

Affiliates' External Financing Policy: Does Parent Firm Nationality Matter?*

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Abstract

This paper examines whether and how bank debt concentration is affected by foreign group affiliation. Affiliates of foreign business groups use about nine percent less bank debt than affiliates of domestic groups. Further, the results indicate that geographical and cultural distance between parent and affiliate countries raise barriers when accessing external financing. The bank debt usage decreases even further, if affiliates and parent firms depend on different legal systems or the degree of legal enforcement in the parent firm's country is low. These results remain valid after controlling for the substitutability between bank and internal financing via the internal capital market.

Keywords: Business groups, Bank debt, Internal capital markets, Ownership structure, Corporate governance, Distance, Multinational firms.

JEL-Classification codes: G3, G32

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1 Introduction

Over the past decades, the classic view of dispersed ownership as depicted by Berle and Means (1932) has gradually changed into a more diversified outlook on the manner in which the ownership of firms is structured.¹ One form of concentrated ownership that prevails around the world is corporate blockholdership (La Porta, Lopez-de-Silanes, and Shleifer, 1999). In Europe, for example, more than half of the largest non-financial firms have a dominant corporate shareholder.²

This type of ownership often results in the creation of business groups. In such groups the relations between member firms can take on various forms. At one end of the spectrum are more hierarchical structured groups where corporate ownership enables a large corporation to control a set of firms, such as pyramids. At the opposite end, firms that pursue a common interest use corporate ownership to form informal associative groups where decision making is coordinated (Schiantarelli and Sembenelli, 2000). All business groups, however, have the defining characteristic that their member firms — also referred to as affiliates — are separate legal entities that can access external financing, but at the same time also can obtain financing via the group's internal capital market. This distinct organizational structure enables scholars to gain more insight in the functioning of internal capital markets by directly examining the debt policies of affiliates and the influence of internal capital markets on this decision-making process. Empirical evidence shows, for example, that the bank debt usage of domestic affiliates is driven by the same motives as that of independent firms. However, for affiliates, the group's internal capital market substantially decreases the necessity to obtain external financing (Dewaelheyns and Van Hulle, 2010). Moreover, foreign affiliates of US multinational firms seem to substitute parental for external financing in response to conditions of the affiliate's home market. In countries with

¹ A discussion of the tremendous amount of research that describes the ownership patterns around the world can be found in the survey of Denis and McConnell (2003).

² 63.2% of the largest European firms have a dominant corporate shareholder using a full control criterion of 50%. This result is based on the 2009 Amadeus version of Bureau van Dijk

costly or limited availability of external borrowings due to weak creditor rights and underdeveloped capital markets, affiliates are found to borrow more from the parent firm and less from external sources (Desai, Foley, and Hines, 2004). However, as affiliates share in their parent firm's reputation and parent firms often provide firms with guarantees that secure their external borrowings, business group membership facilitates access to external financing as well (Schiantarelli and Sembenelli, 2000; Chang and Hong, 2000). This raises the question whether the home market of the parent firm also may affect the external debt usage of affiliated firms.

To address this question, we examine the bank debt concentrations of affiliates that have a foreign parent firm and are located in one specific country. We use domestic affiliates as a benchmark in the analysis (i.e., affiliates that have a parent firm that is located in the same country). By considering affiliates that are all headquartered in the same country, we are able to study the influence of variations in parent firm location on affiliates' bank debt concentration, while implicitly controlling for various aspects of the affiliates' environment that might influence their bank debt usage.

Our study is related to several strands of the literature. First of all, we add to the literature on business groups' internal capital markets. Prior studies have shown that group characteristics largely determine the design of affiliates' external debt policy (see e.g., Manos, Murinde, and Green, 2001; Dewaelheyns and Van Hulle, 2010). We first confirm that the size and depth of internal capital markets play an important role in the bank debt decisions of affiliates. Moreover, by focussing on affiliates that have a foreign parent firm, we provide more insights in the channels through which affiliation influences the access to external financing. We provide clear-cut evidence that the nationality of the parent firm matters in accessing external financing.

Second, this paper complements the growing literature that examines the influence of geographical distance on bank lending. Our focus differs from most of the papers in the literature, which mostly concerns domestic small business lending using transaction data (see e.g.,

Petersen and Rajan, 2002; Degryse and Ongena, 2005) or, on a more aggregated level, international bank assets and liabilities (Buch, 2005). We demonstrate that geographical distance between the parent firm and the borrowing affiliate negatively influences the usage of bank financing in our sample of mature affiliated firms as well.

Third, this study contributes to the literature that links the legal environment with debt-financing policies. Esty and Megginson (2003) provide evidence that the strength and enforcement of legal rules influence the structure of debt ownership within the context of syndicated loans. Desai, Foley, and Hines (2004) show the importance of host country legal rules for the debt policies of affiliates of US multinationals. These results are consistent with the hypothesis that debt policies are a function of the legal environment in which the firm operates. We document that for business group affiliates the relevant legal environment not only encompasses the host country of the affiliate itself, but also that of the parent firm's home country.

Previewing our main results, we find that affiliates with a foreign and domestic parent indeed differ with respect to their bank debt usage: affiliates of foreign parent firms hold 9.6% of their total liabilities in the form of bank debt as compared to 16.2% for affiliates of domestic parent firms. The results are even more striking after controlling for various firm- and group-level characteristics, i.e. being controlled by a foreign parent firm decreases the bank debt ratio with 8.5%. However, the question remains how characteristics of the parent firm's home market influence the bank debt concentrations of affiliated firms. We find evidence that geographical distance between the parent firm and affiliate decreases bank debt concentration. This finding may suggest that the monitoring services of banks are hindered and reputational effects reduced because of greater physical distance. Moreover, two other dimensions of distance negatively affect the bank debt concentrations of affiliates as well, namely cultural and legal distance. Affiliates, with a foreign parent, that depend on a different legal system or are located in a country with different cultural values than their parent firm have smaller bank debt

concentrations. This suggests that information asymmetries caused by cultural and legal differences hinder the access to bank financing. Finally, we document that the quality of legal enforcement in the parent firm's home country has a positive influence on the bank debt ratio of affiliates indicating that guarantees from parent firms located in a country with a high quality of institutions are valued more highly. The results hold after controlling for the substitutability between bank and internal debt, which is available to affiliates via internal capital markets.

These results are obtained using a sample of Belgian affiliates that are part of private European business groups. We employ a dataset of Belgian affiliates as Belgium is ideally suited to investigate the financing policy of business group affiliates. Belgium is a Western civil-law country with a mature market economy where business groups are highly represented. La Porta, Lopez-de-Silanes, and Shleifer (1999) report that Belgium has the highest presence of pyramidal structures and controlling shareholders of all industrialized countries. Moreover, large Belgian companies are obliged to provide information on intra-group transactions in the notes to the financial statements. In order to reduce the impact of confounding factors, affiliates considered for the analysis need to fulfill two additional criteria. We limit the analysis to affiliates that are part of private business groups as this reduces the impact of external financing obtained via public capital markets.

The remainder of the paper is organized as follows. Section 2 contains an overview of the related literature and outlines the main hypotheses. Section 3 discusses the used methodology and describes the data. Section 4 provides the main results and, finally, Section 5 presents the conclusions.

2 Related literature & hypotheses development

2.1 Geographical and cultural distance

Although technological innovations have decreased communication and information costs, many empirical studies still indicate that information asymmetries increase with geographical and cultural distance. These two informational proxies remain to be important determinants of various dimensions of financial and product markets. Lerner (1995) indicates that geographical distance diminishes the board representation of venture capitalists due to higher monitoring costs. Within the US, Coval and Moskowitz (1999) provide evidence that mutual fund managers prefer to invest in geographically close or local headquartered firms because greater geographical proximity is accompanied by lower information asymmetries. Coval and Moskowitz (2001) extend their research by showing that these mutual funds' investment strategies result in considerable abnormal returns. Huberman (2001) also finds evidence of geographically driven investment patterns within the portfolio choices of Regional Bell Operating Companies' shareholders and attributes this to familiarity. Hau (2001) examines the influence of information asymmetries on trading profits within the German electronic trading platform Xetra and finds evidence of smaller profits for foreign traders. Garmaise and Moskowitz (2004) document that commercial real estate market participants try to overcome information asymmetries by investing in geographically proximate properties. Using a gravity model for international finance by Martin and Rey (2004), Portes and Rey (2005) show the importance of geographical distance on international equity flows putting strong emphasis on informational frictions as a sole driving force. Results of Freund and Weinhold (2004) not only report a negative influence of distance on foreign trade growth, the magnitude of this relationship is also proven to be enhanced by the increase in internet usage.

In addition to geographical distance, Grinblatt and Keloharju (2001) find that cultural and language similarities are important drivers in domestic portfolio decisions of Finnish

investors as well. Huyghebaert, Priem and Van de Gucht (2011) indicate that cultural distance also drives syndication within the more international setting of European buyouts. The authors show that the lead investor is more likely to syndicate, withhold a smaller fraction and invite a larger number of participants within the syndicate if the cultural distance with the target firm is higher.

With respect to small business lending in the US, Petersen and Rajan (2002) find evidence that the geographical distance between borrower and lender is increasing over time because of technological innovations.³ The results are, however, particularly stronger for nonbanks as compared to banks suggesting that geographical distance still is an important source of information asymmetries within bank lending. As intermediaries, banks have the comparative advantage — due to scale economies — to decrease information asymmetries between borrowers and lenders by actively monitoring the lent funds (Diamond, 1984; Fama, 1985; Ramakrishnan and Thakor, 1984). The implementation of this task is hindered by greater physical distance. Buch (2005) finds support for this argument by documenting that distance has a negative impact on international asset and liability holdings of commercial banks and that this effect has not diminished over the years, except for the liabilities of French and US banks.

We hypothesize that affiliates with a foreign parent firm are hindered by greater geographical and cultural distance between the affiliate and the parent firm in obtaining bank financing. Berger, Dai, Ongena, and Smith (2003) show that foreign affiliates from 20 European countries predominantly borrow from banks that are headquartered in the same country as the affiliate.⁴ If geographical and cultural distances increase between the affiliate and the parent firm, business group affiliation may be less of an advantage when accessing external financing. A first beneficial effect of group membership is that affiliates often receive guarantees from the parent

³ Besides information asymmetries, transaction costs could also play a role in small business lending. Degryse and Ongena (2006) study the effect of distance on borrowing rates using transaction data for a sample of small, mostly single-person businesses and find evidence of spatial price discrimination due to transaction costs.

⁴ In line with these findings, Petersen and Rajan (2002) show that concentrated ownership has a significant and negative effect on the geographical distance between an affiliated firm and its bank.

firm, which facilitates the availability of external funds (Chang and Hong, 2000; Ghatak and Kali, 2001; Verschueren and Deloof, 2006; Manos, Murinde, and Green, 2007). Greater geographical and cultural distance between parent firm and affiliate makes it more difficult for external local debt holders (i.e., banks) to monitor the actions of the parent firm in order to avoid possible conflicts due to asymmetric information (e.g., moral hazard problems, tunneling). Second, affiliates can benefit from their parent's reputation when accessing external financing, (Chang and Hong, 2000; Schiantarelli and Sembenelli, 2000; Manos, Murinde and Green, 2007). Positive reputation effects may be reduced due to geographical dispersion and cultural differences. These arguments result in the following hypotheses:

H1 (a): The bank debt concentration of foreign affiliates decreases with geographical distance between affiliated and parent firm.

H1 (b): The bank debt concentration of foreign affiliates decreases with cultural distance between affiliated and parent firm.

2.2 The institutional environment of the parent firm

La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) (1998) show how countries and - on a more aggregated level - legal traditions differ greatly with respect to investor rights (i.e., shareholder and creditors) and the enforcement of these rights (i.e., law and order). The authors develop indices that capture various aspects of these two dimensions of the legal environment and document that common-law countries provide the strongest investor protection in terms of rights and Scandinavian-civil-law countries the highest quality of enforcement, while French-civil-law countries show the weakest scores.

The legal environment as characterized by LLSV (1998) proves to be an important driver of the size and depth of financial markets (LLSV, 1997), ownership concentration (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000), the valuation of firms (LLSV, 2002; Kalcheva and Lins, 2007), syndicated loans (Esty and Megginson, 2003), firms'

growth rates (Demirguc-Kunt and Maksimovic, 1998; Levine, 1999; Wurgler, 2000), Earnings management (Leuz, Nanda, and Wysocki, 2003), the amount held and value of corporate cash holdings (Dittmar, Mahrt-Smith, and Servaes, 2003; Ferreira and Vilela, 2004; Pinkowitz, Stulz, and Williamson, 2006; Kalcheva and Lins, 2007; Guney, Ozkan, and Ozkan, 2007). With respect to affiliation, Desai, Foley, and Hines (2004) find that in countries with poor investor protection and underdeveloped capital markets, foreign affiliates of US multinationals substitute parental debt for the more expensive and/or the more limited accessible external financing.

We conjecture that the legal environment of the parent firm's home country plays a role in the capital structure decisions of affiliates as well. First of all, the bank lending to affiliates that reside in a country with a legal system that differs from the system of the parent firm's home country, may be influenced by this difference in legal environments. It is well-known that the legal enforcement of loan contracts becomes more complex if the two aspects of the loan contract - that is the financing contract and security provisions - are governed by different laws and/or legal systems (Esty and Megginson, 2003). For example, Esty (2002) documents that one of the main challenges in the A2 Motorway investment project in Poland originated from legal differences between British common law and Polish civil law concerning bank loans. As Berger, Dai, Ongena, and Smith (2003) show that affiliates predominantly borrow in their own country, the financing contract between affiliates and their bank is, on average, expected to be governed by the law of the country where the affiliate is headquartered. Since banks often demand guarantees from the parent firm when lending funds to affiliated firms, the enforcement of investors' rights concerning the security provisions that rest on the assets of the parent firm will depend on the legislation of the parent's home country. If the affiliate belongs to a foreign parent, the legal enforcement of guarantees becomes more difficult and costly, especially if the bank and the parent firm belong to two distinct legal traditions. Consequently, we expect the following hypothesis to hold:

H2 (a): The bank debt concentration of foreign affiliates is negatively affected if affiliate and parent firm are governed by different legal systems in their home countries.

A second factor that banks may take into consideration when lending funds to affiliates is the quality of the judicial system in the home market of the parent firm. If the country has a risk of expropriation by the government, corruption is present or the judicial system is less efficient in resolving contractual issues, guarantees provided by the parent firm are less effective in enhancing access to external financing. Accordingly, the following hypothesis is expected to hold:

H2 (b): The bank debt concentration of foreign affiliates is positively affected by the quality of the rule of law in the parent's home country.

3 Methodology and data

This section details the variable definitions used in the analysis. In addition, we provide an overview of the sample selection process and provide descriptive statistics and univariate tests.

3.1 Measuring private affiliates' external financing

As we focus on private affiliates of private business groups, we proxy the amount of funds that affiliates have borrowed externally by their bank debt concentration following Hooks (2003) and Dewaelheyns and Van Hulle (2010) among others. This variable is measured as the ratio of bank debt to total liabilities. The amount of funds borrowed internally via the internal capital market of the group is measured as the ratio of internal debt to total liabilities.⁵

In order to assess the impact of the parent's home country on the amount of external financing available to affiliates, we consider two sets of variables. The first group of variables

⁵ Table A1 in the Appendix provides a detailed overview of the variables' measurement.

contains measures concerning the distance between affiliate and parent country. We measure geographical distance (GEODISTANCE) as the natural logarithm of the great-circle distance in kilometres between the capital cities of the affiliate and the parent firm countries (see e.g., Coval and Moskowitz, 1999). Besides physical distance, cultural differences between countries may also give rise to barriers when accessing external financing. In this respect, Hofstede (2001) describes four dimensions in which countries can diverge from each other, namely power distance, individualism, masculinity, and uncertainty avoidance. Using the Hofstede (2001) country-scores for each cultural dimension, we measure cultural distance (CULTDISTANCE) as the natural logarithm of the Euclidean distance between these four cultural dimension-scores of the parent and affiliate country.

The second group encompasses variables that relate to the legal environment of the parent's home market. First, differences in legal systems between affiliate and parent country may explain variations in the bank debt concentrations of affiliated firms. To be able to capture these differences in institutional environments, we use a dummy variable (LEGALDISTANCE1) that equals one if the parent and affiliate are located in countries with different legal systems on an aggregated level, that is common versus code law countries. As only two parent firm countries can be situated within the common law tradition (i.e., Great Britain and Ireland), we define a second dummy variable (LEGALDISTANCE2) that captures the variations in code law traditions (i.e., Scandinavian, French and German civil law) as well. Second, the legal enforcement within the parent's country is also expected to influence affiliates' external financing. We first use the legal enforcement index developed by Berkowitz, Pistor, and Richard (2003) based on the legal enforcement variables of LLSV (1998) as a measure of the rule of law within a certain country (LEGALITY1).⁶ The LLSV (1998) legal enforcement variables,

⁶ This index is the first component of a principal component analysis applied on the highly correlated individual legal enforcement variables of LLSV (1998), that is efficiency of judiciary, rule of law, absence of corruption, risk of expropriation, risk of contract repudiation. The first principal component summarizes 84.6 percent of the total variance.

however, have the drawback that they are constant over time. Therefore, we also consider four time-varying legal enforcement variables of Kaufmann, Kraay, and Mastruzzi (2010), namely government effectiveness, regulatory quality, rule of law, and control of corruption. The average correlation between pairs of these legality proxies amounts to 0.792. These high correlations would result in multicollinearity problems in the regression analyses. Therefore, we perform a principal component analysis for each year and retain the scores for the first principal component as an aggregated measure of legality (LEGALITY2). On average, the first components explain 91.56 percent of total variance.⁷

Besides the main variables of interest, we also include a number of control variables at firm (i.e., affiliate) level that are expected to explain variations in bank debt concentration across firms.

Size. Size is predicted to positively affect firms' bank debt usage as larger firms should incur lower costs in case of default (Titman and Wessels, 1988; Rajan and Zingales, 1995). Larger firms are also shown to have superior access to bank financing (Petersen and Rajan, 1994). Firm size is measured as the natural logarithm of real total assets (SIZE).

Tangibility. The use of tangible assets as collateral when obtaining bank loans reduces asset substitution problems as described by Jensen and Meckling (1976) and lessens expected default costs for the lender. Therefore, we expect a positive relationship between tangibility and bank debt concentration. Tangibility is proxied by the ratio of tangible assets and inventory to total assets (TANG).

Profitability. According to the screening view of bank debt (e.g., Smith, 1987), the level of firm profitability provides a signal concerning the financial health of the firm. Firms with lower profitability are associated with having poorer financial health and higher default risk, and therefore may be exposed to credit rationing. Consequently, higher profitability implies more

⁷ Detailed information concerning the linear combinations used to calculate the PC-scores is available upon request

bank debt. However, profitability may also influence bank debt in a negative manner. Low profitability may proxy for poor market conditions. In that case, firms with low profitability will find it valuable to renegotiate when needed and accordingly hold higher amounts of bank debt (Hooks, 2003). Moreover, private firms are faced with high information asymmetries, which may cause difficulties in accessing additional financing in times of low profitability. Consequently, the competitive advantage of banks to decrease information asymmetries by exercising monitoring services as described by Diamond (1984), Fama (1985), and Ramakrishnan and Thakor (1984), among others, enables private firms to obtain financing to overcome temporary shortages. Profitability is defined as the ratio of operating profit to total assets (PROFIT).

Age. The effect of the firm's age on bank debt concentration is again ambiguous. The age of a firm can be expected to have a positive effect as it is often considered to proxy for the firm's reputation. As firms grow older, they may have established a more solid long-term relationship with lenders resulting in higher amounts of bank lending (Diamond, 1991; Petersen and Rajan, 1994). However, firm age can also negatively affect bank debt concentration. Older firms may have accumulated more internal funds over time. As internally generated funds are accompanied by smaller information asymmetries than external financing, the need for bank debt is reduced (Myers and Majluf, 1984). This effect may be especially true for private firms as internal financing and private debt are the main sources of financing. Firm age is measured as the natural logarithm of the years since incorporation (AGE).

Growth. Traditionally, firms with higher sales growth are expected to hold less bank debt. Growth opportunities are intangible and hence firms with more growth opportunities are faced with higher information asymmetries, resulting in higher capital constraints (Myers, 1977, Myers and Majluf, 1984). Moreover, high growth companies may prefer less bank financing because it brings pressure to meet future financial obligations that may hinder investments in positive net present value projects (McConnell and Servaes, 1995). However, higher growth may also signal better financial health according to the screening view (Hooks, 2003) and, therefore, a

positive relationship may be expected as well. Growth is measured as the annual sales growth (GROWTH).

Leverage. Following Hooks (2003) and Dewaelheyns and Van Hulle (2010) among others, we control for the firm's decision concerning the total amount of debt financing by including the ratio of total liabilities to firm assets in the analyses (LEV).⁸ We consider total liabilities instead of long term debt as a proxy for leverage because short term financing is an important component of Belgian firm's capital structures — as indicated by Deloof and Jegers (1998) among others — and thus necessary to include (Titman and Wessels, 1988).

Finally, we include group-specific control variables that capture the size and depth of the group's internal capital market. More specifically, we consider those variables that proxy for the group's capacity to provide funding for affiliates or ease access to external financing.

Group size. If the size of the group increases, more funds should be available for intra-group transactions. As internal financing is accompanied by smaller information asymmetries than bank debt, group size should negatively affect the amount of bank debt held (Gertner, Scharfstein, and Stein, 1994; Stein, 1997; Dewaelheyns and Van Hulle, 2010). However, within larger groups more assets-in-place should be available to secure external loans and larger groups could also be expected to be more diversified and having smaller default risks (Chang and Hong, 2000; Schiantarelli and Sembenelli, 2000). These factors reduce the cost of debt for affiliates and increase access to bank financing. Group size is defined as the natural logarithm of total group assets in real terms (GROUPSIZE).

Group profitability. Group profitability is expected to negatively affect the firm's bank debt concentration because the higher the profitability at group level, the more internal funds are available and the less attractive bank financing will become. The ratio of group operating profits to group total assets is employed as a measure for group profitability (GROUPPROFIT).

⁸ As an alternative approach, an additional model could be specified to capture the choice of total debt financing and a simultaneous estimation could be performed. However, simultaneous-equation modeling is unnecessary if the system of equations is recursive, as is the case (Hooks, 2003).

Group age. Just as is the case for group size, group age may proxy for the size of the internal capital market. As older groups may have accumulated more funds over time, a negative relationship could be expected. Conversely, group age is often regarded as proxy for reputation (Diamond, 1991; Petersen and Rajan, 1994). As affiliated firms share in their group's reputation, affiliates belonging to older groups could also be expected to hold more bank debt (Chang and Hong, 2000). Group age is defined as the natural logarithm of the years since the groups' incorporation (GROUPAGE).

Group Leverage. If internally generated funds are insufficient to finance activities and projects, private companies are forced to obtain private financing to bridge this shortage due to restricted choices of funds. Consequently, increasing levels of group leverage may reflect shortages in internal financing (Dewaelheyns and Van Hulle, 2010).⁹ Group leverage is proxied by the ratio of total group liabilities to total group assets (GROUPELV). All continuous variables are winsorized at the 1% level.

3.2 Sample selection and descriptive statistics

We start with collecting accounting as well as ownership information for all private Belgian non-financial firms that filed unconsolidated complete annual accounts for at least four consecutive fiscal years from 1998 until 2007.¹⁰ The unconsolidated data are obtained from the Bureau van Dijk EP's Belfirst database and enables us to employ information at firm-level. Using the ownership information, we maintain only those companies that are considered to be business group members (i.e., affiliates). More specifically, if the controlling company of the group holds more than 50% of the firm's shares (directly or indirectly), the firm is classified as a business

⁹ Note that group measures are based on the consolidated statements and accordingly are net of any intra-group transactions. Thus group leverage reflects the total amount of debt borrowed from external lenders.

¹⁰ Belgian firms are required to file complete annual accounts if more than 100 full time equivalent employees are employed or two of the following size criteria are met: total assets exceed 3.125 million euro, total operating revenue surpasses 6.25 million euro, the total number of full time equivalent employees is larger than 50. If these conditions do not hold, firms are allowed to file abbreviated annual accounts.

group affiliate.¹¹ As European business groups are characterized by very high levels of ownership concentration, lowering the threshold to 20% (cf., Gadhoum, Lang and Young, 2005) would entail a negligible effect on the number of firms identified as affiliates. Members of state-controlled business groups are withheld from the sample.

Next, we extend the affiliate-level data with data from the consolidated financial statements of the affiliates' controlling shareholder. We obtain the group-level consolidated data of all unlisted non-financial European business groups from the Amadeus database (Bureau van Dijk EP). Only operating affiliates with available consolidated accounts available at group level are considered for the analysis.¹² However, some affiliates are the only or dominant operating affiliate of the group. If this is the case, the controlling corporation is considered to be a shell company and affiliates controlled by such a firm are excluded.¹³ Following common practice, we omit firm-years with zero sales and extremely high leverage levels, that is above 100% of total assets. Firms active in utilities and several categories of service companies are left out as well because of the specific nature of their activities.

Finally, to be able to assess the influence of the parent firm's home country, we construct two final samples: a sample containing Belgian affiliates that are controlled by a foreign parent firm (i.e., foreign sample) and a benchmark sample containing Belgian affiliates with a Belgian parent firm (i.e., domestic sample). This selection process results in a foreign sample of 723 affiliates part of 581 groups (1901 firm-years) and a domestic sample of 1817 affiliates part of 647 groups (5205 firm-years). In order to improve comparability across samples, both samples

¹¹ Belgian Accounting Law considers control as owning more than 50% of the shares of the votes, or having common controlling shareholders who can appoint the majority of the board or can make strategic decisions. This control can also result from company bylaws, contracts or the existence of a consortium.

¹² Although, considering only groups that file consolidated statements could lead to a possible size bias, it guarantees that variables defined at group level reflect economic reality as accurately as possible. As an alternative approach, Manos, Murinde, and Green (2001) and Chang and Hong (2000) calculate the group variables as the average weighted value of the individual business group affiliates' variables and thus avoid the use of consolidated accounts. This methodology is most likely to lead to information quality problems for our sample of private firms and thus not the preferred approach for this study.

¹³ A consolidated firm is reclassified as a shell company if the firm's average financial fixed assets to total assets is equal to or larger than the 95th percentile and the average sales to total assets is equal to or smaller than the 5th percentile.

are matched on industry (two digit NACE-BEL industry codes) and size (average deflated total assets) reducing the domestic sample to 723 affiliates part of 367 groups (2086 firm-years).¹⁴

 Table 1 about here

Table 1 shows the geographical and industry distribution in absolute numbers and in percentages for the domestic affiliate and foreign affiliate samples. The parent firms of the 723 affiliates of the foreign sample are located in 11 different countries with the majority of parent firms headquartered in the neighboring countries, namely The Netherlands, France and Germany.¹⁵ The highest concentrations of bank debt and internal debt can be found for Sweden and Austria, respectively. Affiliates with foreign parents are mainly active in trade, followed by manufacturing. The amount of bank debt held relative to total liabilities is the highest in agriculture and foods for both the domestic and the foreign sample, though much smaller in magnitude for the latter type of affiliates. For the internal debt ratio, a different picture emerges: the ratio is the highest in the services industry for the domestic sample, but for the foreign sample the maximum level occurs in trade.

 Table 2 about here

¹⁴ As our samples consists of Belgian Affiliates, we use the Belgian version of the European NACE activity codes (i.e., NACE-BEL).

¹⁵ The affiliates of a Dutch parent represent the greater part of our sample. Therefore as robustness, we conduct the analyses without these affiliates. See Section 4 for a discussion of these results.

In Table 2, we present descriptive statistics and univariate tests for the continuous variables used in the subsequent analyses. We report all statistics for the sample of affiliates that have a foreign parent firm and for the benchmark sample of affiliates with a domestic parent firm. The univariate tests that compare bank and internal debt concentration across both groups confirm the results of Table 1. The bank debt concentration of the foreign sample is much smaller. The reversed pattern appears with respect to internal debt concentration: affiliates with a foreign parent firm have significantly higher internal debt concentrations than their domestic counterparts. Although the composition of affiliate's leverage differs between both samples, the total amount of leverage does not. These descriptive findings suggest that affiliates with a foreign parent endure greater information asymmetries when accessing external financing and, therefore, prefer to finance a larger proportion of their activities with internal debt. We observe no difference between both types of affiliates in firm size (SIZE) after matching, nevertheless the remaining firm characteristics differ significantly. Affiliates with a foreign parent have relatively less tangible assets (TAN) than their domestic counterparts, but show higher profitability ratios (PROFIT). In addition, affiliates of the foreign sample are slightly older (21 years vs. 18 years for the domestic sample at median level) and accordingly show smaller growth rates. Turning to the group characteristics, foreign groups are slightly larger than Belgian groups in our sample (GROUPSIZE). The comparison of firm size and group size illustrates that the median affiliate is relatively small within the group, but large enough to be of importance. Furthermore, foreign groups tend to be slightly more profitable (GROUPPROFIT), older (26 years vs. 17 years for the domestic sample) (GROUPAGE) and somewhat less leveraged (GROUPLEV).

4 Main Results

4.1 Firm- and group-level determinants of bank debt

Before we assess whether the parent firm's country location affects the external financing decisions of affiliates, we perform some preliminary estimations where we only include the firm- and group-level characteristics. As our domestic sample is very similar to the sample of Dewaelheyns and Van Hulle (2010) and considering the importance of being able to replicate earlier findings in the literature, this approach enables us to directly compare results. Furthermore, with respect to the foreign sample, this allows us to evaluate how these determinants affect external financing without taking the parent firm's location into consideration.

Table 3 reports these base equations. All equations are estimated using Tobit regressions because a large part of the observations have a value of zero for the dependent variable (46% for the domestic sample and 62% for the foreign sample). All equations include industry and time dummies.¹⁶ The standard errors are robust for group-level clustering as well. As mentioned above, most firm-level characteristics are found to be determinants of leverage. In order to avoid multicollinearity problems, we regress leverage on the other firm-level variables and use the residuals as an instrument for leverage (Johnson, 1997; Dewaelheyns and Van Hulle, 2010). For group leverage we use a similar approach with regard to the group-level variables.

 Table 3 about here

¹⁶ To improve comparability with regression models that include variables that are constant over time (e.g., foreign dummy and distance measures), we opt to report the results with industry dummies. Nevertheless, the results remain qualitatively unaffected with fixed effects estimation techniques

Columns 1 and 3 reveal that all firm characteristics significantly determine the bank debt concentrations of domestic and foreign affiliates, respectively. The majority of signs of the estimated coefficients are equal for both samples. First, larger affiliates use relatively higher amounts of bank debt. This finding is consistent with the view that larger firms face smaller borrowing costs because of lower default risks. Moreover, affiliates with more available tangible assets have better access to bank financing, as predicted, because these assets can serve as collateral. In addition, we observe that affiliates' profitability negatively affects bank debt concentration. Within the domestic sample, the negative effect of age on the relative amount of bank debt held indicates that pecking order theory likely plays an important role with respect to bank financing decisions. However, for affiliates of a foreign parent the debt ratios increase as these affiliates grow older, consistent with the reputation view. Furthermore, we also observe differences in the effect of sales growth on bank financing between both samples. Sales growth does not seem to explain the bank lending of domestic affiliates, though foreign affiliates' bank debt ratios are positively affected. The latter finding supports the view that higher sales growth is seen as a signal for better financial health. Furthermore, in both samples less leveraged firms have smaller bank to total debt ratios as expected.

Next, we consider the impact of group-level characteristics. All group variables' coefficients show similar signs for both samples. The results indicate that affiliates of larger, more profitable and older groups hold relatively less bank debt. These findings provide further support for the argument that these group characteristics predominately reflect the availability of resources within the groups' internal capital markets. Group leverage positively affects the firms' bank debt concentration, indicating that group leverage proxies for shortages in internal financial resources.

Besides these four group-characteristics, there may be other group-specific factors that have an influence on the bank debt ratios of affiliates and/or affect the earlier presented estimations. To control for these effects we include group dummies in Column 2 for the

domestic sample and in Column 4 for the foreign sample. Most firm-level variables remain significant and, except for firm age in the foreign sample, show the same signs. Within the foreign sample, age negatively drives bank debt concentration as is the case for domestic affiliates. This result indicates that the importance of pecking order for affiliates of foreign parent firms is comparable to the role it plays for bank debt usage within domestic affiliates. With respect to the group level variables, we observe that being affiliated to a larger group increases access to external financing by decreasing the cost of debt instead of enhancing the availability of internal financing as found by Dewaelheyns and Van Hulle (2010). As an alternative to group-specific effects we re-estimate the baseline model with country-specific dummies in the foreign sample (not reported), the results remain unchanged.

Finally, we estimate the baseline model with all firm- and group-level characteristics for the full sample containing both types of affiliates. The results are reported in Column 5. In order to compare the bank debt concentrations of both samples while controlling for firm and group characteristics, we include a dummy variable that equals one if the affiliate has a foreign parent firm. The estimated coefficient indicates that affiliates of a foreign parent firm hold on average bank debt ratios that are 8.5% lower than the ratios of affiliates in the domestic sample. This confirms the univariate findings.

Taken as a whole, the first set of results are in line with findings in the literature and show that the bank debt concentrations of affiliates with a foreign parent are mainly driven by the same motives as domestic affiliates.

4.2 Parent firms' home country effects: Distance and the legal environment

In this subsection, we consider the implications of parent firm location on the bank debt concentration of affiliates. Table 4 presents the results of the extended analysis that incorporates distance and legal environment variables in the Tobit estimations.

Table 4 about here

First of all, we consider the impact of geographical proximity in Column 1. Geographical distance is highly significant and shows a negative effect on bank debt concentration. This suggests that information asymmetries increase if the parent firm is located further away because reputation effects diminish and banks are less capable of monitoring collateralized assets. In addition, the estimations of Column 2 demonstrate that cultural differences also negatively affect the access to external financing for foreign affiliates. However, geographical and cultural proximity could capture similar dimensions of asymmetric information, and are therefore both included in Column 3. We observe that this is not the case: bank debt concentrations of affiliates with a foreign parent are negatively influenced by both geographical and cultural distance.

Next, we introduce the first legal distance variable that measures the impact of differences in legal systems between the parent and affiliate country on an aggregated level (Column 4). As expected, affiliates of foreign parent firms have relatively smaller bank borrowings if the parent firm resides in a common law country and the affiliate in a code law country (and vice versa). As there is a considerable amount of variation in legislation between code law countries (LLSV, 1998), we allow the legal distance variable in Column 5 to capture the various code law legal traditions as well. The coefficient remains negative and highly significant indicating that legal differences between countries also create information asymmetries that hinder bank financing. Another aspect of the parent's home market that is expected to influence the use of bank debt by affiliates is the quality of legal enforcement. Both legality variables (Columns 6 and 7) show a highly significant positive effect on affiliate's bank debt concentration: the poorer the legal enforcement within the parent firm's country, the less bank debt is used by affiliates with a foreign parent. This suggest that guarantees received from the foreign parent

firm are valued less when the legal enforcement in the parent firm' country is poorer. All possible combinations of the legal distance and legality variables give the same results (not reported).

The model presented in Column 8 includes both the distance and legal environment variables. Although the second legal distance dummy allows for more variation in legal systems, we opt to include the first legal distance variable because the second measure is highly collinear with geographical distance ($\rho = 75\%$). The second legality proxy is preferred because this variable varies over time. The results remain the same if the first legality variable is employed. The estimated coefficients remain highly significant with the same signs.

Overall, the results indicate that geographical, cultural, and legal distance between affiliates' and parent firm's countries and the legal enforcement of the parent's country affect affiliates' bank borrowings. However, a large part of the foreign sample consists of affiliates that have a Dutch parent firm. To assess whether our findings hold without these affiliates, we re-estimate the model containing all distance and legal enforcement variables. Because of the high correlations between geographical and cultural distance in this restricted sample ($\rho = 63\%$), the influence of both geographical distance and cultural distance is estimated separately in Column 9 and 10, respectively. All distance measures show a negative and highly significant sign in both equations. Finally, the degree of legal enforcement with the parent's country continues to have a positive influence on bank debt usage of affiliates.

4.3 The substitutability between external and internal financing

Hitherto our findings confirm the view that distance in all its aspects is accompanied by larger information asymmetries, inducing a reduction in bank borrowings by affiliates of a foreign parent firm. In addition, we find evidence that poorer legal enforcement in the parent's home country further lessens the usage of bank debt. To overcome these factors that hinder access to

external financing, affiliates can substitute external for internal debt using the internal capital market of the group.¹⁷ The latter type of financing should entail fewer conflicts because of the owner-provided nature of internal debt.¹⁸ Therefore, following Desai, Foley, and Hines (2003) we explicitly consider internal debt concentration in the bank debt equations to control for the substitutability of internal and bank debt concentration within affiliated firms.

We introduce internal debt concentration as an independent variable in Table 5. The baseline equation with the firm-level and group-level characteristics is reported in Column 1. The results reveal a negative and highly significant partial substitution effect: about 40% of the decreases in affiliates' internal borrowings are compensated by external financial resources. Moreover, the introduction of this effect increases the pseudo R-squared from 36% (Column 3, Table 5) to 43.4%. The various distance and legality measures are added in Column 2 and remain highly significant with the predicted signs. The magnitude of the substitution effect remains almost unchanged.

 Table 5 about here

The bank and internal debt concentrations of affiliates are, however, jointly determined and this may lead to biased estimates in Columns 1 and 2. Therefore, we instrument internal debt

¹⁷ The ability of the foreign parent to monitor the affiliate could, however, also be negatively affected by the greater geographical distance between parent and affiliate and reduce the amount of internal debt available for the affiliate. In addition, the amount of internal debt may also be positively influenced by the quality of legal enforcement in the parent firm's home country. In countries with higher quality of legal enforcement, financial markets are typically more developed. Hence, external financing should also be less expensive for the parent firm leading to a higher amount of funds available for allocation in the form of debt through the internal capital market. Nevertheless, in such environments the parent firm often has superior access to external funds due to positive reputation and diversification effects. In addition, parent firms often hold valuable informal relationships with banks that increase access to external financing (Schiantarelli and Sembenelli, 2000). In unreported regressions, we control for geographical distance and legality measures – in addition to the firm and group level characteristics - and find no significant effects of both measures on the usage of internal debt by affiliates.

¹⁸ See Dewaelheyns and Van Hulle (2010) for an extensive discussion on this matter.

concentration using the corrected creditor rights index drawn from Djankov, McLiesh and Shleifer (2007) of the parent firm's home country and one-period lagged internal debt concentration. The creditor rights index is a suitable instrument as it positively influences the amount of private resources available to the parent firm that can be channeled through the internal capital market in the form of debt.¹⁹ Moreover, the creditor right index of the foreign parent's home country is unlikely to be correlated with the bank debt available to affiliates because local bankruptcy laws govern the insolvency proceedings in case of multinational affiliate default and not those of the parent's home country (Desai, Foley, and Hines, 2004).²⁰ The results of these instrumental variable Tobit regressions are presented in Columns 3 and 4. The estimated substitution effect increases slightly to about 43% and 42%. These results imply that nearly half of the reductions in internal lending via the internal capital market are offset by additional bank borrowings.²¹

In Columns 5 until 7 we consider the degree of substitutability between internal and bank financing for the foreign sample without the affiliates that have a Dutch foreign parent firm. Using the same instruments as in the previous columns, the estimated coefficients reveal a smaller substitution effect for this subsample of foreign firms: bank borrowings only make up for about 13% of decreases in internal borrowings. Once we include the distance and legality measures in Columns 6 and 7, the coefficients even drop further to -0.0891 and -0.0906, respectively. The significance and signs of the distance and legal environment variables are, however, not affected.

¹⁹ The F-tests of significance of the first-stage equations all reject the null hypothesis of weak instruments.

²⁰ Regression based tests are not able to reject the null hypothesis of exogenous instruments. We also considered the amount of private credit available in the parent's home country as a possible instrument, but was found to be exogenous and invalid.

²¹ The results are qualitatively similar when using GMM estimation techniques. The Hansen's J Statistic indicates that the employed instruments are valid.

5 Conclusion

This study examines the external debt policies of affiliates of private foreign multinational groups. We extend the existing literature by showing that the relevant environment that drives bank debt policy of affiliates comprises not only the host market of the affiliates itself, but also the home market of the parent firm.

We find that foreign affiliated firms' bank debt usage is driven by mostly the same economic rationales as those of affiliates with a domestic parent firm at firm and group level. Nevertheless, the bank debt concentrations of foreign affiliates is 8.5% smaller as compared to affiliates of domestic business groups after controlling for various firm- and group-level characteristics.

Therefore, we explore several channels through which the variation in parent firm country may affect the bank debt policy of affiliates. First of all, the findings show that distance — in several dimensions — between the parent firm and the affiliate home country negatively affects bank borrowings of affiliates suggesting that distance increases information asymmetries hereby limiting access to bank financing. Geographical and cultural distance does not facilitate the monitoring services provided by local banks and may hamper the potential positive influence of parent firm reputation in obtaining bank borrowings. Differences in legal traditions complicate loan contracts and hence raise barriers in accessing bank financing as well. Furthermore, the results reveal that poorer legal enforcement in the parent firm's home country diminishes bank financing for affiliates that are headquartered in a different country. This suggests that banks value parent firm's guarantees according to the quality of legal enforcement in the country of the parent firm. All these results hold after controlling for the degree of substitutability between bank and internal financing.

Appendix A: Variable definitions

Table A1
Description Variables

This table provides definitions for the variables used in the analysis. Each variable is computed for each firm-year. The firm level characteristics are based on unconsolidated financial statements data of 1686 affiliates. The group level characteristics are calculated using data from consolidated statements of 1128 groups.

<i>Variables</i>	<i>Definitions</i>
BANKDEBT	Bank debt / total liabilities
INTERNALDEBT	Internal debt / total liabilities
GEODISTANCE	The natural logarithm of the great-circle distance in km between the capital cities of the affiliate and the parent firm countries, Latitudes and longitudes obtained from: http://geography.about.com/od/locateplacesworldwide/Locate_Places_Worldwide.htm
CULTDISTANCE	The natural logarithm of the Euclidean distance between the four Hofstede (2001) cultural dimensions of the country of the affiliate and the parent firm: Power distance, Individualism, Masculinity, and Uncertainty avoidance
LEGALDISTANCE1	Dummy variable: 1 if the parent firm is located in a country with a different legal tradition. Two different legal traditions are considered: Common-law and Civil-law
LEGALDISTANCE2	Dummy variable: 1 if the parent firm is located in a country with a different legal tradition. Four different legal traditions are considered: Common-law, Scandinavian-civil-law, German-civil-law, and French-civil-law.
LEGALITY1	Legal enforcement index developed by Berkowitz, Pistor and Richard (2003) by performing a principal component analysis on the LLSV (1998) legal enforcement variables.
LEGALITY2	Legal enforcement index developed by performing a yearly principal component analysis on four of the Kaufmann, Kraay, and Mastruzzi (2008) dimensions of legal enforcement: Government Effectiveness, Regulatory quality, Rule of law, and Control of Corruption.
SIZE	Ln(real total assets)
TANG	(Net tangible assets + inventory) / total assets
PROFIT	Operating profit / total assets
LOGAGE	Ln(firm age)
GROWTH	$Sales_t / sales_{t-1}$
LEV	(ST liabilities + LT liabilities) / total assets
GROUPSIZE	Ln(total group assets)
GROUPPROFIT	Group operating profit / group total assets
GROUPAGE	Ln(group age)
GROUPLEV	(Group ST liabilities + group LT liabilities) / group total assets

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Table 1
Distribution of the sample, bank debt concentration, and internal debt concentration by country and industry

This table provides the geographical and industry distribution for the sample of domestic affiliates (i.e., Belgian affiliates of a Belgian parent firm) and the sample of foreign affiliates (i.e., Belgian affiliates of a foreign parent). The first column for each sample shows the distribution of the number of firms by each category, the second column the distribution of the bank debt concentration with the standard deviation between brackets by each category, and third the distribution of the internal debt concentration with standard deviation between brackets. Both bank and internal debt concentration are winsorized at 1%.

	Domestic Affiliates			Foreign Affiliates		
	n [%]	Bank debt	Internal debt	n [%]	Bank debt	Internal debt
<i>Parent Home Country</i>						
Belgium	723 [100%]	0.162 [0.231]	0.258 [0.292]	-	-	-
Austria	-	-	-	2 [0.28%]	0.012 [0.013]	0.472 [0.476]
Germany	-	-	-	54 [7.47%]	0.035 [0.096]	0.386 [0.276]
Denmark	-	-	-	34 [4.7%]	0.055 [0.144]	0.384 [0.312]
Spain	-	-	-	9 [1.24%]	0.048 [0.116]	0.339 [0.334]
Finland	-	-	-	5 [0.69%]	0.023 [0.065]	0.469 [0.364]
France	-	-	-	81 [11.2%]	0.102 [0.203]	0.262 [0.259]
Great Britain	-	-	-	27 [3.73%]	0.04 [0.123]	0.285 [0.278]
Ireland	-	-	-	5 [0.69%]	0.028 [0.048]	0.363 [0.367]
Italy	-	-	-	30 [4.15%]	0.036 [0.119]	0.359 [0.262]
The Netherlands	-	-	-	446 [61.69%]	0.108 [0.197]	0.322 [0.286]
Sweden	-	-	-	30 [4.15%]	0.132 [0.272]	0.307 [0.326]
<i>Industry</i>						
Agriculture & food	37 [5.12%]	0.208 [0.222]	0.291 [0.332]	37 [5.12%]	0.136 [0.207]	0.283 [0.244]
Manufacturing	161 [22.27%]	0.172 [0.204]	0.238 [0.265]	161 [22.27%]	0.089 [0.155]	0.305 [0.275]
Construction	21 [2.9%]	0.143 [0.240]	0.175 [0.240]	21 [2.9%]	0.043 [0.115]	0.195 [0.285]
Trade	348 [48.13%]	0.157 [0.234]	0.261 [0.295]	348 [48.13%]	0.093 [0.187]	0.364 [0.292]
Transportation	79 [10.93%]	0.151 [0.251]	0.220 [0.257]	79 [10.93%]	0.097 [0.207]	0.277 [0.278]
Services	77 [10.65%]	0.153 [0.258]	0.351 [0.348]	77 [10.65%]	0.119 [0.251]	0.274 [0.305]

Table 2
Descriptive statistics and univariate tests.

This table contains summary statistics and univariate test for the firm level and group level characteristics based on financial statements of the domestic and foreign sample for the fiscal years 1998-2007. Both samples contain 723 firms. All firm characteristics are winsorized at the 1% level. The left-hand side reports the medians, the minimum and maximum between brackets for both samples, followed by the Z-statistics from the Wilcoxon Mann-Whitney tests for the equality of medians. The right-hand side reports the means and standard deviations between brackets as the t-test for the equality of means across both samples. *** denotes significance at the 1% level, ** denotes significance at the 5% level, * denotes significance at the 10% level.

Variable	Median [Min;Max]		Equality test	Mean [StDev]		Equality test
	domestic	foreign		domestic	foreign	
<i>Firm specific characteristics</i>						
BANKDEBT	0.011 [0; 0.840]	0.000 [0;0.841]	(10.936)***	0.162 [0.231]	0.096 [0.189]	(9.85)***
INTERNALDEBT	0.14 [0;0.992]	0.28 [0;0.938]	(-7.490)***	0.258 [0.292]	0.324 [0.289]	(-7.22)***
SIZE	8.72 [4.63;12.13]	8.55 [4.928; 12.555]	(0.771)	8.64 [1.522]	8.6 [1.621]	(-0.12)
TANG	0.294 [0;0.938]	0.254 [0;0.953]	(4.912)***	0.328 [0.249]	0.249 [0.247]	(4.95)***
PROFIT	0.043 [-0.234;0.435]	0.064 [-0.334;0.568]	(-5.581)***	0.065 [0.1]	0.085 [0.135]	(-5.37)***
AGE	2.89 [1.099;4.771]	3.046 [1.099;4.5]	(-4.617)***	2.897 [0.743]	3 [0.724]	(-4.32)***
GROWTH	1.043 [0.186;4.003]	1.039 [0.117;2.671]	(1.325)	1.109 [0.47]	1.057 [0.299]	(4.14)***
LEV	0.647 [0.007;0.976]	0.623 [0.044;0.973]	(1.476)	0.596 [0.248]	0.596 [0.224]	(0.28)
<i>Group characteristics</i>						
GROUPSIZE	11.05 [9.470;15]	11.96 [8.989; 17.32]	(-17.334)***	11.29 [1.142]	12.24 [1.71]	(-19.72)***
GROUPROA	0.554 [-0.0684;0.251]	0.067 [-0.167; 0.304]	(-6.237)***	0.067 [0.0607]	0.074 [0.07]	(-4.49)***
GROUPAGE	2.833 [0;4.905]	3.258 [0;5.517]	(-9.236)***	2.91 [0.986]	3.214 [0.981]	(-9.10)***
GROUPLEV	0.691 [0.137;0.0.97]	0.653 [0.149;0.975]	(3.476)***	0.659 [0.184]	0.642 [0.180]	(2.62)**

Table 3
Base equations

The dependent variable is bank debt concentration. LEV and GROUPELV are residuals from auxiliary ordinary least square regressions of leverage on the other firm characteristics. FOREIGN is a dummy variable that equals one if the affiliate is controlled by a foreign parent firm. All variables are winsorized at the 1% level. The specifications are similar to Dewaelheyns and Van Hulle (2010) and are estimated using Tobit regressions including industry and time fixed effects. Robust standard errors corrected for potential clustering at parent level are reported between brackets *** denotes significance at the 1% level, ** denotes significance at the 5% level, * denotes significance at the 10% level

VARIABLES	(1) Domestic	(2) Domestic	(3) Foreign	(4) Foreign	(5) Full
SIZE	0.0938*** [0.00128]	0.0869*** [5.06e-05]	0.0925*** [0.00121]	0.0521*** [2.86e-05]	0.0952*** [0.000475]
TANG	0.508*** [0.0191]	0.310*** [0.00109]	0.499*** [0.0174]	0.275*** [0.000843]	0.496*** [0.00758]
PROFIT	-0.0933** [0.0471]	-0.318*** [0.00405]	-0.302*** [0.0309]	-0.354*** [0.00271]	-0.234*** [0.0117]
AGE	-0.00930** [0.00368]	-0.0122*** [0.000140]	0.00767** [0.00346]	-0.0452*** [9.56e-05]	-0.00410*** [0.00136]
GROWTH	-0.00547 [0.00862]	0.00264*** [0.000348]	0.0528*** [0.00967]	0.0264*** [0.000269]	0.00805** [0.00330]
LEV	0.221*** [0.00751]	0.296*** [0.00220]	0.244*** [0.00731]	0.0957*** [0.00166]	0.237*** [0.00139]
GROUPSIZE	-0.0420*** [0.00104]	0.00971*** [4.39e-05]	-0.0563*** [0.000912]	0.0218*** [2.45e-05]	-0.0532*** [0.000371]
GROUPROA	-0.472*** [0.0841]	-0.421*** [0.00667]	-0.297*** [0.0684]	-0.139*** [0.00358]	-0.296*** [0.0250]
GROUPAGE	-0.00673** [0.00343]		-0.0197*** [0.00314]		-0.00970*** [0.00131]
GROUPELV	0.392*** [0.00925]	0.343*** [0.00304]	0.319*** [0.00680]	0.0885*** [0.00151]	0.325*** [0.00199]
FOREIGN					-0.0825*** [0.00327]
Constant	-3.735*** [0.0119]	-2.068*** [0.000494]	-1.767*** [0.0115]	-1.132*** [0.000304]	-1.904*** [0.00441]
Observations	1,889	1,889	1,773	1,773	3,662
Ind & time dummies	Y	Y	Y	Y	Y
Parent dummies	N	Y	N	Y	N
Parent clustering	Y	Y	Y	Y	Y
Pseudo R ²	0.319	0.952	0.359	1.222	0.322

Table 4
Extended analysis: the effects of parent firm nationality

The dependent variable is bank debt concentration. LEV and GROUPELV are residuals from auxiliary ordinary least square regressions of leverage on the other firm characteristics. All firm characteristics are winsorized at the 1% level. The specifications are estimated using Tobit regressions including industry and time fixed effects. Robust standard errors corrected for potential clustering at parent level are reported between brackets. *** denotes significance at the 1% level, ** denotes significance at the 5% level, * denotes significance at the 10% level.

VARIABLES	(1) Foreign	(2) Foreign	(3) Foreign	(4) Foreign	(5) Foreign	(6) Foreign	(7) Foreign	(8) Foreign	(9) Foreign	(10) Exclude The Netherlands	(11) Exclude The Netherlands
GEODISTANCE	-0.0250*** [0.00210]		-0.0293*** [0.00214]						-0.0159*** [0.00215]	-0.0362*** [0.00238]	
CULTDISTANCE		-0.0184*** [0.00288]	-0.0273*** [0.00291]						-0.0638*** [0.00296]		-0.0568*** [0.00410]
LEGALDISTANCE1				-0.106*** [0.00776]				-0.105*** [0.00779]	-0.0799*** [0.00787]	-0.103*** [0.0106]	-0.0555*** [0.0105]
LEGALDISTANCE2					-0.0623*** [0.00744]						
LEGALITY1						0.0146*** [0.000550]					
LEGALITY2							0.0200*** [0.00328]	0.0194*** [0.00327]	0.0550*** [0.00336]	0.0330*** [0.00458]	0.0619*** [0.00459]
SIZE	0.0907*** [0.00124]	0.0935*** [0.00124]	0.0919*** [0.00126]	0.0936*** [0.00121]	0.0916*** [0.00121]	0.0913*** [0.00124]	0.0916*** [0.00124]	0.0927*** [0.00124]	0.0932*** [0.00127]	0.107*** [0.00159]	0.106*** [0.00158]
TANGIBILITY	0.244*** [0.00735]	0.243*** [0.00734]	0.241*** [0.00735]	0.236*** [0.00746]	0.237*** [0.00748]	0.245*** [0.00740]	0.246*** [0.00740]	0.238*** [0.00755]	0.238*** [0.00756]	0.254*** [0.0103]	0.255*** [0.0103]
PROFIT	0.497*** [0.0176]	0.501*** [0.0177]	0.499*** [0.0178]	0.498*** [0.0173]	0.497*** [0.0173]	0.498*** [0.0177]	0.499*** [0.0177]	0.498*** [0.0177]	0.501*** [0.0180]	0.634*** [0.0243]	0.638*** [0.0241]
AGE	-0.304*** [0.0310]	-0.297*** [0.0311]	-0.297*** [0.0313]	-0.296*** [0.0306]	-0.294*** [0.0306]	-0.307*** [0.0311]	-0.305*** [0.0312]	-0.300*** [0.0309]	-0.292*** [0.0313]	0.0761* [0.0412]	0.0855** [0.0411]

GROWTH	0.00698**	0.00799**	0.00732**	0.00837**	0.00825**	0.00714**	0.00730**	0.00799**	0.00778**	0.00886*	0.00894*
	[0.00351]	[0.00353]	[0.00357]	[0.00344]	[0.00344]	[0.00353]	[0.00353]	[0.00352]	[0.00360]	[0.00459]	[0.00457]
LEV	0.0520***	0.0513***	0.0497***	0.0521***	0.0510***	0.0532***	0.0534***	0.0527***	0.0482***	0.0994***	0.0914***
	[0.00982]	[0.00987]	[0.00997]	[0.00964]	[0.00961]	[0.00985]	[0.00987]	[0.00983]	[0.0101]	[0.0126]	[0.0125]
GROUPSIZE	-0.0533***	-0.0571***	-0.0540***	-0.0562***	-0.0528***	-0.0546***	-0.0553***	-0.0553***	-0.0544***	-0.0922***	-0.0896***
	[0.000929]	[0.000931]	[0.000943]	[0.000909]	[0.000909]	[0.000931]	[0.000932]	[0.000928]	[0.000952]	[0.00118]	[0.00117]
GROUPROA	-0.304***	-0.295***	-0.302***	-0.326***	-0.315***	-0.300***	-0.298***	-0.326***	-0.317***	-0.596***	-0.580***
	[0.0690]	[0.0692]	[0.0697]	[0.0685]	[0.0682]	[0.0692]	[0.0692]	[0.0694]	[0.0704]	[0.0936]	[0.0937]
GROUPAGE	-0.0189***	-0.0205***	-0.0199***	-0.0206***	-0.0198***	-0.0191***	-0.0188***	-0.0197***	-0.0200***	0.00667*	0.00719*
	[0.00319]	[0.00320]	[0.00323]	[0.00313]	[0.00312]	[0.00320]	[0.00320]	[0.00319]	[0.00326]	[0.00396]	[0.00394]
GROUPLEV	0.312***	0.317***	0.308***	0.313***	0.316***	0.314***	0.319***	0.313***	0.302***	0.294***	0.301***
	[0.00687]	[0.00683]	[0.00688]	[0.00690]	[0.00687]	[0.00692]	[0.00689]	[0.00699]	[0.00705]	[0.00802]	[0.00803]
Constant	-1.567***	-1.661***	-1.376***	-1.772***	-1.670***	-2.105***	-1.859***	-1.861***	-1.528***	-1.153***	-1.255***
	[0.0117]	[0.0117]	[0.0119]	[0.0114]	[0.0114]	[0.0117]	[0.0117]	[0.0117]	[0.0120]	[0.0154]	[0.0153]
Observations	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	597	597
Ind & time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Parent clustering	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pseudo R ²	0.361	0.36	0.361	0.361	0.362	0.36	0.36	0.361	0.365	0.587	0.591

Table 5
Foreign Affiliates: IV Regressions

This table shows the results of Tobit regressions (Column (1) and (2)) and Tobit iv regressions with the creditor rights of the parent's home country (LLSV, 1999) and the one period lagged variable of internal debt concentration as an instrument for internal debt concentration in the remaining columns. LEV and GROUPELV are residuals from auxiliary ordinary least square regressions of leverage on the other firm characteristics. All firm characteristics are winsorized at the 1% level. *** denotes significance at the 1% level, ** denotes significance at the 5% level, * denotes significance at the 10% level.

VARIABLES	(1) Foreign	(2) Foreign	(3) Foreign	(4) Foreign	(5) Exclude The Netherlands	(6) Exclude The Netherlands	(7) Exclude The Netherlands
INTERNALDEBT	-0.401*** [0.0155]	-0.398*** [0.0158]	-0.433*** [0.0238]	-0.423*** [0.0240]	-0.127*** [0.0296]	-0.0837*** [0.0284]	-0.0850*** [0.0282]
GEODISTANCE		-0.0133*** [0.00203]		-0.00678*** [0.00247]		-0.0442*** [0.00274]	
CULTDISTANCE		-0.0366*** [0.00278]		-0.0765*** [0.00336]			-0.0678*** [0.00473]
LEGALDISTANCE1		-0.0637*** [0.00799]		-0.161*** [0.0103]		-0.360*** [0.0142]	-0.293*** [0.0137]
LEGALITY2		0.0515*** [0.00316]		0.115*** [0.00387]		0.0620*** [0.00533]	0.102*** [0.00533]
SIZE	0.0903*** [0.00115]	0.0896*** [0.00120]	0.0848*** [0.00141]	0.0843*** [0.00145]	0.130*** [0.00190]	0.133*** [0.00184]	0.130*** [0.00183]
TANGIBILITY	0.342*** [0.00703]	0.338*** [0.00725]	0.494*** [0.0204]	0.399*** [0.00958]	0.672*** [0.0320]	0.134*** [0.0126]	0.147*** [0.0130]
PROFIT	0.442*** [0.0163]	0.442*** [0.0169]	-0.593*** [0.0414]	0.500*** [0.0209]	0.216*** [0.0629]	0.698*** [0.0312]	0.711*** [0.0309]
AGE	-0.407*** [0.0286]	-0.400*** [0.0290]	-0.00324 [0.00395]	-0.580*** [0.0416]	0.0325*** [0.00538]	0.199*** [0.0589]	0.195*** [0.0589]
GROWTH	-0.0112*** [0.00325]	-0.0117*** [0.00339]	0.0600*** [0.0112]	0.00112 [0.00406]	0.135*** [0.0154]	0.0501*** [0.00519]	0.0531*** [0.00515]

LEV	0.0483***	0.0460***	0.399***	0.0501***	0.221***	0.130***	0.121***
	[0.00916]	[0.00953]	[0.00942]	[0.0115]	[0.0117]	[0.0148]	[0.0147]
GROUPSIZE	-0.0383***	-0.0357***	-0.0246***	-0.0209***	-0.115***	-0.117***	-0.113***
	[0.000861]	[0.000898]	[0.00106]	[0.00109]	[0.00140]	[0.00135]	[0.00134]
GROUPROA	-0.193***	-0.212***	-0.186**	-0.208**	-0.780***	-0.948***	-0.910***
	[0.0648]	[0.0665]	[0.0796]	[0.0808]	[0.114]	[0.109]	[0.109]
GROUPAGE	-0.0152***	-0.0145***	-0.00314	-0.00292	0.0272***	0.0211***	0.0214***
	[0.00296]	[0.00307]	[0.00362]	[0.00370]	[0.00476]	[0.00454]	[0.00451]
GROUPLEV	0.194***	0.182***	0.167***	0.144***	0.249***	0.172***	0.192***
	[0.00664]	[0.00696]	[0.00745]	[0.00772]	[0.0135]	[0.0125]	[0.0127]
Constant	-1.530***	-1.442***	-2.114***	-2.131***	-1.381***	-1.219***	-1.425***
	[0.0108]	[0.0113]	[0.0133]	[0.0137]	[0.0184]	[0.0178]	[0.0176]
Observations	1,773	1,773	1,053	1,053	320	320	320
Ind & time FE	Y	Y	Y	Y	Y	Y	Y
Parent clustering	Y	Y	Y	Y	Y	Y	Y
Pseudo R ²	0.434	0.437	0.470	0.483	0.731	0.791	0.799