Does Foreign Lenders' National Cultures Affect Loan Pricing?

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Abstract: We examine the role of foreign lenders' national culture in the pricing of syndicated loans. Using Schwartz's cultural dimensions, embeddedness and mastery, we find that foreign lenders domiciled in countries with higher embeddedness and mastery scores offer lower interest rates. These findings are robust to a battery of robustness tests and incremental to the effects of formal institutions. We also document that prior lending relationships and economic downturns in the borrower country weaken the impact of the foreign lenders' cultural values on loan pricing. An additional analysis shows that the intensity of loan covenants is also negatively related to the embeddedness and mastery scores of the foreign lenders' countries of domicile. Our findings suggest that cross-border debt contracting decisions are not only determined by objective judgments about risk and return but also depend on the subjective assertion of values and beliefs guided by informal institutions, such as cultural norms. Cultural values can nurture and shape economic incentives and perceptions of sophisticated professional bankers in increasingly globalized market settings, even when the financial stakes are substantial.

Keywords: syndicated loan, cost of debt, cross-border lending, national culture, Schwartz

JEL classifications: F34, G15, G21, G41

1. Introduction

This study examines the impact of foreign lenders' national culture on loan pricing. Foreign banks are subject to higher information risk and expropriation risk than are their domestic counterparts (Buch 2003; Haselmann and Wachtel 2011; Mian 2006; Petersen and Rajan 2002; Vu, Do, and Skully 2015; Mian 2003). Their risk tolerance and appetite for compensation should play particularly important roles in the design of loan contract terms. We expect foreign lenders' attitudes toward risk and compensation to be affected by the national culture of their countries of domicile. Cultural values "serve as guiding principles in people's lives" (Schwartz 1994, , p.88). They affect almost every aspect of human life. North (1990) points out that culture in the form of an informal institution has an even stronger power than formal legal and political institutions in shaping individuals' values, preferences and incentives. Therefore, national culture is likely to play an important role in economic activities through its influence on market participants' behaviors and decision making.

Prior literature has established a link between cultural values and a range of bank activities, including accounting choices (Kanagaretnam, Lim, and Lobo 2011, 2014), dividend policy (Zheng and Ashraf 2014), risk taking (Chircop et al. 2017; Ashraf, Zheng, and Arshad 2016; Mourouzidou-Damtsa, Milidonis, and Stathopoulos 2017), stability (Carretta et al. 2015), and lending corruption (Zheng et al. 2013). Our study extends this stream of research by investigating the impact of foreign banks' national culture on their design of loan contract terms.

We capture national culture using Schwartz (1994)'s cultural dimensions. Schwartz classifies national culture into six value types consolidated into two dimensions: embeddedness and mastery. Embeddedness captures the extent to which individuals are viewed as entities embedded in a collective society. High embeddedness cultures prioritize harmonious group relationships, group interests, security, and public image. Mastery refers to

the values that promote active self-assertion to master, change and exploit the natural and social environment. High mastery cultures accentuate individual success, capability, and taking control (Licht, Goldschmidt, and Schwartz 2007). We expect the embeddedness scores of foreign lenders' countries of domicile to have a negative impact on the interest rates that they charge, while mastery scores are likely to have two opposing effects on interest rates.

Drawing on a sample of 853 syndicated loans extended by foreign banks to U.S. borrowers during the period of 1996-2014, we find that the foreign lenders from high embeddedness countries charge lower interest rates. The mastery scores of the foreign lenders' countries of domicile are also negatively related to the interest rates imposed. These findings are robust to controlling for a range of firm-specific and loan-specific characteristics documented to affect interest spreads by prior literature. We also include some country-specific control variables to capture the effects of the economic condition, credit market development and information asymmetry of the foreign lenders' countries of domicile. Our conclusions still hold when we exclude loans with multiple lead arrangers, correct the sample selection bias with Heckman (1979) two-stage model, and consider the effects of the formal institutions of the foreign lenders' countries of domicile. In addition, we document that the impact of the foreign lenders' cultural values on interest spreads abates if the foreign lenders have led the borrower's prior loans as well as during economic downturns of the borrower country. Finally, an additional analysis shows that both high embeddedness and high mastery cultures reduce the intensity of covenants imposed by foreign lenders.

This study adds to the debt contracting literature. Compared with the sizable research on how borrower characteristics affect the design of loan terms (e.g., Pan, Yue Wang, and Weisbach 2017; Chan, Chen, and Chen 2013; Lin et al. 2013; Graham, Li, and Qiu 2008; Bae and Goyal 2009; Qian and Strahan 2007; Valta 2012), research focusing on lender characteristics has been relatively limited. The extant literature in this area has examined the

role of lenders' reputations (McCahery and Schwienbacher 2010; Ross 2010), competition (Bushman, Hendricks, and Williams 2016; Lian 2018), type (Demiroglu and James 2015; Gatev and Strahan 2009; Harjoto, Mullineaux, and Yi 2006; Lim, Minton, and Weisbach 2014), liquidity (Bord and Santos 2014), and relationships within the lending group (Champagne and Kryzanowski 2007; Panyagometh and Roberts 2010; Wu et al. 2013). Our research complements this literature by providing original evidence for the effect of the informal institutions of the foreign lenders' countries of domicile. Moreover, we find that the effect of informal institutions on loan pricing is incremental to that of formal institutions, such as the legal environment.

In addition, this study contributes to the culture-finance literature in general and the culture-banking literature in particular. A growing body of research has investigated the role of national culture in a variety of economic and capital market activities, for example, foreign investment (Aggarwal, Kearney, and Lucey 2012; Guiso, Sapienza, and Zingales 2009; Siegel, Licht, and Schwartz 2011; Levis, Muradoğlu, and Vasileva 2016), mergers and acquisitions (Chakrabarti, Gupta-Mukherjee, and Jayaraman 2009; Weber, Shenkar, and Raveh 1996; Ahern, Daminelli, and Fracassi 2015), capital structure (Li et al. 2011; Chui, Lloyd, and Kwok 2002; Gleason, Mathur, and Mathur 2000), stock market participation, trading and momentum profits (Guiso, Sapienza, and Zingales 2008; Grinblatt and Keloharju 2001; Chui, Titman, and Wei 2010), dividend policy (Shao, Kwok, and Guedhami 2010; Bae, Chang, and Kang 2012; Fidrmuc and Jacob 2010; Javakhadze, Ferris, and Sen 2014), executive compensation (Bryan, Nash, and Patel 2015; Schuler and Rogovsky 1998), accounting practices and accounting systems (Perera 1989; Doupnik and Richter 2003; Chand, Cummings, and Patel 2012; Gray 1988), and earnings quality (Han et al. 2010; Kanagaretnam, Lim, and Lobo 2011; Doupnik 2008; Nabar and Thai 2007). In particular, some prior studies have provided evidence for the impact of cultural values on banking

activities (e.g., Kanagaretnam, Lim, and Lobo 2011, 2014; Chircop et al. 2017; Zheng et al. 2013). Our study furthers this line of research by showing that the national culture of the foreign banks' countries of domicile plays a significant role in the design of loan contract terms. Our findings suggest that culture matters even in the highly developed syndicated loan market with professional and experienced lenders.

This paper is most closely related to Chui, Kwok, and Zhou (2016), who examine how the national culture of the borrowers' countries of domicile affects the cost of debt. A key feature that differentiates our study from theirs is that they focus on the borrowers' cultural values, while we examine that of the lenders. They argue that the borrowers' cultural values could affect the cost of debt through their impact on the borrowers' default risk and agency costs. In contrast, we propose that the lenders' cultural traits could affect the interest spreads that they charge by shaping the lenders' perceptions of risk and compensation. Another difference between our study and Chui, Kwok, and Zhou (2016) is that they perform a country-level analysis, while our analysis is at the loan level. By aggregating data into country-year observations, the type, purpose, and characteristics of the debt are not controlled for in their study. However, these factors are well recognized as important determinants of the cost of debt, giving rise to a concern for omitted correlated variables. In contrast, by adopting loan-level observations, our study is able to address the effect of debt characteristics. In addition, in Chui, Kwok, and Zhou (2016), both the borrowers and the lenders are from multiple countries, while in our paper, the lenders are from multiple countries, but all of the borrowers are from the U.S. By constraining the borrower firms to those from one country, we eliminate the variations in the borrowers' national cultures, legal environments, and economic conditions.

Other studies that investigate the relationship between culture and debt contracting include Giannetti and Yafeh (2012) and Zhu and Cai (2014), who find that creditors impose

less favorable contract terms on more culturally distant borrowers. Zheng et al. (2012) document a relationship between borrower firms' cultural scores and their debt maturity structures. He and Hu (2016) and Jiang et al. (2018) provide evidence that U.S. borrowers located in counties with high levels of religiosity enjoy lower interest rates, larger loan amounts, and less intensive loan covenants. These studies focus on either how the culture difference between the borrower and the lender affects debt contracting through the information asymmetry channel or how the borrower's cultural background affects debt contracting through the default risk and agency costs channel. In contrast, our paper explores the role of the lender's cultural values. We expect the lender's incentives and subjective perceptions of risk and compensation to be deeply rooted in their cultural values. In particular, since foreign banks are short for soft information and prior lending relationships with local firms compared with their domestic counterparts, their subjective perceptions should play a particularly important role in the decision making. Since the debt contracts are written by lenders, the lenders' cultural values should exert a more direct impact on the design of contract terms than those of the borrowers.

The rest of this paper is organized as follows. Section 2 reviews the relevant literature and develops testable hypotheses. Section 3 describes the variables, methodology, and sample. Section 4 presents the empirical findings. Section 5 concludes the study.

2. Literature Review and Hypothesis Development

Embeddedness concerns desirable relationships between individuals and groups. Cultures with high embeddedness emphasize the person as embedded in the group and committed to maintaining the status quo, propriety, group solidarity, and traditional order (Licht, Goldschmidt, and Schwartz 2007; Schwartz 1994). Chui, Lloyd, and Kwok (2002) and Li et al. (2011) examine the impact of embeddedness on capital structure. They argue that firms in

high embeddedness cultures use less debt because these firms pursue harmonious relationships and are more concerned about the liquidation costs to their employees, suppliers, customers and other stakeholders. High embeddedness also reduces the benefit of debt financing as a means for mitigating the agency conflict between shareholders and managers since the agency problem is less severe in high embeddedness societies, where people value group interests more than individual interests. In addition, public image is regarded as important in high embeddedness societies, and the use of debt incurs the risk of bankruptcy, which damages the firm's public image. These papers also conjecture that embeddedness-oriented cultures advocate for security and might regard the excessive use of debt as too risky. Shao, Kwok, and Guedhami (2010) document a positive relation between embeddedness and dividend payouts. They argue that shareholders in high embeddedness countries prefer receiving cash dividends to accumulating retained earnings because cash dividends are "bird in hand" and more secure. Moreover, high dividend payouts play a positive signaling role of firm performance and satisfy the demand to preserve one's public image in high embeddedness countries. In addition, high dividend payouts reduce the agency problem between managers and shareholders and are therefore welcomed by high embeddedness cultures, which value harmonious group relationships. Chui, Kwok, and Zhou (2016) show that firms in high embeddedness countries enjoy lower cost of debt. They explain this finding by the notion that the pursuit of security, public image and group welfare in high embeddedness cultures decreases the borrower firms' default risk. In addition, the emphasis on harmonious group relationships also reduces agency conflicts between borrower firms and creditors.

Since the embeddedness culture places great importance on maintaining harmonious group relationships and calls for the sacrifice of individual interests to protect group interests, we expect foreign lenders from high embeddedness countries to be less aggressive in

demanding high interest payments. In contrast, they are likely to be keener on fostering positive interactions and maintaining long-term relationships with borrower firms. Furthermore, since the embeddedness culture stresses security, foreign banks from high embeddedness countries are likely to lend to less risky firms, leading to a negative correlation between the embeddedness scores of the foreign lenders' countries of domicile and the interest rates that they charge. Based on these arguments, we formulate the following testable hypothesis:

H1: Foreign lenders from high embeddedness countries charge lower interest rates.

Mastery concerns the relationship between humankind and the natural and social world. Cultures with high mastery commit to actively modifying and exerting control over one's surroundings, rather than accepting the natural and social world as it is. In these cultures, attributes such as self-assertion and getting ahead of others are valued (Schwartz 1994; Licht, Goldschmidt, and Schwartz 2007). Chui, Lloyd, and Kwok (2002) and Li et al. (2011) find that high mastery values reduce the use of debt. They suggest that high mastery cultures encourage managers to demonstrate their abilities by pursuing aggressive business strategies, and in this case, the managers are reluctant to be bound by debt covenants and lender monitoring. Moreover, high mastery cultures emphasize individual success. Since the event of default can be viewed as a failure of management, managers in high mastery countries are likely to avoid the excessive use of debt, which increases firms' default risk. Shao, Kwok, and Guedhami (2010) document a negative relationship between mastery and dividend payouts. They argue that managers from high mastery backgrounds like to maintain control, and by retaining cash in the company, they gain more flexibility and control over the business operations. In addition, the emphasis on success in high mastery societies also

encourages managers to retain cash since internal cash is more efficient, economical, and timely than outside financing and can enhance a project's profitability. Chui, Kwok, and Zhou (2016) propose that the mastery scores of borrower firms' countries of domicile could have two opposing effects on their borrowing costs. On the one hand, managers influenced by high mastery cultures would commit to achieving success and therefore avoiding the failure of bankruptcy. This commitment reduces the firms' cost of debt by decreasing the default risk. On the other hand, high mastery cultures encourage managers to demonstrate their abilities by investing in risky projects, leading to increased default risk. Chui, Kwok, and Zhou (2016)'s empirical findings are consistent with high mastery scores in the borrower firms' countries of domicile reducing the cost of debt.

Since high mastery cultures accentuate individual success, foreign lenders from high mastery countries are likely to impose higher interest rates to maximize profitability. However, higher interest rates increase default risk. To the extent that nonperforming loans are regarded as an indication of failure, bank managers in pursuit of success are likely to avoid charging overly high interest rates. In addition, foreign lenders with high mastery backgrounds are likely to believe in their own capabilities and be less sensitive to risk, reducing the compensation that they require for risk. Moreover, since high mastery cultures emphasize exerting control, foreign lenders from high mastery countries are expected to address risk actively with intensive screening and monitoring, instead of high interest rates. There is no a priori evidence indicating which effect of the mastery culture would dominate. We therefore treat the impact of the foreign lenders' mastery values on the interest rates that they charge as an empirical issue. Based on these arguments, we formulate the following testable hypothesis:

H2a (b): Foreign lenders from high mastery countries charge higher (lower) interest rates.

3. Research Design

3.1 Schwartz's (1994) National Cultural Dimensions

Following Chui, Kwok, and Zhou (2016), we adopt the updated version of Schwartz's (1994) survey-based national cultural scores to capture the foreign lenders' cultural backgrounds (Schwartz 2008). The survey is participated in by more than 15,000 urban elementary school teachers from 55 countries. The focus of the survey on school teachers corresponds to schools and teachers playing a crucial role in upholding and conveying cultural values in a socialized process over generations. In addition, by focusing on a single profession, the respondents' characteristics, such as educational background, income, and age, are relatively consistent. This design also facilitates comparisons across countries (Licht, Goldschmidt, and Schwartz 2007; Siegel, Licht, and Schwartz 2011). Hofstede (2001, p. 8) regard Schwartz's survey as the ''most extensive research project on values so far". Moreover, Schwartz's survey was conducted in the early 1990s, which is closer to our sample period than other cultural surveys, for example, the Hofstede survey, which was conducted in the early 1970s.

Schwartz's cultural scores include seven value types, which are further condensed into two broad dimensions: (1) embeddedness vs. affective and intellectual autonomy; and (2) mastery and hierarchy vs. egalitarian commitment and harmony. Consistent with prior literature (Chui, Lloyd, and Kwok 2002; Chui, Kwok, and Zhou 2016; Li et al. 2011; Shao, Kwok, and Guedhami 2010), we focus on embeddedness and mastery because these two dimensions capture all seven value types.

3.2 Methodologies

We estimate the following regression to examine the relationship between the foreign lenders' national cultures and interest spreads:

$$\begin{aligned}\log(IntSpread_{i,t}) = {} & \alpha_0 + \alpha_1 Embeddedness/Mastery_i + \alpha_2 \log(Firm\ Size_{i,t-1}) \\ & + \alpha_3 Leverage_{i,t-1} + \alpha_4 IntCov_{i,t-1} + \alpha_5 CurRatio_{i,t-1} \\ & + \alpha_6 Mar\ to\ Book_{i,t-1} + \alpha_7 Tangibility_{i,t-1} + \alpha_8 ROA_{i,t-1} \\ & + \alpha_9 \sigma(ROA)_{i,t-1} + \alpha_{10} Z-Score_{i,t-1} + \alpha_{11} \log(Maturity_{i,t}) \\ & + \alpha_{12} \log(Loan\ Size_{i,t}) + \alpha_{13} InstLoan_{i,t} + \alpha_{14} Revolver_{i,t} + \alpha_{15} PPP_{i,t} \\ & + \alpha_{16} LeadRep_{i,t} + \alpha_{17} PreRelation_{i,t} + \alpha_{18} \log(Lender\ No._{i,t}) \\ & + \alpha_{19} MarCon_{i,t} + \alpha_{20} \log(GDP\ per\ capita_{i,t}) + \alpha_{21} GDP\ growth_{i,t} \\ & + \alpha_{22} PrvCredit_{i,t} + \alpha_{23} Inflation_{i,t} + \alpha_{24} \log(GeoDist_i) \\ & + Loan\ Purpose\ FE + Industry\ FE + Year\ FE \\ & + \varepsilon_{i,t} \end{aligned} \quad (1)$$

where the dependent variable, *log(IntSpread$_{i,t}$)*, is the interest spread of loan i issued in year t measured as the annual spreads paid over LIBOR for each dollar drawn down from the loan.

The test variables are *Embeddedness* and *Mastery*. For each loan i, they are measured with Schwartz's (1994) culture scores of the foreign lead arrangers' countries of domicile.[1] For loans with multiple foreign lead arrangers domiciled in various countries, *Embeddedness* and *Mastery* are calculated as the average scores among those countries. We focus on the cultural values of the lead arrangers and disregard those of the participant lenders because the contract terms of syndicated loans are mainly negotiated and designed by the lead arrangers (Sufi 2007). *Embeddedness* and *Mastery* are constant over time since cultural values change

[1] Following Giannetti and Yafeh (2012), we assign to the lead bank the culture scores of the country where its headquarter is located. Since syndicated loans typically are for large amounts, the decision rights on contract terms are often in the hands of senior staff in the banks' headquarters. Even when the loan contracts are written in local branches, they should follow the policies set by the headquarters. Moreover, the culture of the headquarters' country should affect the organizational culture of the branches.

slowly, often over the course of centuries (Licht, Goldschmidt, and Schwartz 2005; Hofstede 1980). Hypothesis H1 predicts a negative coefficient on *Embeddedness,* while hypothesis H2a (H2b) predicts a positive (negative) coefficient on *Mastery*.

We include a number of control variables commonly regarded as the determinants of loan spreads (Graham, Li, and Qiu 2008; Hollander and Verriest 2016; Bharath et al. 2011; Ge, Kim, and Song 2012; Valta 2012; Deng, Willis, and Xu 2014). We first employ the natural logarithm of the borrower firm's total assets (*Log(Firm Size)*) to capture the borrower size. Smaller firms are more informationally opaque, less capable of accessing external financing and more vulnerable to distress. We expect smaller firms to incur higher interest spreads. We also control for the borrower firm's performance, including solvency, liquidity, profitability, and volatility, using the firm's leverage ratio (*Leverage*), interest coverage ratio (*IntCov*), current ratio (*CurRatio*), return on assets (*ROA*) and earnings volatility (σ*(ROA)*). Firms with higher leverage ratios and earnings volatility and lower interest coverage ratios, current ratios and return on assets are subject to a greater risk of default. We expect them to borrow with higher interest rates. The market-to-book ratio (*Mar to Book*) captures the additional value over book assets that debt holders can access in the event of default. Firms with higher market-to-book ratios should enjoy a lower interest charge. Tangible assets can be sold more easily than intangible assets to recover the loan in the event of default. We expect firms with greater tangibility (*Tangibility*) to have more favorable interest rates. Altman (1968) Z-score (*Z-score*) is adopted to address the borrower firm's distance from bankruptcy. Since a higher Z-score indicates a lower likelihood of bankruptcy, we predict a negative relationship between Z-score and loan pricing. These firm variables are all estimated at the end of the fiscal year immediately prior to loan initiation (year t-1).

Along with firm-specific characteristics, we also include a series of loan-specific variables in the regressions. First, we control for the natural logarithm of loan maturity

(*Log(Maturity)*). Loans with longer maturities expose banks to firm financial conditions for longer periods; therefore, these loans should be charged with higher interest rates. We also control for the size of the loan, measured by the natural logarithm of the loan amount (*Log(Loan Size)*). We predict a negative relationship between loan size and interest spreads due to the economies-of-scale effect in lending (Berger and Udell 1990). *InstLoan* is a dummy variable indicating whether the loan is funded by institutional investors. Institutional loans are typically extended to riskier borrowers. Thus, we expect them to have higher interest spreads than bank loans. *Revolver* is a dummy variable indicating whether the loan is a revolving loan. Andre, Mathieu, and Zhang (2001) provide evidence that banks bear lower risk by issuing lines of credit than term loans. We, therefore, expect *Revolver* to be inversely related to interest spreads. Another dummy variable that we employ is *PPP*, which indicates whether the loan includes a performance pricing provision (PPP). Under PPPs, interest rates are directly tied to a prespecified measure of the borrower's credit quality. We expect the presence of PPPs to reduce interest rates since PPPs mitigate agency problems in lending (Asquith, Beatty, and Weber 2005; Panyagometh et al. 2013) and play a signaling role (Manso, Strulovici, and Tchistyi 2010). We further address the effect of the lead arranger's reputation by including a dummy variable, *LeadRep*, to capture whether the loan is arranged by one of the top 25 lead arrangers in the U.S. syndicated loan market, based on market share. Prior literature has asserted that the reputation of the lead bank plays a certification role in the bank's screening and monitoring abilities, which brings down the adverse selection and moral hazard problems within the syndicate and in turn lowers the interest charge required by the participant lenders (Bushman and Wittenberg-Moerman 2012; Chaudhry and Kleimeier 2015; Do and Vu 2010; Godlewski, Sanditov, and Burger‐Helmchen 2012; Ross 2010). *PreRelation* indicates whether the lead arranger of the loan has led the borrower's prior loans within the previous five-year period. Repeated lending, on the one hand,

attenuates the information asymmetry between borrowers and lenders (Bharath et al. 2007). On the other hand, it exacerbates the hold-up problem (Sharpe 1990; Rajan 1992). It is therefore uncertain what the net effect of prior lending relationships on interest rates would be. The natural logarithm of the number of lenders involved in a loan syndicate (*Log(Lender No.)*) is also included as a control variable. The larger the number is, the more spread out the risk is among the involved lenders. Hence, an inverse relationship between the number of lenders and interest spreads is anticipated. All of the loan variables are estimated at loan initiation (year t).

In addition, we control for the market conditions of the borrower country in the month of loan initiation (*MarCon*), measured with a principal component analysis combined metric based on three different macroeconomic factors: (1) the difference between the yields on Moody's BAA and AAA-rated corporate bonds; (2) the difference between the yields on ten-year government securities and the three-month Treasury Bill; and (3) yields on three-month Treasury Bill. A higher value indicates worse market conditions. We anticipate a positive coefficient on *MarCon* in the interest spreads regression since the market-wide default risk increases in recessions.

Another set of control variables are related to the characteristics of the foreign lead arrangers' countries of domicile. We first address the effect of the economic environment using the natural logarithm of GDP per capita (*Log(GDP per capita)*), annual GDP growth rate (*GDP growth*), and inflation rate (*Inflation*). Prior literature (e.g., Peek and Rosengren 1997; Giannetti and Laeven 2012) has documented that foreign banks encountering economic turmoil in their home countries restrict their credits in host countries, exerting upward pressure on interest rates. We, therefore, expect *Log(GDP per capita)* and *GDP growth* to be negatively associated with and *Inflation* to be positively associated with interest spreads. We also control for credit market development, proxied by the ratio of private credit to GDP

(*PrvCredit*) (Djankov, McLiesh, and Shleifer 2007; Haselmann and Wachtel 2011). We anticipate lenders from more developed credit markets to offer a lower interest charge. The natural logarithm of geographical distance between the foreign lead arranger's country of domicile and the U.S. (*Log(GeoDist)*) is included to capture the information asymmetry between the foreign lender and the borrower. According to sizable research (e.g., Agarwal and Hauswald 2010; Coval and Moskowitz 2001; Giannetti and Laeven 2012), information risk increases with geographical distance. Hence, *Log(GeoDist)* should be positively related to interest spreads. All of the above country variables except for *Log(GeoDist),* which remains constant throughout our sample period, are measured at loan initiation (year t). For loans with multiple foreign lead arrangers domiciled in various countries, we use the average value among these countries.

Finally, we control for loan purpose fixed effects based on seven categories of primary loan purposes, including acquisition lines, LBO/MBO/SBO, takeover, debt repayment/recapitalization, corporate purpose, working capital, and other purposes. We also control for year fixed effects and industry fixed effects using the 2-digit SIC code. A more detailed description of the definition and measurement of variables is presented in Table 1.

[Insert Table 1]

3.3 Sample and Data

Our sample selection starts with all dollar-denominated loans issued to U.S. companies recorded in the Thomson Reuters LPC DealScan Database until September 2014. We eliminate loans issued before 1996 since the data collection for the DealScan Database commenced in 1996. The loan information for the previous years (1985-1995) was recorded retroactively, so the data coverage for this period might be incomplete. The financial information of the borrower firm is obtained from Compustat. Loan variables are matched

with firm variables using the link file provided by Chava and Roberts (2008). We further exclude loans issued to financial (SIC code 6000-6999) and regulated (SIC code 4400-4999) firms. We only keep loans led by foreign (i.e., non-U.S.) lenders. More than 90% of loans are removed in this step since most loans include domestic lead arrangers.[2] Finally, we exclude loans with missing data on the variables used in the main regressions. The final sample consists of 853 loans issued to 362 companies by foreign lenders from 18 countries with an issuance date between January 1996 and September 2014. The number of observations in different tests might vary with the data availability of the variables used in the test. The sample selection procedure is described in Table 2.

[Insert Table 2]

Table 3 presents the sample distribution by lender country (Panel A), borrower industry (Panel B), and loan issuance year (Panel C). In Panel A, the sum of the number of loans for all countries exceeds the total number of loans in our sample because a few loans involve multiple lead arrangers domiciled in different countries. The foreign lead arrangers in our sample come from a total of 18 countries. The countries contributing more than 10 loans are Canada, Switzerland, France, the Netherlands, Germany, the United Kingdom, and Japan. Panel B shows the distribution of sample loans based on the industries of borrower firms. The industries represented most frequently are durable goods manufacturing, nondurable goods manufacturing, mining, and services. Panel C reports the yearly distribution of sample loans. The number of loans experienced a sharp decrease during 1998-2000 after the Asian financial crisis. It recovered from 2001 but decreased again in 2008 when the subprime mortgage crisis struck the U.S. The number remained low until 2014, when our sample period ends, possibly

[2] We require all of the lead arrangers of our sample loans to be foreign banks since lenders with identical cultures can have different perceptions of risk and compensation when they lend to domestic, as opposed to foreign, firms. This issue could not be solved by controlling for the percentage of domestic lead arrangers in the lender group since the percentage of domestic lead arrangers can exert a non-linear effect on the whole lender group's perception of risk and compensation.

due to the prolonged effects of the 2008 financial crisis and the subsequent European sovereign debt crisis. This pattern of distribution reveals that the supply of foreign credits is affected by the economic situations in both the foreign lender's home country and the host country.

[Insert Table 3]

4. Empirical Findings

4.1 Summary Statistics and Correlation Analysis

Table 4 reports the summary statistics of the variables used in our main tests. The mean (median) values of the culture variables, i.e., *Embeddedness* and *Master*, are 3.348 (3.355) and 3.811 (3.801), respectively.

In Table 4, we also compare the firm and loan characteristics between our test sample and a comparison sample, which applies the same selection criteria as the test sample except that the lead arrangers are all domestic, instead of foreign, banks. The comparison reveals that the firms seeking funding from foreign creditors are smaller with poorer performance. For example, the total assets of the firms are significantly lower in our test sample (mean = $2,853.400 million) than in the comparison sample (mean = $3,733.704 million); the leverage ratio is significantly higher (mean = 0.621 in our test sample vs. mean = 0.601 in the comparison sample); the market to book ratio is significantly lower (mean = 1.651 in our test sample vs. mean = 1.753 in the comparison sample); and the ROA is also significantly lower (mean = 0.016 in our test sample vs. mean = 0.034 in the comparison sample). These findings are consistent with the conclusion in Haselmann and Wachtel (2011) that, despite the consensus in the literature based on less-developed economies that foreign creditors prefer choosing larger and better performing borrower firms compared with their domestic

counterparts, the foreign creditors in developed markets, in contrast, tend to lend to riskier firms.

The contract terms of our sample loans are generally less favorable than those of the compared loans, which might be due to: (1) the borrower firms being riskier in our test sample; and (2) the foreign lenders using more restrictive terms to protect themselves against greater information asymmetry. For example, the interest spreads are significantly higher in our test sample (mean = 213.798) than in the comparison sample (mean = 189.065); the covenants are significantly more intensive (mean = 3.637 for *Cov_Ind_BR* in our test sample vs. mean = 3.012 for *Cov_Ind_BR* in the comparison sample); and the amount of the loan is significantly smaller (mean = $232.449 million in our test sample vs. mean = $346.249 million in the comparison sample). Notably, in our test sample with foreign lead arrangers, 44.1% of loans are led by relationship banks, while in the comparison sample with domestic lead arrangers, 49.1% of loans are led by relationship banks. This observation is consistent with the argument in the literature that foreign lenders are less likely to have prior lending relationships with local firms, exacerbating their information risk (Buch 2003; Haselmann and Wachtel 2011; Mian 2006; Petersen and Rajan 2002; Vu, Do, and Skully 2015; Mian 2003).

Regarding the country variables in our test sample, the mean (median) of GDP per capita for the foreign lead arrangers' countries of domicile is $35,151.034 ($30,969.738). The mean (median) of GDP growth is 2.285% (2.124%); the mean (median) of inflation is 1.786% (1.735%); and the mean (median) of private credit to GDP is 122.122% (110.651%). On average, the geographical distance between the foreign lead arrangers' home countries and the U.S. is 5,774.335 km.

[Insert Table 4]

Table 5 provides the Pearson correlation matrix for the variables in the main tests. The correlation coefficient between the two culture variables, i.e., *Embeddedness* and *Mastery*, is as high as 0.826 and statistically significant at the 1% level. Therefore, to avoid the multicollinearity problem, we do not include these two variables in the same regression in the subsequent multivariate analyses. The correlations between *Embeddedness* and *Log(IntSpread)* and between *Mastery* and *Log(IntSpread)* are both negative and significant at the 1% level, providing preliminary support for hypotheses H1 and H2b. We document strong correlations among the three covenant intensity variables, i.e., *Cov*, *Cov_Ind_BR*, and *Cov_Ind_FFS*. The correlations between the culture variables and the covenant intensity variables are mostly negative, suggesting that foreign lenders domiciled in countries with high embeddedness and mastery scores tend to relax the covenant requirements.

[Insert Table 5]

4.2 The Impact of Foreign Lenders' National Culture on Interest Spreads

Table 6 presents the estimation results of the impact of foreign lenders' national cultures on interest rates. The first two columns do not include the control variables on lender country characteristics, whereas the last two include them. In Column 1, we document a significantly negative coefficient on *Embeddedness* (coef. = -0.315, t-stat. = -2.45), consistent with hypothesis H1. Column 2 shows a significantly negative coefficient on *Mastery* (coef. = -0.538, t-stat. = -3.18), lending support to hypothesis H2b. When we include the country-specific control variables in Columns 3 and 4, the significantly negative relations between *Embeddedness* and *Log(IntSpread)* and between *Mastery* and *Log(IntSpread)* continue to hold (coef. = -0.866, t-stat. = -3.44; coef. = -1.295, t-stat. = -3.61, respectively). Collectively, the findings in Table 6 indicate that foreign lenders from high embeddedness and mastery countries charge lower interest rates.

With respect to the control variables, the results show that smaller firms with lower market to book ratios and ROA and higher leverage are subject to higher interest spreads. We document significantly negative coefficients on *Log(Loan Size)*. Institutional loans incur higher costs, while revolving loans are less costly. The presence of PPP is significantly inversely associated with interest spreads when we control for the lender country characteristics. We also document higher interest rates during economic downturns. Moreover, the coefficient on *Inflation* is significantly positive in Column 3, where we control for the lender country characteristics and use *Embeddedness* as the test variable. The above findings are all consistent with our predictions. However, the coefficient on *Log(GeoDist)* is significantly negative in Column 4, where we control for the lender country characteristics and use *Mastery* as the test variable. This result is contrary to our anticipation that loans issued by more geographically distant lenders incur higher costs due to the elevated information asymmetry problem. The coefficients on other control variables are insignificant in our regressions.

[Insert Table 6]

4.3 Robustness Checks

A syndicated loan can include multiple lead arrangers domiciled in different countries. There is a possibility that these lead arrangers have diametrically opposite culture scores, which in turn could affect our results. To address this issue, we exclude from our sample loans with multiple lead arrangers. Of 853 loans, 87 are removed in this robustness test. As reported in Table 7, Panel A, our previous finding that the foreign lenders from high embeddedness and mastery countries offer lower interest rates remains unchanged.

In our main tests, we restrict our sample to loans arranged by foreign banks. However, the choice of having foreign, instead of domestic, lead arrangers is nonrandom. Some

unobservable factors driving this choice can also affect the interest rate, exposing our main tests to an omitted correlated variable problem. We adopt Heckman (1979) two-stage procedure to mitigate this selection issue. In the first stage, we estimate a selection model that explains the choice of having foreign, instead of domestic, lead arrangers and calculate the inverse Mills ratio (*IMR*). The instrument that we use in this stage is the ratio of the borrower firm's foreign sales to total sales. Firms with higher foreign sales percentages are more likely to have foreign lead arrangers (Vu, Do, and Skully 2015). In the second stage, we include *IMR* in Eq. (1) as an additional explanatory variable to correct for the potential sample selection bias. The results for the second-stage regression are presented in Table 7, Panel B. The coefficients on *Embeddedness* and *Mastery* continue to be negative and significant at the 1% level, confirming that our previous inferences are not affected by the sample selection issue. The coefficients on *IMR* are insignificant in both columns, suggesting that our tests are unlikely to suffer from sample selection bias.

The legal environment of a country is correlated with the national culture of the country (Licht, Goldschmidt, and Schwartz 2007). In this robustness test, we consider the effect of the legal environment of the foreign lead arrangers' countries of domicile, proxied by the creditor rights and legal enforcement (La Porta et al. 1998). Although the legal environment in the lender country is unlikely to affect loan pricing directly since creditor rights are normally determined by laws in the borrower country, and the enforcement of contracts relies on the courts of the borrower country, the judicial risk of the lender country can influence the foreign lenders' design of loan contracts by building their risk attitudes. We repeat the main tests with *Creditor Rights* and *Legal Enforcement* as additional control variables and report the results in Table 7, Panel C. The coefficients on *Embeddedness* and *Mastery* are both significantly negative, similar to those in the main tests, suggesting that the effect of informal institutions on interest rates is incremental to that of formal institutions.

Moreover, the coefficients on *Creditor Rights* and *Legal Enforcement* are insignificantly different from zero.

[Insert Table 7]

4.4 Conditional Tests

Lenders with prior lending relationships with the borrower firm should possess more information about the firm than new lenders (Bharath et al. 2007). We expect the relationship lenders to rely more on objective judgment based on the information that they possess, rather than subjective perception. In other words, a prior lending relationship is likely to weaken the impact of national culture on the foreign lenders' contracting decisions. We document results in support of this conjecture in Table 8, Panel A. Specifically, the results show significantly positive coefficients on the interaction terms between embeddedness and the prior lending relationship indicator (*Embeddedness * PreRelation*) and between mastery and the prior lending relationship indicator (*Mastery * PreRelation*), attenuating the negative correlations between these culture variables and interest spreads.

The market conditions of the borrower country capture the market-wide default risk of the borrower firms. We expect foreign lenders to be particularly careful in performing due diligence when the host country is undergoing economic turmoil and to only grant credit when they have sufficient confidence in the borrower firm's credit quality. During this period, the role of rigorous assessment and professional judgment in lending decisions should surpass that of subjective perception. Therefore, we anticipate a weakened effect of the foreign lenders' national culture on interest rates when the host country's economic condition deteriorates. The results presented in Table 8, Panel B, are consistent with our prediction. Specifically, we document significantly positive coefficients on the interaction terms between embeddedness and the inverse measure of the host country's market condition

(*Embeddedness * MarCon*) and between mastery and the market condition variable (*Mastery * MarCon*), offsetting the negative correlations between these culture variables and interest spreads.

[Insert Table 8]

4.5 The Impact of Foreign Lenders' National Culture on Covenant Intensity

In this additional test, we examine the impact of foreign lenders' national culture on covenant intensity. We apply three measures to capture the covenant intensity: (1) the total number of covenants included in a loan contract (*Cov*); (2) a covenant index based on Bradley and Roberts (2015), which considers the presence of both financial and certain general covenants -- specifically, the index assigns one point (maximum of six) if any of the following covenants exists in a loan: security provision, dividend restriction, more than two restrictions on financial ratios, asset sweep, debt sweep, and equity sweep (*Cov_Ind_BR*); and (3) another covenant index based on Fields, Fraser, and Subrahmanyam (2012), which is similar to the Bradley and Roberts (2015) index. Specifically, the index assigns one point (maximum of three) if any of the following covenant categories exists in a loan: security provisions, more than two restrictions on financial ratios, and whether the loan covenants include asset, debt, and/or equity sweeps (*Cov_Ind_FFS*). We regress each covenant intensity measure on the same set of explanatory variables as in Eq. (1). Since the covenant intensity variables are all count variables, we adopt Poisson regressions.

The results are presented in Table 9. The dependent variables are *Cov* in Columns 1 and 2, *Cov_Ind_BR* in Columns 3 and 4, and *Cov_Ind_FFS* in Columns 5 and 6. We document consistently negative coefficients on *Embeddedness* in Columns 1, 3, and 5, significant at the 1% level. In Columns 2, 4, and 6, the coefficients on *Mastery* are also consistently negative and significant at the 1% level. These findings suggest that foreign

lenders from countries with high embeddedness and mastery scores impose less intensive covenants.

With respect to the control variables, the results show that smaller firms with higher leverage ratios and current ratios are subject to more restrictive covenants. Loans with longer maturity, smaller amounts, and more syndicate members incur tighter covenants. Institutional loans also have tighter covenants. The presence of PPP is positively associated with the intensity of covenants, consistent with the notion that PPPs complement, rather than substitute, covenants (Chan, Chen, and Chen 2013; Costello and Wittenberg-Moerman 2011; Graham, Li, and Qiu 2008; Kim, Song, and Zhang 2011). Moreover, loans issued when the borrower country's economic situation deteriorates are imposed with more restrictive covenants. Foreign lenders domiciled in countries with higher GDP growth and private credit to GDP adopt more restrictive covenants, likely because these lenders are better able to afford the monitoring costs associated with the use of covenants. Foreign lenders geographically closer to the borrower country also apply more intensive covenants, consistent with assertions in prior literature (e.g., Almazan 2002) that the monitoring cost is lower for geographically proximate creditors.

[Insert Table 9]

5. Conclusion

This study examines the link between the national culture of foreign banks' countries of domicile and the pricing of syndicated loans. Culture is commonly defined as a set of norms, beliefs, shared values, and expected behaviors that serve as guiding principles in people's lives (Hofstede 1980; Schwartz 1994). Cultural norms and customs embedded in the social fabric of countries encourage individuals to prescribe specific behaviors in economic interactions (Hofstede 2001; Schneider and De Meyer 1991). Culture also affects the

individuals' decision making and preferences by influencing the way in which individuals process information and shaping their subjective mental constructs used to interpret problems faced in life (North 1990). We are interested in the role of the foreign banks' cultural traits because foreign banks are relatively short for insider information, and they are subject to higher screening and monitoring costs than their domestic counterparts (Buch 2003; Haselmann and Wachtel 2011; Mian 2006; Petersen and Rajan 2002; Vu, Do, and Skully 2015; Mian 2003); therefore, their subjective perceptions of risk and compensation shaped by cultural values are likely to exert a more prominent impact on their pricing decisions.

Using Schwartz's (1994) cultural dimensions to proxy for national culture, we find that a high embeddedness value, which emphasizes harmonious group relationships, group interests, security, and public image, decreases foreign lenders' demands on interest rates. Moreover, foreign lenders rooted in high mastery cultures, which stress individual success, capability, and taking control, also charge lower interest spreads. These results are robust to a battery of robustness tests and incremental to the effects of the formal institutions of the foreign lenders' countries of domicile. We also document that prior lending relationships and economic downturns in the borrower country weaken the impact of the foreign lenders' cultural values on loan pricing. Finally, in an additional analysis, we provide evidence that the intensity of loan covenants is also negatively related to the embeddedness and mastery scores of the foreign lenders' countries of domicile.

These findings emphasize that cross-border debt contracting decisions are not only determined by objective judgment regarding risk and return, but they also depend on the subjective assertion of values and beliefs guided by informal institutions, such as cultural norms. Cultural values can nurture and shape the economic incentives and perceptions of sophisticated professional bankers in increasingly globalized market settings, even when the financial stakes are substantial.

This study offers some practical implications for market participants. First, firms seeking funds from foreign lenders domiciled in countries with low embeddedness or mastery scores are more likely to be charged higher interest rates. Firms should be aware of this cultural impact when choosing creditors. If they must approach banks from a less group-oriented or self-assertion culture, they should exert efforts to mitigate the culture's adverse effects, e.g., by improving the information quality. Second, firms should match their economic conditions with the banks' cultural backgrounds when choosing creditors. For example, firms with high growth potential might want to maintain their flexibility in making investment decisions and avoid excessive creditor interventions. These firms are reluctant to form intensive covenants, which can lead to covenant violations and transfers of control rights to creditors. Banks from high embeddedness and high mastery countries would, therefore, suit these firms better since they are less likely to impose intensive covenants.

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Table 1
Definition and Measurement of Variables

Variables	Definition and Measurement
Culture Variables (Source: Licht, Goldschmidt, and Schwartz (2007))	
Embeddedness	Average Schwartz's culture scores on embeddedness for the foreign lead arrangers' countries of domicile.
Mastery	Average Schwartz's culture scores on mastery for the foreign lead arrangers' countries of domicile.
Firm Variables (Source: Compustat)	
σ(ROA)	Standard deviation of *ROA* (defined below) estimated over the previous three to five years as available.
CurRatio	Current ratio, calculated as the ratio of current assets (*ACT*) to current liabilities (*LCT*).
Firm Size	The firm's total assets (*AT*) in millions of dollars.
IMR	Inverse Mills ratio obtained from the first stage of Heckman (1979) selection model.
IntCov	Interest coverage rate, measured by the ratio of operating income (*OIBDP* - *DP*) to interest expense (*XINT*).
Leverage	Ratio of long-term debt (*DLTT*) to total assets (*AT*).
Mar to book	Ratio of the market value of equity plus the book value of debt (*PRCC* × *CSHO* + *LT*) to total assets (*AT*).
ROA	Return on assets, calculated as net income before extraordinary items (*IB*) divided by average assets (*AT*).
Tangibility	Ratio of net PPE plus inventory (*PPENT* + *INVT*) to total assets (*AT*).
Z-Score	Altman (1968) Z-score for the likelihood of bankruptcy, computed as (1.2 Working capital + 1.4 Retained earnings + 3.3 EBIT + 0.999 Sales) / Total assets + 0.6 (Market value of equity / Book value of total liabilities) = (1.2 *WCAP* + 1.4 *RE* + 3.3 (*PI* + *XINT* - *IINT*) + 0.999 *SALE*) / *AT* + 0.6 (*PRCC* × *CSHO*) / *LT*.
Loan Variables (Source: DealScan)	
Cov	The total number of covenants included in a loan contract.
Cov_Ind_BR	An index that assigns one point (maximum of six) if any of the following covenants exists in a loan: security provision, dividend restriction, more than two restrictions on financial ratios, asset sweep, debt sweep, and equity sweep (Bradley and Roberts 2015).
Cov_Ind_FFS	An index that assigns one point (maximum of three) if any of the following covenant categories exists in a loan: security provision, more than two restrictions on financial ratios, and whether the loan covenants include asset, debt, and/or equity sweeps (Fields, Fraser, and Subrahmanyam 2012).
InstLoan	An indicator variable equal to one for loans with a type of term loan B, C, D, E, F, G or H (institutional term loans) and zero otherwise.
IntSpread	Interest spread, measured by All in Spread Drawn (*AISD*), which is the annual spread paid over LIBOR for each dollar drawn down from the loan. The commitment fee, annual fee, upfront fee, etc., are all included in the calculation of *AISD*.
LeadRep	An indicator variable equal to one if deal i is syndicated by one of the top 25 lead arrangers in the U.S. syndicated loan market and zero otherwise. The ranking of lead arrangers is based on their previous year market shares, in terms of the total amount of deals that they syndicated. In calculating the market share, the deal amount is split equally among all of the lead arrangers if a deal involves multiple leads. For deal i, *LeadRep* is determined based on the highest ranking of all of its lead arrangers (Ball, Bushman, and Vasvari 2008).
Lender No.	The number of lenders in the loan syndicate, including both lead arrangers and participant lenders.
Loan Purpose	Loans are divided into seven groups according to their primary purpose: acquisition lines, LBO/MBO/SBO, takeover, debt repay/recapitalization, corporate purpose, working capital, and other purposes.

Table 1
Definition and Measurement of Variables

Variables	Definition and Measurement
Loan Size	The loan amount in millions of dollars.
Maturity	Loan maturity in months.
PPP	An indicator variable equal to one if the loan agreement contains performance pricing provisions and zero otherwise.
PreRelation	An indicator variable equal to one if at least one of the lead arrangers of deal i has led the borrower firm's prior deals within the previous five-year period and zero otherwise (Ivashina 2009).
Revolver	An indicator variable equal to one for revolving loans and zero otherwise. A revolving loan is a loan with a type of any of the following: "Revolver/Line < 1 Yr.", "Revolver/ Line >= 1 Yr.", "Revolver/Term Loan", "364-Day Facility", "Demand Loan", or "Limited Line".
Country Variables (Source: specified in below)	
Creditor Rights	Average creditor rights for the foreign lead arrangers' countries of domicile, measured with the index developed by La Porta et al. (1998) and updated by Djankov, McLiesh, and Shleifer (2007). This index considers four types of rights that creditors possess in the event of default: (1) there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization; (2) secured creditors are able to seize their collateral once a reorganization petition is approved; (3) secured creditors are paid first out of the proceeds of liquidating a bankrupt firm; and (4) the administration of the property pending the resolution of the reorganization is passed to creditors or an administrator, rather than retained by the debtor. One point is added to a country if its laws and regulations grant any of the above rights to creditors. The index records the aggregated points for each country, ranging from zero to four with higher values representing stronger creditor rights. Source: La Porta et al. (1998), Djankov, McLiesh, and Shleifer (2007)
GeoDist	Average geographical distance between the foreign lead arrangers' countries of domicile and the U.S. in kilometers. Source: http://www.distancefromto.net/
GDP per capita	Average gross domestic product in current U.S. dollars divided by the midyear population of the foreign lead arrangers' countries of domicile. Source: World Bank
GDP growth	Average annual percentage growth rate of GDP based on current U.S. dollars for the foreign lead arrangers' countries of domicile. Source: World Bank
Inflation	Average annual percentage change in the consumer price index for the foreign lead arrangers' countries of domicile. Source: World Bank
Legal Enforcement	Average score of legal enforcement for the foreign lead arrangers' countries of domicile measured using the Berkowitz, Pistor, and Richard (2003) legality index, which aggregates five individual legality proxies from La Porta et al. (1998), including the effectiveness of the judiciary, rule of law, risk of contract repudiation, absence of corruption, and risk of expropriation, into a parsimonious measure using the principal component analysis. Source: La Porta et al. (1998), Berkowitz, Pistor, and Richard (2003)
MarCon	Market condition of the borrower country measured with a principal component analysis combined metric based on three different macroeconomic factors: (1) the difference between the yields on Moody's BAA- and AAA-rated corporate bonds; (2) the difference between the yields on ten-year government securities and three-month Treasury Bill; and (3) yields on the three-month Treasury Bill. A higher value indicates a worse market condition. Source: Federal Reserve Bank of St. Louis
PrvCredit	Average ratio of private credit to GDP for the foreign lead arrangers' countries of domicile. Private credit is credit from deposit-taking financial institutions to the private sector. Source: IMF

Table 2
Sample Selection Procedure

Selection Procedure	No. of Loans
Dollar-denominated loans issued to U.S. companies in the *DealScan* database until Sep 2014	142,538
- Loans issued before 1996	(32,001)
- Loans cannot be matched with financial data in *Compustat*	(67,073)
- Loans issued to financial or regulated firms	(12,281)
- Loans with domestic lead lenders	(29,087)
- Loans missing data on country variables	(1,091)
- Loans missing data on other test and control variables	(152)
Test Sample	853

Notes: This table presents the sample selection procedure of the main sample.

Table 3
Sample Distribution

	No. of Loans
Panel A: Sample Distribution by Lender Country	
Canada	319
Switzerland	143
France	141
Netherlands	105
Germany	98
United Kingdom	91
Japan	32
Norway	10
China	4
Australia	3
Brazil	3
Russia	2
Austria	1
Hong Kong	1
Israel	1
Mexico	1
Portugal	1
Singapore	1
Panel B: Sample Distribution by Industry	
SIC01-09 Agriculture, Forestry, and Fishing	23
SIC10-14 Mining	151
SIC15-17 Construction	14
SIC20-33 Nondurable goods manufacturing	196
SIC34-39 Durable goods manufacturing	209
SIC40-42 Transportation	17
SIC50-51 Wholesale trade	44
SIC52-59 Retail trade	47
SIC70-89 Services	149
SIC91-99 Public administration	3
Panel C: Sample Distribution by Year	
1996	107
1997	98
1998	46
1999	35
2000	21
2001	58
2002	55
2003	72
2004	59
2005	49
2006	57
2007	60
2008	37
2009	14
2010	18
2011	26
2012	9
2013	20
2014	12

Notes: This table presents the sample distribution by lender country (Panel A), industry (Panel B) and year (Panel C).

Table 4
Summary Statistics

	Test Sample (Foreign Lender Loans) N = 853			Comparing Sample (Domestic Lender Loans) N = 12,359		
Variables	*Mean*	*Median*	*Std. Dev.*	*Mean*	*Median*	*Std. Dev.*
Culture Variables						
Embeddedness	3.348	3.355	0.204			
Mastery	3.811	3.801	0.126			
Firm Variables						
Firm Size ($m)	2,853.400	878.132	5,501.018	3,733.704***	838.812**	10,012.230
Leverage	0.621	0.613	0.232	0.601**	0.577***	0.278
IntCov	10.649	2.833	33.460	37.602***	4.489***	417.743
CurRatio	1.722	1.439	1.039	1.940***	1.664***	1.318
Mar to Book	1.651	1.349	0.909	1.753***	1.434**	2.130
Tangibility	0.480	0.474	0.244	0.457***	0.450***	0.231
ROA	0.016	0.031	0.124	0.034***	0.045***	0.114
σ (ROA)	0.071	0.043	0.092	0.071	0.035***	0.949
Z-Score	2.849	2.387	2.627	3.576***	2.980***	4.135
Loan Variables						
IntSpread (bps)	213.798	200.000	146.908	189.065***	175.000***	136.863
Cov	6.162	6.000	5.094	5.825*	5.000*	4.471
Cov_Ind_BR	3.637	4.000	2.006	3.012***	3.000***	1.927
Cov_Ind_FFS	1.409	1.000	1.176	1.267***	1.000***	1.121
Maturity (month)	49.422	60.000	22.453	45.774***	52.000***	21.875
Loan Size ($m)	232.449	125.000	327.128	346.249***	150.000**	761.366
InstLoan	0.175	0	0.380	0.079***	0***	0.269
Revolver	0.563	1	0.496	0.735***	1***	0.441
PPP	0.449	0	0.498	0.541***	1***	0.498
LeadRep	0.437	0	0.496	0.683***	1***	0.465
PreRelation	0.441	0	0.497	0.491***	0***	0.500
Lender No.	6.821	5.000	6.644	8.002***	6.000***	8.233
Country Variables						
MarCon	-0.646	-1.758	1.933			
GDP per capita ($)	35,151.034	30,969.738	13,946.978			
GDP growth (%)	2.285	2.124	1.578			
PrvCredit (%)	122.122	110.651	35.565			
Inflation (%)	1.786	1.735	0.856			
GeoDist (km)	5,774.335	7,502.560	2,704.320			

Notes: This table presents the summary statistics of the variables used in the main tests. It also reports the tests of differences in means and medians between the loans led by foreign versus domestic lenders. We use ***, **, and * to denote that the means (t-test) and the medians (Wilcoxon rank sum test) for the compared samples are significantly different at the 1 percent, 5 percent, and 10 percent levels, respectively. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. Refer to Table 1 for the definition and measurement of variables.

Table 5
Pearson Correlation Matrix

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1 *Embeddedness*														
2 Mastery	**0.826**													
3 *Log(IntSpread)*	**-0.226**	**-0.182**												
4 Cov	-0.014	0.004	**0.250**											
5 *Cov_Ind_BR*	**-0.092**	-0.046	**0.491**	**0.841**										
6 *Cov_Ind_FFS*	**-0.199**	-0.073	**0.568**	**0.829**	**0.933**									
7 Log(Firm Size)	-0.023	0.030	**-0.348**	**-0.355**	**-0.400**	**-0.316**								
8 Leverage	**-0.124**	-0.065	**0.223**	0.032	**0.131**	**0.203**	**0.139**							
9 *IntCov*	0.022	0.035	**-0.101**	-0.054	-0.053	0.001	-0.070	**-0.267**						
10 CurRatio	0.016	0.005	-0.084	0.024	0.000	-0.013	**-0.113**	**-0.469**	**0.208**					
11 *Mar to Book*	-0.036	-0.080	**-0.193**	-0.040	-0.087	-0.074	-0.078	**-0.163**	**0.237**	**0.139**				
12 *Tangibility*	0.082	-0.009	-0.014	**0.146**	**0.094**	-0.080	-0.088	0.005	**-0.209**	**-0.257**	**-0.180**			
13 *ROA*	0.044	0.075	**-0.213**	-0.045	**-0.106**	-0.073	**0.130**	**-0.344**	**0.396**	**0.195**	**0.104**	**-0.089**		
14 *σ(ROA)*	**-0.125**	**-0.128**	**0.216**	0.045	**0.129**	**0.126**	**-0.287**	0.085	-0.028	-0.018	**0.247**	-0.045	**-0.371**	
15 *Z-Score*	0.080	0.062	**-0.269**	-0.060	**-0.138**	**-0.129**	-0.022	**-0.639**	**0.471**	**0.504**	**0.534**	**-0.201**	**0.558**	**-0.171**
16 *Log(Maturity)*	-0.073	-0.046	**0.155**	**0.159**	**0.223**	**0.251**	**-0.105**	0.056	0.002	-0.073	-0.064	-0.003	-0.002	-0.018
17 *Log(Loan Size)*	**-0.115**	-0.044	**-0.250**	**-0.127**	**-0.184**	**-0.200**	**0.572**	0.051	-0.002	-0.036	-0.031	0.016	**0.165**	**-0.183**
18 *InstLoan*	**-0.200**	-0.071	**0.341**	0.068	**0.234**	**0.294**	0.056	**0.160**	-0.045	-0.025	-0.079	-0.081	-0.033	**0.110**
19 Revolver	0.084	0.015	**-0.286**	0.014	**-0.125**	**-0.260**	-0.043	-0.066	-0.036	-0.033	-0.018	**0.094**	0.011	-0.053
20 PPP	**0.129**	**0.110**	**-0.136**	**0.481**	**0.301**	-0.091	-0.084	-0.051	0.009	-0.043	-0.041	**0.117**	**0.093**	-0.062
21 LeadRep	**-0.129**	-0.008	-0.085	**-0.094**	-0.080	-0.103	**0.238**	**0.097**	0.054	-0.073	0.022	-0.058	0.025	-0.045
22 PreRelation	-0.031	-0.031	-0.080	-0.023	-0.074	**-0.152**	**0.206**	-0.026	-0.069	-0.027	-0.014	**0.092**	0.080	0.011
23 *Log(Lender No.)*	0.028	0.026	**-0.170**	**0.238**	0.084	-0.077	**0.239**	0.000	-0.038	-0.086	**-0.092**	**0.091**	**0.103**	**-0.184**
24 *MarCon*	**-0.240**	**-0.209**	**0.306**	**-0.141**	-0.021	0.047	**0.196**	0.041	-0.029	0.018	**-0.128**	**-0.104**	-0.034	-0.012
25 *Log(GDP per capita)*	**-0.522**	**-0.307**	**0.226**	**-0.125**	-0.020	0.031	**0.115**	-0.041	0.063	**0.116**	-0.007	**-0.198**	0.051	**0.115**
26 *GDP growth*	**0.298**	**0.288**	**-0.182**	**0.113**	0.046	-0.003	-0.026	0.020	0.055	-0.009	0.034	0.053	0.020	-0.017
27 *PrvCredit*	**0.151**	**0.429**	0.065	**-0.094**	-0.045	0.082	0.056	-0.082	**0.097**	**0.092**	-0.012	**-0.180**	0.067	0.012
28 *Inflation*	**0.408**	**0.136**	0.008	0.026	-0.006	-0.092	0.002	**-0.103**	**0.089**	0.030	**0.115**	0.009	0.033	-0.043
29 *Log(GeoDist)*	**-0.632**	**-0.685**	0.077	**-0.193**	**-0.126**	-0.058	0.039	-0.030	**0.098**	**0.138**	**0.126**	**-0.164**	0.003	0.083

Table 5
Pearson Correlation Matrix

	15	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*
16 *Log(Maturity)*	-0.056														
17 *Log(Loan Size)*	0.024	0.025													
18 *InstLoan*	**-0.091**	**0.273**	**0.135**												
19 Revolver	-0.014	**-0.180**	0.012	**-0.522**											
20 PPP	0.017	0.075	**0.095**	**-0.223**	**0.273**										
21 LeadRep	-0.042	-0.036	**0.261**	0.074	-0.038	0.031									
22 PreRelation	-0.019	**-0.097**	**0.228**	0.008	0.073	0.034	**0.193**								
23 *Log(Lender No.)*	0.011	0.046	**0.422**	**-0.106**	**0.167**	**0.330**	**0.147**	**0.131**							
24 *MarCon*	-0.086	**-0.124**	**0.096**	**0.103**	-0.051	**-0.101**	**0.093**	0.062	0.049						
25 *Log(GDP per capita)*	0.023	0.042	**0.199**	**0.246**	**-0.128**	**-0.150**	0.065	0.057	**-0.105**	**0.329**					
26 *GDP growth*	0.011	0.043	0.068	-0.030	0.063	**0.116**	-0.040	-0.025	-0.011	**-0.518**	**-0.247**				
27 *PrvCredit*	**0.094**	-0.002	-0.014	0.085	-0.081	**-0.097**	-0.040	-0.064	-0.083	**0.171**	**0.429**	**-0.138**			
28 *Inflation*	**0.164**	**-0.119**	-0.061	**-0.127**	0.036	0.063	-0.024	0.035	0.069	0.057	**-0.302**	0.029	**-0.095**		
29 *Log(GeoDist)*	**0.106**	0.028	0.025	0.086	**-0.094**	**-0.245**	-0.012	-0.047	**-0.135**	**0.274**	**0.463**	**-0.356**	0.000	**-0.160**	

Notes: This table presents the Pearson correlation coefficients among the variables used in the main tests. Refer to Table 1 for the definition and measurement of variables. Figures in bold denote significance at the 1 percent level (two tailed).

Table 6
Impact of Foreign Lenders' National Culture on Interest Spreads

		Dependent Variable: Log(IntSpread)			
	Pred.Sign	(1)	(2)	(3)	(4)
Culture Variables					
Embeddedness	-	-0.315**		-0.866***	
		(-2.45)		(-3.44)	
Mastery	?		-0.538***		-1.295***
			(-3.18)		(-3.61)
Firm Variables					
Log(Firm Size)	-	-0.198***	-0.197***	-0.192***	-0.194***
		(-4.92)	(-4.95)	(-4.91)	(-4.93)
Leverage	+	0.606***	0.621***	0.589***	0.618***
		(4.45)	(4.65)	(4.65)	(4.79)
IntCov	-	-0.000	-0.000	-0.000	-0.000
		(-0.73)	(-0.75)	(-0.65)	(-0.74)
CurRatio	-	0.010	0.006	0.011	0.006
		(0.31)	(0.19)	(0.33)	(0.17)
Mar to Book	-	-0.134***	-0.140***	-0.135***	-0.139***
		(-3.42)	(-3.57)	(-3.59)	(-3.75)
Tangibility	-	-0.131	-0.164	-0.145	-0.163
		(-0.85)	(-1.03)	(-0.88)	(-0.97)
ROA	-	-0.431**	-0.421**	-0.397*	-0.401*
		(-2.13)	(-2.07)	(-1.80)	(-1.81)
σ(ROA)	+	0.183	0.202	0.233	0.266
		(0.57)	(0.67)	(0.79)	(0.92)
Z-Score	-	-0.002	-0.000	-0.002	0.002
		(-0.10)	(-0.01)	(-0.10)	(0.11)
Loan Variables					
Log(Maturity)	+	0.055	0.053	0.068	0.063
		(1.22)	(1.20)	(1.46)	(1.37)
Log(Loan Size)	-	-0.089***	-0.088***	-0.089***	-0.086***
		(-2.89)	(-2.93)	(-3.06)	(-3.02)
InstLoan	+	0.278***	0.290***	0.269***	0.288***
		(3.37)	(3.55)	(3.04)	(3.34)
Revolver	-	-0.203***	-0.201***	-0.203***	-0.202***
		(-4.24)	(-4.20)	(-4.11)	(-4.08)
PPP	-	-0.086	-0.087	-0.103*	-0.104*
		(-1.56)	(-1.53)	(-1.83)	(-1.79)
LeadRep	-	-0.037	-0.023	-0.064	-0.022
		(-0.72)	(-0.45)	(-1.22)	(-0.46)
PreRelation	?	0.081	0.080	0.071	0.069
		(1.45)	(1.46)	(1.37)	(1.38)
Log(Lender No.)	-	0.005	0.002	-0.003	-0.006
		(0.14)	(0.06)	(-0.07)	(-0.16)
Country Variables					
MarCon	+	0.080**	0.081**	0.076**	0.082**
		(2.18)	(2.20)	(2.22)	(2.31)
Log(GDP per capita)	-			-0.165	-0.016
				(-0.84)	(-0.08)
GDP growth	-			0.023	0.019
				(0.75)	(0.57)
PrvCredit	-			0.001	0.001
				(0.67)	(1.22)
Inflation	+			0.123**	0.072
				(2.01)	(1.25)
Log(GeoDist)	+			-0.097	-0.141*
				(-1.36)	(-1.72)
Intercept		7.782***	8.796***	11.818***	12.741***
		(14.41)	(11.48)	(5.04)	(4.74)

Table 6
Impact of Foreign Lenders' National Culture on Interest Spreads

		Dependent Variable: Log(IntSpread)			
	Pred.Sign	(1)	(2)	(3)	(4)
Loan Purpose		Yes	Yes	Yes	Yes
Industry Effects		Yes	Yes	Yes	Yes
Year Effects		Yes	Yes	Yes	Yes
No. of Observations		853	853	853	853
Adjusted R^2		64.4%	64.5%	61.6%	61.2%

Notes: This table presents the regression results of the impact of foreign lenders' national culture on interest spreads. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by year. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two tailed).

Table 7
Robustness Checks

	Dependent Variable: Log(IntSpread)	
	(1)	(2)
Panel A: Exclude Loans with Multiple Leads		
Embeddedness	-0.702***	
	(-2.73)	
Mastery		-0.988***
		(-2.62)
Intercept, Controls, and Fixed Effects	Yes	Yes
No. of Observations	766	766
Adjusted R^2	59.7%	59.4%
Panel B: Correct Sample Selection Bias		
Embeddedness	-0.876***	
	(-3.45)	
Mastery		-1.303***
		(-3.64)
IMR	-0.135	-0.089
	(-0.48)	(-0.33)
Intercept, Controls, and Fixed Effects	Yes	Yes
No. of Observations	853	853
Adjusted R^2	61.5%	61.2%
Panel C: Control for the Effects of Formal Institutions		
Embeddedness	-0.880***	
	(-2.75)	
Mastery		-1.941***
		(-3.27)
Creditor Rights	0.007	0.012
	(0.15)	(0.25)
Legal Enforcement	-0.007	0.109
	(-0.09)	(1.47)
Intercept, Controls, and Fixed Effects	Yes	Yes
No. of Observations	754	754
Adjusted R^2	61.5%	61.4%

Notes: This table presents the results of the robustness tests. In Panel A, we exclude loans with multiple lead arrangers. In Panel B, we correct for sample selection bias. In Panel C, we control for the effects of formal institutions. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by year. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two tailed).

Table 8
Conditional Effects

		Dependent Variable: Log(IntSpread)	
	Pred.Sign	(1)	(2)
Panel A: Prior Lending Relationship			
Embeddedness	-	-0.986***	
		(-3.74)	
*Embeddedness * PreRelation*	+	0.365**	
		(2.19)	
Mastery	?		-1.603***
			(-4.89)
*Mastery * PreRelation*	Opposite to the above		0.726***
			(2.87)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		853	853
Adjusted R^2		61.7%	61.5%
Panel B: Market Condition			
Embeddedness	-	-0.747***	
		(-2.90)	
*Embeddedness * MarCon*	+	0.076**	
		(1.97)	
Mastery	?		-1.069***
			(-2.95)
*Mastery * MarCon*	Opposite to the above		0.163**
			(2.43)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		853	853
Adjusted R^2		61.6%	61.4%

Notes: This table presents the regression results of the impact of prior lending relationship (Panel A) and market condition (Panel B) on the relationship between foreign lenders' national culture and interest spreads. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by year. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two tailed).

Table 9
Impact of Foreign Lenders' National Culture on Covenant Intensity

Dependent Variable:	*Cov*		*Cov_Ind_BR*		*Cov_Ind_FFS*	
	(1)	(2)	(3)	(4)	(5)	(6)
Culture Variables						
Embeddedness	-1.179***		-1.308***		-1.151***	
	(-3.65)		(-4.35)		(-3.29)	
Mastery		-1.987***		-1.691***		-1.684***
		(-3.75)		(-3.12)		(-2.92)
Firm Variables						
Log(Firm Size)	-0.172***	-0.173***	-0.166***	-0.173***	-0.246***	-0.247***
	(-4.63)	(-4.71)	(-4.70)	(-4.64)	(-4.66)	(-4.48)
Leverage	0.380**	0.450**	0.629***	0.692***	0.682***	0.724***
	(2.02)	(2.34)	(4.99)	(5.57)	(3.41)	(3.56)
IntCov	0.000	0.000	0.001	0.001	0.000	0.000
	(0.10)	(0.31)	(0.68)	(1.11)	(0.04)	(0.18)
CurRatio	0.140***	0.138***	0.071***	0.069***	0.137***	0.133***
	(4.14)	(4.16)	(2.85)	(2.76)	(2.93)	(2.83)
Mar to Book	0.038	0.035	-0.026	-0.024	-0.039	-0.037
	(0.90)	(0.84)	(-0.62)	(-0.52)	(-0.7)	(-0.64)
Tangibility	0.340	0.340	-0.154	-0.187	0.216	0.207
	(1.64)	(1.63)	(-0.99)	(-1.2)	(0.97)	(0.92)
ROA	-0.189	-0.214	-0.020	-0.038	-0.336	-0.343
	(-0.70)	(-0.81)	(-0.09)	(-0.16)	(-1.14)	(-1.2)
σ(ROA)	-0.344	-0.333	-0.309	-0.377	-0.329	-0.338
	(-1.02)	(-1.00)	(-1.11)	(-1.32)	(-0.88)	(-0.84)
Z-Score	-0.026	-0.018	-0.009	-0.008	-0.011	-0.007
	(-1.16)	(-0.80)	(-0.47)	(-0.35)	(-0.38)	(-0.24)
Loan Variables						
Log(Maturity)	0.046	0.038	0.086**	0.084**	0.145**	0.140**
	(0.81)	(0.65)	(1.99)	(1.96)	(2.16)	(2.08)
Log(Loan Size)	-0.086**	-0.082**	-0.022	-0.013	-0.071*	-0.067*
	(-2.45)	(-2.28)	(-0.85)	(-0.56)	(-1.95)	(-1.92)
InstLoan	0.388***	0.414***	0.081	0.110	0.365***	0.389***
	(5.90)	(6.15)	(1.09)	(1.44)	(5.02)	(5.39)
Revolver	-0.013	-0.009	-0.090**	-0.081**	-0.077	-0.070
	(-0.28)	(-0.18)	(-2.15)	(-2.04)	(-1.59)	(-1.41)
PPP	0.638***	0.646***	0.033	0.040	0.429***	0.436***
	(8.93)	(8.96)	(0.72)	(0.84)	(6.11)	(6.22)
LeadRep	-0.080	-0.023	-0.045	0.001	0.041	0.088
	(-1.34)	(-0.38)	(-1.3)	(0.03)	(0.68)	(1.6)
PreRelation	0.110*	0.102*	-0.050	-0.059	0.069	0.061
	(1.85)	(1.72)	(-0.72)	(-0.85)	(1.00)	(0.88)
Log(Lender No.)	0.186***	0.180***	0.021	0.018	0.106**	0.100**
	(4.55)	(4.33)	(0.59)	(0.47)	(2.54)	(2.34)
Country Variables						
MarCon	0.056	0.053	0.076**	0.066**	0.088*	0.089*
	(0.91)	(0.89)	(2.30)	(2.10)	(1.74)	(1.68)
Log(GDP per capita)	0.039	0.221	0.041	0.338*	-0.133	0.131
	(0.13)	(0.82)	(0.22)	(1.91)	(-0.56)	(0.66)
GDP growth	0.126***	0.119***	0.051	0.042	0.102***	0.098***
	(3.42)	(3.30)	(1.64)	(1.25)	(2.70)	(2.75)
PrvCredit	0.003*	0.005***	0.002*	0.003*	0.002	0.003
	(1.94)	(2.71)	(1.80)	(1.78)	(1.06)	(1.19)
Inflation	0.087	0.014	0.064**	-0.015	0.077	0.011
	(1.49)	(0.27)	(2.00)	(-0.49)	(1.6)	(0.27)
Log(GeoDist)	-0.142	-0.222*	-0.317***	-0.342***	-0.184*	-0.237**
	(-1.47)	(-1.93)	(-3.66)	(-3.59)	(-1.71)	(-1.96)
Intercept	6.098*	8.462**	8.220***	7.481**	6.985**	7.324*
	(1.75)	(2.32)	(3.02)	(2.14)	(2.08)	(1.89)

Table 9
Impact of Foreign Lenders' National Culture on Covenant Intensity

Dependent Variable:	*Cov*		*Cov_Ind_BR*		*Cov_Ind_FFS*	
	(1)	(2)	(3)	(4)	(5)	(6)
Loan Purpose	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	853	853	565	565	853	853
Pseudo R^2	33.1%	33.1%	16.3%	15.9%	19.3%	19.2%

Notes: This table presents the Poisson regression results of the impact of foreign lenders' national culture on covenant intensity. Z-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by year. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two tailed).

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.