

University of Texas Rio Grande Valley

ScholarWorks @ UTRGV

Accountancy Faculty Publications and
Presentations

Robert C. Vackar College of Business &
Entrepreneurship

8-2021

Do the specific countries in which a multinational corporation operates affect its private loan contracts?

Brandon Ater

The University of Texas Rio Grande Valley, brandon.ater@utrgv.edu

Bowe Hansen

Follow this and additional works at: https://scholarworks.utrgv.edu/account_fac



Part of the [Accounting Commons](#)

Recommended Citation

Ater, B., Hansen, B., 2021. Do the specific countries in which a multinational corporation operates affect its private loan contracts? *Journal of Multinational Financial Management* 100709. <https://doi.org/10.1016/j.mulfin.2021.100709>

This Article is brought to you for free and open access by the Robert C. Vackar College of Business & Entrepreneurship at ScholarWorks @ UTRGV. It has been accepted for inclusion in Accountancy Faculty Publications and Presentations by an authorized administrator of ScholarWorks @ UTRGV. For more information, please contact justin.white@utrgv.edu, william.flores01@utrgv.edu.

Do the Specific Countries in which a Multinational Corporation Operates Affect its Private Loan Contracts?

ABSTRACT

Previous research has shown that higher levels of firm globalization lead to a lower cost of private debt. However, this research generally treats globalization as a homogeneous attribute ignoring the specific countries in which a multinational corporation (MNC) operates. Using a sample of U.S. MNCs from 1999 through 2017, we relax this assumption and find that while the results from prior research hold with regards to the level of an MNC's operations in segments reported at the regional or continent-wide level, the level of an MNC's operations in countries with low institutional quality is associated with a higher cost of bank debt. Our results are robust to controlling for firms' choice to operate in countries with low institutional quality using self-selection models and propensity score matching. In additional testing we find that the level of MNCs operations in countries with low institutional quality is negatively associated with the inclusion of collateral requirements in private lending agreements, but is not associated with the maturity of the loan or the number of covenants included in the lending agreement. Finally, we find that firms' segment disclosure choices vary around new loan issuances in a manner consistent with management being aware that operations in low institutional quality are perceived by lenders to indicate higher credit risk.

Keywords: Cost of debt, Spread, Institutional Quality, Private Lending, Globalization, Financial Contracting

1. Introduction

A significant amount of research has investigated the effect of globalization on the cost of debt to multinational companies (MNCs) (e.g., Reeb et al., 2001; Mansi and Reeb, 2002; Li et al., 2011). The overall tenor of the results of these studies is that globalization is associated with a lower cost of both public and private debt. These studies measure globalization using firms' total foreign assets, foreign sales, or the number of foreign segments, implicitly assuming that the effect of globalization is independent of the countries in which MNCs operate. However, MNCs have been increasingly investing in emerging markets with sales of foreign subsidiaries in emerging markets representing 20% of total foreign sales for MNCs in 2009 (Barefoot and Mataloni Jr., 2011), and foreign direct investment in emerging and developing markets increasing from \$340 billion in 2005 to \$703 billion in 2013 (United Nations Conference on Trade and Development (UNCTAD, 2013). As a result, MNCs are increasingly operating in a diverse mix of political, economic, and legal environments and prior research presents evidence that country specific factors are associated with the attributes of debt financing (Aggarwal and Goodell, 2009; Chui et al. 2016). This brings into question the assumption that globalization is a homogeneous construct and raises the concern that variation in legal and institutional quality across countries may affect the relationship between globalization and the cost of debt. Therefore, the objective of this study is to investigate the extent to which the effect of globalization on the terms of MNCs' private debt contracts is affected by the set of countries in which they operate, and specifically the effect of operations in countries with low institutional quality.

Investigating the effect of the specific set of countries that MNCs operate in on private lending is important for several reasons. First, debt is the primary source of external capital for

firms as new debt issuances dwarf new equity issuances (Graham et al., 2008), and bank debt is, on average, the largest source of debt financing (Houston and James, 1996; Graham et al., 2008). Therefore, an understanding of how the nature of MNC globalization affects the cost of private debt is important for firms, regulators, and academics. Second, banks represent a more informed set of creditors than public debtholders and have access to private information regarding borrowers, leading to lower information asymmetry (Leland and Pyle, 1977; Rajan, 1992; Demiroglu and James, 2010). Banks are also active monitors of firms and can influence firms' operating and financing decisions (Chava and Roberts, 2008; Nini et al., 2012). As a result, an investigation of private lending terms provides insight into how an informed and influential set of capital providers evaluate MNC's operations in countries with lower institutional quality.

Prior literature provides several theoretical arguments regarding the effect that globalization may have on the costs of private debt. First, MNCs provide creditors' access to markets they may be constrained from otherwise accessing which should result in lower costs of private debt (Errunza and Senbet, 1981; 1984). Second, globalization internalizes transactions related to intangible assets where proprietary information would lead to substantial transaction costs increasing the value of the MNC which also should result in lower costs of private debt (Caves, 1979). Finally, global diversification increases the risk of agency costs to MNCs which should result in higher costs of debt (Harris et al., 1982). Motivated by these theories, Li et al. (2011) investigate the association between an MNCs level of globalization and the terms of private lending agreements, and find that higher levels of globalization are associated with more favorable lending terms.

We argue that treating globalization as a homogenous construct provides an incomplete assessment of the relation between globalization and private lending terms. Specifically, we

argue that the value of internalizing transactions related to intangible assets is lower and agency costs are higher when globalization is achieved through operations in countries with low institutional quality than when globalization is achieved through operations in countries with high institutional quality. Therefore, we predict that the association between an MNC's level of globalization and the cost of private debt will be associated with the institutional quality of the countries in which an MNC operates. Specifically, we argue that, in contrast to the findings in Li et al. (2011), MNC's operations in countries with low institutional quality will be associated with a higher cost of debt.

We perform our study using a sample of 15,715 private debt contracts entered into by 2,982 public U.S. companies during the years 1999 – 2017, including 8,668 debt contracts entered into by multinational firms. We measure the strength of country-level institutional quality using the creditor rights index from Djankov et al. (2007), the property rights index from Kaufmann et al. (2011), and the per capita income level of the country as an outcome variable that reflects institutional quality (Glaeser et al., 2004). We identify countries as having low institutional quality if any of these three measures reflect low institutional quality. We measure the level of MNCs operations in countries with low institutional quality using each of: the number of segments in low institutional quality countries reported by the firm, the ratio of reported sales in low institutional quality countries to total sales, and the ratio of reported assets in low institutional quality countries to total assets. We then perform tests using multivariate regressions controlling for loan and firm specific factors that prior research finds to be related to private lending terms. To isolate the effect of globalization in low institutional quality countries, we include corresponding measures of firm globalization in high institutional quality countries

and non-country-specific globalization (i.e., foreign segments reported at a regional or continent-wide level) as additional control variables in our tests.

Our results indicate that the relationship between the level of an MNC's globalization and the cost of private debt relates systematically to the countries in which MNCs operate. Consistent with the findings in Li et al. (2011), and their argument that MNCs provide lenders an opportunity to diversify their lending portfolio, we find that the level of U.S. MNCs' globalization in segments reported at the regional or continent-wide level is associated with a lower cost of private debt, measured using interest rate spreads. However, in contrast to Li et al. (2011), we find that the level of U.S. MNCs' globalization in countries with low institutional quality is associated with a higher cost of debt. These results hold when we measure MNCs' globalization in countries with low institutional quality using either the number of segments or the percentage of an MNC's sales that are in countries with low institutional quality.

It is unlikely that our multivariate results are driven by reverse causality since it would not be rational for a firm to operate in a low institutional quality country in order to obtain a higher cost of debt. However, it is possible that our multivariate regression results are driven by an omitted correlated variable related to the firm's choice to operate abroad. Therefore, we perform multiple additional analyses to control unobservable factors related to firms' choice to operate internationally. First, using our entire sample, we control for firms' choice to operate globally using a Heckman (1979) selection model. Second, including only the MNCs in our sample, we control for firms' choice to operate in a low institutional quality country using a Heckman selection model. Finally, using only the MNCs in our sample, we use matching analyses, including propensity score matching and Mahalanobis distance matching. In each case, we find that MNCs with greater operations in countries with low institutional quality obtain less

favorable interest rate spreads increasing our confidence that lenders view the operations of U.S. MNCs in countries with low institutional quality as being associated with higher credit risk.¹

We then leverage non-price features of private debt contracts: maturity, loan collateral security requirements, and the number of covenants included in the debt contract, to provide a richer understanding of the relationship between the set of countries that MNCs operate in and firm credit risk. Li et al. (2011) present evidence that firms' overall level of globalization is negatively associated with the likelihood of the loan being secured and the number of covenants included in the debt contract and is not associated with loan maturity. We find no evidence of an association between globalization in countries with low or high institutional quality and loan maturity or the number of covenants included in the debt contract. However, we find a subtle relationship between loan security requirements and globalization, indicating that the role of collateral in private debt is influenced both by the characteristics of the countries in which an MNC operates and the nature of their operations in these countries.

Specifically, we find a significant negative association between globalization in countries with low institutional quality and security requirements when we use foreign sales to measure globalization, and a stronger negative association when we measure globalization using foreign assets. However, we find no evidence of an association between loan security requirements and globalization in countries with high institutional quality using any of our measures of globalization, or globalization in low institutional quality countries when we measure globalization using the number of segments. This result is consistent with property laws, and

¹ We do not argue that MNC's operating in countries with low institutional quality are behaving sub-optimally. Operations in countries with low institutional quality may offer firms benefits that compensate for the higher costs of debt, such as: cheaper labor, access to raw materials, or greater opportunities for value creation. Rather, we argue that whether globalization provides benefits or costs to the firm, in terms of the cost of private debt, depends on the specific countries in which the firm operates.

their enforcement, in countries with low institutional quality reducing the perceived value of collateral in those countries. Therefore, the negative association between globalization and collateral found by Li et al. (2011) may reflect collateral in countries with low institutional quality representing lower, or more uncertain, value to private lenders.

Finally, the guidance on segment disclosures under Accounting Standard Codification paragraph 280 (ASC 280) allows firms flexibility in identifying reportable segments. In additional analyses, we find that MNCs report fewer segments in countries with low institutional quality in the years around private debt issuances than in other years. This result is consistent with MNCs being aware of the less favorable lending terms associated with operations in countries with low institutional quality and using the flexibility in the accounting guidance to reduce the salience of their operations in these countries. Overall, our results support the inference that globalization by U.S. MNCs is not homogeneous, and that the effect of globalization on the attributes of private debt contracts varies as a function of the legal and institutional features of the countries in which MNCs operate.

Our findings contribute to a growing number of cross-country studies that investigate the effect of country-specific legal institutions on public and private loan contracts obtained by domestic firms (Qian and Strahan, 2007; Bae and Goyal, 2009; Zaher et al., 2020). Our study is not a cross-country study in the sense that all of the firms in our sample are domiciled in the U.S. However, we are able to extend the cross-country research by isolating the effect of operations in countries with low institutional quality on the attributes of private debt contracts holding constant the institutional quality of the company's country of domicile.² We also contribute to

² Limiting our sample to U.S. MNC's also holds constant the culture of the country in which the corporation is domiciled. This mitigates concerns that our results may reflect relations between lending terms and culture found in prior research (Chui et al., 2016; Meng and Yin, 2019)

the literature investigating the impact of globalization on firm value (Denis et al., 2002; Mansi and Reeb, 2002), specifically the value of globalization as assessed by the firm's primary source of external capital, banks (Li et al., 2011). By removing the assumption that globalization is homogeneous we are able to provide evidence that the relationship between globalization and the cost of private debt relates systematically to the countries in which MNCs operate. Finally, Gande et al. (2009) provide evidence that MNCs with operations in countries with stronger creditor rights have higher Tobin-Qs. They posit, but do not test, that this results from these companies being able to obtain debt capital at a lower cost. We provide direct evidence supporting this supposition.

The remainder of the paper proceeds as follows. In the following section, we discuss theoretical and empirical evidence regarding the association between firm globalization and the cost of private debt and evaluate the potential effect of MNCs' operations in low institutional quality countries on that association. In section 3, we present our research design including a discussion of our self-selection and matching techniques. We discuss our sample selection procedure and provide descriptive statistics in section 4, and present our primary results in section 5. In the sixth section, we present additional analyses investigating the association between MNCs' operations in countries with low institutional quality and non-price features of private debt, including collateralization, loan maturity, and the use of loan covenants. In the seventh section, we present our analysis of firms' segment disclosure choices to provide supporting evidence for our primary findings. The final section concludes.

2. Firm globalization and the cost of private debt

Prior literature provides several theoretical arguments regarding the effect that globalization may have on creditors' assessments of the value and risk of a firm. These theories

consider both the effect that lending to an MNC may have on the lenders' overall lending portfolio and on the effect that globalization may have on the value of the MNC.

The theory of imperfect world capital markets focuses on the ability of MNCs to "complete" markets by providing lenders with indirect access to countries that they would otherwise be constrained from entering (Errunza and Senbet, 1981; 1984). If global capital markets were "perfect", creditors could choose lending portfolios that would produce an optimal level of diversification. However, their ability to do so is limited by transaction costs related to information asymmetry and legal constraints on cross-country capital flows. Therefore, MNCs offer creditors an effective opportunity to improve the diversification of their lending portfolio and should be associated with a lower cost of debt.

In addition to the ability of globalization to add value to the lender based on its effect on the diversification of the banks' loan portfolio, theory also supports globalization directly increasing the value of the MNC. Internalization theory (Caves, 1971) suggests that firms can increase their value by internalizing the markets for certain intangible assets (e.g., R&D and advertising expenditures) that are based on propriety information, such that they generate substantial transaction costs in arm's length transactions. Globalization internalizes transactions related to these intangibles, avoiding these transaction costs and therefore increasing the value of the firm. Therefore, internalization theory indicates that globalization should be viewed favorably by creditors and be associated with a lower cost of debt.

In contrast to the above theories, which predict that banks will value globalization positively, agency theory suggests that banks may view globalization negatively. The additional complexity of a globalized firm creates information asymmetry between local managers and central managers increasing the overall agency costs in the firm (Harris et al., 1982). In addition,

globalization gives managers access to more internal markets across which to allocate a firm's resources, thereby making it more difficult for banks to monitor managerial decisions and increasing the risk of empire building, asset substitution, and self-dealing. These higher agency costs should be associated with a higher cost of debt.

Motivated by these theories, Li et al. (2011) examine the effect of overall globalization on the cost of bank debt. They find that the overall level of an MNC's globalization is negatively associated with the cost of private debt. Based on these results, they infer that the benefits of globalization resulting from a firm's ability to internalize intangible assets and to "complete" markets for lenders outweigh any increased agency costs. The measures of globalization in their study treat globalization as homogenous, i.e., they do not allow for the effect of globalization to vary depending on the countries in which an MNC operates. However, prior studies investigating the effect of country-level factors indicate that public and private lending agreements are sensitive to the legal, economic, political, and cultural differences between countries in which borrowing firms are domiciled.

Investigating private loans in 43 countries, Qian and Strahan (2007) present evidence that firms domiciled in countries with weaker creditor protection obtain private loans with higher interest rates. Further, Laeven and Majnoni (2005) present evidence that interest rate spreads are negatively related to judicial efficiency in the firm's country of domicile. Similarly, Lobo et al. (2020) find that bank loans in countries with weaker debt enforcement have larger interest rate spreads. The findings in these papers bring into question the extent to which the effects of globalization on the cost of private debt are conditional on the institutional quality of the countries in which U.S. MNCs operate.

It is possible that the results from these cross-country studies do not generalize to U.S. MNC's because loan contracts between banks and U.S. MNCs are subject to U.S. law. As a result, the relatively strong creditor rights and enforcement mechanisms in the U.S. offer protection to private lenders. However, operations in countries with low institutional quality could still have an effect on private lending if they moderate the effect of globalization on the value of the MNC by increasing agency costs or reducing the benefit to the firm of internalizing intangible assets.

Consistent with operations in countries with low institutional quality reducing the value of internalization of intangible assets, Gao and Chou (2015) present evidence that the innovation efficiency of MNCs with operations in developing countries or countries with weak patent protection has smaller valuation benefits than innovation efficiency of MNCs with operations in developed countries and countries with strong patent protection. Consistent with this result, Chu et al. (2020) find that strong patent protections are more likely to be associated with innovation in countries with a high level of economic development.

In addition, the increased risk of self-dealing and the increased cost of monitoring operations in countries with low institutional quality means that the agency costs resulting from globalization are greater for MNCs with operations in countries with low institutional quality. Supporting this inference, Amiram and Owens (2018) present evidence that income smoothing is associated with a lower cost of debt in countries with a low risk of management self-dealing, but a higher cost of debt in countries with a high risk of management self-dealing.

The reduced benefits of internalization of transactions and increased agency costs are likely to lead to significantly lower valuation benefits to MNCs with operations in countries with low institutional quality. Supporting the inference that the valuation benefits of globalization are

affected by the countries in which MNCs operate, Gande et al. (2009) find that MNCs with operations in countries with weak creditor rights have smaller valuation benefits, measured using Tobin's-Q, than MNCs that operate in countries with stronger creditor rights.

In addition to having an effect on the value of MNCs, operations in countries with low institutional quality also affect MNCs' financing decisions. Desai et al., (2004) present evidence that MNCs with foreign affiliates in countries with underdeveloped capital markets or weak creditor rights increase the amount of borrowing by the parent company in order to fund the subsidiary rather than bear the higher cost of debt that would result if the subsidiary was financed using domestic loans. This increased leveraging of the parent company generates an increased risk to the lender which should lead to a higher cost of debt. Based on these effects of operations in countries with low institutional quality on the value of internalization, the magnitude of agency costs, and the financing decisions of U.S. MNCs we expect that the price component of private loans to U.S. MNCs will be positively associated with their level of operations in countries with low institutional quality.

3. Research design

3.1. Identification of operations in countries with low institutional quality

In order to evaluate the effect of globalization in countries with low institutional quality on private lending agreements we first identify the extent to which MNCs have such operations. We use segment disclosures required under ASC 280 to identify the countries in which MNCs operate and to determine their level of operation, i.e., assets and sales, in each country. We define institutional quality broadly as a set of legal rules and social norms that promote economic development. Following prior literature, we determine the strength of institutional quality in the countries in which segments are operated based on the following three country-level measures:

the protection of creditor rights, the protection of property rights, and the level of economic development (Qian and Strahan, 2007; Bae and Goyal, 2009; Djankov et al., 2007).

We include creditor rights as a measure of institutional quality because the protection of creditor rights is a primary concern for creditors in evaluating their lending risk. We adopt our measure of creditor rights from Djankov et al. (2007). Djankov et al. (2007) find that the most important components of creditor rights are: that secured creditors are paid first following the liquidation of a bankrupt firm and secured creditors are able to seize collateral following an approved petition for reorganization without a court superseding or forestalling such action by imposing an automatic stay or “asset freeze.” Therefore, we designate a segment as being in a country with strong creditor rights if the country grants both of these powers to creditors in bankruptcy and in a country with weak creditor rights if the country fails to grant *both* of these rights. The data from Djankov et al. (2007) are available for the first six years of our sample; for all years following 2002, we use the creditor rights score as of 2003.³

Bae and Goyal (2009) present evidence that legal enforcement plays a significant role in the pricing of private debt, therefore, we use property rights as our second measure of institutional quality. We measure country-level property rights based on a composite of the following measures from Kaufmann et al. (2011): government effectiveness, regulatory quality, rule of law, and control of corruption. We use these four measures because they incorporate both the de jure legal quality and the de facto quality of legal enforcement, and prior literature presents evidence that the institutional quality of a country depends on both the quality of the

³ We acknowledge that this introduces potential measurement error. However, the correlation between 1998 and 2003 creditor rights indices is 0.97 indicating that creditor rights are highly persistent, mitigating this concern. As an additional robustness test, we performed our primary analysis excluding creditor rights (i.e., measuring institutional quality using only property rights and economic development) and obtained qualitatively and quantitatively similar results.

laws as written and the level of legal enforcement (La Porta et al. 1997). We first calculate the average percentile rank of each of these four indicators for each country in each year of our sample. Then, following prior literature, we designate a country as having weak property rights if the country's property rights are below the sample median (Hansen et al. 2015; Zaher et al. 2020).⁴

Finally, as we define high quality institutions as those that promote economic development, we include economic development as a reflective measure of institutional quality. We measure the economic development of a country using country classifications generated annually by the World Bank. Each year, the World Bank assigns countries to one of four groups based on the country's estimated gross national income per capita (in U.S. dollars). The four groups are high, upper middle, lower middle, and low. We find that 76.8 percent of the segments in our sample are located in high-income countries. Therefore, we designate a segment as being in a country with low economic development if the country is in the three lowest income classifications as measured by the World Bank.⁵

Since prior literature has demonstrated each of creditor rights, property rights, and economic development to be related to private debt contracting terms for domestic firms, we classify a country to have low institutional quality if it is classified as low under any of these three indicators.⁶ We then measure the level of an MNC's operations in countries with low

⁴ Since our sample is composed of U.S. MNCs, lenders may evaluate the property rights of the countries in which the MNCs operate relative to property rights in the U.S. Therefore, in untabulated robustness tests we designated countries as having weak property rights if the country's percentile rank is two or more, or three or more, standard deviations below the U.S., and obtained results that support the same statistical inferences in both cases.

⁵ Our findings are qualitatively unchanged if we classify a country as having low economic development only if it is in the lower middle, or low classification.

⁶ In additional (untabulated) tests we perform our analyses classifying segments as being in countries with low institutional quality only if the country meets all three of the criteria used to determine low institutional quality and obtain qualitatively similar results.

institutional quality using the number of operating segments the firm reports in countries with low institutional quality, and each of the firm’s sales and assets that they report for segments located in countries with low institutional quality as a percentage of their total sales and assets.

3.2. Multivariate Regression Analysis

We use the following regression specification to evaluate the effect of U.S. MNC’s operations in countries with low institutional quality on the price component of private loans:

$$\begin{aligned} \text{LogSpread} = \beta_0 + \beta_1 \text{LowInstGlob} + \beta_2 \text{HighInstGlob} + \beta_3 \text{NonSpecGlob} + & \quad (1) \\ \beta_{i-j} \text{Controls} + \beta_{j-k} \text{Industry} + \varepsilon & \end{aligned}$$

We measure our dependent variable, the price component of private loans, using the natural log of the all-in-spread on the loan, *LogSpread*, measured using the “All-in Drawn” variable from DealScan which is the total amount paid in basis points over LIBOR including interest and any annual or facility fee. *LowInstGlob* is a generic variable representing the extent of U.S. MNC’s operations in low institutional quality countries, measured as each of: the number of operating segments that the firm reports in countries with low institutional quality, *LowInstSeg*, sales in low institutional quality countries divided by total sales, *LowInstSales*, and assets in low institutional quality countries divided by total assets, *LowInstAssets*. A positive coefficient on *LowInstGlob*, β_1 , would support our argument that higher levels of operations in countries with low institutional quality are associated with higher costs of private debt. To isolate the effect of operations in countries with low institutional quality and control for the effect of overall globalization on private lending terms documented in Li et al. (2011) we include controls for the level of foreign operations in countries with high institutional quality and the level of foreign operations that are not country specific. We measure these variables, *HighInstGlob* and *NonSpecGlob* using measures that correspond to our measures of *LowInstGlob*: the number of

operating segments reported for each classification of segment, the ratio of sales in each classification of segment to total sales, and the ratio of assets reported for each classification of segment to total assets.

In addition, we control for firm and loan characteristics that have been shown by prior literature to impact debt contracts (Strahan, 1999; Qian and Strahan, 2007; Bae and Goyal, 2009; Kim et al., 2011; Li et al., 2011). We measure firm *Size* using the natural log of the total assets of the firm in millions of U.S. dollars. *Profitability* is the ratio of operating income before depreciation to total assets. *Leverage* is the ratio of total long-term debt to total assets. We measure *Tangibility* as the ratio of net property, plant, and equipment to total assets. Consistent with Bae and Goyal (2009) and Li et al. (2011), we measure *Market-to-Book* by summing the public value of equity and book value of long-term debt, and dividing by total assets. We measure *Return Volatility* as the standard deviation of monthly stock returns over the four years prior to loan inception. We control for the firm's expected default risk using *EDF* (*Expected Default Frequency*). We measure *EDF* using the methodology proposed in Bharath and Shumway (2008) which calculates the firm's expected probability of default based on the model proposed in Merton (1974) using as inputs: an estimated market value of the firm, the face value of the firm's debt, an estimated expected annual return on the firm's assets, and an estimated standard deviation of the value of the firm.

Following Francis et al. (2017), we control for overall macroeconomic conditions at the time the loan was originated by including the difference between the yield on AAA bonds and BAA bonds measured in the month of loan origination, *DefSpread*, and the difference between the yield on ten year U.S. treasury bonds and the yield on two year U.S. treasury bonds in the month of loan origination, *TermSpread*. We also control for the effects of the internet bubble and

the financial crisis periods by including an indicator variable, *TechBubble*, equal to one for the years 1999 and 2000, and zero otherwise, and an indicator variable, *FinCrisis*, equal to one for the years 2007 and 2008, and zero otherwise.

Next, loan terms other than pricing are generally established based on negotiations between the firm and the lead bank in a syndicate, and the spread is subsequently determined in the process of recruiting other banks into the syndicate (Bharath et al., 2011). Therefore, we also control for the natural log of the loan amount, *LogAmount*, the natural log of the loan term in months, *LogMaturity*, and an indicator variable for secured loans, *Secured*. Finally, we include one-digit SIC code indicators, as well as indicators for the loan's purpose (e.g., asset acquisition, takeover, debt restructuring, working capital, etc.) and the loan's type (e.g., revolving loan, term loan, etc.). To address potential correlation in errors within firms we evaluate significance using robust standard errors clustered by firm. We present definitions for all variables used in our analysis in the Appendix.

3.3. Analyses addressing potential self-selection bias

We argue that the strength of institutional quality in countries in which U.S. MNCs operate affects the cost of private debt. Since we argue that the level of operations in countries with low institutional quality will be associated with *higher* costs of debt it is unlikely that our findings could be driven by reverse causality. However, it is possible that unobservable firm characteristics may affect both the cost of a firm's private debt and its choice of countries in which to operate. Therefore, we perform several additional tests to address this potential endogeneity. First, we control for firms' choice to operate globally using the Heckman (1979) two-step treatment model using the same instrumental variables identified and validated by Li et al. (2011). Second, we perform the Heckman two-step treatment model using only MNCs and

modified versions of the instrumental variables used in Li et al. (2011) to control for firms' choice to operate in low institutional quality countries. Finally, we use multiple matching techniques to compare the costs of debt of MNCs with operations in low institutional quality countries to MNCs with similar characteristics that do not operate in countries with low institutional quality.

3.3.1. Heckman two-step model controlling for the choice to operate globally

We first address potential endogeneity related to firms' choice to operate globally using the Heckman (1979) two-step treatment model. The two-step model requires the identification of variables that are significantly associated with the dependent variable in the first stage regression, firms' choice to operate in foreign countries, but are not associated with the dependent variable in the second stage regression, the price component of private loans. To satisfy this exclusion requirement, we use the same three instrumental variables (IVs) identified by Li et al. (2011).

First, we use the percentage of firms in each industry-year that are multinational corporations, *IndPercGlob*, as an industry-level instrumental variable for total globalization and expect *IndPercGlob* to be positively associated with the level of a firm's global operations. Second, we use the ratio of foreign exports from the state in which the firm's headquarters is located to total U.S. exports, *StateExp*, as a geographic-level instrument for firms' total level of globalization. This IV is motivated by prior literature supporting the intuition that firms with greater experience with international trade are more likely to become multinational firms (Blonigen, 2000; Rob and Vettas, 2003). We expect that a larger level of exports from the state in which a firm's headquarters is located is positively associated with its likelihood of having global operations. Finally, we use an indicator variable which equals 1 if the firm reports a

minority interest, and 0 otherwise, Min_Int , as a firm-level instrument for firms' total level of globalization. This IV is motivated by the intuition that acquisitions are often the most effective means for gaining access to foreign markets. Therefore, Min_Int , should be positively associated with a firms' level of foreign operations.

We include these three instrumental variables in the first-stage equation used to estimate the likelihood of a firm being global, resulting in the following probit selection model:

$$Globalization_Ind = \beta_0 + \beta_1 IndPercGlob + \beta_2 StateExp + \beta_3 Min_Int + \beta_{i-j} Controls + \beta_{j-k} Industry + \varepsilon \quad (2)$$

$Globalization_Ind$ is an indicator variable that equals 1 if the firm is an MNC, and 0 otherwise. We then use the results of this regression to calculate the inverse Mills ratio, IMR , and amend Equation (1) to include IMR as an additional control resulting in the following second-stage outcome model:

$$LogSpread = \beta_0 + \beta_1 LowInstGlob + \beta_2 HighInstGlob + \beta_3 NonSpecGlob + \beta_4 IMR + \beta_{i-j} Controls + \beta_{j-k} Industry + \varepsilon \quad (3)$$

We perform this analysis using all firms in our sample. A positive coefficient β_1 would support our hypothesis that operations in countries with low institutional quality are associated with higher costs of private debt. We include the same controls variables included in Equation (1) and 1-digit SIC code indicator variables in both the selection and outcome models and use robust standard errors clustered by firm in estimations of Eqs. (2) and (3). We use the number of operating segments, the asset ratio, and the sales ratio as alternative measures of globalization in our outcome regression.

3.3.2. Heckman two-step model controlling for the choice to operate in countries with low institutional quality

While the prior analysis addresses potential omitted correlated variables related to firms' choice to operate globally, it does not address unknown factors that may be specifically related with firms' choice to operate in countries with low institutional quality. Therefore, we next modify our Heckman (1979) two-step analysis to address this concern. First, we include only MNCs in this analysis in order to focus on the choice to operate in countries with low institutional quality, given that the firm operates internationally. Second, we replace the outcome variable of the selection model with an indicator variable that takes a value of 1 if the firm has operations in a low institutional quality country, and 0 otherwise, *LowInst_Ind*.

Finally, we modify the instrumental variables in Li et al. (2011) to focus on operations in countries with low institutional quality. Specifically, we measure *StateExportsLow* as exports from the state in which the firm's corporate headquarters are located to low institutional quality countries as a percentage of total U.S. exports. The benefit of experience transacting in countries with low institutional quality may have a particularly large benefit in the case of globalization into a country with low institutional quality given the higher risk of operations in these countries. We modify the industry-level instrumental variable in this analysis, *IndPercLow*, to be the percentage of firms, in our sample, in each one-digit SIC code which report at least one segment in a country with low institutional quality. We expect *IndPercLow* to be positively associated with the level of a firm's operations in weak governance countries. We exclude the minority interest indicator variable from our selection model in this analysis, since we are not aware of theoretical or empirical evidence that acquisitions provide a more effective means of entry into either weak or strong governance countries.⁷

This leads to the following selection model:

⁷ Our results are quantitatively and qualitatively unchanged if we include *Min_Int* in the selection model controlling for the choice to operate in countries with low institutional quality.

$$LowInst_Ind = \beta_0 + \beta_1 IndPercLow + \beta_2 StateExpLow + \beta_{i-j} Controls + \beta_{j-k} Industry + \varepsilon \quad (4)$$

We then use the results of this regression to calculate the inverse Mills ratio, *IMR*, and estimate our outcome model, Eq. (3), including the *IMR* from Eq. 4, and using only the subset of firms in our sample that are MNCs. A positive association between *LowInstGlob* and the cost of debt (β_1 in Eq. 3) would support our assertion that the cost of debt is positively associated with the level of operations in countries with low institutional quality. We again include the same controls variables included in Eq. (1) and 1-digit SIC code indicator variables in both the selection and outcome models, and evaluate statistical significance using robust standard errors clustered by firm.

3.3.3. Controlling for the choice to operate in weak governance countries using matching techniques

Lastly, we address the potential endogeneity of the choice to operate in countries with low institutional quality using matched samples. The research design choices inherent in matching techniques involve trade-offs between the number of matches and the quality of the matching, and no single matching technique is clearly superior. Therefore, we perform our matching tests using four matched samples based on alternative matching techniques to ensure the robustness of our results. We use matching with replacement in all of our matching analyses in order to generate matched samples most similar to our treatment sample.

We first use three matching methods based on propensity score matching. In each of these tests we measure propensity scores for the likelihood MNCs operate in countries with low institutional quality based on the instrumental variables used in our Heckman selection model addressing the choice to operate in countries with low institutional quality, *IndPercLow* and *StateExpLow*, as well as all control variables included in Eq. (1). Based on the resulting propensity scores, we create matched samples using: the ten nearest neighbors, the fifty nearest

neighbors, and Epanechnikov kernel matching. To generate our fourth matched sample, we use Mahalanobis distance matching based on the actual covariates (*IndPercLow*, *StateExpLow*, and all control variables included in Eq. 1) rather than the propensity scores.

We then use each of these four matched samples to evaluate the effect of operations in countries with low institutional quality based on the differences between the cost of debt of MNCs that operate in countries with low institutional quality and the matched samples of MNCs that do not operate in countries with low institutional quality.⁸ A finding that MNCs with operations in countries with low institutional quality obtain higher interest rate spreads, on average, than MNCs that do not operate in countries with low institutional quality would provide additional evidence consistent with our assertions. One limitation of these tests is that firms who report operations in both low and high institutional quality countries will be classified as operating in countries with low institutional quality, which introduces noise to this analysis. Therefore, we also perform our propensity score matching analyses using the subsample of MNCs that only report a single foreign segment.

4. Sample selection and summary statistics

We begin our sample with all loans in the Dealscan database for non-utility and non-financial publicly traded U.S. firms with available financial information in Compustat from January 1999 to December 2017. We limit our sample to public U.S. companies for two reasons. First, this restriction makes our sample comparable to the sample used in Li et al. (2011). Second, limiting the sample to U.S. companies allows us to isolate the effect of operations in countries with low institutional quality from the effects of cross-country variations in

⁸ In all of our matching analyses, we include only MNCs and in lieu of indicator variables in the scoring model, we require exact matches on loan type, loan purpose, and one-digit SIC code to control for loan type and purpose, and industry specific factors.

institutional quality, culture, and accounting transparency that previous literature has demonstrated to be associated with private lending terms (e.g., Qian and Strahan, 2007; Chui et al., 2016).

We begin our sample in 1999 because required segment disclosures were altered significantly by ASC 280, which was effective for fiscal years beginning after December 1997. Beginning the sample in 1999 ensures that segment disclosures used in our study were generated under a common accounting standard and avoids issues that may have occurred during the initial implementation of the standard in 1998. Each loan deal, or package, in the Dealscan database can be comprised of one or more loan facilities and the priced and non-priced terms can vary across loan facilities in the same package. Due to this variance, we treat each loan facility as a separate observation in our sample.

We collect firm-level financial statement information from the Compustat North America database and collect segment financial information from the Compustat Historical Segment database. We measure all Compustat variables for the fiscal year prior to loan origination to ensure that the information is available prior to loan issuance. Following prior research, we require that the sum of the sales of reported segments be within one percent of total sales reported in the financial statements (Denis et al., 2002; Gande et al., 2009). This ensures that all segment sales are allocated geographically. Additionally, we restrict our sample to only firm years with sales in excess of \$20 million to ensure that the results are not driven by small firms (Gande et al., 2009), and drop all observations missing necessary data for our analyses. Our final sample consists of 15,715 loan contracts for 2,982 U.S. public firms. Of these loan observations, 8,668 (55.2 percent) occur in firm-years in which the firm reported at least one foreign segment.

The firms in our sample report operations in 89 countries. Forty-three countries appear in the sample for 10 or more years, with 11 countries appearing in every sample year.

Table 1 reports the sample selection procedure and the distribution of loan observations in our sample by loan type. The most common loan types in our sample are revolving loans (58.1 percent of the sample) and term loans (32.2 percent of the sample). This distribution is consistent with prior research (Kim et al. 2011).

Table 2 presents descriptive statistics for each loan observation. The statistics reflect the fact that the majority of foreign segments are not reported at the country level. However, over 40 percent of the segments reported are country specific, with a substantial number reported in countries with both high and low institutional quality.⁹ The mean number of total foreign segments and the mean total foreign sales ratio (the sum of the means for each type) are comparable to the mean for foreign segments and sales ratio reported in related studies (e.g., Li et al. 2011), though the mean total foreign assets ratio in our sample is lower than that found in previous studies.¹⁰

Table 3 displays the Pearson pairwise correlation matrix between *LogSpread* and the explanatory variables used in our analysis. We find that *LogSpread* is negatively associated with globalization in all three types of segments (i.e., low institutional quality, high institutional quality, and non-country specific). However, the correlation of *LogSpread* with globalization in low institutional quality countries is generally weaker than its association with globalization in high institutional quality countries and is substantially weaker than its association with non-

⁹ 6,729 segments (29.0% of segments) are reported in countries with low institutional quality. Of these 2,339 are in countries with low economic development, 2,671 were in countries with weak property rights, and 6,422 are in countries with weak creditor rights.

¹⁰ The lower levels of reported segment assets in our sample reflects the fact that under ASC 280 firms are required to report long-lived assets rather than total assets for each segment.

country specific globalization. In addition, *LogSpread* and our measures of globalization in countries with low institutional quality are both significantly correlated with several of our control variables indicating the importance of basing inferences on multivariate tests.¹¹ The highest correlation between any two of our variables is 0.78, between the natural log of the loan amount and *Size*. To investigate the potential of multicollinearity resulting from this high correlation, we calculated variance inflation scores for our variables and found no variance inflation scores above 5.¹²

[Insert Table 1,2,3 About Here]

5. Results

We first examine the effect of an MNC's operations in countries with low institutional quality on the price component of private debt using multivariate regression tests. We present the results of these tests in Table 4. In the first column of Table 4, we measure operations in low institutional quality countries using the number of operating segments. Consistent with our expectations we find that the estimated coefficient on *LowInst* is positively, and significantly, associated with interest rate spreads. In terms of economic significance, the coefficient on *LowInst*, 0.017, indicates that a one-standard deviation change in the number of segments reported in countries with low institutional quality (approximately one additional segment) is associated with a 1.94% increase in the spread on bank loans.¹³ In addition, we find significant

¹¹ For example, our proxies for globalization in countries with low institutional quality are positively correlated with *Size*, and *LogSpread* is negative correlated with *Size*. These cross-correlations could explain why globalization in countries with low institutional quality appears to be associated with lower interest rates based on only the univariate correlations. However, a multivariate analysis is required to disentangle the relationships among these variables.

¹² In untabulated analyses we performed our primary analysis excluding, in turn, either *LogAmount* or *Size* and obtained statistically similar results.

¹³ As a point of reference, our results indicate that a one standard-deviation increase in *LogMaturity* has an effect of similar magnitude, approximately a 2.27% increase in the all-in-spread.

differences between the coefficient on *LowInst* and the coefficients on both *HighInst* and *NonSpec* supporting our argument that globalization is not homogenous.

In the second column of Table 4, we measure operations in countries with low institutional quality using MNC's sales in these countries. We again find a positive and significant association between *LowInst* and interest rate spreads. In addition, we find a negative and significant association between *NonSpec* and interest rate spreads. This result is consistent with the findings in Li et al. (2011) that overall globalization is associated with lower debt costs. Finally, we find that the difference between the coefficients on *HighInst* and *NonSpec* is significant. The third column of Table 4 presents our findings when we measure globalization using the level of assets reported in countries with low institutional quality. In this case, we do not find a significant association between operations in countries with low institutional quality and interest rate spreads. However, we do find a significant difference between the coefficient on *LowInst* and the coefficients on both *HighInst* and *NonSpec*.

In all three specifications, our findings with regards to the control variables are consistent with prior literature (e.g., Li et al. 2011; Bharath et al. 2011; Graham et al. 2008). Specifically, we find that larger, more profitable firms, with more tangible assets, and greater expected growth are able to obtain loans at lower costs. In contrast, greater leverage, a higher default risk, and a greater return volatility are associated with higher all-in-spreads, commensurate with these characteristics reflecting a higher level of risk to the lender. In addition, we find that secured loans have higher interest rates, consistent with lenders using higher all-in-spreads and collateral requirements as complementary means to address risk.¹⁴

¹⁴ Our results are qualitatively and quantitatively unchanged if we include a control variable for the number of covenants included in the lending agreement, using Fama-French 48 industry indicator variables rather than 1-digit SIC indicator variables, or clustering standard errors at the firm and year level.

Our multivariate regression results are generally consistent with our argument that U.S. MNCs' operations in low institutional quality countries are associated with higher lending spreads. However, it is possible that unmeasurable factors related to corporate globalization decisions are also related to bank loan spreads. Therefore, we next present our results employing the Heckman (1979) two-step selection technique to control for firms' choice to operate globally. The results of this analysis are presented in Table 5.

With regards to our selection models, we find that the choice to operate globally is positively and significantly associated with both *IndPercGlobal* and *StateExp* using all three measures of globalization, supporting the appropriateness of including these variables in the first-stage regressions.¹⁵ However, we do not find a significant association between *Min_Int* and the choice to operate globally.

The results of our outcome models are consistent with our multivariate regression results. Specifically, we find that the coefficient on *LowInst* is positive and statistically significant when we measure globalization using either the number of segments or the foreign sales ratio. In addition, the coefficient on *HighInst* is negative and significant when we measure globalization using the level of assets reported in strong governance countries, and the coefficient on *NonSpec* is negative and significant in the specifications measuring globalization using the sales and asset ratios. Similarly, we find that the differences between the coefficients on *LowInst* and *HighInst* are statistically significant when we measure globalization using either segment counts or foreign assets, and the difference between *LowInst* and *NonSpec* is significant in all three cases. We infer

¹⁵ A joint F-test indicates that the instruments are relevant using all three measures of globalization. In addition, the Kleibergen-Paap rank Wald Test indicates that our instrumental variables do not suffer from a weak instrument problem.

from these results that the findings from our multivariate regression tests are not driven by an omitted correlated variable associated with firms' choice to operate globally.

[Insert Table 4 About Here]

Next, we investigate the extent to which unmeasurable variables related to MNCs' choice to operate in countries with low institutional quality influence our results. We present the results of this analysis in Table 6. In the selection model, we find that *IndPercLow* is significantly, at the 1% level, associated with MNCs' choice to operate in a country with low institutional quality. However, our other IV, *StateExpLow* obtains significance only when we measure globalization based on the number of reported segments.¹⁶ Similar to our multivariate regression analysis, we find a positive and significant association between *LowInst* and the cost of debt when we measure globalization using either the number of operating segments or the foreign sales ratio. In addition, we find that the difference between *LowInst* and *HighInst* is significant when we use the asset ratio as our measure of globalization. Finally, we find that non-country-specific globalization is negatively and significantly associated with the costs of debt using all three of our measures of globalization as is the difference between *NonSpec* and *LowInst*.

Finally, we present our matched sample tests in Table 7. Panel A of Table 7 presents the results when we measure globalization using operating segments. We again find that the cost of debt is significantly higher for MNCs with operating segments in countries with low institutional quality than for the MNCs in the matched samples. This result holds for all of our matching

¹⁶ Joint F-tests indicate that these instrumental variables are relevant using all three measures of globalization. However, the Kleibergen-Paap Test fails to obtain significance when we measure globalization using segment counts or the asset ratio, indicating that jointly the instruments are weak. Therefore, as a robustness test, we performed our analysis using only *IndPercLow* as an instrumental variable and obtained qualitatively and quantitatively similar results in our main tests and a significant result in the Kleibergen-Paap test consistent with *IndPercLow* being a valid instrument that does not suffer from the weak instrument problem.

techniques and is stronger when we limit the sample to firms reporting exactly one foreign segment. We present the results when we measure globalization using the foreign sales ratio and foreign assets ratios in Panels B and C, respectively. In these cases, we do not find significant differences in the cost of debt between MNCs that operate in low institutional quality countries and the matched MNC samples when we include all global firms in the test. However, when we restrict the sample to MNCs that report exactly one foreign segment, we find that MNCs with operations in countries with low institutional quality have significantly higher costs of debt, consistent with our previous results. This may indicate that the continuous nature of the asset and sales ratios result in a greater likelihood of a misclassification error because this analysis does not control for non-country specific segments or segments reported in countries with high institutional quality. Specifically, MNCs that report multiple segments are classified as operating in a low institutional quality country even when the vast majority of their foreign assets or sales are in high institutional quality countries.

[Insert Table 5 About Here]

Overall, our results support our argument that the effect of globalization on the costs of private debt is not homogenous. Our evidence concerning operations in non-country-specific segments generally supports prior evidence that globalization reduces lenders' perception of the risk of the firm resulting in lower costs of debt (Li et al. 2011). However, the level of operations in countries with low institutional quality has the opposite effect and is associated with higher costs of debt.¹⁷ This finding supports the inference that the results found in the cross-country literature (e.g., Qian and Strahan, 2007) generalize to multinational corporations with operations

¹⁷ To provide additional validation of our results, we also performed our tests using credit ratings as the dependent variable and found that the level of MNCs operations in countries with low institutional quality is associated with lower credit ratings. We thank an anonymous reviewer for suggesting this additional test.

in countries with low institutional quality, and are not limited to firms domiciled in countries with low institutional quality. Our additional tests indicate that this association is not likely to be driven by unobservable firm characteristics that may be associated with both the choice to operate in low institutional quality countries and the firms' cost of debt.

Our findings present compelling evidence of an association between the cost of private debt and the institutional quality of countries in which MNCs operate. However, we cannot infer a causal relationship between these variables, because institutional quality is likely to be endogenously related to several non-institutional attributes of the countries in which an MNC operates, including culture (See Kirkman, et al., 2006 for a review of literature documenting relations between culture and a wide range of formal and informal institutions). As a result, our ability to isolate the effect of institutional quality on the cost of debt is limited. However, to provide evidence that our findings do not result from institutional quality serving as a proxy for culture, we performed our multivariate analysis including control variables measuring cultural characteristics of the countries in which MNCs operate.

Specifically, we included the following culture variables from Hofstede Insights: Power Distance, Uncertainty Avoidance, Masculinity, Individualism, Long-Term Orientation, and Indulgence. When we measure globalization using segment counts, we include simple averages of each culture measure for each of the segments reported by the MNC (we use the sample mean of each measure of culture for non-country-specific segments). We use a weighted average of each culture measure for each segment when we measure globalization using foreign sales or assets. The results of this analysis (untabulated) provide little evidence of a significant association between culture and the price of private debt. More importantly, our results with regards to the association between the cost of private debt and the level of firm's operations in

countries with low institutional quality are robust to including control variables for cultural attributes of the countries in which MNCs operate.

[Insert Table 6 About Here]

6. Firm globalization and the non-price components of private debt

We next investigate the effect of MNCs operations in countries with low institutional quality on the non-price components of private debt. Following Li et al. (2011), we investigate the extent to which loan maturity, loan security requirements, or the number of loan covenants included in the lending agreement is associated with globalization, and in particular, with operations in countries with low institutional quality. Shorter maturities provide banks with greater bargaining power and allows them to more frequently re-evaluate the borrower's credit profile, providing creditors a means to reduce risk (Barclay & Smith, 1995; Brockman et al., 2010). Similarly, loan collateral security reduces the downside risk of the lender and has been found to be positively associated with the risk level of the borrowing firm (Berger & Udell, 1980; Bharath et al. 2011). Finally, loan covenants reduce the creditor's risk by providing opportunities for the lender to intervene quickly in the event of a negative event (Dichev & Skinner, 2002; Chava and Roberts, 2008).

We perform this analysis using the full sample and controlling for firms' choice to operate internationally using the Heckman (1979) selection model in Equ. (2).¹⁸ We measure loan security requirements using the indicator variable, *Secured*, that is equal to 1 if the loan is secured with collateral, and 0 otherwise. We measure loan maturity using *LogMaturity*, the natural log of the loan term in months. Finally, we measure the use of covenants in lending

¹⁸ In untabulated analyses, we also performed this analysis using only MNCs and controlling for the choice to operate in weak governance countries and obtained qualitatively similar results.

agreements using the count of the number of covenants included in the lending agreement, *Covenants*.

[Insert Table 7 About Here]

We use the same control variables used in our analysis related to the price component of debt, except we exclude either *Secured* or *LogMaturity*, when that variable is the dependent variable. We do not include *Spread* as a control variable because the non-price terms of syndicated loans are normally established based on negotiations between the lead bank and the borrower, with the all-in-spread determined subsequently as other banks are recruited to the syndicate (Bharath et al., 2011). We use an ordinary least squares regression model when *LogMaturity* is the dependent variable, a Poisson model when *Covenants* is the dependent variable, and a probit model when the indicator variable *Secured* is the dependent variable.

Consistent with the findings in Li et al. (2011), we do not find a significant association between debt maturity and globalization, regardless of the countries in which the MNC operates, or the measure of globalization. In addition, we find no evidence of an association between the number of covenants included in the lending agreement and globalization. We infer from these result that private lenders do not view loan maturities or covenants as efficient mechanisms to address the increased credit risk associated with operations in countries with low institutional quality.

In contrast, the results of our analysis of the association between loan security requirements and globalization, shown in Table 8, reveal a subtle relationship between globalization and the use of collateral in private debt contracts. Specifically, we find no evidence of a significant association between the use of collateral and firms' operations in strong governance countries using any of our measures of globalization. However, when we look at

firms' operations in weak governance countries we find that our results depend on the nature of firms' operations in those countries. We find no evidence that the use of collateral is associated with the number of segments in weak governance countries, and only a weak association between *Secured* and the level of sales in weak governance countries or in non-country-specific segments. However, we find significant evidence that the use of collateral is negatively associated with the level of assets located in countries with low institutional quality and in non-country-specific segments. Our results with regards to non-country-specific segments are consistent with Li et al.'s (2011) inference that loans to globally diversified firms are less likely to be secured because banks perceive globalization as reducing firm risk. However, our findings with regard to assets in countries with low institutional quality supports the inference that the lower likelihood of loans including security requirements is at least partially driven by firms with larger levels of assets in weak governance countries which are likely to represent less valuable collateral.

This finding also provides insight into the mechanism by which operations in countries with low institutional quality are associated with higher lending spreads. Specifically, collateral provides lenders with an alternative mechanism for addressing lending risk (Booth and Booth, 2006). However, the ability of the lender to seize collateral depends on the institutional quality of the country (e.g., creditor rights) (Qian and Strahan, 2007). Therefore, the higher interest rate spreads associated with private loans to MNCs with greater assets in countries with low institutional quality are at least partially driven by recoverability concerns rather than default risk alone.

[Insert Table 8 About Here]

7. Firm segment disclosures and private loan issuances

Our results to this point are consistent with private lenders assessing that U.S. MNCs with greater operations in countries with low institutional quality have greater credit risk and less valuable collateral. We expect rational managers would be aware of this and make strategic decisions to limit the increased costs of debt resulting from banks' higher assessments of the firms' credit risk. Specifically, ASC 280 provides management with significant flexibility in the reporting of geographic segments. The standard requires disclosures of revenues from external customers and long-lived assets in individual foreign countries only if those sales or long-lived assets are "material", but does not define materiality. In addition, the standard allows an exception if "providing the geographical information is impracticable" (ASC 280-10-50-41).¹⁹ Therefore, managers may reduce the level of disclosures related to operations in countries with low institutional quality in the years around a private debt issuance in order to reduce the salience of those operations to private lenders.

It is not clear that strategic segment disclosures provide a benefit to the firm in the private lending arena. On one hand, private lenders have access to, and are better able to process, firm-specific information than other market participants (Bharath et al. 2008).²⁰ On the other hand, in spite of this information advantage, recent studies provide evidence that public disclosures have implications for private lending. For example, Ertugrul et al. (2017) present evidence that firms with longer 10-K filings that include more ambiguous words obtain higher interest rate spreads and more restrictive debt covenants. Similarly, Kim et al. (2011) provide within-firm evidence that the disclosure of internal control weaknesses under section 404 of the Sarbanes-Oxley Act is

¹⁹ In addition, ASC 280 provides firms with significant flexibility in the allocation of revenues to specific countries, and in determining what classifies as a long-lived asset (ASC 280-10-55-22 and ASC 280-10-55-23).

²⁰ In addition, failing to disclose a segment in a country with low institutional quality for only a small number of years around the loan offering may not be sufficient to conceal it from the lender, and could even work against the firm if the lender feels the firm is actively concealing information.

associated with higher interest rate spreads on private debt. Therefore, the extent to which managers use the flexibility inherent in ASC 280 to strategically report segment information around private debt offerings is an empirical question.²¹

We test this question by estimating the following regression using the sample of firm-years for all multinational corporations (i.e., firms that report at least one foreign segment) with the necessary data available on Compustat and CRSP for the years 1999 – 2017.

$$LowInstGlob = \beta_0 + \beta_1 Loan + \beta_2 IndPercLow + \beta_3 StateExpLow + \beta_{4-i} Controls + \beta_{j-k} Industry \quad (5)$$

LowInstGlob represents our measures of globalization in countries with low institutional quality based on the number of segments reported in countries with low institutional quality, and the sales and asset ratios. *Loan* is an indicator variable that takes the value of one in the three years around a private loan issuance, and zero otherwise.²² A negative coefficient for β_1 would be consistent with management at MNCs reducing disclosures related to operations in countries with low institutional quality around private debt issuances.

We control explicitly for the likelihood of firms having operations in countries with low institutional quality using *IndPercLow* and *StateExpLow*. We also include all of the other control variables included in our primary analysis as well as industry indicator variables, and measure significance using robust standard errors clustered by firm. The results of this analysis are presented in Table 9.

²¹ Based on the contrasting arguments related to the extent that public disclosures provide information that is useful to private lenders, we refrain from drawing generalized inferences regarding firms' disclosure choices around private loan issuances from this analysis. Rather, we intend this analysis to provide additional support for our primary analyses and inferences regarding the association between MNCs operations in countries with low institutional quality and the costs of private debt.

²² We include the year before and year after loan issuance because a change in segment reporting that occurs only in the year of loan issuance is likely to attract scrutiny from the lender as well as auditors and regulators.

We find that the coefficient on *Loan* is negative and significant when we measure globalization in countries with weak legal institutions using either the number of segments reported, or the sales ratio. The coefficient on *Loan* is also negative when we measure globalization using the assets ratio; however, the coefficient fails to obtain statistical significance in this case ($p = 0.130$). These results are consistent with rational managers using the discretion in ASC 280 to reduce disclosures related to operations in weak institutional quality countries in the years around private debt issuances and provide further support for our argument that operations in these countries are associated with less favorable debt terms.²³

8. Conclusion

Using a sample of 15,715 private loan contracts covering the years 1999 – 2017, we investigate the effect of operations in countries with low institutional quality on the terms of private debt contracts of U.S. MNCs. Consistent with prior literature, we find evidence that a firm's level of globalization reported in non-country-specific segments is associated with a lower cost of debt (Reeb et al., 2001; Mansi and Reeb, 2002; Li et al., 2011). However, in contrast to prior literature, we find the price component of private debt is positively associated with the level of an MNC's operations in countries with low institutional quality, indicative of lenders viewing such operations as increasing the risk of the firm. Our results contribute to the literature, by providing evidence that globalization is not a homogenous construct, and that the choice of countries in which an MNC operates should be considered when evaluating the effect of globalization on private lending terms, and on firm value in general.

²³ In untabulated tests, we found no significant association between the level of operations reported in countries with high institutional quality and the issuance of private debt. Therefore, our results do not reflect a general decrease in segment disclosures around loan issuance.

In addition, our results extend cross-country research investigating the effect of country level creditor rights and enforcement mechanisms on the terms of public and private debt for domestic companies (Qian and Strahan, 2007; Bae and Goyal, 2009; Persakis and Iatridis, 2017). Our finding that the price component of private debt is positively associated with the level of an MNC's operations in countries with low institutional quality is consistent with the findings in these papers, indicating that operations in countries with low institutional quality have a significant impact on the cost of private debt even holding constant the firm's country of domicile. Moreover, our findings with regards to debt collateralization are also consistent with the findings in Qian and Strahan (2007), and indicate that the negative association between collateralization and globalization documented by Li et al. (2011) is at least partially driven by the weaker property laws covering assets held in countries with low institutional quality. Finally, consistent with managers at MNCs being aware of the negative effect of operations in countries with low institutional quality on the terms of private debt contracts, we find that MNCs report fewer segments in countries with low institutional quality in the years around private debt issuances. Collectively, we infer from our results that creditors view higher levels of operations in countries with low institutional quality as being associated with greater lending risk. However, lenders adapt the non-price terms of private loans in a manner that reflects both the legal environments in which a firm operates and the nature of its operations in those environments.

Our findings provide a basis for several future studies. First, we do not consider the potential benefits to the MNC of operating in countries with low institutional quality, such as: lower labor costs, access to raw materials, or greater opportunities for value creation. Future research investigating the extent to which these factors generate value for MNCs operating in countries with low institutional quality that offset the higher costs of debt financing may prove

fruitful. Second, our robustness tests provide evidence that our results are not an artifact of the relation between institutional quality and culture. However, future research fully disentangling the effects of institutional quality and culture on private debt contracting would make a significant contribution to the literature. Finally, when issuing private debt, companies have the choice as to where to originate the debt. Prior evidence indicates that domestic lending may lead to lower spreads due to improved monitoring and due diligence (Bharath et al. 2011; Brown, 2016). The restriction of our sample to only U.S. based MNCs should reduce concerns that our results are affected by variations in monitoring. However, future research investigating the extent to which our findings are moderated by the inclusion of a local bank in the lending syndicate could provide valuable insights.

[Insert Table 9 about Here]

We acknowledge that our study is not without limitations. While ASC 280 has increased the granularity of segment disclosures and allows researchers to view information regarding the operations of a firm at a country level when operations in a single country are substantial enough to be considered “material,” there is still a large portion of globalization that cannot be disaggregated due to lack of disclosure. The inability to fully disaggregate globalization increases the risk of measurement error in our tests.²⁴ An additional limitation of segment reporting data under ASC 280 is the presence of firm discretion regarding what segment level information to report. Some firms disclose foreign sales, but not foreign assets, or vice versa, at a country level. So, while we may be able to identify a segment as operating in a specific country,

²⁴ Non-country-specific segments could also introduce bias in our analyses. However, bias could only explain our results if MNCs with higher credit risk are more likely to choose to disclose operations in countries with low institutional quality, but are *not* more likely to choose to disclose operations in countries with high institutional quality. As an additional robustness test, we performed our analysis excluding MNC observations that disclose only non-country-specific segments and obtained qualitatively and quantitatively similar results.

we cannot always measure the segment's sales or assets. Similarly, data regarding private bank loans are limited. Our sample utilizes the Dealscan database for loan characteristics, a database that is skewed towards large firms obtaining loans from large banks. This limits our ability to generalize to smaller multinational firms.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. We thank Robert Brown, Scott Johnson, Brooke Beyer, Ugur Lel, Wayne Thomas, Dirk Black, Asheq Rahman, and workshop participants at: Virginia Tech, The University of Texas Rio Grande Valley, Kansas State University, Eastern Michigan University, University of Michigan – Flint, the 2015 International Accounting Section of the American Accounting Association Midyear Meeting, and the 2016 American Accounting Association Annual Meeting for helpful comments and suggestions. We are grateful for research support provided by The University of Texas Rio Grande Valley and Virginia Commonwealth University

REFERENCES

- Aggarwal, R., Goodell, J. W., 2009. Markets and institutions in financial mediation: National characteristics as determinants. *Journal of Banking & Finance*, 33(10), 1770 – 1780.
- Amiram, D., Owens, E., 2018. Sign reversal in the relationship between income smoothing and the cost of debt. *Journal of Business Finance & Accounting*, 45(1-2), 40 – 71.
- Bae, K. H., Goyal, V.K. 2009. Creditor rights, enforcement, and bank loans. *Journal of Finance*, 64(2), 823 – 860.
- Barclay, M. J., & Smith, C. W., 1995. The maturity structure of corporate debt. *Journal of Finance*, 50(2): 609 – 631.
- Barefoot, K. B., Mataloni Jr., R. J., 2011. Operations of US multinational companies in the United States and abroad. *Survey of Current Business*, (November), 29 – 48.
- Berger, A. N., Udell, G. F., 1990. Collateral, loan quality, and bank risk. *Journal of Monetary Economics*, 25(1), 21 – 42.
- Bharath, S. T., Shumway, T., 2008. Forecasting default with the Merton distance to default model. *Review of Financial Studies*, 21(3), 1339 – 1369.
- Bharath, S. T., Sunder, J., Sunder, S. V., 2008. Accounting quality and debt contracting. *The Accounting Review*, 83(1), 1 – 28.
- Bharath, S. T., Dahiya, S., Saunders, A., Srinivasan, A., 2011. Lending relationships and loan contract terms. *Review of Financial Studies* 24 (4), 1141 – 1203.
- Blonigen, B. A., 2000. In search of substitution between foreign production and exports. *Journal of International Economics*, 53(1), 81 – 104.
- Booth, J. R., Booth, L. C., 2006. Loan collateral decisions and corporate borrowing costs. *Journal of Money, Credit and Banking*, 38(1), 67 – 90.
- Brockman, P., Martin, X., & Unlu, E., 2010. Executive compensation and the maturity structure of corporate debt. *Journal of Finance*, 65(3): 1123 – 1161.
- Brown, A. B., 2016. Institutional differences and international private debt markets: A test using mandatory IFRS adoption. *Journal of Accounting Research*, 54(3), 679 – 723.
- Caves, R. E., 1971. International corporations: The industrial economics of foreign investment. *Economica*, 38(149), 1 – 27.
- Chava, S., Roberts, M. R., 2008. How does financing impact investment? The Role of Debt Covenants. *Journal of Finance*, 63(5), 2085 – 2121.

- Chu, A. C., Cozzi, G., Fan, H., Pan, S., Zhang, M., 2020. Do stronger patents stimulate or stifle innovation? The crucial role of financial development. *Journal of Money, Credit and Banking*, 52(5), 1305 – 1322.
- Chui, A. C. W., Kowk, C. C. Y., Zhou, G., 2016. National culture and the cost of debt. *Journal of Banking & Finance*, 69, 1 – 19.
- Demiroglu, C., James, C. M., 2010. The information content of bank loan covenants. *Review of Financial Studies*, 23 (10), 3700 – 3737.
- Denis, D. J., Denis, D. K., Yost, K., 2002. Global diversification, industrial diversification, and firm value. *Journal of Finance*, 59(6), 1951 – 1979.
- Desai, M. A., Foley, C. F., Hines, Jr., J. R., 2004. A multinational perspective on capital structure choice and internal capital markets. *Journal of Finance*, 59(6), 2451 – 2487.
- Dichev, I., Skinner, D., 2002. Large-sample evidence on the debt covenant hypothesis. *Journal of Accounting Research*, 40(4), 1091 – 1123.
- Djankov, S., McLiesh, C., Shleifer, A., 2007. Private credit in 129 countries. *Journal of Financial Economics*, 84(2), 299 – 329.
- Errunza, V. R., Senbet, L. W., 1981. The effects of international operations on the market value of the firm: Theory and evidence. *Journal of Finance*, 36(2), 401 – 417.
- Errunza, V. R., Senbet, L. W., 1984.. International corporate diversification, market valuation, and size-adjusted evidence. *Journal of Finance*, 39(3), 727 – 743.
- Ertugrul, M., Lei, J., Qui, J., Wan, C., 2017. Annual report readability, tone ambiguity, and the cost of borrowing. *Journal of Financial and Quantitative Analysis*, 52(2), 811 – 836.
- Francis, B. B., Hunter, D. M., Robinson, D. M., Robinson, M. N., Yuan, X., 2017. Auditor changes and the cost of bank debt. *The Accounting Review*, 92(3), 155 – 184.
- Gande, A., Schenzler, C., Senbet, L. W., 2009. Valuation effects of global diversification. *Journal of International Business Studies*, 40(9), 1515 – 1532.
- Gao, W., Chou, J., 2015. Innovation efficiency, global diversification, and firm value. *Journal of Corporate Finance*, 30, 278 – 298.
- Glaeser, E., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A., 2004. Do institutions cause growth? *Journal of Economic Growth*, 9(3), 271 – 303.
- Graham, J.R., Li, S., Qiu, J., 2008. Corporate misreporting and bank loan contracting. *Journal of Financial Economics*, 89(1), 44 – 61.

- Hansen, B. Miletkov, M.K., Wintoki, M.B., 2015. Investor protection and the role of firm-level financial transparency in attracting foreign investment. *The Financial Review*, 50(3), 393 – 434.
- Harris, M., Kriebel, C. H., Raviv, A., 1982. Asymmetric information, incentives and intrafirm resource allocation. *Management Science*, 28(6), 604 – 620.
- Heckman, J., 1979. Sample selection bias as a specification error. *Econometrica*, 47(1), 153 – 161.
- Houston, J., James, C., 1996. Bank information monopolies and the mix of private and public debt claims. *Journal of Finance*, 51(5), 1863 – 1889.
- Kaufmann, D., Kraay, A., Mastruzzi, M., 2011. The worldwide governance indicators: Methodology and analytical issues. *Hague Journal on the Rule of Law*, 3(2), 220 – 246.
- Kim, J. B., Song, B. Y., Zhang, L., 2011. Internal control weakness and bank loan contracting: Evidence from SOX section 404 disclosures. *The Accounting Review*, 86(4), 1157 – 1188.
- Kirkman, B. L., Lowe, K. B., Gibson, C. B., 2006. A quarter century of Culture's Consequences: a review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, 37, 285 – 320.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. W., 1997. Legal determinants of external finance. *Journal of Finance*, 52(3), 1131 – 1150.
- Laeven, L., Majnoni, G., 2005. Does judicial efficiency lower the cost of debt? *Journal of Banking & Finance*, 29(7), 1791 – 1812.
- Leland, H. E., Pyle, D. H., 1977. Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance*, 32(2), 371 – 387.
- Li, S., Qiu, J., Wan, C., 2011. Corporate globalization and bank lending. *Journal of International Business Studies*, 42(8), 1016 – 1042.
- Lobo, G. J., Wang, C., Wang Y., Wu F., 2020. Debt enforcement and bank loans: evidence from insolvency practices worldwide. Forthcoming: *Asia-Pacific Journal of Accounting & Economics*, DOI: [10.1080/16081625.2020.1845004](https://doi.org/10.1080/16081625.2020.1845004)
- Mansi, S. A., Reeb, D. M., 2002. Corporate international activity and debt financing. *Journal of International Business Studies*, 33(1), 129 – 147.
- Meng, Y., Yin, C., 2019. Trust and the cost of debt financing. *Journal of International Financial Markets, Institutions & Money*, 59, 58 – 73.
- Merton, R. C., 1974. On the pricing of corporate debt: the risk structure of interest rates. *Journal of Finance*, 29, 449 – 470.

Nini, G., Smith, D. C., Sufi, A., 2012. Creditor control rights, corporate governance, and firm value. *Review of Financial Studies*, 25(6), 1713 – 1761.

Persakis, A., Iatridis, G. E., 2017. The joint effect of investor protection, IFRS and earnings quality on cost of capital: An international study. *Journal of International Financial Markets, Institutions & Money*, 46, 1 – 29.

Qian, J., Strahan, P. E., 2007. How laws and institutions shape financial contracts: The case of bank loans. *Journal of Finance*, 62(6), 2803 – 2834.

Rajan, R., 1992. Insiders and outsiders: The choice between informed and arm's-length debt. *Journal of Finance*, 47(4), 1367 – 1400.

Reeb, D. M., Mansi, S. A., Allee, J. M., 2001. Firm internationalization and the cost of debt financing: Evidence from non-provisional publicly traded debt. *Journal of Financial and Quantitative Analysis*, 36(3), 395 – 414.

Rob, R., Vettas, N., 2003. Foreign direct investment and exports with growing demand. *The Review of Economic Studies*, 70(3), 629 – 648.

Strahan, P., 1999. Borrower risk and the price and nonprice terms of bank loans. Federal Reserve Bank of New York Staff Report, Number 90, October 1999.

United Nations Conference on Trade and Development (UNCTAD), 2013. World investment report 2013: Global value-chains: Investment and trade for development. New York and Geneva: United Nations

Zaher, N. A., Mohamed, E. K. A., Basuony, M. A. K., 2020. The effect of timely loss recognition and accrual quality on corporate bond spread: The influence of legal and financial institutions. *Journal of International Financial Markets, Institutions & Money*, 64, <https://doi-org/10.1016/j.intfin.2019.101171>

Table 1 Sample selection and distribution by firm and loan type

Panel A: Sample selection

	<u>Firms</u>	<u>Loans</u>
Loans in DealScan matched to firms in Compustat from 1999 - 2017	6,291	41,855
Less:		
Observations with sum of segment sales not within +/- 1% of total sales	(255)	(6,358)
Loans to utilities or financial firms	(958)	(8,154)
Observations with total sales less than \$20 million	(368)	(952)
Observations missing necessary control variables	(1,728)	(10,676)
Total Observations	<u>2,982</u>	<u>15,715</u>

Panel B: Number of loans by firm and loan type

<u>Firm Type</u>	<u>364 – Day Facilities</u>	<u>Term Loans</u>	<u>Revolving Loans</u>	<u>Other Loan Types</u>	<u>Total Loans</u>
MNC	950	2,761	4,873	84	8,668
Domestic	409	2,305	4,255	78	7,047
Total	<u>1,359</u>	<u>5,066</u>	<u>9,128</u>	<u>162</u>	<u>15,715</u>

Firms are labeled as an MNC for each year that they report at least one geographic segment as existing outside the United States otherwise the firm is labeled as a domestic firm.

Table 2 Summary statistics

	Mean	SD	Median	Q1	Q3
LogSpread	5.12	0.76	5.22	4.83	5.62
LowInstSeg	0.43	1.14	0.00	0.00	0.00
LowInstSales	0.03	0.09	0.00	0.00	0.00
LowInstAssets	0.01	0.03	0.00	0.00	0.00
HighInstSeg	0.19	0.58	0.00	0.00	0.00
HighInstSales	0.02	0.07	0.00	0.00	0.00
HighInstAssets	0.00	0.03	0.00	0.00	0.00
NonSpecSeg	0.85	1.11	0.00	0.00	1.00
NonSpecSales	0.09	0.17	0.00	0.00	0.12
NonSpecAssets	0.01	0.04	0.00	0.00	0.00
Size	7.27	1.75	7.28	6.07	8.44
Profitability	0.13	0.11	0.13	0.09	0.17
Leverage	0.29	0.22	0.26	0.13	0.40
Tangibility	0.32	0.25	0.25	0.12	0.47
Market-to-Book	1.73	1.11	1.44	1.14	1.94
EDF	0.14	0.25	0.00	0.00	0.16
ReturnVolatility	0.13	0.07	0.11	0.08	0.15
DefSpread	1.02	0.35	0.92	0.81	1.18
TermSpread	1.42	0.92	1.57	0.56	2.18
TechBubble	0.14	0.34	0.00	0.00	0.00
FinCrisis	0.07	0.25	0.00	0.00	0.00
LogAmount	5.15	1.58	5.30	4.25	6.21
LogMaturity	3.75	0.63	4.10	3.58	4.09
Secured	0.53	0.50	1.00	0.00	1.00
LogSynSize	1.74	0.95	1.79	1.10	2.40

This table reports descriptive statistics for the 15,715 firm-loan observations in our sample. *LogSpread* is the natural log of the all-in-spread. *LowInstSeg* is the count of segments reported by the firm located in countries with low institutional quality. *LowInstSales* is the firm's sales in countries with low institutional quality divided by total sales. *LowInstAssets* is the firm's assets in countries with low institutional quality divided by total assets. *HighInstSeg* is the count of segments reported by the firm located in countries with high institutional quality. *HighInstSales* is the firm's sales in countries with high institutional quality divided by total sales. *HighInstAssets* is the firm's assets in countries with high institutional quality divided by total assets. *NonSpecSeg* is the count of segments reported by the firm that are reported at a regional or continent level. *NonSpecSales* is the firm's sales in segments reported at a regional or continent level divided by total sales. *NonSpecAssets* is the firm's assets in segments reported at the regional or continent level divided by total assets. *Size* is the natural log of the firm's total assets in millions of U.S. dollars. *Profitability* is the ratio of operating income before depreciation to total assets. *Leverage* is the ratio of long term debt to total assets. *Tangibility* is the ratio of net property, plant, and equipment to total assets. *Market-to-Book* is the ratio of the market value of assets to the book value of assets. *EDF* is the expected default frequency, measured as in Bharath & Shumway (2008). *ReturnVolatility* is the standard deviation of the monthly stock returns for the four years prior to loan inception. *DefSpread* is the difference between the yield on AAA bonds and BAA bonds measured in the month of loan origination.

Continued on next page

Table 2 – continued from prior page

TermSpread is the difference between the yield on ten-year U.S. treasury bonds and two-year U.S. treasury bonds measured in the month of loan origination. *TechBubble* is an indicator variable taking the value of 1 if the loan was originated in 1999 or 2000, and 0 otherwise. *FinCrisis* is an indicator variable taking the value of 1 if the loan was originated in 2007 or 2008, and 0 otherwise. *LogAmount* is the natural log of the amount of the loan facility in millions of U.S. dollars. *LogMaturity* is the natural log of the length of the loan in months. *Secured* is an indicator variable that takes the value of 1 if the loan is secured with collateral, and 0 otherwise. *LogSynSize* is the natural log of the number of lenders participating in the loan syndicate.

Table 3 Pearson correlation matrix for all-in-spread, globalization proxies and control variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
LogSpread (1)	1.00													
LowInstSeg (2)	-0.03	1.00												
LowInstSales (3)	0.01	0.56	1.00											
LowInstAssets (4)	-0.04	0.03	0.03	1.00										
HighInstSeg (5)	-0.05	0.59	0.23	0.01	1.00									
HighInstSales (6)	-0.00	0.18	0.10	0.00	0.42	1.00								
HighInstAssets (7)	-0.06	0.13	0.05	0.01	0.33	0.27	1.00							
NonSpecSeg (8)	-0.15	0.29	0.16	0.00	0.23	0.11	0.07	1.00						
NonSpecSales (9)	-0.20	0.11	0.05	-0.00	0.11	0.06	0.06	0.70	1.00					
NonSpecAssets (10)	-0.15	0.04	0.01	0.00	0.04	0.04	0.07	0.23	0.33	1.00				
Size (11)	-0.40	0.11	-0.00	-0.01	0.10	0.02	0.05	0.20	0.16	0.12	1.00			
Profitability (12)	-0.27	0.02	0.02	0.00	0.01	-0.00	0.02	0.02	0.01	0.03	0.18	1.00		
Leverage (13)	0.23	-0.03	-0.07	-0.00	-0.03	-0.01	0.01	-0.08	-0.08	0.00	0.15	-0.00	1.00	
Tangibility (14)	0.01	-0.01	-0.01	0.00	-0.05	-0.01	0.01	-0.15	-0.14	0.00	0.18	0.14	0.21	1.00
Market-to-Book (15)	-0.23	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00	-0.00	0.00	-0.00	-0.04	-0.09	0.00	-0.02
EDF (16)	0.33	-0.02	0.01	0.01	-0.03	-0.01	-0.01	-0.08	-0.06	-0.05	-0.19	-0.29	0.19	0.04
ReturnVolatility (17)	0.36	0.05	0.10	-0.00	0.04	0.03	0.01	0.09	0.09	-0.01	-0.43	-0.28	-0.05	-0.09
DefSpread (18)	0.13	0.03	0.03	0.01	0.02	0.02	0.01	0.01	0.04	0.02	0.05	-0.04	-0.02	0.01
TermSpread (19)	0.20	0.07	0.05	0.03	0.03	0.00	-0.02	0.04	0.01	0.00	0.12	-0.02	0.00	0.00
TechBubble (20)	-0.06	-0.05	-0.04	0.00	-0.02	-0.01	-0.00	-0.03	-0.02	-0.01	-0.09	-0.02	0.01	0.01
FinCrisis (21)	0.06	0.01	0.02	-0.00	0.00	0.00	0.00	-0.01	0.02	0.01	0.00	0.00	-0.02	-0.01
LogAmount(22)	-0.37	0.08	0.04	0.05	0.05	0.02	0.03	0.12	0.08	0.08	0.78	0.17	0.14	0.08
LogMaturity (23)	0.19	0.01	0.01	0.01	0.00	0.01	-0.00	-0.03	-0.09	-0.05	-0.01	0.06	0.15	0.01
Secured (24)	0.48	-0.05	-0.04	-0.05	-0.04	0.01	-0.02	-0.11	-0.14	-0.12	-0.38	-0.15	0.11	-0.03
LogSynSize (25)	-0.33	0.05	0.03	0.04	0.04	0.01	0.02	0.09	0.06	0.06	0.56	0.16	0.10	0.05

Continued on next page

Table 3 – continued from prior page

Variable	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
Market-to-Book (15)	1.00										
EDF (16)	-0.21	1.00									
ReturnVolatility (17)	0.10	0.34	1.00								
DefSpread (18)	-0.05	0.08	-0.04	1.00							
TermSpread (19)	-0.07	0.04	0.03	0.24	1.00						
TechBubble (20)	0.00	0.11	0.11	-0.25	-0.43	1.00					
FinCrisis (21)	-0.00	0.03	-0.14	0.51	0.10	-0.16	1.00				
LogAmount(22)	0.08	-0.23	-0.41	0.01	0.08	-0.16	-0.02	1.00			
LogMaturity (23)	-0.02	-0.10	-0.04	-0.08	-0.00	-0.17	-0.06	0.10	1.00		
Secured (24)	-0.11	0.19	0.30	0.02	-0.00	-0.02	0.03	-0.28	0.16	1.00	
LogSynSize (25)	0.05	-0.22	-0.34	-0.00	0.08	-0.13	-0.05	0.63	0.15	-0.20	1.00

All variables are as defined in Table 2. Correlation coefficients shown in bold are significant at the 5% level or stronger.

Table 4 MNC's operations countries with low institutional quality and private loan spreads: OLS results

	Globalization Measure		
	Segments	Sales	Assets
LowInst	0.017** (2.51)	0.157** (2.14)	0.240 (1.28)
HighInst	-0.022 (-1.50)	0.088 (0.84)	-0.741** (-3.03)
NonSpec	-0.008 (-1.09)	-0.199*** (-3.98)	-0.502*** (-2.65)
Size	-0.062*** (-8.23)	-0.060*** (-8.25)	-0.062*** (-8.41)
Profitability	-0.700*** (-7.76)	-0.696*** (-7.74)	-0.695*** (-7.75)
Leverage	0.542*** (16.01)	0.538*** (15.92)	0.541*** (16.09)
Tangibility	-0.080** (-2.40)	-0.086** (-2.62)	-0.075** (-2.28)
Market-to-Book	-0.063*** (-5.82)	-0.063*** (-5.84)	-0.063*** (-5.87)
EDF	0.311*** (13.03)	0.312*** (13.04)	0.312*** (13.10)
ReturnVolatility	0.940*** (8.99)	0.969*** (9.18)	0.944*** (9.11)
DefSpread	0.205*** (12.40)	0.203*** (12.28)	0.205*** (12.50)
TermSpread	0.172*** (26.57)	0.172*** (26.48)	0.171*** (26.27)
TechBubble	0.138*** (6.89)	0.138*** (6.87)	0.134*** (6.67)
FinCrisis	-0.014 (-0.59)	-0.003 (-0.17)	-0.012 (-0.52)
LogAmount	-0.042*** (-7.24)	-0.042*** (-7.25)	-0.041*** (-7.13)
LogMaturity	0.036*** (2.73)	0.035*** (2.68)	0.035*** (2.67)
Secured	0.301*** (23.17)	0.298*** (23.00)	0.300*** (23.09)
LogSynSize	-0.045*** (-5.28)	-0.045*** (-5.27)	-0.045*** (-5.29)
Constant	4.706*** (45.02)	4.721*** (43.31)	4.753*** (44.81)
LowInst – HighInst	0.039** (F = 4.09)	0.069 (F = 0.24)	0.981*** (F = 8.88)
LowInst – NonSpec	0.025** (F = 5.41)	0.356*** (F = 15.52)	0.742*** (F = 7.24)
N	15,715	15,715	15,715
Adj. R ²	0.612	0.614	0.613

Continued on next page

Table 4 – continued from prior page

This table presents tests of association between the price component of private debt and firms' level of globalization in low institutional quality countries, high institutional quality countries, and in non-country specific segments measured using number of segments, sales, and assets. All regressions include indicator variables for the loan purpose, loan type, and one-digit SIC code indicator variables. All variables are as defined in Table 2. T-statistics are shown parenthetically following the coefficients. Significance is measured using 2-tailed tests with robust standard errors clustered by firm. ***, **, and * denote significance at the 1%, 5%, and 10% levels respectively.

Table 5 MNC's operations in countries with low institutional quality and private loan spreads: Heckman selection model results.

	Globalization Measure					
	Number of Segments		Sales Ratio		Assets Ratio	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
LowInst		0.01** (2.15)		0.14* (1.97)		0.30 (1.64)
HighInst		-0.01 (-1.41)		0.07 (0.74)		-0.70*** (-3.14)
NonSpec		-0.01 (-0.61)		-0.16*** (-3.28)		-0.36** (-2.25)
IndPercGlobal	0.97*** (2.89)		0.89*** (2.64)		0.94*** (2.81)	
StateExp	1.18*** (2.70)		1.19*** (2.72)		1.16*** (2.67)	
Min_Int	0.02 (0.29)		0.02 (0.34)		0.02 (0.39)	
Size	0.23*** (11.41)	-0.12*** (-10.63)	0.23*** (11.40)	-0.11*** (-10.72)	0.23*** (11.39)	-0.12*** (-10.80)
Profitability	0.47** (1.98)	-1.11*** (-7.46)	0.47** (1.97)	-1.10*** (-7.43)	0.47** (1.97)	-1.10*** (-7.39)
Leverage	-0.86*** (-6.13)	0.82*** (12.28)	-0.85*** (-6.12)	0.82*** (12.35)	-0.86*** (-6.13)	0.82*** (12.35)
Tangibility	-1.06*** (-7.30)	0.14** (2.04)	-1.06*** (-7.33)	0.13* (1.95)	-1.06*** (-7.32)	0.15** (2.21)
Market-to-Book	0.07*** (2.91)	-0.07*** (-7.07)	0.07*** (2.90)	-0.07*** (-7.07)	0.07*** (2.90)	-0.07*** (-7.09)
EDF	0.21** (2.44)	0.27*** (6.69)	0.20** (2.44)	0.27*** (6.75)	0.20** (2.44)	0.27*** (6.73)
ReturnVolatility	0.34 (0.87)	1.07*** (5.86)	0.33 (0.85)	1.11*** (5.97)	0.33 (0.85)	1.07*** (5.88)
DefSpread	-0.02 (-0.52)	0.21*** (8.31)	-0.02 (-0.48)	0.21*** (8.21)	-0.02 (-0.51)	0.21*** (8.42)
TermSpread	-0.02 (-1.05)	0.18*** (18.49)	-0.02 (-0.94)	0.18*** (18.37)	-0.02 (-0.98)	0.18*** (18.21)
TechBubble	0.22*** (3.70)	0.12*** (3.66)	0.21*** (3.66)	0.12*** (3.69)	0.22*** (3.72)	0.12*** (3.53)
FinCrisis	-0.01 (-0.09)	0.04 (0.94)	-0.01 (-0.11)	0.05 (1.31)	-0.01 (-0.08)	0.04 (1.01)
LogAmount		-0.04*** (-5.55)		-0.04*** (-5.54)		-0.04*** (-5.47)
LogMaturity		0.01 (0.65)		0.01 (0.64)		0.01 (0.55)

Continued on next page

Table 5 continued from previous page

Secured		0.31*** (17.25)		0.30*** (17.20)		0.30*** (17.31)
LogSynSize		-0.05*** (-4.95)		-0.05*** (-4.94)		-0.05*** (-4.94)
IMR		-0.47*** (-22.82)		-0.47*** (-22.62)		-0.47*** (-22.55)
Constant	-1.56*** (-3.68)	5.28*** (30.35)	-1.52*** (-3.57)	5.29*** (29.93)	-1.54*** (-3.64)	5.34*** (32.18)
ρ		-0.80		-0.80		-0.80
Wald test for $\rho = 0$ (p-value)		p = 0.000		p = 0.000		p = 0.000
LowInst – HighInst		0.02* ($\chi^2 = 3.35$)		0.07 ($\chi^2 = 0.29$)		1.00*** ($\chi^2 = 10.32$)
LowInst - NonSpec		0.02* ($\chi^2 = 2.96$)		0.30*** ($\chi^2 = 13.00$)		0.66*** ($\chi^2 = 7.15$)

This table presents tests of association between the price component of private debt and the firm's level of globalization in low institutional quality countries, high institutional quality countries, and in non-country specific segments measured using number of segments, sales, and assets. The tests are performed using the full sample (N = 15,715) and controlling for the firm's choice to globalize using the Heckman procedure. The dependent variable in the first stage regression is an indicator variable taking the value of 1 if the firm reports a foreign segment, and 0 otherwise. The exogenous selection instruments adopted from Li et al. (2011) are: *IndPercGlob*, the percentage of firms in the same two-digit SIC code that are global; *StateExp*, the ratio of exports from the firm's home state in year t to total US exports in year t; and *Min_Int*, an indicator variable that takes the value of 1 if the firm reports a minority interest, and 0 otherwise. All other variables are as defined in Table 2. All regressions include one-digit SIC code indicator variables. Z-statistics are shown parenthetically following the coefficients. Significance is measured using 2-tailed tests with robust standard errors clustered by firm. ***, **, and * denote significance at the 1%, 5%, and 10% levels respectively.

Table 6 MNC's operations in countries with low institutional quality and private loan spreads: Heckman selection model for selection to operate in a country with low institutional quality

	Globalization Measure					
	Number of Segments		Sales Ratio		Assets Ratio	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
LowInst		0.01* (1.85)		0.17** (1.98)		0.25 (1.27)
HighInst		-0.02 (-1.15)		0.09 (0.62)		-0.53* (-1.95)
NonSpec		-0.02*(-2.03)		-0.32*** (-4.02)		-0.82*** (-3.23)
IndPercLow	3.73*** (6.90)		3.59*** (6.57)		3.69*** (6.75)	
StateExpLow	1.06* (1.67)		1.02 (1.57)		1.05 (1.65)	
Size	-0.03 (-1.07)	-0.05*** (-2.98)	-0.03 (-1.08)	-0.05*** (-3.18)	-0.03 (-1.09)	-0.05*** (-3.18)
Profitability	-0.09 (-0.25)	-0.78*** (-3.27)	-0.10 (-0.28)	-0.74*** (-3.10)	-0.09 (-0.26)	-0.75*** (-3.13)
Leverage	-0.25 (-1.35)	0.64*** (6.17)	-0.25 (-1.33)	0.67*** (6.72)	-0.24 (-1.32)	0.65*** (6.22)
Tangibility	0.87*** (4.00)	-0.52*** (-4.57)	0.86*** (3.95)	-0.53*** (-4.69)	0.87*** (3.98)	-0.49*** (-4.20)
Market-to-Book	-0.03 (-1.27)	-0.07*** (-3.56)	-0.03 (-1.27)	-0.08*** (-3.74)	-0.03 (-1.29)	-0.07*** (-3.57)
EDF	0.05 (0.46)	0.34*** (5.11)	0.05 (0.45)	0.34*** (5.16)	0.05 (0.43)	0.34*** (5.18)
Return Volatility	-0.22 (-0.41)	1.06*** (3.31)	-0.23 (-0.43)	1.12*** (3.45)	-0.23 (-0.42)	1.07*** (3.32)
DefSpread	0.06 (1.03)	0.14*** (3.51)	0.06 (1.05)	0.13*** (3.41)	0.06 (1.04)	0.14*** (3.53)
TermSpread	-0.03 (-1.03)	0.17*** (10.27)	-0.02 (-0.88)	0.17*** (10.43)	-0.02 (-0.96)	0.16*** (10.17)
TechBubble	-0.20** (-2.54)	0.35*** (6.49)	-0.21*** (-2.67)	0.34*** (6.47)	-0.20** (-2.54)	0.35*** (6.50)
FinCrisis	-0.21** (-2.39)	0.17*** (2.69)	-0.21** (-2.37)	0.19*** (2.99)	-0.21** (-2.36)	0.18*** (2.80)
LogAmount		-0.05*** (-4.48)		-0.05*** (-4.40)		-0.05*** (-4.48)
LogMaturity		-0.01 (-0.40)		-0.01 (-0.29)		-0.01 (-0.42)

Continued on next page

Table 6 – continued from previous page

Secured		0.28*** (11.50)		0.27*** (11.12)		0.28*** (11.46)
LogSynSize		-0.06*** (-3.39)		-0.05*** (-3.22)		-0.06*** (-3.43)
IMR		-0.55*** (-14.77)		-0.54*** (-14.11)		-0.55*** (-14.38)
Constant	-0.06 (-0.13)	4.97*** (23.02)	0.03 (0.07)	4.99*** (23.01)	0.04 (0.09)	5.04*** (23.43)
ρ		-0.85		-0.84		-0.84
Wald test for $\rho = 0$ (p-value)		p = 0.000		p = 0.000		p = 0.000
LowInst – HighInst		0.03 ($\chi^2 = 2.38$)		0.08 ($\chi^2 = 0.23$)		0.78** ($\chi^2 = 4.64$)
LowInst - NonSpec		0.03*** ($\chi^2 = 6.70$)		0.49*** ($\chi^2 = 17.70$)		1.07*** ($\chi^2 = 10.66$)

This table presents tests of association between the price component of private debt and the firm's level of globalization in low institutional quality countries, high institutional quality countries, and in non-country specific segments measured using number of segments, sales, and assets. The tests are performed using only multinational firms (N=8,668) and controlling for the firm's choice to operate in a low institutional quality country using the Heckman procedure. The dependent variable in the first stage regression is an indicator variable for firms that report operations in a country with low institutional quality. The exogenous selection instruments are: *IndPercLow*, the percentage of firms in the same two-digit SIC code that report operations in a low institutional quality country; and *StateExpLow*, the ratio of exports from the firm's home state to low institutional quality countries in year t to total US exports in year t. All other variables are as defined in Table 2. All regressions include one-digit SIC code indicator variables. Z-statistics are shown parenthetically following the coefficients. Significance is measured using 2-tailed tests with robust standard errors clustered by firm. ***, **, and * denote significance at the 1%, 5%, and 10% levels respectively.

Table 7 MNC's operations in countries with low institutional quality and private loan spreads: Matched sample estimation

Panel A Presence of a foreign segment in a low institutional quality country as treatment variable

Matching Method	All MNC Firms	Firms with exactly one Foreign Segment
PSM - Nearest Neighbor (n = 10)	0.06*** (3.41)	0.12** (2.44)
PSM - Nearest Neighbor (n = 50)	0.07** (2.56)	0.07* (1.72)
PSM - Epanechnikov kernel	0.05*** (2.70)	0.10*** (3.54)
Mahalanobis distance	0.06*** (3.49)	0.13*** (4.18)

Panel B Presence of foreign sales reported in a low institutional quality country as treatment variable

Matching Method	All MNC Firms	Firms with exactly one Foreign Segment
PSM - Nearest Neighbor (n = 10)	-0.00 (-0.04)	0.11*** (2.68)
PSM - Nearest Neighbor (n = 50)	0.02 (0.95)	0.07** (2.09)
PSM - Epanechnikov kernel	-0.00 (-0.01)	0.08*** (3.18)
Mahalanobis distance	-0.00 (-0.03)	0.13*** (3.95)

Panel C Presence of foreign assets reported in a low institutional quality country as treatment variable

Matching Method	All MNC Firms	Firms with exactly one Foreign Segment
PSM - Nearest Neighbor (n = 10)	0.01 (0.73)	0.12*** (2.88)
PSM - Nearest Neighbor (n = 50)	0.02 (1.28)	0.07* (1.76)
PSM - Epanechnikov kernel	0.00 (0.57)	0.10*** (2.90)
Mahalanobis distance	0.00 (0.23)	0.13*** (5.35)

This table presents the difference in *LogSpread* between firms with segments in low institutional quality countries and matched samples of multinational firms without operations in low institutional quality countries. We generate matched samples first using propensity scores based on the identification variables used in our Heckman model (*IndPercLow* and *StateExpLow*) and all control variables included in our multivariate regression analyses (Equation 1): retaining the ten nearest neighbors, retaining the fifty nearest neighbors, and using Epanechnikov kernel matches. Then, we generate our fourth set of matched firms using Mahalanobis distance matching based on the actual covariates rather than the propensity scores. For all matching methods we require an exact match on loan purpose, loan type, and one-digit SIC code to control for loan-type and industry specific effects. ***, **, and * indicate significance at the 1%, 5%, and 10% levels respectively.

Table 8 MNC's operations in countries with low institutional quality and loan security requirements: Heckman selection model results.

	Globalization Measure					
	Number of Segments		Sales Ratio		Assets Ratio	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
LowInst		-0.01 (0.46)		-0.36* (-1.69)		-1.36** (-2.54)
HighInst		-0.01 (-0.16)		0.05 (0.14)		0.63 (0.81)
NonSpec		0.00 (0.10)		-0.51*** (-4.01)		-1.29*** (-2.83)
IndPercGlob	0.23 (0.52)		0.18 (0.41)		0.20 (0.46)	
StateExp	1.56*** (2.95)		1.58*** (3.03)		1.57*** (2.97)	
Min_Int	0.06 (0.82)		0.06 (0.86)		0.06 (0.90)	
Size	0.22*** (10.39)	-0.29*** (-11.49)	0.22*** (10.36)	-0.28*** (-11.11)	0.22*** (10.36)	-0.29*** (-11.36)
Profitability	0.41* (1.65)	-1.97*** (-4.34)	0.40 (1.65)	-1.99*** (-4.43)	0.40 (1.65)	-1.98*** (-4.41)
Leverage	-0.76*** (-5.24)	1.20*** (8.62)	-0.75*** (-5.23)	1.15*** (8.44)	-0.76*** (-5.23)	1.19*** (8.55)
Tangibility	-1.15*** (-7.66)	0.35 (1.43)	-1.15*** (-7.66)	0.35 (1.44)	-1.15*** (-7.67)	0.42 (1.79)
Market-to-Book	0.06** (2.39)	-0.08*** (-3.01)	0.06** (2.40)	-0.08*** (-2.88)	0.06** (2.40)	-0.08*** (-3.07)
EDF	0.19** (2.21)	0.21* (1.72)	0.19** (2.21)	0.21* (1.71)	0.19** (2.21)	0.21* (1.76)
ReturnVolatility	0.12 (0.29)	2.89*** (4.32)	0.11 (0.27)	3.09*** (4.52)	0.11 (0.28)	2.83*** (4.23)
DefSpread	0.01 (0.30)	0.11* (1.71)	0.01 (0.30)	0.10 (1.57)	0.01 (0.31)	0.11* (1.66)
TermSpread	0.02 (0.94)	-0.00 (-0.09)	0.02 (0.99)	-0.01 (-0.23)	0.02 (0.97)	-0.00 (-0.11)
TechBubble	0.22*** (3.58)	-0.26*** (-3.24)	0.22*** (3.58)	-0.27*** (-3.39)	0.22*** (3.57)	-0.27*** (-3.44)
FinCrisis	-0.09 (-1.20)	0.07 (0.77)	-0.09 (-1.20)	0.12 (1.34)	-0.09 (-1.18)	0.09 (1.01)
LogAmount		-0.01 (-0.29)		-0.01 (-0.47)		-0.01 (-0.25)
LogMaturity		0.29*** (4.97)		0.29*** (4.91)		0.29*** (5.13)

Continued on next page

Table 8 – continued from previous page

LogSynSize		-0.07** (-2.39)		-0.07** (2.36)		-0.07** (2.44)
Constant	-1.10** (-2.28)	0.88 (1.51)	-1.07* (-2.23)	0.96* (1.72)	-1.08** (-2.24)	0.91 (1.62)
ρ		-0.73		-0.74		-0.72
Wald test for $\rho = 0$ (p-value)		p = 0.040		p = 0.042		p = 0.037
LowInst - HighInst		0.00 ($\chi^2 = 0.00$)		-0.41 ($\chi^2 = 0.91$)		-1.99* ($\chi^2 = 3.69$)
LowInst - NonSpec		0.01 ($\chi^2 = 0.15$)		0.15 ($\chi^2 = 0.42$)		-0.07 ($\chi^2 = 0.01$)

This table presents tests of association between the security requirements included in private debt and the firm's level of globalization in countries with low institutional quality, countries with high institutional quality, and in non-country specific segments measured using number of segments, sales, and assets. The tests are performed using the full sample (N = 15,715) and controlling for the firm's choice to globalize using the Heckman procedure. The dependent variable in the first stage regression is an indicator variable for multinational firms. The exogenous selection instruments are: *IndPercGlob*, *StateExp*, and *Min_Int*, and are as defined in Table 5. All other variables are as defined in Table 2. All regressions include one-digit SIC code indicator variables. Z-statistics are shown parenthetically following the coefficients. Significance is measured using 2-tailed tests with robust standard errors clustered by firm. ***, **, and * denote significance at the 1%, 5%, and 10% levels respectively.

Table 9 MNC's disclosure of operations countries with low institutional quality and private loan issuances

	Globalization Measure		
	Segments	Sales	Assets
Loan	-0.152*** (-2.97)	-0.020*** (-4.37)	-0.006 (-1.52)
IndPercLow	2.56*** (7.00)	0.250*** (7.86)	0.032 (1.09)
StateExpLow	0.570 (0.82)	0.302*** (2.84)	-0.007 (-0.24)
Size	0.073*** (3.44)	0.001 (0.63)	-0.003 (-0.87)
Profitability	0.077 (0.94)	-0.010 (-0.55)	-0.001 (-0.20)
Leverage	-0.228** (-2.07)	-0.043*** (-3.22)	-0.029 (-1.52)
Tangibility	1.026*** (6.22)	0.101*** (5.24)	0.047*** (3.31)
Market-to-Book	-0.001 (-0.15)	0.001 (1.18)	0.000 (0.63)
EDF	0.062 (1.03)	0.016 (0.97)	0.059 (1.04)
ReturnVolatility	0.870*** (2.86)	0.143*** (3.24)	-0.141 (-0.95)
DefSpread	-0.014 (-1.04)	-0.004** (-2.10)	-0.003 (-1.52)
TermSpread	-0.015 (-1.38)	-0.001 (-0.70)	0.001 (0.54)
TechBubble	-0.138*** (-3.29)	0.001 (0.11)	-0.009 (-1.26)
FinCrisis	0.031 (1.13)	0.006 (1.99)	-0.005 (-0.61)
Constant	0.087 (0.13)	-0.067* (-1.71)	0.055 (0.92)
N	24,899	24,899	24,899
Adj. R ²	0.070	0.024	0.001

This table presents tests of changes in management's disclosure of operations in low institutional quality countries in the year's around a private debt issuance. We measure the level of operations disclosed in low institutional quality countries using the number of segments, level of sales, and level of assets reported. All regressions include one-digit SIC code indicator variables. *IndPercLow* and *StateExpLow* are as defined in Table 6, all other variables are as defined in Table 2. T-statistics are shown parenthetically following the coefficients. Significance is measured using 2-tailed tests with robust standard errors clustered by firm. ***, **, and * denote significance at the 1%, 5%, and 10% levels respectively.

Appendix A. – Variable Definitions

Variable	Definition
<i>Panel A: Measures of Institutional Quality and Globalization</i>	
LowInstSeg	Count of segments reported by the firm located in countries with low institutional quality
LowInstSales	The firm's sales in countries with low institutional quality divided by total sales.
LowInstAssets	The firm's assets in countries with low institutional quality divided by total assets.
HighInstSeg	Count of segments reported by the firm located in countries with high institutional quality.
HighInstSales	The firm's sales in countries with high institutional quality divided by total sales.
HighInstAssets	The firm's assets in countries with high institutional quality divided by total assets.
NonSpecSeg	Count of segments reported by the firm that are reported at a regional or continent level.
NonSpecSales	The firm's sales in segments reported at a regional or continent level divided by total sales.
NonSpecAssets	The firm's assets in segments reported at the regional or continent level divided by total assets.
<i>Panel B: Cost of Debt and Non-Price Loan Terms</i>	
LogSpread	The natural log of the All-in-Spread in basis points over LIBOR.
Secured	An indicator variable that takes the value of 1 if the loan is secured with collateral, and 0 otherwise.
LogMaturity	The natural log of the length of the loan in months.
Covenants	Count of the number of covenants included in the loan agreement.
<i>Panel C: Control Variables</i>	
Size	The natural log of the firm's total assets in millions of U.S. dollars.
Profitability	The ratio of operating income before depreciation to total assets.
Leverage	The ratio of the firm's long-term debt to total assets.
Tangibility	The ratio of net property, plant, and equipment to total assets.
Market-to-Book	The ratio of the market value of assets to the book value of assets.
EDF	The expected default frequency, measured as in Bharath & Shumway (2008).
ReturnVolatility	The standard deviation of the firm's monthly stock returns for the four years prior to loan inception.
DefSpread	The difference between the yield on AAA bonds and BAA bonds measured in the month of loan origination.
TermSpread	The difference between the yield on ten-year U.S. Treasury bonds and two-year U.S. Treasury bonds measured in the month of loan origination.
TechBubble	An indicator variable taking the value of 1 if the loan was originated in 1999 or 2000, and 0 otherwise.
FinCrisis	An indicator variable taking the value of 1 if the loan was originated in 2007 or 2008, and 0 otherwise.
LogAmount	The natural log of the amount of the loan facility in millions of U.S. dollars.
LogSynSize	The natural log of the number of lenders participating in the loan syndicate.

<i>Panel D: Instrumental Variables used in Self-Selection and Propensity Score Matching Analyses</i>	
IndPercGlobal	The percentage of firms in the same two-digit SIC code that are global.
StateExp	The ratio of exports from the firm's home state in year t to total US exports in year t.
Min_Int	An indicator variable that takes the value of 1 if the firm reports a minority interest, and 0 otherwise.
IndPercLow	The percentage of firms in the same two-digit SIC code that report operations in a low institutional quality country.
StateExpLow	The ratio of exports from the firm's home state to low institutional quality countries in year t to total US exports in year t.