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Working Paper

Are firm- and country-specific governance substitutes? Evidence from financial contracts in emerging markets

Bank of Finland Research Discussion Papers, No. 12/2012

Provided in Cooperation with:

Bank of Finland, Helsinki

Suggested Citation: Francis, Bill; Hasan, Iftekhar; Song, Liang (2012) : Are firm- and country-specific governance substitutes? Evidence from financial contracts in emerging markets, Bank of Finland Research Discussion Papers, No. 12/2012, ISBN 978-952-462-797-9, Bank of Finland, Helsinki, <https://nbn-resolving.de/urn:nbn:fi:bof-20140807127>

This Version is available at:

<https://hdl.handle.net/10419/212215>

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Are firm- and country-specific governance substitutes? Evidence from financial contracts in emerging markets



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ARE FIRM- AND COUNTRY-SPECIFIC GOVERNANCE SUBSTITUTES? EVIDENCE FROM FINANCIAL CONTRACTS IN EMERGING MARKETS

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Abstract

We investigate how borrowers' corporate governance influences bank loan contracting terms in emerging markets and how this relation varies across countries with different country-level governance. We find that borrowers with stronger corporate governance obtain favorable contracting terms with respect to loan amount, maturity, collateral requirements, and spread. Firm-level and country-level corporate governance are substitutes in writing and enforcing financial contracts. We also find that the distinctiveness of borrowers' characteristics affect the relation between firm-level corporate governance and loan contracting terms. Our findings are robust, irrespective of types of regression methods and specifications.

JEL Classification: G20, G30, G31, G34, G38.

I. Introduction

Corporate governance deals with the ways in which finance providers ensure they gain a return on their investments (Shleifer and Vishny 1997). An extensive theoretical literature (e.g., Williamson 1988) argues that optimal debt policy critically depends on corporate governance. Empirical evidence reveals that country-level governance status such as creditor protection and legal environment (or judicial norms) matters in writing and enforcing financial contracts (e.g., Qian and Strahan 2007). However, it is still an open question as to the role of firm-level corporate governance in financial contracting in cross-country settings.¹ Furthermore, it is not obvious what relative importance is portrayed by firm- and country-specific governance factors (or whether they are substitutes or complements) in determining financial contracts.

In the quest for better understanding of these issues, we investigate the influence of firm-level corporate governance provisions on bank loan contracting after controlling for country-level governance and whether this relation varies across countries with different country-level governance in emerging economies. An examination of the influence of firm-level corporate governance provisions on bank loan contracting and how firm- and country-level governance interact to determine bank loan contracts requires measures of how well a firm is governed. We use firm-specific corporate governance measures from a recent survey by Credit Lyonnais Securities Asia (CLSA). Although the CLSA governance index intends to measure whether managers work for the interests of shareholders, the corporate governance standards measured by this governance index should also be priced by banks because they can influence the assessment of the firms' default likelihood by reducing agency and information asymmetry problems.

¹ There is some U.S. evidence about the effect of firm-specific corporate governance on financial contracting (e.g., Ağca et al. 2008). In addition, Athavale and Edmister (1999) find that the previous bank lending relationship reduces the bank monitoring cost and further decreases the loan rate.

Using firm-level corporate governance rankings across 14 emerging markets, we attempt to determine loan amount, loan maturity, the secured status of a loan, and loan interest rate spread. Several broad conclusions can be drawn from the findings. First, we find that well-governed firms obtain loans with more favorable contracting terms, for example, larger amounts, longer maturity, less probability to be secured, and lower spread. These results suggest that bank lenders take the view that firms' superior governance standards decrease the severity of agency and information problems. Thus, they respond to it by writing more favorable loan contracting terms. Second, the results show that firm-level corporate governance provisions matter more to determine loan contracts in countries with weaker legal systems. This suggests that corporate governance and legal environment are substitutes in writing and enforcing bank loan contracts. We also find that the effects of firm-level corporate governance on bank loan contracting terms vary with different borrower characteristics. Specifically, the influence of firm-level corporate governance on bank loan contracts is more pronounced for borrowers with higher leverage and lower tangibility than for borrowers with lower leverage and higher tangibility.

This research contributes to the literature on financial contracting and corporate governance in important ways. First, the existing literature (e.g., Attig, Ghouli, and Guedhami 2009) shows that firm-level corporate governance mechanisms play an important role on firms' performance in emerging markets. We extend this stream of literature to provide a more comprehensive analysis of the relevance of corporate governance from the perspective of debt holders. Specifically, banks have access to firms' proprietary information compared to equity and bond holders (Diamond 1984). In addition, bank loan contracts include multidimensional terms such as interest rates, maturity, and collateral (Qian and Strahan 2007). Thus, we can

obtain more insight about the relative role of firm's corporate governance and legal environment, a key country-level governance variable, on financial contracts.

Second, Qian and Strahan (2007) and Bae and Goyal (2009) examine the syndicated loan market across countries and show that strong creditor protection is associated with more favorable bank loan contracting terms. This stream of literature focuses solely on the effect of country-level governance while ignoring the impact of firm-level governance standards on bank loan contracts. We extend this stream of literature by incorporating firm-level governance mechanisms designed to control agency problems between controlling shareholders and minority shareholders and between controlling shareholders and creditors.

Finally, Durnev and Kim (2005) find that the positive relation between firm-level governance and valuation is stronger in countries that are less investor friendly. We extend this stream of literature by investigating how firm- and country-level governance interact to determine financial contracts in emerging markets. The firms in emerging economies provide a perfect and necessary testing ground to examine whether firm-level and country-level governance are substitutes in determining bank loan contracting because of their wide variations in firm-level corporate governance standards that are not fully determined by country characteristics. For example, Doidge, Karolyi, and Stulz (2007) show that 39% of the variance in emerging market firm governance ratings can be explained by country-level characteristics. In contrast, more than 70% of the variance in corporate governance rating of developed market firms can be explained by legal environments.

In addition, we try to address the endogeneity issue in a more careful way.² First, we use firm-level corporate governance data in 2000 to explain bank loan contracts from 2000 to 2005.

² As our governance data is time invariant, we cannot establish causality based on that and leave it in the future research. However, we attempt to mitigate this endogeneity problem.

We argue that our firm-level governance standards are less likely to be determined by firms' ex post borrowing behavior. We also use two-stage regressions to deal with this issue and still obtain the qualitatively same results. Thus, we mitigate the concern of reverse causality. Second, we control for several variables that could measure or relate to growth opportunities, such as firm size and Tobin's Q. We also control for tangible assets, leverage, profitability, Z-score (an accounting measure of a firm's probability of default), firm quality, firm reputation, and American Depositary Receipts (ADR) dummy. We find that our results are not caused by these omitted variables.

II. Related Literature and Hypothesis Development

Banks are the most important credit suppliers and outside monitors for firms in most economies around the world (Demirguc-Kunt and Levine 2001), especially in emerging markets because of their immature capital markets and weak laws or institutions. As discussed in the introduction, the common theme in the existing literature on syndicated bank lending in an international context is that creditor protection (Qian and Strahan 2007), and judicial efficiency (Bae and Goyal 2009) are key to lending decisions, lending structure, and pricing. Similar themes are observed in project finance loans (Esty and Megginson 2003).

Virtually all of this research has only focused on the relation between country legal environment and bank loans. However, "many provisions in country-level investor protection laws may not be binding" (Klapper and Love 2004). Firms can change their corporate charters and by-laws to either remove the existing provisions in their legal code or add additional provisions not provided by their legal code (Easterbrook and Fischel 1991). In addition, a "choice of law" clause exists in many syndicated loan contracts. Under this term, the laws in the

U.S. or the U.K. take effect instead of those laws in the borrower's country (Qian and Strahan 2007). Therefore, it is likely that firms within the same country will offer varying degrees of protection to their creditors and banks will write varying loan contracts, accordingly.

Differences in firm-level governance standards are crucial in affecting firms' protection to their creditors, however, this relation is not unambiguous. On the one hand, in our emerging markets, firms' management is rarely separate from ownership control and controlling shareholders have more ability and incentives to expropriate from minority shareholders (Claessens, Djankov, and Lang 2000). The corporate governance mechanisms decrease the ability and incentive of the controlling shareholders and management to expropriate from minority shareholders and creditors (Himmelberg, Hubbard, and Palia 1999). Stricter governance mechanisms can also reduce the information asymmetry between borrowers and lenders by establishing an effective and efficient information disclosure mechanism (Sufi 2007). Bank loan contracts are essentially determined by the firm's probability of default perceived by banks. Besides several characteristics of the firm and the bank loan contracts, the assessment of the firms' default likelihood would also depend on agency problems and information asymmetry problems (Bhojraj and Sengupta 2003). Thus, when firms have superior governance standards that decrease the severity of agency and information problems, banks respond by writing more favorable loan contracting terms. On the other hand, when managers are entrenched and corporate governance is poor, the managers of this firm would undertake low-risk projects (Bertrand and Mullainathan 2003). This reduction in asset risk at firms with more entrenched managers will make it attractive to banks to lend to such firms at better terms. Given the limited upside potential from the entrenchment effect for bank lenders relative to the possible severe negative impacts of agency and information problems in the emerging markets, we believe that

banks view superior corporate governance to be positive in their contracting decisions. Ultimately, however, it is an empirical question about the impact of firm-level corporate governance on bank loan contracting. We develop several hypotheses related to the specific bank loan contracting terms as below.

Corporate Governance and Loan Amount

Stiglitz and Weiss (1981) argue that as credit risk increases, banks reduce loan amounts instead of increasing loan interest rates. Jappelli and Pagano (1993) argue that reduced information asymmetry would make lenders more likely to provide credit. Empirically, Bae and Goyal (2009) find that banks respond to country-level poor enforceability of contracts by providing less credit. Dennis and Mullineaux (2000) show that if firms have very severe information asymmetry problems, banks will refuse to lend. As establishing superior corporate governance practices can reduce firms' expropriation risk and opaqueness, we conjecture that banks will provide less credit to borrowers with poor corporate governance. On the other hand, if entrenched managers undertake low-risk projects and reduce firms' default risk, banks will provide more credit to borrowers with poor corporate governance. The hypothesis to be tested is as below:

Hypothesis 1: All else being equal, lenders reduce loan amounts when the borrower has weaker corporate governance.

Corporate Governance and Loan Maturity

Debt maturity is an effective contracting tool and lenders prefer to issue short-term debt because they can review their lending decisions more frequently (Diamond 2004). Diamond's

(1991) theory shows that firms with low and high default risk borrow short-term debt because low-risk firms are able to roll over their debt and high risk firms may not be able to obtain long-term debt from banks. Firms with intermediate default risk prefer long-term loans because they try to minimize refinancing risk. Firms in our sample are all from emerging markets, therefore, they might be riskier compared to those in developed countries. Thus, we expect our sample firms have intermediate to high default risk defined in Diamond's (1991) argument: borrowers with poor firm-level corporate governance are perceived to be very risky and are limited primarily to short-term loans. If establishing good corporate governance can reduce firms' agency and information asymmetry problems and further reduce firms' credit risk, banks will provide loans with shorter maturity to borrowers with poor corporate governance. On the other hand, if lenders value more the effect of firms' default risk reduction through entrenched managers' undertaking low-risk projects, banks will provide loans with longer maturity to borrowers with poor corporate governance. The hypothesis to be tested is as below:

Hypothesis 2: All else being equal, lenders provide loans with shorter maturity when the borrower has weaker corporate governance.

Corporate Governance and Loan Secured Status

Collateral requirements are common provisions in loan contracts. The existing research (e.g., Bester 1985 and Boot, Thakor, and Udell 1991) explains that information asymmetry and/or agency problems between borrowers and lenders lead to the use of collateral arrangements. Banks can better control borrower risk if the loan is already secured by the collateral (Qian and Strahan 2007). Berger and Udell (1990) and Jimenez, Salas, and Saurina (2006) find that lenders are more likely to secure their loans with collateral when borrowers have

higher default risk. Corporate governance mechanisms can effectively prevent management and controlling shareholders from expropriating creditors. Thus, we hypothesize that lenders are more likely to request collateral in writing the loan contract when borrowers have poor corporate governance. On the other hand, if the effect of firms' risk reduction through entrenched managers' taking low-risk projects dominates, lenders are less likely to request collateral in the bank loan contract when borrowers have poor corporate governance. The hypothesis to be tested is as below:

Hypothesis 3: All else being equal, lenders are more likely to require collateral to secure loans when the borrower has weaker corporate governance.

Corporate Governance and Loan Interest Rate Spread

Loan interest spreads also respond to the variations in borrowers' corporate governance practices. Freixas and Rochet (1997) argue that default risk is the most important determinant of loan pricing. In addition, Easley and O'Hara (2004) suggest that information disclosure lowers information risk and reduces the cost of capital. Corporate governance mechanisms can effectively decrease expropriation risks and information risks from management and controlling shareholders. As a result, we expect that well-governed firms have a lower loan spread. On the other hand, in the firm with poor corporate governance, entrenched managers might undertake low-risk projects. If lenders value more the effect of firms' default risk reduction by entrenched managers, poorly-governed firms will obtain a lower loan spread. The hypothesis to be tested is as below:

Hypothesis 4: All else being equal, lenders increase loan interest rate spread when the borrower has weaker corporate governance.

Relative Importance of Corporate Governance and Legal Environment

The final hypothesis is whether firm-specific governance-related provision matters more or less in countries with weak legal enforcement in bank loan contracting. Klapper and Love (2004) argue that corporate governance might not be enforceable in countries with weak law enforcement. Thus, firm-level governance standards could be less effective in countries with good enforcement. Bergman and Nicolaievsky (2007) argue that a country with poor country-level governance usually has poor financial development. Thus, firms in a country with poor country-level governance have less incentive to adopt good corporate governance because that firm will obtain less financing from local financial market and hence will benefit less from the reduction in the cost of capital caused by superior corporate governance. Thus, corporate governance is a complement of legal environment.

On the other hand, financial globalization can increase borrowers' incentives to adopt superior governance standards because borrowers with superior corporate governance practices in developing economies may obtain credits from foreign banks (Doidge, Karolyi, and Stulz 2007). Thus, this reduces the effect of the country-level governance on the cost of debt. Creditors may reward borrowers more to establish superior corporate governance practices in countries with weak legal systems. This suggests that firm-level corporate governance can, in some sense, be a substitute for legal environment. Additionally, establishing good governance mechanisms might reduce agency costs more in countries where investor protection is poor because controlling shareholders have more incentives to expropriate from other investors in countries with poor country-level governance (Doidge, Karolyi, and Stulz 2004) and agency problems are more severe in countries with poor rule of law (Nenova 2003). Based on these arguments, firm-

level governance standards are more valuable in countries with poor legal systems. In this paper, we empirically test whether borrowers' corporate governance and legal environment are substitutes or complements in determining financial contracts in the bank-syndicated loan market. The hypotheses are formalized as below:

Hypothesis 5: Borrowers' corporate governance and legal environment are substitutes in determining bank loan contracting.

There is no doubt that lenders could also employ other means such as putting more covenants in response to borrowers' poor corporate governance. However, because of data limitations in emerging markets, we leave this for future research.

III. Data

Sample

Our key variable *Governance*, which measures firm-level corporate governance, is from a corporate governance rating report compiled by CLSA. This report covers 495 companies in 25 countries, which was written in late 2000. The questionnaire includes 57 qualitative questions and is well designed to avoid subjectivity. The questions in the CLSA report are grouped into seven categories such as management discipline, transparency, independence, accountability, responsibility, fairness and social awareness. In particular, variables in the management discipline section measure whether management is committed to increase shareholder value. Variables in the transparency section measure whether outside investors can assess the financial position of a firm. Variables in the independence section measure whether the board of directors is independent of management and controlling shareholders. Variables in the accountability section measure whether management is accountable to the board of directors. Variables in the

responsibility section measure whether the board is effective to take necessary measures in cases of mismanagement. Variables in the fairness section measure whether majority shareholders expropriate minority shareholders. Variables in the last section, social awareness, measure whether the firm emphasizes ethical and socially responsible behavior.³

Each variable equals one if the answer is “yes” and zero otherwise. The percent of positive answers in each section is reported. We only focus on aggregate indices because it seems that the categories overlap (Klapper and Love 2004). Our firm-level governance measure (*Governance*) is defined as the mean value of the first six categories (management discipline, transparency, independence, accountability, responsibility and fairness) and therefore is a comprehensive reflection of firms’ corporate governance practices.⁴ The higher the firm’s governance score, the lower the expropriation risk and information risk from the majority shareholders and management. Although variables in the management discipline and fairness sections emphasize how to protect the interests of minority shareholders, we believe that it is also beneficial to creditors because lenders also suffer from the agency and information asymmetry problem from the majority shareholders and management.

Additionally, the CLSA governance data is the only available comprehensive and direct governance measure in emerging markets so far that is widely used in the literature (e.g. Doidge, Karolyi, and Stulz 2007). Thus, it is more suitable to test our research question than other single dimensional measures of corporate governance such as board structure, which can only gauge one aspect or indirect effect of firms’ corporate governance mechanisms.

We use three country-level legal efficacy measures to capture the effectiveness of a country’s creditor protection. To cover the existence of creditor protection laws, we include the

³ More details can be found in Klapper and Love (2004).

⁴ Our results are robust to the inclusion of the social awareness section and the exclusion of either the management discipline or fairness rating section.

variable *Creditor_Rights* from La Porta et al. (1998). To cover the effectiveness of their implementation, we obtain the measure of *Judicial_Efficiency* from Klapper and Love (2004), which is originally from the *International Country Risk Guide* (2000). To cover the overall legal environment, we include the variable *Legality_Index*, which measures the strength of the legal and institutional environment. We obtain the measure of *Legality_Index* from Klapper and Love (2004), which is an aggregate index originally constructed by Berkowitz, Pistor, and Richard (2003). We also include the variable *Log (GDP Per Capita)* to capture economic development, and the variable *GDP Growth* to control for business cycle, which are from the World Development Indicator (WDI) database. To control for overall country default risk, we define the variable *Log (Sovereign Rating)* as the logarithm of the most recent country credit rating prior to loan origination from Institutional Investor. Esty and Megginson (2003) argue that these ratings are forward-looking estimates of sovereign risk. In our robustness tests, we also include the ratio of total domestic bank credit to GDP into our regressions to control for the countries' financial development, which is from the WDI, and legal origins to control for omitted variables, which is from La Porta et al. (1998).

To obtain bank loan data, we further hand-merge the firm-level governance standards with the Dealscan database by firm name. To obtain enough observations, we begin our sample with loans originated in 2000 and include loans originated through to 2005. Another motivation to cover longer time periods is, to a certain extent, to avoid reverse causality problems. The reason is that our firm-level corporate governance data is from the year 2000 and the firm-level governance standards are not determined by firms' ex post borrowing behavior. Specifically, it is possible that firms faked their corporate governance in 2000 to obtain better bank loan contracting terms in the same year. However, it is hard to believe that firms did the same thing in

2000 to get a better deal in 2005. To do so, we implicitly assume corporate governance does not change much over time or that bank lending decisions will consider firms' corporate governance situations of several years ago.

The Dealscan database provides data about various terms of the loans at origination. Using data from this database, we construct the variable *Log (Loan Amount)*, calculated as the natural logarithm of the amount of a loan; *Log (Maturity)*, measured as the natural logarithm of loan maturity in months; loan secured status (*Loan Secured Dummy*), defined as a dummy variable equal to one if a loan is secured and zero otherwise; *Log (Loan Spread)*, measured as the natural logarithm of the all-in-spread; number of lenders in the loan syndicate (*Log (Number of Lenders)*), measured as the natural logarithm of number of lenders in the loan syndicate; loan type (*Loan Type Dummies*), loans have different types, such as term loans, and revolving loans; loan purpose (*Loan Purpose Dummies*), loans can also be used for different purposes such as corporate purposes and takeovers.

Esty and Megginson (2003) argue that banks can reduce borrowers' default risk by co-lending with multilateral or bilateral agencies such as the central banks because agency lenders help mitigate legal risks from complicated legal issues and sovereign influence. To control for this effect, we define the variable *Agency Participation Dummy* as one if one or more of multilateral or bilateral agencies are involved in the syndicate, and zero otherwise. We also define the variable *Foreign Bank Participation Dummy* as one if one or more of the foreign banks are involved in the syndicate, and zero otherwise.

Loans in our sample are all senior ones, except for those for which we do not have enough information to identify. Very few loans in our sample have a non-missing value of firm rating in the Dealscan. We exclude bank borrowers from our sample because of their different

borrowing behaviors, compared with industrial firms. We exclude firms in Eastern Europe and China from our sample because we cannot find country-level governance measures. We also exclude firms in countries with less than two firms. Our sample reduced to 697 loans in 139 firms in the following countries: Brazil, Chile, Hong Kong, India, Indonesia, South Korea, Malaysia, Pakistan, the Philippines, Singapore, South Africa, Taiwan, Thailand, and Turkey.

In order to include firm-level accounting data, we further hand-matched our sample data with the Worldscope database, based on the firm name. To ensure the financial data reflect the borrower's situation before loan contracting, and that it is in the information set of the lenders, we use the financial data one year earlier than the year the loan was originated. Only about half of our sample observations have matched accounting information in Worldscope.

We employ the logarithm of total assets to measure firm size (*Firm Size*). We define the variable *Profitability* as net income divided by total assets. We define the variable *Leverage* as total debt divided by assets. We use a modified version of Altman's *Z-score* without leverage to measure a firm's probability of default following Graham, Lemmon, and Schallheim (1998). All else being equal, a firm with a higher *Z-score* value should face a lower default risk. We define the variable *Tangibility* as PP&E divided by total assets. We use the variable *Tobin's Q* to measure firms' investment opportunities. *Tobin's Q* is defined as the market value of assets over the book value of assets. We calculate the market value of assets as book value of assets minus book value of equity plus market value of equity. The variable *Firm Quality* is defined as the firm's abnormal future earnings. Barclay and Smith (1995) argue that high-quality firms have positive future abnormal earnings and low-quality firms have negative future abnormal earnings. We follow their definition and assume that earnings follow a random walk. Abnormal earnings are defined as the difference between earnings per share in the current year and in the previous

year, divided by the previous year share price. We also control for a firm's reputation. Berger and Udell (1995) argue that firm age reflects a firm's public reputation. We define the variable *Firm Reputation* as the age of the firm. Finally, we define a dummy variable *ADR Dummy*, which is equal to one if a firm trades ADRs on a major U.S. exchange, zero otherwise.⁵ We report the details of definitions and sources of all the variables in the Appendix.

Summary Statistics

Having described the data and defined the key variables, we now present summary statistics. The distribution of our firm-level corporate governance across countries is shown in Table 1, Panel A. As shown, our sample is not equally distributed all over the world; most firms are in Asia, and a few are located in Latin America and Africa. In our sample, borrowers are not concentrated in a few countries, and there is no evidence that loans in a few outlier countries drive our results. Overall, mean corporate governance is 53.35, and ranges from a country average of 25.82 in Pakistan to 64.63 in South Africa. There is also great variation within countries; for example, the corporate governance ranking of firms in Malaysia varies from 23.25 to 80.92. These summary statistics highlight the firm-level variations in corporate governance even within countries. These results suggest that firms still have some flexibility to increase their corporate governance even if their country has higher legal risks.

[INSERT TABLE 1 HERE]

Summary statistics and sample distributions for country-level indices are shown in Table 1, Panel B. In the whole sample, the average value of the variable *GDP Growth* is 4.27%. This is consistent with the fact that emerging economies are developing at a very fast speed, and

⁵ We use the JP Morgan website: www.adr.com to identify ADRs.

probably need a lot of external financing. There is a very high correlation among the variables *Creditor_Rights*, *Judicial_Efficiency*, and *Legality_Index*.

From Table 2, the country-average loan size is \$153 million in our sample, indicating that loans are all large loans and our results reflect the effects of firm-level corporate governance differences on financial contracting between large banks and large borrowers. This will influence the generality of our results. However, in an international context, the financial contracting process for small and private firms is more likely to be affected by social and cultural relationships that are difficult to control for in empirical studies (Petersen and Rajan 1994). Thus, Qian and Strahan (2007) argue that individual country studies provide a better way to understand financial contracting for those small and private firms compared to cross-country comparisons. There is also a big variation in loan maturity, the sample average is 58.45 months, and the standard deviation is 38.78 months, with the lowest average of two months in India and the highest in Singapore. The average value of loan secured status and loan spread in our sample are 0.35 and 119.34 basis points respectively. These summary statistics are consistent with the existing literature.

[INSERT TABLE 2 HERE]

Table 3 presents the mean value of loan contracting terms in the subsamples based on country-level and firm-level governance.⁶ The results suggest that holding country-level governance at the low level, moving from low firm-level governance to high firm-level governance increases loan size by \$14.98 million, increases loan maturity by 9.12 months, decreases loan secured probability by 6%, and decreases loan spread by 15.85 basis points.

⁶ The mean value of debt contracting terms including *Loan Size*, *Loan Maturity*, *Loan Secured Dummy*, and *Loan Spread* are reported for loans in the subsamples are reported. Low means the subsample including firms with lower than the median value of the corresponding governance variable. High means the subsample including firms with higher than the median value of the corresponding governance variable. The country-level governance is measured by *Legality_Index*.

Conversely, controlling for firm-level governance at low level, moving from low country-level governance to high country-level governance increases loan size by \$16.99 million, increases loan maturity by 11.67 months, decreases loan secured probability by 10%, and decreases loan spread by 19.83 basis points. All loan contracting term differentials are highly statistically significant at the 1% level. These results also suggest that all loan contracting term differentials are economically significant and the effects of country-level and firm-level governance are comparable. In contrast, holding country-level governance at the high level or firm-level governance at the high level, all loan contracting term differentials are not highly statistically significant at the 1% level although they are still more than zero. In general, the results in Table 3 indicate on average, poorly-governed companies obtain less favorable contacting terms and these relations are more pronounced for firms in the countries with poor country-level governance. In addition, to some extent, firms can get around the problems arising from the poor country-level governance by adopting good firm-level governance systems, which we will further investigate in the multivariate analysis.

[INSERT TABLE 3 HERE]

IV. Methodology and Results

The summary statistics presented in the previous section show significant differences in loan and borrower characteristics across countries. We next begin a more formal investigation, and use regression analysis to examine the effect of firm-level governance standards on the bank loan contracting and how this relation is moderated by country-level governance mechanisms. The empirical model follows:

Bank Loan Contracting Terms = f (Firm-level Governance, Firm-level Governance* Country-level Governance, Country-level Governance, Firm Characteristics, Loan Characteristics, Macroeconomic Factors, Industry Effects, Year Effects) (1)

A bank loan contract is a multidimensional agreement that include not only interest rates, maturity, and collateral, but also ownership and covenants (Qian and Strahan 2007). We cannot consider every aspect of such contracts because some of the variables in emerging markets are not available. In this paper, we only employ loan size (*Log (Loan Size)*), loan maturity (*Log (Loan Maturity)*), the secured status of the loan (*Loan Secured Dummy*), and loan interest rate spread (*Log (Loan Spread)*) as our dependent variables. Our key variable is the measure of firm-level corporate governance (*Governance*) and the interaction term between firm-level corporate governance and country-level governance measured by *Judicial_Efficiency*, *Legality_Index*, and *Creditor_Rights*. The coefficient estimates on these two variables are our primary interest.

As only about half of our sample observations are left, when we control for firm characteristics, we report each regression result with and without controlling for firm characteristics. Specifically, we control for the variable *Firm Size*. Larger firms are more likely to be mature and have a lower default risk. Thus, they have easier access to external financing and are more likely to borrow from banks on better terms. We control for the variable *Profitability* because banks are more likely to give more favorable loan contract terms to firms with more earnings. We include the firm's leverage ratio (*Leverage*) in our model since highly levered firms are more likely to default. We also control for the variable *Z-score*. Again, a lower value of *Z-score* should lead to more favorable loan contract terms. The variable *Tangibility* is also included. Firms with more tangible assets are likely to borrow from banks on better terms

because tangibility reduces the costs of financial distress and information asymmetry problems. We also include the variable *Tobin's Q*. All else being equal, a firm with better growth opportunities should face lower default risk. The variables *Firm Quality* and *Firm Reputation* are included because these firms with high quality and reputation are expected to obtain more favorable contracting terms. The variable *ADR Dummy* is also added. We expect that firms listed on a major U.S. exchange are well-governed because they are required to comply with U.S. GAAP accounting standards and are subject to many SEC laws and regulations.

We also control for loan type dummy variables (whether a loan is a revolver loan, term A loan etc.), loan purpose dummy variables (whether a loan is for corporate purposes, to finance a project etc.) because the loan pricing varies across the different loans. We also include the variables *Agency Participation Dummy* and *Foreign Bank Participation Dummy* in the regressions. Esty and Megginson (2003) argue that banks can reduce borrowers' default risk by co-lending with multilateral or bilateral agencies because agency lenders help mitigate legal risks from complicated legal issues and sovereign influence. To control for macroeconomic factors' effect, we include the measures of economic development (*Log (GDP Per Capita)*), business cycle (*GDP Growth*), and sovereign risk (*Log (Sovereign Rating)*) into the regressions. In the loan interest rate spread regressions, we add loan characteristics such as *Log (Number of Lenders)*, *Log (Loan Amount)*, *Log (Loan Maturity)*, and *Loan Secured Dummy* as other control variables.

We use the one-digit SIC code as the industry dummy to control for unobserved heterogeneity on the industry level. Controlling for one-digit SIC code instead of two-digit SIC code can save the degrees of freedom because many industries include only one firm in them when we control for two-digit SIC code in our small sample (Klapper and Love 2004). We do

not include either country-level or firm-level fixed effects in our regression because there is no time variation in the key variables firm-level corporate governance and legal indices. Inclusion of either firm-level or country-level fixed effects would make it impossible to identify how the firm-level corporate governance indices and the interactions between firm-specific governance mechanisms and country-level laws governing investor protection affect loan contracting terms. The year effect is also included to control for the potential differences in loan pricing across years. When we calculate standard errors, we cluster at the country level.

Interaction between Firm-Level and Country-Level Governance

We first study the impact of firm-level corporate governance on the loan size and how this relation varies across the countries with different country-level governance. Table 4 provides the primary results from OLS regressions with the dependent variable *Log (Loan Amount)*. As shown in Table IV, the coefficients of the variables *Governance* and country-level governance variables including *Judicial_Efficiency*, *Legality_Index* and *Creditor_Rights* are positive and statistically significant even when we control for firm characteristics. The coefficients of the interaction terms between firm-level and country-level governance variables are negative and statistically significant.

[INSERT TABLE 4 HERE]

Our results are also economically significant. The overall coefficients of firm-level corporate governance on loan amount can be expressed as $(0.01 - 0.0005 * \text{Legality_Index})$ based on the result reported in column five. In the country with the lowest value of legality index such as the Philippines (*Legality_Index*=8.51), all else being equal, one standard deviation increase in

firm-level governance increases loan amount by 7.9% $[(0.01-0.0005*8.51)*13.82]$, approximately \$12.09 million $(153*7.9\%)$ relative to the \$153 million sample mean. In contrast, in the country with the median value of *Legality_Index* such as Chile (*Legality_Index*=14.70), all else held equal, one standard deviation increase in firm-level governance increases loan amount by 3.7% $[(0.01-0.0005*14.70)*13.82]$, approximately \$5.66 million $(153*3.7\%)$ relative to the \$153 million sample mean. Overall, the results suggest that lenders increase loan amounts when borrowers have superior corporate governance and this relation is stronger in countries with higher legal risks. Our results are comparable to the result that there is a \$57 million loan amount difference between a borrower in the country with the weakest protection of property rights and a borrower in the country with the strongest protection of property rights, as reported by Bae and Goyal (2009).

Loan maturity plays a very important role in bank loan contracts. Next, we study the impact of different firm-level corporate governance practices on the loan maturity and how this relation varies across the countries with different country-level governance. Table 5 provides the primary results from OLS regressions with the dependent variable *Log (Loan Maturity)*. In Table V, the coefficients of the variables *Governance* and country-level governance variables including *Judicial_Efficiency*, *Legality_Index* and *Creditor_Rights* are positive and statistically significant, even controlling for borrower characteristics. The coefficients of the interaction terms between firm-level and country-level governance variables are negative and statistically significant.

[INSERT TABLE 5 HERE]

Our results are also economically significant. The overall coefficients of firm-level corporate governance on loan maturity can be expressed as $(0.011-0.0005*Legality_Index)$ based on the result reported in column five. In the country with the lowest value of *Legality_Index* such

as the Philippines (*Legality_Index*=8.51), all else held equal, one standard deviation increase in firm-level governance increases loan maturity by 9.3% $[(0.011-0.0005*8.51)*13.82]$, approximately 5.44 months ($58.45*9.3\%$) relative to the 58.45 months sample mean. In contrast, in the country with the median value of *Legality_Index* such as Chile (*Legality_Index*=14.70), all else held equal, one standard deviation increase in firm-level governance increases loan maturity by 5.0% $[(0.011-0.0005*14.70)*13.82]$, approximately 2.92 months ($58.45*5.0\%$) relative to the 58.45 months sample mean. Overall, the results show that lenders shorten loan maturity in response to borrowers' poor corporate governance mechanisms and this effect is more pronounced in countries with poor creditor protection.

When the borrower has poor corporate governance, smaller loan maturities suggest that lenders shorten loan maturity to review their lending decisions more frequently and restrict the flexibility of borrowers to expropriate bank lenders (Diamond 1993). In the existing literature, Bae and Goyal (2009) show that there is 2.5 years loan maturity difference between a borrower in the country with the weakest protection of property rights and a borrower in the country with the strongest protection of property rights. Thus, the effect of borrowers' corporate governance on loan maturity is comparable to their results.

Collateralization is an important term of the bank loan contracts. We further study the impact of different firm-level corporate governance on the likelihood of a loan being secured and how this relation varies across the countries with different country-level governance. Table 6 provides the primary results from Logit regressions with the dependent variable *Loan Secured Dummy*. In Table 6, the coefficients of the variables *Governance* and country-level governance variables including *Judicial_Efficiency*, *Legality_Index* and *Creditor_Rights* are negative and statistically significant, even controlling for borrower characteristics. The coefficients of the

interaction terms between firm-level and country-level governance variables are positive and statistically significant.

[INSERT TABLE 6 HERE]

Our results are also economically significant. The overall coefficients of firm-level corporate governance on loan secured status can be expressed as $(-0.0025 + 0.0001 * \text{Legality_Index})$ based on the result reported in column five. In the country with the lowest value of *Legality_Index* such as the Philippines (*Legality*=8.51), all else held equal, one standard deviation increase in firm-level governance decreases the likelihood of loan securitization by 2.4% $[(-0.0025 + 0.0001 * 8.51) * 13.82]$, which is comparable to the 35% sample mean. In contrast, in the country with the median value of *Legality_Index* such as Chile (*Legality_Index*=14.70), all else held equal, one standard deviation increase in firm-level governance decreases the likelihood of loan securitization by 1.4% $[(-0.0025 + 0.0001 * 14.70) * 13.82]$. Overall, the results show that lenders are more likely to secure loans in response to borrowers' poor corporate governance mechanisms and this effect is more pronounced in the country with poor creditor protection.

Finally, we study the impact of different firm-level corporate governance on the cost of debt and how this relation varies across the countries with different country-level governance. Table 7 provides the primary results from OLS regressions with the dependent variable *Log (Loan Spread)*. In Table 7, the coefficients of the variables *Governance* and country-level governance variables including *Judicial_Efficiency*, *Legality_Index* and *Creditor_Rights* are negative and statistically significant. We observe the similar results when we control for

borrower characteristics. The coefficients of the interaction terms between firm-level and country-level governance variables are positive and statistically significant.

[INSERT TABLE 7 HERE]

Our results are also economically significant. The overall coefficients of firm-level corporate governance on loan spread can be expressed as $(-0.012 + 0.0005 * \textit{Legality_Index})$ based on the result reported in column five. In the country with the lowest value of *Legality_Index* such as the Philippines (*Legality_Index*=8.51), all else held equal, one standard deviation increase in firm-level governance decreases loan spread by 10.7% $[(-0.012 + 0.0005 * 8.51) * 13.82]$, approximately 12.76 basis points $(119.24 * 10.7\%)$ relative to the 119.24 basis points sample mean. In contrast, in the country with the median value of *Legality_Index* such as Chile (*Legality_Index*=14.70), all else held equal, one standard deviation increase in firm-level governance decrease loan spread by 6.4% $[(-0.012 + 0.0005 * 14.70) * 13.82]$, approximately 7.63 basis points $(119.24 * 6.4\%)$ relative to the 119.24 basis points sample mean.

These results are comparable to the result that there is 67 basis points loan spread difference between a borrower in the country with the weakest protection of property rights and a borrower in the country with the strongest protection of property rights (Bae and Goyal 2009). These results further suggest that borrowers' corporate governance has substantial micro-level effects on their cost of loan finance. The higher loan spreads on the borrower with poor corporate governance suggest that lenders require additional compensation when there is greater credit risk due to borrowers' poor corporate governance.

Taken together, the results from Tables 4, 5, 6, and 7 demonstrate that firm-level governance standards have a significant impact on the price and non-price terms of loan

contracts. In the presence of weak firm-level governance standards, creditors are more likely to reduce loan amounts, lend on a shorter-term basis, impose reduced collateral requirements, and charge higher rates. Furthermore, firm-specific and country-level governance are substitutes in determining bank loan contracting. These results suggest that lenders believe that superior corporate governance mechanisms decrease the ability and incentives of the controlling shareholders and management to expropriate from them and reduce the severity of information problems. Thus, when firms have superior governance standards that decrease expropriation hazards, bank lenders respond by writing more favorable loan contracting terms.

As we mentioned before, firm-level differences in corporate governance have relatively small effects on bank loan contracting, compared with country-level creditor protection. Thus, our results do not support the argument that firm-level governance standards are the dominant determinant in bank loan contracting. Legal infrastructure is still the most important factor in the bank loan contracting process. We also observe that firm-specific governance provisions matter more in countries with weak legal enforcement. Thus, our results imply that legal environment and corporate governance are substitutes in writing and enforcing financial contracts.

The signs of the coefficients of several borrower characteristic variables are consistent with our prediction. Larger companies, companies with lower default risk (higher *Z-score*) and companies with more tangible assets receive loans with larger amounts, longer maturity, loans that are less likely to be secured and have lower spread. Highly levered firms obtain less favorable bank loan contracting terms in terms of smaller amounts, shorter maturity, loans that are more likely to be secured and higher loan spread. Loan spread is inversely related to the borrower's investment opportunity. Firm reputation is positively associated with loan amount, while negatively related to loan spread. For brevity, we do not show the coefficients of *Agency*

Participation Dummy and *ADR Dummy* variables in the results. We find that when lenders co-lend with multilateral or bilateral agencies, loan amounts are larger, loan maturities are longer, loans are more likely to be secured, and spreads are smaller.

Although we are less concerned about the simultaneous causality problem because our firm-level governance standards are less likely to be determined by firms' ex post borrowing behavior, we still want to formally address this issue by running two-stage regressions. Specifically, in the first-stage regression, the dependent variable is firm-level corporate governance. We include the same set of control variables used in Table 4, 5, 6, and 7, respectively, excluding industry dummies, year dummies, the interaction term, agency and foreign bank participation dummies, and loan type and purpose dummies. In addition, we include the corresponding loan contracting terms as simultaneously determined variable. We also include firms' *Alpha* and *Beta*, which are calculated using more than 23 and 35 consecutive month-end percentage price changes against a local market stock index during years from 2000 to 2005 based on Worldscope data. Durnev and Kim (2005) argue that the variable *Alpha* is a proxy for excess returns, which may motivate controlling shareholders to adopt good governance. The variable *Beta* is a proxy for market risk, which may be negatively related to firm-level governance because controlling shareholders are more likely to profit from inside information when their firm has higher market risk. We assume that *Alpha* and *Beta* are only related to firm-level corporate governance but not loan contracting terms.

In the second-stage regression, the dependent variable is loan contracting terms and firm-level corporate governance is included as simultaneously determined variable. We include the same control variables as the first-stage regression, adding industry dummies, year dummies, the interaction term, agency and foreign bank participation dummies, and loan type and purpose

dummies and excluding *Alpha* and *Beta*. We also exclude the variable *Firm Size* by assuming that it has not further incremental effect on loan contracting terms after controlling for other firm characteristics (Himmelberg, Hubbard, and Palia 1999).

Table 8 reports the two-stage estimation results for *Log (Loan Amount)* (Panel A), *Log (Loan Maturity)* (Panel B), *Loan Secured Dummy* (Panel C), and *Log (Loan Spread)* (Panel D).⁷ Based on these results, we conclude that lenders provide more favorable loan contracting terms in response to borrowers' superior governance and these relations are more pronounced in the countries with higher legal risk. These results are consistent with those reported in Table 4, 5, 6, and 7.

[INSERT TABLE 8 HERE]

Interaction between Borrower Characteristics and Governance

The existing literature finds that the effects of a number of factors, such as audit quality, accounting quality, property and shareholder rights, etc., on bank loan contracting terms vary across firms with high and low default risk (e.g., Bharath, Sunder, and Sunder, 2008). In this subsection, we try to test how borrower characteristics influence the effect of firm-level corporate governance on bank loan contracting terms.

Higher leverage levels indicate a higher default risk of the firm. Superior corporate governance can decrease default risk by reducing agency costs and monitoring managers' misbehavior and by mitigating information asymmetry problems between firms and banks. Thus, we expect that the effect of firm-level corporate governance on bank loan contracting terms is more pronounced for firms with higher leverage because firm-level corporate governance is

⁷ In Panel A, B, and D, we run the two-stage least square regressions. In Panel C, we use the `cdsimeq` command in Stata to implements the two-stage probit least square regression.

valued more by banks. To empirically test this, we create a dummy variable *High Leverage*, which is equal to one if a firm has higher than the median value of *Leverage*, otherwise zero. Then we put the variable *High Leverage* and the interaction term between this variable and *Governance* into the regressions. In the regression, we only control for the variable *Legality_Index*. We obtain similar results when we control for *Creditor_Rights* and *Judicial_Efficiency*.⁸ As shown in column one of Table 9, we find that the coefficient estimate of *Governance*, which captures the effect of firm-level corporate governance on bank loan size for below median leverage level firms, is 0.0041 with a t-statistic of 4.812. The interaction term between *High Leverage* and *Governance*, which captures the incremental effect of firm-level corporate governance on bank loan size for above median leverage level firms, is 0.0019 with a t-statistic of 4.856. Hence, the impact of firm-level corporate governance on bank loan size is more pronounced for higher leveraged firms than for less leveraged firms. We also observe the similar relation when we use the variables *Log (Loan Maturity)*, *Loan Secured Dummy* and *Log (Loan Spread)* as dependent variables as shown in columns two, three, and four of Table 9. In summary, the effect of firm-level corporate governance on bank loan contracting terms is more pronounced for firms with higher leverage.

[INSERT TABLE 9 HERE]

In addition, we test how the effect of firm-level corporate governance on bank loan contracting terms varies for borrowers with different tangibility. Expropriation problems are more severe in firms with fewer tangible assets. Lower tangibility indicates more information asymmetry problems (Strahan 1999). Superior corporate governance can reduce agency costs and mitigate information asymmetry problems between firms and banks. Thus, firm-level corporate governance can reduce firms' default risk. Thus, we expect that the effect of firm-level

⁸ Although not reported, these results are available upon request.

corporate governance on bank loan contracting terms is more pronounced for firms with lower tangibility because firm-level corporate governance is more valuable for debt holders. To test this, we create a dummy variable *High Tangibility*, which is equal to one if a firm has higher than the median value of *Tangibility*, otherwise zero. Then we put the variable *High Tangibility* and the interaction term between this variable and *Governance* into the regressions. In the regression, we only control for the variable *Legality_Index*. We obtain similar results when we control for *Creditor_Rights* and *Judicial_Efficiency*.⁹ As shown in column one of Table 9, we find that the coefficient estimate of *Governance*, which captures the effect of firm-level corporate governance on bank loan size for below median tangibility level firms, is 0.0059 with a t-statistic of 4.871. The interaction term between *High Tangibility* and *Governance*, which captures the incremental effect of firm-level corporate governance on bank loan size for above median leverage level firms, is -0.0018 with a t-statistic of -4.888. Hence, the impact of firm-level corporate governance on bank loan size is more pronounced for firms with lower tangibility than for firms with higher tangibility. We also observe the similar relation when we use the variables *Log (Loan Maturity)*, *Loan Secured Dummy* and *Log (Loan Spread)* as dependent variables as shown in columns two, three, and four of Table 10. In summary, the effect of firm-level corporate governance on bank loan contracting terms is more pronounced for firms with lower tangibility.

[INSERT TABLE 10 HERE]

To conclude, Tables 9 and 10 show that the role of firm-level corporate governance on loan contracting terms is more pronounced for firms with higher default risks and with more opaque assets. Superior firm-level corporate governance is also a substitute for high leverage and low tangibility to influence bank loan contracting terms.

⁹ Although not reported, these results are available upon request.

V. Robustness Tests

This section explores whether our results are robust when alternative regression specifications are examined. In unreported results, the following alternatives are considered:¹⁰

1. When we estimate loan interest spread regressions, we treat the independent variables as exogenous. However, some of them, particularly the loan characteristics such as loan maturity, loan amount, loan secured status, are likely to be endogenous. To solve this problem, predicted loan amount, predicted loan maturity and predicted loan secured status are used instead. The regressions produce similar results in terms of sign, magnitude, and significance of the coefficients.
2. The financial development of the borrower's country might affect the terms of the bank loan. To measure financial development, we include the ratio of total domestic bank credit to GDP into our regressions. As the WDI database does not provide this variable for Taiwan, our sample is reduced to 13 countries. The results do not change qualitatively; the coefficients are the same sign and of similar magnitude and significance.
3. There are other aspects of legal protection and institutional efficiency besides the variables we have controlled for in our regressions. For example, Stulz and Williamson (2003) find that culture plays an important role in determining creditor protection. Since, La Porta et al. (1998) argue that almost all of these variables are highly correlated with legal origin, we add legal origin as a control variable to capture the effect of possible omitted variables. We still obtain similar results.

¹⁰ Although not reported, these results are available upon request.

4. The countries such as Indonesia, Pakistan, and Turkey have less than 10 observations of loans. This may bias our estimations. We address this problem by repeating regressions in Tables 4, 5, 6, and 7 using the subsample excluding firms in Indonesia, Pakistan, and Turkey. We find that virtually no change in our results and therefore conclude that our results are not subjected to a sample selection problem.

VI. Conclusion

It is well established that country-level creditor rights and judicial efficiency affect the design of financial contracts in an international context (e.g., Bae and Goyal 2009). There is also a similar effect of firm-level corporate governance on writing financial contracts in the U.S. market (e.g., Chava, Livdan, and Purnanandam 2009). To date, however, there are no studies that examine whether banks value borrowers' corporate governance in cross-country settings and whether legal environment and corporate governance are substitutes or complements in writing and enforcing financial contracts.

We investigate the relations between the differences in firm-level governance mechanisms and the setting of bank loan contracts controlling for country-level creditor protection in emerging economies, and explore how these relations differ in different legal environments. Using firm-level corporate governance rankings across 14 emerging markets, we report that borrowers with stricter corporate governance standards receive more favorable bank loan contracting terms such as larger amounts, longer maturity, less probability to be secured and lower interest rate spread. In addition, we document that borrowers' corporate governance and legal systems are substitutes in determining bank loan contracting. Finally, we show that the influence of firm-level corporate governance on bank loan contracts is more pronounced for

borrowers with higher leverage and lower tangibility than for borrowers with lower leverage and higher tangibility.

Our results do not attempt to imply that firm-level corporate governance is the dominant factor in bank loan contracting. Legal infrastructure is still the most important in determinant terms of writing the bank loan contract. Firms can only independently improve their own corporate governance to a certain degree to obtain more favorable bank loan contracting terms.

Our results also have important policy implications. From the perspective of policy-makers, improving firm-level corporate governance and improving country-level institutional factors both have their advocates. However, it is very difficult to reform the legal system in a short horizon. Firms can improve their own corporate governance, and quickly improve their financing environment. Thus, it is very important to know the role of the borrower's corporate governance on the bank loan contracting process and how this relation is moderated by the existing legal environment. This will help policy-makers to take measures to facilitate the financing markets.

Appendix. Brief Description of All the Variables and Their Sources

Variable	Description	Sources
<i>Governance</i>	Measuring firm-level corporate governance.	CLSA report
Legal Efficacy		
<i>Judicial_Efficiency</i>	Measuring the effectiveness of law implementation.	International Country Risk Guide (2000)
<i>Creditor_Rights</i>	An index measuring the number of the existing creditor protection laws. “The index is formed by adding “1” when: 1. the country imposes restrictions, such as creditors’ consent or minimum dividends to file for reorganization; 2. secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); 3. secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and 4. the debtor does not retain the administration of its property pending the resolution of the reorganization. “	La Porta et al. (1998)
<i>Legality_Index</i>	An aggregate index of the strength of the legal system and institutional Environment.	Berkowitz, Pistor, and Richard (2003)
<i>Legal Origin</i>	Identifies the legal origin of each country.	La Porta et al. (1998)
Firm Characteristics		
<i>Firm Size</i>	The logarithm of total assets	Worldscope
<i>Leverage</i>	Total debt/total assets.	Worldscope
<i>Profitability</i>	Net income/total assets.	Worldscope
<i>Tangibility</i>	PP&E/total assets.	Worldscope
<i>Z-score</i>	$3.3*(EBIT/total\ assets)+1.0*(sales/total\ assets)+1.4*(retained\ earnings/total\ assets)+1.2*(working\ capital/total\ asset).$	Worldscope
<i>Tobin's Q</i>	Market value of assets over book value of assets. Market value of assets are calculated as book value of assets minus book value of equity plus market value of equity	Worldscope
<i>Firm Quality</i>	The difference between earnings per share in the current year and earnings per share in the previous year, divided by the previous year share price.	Worldscope
<i>Firm Reputation</i>	The age of firms.	Worldscope
<i>ADR Dummy</i>	Equals one if a firm trades ADRs on a major U.S. exchange, zero otherwise.	JP Morgan website: www.adr.com
<i>Alpha</i>	Calculated using more than 23 consecutive month-end percentage price changes again a local market stock index during the years from 2000 to 2005.	Worldscope
<i>Beta</i>	Calculated using more than 35 consecutive month-end percentage price changes again a local market stock index during the years	Worldscope

from 2000 to 2005.

<i>High Leverage</i>	Equals one if a firm has higher than the median value of <i>Leverage</i> , otherwise zero.	Worldscope
<i>High Tangibility</i>	Equals one if a firm has higher than the median value of <i>Tangibility</i> , otherwise zero.	Worldscope
Macroeconomic Factors		
<i>Log (GDP Per Capita)</i>	The logarithm of GDP per capita.	WDI
<i>GDP Growth</i>	Percent change in GDP per capita in two adjacent years.	WDI
<i>Log (Sovereign Rating)</i>	The logarithm of country credit rating.	Institutional Investor
<i>Credit Provided by Banks</i>	Domestic credit provided by banking sector (% of GDP).	WDI
Loan Contracting Terms		
<i>Log (Loan Amount)</i>	The logarithm of the loan facility amount. Loan amount is measured in millions of dollars.	Dealscan
<i>Log (Loan Maturity)</i>	The logarithm of the loan maturity. Maturity is measured in months.	Dealscan
<i>Loan Secured Dummy</i>	Equals one if the loan is secured, otherwise zero.	Dealscan
<i>Log (Loan Spread)</i>	The logarithm of all-in spread drawn.	Dealscan
Loan Characteristics		
<i>Foreign Bank Participation Dummy</i>	Equals one if one or more of the foreign banks are involved in the syndicate, and zero otherwise.	Dealscan
<i>Loan Type Dummies</i>	Dummy variables for loan types such as term loans, etc.	Dealscan
<i>Loan Purpose Dummies</i>	Dummy variables for loan purposes such as corporate purposes, etc.	Dealscan
<i>Log (Number of Lenders)</i>	The logarithm of total number of lenders in a single loan.	Dealscan

References

- Ağca, S., and S. A. Mansi, 2008, Managerial ownership, takeover defenses, and debt financing, *Journal of Financial Research* 31(2): 85-112.
- Athavale, M., and R. O. Edmister, 1999, Borrowing relationships, monitoring, and the Influence on loan rates *Journal of Financial Research* 22(3): 341-353.
- Attig, N., S. El Ghouli, and O. Guedhami, 2009, Do multiple large shareholders play a corporate governance role? Evidence from East Asia *Journal of Financial Research* 32(4): 395-422.
- Bae, K., and V. K. Goyal, 2009, Creditor rights, enforcement, and bank loans, *Journal of Finance* 84: 823-860.
- Barclay, M. J., and W. S. Clifford Jr., 1995, The maturity structure of corporate debt, *Journal of Finance* 50(2): 609-631.
- Berger, A. N., and G. F. Udell, 1990, Collateral, loan quality, and bank risk, *Journal of Monetary Economics* 25(1): 21-42.
- Berger, A. N., and G. F. Udell, 1995, Relationship lending and lines of credit in small firm finance, *Journal of Business* 68(3): 351-381.
- Bergman, E., and D. Nicolaievsky, 2007, Investor protection and the coasian view, *Journal of Financial Economics* 84(3): 738-771.
- Berkowitz, D., K. Pistor, and J. Richard, 2003, Economic development, legality, and the transplant effect, *European Economic Review* 47(1): 165-195.
- Bertrand, M., and S. Mullainathan, 2003, Enjoying the quiet life? Managerial behavior following antitakeover legislation, *Journal of Political Economy* 111(5): 1043-1043.
- Bester, H., 1985, Screening vs. rationing in credit markets with imperfect information, *American Economic Review* 75(4): 850-855.
- Bharath, S. T., J. Sunder, and S. V. Sunder, 2008, Accounting quality and debt contracting, *Accounting Review* 83(1): 1-28.
- Bhojraj S., and P. Sengupta, 2003, Effect of corporate governance on bond ratings and yields: the role of institutional investors and the outside directors, *Journal of Business* 76(3): 455-475.
- Boot, A. A. V. Thakor, and G. F. Udell, 1991, Secured lending and default risk: equilibrium analysis, policy implications and empirical results, *Economic Journal* 101(406): 458-472.

- Chava, S., D. Livdan, and A. K. Purnanandam, 2009, Do shareholder rights affect the cost of bank loans? *Review of Financial Studies* 22(8): 2973-3004.
- Claessens, S., S. Djankov, and L. H. P. Lang, 2000, The separation of ownership and control in East Asian corporations, *Journal of Financial Economics* 58(1-2): 81–112.
- Demirguc-Kunt, A., and R. Levine, 2001, *Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development* (MIT Press, Cambridge, MA).
- Dennis, S., and D. J. Mullineaux, 2000, Syndicated loans, *Journal of Financial Intermediation* 9(4): 404-426.
- Diamond, D. W., 1984, Financial intermediation and delegated monitoring, *Review of Economic Studies* 51(3): 393-414.
- Diamond, D. W., 1991, Monitoring and reputation: the choice between bank loans and directly placed debt, *Journal of Political Economy* 99(4): 689-722.
- Diamond, D. W., 1993, Seniority and maturity of debt contracts, *Journal of Financial Economics* 33(3): 341-368.
- Diamond, D. W., 2004, Committing to commit: short-term debt when enforcement is costly, *Journal of Finance* 59(4):1447-1480.
- Doidge, C., G. A. Karolyi, and R. M. Stulz, 2007, Why do countries matter so much for corporate governance? *Journal of Financial Economics* 86(1): 1-39.
- Doidge, C., G. A. Karolyi, and R. M. Stulz, 2004, Why are foreign firms listed in the US worth more, *Journal of Financial Economics* 71(2): 205-238.
- Durnev, A., and E. H. Kim, 2005, To steal or not to steal: firm attributes, legal environment, and valuation, *Journal of Finance* 60(3): 1461-1493.
- Easley, D., and M. O'Hara, 2004, Information and the cost of capital, *Journal of Finance* 59(4): 1553-1583.
- Easterbrook, F. H., and D. R. Fischel, 1991, *The Economic Structure of Corporate Law* (Harvard University Press, Cambridge, MA).
- Esty, B. C., and W. L. Megginson, 2003, Creditor rights, enforcement, and debt ownership structure: Evidence from the global syndicated loan market, *Journal of Financial and Quantitative Analysis* 38(1): 37-59.
- Freixas, X., and J. Rochet, 1997, *Microeconomics of Banking* (MIT Press, Cambridge, MA).

- Graham, J., M. Lemmon, and J. Schallheim, 1998, Debt, leases, taxes, and the endogeneity of corporate tax, *Journal of Finance* 53(1):131–62.
- Himmelberg, C., R. G. Hubbard, and D. Palia, 1999, Understanding the determinants of managerial ownership and the link between ownership and performance, *Journal of Financial Economics* 53(3): 353-384.
- International Country Risk Guide, 2000, the PRS Group, New York.
- Jappelli, T., and M. Pagano, 1993, Information sharing in credit markets, *Journal of Finance* 48(5), 1693–1718.
- Jimenez, G., V. Salas, and J. Saurina, 2006, Determinants of collateral, *Journal of Financial Economics* 81(2): 255-281.
- Klapper, L. F., and I. Love, 2004, Corporate governance, investor protection, and performance in emerging markets, *Journal of Corporate Finance* 10(5): 703-728.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny, 1998, Law and finance, *Journal of Political Economy* 106(6): 1113-1155.
- Nenova, T., 2003, The value of corporate voting rights and control: a cross-country analysis, *Journal of Financial Economics* 68(3): 325-351.
- Petersen, M. A., and R. G. Rajan, 1994, The benefits of lending relationships: evidence from small business data, *Journal of Finance* 49(1): 3-38.
- Qian, J. U. N., and P. E. Strahan, 2007, How laws and institutions shape financial contracts: the case of bank loans, *Journal of Finance* 62(6): 2803-2834.
- Strahan, P. E., 1999, Borrower risk and the price and nonprice terms of bank loans, Working Paper, Boston College.
- Shleifer, A., and R. W. Vishny, 1997, A survey of corporate governance, *Journal of Finance* 52(2): 737-783.
- Stiglitz, J. E., and A. Weiss, 1981, Credit rationing in markets with imperfect information, *American Economic Review* 71(3): 393-410.
- Stulz, R., and R. Williamson, 2003, Culture, openness and finance, *Journal of Financial Economics* 70(3): 261-300.
- Sufi, A., 2007, Information asymmetry and financing arrangements: evidence from syndicated loans, *Journal of Finance* 62(2): 629-668.

Williamson, O. E., 1988, Corporate finance and corporate governance, *Journal of Finance* 43(3): 567-591.

**Table 1. Summary Statistics for Firm-Level Governance and
Country-Level Variables**

Panel A: Firm-Level Governance Indices						
	No. of Firms	Mean	Median	Standard Deviation	Minimum	Maximum
All Sample	139	53.35	55.22	13.82	19.40	85.97
Brazil	13	59.48	60.72	6.98	45.07	68.22
Chile	5	62.91	60.53	3.82	60.40	69.25
Hong Kong	15	53.45	57.18	13.78	30.90	80.02
India	16	52.21	49.30	8.80	40.43	74.67
Indonesia	2	30.87	25.75	7.24	25.75	35.98
South Korea	10	41.60	39.68	6.13	35.10	55.82
Malaysia	18	53.43	60.00	13.86	23.25	80.92
Pakistan	2	25.82	25.82	1.44	24.80	26.83
Philippines	10	39.30	48.65	14.73	19.40	64.35
Singapore	18	64.43	64.48	11.54	45.37	85.97
South Africa	5	64.63	54.72	8.14	54.72	75.97
Taiwan	14	54.56	55.22	9.51	44.32	74.52
Thailand	8	53.00	60.50	17.76	28.33	79.02
Turkey	3	45.14	53.71	15.15	28.02	56.77

Panel B: Country-Level Indices						
	<i>Creditor_ Rights</i>	<i>Judicial_ Efficiency</i>	<i>Legality_ Index</i>	<i>GDP Growth (Percentage)</i>	<i>Log (GDP Per Capita)</i>	<i>Log (Sovereign Rating)</i>
All Sample	2.86	6.30	13.93	4.27	8.18	4.05
Brazil	1	5.75	14.09	3.23	8.16	3.72
Chile	2	7.25	14.70	4.43	8.55	4.16
Hong Kong	4	10.00	19.41	3.72	10.11	4.20
India	4	8.00	12.80	6.22	6.32	3.87
Indonesia	4	2.50	9.16	4.08	6.87	3.27
South Korea	3	6.00	14.23	5.13	9.43	4.14
Malaysia	4	9.00	16.67	5.17	8.39	4.06
Pakistan	4	5.00	8.98	4.53	6.32	2.99
Philippines	0	4.75	8.51	3.95	6.87	3.80
Singapore	4	10.00	19.53	4.67	10.05	4.44
South Africa	3	6.00	14.51	2.90	8.14	3.92
Taiwan	2	6.75	17.62	4.13	9.55	4.32
Thailand	3	3.25	12.94	4.50	7.69	3.90
Turkey	2	4.00	11.84	3.05	8.08	3.65

Note: We present summary statistics of firm-level corporate governance and country-level indices in the full sample and by borrower country. Panel A reports number of firms, mean, median, standard deviation, minimum and maximum of firm-level corporate governance; Panel B reports country-level indices including *Creditor_Rights*, *Judicial_Efficiency*, *Legality_Index*, average value from 2000 to

2005 of *GDP Growth*, *Log (GDP Per Capita)* and *Log (Sovereign Rating)*. The details of definitions and sources of all the variables are reported in the Appendix.

Table2 Summary Statistics for Loan Contract Terms

	<i>Loan Amount (\$millions)</i>			<i>Loan Maturity (months)</i>			<i>Loan Secured Dummy</i>			<i>Loan Spread (basis points)</i>		
	No. of loans	Mean	Standard deviation	No. of loans	Mean	Standard deviation	No. of loans	Mean	Standard deviation	No. of loans	Mean	Standard deviation
All Sample	697	153.00	153.00	697	58.45	38.78	256	0.35	0.43	92	119.24	49.20
Brazil	49	174.00	181.00	49	35.24	20.64	12	0.80	0.45	4	109.69	79.41
Chile	19	329.00	297.00	19	64.42	37.51	14	0.26	0.41	9	28.00	12.55
Hong Kong	84	285.00	397.00	84	61.12	30.86	16	0.56	0.34	4	72.40	13.83
India	78	129.00	150.00	78	59.92	56.92	30	0.37	0.49	8	188.25	93.49
Indonesia	8	106.00	47.60	8	34.13	12.31	8	0.33	0.25	8	158.97	55.87
South Korea	58	141.00	96.70	58	40.41	14.39	20	0.27	0.46	8	84.67	30.50
Malaysia	83	128.00	157.00	83	64.70	44.10	22	0.45	0.24	3	195.00	103.37
Pakistan	2	16.30	12.30	2	33.00	38.18	2	0.35	0.46	2	174.64	40.50
Philippines	71	78.10	221.00	71	62.46	27.12	32	0.26	0.36	11	64.67	40.54
Singapore	64	169.00	282.00	64	53.19	48.77	31	0.46	0.35	4	84.63	30.50
South Africa	19	261.00	555.00	19	59.37	29.25	13	0.35	0.26	9	74.67	50.56
Taiwan	89	106.00	109.00	89	56.07	18.73	30	0.27	0.36	9	84.64	50.50
Thailand	65	98.50	134.00	65	87.78	43.29	30	0.36	0.45	5	66.83	44.67
Turkey	8	126.00	75.80	8	33.00	38.88	8	0.15	0.36	8	55.73	66.37

Note: We present summary statistics of loan contracts terms for sample firms. Number of observations, mean, standard deviation of debt contract terms including *Loan Amount*, *Loan Maturity*, *Loan Secured Dummy* and *Loan Spread* are reported for loans in the full sample and by borrower country. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix.

Table 3. Univariate Analysis for Loan Contract Terms

Variables	Country-level governance	Firm-level governance		
		Low	High	Low-High
<i>Loan Size</i> (\$Millions)	Low	138.04	153.02	-14.98***
	High	155.03	162.45	-7.42*
	Low-High	-16.99***	-9.43*	
<i>Loan Maturity</i> (months)	Low	50.99	60.11	-9.12***
	High	62.66	66.25	-3.59*
	Low-High	-11.67***	-6.14*	
<i>Loan Security Dummy</i>	Low	0.41	0.35	0.06***
	High	0.31	0.28	0.03
	Low-High	0.1***	0.07*	
<i>Loan Spread</i> (basis points)	Low	136.08	120.23	15.85***
	High	116.25	107.24	9.01*
	Low-High	19.83***	12.99*	

Note: We present univariate analysis of loan contracting terms for the subsamples. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The mean value of debt contracting terms including *Loan Size*, *Loan Maturity*, *Loan Secured Dummy* and *Loan Spread* are reported for loans in the subsamples are reported. Low means the subsample including firms with lower than the median value of the corresponding governance variable. High means the subsample including firms with higher than the median value of the corresponding governance variable. The country-level governance is measured by *Legality_Index*. The details of definitions and sources of all the variables are reported in the Appendix. Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

**Table 4. OLS Regression Relating *Log (Loan Amount)* to the
Interaction between Firm-level and Country-level Governance and
Other Variables**

	Dependent variable= <i>Log (Loan Amount)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Governance</i>	0.0071*** (4.245)	0.0106*** (4.231)	0.0049** (2.665)	0.0075*** (4.356)	0.0100*** (4.567)	0.0055** (2.667)
<i>Judicial_Efficiency</i>	0.0820*** (4.899)			0.0790*** (4.888)		
<i>Legality_Index</i>		0.0580*** (4.345)			0.0550*** (4.567)	
<i>Creditor_Rights</i>			0.1260*** (3.781)			0.1360*** (5.003)
<i>Governance * Judicial_Efficiency</i>	-0.0005*** (-4.788)			-0.0006*** (-4.671)		
<i>Governance * Legality_Index</i>		-0.0004*** (-3.892)			-0.0005*** (-3.891)	
<i>Governance * Creditor_Rights</i>			-0.0007*** (-4.891)			-0.0008*** (-4.871)
<i>Firm Size</i>	-	-	-	0.2832*** (4.781)	0.2871*** (4.523)	0.2943*** (4.356)
<i>Leverage</i>	-	-	-	-1.0046*** (-4.682)	-0.9905*** (-4.764)	-1.0204*** (-4.476)
<i>Profitability</i>	-	-	-	0.4021 (0.424)	0.4782 (0.713)	0.5035 (0.355)
<i>Tangibility</i>	-	-	-	0.1198*** (4.467)	0.1217*** (4.114)	0.1316*** (4.002)
<i>Z-score</i>	-	-	-	0.1044*** (4.671)	0.1056*** (4.145)	0.1094*** (4.245)
<i>Tobin's Q</i>	-	-	-	0.1293 (0.010)	0.1347 (0.002)	0.1365 (0.005)
<i>Firm Quality</i>	-	-	-	0.5013 (0.878)	0.5038 (0.656)	0.5089 (0.456)
<i>Firm Reputation</i>	-	-	-	0.0023*** (4.245)	0.0034*** (4.809)	0.0056*** (4.887)
Control For						
Macroeconomic Factors	Yes	Yes	Yes	Yes	Yes	Yes
Agency Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
foreign Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	697	697	697	341	341	341
Adjusted R-squared	0.417	0.418	0.421	0.515	0.526	0.538

Note: We include, but do not report coefficients on agency participation indicator and foreign bank participation indicator, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in Appendix A. In computing standard errors, we cluster at the country level. The table reports coefficients, with t-statistics in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

**Table 5. OLS Regression Relating *Log (Loan Maturity)* to the
Interaction between Firm-level and Country-level Governance and
Other Variables**

	Dependent variable= <i>Log (Loan Maturity)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Governance</i>	0.0075*** (4.019)	0.0103*** (4.283)	0.0070** (2.660)	0.0081*** (4.357)	0.0110*** (3.782)	0.0071*** (4.572)
<i>Judicial_Efficiency</i>	0.0690*** (4.514)			0.0730*** (4.110)		
<i>Legality_Index</i>		0.0500*** (4.002)			0.0501*** (4.561)	
<i>Creditor_Rights</i>			0.1291*** (4.241)			0.1310*** (4.892)
<i>Governance * Judicial_Efficiency</i>	-0.0006*** (-4.732)			-0.0006*** (-4.341)		
<i>Governance * Legality_Index</i>		-0.0004*** (-4.231)			-0.0005*** (-4.462)	
<i>Governance * Creditor_Rights</i>			-0.0009*** (-4.562)			-0.0010*** (-4.452)
<i>Firm Size</i>	-	-	-	0.0268*** (4.535)	0.0319*** (4.672)	0.0320*** (4.572)
<i>Leverage</i>	-	-	-	-0.1550*** (-4.513)	-0.1600*** (-4.623)	-0.1680*** (-4.672)
<i>Profitability</i>	-	-	-	0.0569 (0.351)	0.0588 (0.513)	0.0597 (0.456)
<i>Tangibility</i>	-	-	-	0.2756*** (5.009)	0.2798*** (5.002)	0.3017*** (5.001)
<i>Z-score</i>	-	-	-	0.0086*** (4.435)	0.0097*** (4.324)	0.0118*** (4.113)
<i>Tobin's Q</i>	-	-	-	0.0154 (0.516)	0.0195 (0.562)	0.0189 (0.456)
<i>Firm Quality</i>	-	-	-	0.0812 (0.571)	0.0814 (0.467)	0.0856 (0.499)
<i>Firm Reputation</i>	-	-	-	0.0045 (0.634)	0.0056 (0.656)	0.0067 (0.677)
Control For						
Macroeconomic Factors	Yes	Yes	Yes	Yes	Yes	Yes
Agency Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Foreign Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes

Observations	697	697	697	341	341	341
Adjusted R-squared	0.321	0.322	0.327	0.656	0.691	0.695

Note: We include, but do not report, coefficients on agency participation indicator and foreign bank participation indicator, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix. In computing standard errors, we cluster at the country level. The table reports coefficients, with t-statistics in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

**Table 6. Logistic Regression Relating Loan Secured Status to the
Interaction between Firm-level and Country-level Governance and
Other Variables**

	Dependent variable= <i>Loan Secured Dummy</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Governance</i>	-0.0016** (-2.544)	-0.0023*** (-4.123)	-0.0014*** (-3.799)	-0.0019*** (-4.245)	-0.0025** (-2.329)	-0.0016*** (-4.377)
<i>Judicial_Efficiency</i>	-0.0305*** (-4.124)			-0.0331*** (-4.656)		
<i>Legality_Index</i>		-0.0199*** (-4.514)			-0.0201*** (-4.656)	
<i>Creditor_Rights</i>			-0.0691*** (-4.467)			-0.0710*** (-4.900)
<i>Governance * Judicial_Efficiency</i>	0.0002*** (4.201)			0.0002*** (4.888)		
<i>Governance * Legality_Index</i>		0.0001*** (5.009)			0.0001** (2.231)	
<i>Governance * Creditor_Rights</i>			0.0002*** (4.865)			0.0003*** (4.899)
<i>Firm Size</i>	-	-	-	-0.0672*** (-4.434)	-0.0643*** (-4.312)	-0.0711*** (-4.413)
<i>Leverage</i>	-	-	-	0.0701*** (4.766)	0.0671*** (4.856)	0.0561*** (5.000)
<i>Profitability</i>	-	-	-	-0.0991 (-0.534)	-0.1511 (-0.756)	-0.1802 (-0.755)
<i>Tangibility</i>	-	-	-	-0.0673*** (-4.354)	-0.0692*** (-4.655)	-0.0711*** (-4.002)
<i>Z-score</i>	-	-	-	-0.0117*** (-4.132)	-0.0146*** (-4.134)	-0.0151*** (-4.527)
<i>Tobin's Q</i>	-	-	-	-0.0238 (-0.655)	-0.0207 (-0.423)	-0.0216 (-0.211)
<i>Firm Quality</i>	-	-	-	-0.0814 (-0.046)	-0.0915 (-0.056)	-0.0713 (-0.101)
<i>Firm Reputation</i>	-	-	-	-0.0028 (-0.024)	-0.0029 (-0.077)	-0.0031 (-0.200)
Control For						
Macroeconomic Factors	Yes	Yes	Yes	Yes	Yes	Yes
Agency Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Foreign Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes

Observations	256	256	256	177	177	177
Likelihood ratio	-44.552	-44.536	-45.562	-10.713	-12.456	-14.672
Prob. > chi2	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-squared	0.671	0.688	0.662	0.913	0.885	0.871

Note: We include, but do not report, coefficients on agency participation indicator and foreign bank participation indicator, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix. In computing standard errors, we cluster at the country level. The table reports marginal effects, with z-statistics in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

**Table 7. OLS Regression Relating *Log (Loan Spread)* to the
Interaction between Firm-level and Country-level Governance and
Other Variables**

	Dependent variable= <i>Log (Loan Spread)</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Governance</i>	-0.0109*** (-4.811)	-0.0110*** (-4.764)	-0.0061*** (-4.334)	-0.0100*** (-4.724)	-0.0120** (-2.664)	-0.0070** (-2.653)
<i>Judicial_Efficiency</i>	-0.0801*** (-4.324)			-0.0830*** (-5.005)		
<i>Legality_Index</i>		-0.0598*** (-4.875)			-0.0603*** (-4.887)	
<i>Creditor_Rights</i>			-0.1551*** (-4.823)			-0.1681*** (-3.888)
<i>Governance * Judicial_Efficiency</i>	0.0005*** (5.000)			0.0006*** (4.878)		
<i>Governance * Legality_Index</i>		0.0004*** (4.912)			0.0005*** (4.743)	
<i>Governance * Creditor_Rights</i>			0.0008*** (4.643)			0.0007*** (3.798)
<i>Firm Size</i>	-	-	-	-0.0644*** (-4.812)	-0.0565*** (-4.432)	-0.0506*** (-5.025)
<i>Leverage</i>	-	-	-	0.4314*** (5.002)	0.4823*** (5.003)	0.3795*** (5.001)
<i>Profitability</i>	-	-	-	-0.3655 (-0.643)	-0.2913 (-0.876)	-0.3816 (-0.514)
<i>Tangibility</i>	-	-	-	-0.1193*** (-5.011)	-0.1214*** (-5.023)	-1.1554*** (-4.800)
<i>Z-score</i>	-	-	-	-0.1293*** (-4.676)	-0.1284*** (-4.777)	-0.1204*** (-4.884)
<i>Tobin's Q</i>	-	-	-	-0.0455*** (-4.534)	-0.0673*** (-4.555)	-0.0894*** (-4.764)
<i>Firm Quality</i>	-	-	-	-0.3102 (-0.624)	-0.2814 (-0.801)	-0.4156 (-0.524)
<i>Firm Reputation</i>	-	-	-	-0.0010*** (-4.756)	-0.0021*** (-4.904)	-0.0022*** (-4.667)
Control For						
Macroeconomic Factors	Yes	Yes	Yes	Yes	Yes	Yes
Agency Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Foreign Bank Participation	Yes	Yes	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes

Observations	92	92	92	63	63	63
Adjusted R-squared	0.621	0.626	0.631	0.654	0.698	0.656

Note: We include, but do not report coefficients on agency participation indicator and foreign bank participation indicator, loan characteristics such as *Log (Loan Amount)*, *Log (Number of Lenders)*, *Log (Loan Maturity)* and *Loan Secured Dummy*, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix. In computing standard errors, we cluster at the country level. The table reports coefficients, with t-statistics in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

Table 8. Two-stage Regression Relating Log Contracting Term to the Interaction between Firm-level and Country-level Governance and Other Variables

	Panel A		Panel B		Panel C		Panel D	
Dependent Variable	<i>Governance</i>	<i>Log (Loan Amount)</i>	<i>Governance</i>	<i>Log (Loan Maturity)</i>	<i>Governance</i>	<i>Loan Secured Dummy</i>	<i>Governance</i>	<i>Log (Loan Spread)</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Governance</i>	-	0.0112***	-	0.0113***	-	-0.0021***	-	-0.0109*
	-	(3.892)	-	(3.790)	-	(-3.931)	-	(-1.951)
<i>Log (Loan Amount)</i>	5.5629	-	-	-	-	-	-	-
	(0.568)	-	-	-	-	-	-	-
<i>Log (Loan Maturity)</i>	-	-	6.3415	-	-	-	-	-
	-	-	(0.367)	-	-	-	-	-
<i>Loan Secured Dummy</i>	-	-	-	-	9.3123	-	-	-
	-	-	-	-	(0.791)	-	-	-
<i>Log (Loan Spread)</i>	-	-	-	-	-	-	8.2415	-
	-	-	-	-	-	-	(0.824)	-
<i>Legality_Index</i>	2.3115***	0.0502***	2.6712***	0.0514***	2.0002***	-0.0155***	3.0021***	-0.0588***
	(3.890)	(3.902)	(4.001)	(3.890)	(4.002)	(-4.101)	(3.920)	(-3.888)
<i>Governance * Legality_Index</i>	-	-0.0004***	-	-0.0006***	-	0.0002***	-	0.0004***
	-	(-3.902)	-	(-3.879)	-	(4.004)	-	(4.213)
<i>Firm Size</i>	-0.5610*	-	-0.4154*	-	-0.5136***	-	-0.5245**	-
	(-1.929)	-	(-1.931)	-	(-4.102)	-	(-2.667)	-
<i>Leverage</i>	0.2415***	-0.9001***	0.2671	-0.1525***	0.2819	0.0351***	0.2845	0.4076***
	(3.904)	(-3.807)	(0.157)	(-3.903)	(0.132)	(3.911)	(0.256)	(3.879)
<i>Profitability</i>	0.2156	0.2145	0.2351	0.0415	0.2241	-0.1145	0.2278	-0.2513
	(0.672)	(0.245)	(0.792)	(0.487)	(0.801)	(-0.892)	(0.516)	(-0.670)
<i>Tangibility</i>	0.3456	0.1013***	0.3782	0.1456***	0.3615	-0.0555***	0.3639	-0.1028***
	(0.402)	(4.102)	(0.424)	(3.809)	(0.509)	(-3.921)	(0.537)	(-3.903)
<i>Z-score</i>	0.4156	0.0998***	0.4002	0.0102***	0.4156	-0.0093***	0.4189	-0.1198
	(0.604)	(3.903)	(0.712)	(4.123)	(0.571)	(-4.089)	(0.502)	(-0.256)
<i>Tobin's Q</i>	0.8701	0.1001	0.8461	0.0167	0.8213	-0.0199	0.8249	-0.0523***
	(0.551)	(0.782)	(0.598)	(0.781)	(0.603)	(-0.456)	(0.499)	(-4.203)
<i>Firm Quality</i>	0.2415	0.3145	0.2671	0.0671	0.2891	-0.0824***	0.2902	-0.1278
	(0.901)	(0.678)	(0.891)	(0.279)	(0.701)	(-3.978)	(0.614)	(-0.598)
<i>Firm Reputation</i>	0.0028	0.0003	0.0031	0.0047	0.0035	-0.0031	0.0046	-0.0014***
	(0.601)	(0.378)	(0.614)	(0.469)	(0.513)	(-0.245)	(0.790)	(-4.156)
<i>Alpha</i>	0.2412	-	0.2404	-	0.2215	-	0.2319	-
	(0.351)	-	(0.378)	-	(0.399)	-	(0.501)	-
<i>Beta</i>	-5.001***	-	-4.999***	-	-4.902***	-	-4.906***	-

	(-3.901)	-	(-4.213)	-	(-4.103)	-	(-4.004)	-
Control For								
Macroeconomic Factors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Agency Bank Participation	No	Yes	No	Yes	No	Yes	No	Yes
Foreign Bank Participation	No	Yes	No	Yes	No	Yes	No	Yes
Loan Type and Purpose	No	Yes	No	Yes	No	Yes	No	Yes
ADR Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Effect	No	Yes	No	Yes	No	Yes	No	Yes
Observations	341	341	341	341	177	177	63	63
F statistics / chi2 statistics	156.782	111.356	144.579	122.314	313.145	188.906	166.245	124.580
Prob. > F/ Prob.> chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note: We include, but do not report coefficients on agency participation indicator and foreign bank participation indicator, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. The regressions in Panels (A), (B) and (D) are two-stage least square regressions and the regression in Panel (C) is a two-stage probit least square regression. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix. The table reports coefficients (marginal effects), with t-statistics (z-statistics) in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

**Table 9. Regression Relating Log Contracting Term to the
Interaction between Governance and Leverage and Other Variables**

Dependent variable	<i>Log (Loan Amount)</i>	<i>Log (Loan Maturity)</i>	<i>Loan Secured Dummy</i>	<i>Log (Loan Spread)</i>
	(1)	(2)	(3)	(4)
<i>Governance</i>	0.0041*** (4.812)	0.0045*** (4.855)	-0.0010*** (-4.354)	-0.0060*** (-4.452)
<i>High Leverage</i>	-0.5501*** (-4.867)	-0.2000*** (-4.900)	0.1120*** (4.625)	0.6310*** (4.756)
<i>High leverage* Governance</i>	0.0019*** (4.856)	0.0021*** (4.812)	-0.0009*** (4.711)	-0.0025*** (4.644)
<i>Legality_Index</i>	0.0305*** (5.002)	0.0317*** (5.113)	-0.0081*** (-5.011)	-0.0315*** (-5.135)
<i>Firm Size</i>	0.2899*** (4.856)	0.0321*** (4.845)	-0.0678*** (-4.347)	-0.0589*** (-4.464)
<i>Leverage</i>	-	-	-	-
<i>Profitability</i>	0.4713 (0.701)	0.0534 (0.600)	-0.1501 (-0.688)	-0.2956 (-0.803)
<i>Tangibility</i>	0.1224*** (4.103)	0.2701*** (5.056)	-0.0625*** (-4.501)	-0.1200*** (-5.045)
<i>Z-score</i>	0.1032*** (4.343)	0.0078*** (4.424)	-0.0134*** (-4.155)	-0.1255*** (-4.735)
<i>Tobin's Q</i>	0.1289 (0.002)	0.0189 (0.605)	-0.0226 (-0.424)	-0.0645*** (-4.656)
<i>Firm Quality</i>	0.5156 (0.675)	0.0801 (0.636)	-0.0909 (-0.056)	-0.2800 (-0.872)
<i>Firm Reputation</i>	0.0037*** (5.004)	0.0059 (0.624)	-0.0034 (-0.099)	-0.0028*** (-4.901)
Control For				
Macroeconomic Factors	Yes	Yes	Yes	Yes
Loan characteristics	No	No	No	Yes
Agency bank participation	Yes	Yes	Yes	Yes
Foreign bank participation	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes
Industry and Year Effect	Yes	Yes	Yes	Yes
Observations	341	341	177	63
Likelihood ratio	-	-	-13.015	-
Prob. > chi2	-	-	0.000	-
Adjusted/ Pseudo R-squared	0.529	0.698	0.885	0.651

Note: We include, but do not report coefficients on agency participation indicator and foreign bank participation indicator, loan characteristics such as *Log (Loan Amount)*, *Log (Number of Lenders)*, *Log (Loan Maturity)* and *Loan Secured Dummy*, macroeconomic factors, year indicators, industry indicators, indicators on loan type,

indicators on loan purpose, and an ADR dummy. Regressions (1), (2) and (4) are OLS regressions and regression (3) is Logit regression. The sample includes loans originated between 2000 and 2005. We drop loans to banks. The details of definitions and sources of all the variables are reported in the Appendix. In computing standard errors, we cluster at the country level. The table reports coefficients (marginal effects), with t-statistics (z-statistics) in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

**Table 10. Regression Relating Log Contracting Terms to the
Interaction between Governance and Tangibility and Other
Variables**

Dependent variable	<i>Log (Loan Amount)</i> (1)	<i>Log (Loan Maturity)</i> (2)	<i>Loan Secured Dummy</i> (3)	<i>Log (Loan Spread)</i> (4)
<i>Governance</i>	0.0059*** (4.871)	0.0069*** (4.815)	-0.0022*** (-4.355)	-0.0082*** (-4.428)
<i>High Tangibility</i>	0.1700*** (4.879)	0.2300*** (4.072)	-0.0921*** (-4.759)	-0.251*** (-4.645)
<i>High Tangibility * Governance</i>	-0.0018*** (-4.888)	-0.0017*** (-4.824)	0.0010*** (4.835)	0.0023*** (4.915)
<i>Legality_Index</i>	0.0301*** (5.056)	0.0314*** (5.274)	-0.0084*** (-5.073)	-0.0319*** (-5.146)
<i>Firm Size</i>	0.2890*** (4.369)	0.0323*** (4.853)	-0.0667*** (-4.325)	-0.0580*** (-4.468)
<i>Leverage</i>	-0.9998*** (-4.914)	-0.1612*** (-4.876)	0.0689*** (4.911)	0.4924*** (5.008)
<i>Profitability</i>	0.4832 (0.747)	0.0624 (0.769)	-0.1672 (-0.936)	-0.3014 (-0.986)
<i>Tangibility</i>	- -	- -	- -	- -
<i>Z-score</i>	0.1100*** (4883)	0.0104*** (4.657)	-0.0189*** (-4.344)	-0.1301*** (-4.812)
<i>Tobin's Q</i>	0.1213 (0.015)	0.0203 (0.672)	-0.0235 (-0.473)	-0.0711*** (-4.763)
<i>Firm Quality</i>	0.5124 (0.704)	0.0935 (0.714)	-0.0989 (-0.094)	-0.2915 (-0.900)
<i>Firm Reputation</i>	0.0068*** (5.024)	0.0067 (0.701)	-0.0030 (-0.102)	-0.0027*** (-4.891)
Control For				
Macroeconomic factors	Yes	Yes	Yes	Yes
Loan characteristics	No	No	No	Yes
Agency Bank Participation	Yes	Yes	Yes	Yes
Foreign bank participation	Yes	Yes	Yes	Yes
Loan Type and Purpose	Yes	Yes	Yes	Yes
ADR Dummy	Yes	Yes	Yes	Yes
Industry and Year Effect	Yes	Yes	Yes	Yes
Observations	341	341	177	63
Likelihood ratio	-	-	-13.115	-
Prob. > chi2	-	-	0.000	-
Adjusted/ Pseudo R-squared	0.528	0.699	0.884	0.653

Note: We include, but do not report coefficients on agency participation indicator and foreign bank participation indicator, loan characteristics such as *Log (Loan Amount)*, *Log (Number of Lenders)*, *Log (Loan Maturity)* and *Loan Secured Dummy*, macroeconomic factors, year indicators, industry indicators, indicators on loan type, indicators on loan purpose, and an ADR dummy. Regressions (1), (2) and (4) are OLS regressions and regression (3) is Logit regression. The details of definitions and sources of all the variables are reported in the Appendix. In computing standard errors, we cluster at the country level. The table reports coefficients (marginal effects), with t-statistics (z-statistics) in parentheses. Significance at the 10%, 5% and 1% levels is indicated by *, **, and ***, respectively.

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