending may occur through deposits (Black, 1975; Blackwell and Winter, 1997), bond placement services (Yasuda, 2005; Yasuda, 2007; Bharath et al., 2007; Drucker and Puri, 2007), share placement services (Drucker and Puri, 2005), IPO support services (Schenone, 2009) and services in Mergers and Acquisitions (Dittman et al., 2010; Guner et al., 2008; Bodnareck et al., 2009). Other authors have evaluated the effect of previous relationships (Bharath et al., 2008), of geographical distance between lender and borrower (Petersen and Rajan, 1994; Degryse and Ongena, 2005) and the duration of the relationship (Petersen and Rajan, 1994; Berger and Udell, 1995; Degryse and Van Cayseele, 2000; Ongena and Smith, 2001) in financing costs. In this study, by adding another side to the issue of relationship lending, we verify how the financial, governance and legal system in each country influences financing. Lastly, this work introduces the importance of the characteristics of a borrower's country in the cost of syndicated loans. Therefore, the spread that borrowers must bear is affected not only by the company's attributed, but also by the particularities of the countries.

The results provide evidence that borrowers pay lower spreads when they belong to countries with a bank-based financial system, which is in accordance with the existence of more relationship lending. As for the governance system, borrowers from continental countries have lower interest rate spreads on their financing, suggesting that "inside" control of companies' life by banks yields lower costs of financing than "outside" control in a market relationship context. Lastly, considering the countries' legal system, we verify that borrowers from civil law countries achieve cheaper financing than borrowers from common law countries, while borrowers from socialist countries are those with the most expensive financing. Borrowers from German civil law countries have the lowest spreads, followed by French civil law and Scandinavian civil law. Thus, in the countries mentioned in existing literature as giving the lowest protection of debtholders (civil law countries), borrowers have lower spreads in their financing, in line with Carey and Nini (2007) and Houston et al. (2007), which may induce some

questioning of the label attributed to these countries in terms of debtholder protection. As for law enforcement, German civil law countries have the best performance and the lowest spreads, so in this case there is a consistency between this label and the costs of debt. Generally, we conclude that the costs of financing vary with debtholders' legal rights, legal system and the classification of the governance system.