

The Design of Bank Loan Syndicates in Emerging Market Economies

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This paper empirically explores the influence of loan characteristics, banking and financial structure, and regulatory and institutional factors on the design of bank loan syndicates in emerging market economies. The results show that the structure of syndicates is adapted to enhance monitoring of the borrower and to increase the efficiency of recontracting process in case of borrower's distress. Main syndication motives, such as loans portfolio diversification, regulatory pressure and management costs reduction, influence syndicate design in emerging market economies.

Introduction

What are the determinants of bank loan syndicates' design in Emerging Market Economies (EME)? The syndicate design might be different in EME than in developed countries and can therefore have important implications for the functioning and the development of syndicated loan markets, and more broadly for the financial and economic development of EME. As these economies are more fragile, a better knowledge of the determinants of bank loan syndicates provides timely policy recommendations on how to encourage the development of syndicated lending in these markets. This paper is the first empirical research investigating the design of bank loan syndicates in EME using loan and country-level variables for 10,930 loan facilities to borrowers from emerging markets over the period 1990-2006.

Already in 1991, syndicated loans represented 67% of all emerging market corporate and sovereign borrowers' financing, twice the amount of total bond and equity financing (Altunbas *et al.*, 2006). Furthermore, in the last decade, the volume of syndicated loans in emerging markets has considerably grown from \$91.8 bn in 1995 to \$379.8 bn in 2005.¹ During that period, the number of issues increased from 791 in 1995 to 1,124 in 2005. Currently, syndicated loans represent an important source of external finance in emerging markets, comparable to bond markets and often larger than equity markets (Nini, 2004). For instance, in 2005, syndicated lending corresponds to more than 11% of the private credit of financial institutions in Singapore, almost 23% in Mexico and close to 36% in the

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¹ These figures are based on computations by the author on the Dealscan database.

Russian Federation.² In the third quarter of 2006,³ Asia (excluding Australasia) is the largest syndication market within the emerging economies. It has reached a total amount of \$119.2 bn (4.3% of global market) and 549 issues. Middle East and Eastern Europe come in the second position, totaling to \$50.7 bn (1.8% of global market) and \$45.2 bn, with 59 and 148 issues respectively. Finally, Central and South America have issued 70 deals for a total amount of \$30.5 bn (1.1% of global market).

Briefly, bank loan syndication can be considered as a sequential process, which can be separated into three phases.⁴ During the 'pre-mandated phase', the borrower solicits competitive offers to arrange and manage the syndication with one or more banks. From the proposals it receives, the borrower chooses one or more arrangers that are mandated to form a syndicate,⁵ and negotiates a preliminary loan agreement. During the 'post-mandated phase', the arranger begins the syndication process, which involves drafting a preliminary loan contract and preparing a documentation package for the potential syndicate members, called an 'information memorandum', containing information about borrower's creditworthiness and the loan terms. A 'road show' is then organized to present and discuss the content of the memorandum, as well as to announce closing fees and to establish a timetable for commitments and closing. After the road show, the arranger makes formal invitations to potential participants and determines the allocation given to each participant. The loan becomes operational, binding the borrower and the syndicate members by the debt contract.

A syndicated loan has several advantages that motivates the lenders. It allows to diversify loan portfolios and thus to avoid excessive single-name exposure in compliance with the regulatory limits while maintaining a relationship with the borrower, it helps to exploit comparative advantages of syndicate members in terms of financing and eventually in terms of information sharing and it also allows diversifying income sources through the collection of fees. While these advantages mostly apply to senior syndicate members, lack of origination capability and cutting down origination costs are the main advantages for junior participants. They can also benefit from the know-how transfer between members (Tykvova, 2007).⁶

Loan syndication also has several drawbacks as it generates potential agency problems due to informational frictions between the senior and the junior members of the syndicate. Following Diamond (1984), Holmstrom and Tirole (1997) and Gorton and Pennachi (1995),

² These figures are based on computations by the author, with figures on syndicated loans from the Dealscan database and with figures for the private credit by financial institutions from Beck *et al.* (2000).

³ Thomson Financial (2006).

⁴ See Esty (2001) for a detailed analysis of syndication.

⁵ The syndication can be sole or joint mandated, the latter involving the participation of more than one lead bank. Such syndications are usually chosen by the borrower in order to maximize the likelihood of a successful syndication. The arranger is responsible for the negotiation of key loan terms with the borrower. It acts as the syndicate's agent, which involves such tasks as funds administration, interest calculation, and covenants enforcement.

⁶ Borrowers can also gain the following advantages from syndication (Allen, 1990; and Altunbas *et al.*, 2006): ability to arrange cross-border transactions, restriction of negotiation with one bank, uniform terms and conditions, more competitive pricing resulting in lower spreads, lower fees compared to bond issues, more flexible funding structure, larger amount compared to public finance, and speed and discretion of arranging the deal.

borrower monitoring by multiple creditors may lead to cost inefficiency and free-riding. Hence, creditors usually delegate monitoring to one financial intermediary, the arranger, who acts as the syndication agent. As his monitoring effort is unobservable, the syndicate faces a moral hazard problem. Additionally, the arranger collects private information through due diligence or through a previous lending relationship. If this information cannot be credibly communicated to the participants, an adverse selection problem arises as the arranger may syndicate loans with the less favorable information. Finally, handling borrower's financial distress is more complicated in a syndicate setting because lenders must reach a collective decision. The outcome of negotiations in debt restructuring are affected by the number of creditors, by the allocation of security among the set of creditors, and by the character of stringency of the voting rules among the creditors (Bolton and Scharfstein, 1996).

The advantages of syndicated loans for banks and borrowers show that they provide an important financing vehicle for emerging markets and thus for their economic development, as they contribute to enhance the sources of external finance in these countries. Moreover, if syndicated loans reduce the cost of borrowed funds, they also contribute to favor the financing of companies. The expansion of syndicated loans increases the diversification possibilities for banks in terms of risk and income, which decreases the likelihood of bank failures. As a consequence, the expansion of syndicated loans contributes to financial stability, which is a fundamental issue for emerging economies.

As these benefits are especially important for emerging markets finance, the agency problems related to syndications, can have severe consequences for the financial stability of these markets. A crucial input to mitigate these problems is the structure of the syndicates that, if adapted, can reduce agency costs related to the syndication process. Therefore, empirical investigation of the factors that influence the size and the composition of syndicates in emerging markets, is an important and timely issue.

Academic literature on the structure of bank syndicates remains relatively scarce. The first empirical research on syndicate size and composition was performed by Lee and Mullineux (2004), showing that syndicates in the US market are structured to enhance monitoring efforts and to facilitate renegotiation. Jones *et al.* (2005) and Sufi (2007) show that the lead bank retains larger share of the loan and forms a more concentrated syndicate when the borrower requires more intense monitoring and due diligence. Finally, François and Missonier-Piera (2007) empirically explore the motives for delegating administrative tasks (e.g., issuing the legal documents, or holding the collateral) to specialized co-agents.

Contrary to the US syndication market, evidence regarding the structure of syndicates is very scarce for EMEs. The investigated issues are rather the determinants of syndicated loan pricing in developing countries (Altunbas *et al.*, 2006) and the participation of local banks in syndications (Nini, 2004). Therefore, the first objective of this work is to test if the same factors as in industrialized markets (along the lines of Lee and Mullineux, 2004), influence syndicates in emerging economies. Furthermore, as the loan characteristics are definitely richer, we also investigate the impact of such features as covenants, guarantors and sponsors

on the syndicate structure. Finally, we also investigate the impact of banking and financial structure, regulatory environment and legal risk on the syndicate design.

Determinants of Bank Syndicate Design

This section is devoted to the discussion of the syndication-specific agency problems and its linkage to the syndicated design, as well as to the presentation of the individual (loan characteristics) and country-level (market structure, financial development and legal risk) determinants of the syndicate design in EME.

Syndicate Design and Agency Problems

This paper investigates the factors that influence the syndicate design and analyzes if that design is a response to the specific potential agency problems generated by bank loan syndication. Syndicate design is measured with total syndicate size (*Number of Lenders*) and with the number of senior syndicate members (*Number of Arrangers*). We make this distinction because senior members of the syndicate have different concerns and motivations compared to other participants. Therefore, the influence of the same factors can differ in terms of sign and significance depending on the status of the lender in the hierarchy of the syndicate.⁷

As mentioned in the introduction, syndicated loans present certain benefits and costs that influence their use. Banks may expect benefits from syndicated loans through the diversification of loan portfolios and of sources of income with fee income obtained, the enforcement of the lending limits, and the possibility for some banks suffering from the lack of origination capacities in certain types of transactions to participate in certain types of loans.

However, syndicated loans generate two specific agency problems. First, private information about the borrower creates an adverse selection problem, as the arranger may be inclined to syndicate loans from bad borrowers.⁸ Second, the participant banks delegate monitoring tasks to the arranger whose efforts are unobservable for the participant banks, which results in a moral hazard problem.⁹

The structure of a syndicate can be viewed as an organizational response to these problems (Pichler and Wilhelm, 2001). The arranger has concerns about the monitoring efforts of participants and can consequently influence the size and the composition of the syndicate that involve explicit and implicit costs/revenues tradeoff. It decides on the institutions it will invite to participate, chooses the initial menu of designated amounts for participation, the dollar size of each bracket, and the associated fees for each bracket. It also reserves the right to close the syndication at any time prior to the designated end of the offering period.

In order to provide a credible signal about the borrower's quality and to align monitoring incentives, the arranger can adjust its own portion of the loan (Jones *et al.*, 2005; and

⁷ In order to avoid biased results, we do not distinguish the number of participants, as the same financial institution can have several roles in a syndicate, being simultaneously an arranger and a participant, which involves senior and junior status.

⁸ However, such opportunistic behavior generates reputation risk for the arranger and negatively affects the success of future syndications (Pichler and Wilhelm, 2001).

⁹ Nonetheless, the arranger has less incentive to monitor the borrower than if it were to lend the full amount of the loan (Pennacchi, 1998).

Sufi, 2007). This can be achieved by forming a smaller syndicate and/or a smaller syndicate ‘core’ with few arrangers. Smaller syndicates allow arrangers to minimize the management costs of a group lending process, to prevent free-riding, and to solve borrower’s financial distress problems more efficiently. However, large syndicates might allow exploiting scale economies. Seeking to develop or maintain reputation through reciprocity and repeated dealing is also a potential argument to form larger syndicates. Enhancing fee income could also be achieved by forming a larger syndicate with small proportional holdings for each member.

In summary, the factors that influence the syndicate structure are expected to be those that banks, and especially the arranger, believe will modify the benefits and costs of syndication. These factors are loan characteristics but they can also be country-level variables taking banking regulation, financial development and institutional framework into account.

Loan Characteristics

We first test the role of several loan characteristics that might impact the structure of the syndicate in terms of number of lenders and number of arrangers. Increased loan size (*Loan Size*) is expected to be positively related to syndicate structure. Indeed, the motives to diversify loan portfolios and to be in accordance with regulation are more likely to play a role for larger loans, thus implying more lenders within the syndicate.

Maturity of the loan (*Maturity*) is also considered, although, whether it plays a positive or negative role is ambiguous. Greater maturity is associated with greater monitoring costs as long-term loans incur control of collateral and covenant costs. As a consequence, the moral hazard problem involved in syndicated loans is enhanced and therefore implies a smaller syndicate and/or a larger ‘core’ of arrangers. Also, if we consider a positive relationship between maturity and credit risk (Flannery, 1986; and Agbanzo *et al.*, 1998), syndicates should be smaller and/or the number of arrangers should be larger to enhance monitoring efforts and prevent free-riding, as well as to resolve potential borrower distress more efficiently. However, if credit risk and maturity are negatively related (Dennis *et al.*, 2000), syndicates should be larger and/or the number of arrangers should be smaller.

We also test several characteristics that provide lenders with better protection in case of loan default and thus reduce loan loss. Such characteristics are expected to play a role in the syndicate structure mainly through their impact on potential agency problems.

Our first idea was to consider the presence of collateral in the loan agreement through a dummy variable, equal to one, if the loan is secured. However, since information on the presence of collateral is strongly missing, its inclusion in the estimations would have considerably reduced our sample.¹⁰ We instead take the presence of guarantors in the loan agreement into account, with a dummy variable, equal to one, if at least one guarantor exists (*Guarantors*). A guarantor gives additional protection to the lenders, as the guarantor will honor a part or the totality of the claim in case of loan default. Therefore, the presence of a

¹⁰ Results from estimations with this variable on a reduced sample are very similar to the ones obtained with the alternative proxy for collateralization. Therefore, we adopt the latter proxy in order to benefit from a larger sample.

guarantor mitigates agency problems resulting from adverse selection in line with the better information owned by the arranger on the borrower. However, empirical literature on the role of collateral in loan contracts provides evidence in favor of the ‘observed-risk hypothesis’, according to which banks would be able to sort borrowers from the information they have on their quality (Berger and Udell, 1990; and Jimenez and Saurina, 2004). As a consequence, banks would ask more protection schemes from riskier borrowers. Accordingly, the presence of a guarantor may signal a riskier loan and, consequently, a loan plagued by greater agency problems. Smaller syndicates and/or larger syndicates ‘core’ would promote more effective monitoring, also avoiding duplicative monitoring of the collateral, and more efficient loan restructuring in the event of borrower distress.

Additionally, we include a dummy variable (*Sponsors*), equal to one, if the loan is sponsored. A sponsor is usually an individual capital investor who is involved in the project and might also act as an advisor and eventually as an additional monitor of the borrower. Therefore, the presence of a sponsor should be positively related to syndicate size and/or negatively to the number of arrangers.

We also take debt seniority into account through a dummy variable (*Senior Debt*), equal to one, if the debt is senior. Although debt seniority constitutes an additional protection for the lenders in the case of loan default, its impact is ambiguously similar to that of *Guarantors*. If it works as an effective protection for all the lenders, syndicates and number of arrangers should be smaller. But if the seniority does not apply equally to all syndicate members, its influence may be significant only for the number of arrangers. Similarly, the ‘observed-risk hypothesis’ also suggests a negative impact of this variable on the number of lenders and eventually a positive one on the number of arrangers, as the request for seniority may result from the perception of a higher risk of the borrower.

The presence of covenants, which aim at restricting the discretionary power of the borrower, is taken into account with a dummy variable (*Covenants*), equal to one, if the loan agreement includes covenants. Therefore, the presence of covenants in a loan agreement is expected to reduce the risk of loan default (Rajan and Winton, 1995), and enhance the ability to monitor the borrower, thereby reducing monitoring costs. It appears that covenants should favor larger syndicates and/or a smaller number of arrangers as they reduce potential agency problems from moral hazard behavior of the member banks during the monitoring process. However, empirical evidence tends to show the opposite: a positive link between the presence of covenants and the probability of default of the borrower (e.g., Foster *et al.*, 1998). This is in accordance with the ‘observed-risk hypothesis’, where riskier borrowers are offered more binding loan agreements. Therefore, arguments exist for both a positive and a negative relationship.

To account for the impact of publicly available information on syndicate structure, we include in our regressions a dummy variable (*S&P Rating*), equal to one, if a Standard and Poor’s senior debt rating is available. We expect a positive coefficient, since the existence of a rating mitigates the adverse selection problem and therefore allows forming a larger syndicate and/or a reduced syndicate ‘core’ with few arrangers.

Borrower's market presence is proxied through a variable (*Borrower Presence*) equal to the occurrence of a particular borrower in the sample.¹¹ Although, this variable is contingent on the available data within the sample period, it gives a broad indication of the borrower's presence in the international syndicated lending and therefore his reputation. We expect a positive coefficient for this variable, as lending to a more present and reputable borrower should involve less informational frictions within the syndicate compared to a new or less present borrower.

We also control for the type (*Term Loan*, *Revolving Bank Facility*) and the purpose (*General Corporate*, *Debt Repayment*, *Project Finance*, *Working Capital*) of the loan through the inclusion of dummy variables.¹² Finally, dummy variables taking benchmark rate (*Libor* and *Euribor*), region and industry are included in the regressions.

Country-Level Variables

We now turn to country-level variables that may influence the design of a syndicate. Indeed, Esty and Megginson (2003) have pointed out the possible influence on the syndication process in emerging markets. Therefore, we test the role of the legal environment, financial development, and banking regulation on syndicate structure.

Our first category of country-level variables examines the role of banking structure. *Overheads*, the ratio of banking overhead costs to total banking assets, measures cost inefficiency of a banking industry. Since syndicated loans imply the sharing of administration and origination costs, cost inefficiency is expected to encourage the formation of larger syndicates, both in terms of total number of lenders and arrangers. Consequently, we expect a positive coefficient for this variable. *Concentration*, defined as the assets of the three largest banks as a share of all bank assets, proxies market structure of the banking industry. Several arguments imply a negative influence that this variable should have on the syndicate size. First, a greater concentration means a lower number of potential participants to join a syndicate. Second, banks with greater market shares in a banking industry already benefit from diversified loan portfolios and have little incentive to diversify further. Finally, the motivation provided by increased revenue from syndicated loans should exert a lower impact on banks with greater profitability, generally due to stronger market power.

We also add three variables that take the development of financial markets into account. *Stock Markets*, defined as the value of listed shares to GDP, measures the development of stock markets. The expected sign of this variable is ambiguous. Allen and Gotesman (2006) have shown that stock markets and syndicated loan markets are highly integrated, enabling information flow among the markets. The development of stock markets contributes to information disclosure, which mitigates the adverse selection problem resulting from the private information owned by the lead bank on the borrower. We should thus, observe a

¹¹ Bharath *et al.* (2006) constructed similar indicators to investigate the benefits of lending relationships for the banks.

¹² We do not provide variables for other types and purposes in our regressions, since they represent less than 5% of our sample.

positive coefficient for this variable. However, one may also consider that stock markets are an alternative source of financing for large loans requested by companies.

Therefore, one might consider that more developed stock markets reduce the potential for syndicated loans in a country, and consequently increase the share of bank loans which are not syndicated. Such influence should be even more prominent for the development of bond markets, measured by the ratio of private domestic debt securities to GDP (*Private Bond Markets*) and the ratio of public domestic debt securities to GDP (*Public Bond Markets*). Bonds directly compete syndicated loans for large financing needs of companies, but this negative influence may also be offset by the positive impact of the existence of bond markets, which contribute to increased information for participant banks in loan syndicates and therefore, limits the adverse selection problem in syndicated loans.

Our second category of country-level variables is for banking regulation. We first construct the variable *Mincar*Credit Risk*, which is the product of the minimum capital requirement value and a dummy variable equal to one, if the minimum regulatory capital ratio varies with bank credit risk. Indeed, what matters for minimum capital requirement is as much the existence of such requirements than its implementation? On the one hand, we expect a positive coefficient for this variable as the existence of capital requirement should contribute to favor the syndication through the motivation of respecting the lending limits. This takes into consideration the fact that a stronger requirement increases the relevance of this motivation. On the other hand, a negative coefficient can also be observed as this capital requirement reduces the number of potential syndication participants eligible in terms of adequate capitalization and thus in terms of funding advantages.

A supervisory feature is introduced through *NPL Definition*, a dummy variable equal to one, if a formal definition of non-performing loans exists. If binding, such regulatory feature should have a positive influence on syndicate size as it enhances transparency on loans portfolio of participant banks. The regulation on lending abroad should positively impact syndicate size, as such regulation reduces diversification opportunities for domestic banks. We therefore, expect that the coefficient of *Abroad Loan Prohibited*, a dummy variable equal to one, if abroad loan making is prohibited, should be positive, as such prohibitions make syndication more attractive to gain more diversified loan portfolios.

Our third and last category of country-level variables takes legal environment into account. Following a large body of research on law and finance pioneered by La Porta *et al.* (1997) and recently completed by Qian and Strahan (2007), legal institutions may exert an impact on syndicate structure. Legal risk can affect the way banks perform their governance function, mainly monitoring and recontracting, and in consequence their syndicate structure. Two indicators for legal institutions are included in our estimations. Protection of creditor rights is measured with the index provided by La Porta *et al.* (1998), *Creditor Rights*. This index is scored on a scale from zero to four with a higher score indicating better protection. Law enforcement is measured with the 'Rule of Law' index also provided by La Porta *et al.* (1998), *Rule of Law*. This indicator ranges from zero to ten with a higher score indicating a better enforcement of the law.

The expected sign of the coefficient for both of these variables is ambiguous. Esty and Megginson (2003) find that syndicates funding project finance in countries with weak creditor rights and poor legal enforcement are larger and more diffuse. Thus, lenders seem to structure the syndicates in order to facilitate recontracting in countries where creditors have strong and enforceable rights. Additionally, better legal protection of banks mitigates the moral hazard problem induced by syndicated loans. Indeed, a better protection of creditors decreases the need to monitor the borrower, which reduces agency problems resulting from the monitoring efforts of banks involved in the syndicate.

Furthermore, in high legal risk countries, efficient reorganization of a distressed borrower might be difficult. Hence, larger syndicate structure is more adapted as they minimize hold-up problems in case of reorganization. However, on a more global basis, the agency problems resulting from all lending decisions should also be mitigated, which may favor the choice of a standard loan rather than a syndicated loan for the lead bank. Indeed, the motive of the risk sharing should play a lesser role in well-protected legal environments. Hence, monitoring should be more important in the presence of high legal risk (few legal rights and low contract enforcement), through a smaller syndicate and/or a larger number of arrangers.

We also control for the number of syndicated loan facilities in a particular country through the inclusion of the *Syndicated Loan Issues* variable. This variable allows controlling for the development of the syndicated lending market, which should be positively related to the syndicate design.

Data and Methodology

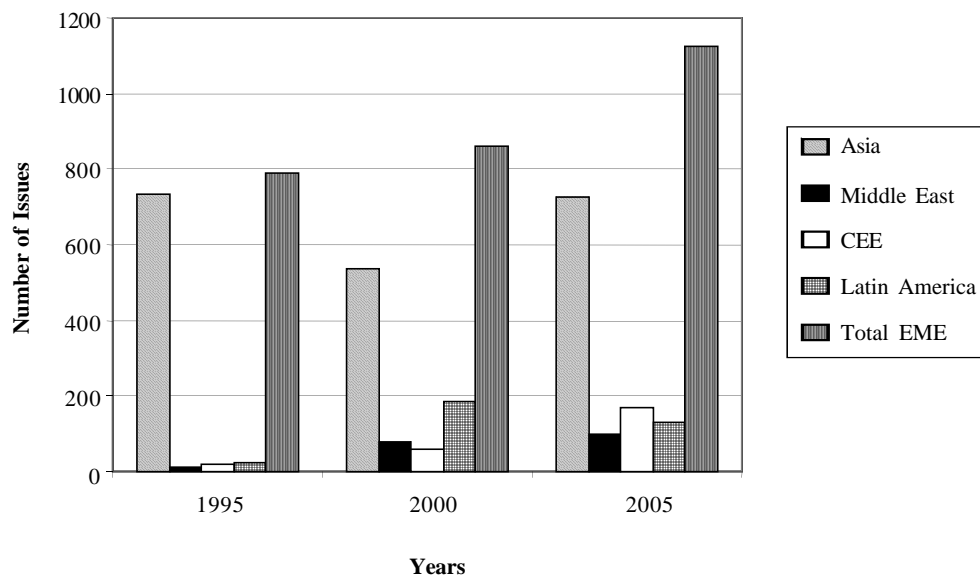
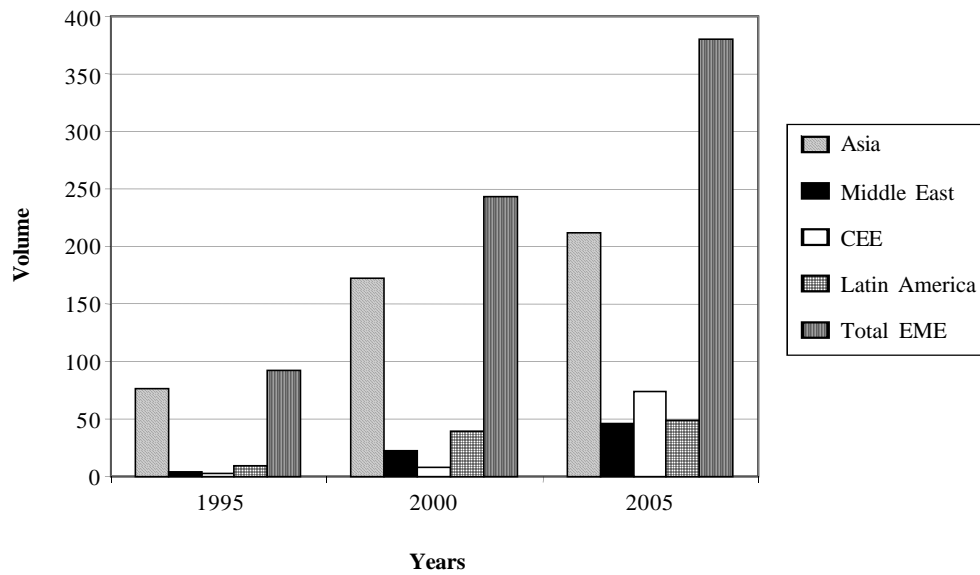
The sample of syndicated loans is taken from the Dealscan database, provided by the Loan Pricing Corporation (LPC). Data concerning financial structure, and regulatory and supervisory characteristics is taken from Beck *et al.* (2000), while data on banking regulation is taken from Barth *et al.* (2005). Indicators of legal environment come from La Porta *et al.* (1998). Sample size is determined by information availability on the variables used in the regressions. Following Lee and Mullineaux (2004), we use only syndicated, completed, and fully confirmed deals, excluding private placements. We therefore, have a sample of 10,930 loan facilities from 50 emerging countries for the period between 1990 and 2006. The country-wise frequencies of loan facilities are displayed in Table A.1 in the Appendix.

Following our focus on emerging countries, syndicated loans come from four geographical areas:¹³ Asia, Latin America, Central and Eastern Europe, and Middle East, which account respectively for 70.6%, 12.7%, 9.7%, and 7% of the total number of loan facilities in our sample. Therefore, Asia represents almost three quarters of the loans in our sample. These shares are in accordance with the relative importance of each geographical area in the syndicated loans markets for emerging countries.

We observe an impressive increase in the volume and issues of syndicated loans from 1995-2005 (see Figure 1).

¹³ We do not have any syndicated loans to borrowers from Africa, in our sample.

**Figure 1: Evolution of Syndicated Loans Volume (in \$ bn)
and Syndicated Loans Issues from 1995 to 2005 in Emerging Market Economies**



Note: CEE – Central and Eastern Europe; and EME – Emerging Market Economies.

Asia is by far the greatest market for syndicated loans in emerging markets, representing more than half of the volume and issues of syndicated loans for all dates. However, the other emerging markets have increasing shares in syndicated loans, with a particularly fast increase noticed in Central and Eastern Europe. Middle East and Latin America are also ‘catching up’, with both their syndicated markets being close to \$50 bn. Table 1 lists descriptive statistics of the variables.¹⁴ The table provides descriptive statistics computed on our dataset of loan facilities.

Table 1: Descriptive Statistics of the Variables					
Variable	Sample Size	Mean	Std. Dev.	Min.	Max.
<i>Number of Lenders</i>	10,930	11.2983	8.1207	2.0000	78.0000
<i>Number of Arrangers</i>	8,747	3.0388	2.9404	1.0000	32.0000
<i>Loan Size</i>	10,930	20.6929	90.3528	0.0022	81.7845
<i>Maturity</i>	10,930	54.3310	39.1371	1.0000	600.0000
<i>S&P Rating</i>	10,930	0.0673	0.2506	0	1.0000
<i>Guarantors</i>	10,930	0.0898	0.2858	0	1.0000
<i>Sponsors</i>	10,930	0.0926	0.2899	0	1.0000
<i>Covenants</i>	10,930	0.2436	0.4293	0	1.0000
<i>Senior Debt</i>	10,930	0.5270	0.4993	0	1.0000
<i>Borrower Presence</i>	10,930	5.0209	5.8614	1	36
<i>Syndicated Loans Issues</i>	10,930	795.7952	552.3781	9	1515
<i>Overheads</i>	10,207	0.0327	0.0217	0.0063	0.1418
<i>Concentration</i>	10,219	0.5610	0.1843	0.2493	1.0000
<i>Stock Markets</i>	10,084	0.8976	1.0102	0.0021	4.9921
<i>Private Bonds Markets</i>	8,646	0.1720	0.1524	0.0003	0.5570
<i>Public Bonds Markets</i>	9,150	0.1563	0.1219	0.0033	0.5375
<i>Credit Risk</i>	9,127	0.1688	0.3746	0	1.0000
<i>Mincar</i>	9,150	8.6874	1.3679	8.0000	12.0000
<i>Solvency</i>	8,699	0.7021	0.4573	0	1.0000
<i>NPL Definition</i>	9,131	0.6746	0.4685	0	1.0000
<i>Abroad Loan Prohibited</i>	9,150	0.4099	0.4919	0	1.0000
<i>Creditor Rights</i>	8,724	2.7727	1.2614	0	4.0000
<i>Rule of Law</i>	8,724	6.3505	1.8141	1.9000	8.5700
Note: Std. Dev. – Standard Deviation; Min. – Minimum; and Max. – Maximum.					

¹⁴ Tables A.2 and A.3 in the Appendix provides the definition and correlation coefficients of the variables respectively.

We observe that on average, syndicate has almost 11 lenders and 3 arrangers, with average loan size of \$206,929 mn and maturity of 4 to 5 years.¹⁵ The average size of a bank loan syndicate, measured in terms of number of lenders, is close to 10 in Asia and Latin America, while it increases in Central and Eastern Europe to more than 12, and is highest in Middle East (more than 18). The number of arrangers is the lowest in Asia (less than 3), average in Latin America and Central and Eastern Europe (close to 4) and large in Middle East (close to 5). The covenants are only included in one quarter of loan contracts, while the presence of guarantors and sponsors is scarce, being observed in only 8.98% and 9.26% of loan contracts respectively. More than half of the loans are senior debt for the lenders. An average borrower had 5 syndicated loan facilities during the time span of the sample. On average, bank markets are relatively concentrated and rather cost efficient, while stock market capitalization is important and the bonds market is rather small. Formal definition of non-performing loans is quite common, with a minimum capital to assets ratio above 8%. Creditor rights and rule of law are in the upper-average.

Following Lee and Mullineux (2004), we estimate the following set of individual equations using Poisson regression:

$$\begin{aligned} \text{Number of Lenders} = f & (\text{Intercept, Loan Characteristics, Banking Structure,} \\ & \text{Financial Development, Regulation and Supervision,} \\ & \text{Legal Risk}) \end{aligned} \quad \dots(1)$$

$$\begin{aligned} \text{Number of Arrangers} = g & (\text{Intercept, Loan Characteristics, Banking Structure,} \\ & \text{Financial Development, Regulation and Supervision,} \\ & \text{Legal Risk}) \end{aligned} \quad \dots(2)$$

Poisson regression assumes the data follows a Poisson distribution, which is skewed with non-negative and discrete values and variance increasing with the mean. Given the integer nature of the dependent variable, this estimation technique is the most appropriate. We do not use negative binomial regressions, as overdispersion is weak in our sample.¹⁶

Results and Discussion

We perform five Poisson regressions, with varying combinations of tested factors, for the two individual Equations 1 and 2, where the endogenous variables are the *Number of Lenders* and the *Number of Arrangers* respectively. All regressions include loan characteristics. However, we test alternatively the role of the four categories of country-level variables. While the first set of regressions does not include any country-level variable, the four following regressions alternatively add one category of country-level variables to explain the bank's decision to syndicate a loan. Therefore, the second, third, fourth and fifth sets of estimations, respectively consider the role of banking structure, financial development, banking regulation and legal risk, on the syndicate structure.

¹⁵ For comparison, from 1987-1995 in USA, Lee and Mullineux (2004) found the average number of lenders equal to 9, with average loan volume at \$221 mn and average maturity equal to almost 4 years. On a more recent time span (1992-2003), Sufi (2007) observes the average number of lenders and arrangers at 8 and 2 respectively. Average loan is equal to \$364 mn and average maturity is 3 years.

¹⁶ Given the skewness of the dependent variables distribution we also do not perform OLS regressions as well as Tobit regressions, although, OLS regressions give qualitatively similar results.

Table 2: Estimation Results										
Specification	(1.1)	(2.1)	(1.2)	(2.2)	(1.3)	(2.3)	(1.4)	(2.4)	(1.5)	(2.5)
	Number of		Number of		Number of		Number of		Number of	
Endogenous Variable	Lenders	Arrangers	Lenders	Arrangers	Lenders	Arrangers	Lenders	Arrangers	Lenders	Arrangers
<i>Intercept</i>	-5.3215*** (0.7539)	-6.7571*** (1.1282)	-5.2691*** (0.8655)	-7.0675*** (1.5027)	-3.2669*** (0.8318)	-7.0578*** (1.6453)	-5.1780*** (0.9069)	-6.8716*** (1.4572)	-5.0564*** (0.8321)	-6.9609*** (1.2306)
<i>Loan Size</i>	0.3368*** (0.0090)	0.3131*** (0.0148)	0.3463*** (0.0098)	0.3141*** (0.0153)	0.3524*** (0.0099)	0.3296*** (0.0169)	0.3420*** (0.0100)	0.2938*** (0.0164)	0.3525*** (0.0100)	0.3289*** (0.0166)
<i>Maturity</i>	-0.0015*** (0.0003)	0.0010** (0.0004)	-0.0015*** (0.0003)	0.0013*** (0.0004)	-0.0012*** (0.0003)	0.0007 (0.0004)	-0.0016*** (0.0003)	0.0011*** (0.0004)	-0.0010*** (0.0003)	0.0011*** (0.0004)
<i>S&P Rating</i>	0.0186 (0.0279)	0.0585 (0.0490)	0.0064 (0.0286)	0.0625 (0.0503)	-0.0181 (0.0267)	0.0674 (0.0515)	0.0200 (0.0314)	0.0803 (0.0550)	0.0073 (0.0298)	0.0573 (0.0523)
<i>Guarantors</i>	0.0466** (0.0218)	0.0068 (0.0380)	0.0489** (0.0231)	-0.0052 (0.0387)	0.0467** (0.0238)	-0.0271 (0.0425)	0.0638*** (0.0231)	-0.0052 (0.0401)	0.0327 (0.0250)	-0.0029 (0.0431)
<i>Sponsors</i>	0.0050 (0.0264)	-0.0729* (0.0421)	-0.0021 (0.0275)	-0.0757* (0.0420)	-0.0253 (0.0269)	-0.0614 (0.0468)	-0.0004 (0.0289)	-0.0854** (0.0431)	-0.0253 (0.0288)	-0.0708 (0.0468)
<i>Covenants</i>	0.0554** (0.0246)	-0.0246 (0.0429)	0.0426* (0.0195)	-0.0216 (0.0430)	0.0671** (0.0259)	-0.0248 (0.0483)	0.0442* (0.0264)	0.0641 (0.0433)	0.0572** (0.0285)	0.0214 (0.0473)
<i>Senior Debt</i>	-0.1147*** (0.0321)	-0.1598*** (0.0572)	-0.1164*** (0.03456)	-0.1475** (0.0575)	-0.0344 (0.0358)	-0.1924*** (0.0652)	-0.0976*** (0.0346)	-0.1137** (0.0597)	-0.1444*** (0.0398)	-0.2197*** (0.0673)
<i>Borrower</i>	0.0045** (0.0019)	0.0097*** (0.0033)	0.0041** (0.0020)	0.0104*** (0.0033)	0.0053** (0.0022)	0.0102*** (0.0036)	0.0059*** (0.0019)	0.0081** (0.0033)	0.0039** (0.0019)	0.0090*** (0.0033)
<i>Syndicated</i>	0.0001** (0.0001)	0.0001** (0.0001)	0 (0.0001)	0.0001* (0.0001)	0.0002*** (0.0001)	0.0001 (0.0001)	- (0.0001)	- (0.0001)	0 (0.0001)	0.0002*** (0.0001)
<i>Loans Issues</i>										

(Contd...)

Table 2: Estimation Results											(...contd)
Specification	(1.1)	(2.1)	(1.2)	(2.2)	(1.3)		(2.3)	(1.4)	(2.4)	(1.5)	(2.5)
Endogenous Variable	Number of		Number of		Number of		Arrangers	Number of		Lenders	Arrangers
	Lenders	Arrangers	Lenders	Arrangers	Lenders	Arrangers		Lenders	Arrangers		
Overheads	-	-	2.4280*** (0.6556)	4.6426*** (0.7956)	-	-	-	-	-	-	-
Concentration	-	-	-0.1430*** (0.0519)	0.2115** (0.0836)	-	-	-	-	-	-	-
Stock Markets	-	-	-	-	-0.0072 (0.0094)	0.0177 (0.0166)	-	-	-	-	-
Private Bond Markets	-	-	-	-	-0.6745*** (0.0822)	-0.0615 (0.1403)	-	-	-	-	-
Public Bond Markets	-	-	-	-	0.1332 (0.1120)	-0.5598*** (0.1771)	-	-	-	-	-
Mincar*Credit Risk	-	-	-	-	-	-	0.0058* (0.0034)	-0.0023 (0.0048)	-	-	-
NPL Definition	-	-	-	-	-	-	0.1757*** (0.0212)	-0.1441*** (0.0354)	-	-	-
Abroad Loan Prohibited	-	-	-	-	-	-	0.1271*** (0.0220)	0.0249 (0.0365)	-	-	-
Creditor Rights	-	-	-	-	-	-	-	-	-0.0252** (0.0105)	0.0750*** (0.0177)	-
Rule of Law	-	-	-	-	-	-	-	-	-0.0017 (0.0067)	-0.0447*** (0.0095)	-
N	10,930	8,747	10,207	8,342	8,376	7,101	9,108	7,265	8,724	7,144	
LR Chi-square	22,159.64***	5,022.06***	21,551.19***	5,039.51***	14,575.64***	3,955.59***	19,476.18***	3,974.18***	18,803.15***	4,227.11***	
Pseudo R ²	0.2242	0.1192	0.2323	0.1253	0.2106	0.1189	0.2358	0.1168	0.2403	0.1252	
Note: The table presents Poisson regression results taking bank market structure, financial development, bank regulation and legal risk into account respectively. The dependent variables are <i>Number of Lenders</i> and <i>Number of Arrangers</i> (Equations 1 and 2 respectively), equal to the number of lenders and arrangers forming the syndicate. Dummy variables for loan type (Term and Revolving Bank Facility), loan purpose (General Corporate, Debt Repayment, Working Capital, and Project Finance), benchmark rate (Libor, and Euribor), year, region, industry sector, and loan facility active date are included in the regressions but are not reported. Robust standard errors clustered at the borrower level are given in brackets. ***, ** and * correspond to coefficients significantly different from zero at the 1%, 5%, and 10% level respectively.											

The results are provided in Table 2. All five regressions have satisfactory statistics in terms of Likelihood Ratio Chi-square statistic, as well as in terms of pseudo R^2 , greater than 20% and 10% for Equations 1 and 2 respectively.

Loan Size is positive and significant in all regressions, suggesting as expected that larger syndicates, both in terms of total number of lenders and arrangers, form around larger loans in accordance with the motives of the diversification of loan portfolios and regulatory-driven issues (as in Lee and Mullineux, 2004 and Sufi, 2007). The coefficient of *Maturity* is significantly negative in all estimations of Equation 1 and significantly positive in most of the estimations of Equation 2. This finding can be explained by the fact that greater maturity strengthens the moral hazard problem through higher monitoring costs of the loan as well as by a positive relationship between maturity and credit risk (Flannery, 1986; and Agbanzo *et al.*, 1998). This finding contrasts with prior literature on the USA market and advocates for the specificity of syndicate design in emerging markets.

Among the variables taking into account the reduction of the loan loss in case of default, we observe that *Senior Debt* is almost always negative and significant in all estimations, while *Sponsors* is negatively and weakly related to the number of arrangers only. *Guarantors* and *Covenants* are significantly positive in most of estimations of Equation 1.

Debt seniority seems to work as an effective protection device for all the lenders, leading to smaller syndicates and a lower number of arrangers. The presence of a sponsor involved in the funded project leads effectively to a smaller number of arrangers. The presence of a guarantor mitigates agency problems resulting from adverse selection, in line with the better information owned by the arranger on the borrower, leading to a larger syndicate. This result contrasts Lee and Mullineux (2004), who found significant and negative relationship between syndicate size and secured loans. The restriction on discretionary power of the borrower through the presence of covenants effectively reduces the risk of loan default and enhances the ability to monitor the borrower, thereby reducing the monitoring costs and leading to larger syndicates.

We also observe that borrower transparency, proxied with the existence of a senior debt rating by Standard and Poor's, has no impact on syndicate structure. This finding contrasts with the results obtained by Lee and Mullineux (2004) and Sufi (2007). This finding might be driven by the small number of borrowers being rated (less than 7%) or alternatively, by the fact that syndicate lenders, especially the arrangers, perform screening actions within a relationship-based framework, and external public information does not add supplementary elements to reduce borrower opaqueness. Finally, as expected, borrower presence is positively related to syndicate design.¹⁷

¹⁷ Performing our regressions omitting the borrowers from Asia, as this area accounts for 70% of our sample, might drive our main findings. A vast majority of the results obtained hold on a smaller sample (close to 3,200 observations), with a slightly lower level of significance for the loan characteristics which proxy lender protection.

We now turn to the analysis of the country-level variables. The main finding is the significance of most variables. In other words, institutions matter for the syndicate structure. All kinds of institutions matter in the sense that we observe significant variables for legal risk, financial development, and banking structure and regulation.

Banking structure clearly matters for the syndicate structure in emerging markets. As expected, the cost level of the banking industry exerts a positive impact on the syndicate size, both in terms of total number of lenders and arrangers, as the coefficient of *Overheads* is significantly positive. The sharing of administration and origination costs encourages the formation of larger syndicates.¹⁸ Concentration of the banking industry is negatively related to the number of lenders forming the syndicate. As expected, greater concentration lowers the number of potential participants to join and form a syndicate. Also, banks holding greater market shares already benefit from diverse loan portfolios and have little incentive to diversify further. The positive and significant sign for this factor in specification 2.2, can be explained by the necessity for arrangers to form a larger ‘core’ of the syndicate to enhance monitoring of the participants, who benefit from a comfortable market power and therefore, might have less incentive to perform their monitoring duties in an efficient way.

Furthermore, the development of bond markets reduces syndicate size, as they are direct competitors to syndicated loans. Public bonds affect the number of arrangers only, which is consistent with the fact that syndicated loans often fund large public companies as well as local administrations in emerging markets. The development of stock markets has no significant impact on syndicate structure.¹⁹

Specifications 1.4 and 2.4 display our results for banking regulation. The coefficient of *Mincar*Credit Risk* is in accordance with the positive influence of a capital requirement on the syndicate size in order to respect the lending limits, as a stronger requirement increases the impact of this motivation. The coefficient of *NPL Definition* is significant in both the specifications, but influences positively the number of lenders and negatively the number of arrangers. Such regulatory feature seems to enhance bank transparency, allowing formation of a larger syndicate with fewer arrangers, as problems related to informational frictions regarding loans portfolio. Finally, the regulation on lending abroad positively impacts syndicate size, as such regulation reduces diversification opportunities for domestic banks and increases their ‘appetite’ to fund a share of a syndicated loan while diversifying their portfolio.

The results with the legal environment variables are presented with specifications 1.5 and 2.5. We observe that better creditor rights protection has a negative and significant influence

¹⁸ The mean level of *Overheads* is relatively low in our sample (less than 5%), therefore larger syndicates do not necessarily imply more agency costs as the participating banks do not carry a burden of cost inefficiency that would probably exacerbate the free-riding problem and inefficient monitoring.

¹⁹ We also test alternative proxies for financial structure and legal risk. For instance, we replace *Stock Markets* with the ratio of private credit of financial institutions to GDP, which can be considered as another proxy of the country’s financial structure development. Results from specifications 1.3 and 2.3 are robust to this replacement.

on the number of lenders, whereas it has a positive and significant impact on the number of arrangers. Better protection of creditors might reduce lenders' incentives to monitor borrowers and consequently exacerbates the free-riding problem, which can be tackled through an adapted syndicate structure of small size and a larger 'core' of arrangers. Let us also note that as the other creditors can benefit from such protection, monitoring of the borrower by the syndicate must increase to avoid inefficient recontracting in case of distress. Smaller syndicates with larger cores are more suitable for such task. As the quality of institutions increases (i.e. legal risk decreases), the number of arrangers diminishes as monitoring is more effective in such legal environment. This result is in accordance with the findings of Esty and Megginson (2003).²⁰

Overall, the structures of syndicates are adapted to enhance monitoring of the borrower and to increase the efficiency of recontracting process in case of borrower's distress. Main syndication motives, such as loans portfolio diversification, regulatory pressure and management costs reduction, also influence the syndicate structure in emerging markets.

Conclusion

In this paper, we have investigated the determinants of the syndicate design by analyzing the role of loan characteristics, following the study design of Lee and Mullineaux (2004) on US syndicated loans. Additionally, we examined institutional factors inspired by the recent literature, on the role of institutions on a bank's loan behavior (Esty and Megginson, 2003; and Qian and Strahan, 2007). Our main findings are summarized as follows:

First, we provide evidence to explain the role of several loan characteristics in the structure of bank syndicates funding loans to borrowers from emerging markets.

Second, we show that institutions influence the syndicate structure. Indeed, we undoubtedly found that banking structure, financial development, banking regulation, and legal environment exert an impact on the syndicate size.

Third, the observed impact of tested variables suggests the prominence of certain motives for the formation of syndicates with adapted structure. Syndicates are structured in order to minimize agency problems related to loan characteristics and country financial, regulatory and institutional environment. The numbers of lenders and arrangers increase with loan size, but are not affected by borrower's transparency. The overall size of the syndicate increases with presence of covenants and guarantors. It decreases with debt seniority as well as with loan maturity, while the latter positively affects the number of arrangers. More costly banking industry involves larger syndicates, while more concentrated banking industry reduces the

²⁰ Replacing *Rule of Law* with alternative proxies from La Porta *et al.* (1997 and 1998) such as '*Risk of Expropriation*' and '*Repudiation of Contracts*' (defined as indexes, scaled from 0-10 with lower scores for higher risks, assessing the risk of 'outright confiscation' or 'forced nationalization' and of the 'risk of a modification in a contract' respectively) does not affect our results, while these alternative proxies exhibit significant and consistent signs.

number of lenders. Financial development, in particular bonds markets, affects negatively the size of the syndicate. Bank capital and banking activities regulation, as well as loan portfolio transparency, have a positive impact on syndicate size. Finally, syndicates are structured in a consistent manner in order to mitigate legal risk. These main findings are robust to sample, proxy variables and estimation methods used in the regressions.

Our analysis can be extended in a number of ways. An important input to understand syndication process would be to include borrowers and lenders characteristics into regressions explaining the syndication process (following Altunbas *et al.*, 2006). Furthermore, the formation of syndicates, its heterogeneity and dynamics, as well as its dependence upon business cycles, industrial sectors and geographic areas, should be more deeply investigated. Ultimately, empirical knowledge regarding ‘who syndicates with whom’ and the factors influencing this process should be empirically modeled, using more developed econometric techniques. ♦

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Appendix

Table A.1: Country-wise Frequencies of Loan Facilities			
Country	<i>N</i>	Country	<i>N</i>
United Arab Emirates	62	Latvia	23
Argentina	208	Mexico	429
Azerbaijan	14	Malaysia	314
Bulgaria	26	Oman	40
Bahrain	61	Pakistan	38
Brazil	278	Panama	38
Chile	211	Peru	47
China	661	Philippines	219
Colombia	75	Poland	119
Czech Republic	72	Qatar	37
Egypt	66	Romania	44
Estonia	19	Russia	313
Guatemala	18	Saudi Arabia	64
Hong Kong	1,372	Singapore	366
Croatia	58	El Salvador	11
Hungary	133	Slovakia	40
Indonesia	790	Slovenia	62
India	404	Thailand	582
Iran	24	Trinidad and Tobago	13
Israel	28	Turkey	344
Kazakhstan	85	Taiwan	1,515
Korea	1,42	Ukraine	35
Kuwait	40	Uruguay	9
Sri Lanka	9	Venezuela	53
Lithuania	15	Vietnam	26
Total		10,930	
Note: The table provides country-wise frequencies (<i>N</i>) of loan facilities for the entire sample.			

(Contd...)

Appendix

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Table A.2: Brief Description of All Variables and Their Sources		
Variable	Description	Source
Loan Contract Characteristics		
<i>Number of Lenders</i>	Number of lenders in the syndicate.	Dealscan
<i>Number of Arrangers</i>	Number of arrangers in the syndicate.	Dealscan
<i>Loan Size</i>	Logarithm of the size of the loan in \$ mn.	Dealscan
<i>Maturity</i>	Maturity of the loan in months	Dealscan
<i>S&P Rating</i>	= 1, if the borrower has a senior debt rating by Standard and Poor's	
<i>Guarantors</i>	= 1, if there is at least one guarantor	Dealscan
<i>Covenants</i>	= 1, if the loan agreement includes covenants	Dealscan
<i>Senior Debt</i>	= 1, if debt is senior	Dealscan
<i>Borrower Presence</i>	Number of times a particular borrower is present in the sample	Dealscan
Control Variables		
<i>Term Loan</i>	= 1, if the loan is a term loan	Dealscan
<i>Revolver</i>	= 1, if the loan is a revolving bank facility	Dealscan
<i>Corporate Purposes</i>	= 1, if the loan purpose is general corporate purpose funding	Dealscan
<i>Debt Repayment</i>	= 1, if the loan purpose is debt repayment funding	Dealscan
<i>Working Capital</i>	= 1, if the loan purpose is working capital funding	Dealscan
<i>Project Finance</i>	= 1, if the loan purpose is project finance funding	Dealscan
<i>Libor</i>	= 1, if the benchmark rate is Libor	Dealscan
<i>Euribor</i>	= 1, if the benchmark rate is Euribor	Dealscan
Country Characteristics		
<i>Syndicated Loan Issues</i>	Number of syndicated loan facilities in a particular country	Dealscan
<i>Overheads</i>	Ratio of banking overhead costs to total banking assets	Beck <i>et al.</i> (2000)
<i>Concentration</i>	Assets of the three largest banks as a share of total banking assets	Beck <i>et al.</i> (2000)
<i>Stock Markets</i>	Value of listed shares to GDP	Beck <i>et al.</i> (2000)
<i>Private Bond Markets</i>	Public domestic debt securities to GDP	Beck <i>et al.</i> (2000)
<i>Public Bond Markets</i>	Private domestic debt securities to GDP	Beck <i>et al.</i> (2000)
<i>Mincar</i>	Minimum capital requirement value	Barth <i>et al.</i> (2005)
<i>Credit Risk</i>	= 1, if the minimum regulatory capital ratio varies with bank credit risk	Barth <i>et al.</i> (2005)
<i>NPL Definition</i>	= 1, if a formal definition of non-performing loans exists	Barth <i>et al.</i> (2005)
<i>Abroad Loan Prohibited</i>	= 1, if banks are prohibited from granting loans abroad	Barth <i>et al.</i> (2005)
<i>Creditor Rights</i>	An index aggregating four aspects of creditor rights. The index ranges from zero (weak creditor rights) to four (strong creditor rights)	La Porta <i>et al.</i> (1998)
<i>Rule of Law</i>	An index indicating the law enforcement. The index ranges from zero (weak enforcement) to ten (strong enforcement)	La Porta <i>et al.</i> (1998)

(Contd...)

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Appendix

Table A.3: Correlation Coefficients of Loan and Country Characteristics Variables

	Loan size	Maturity	S&P Rating	Guarantors	Sponsors	Covenants	Senior Debt	Borrower Presence
Loan size	1.00							
Maturity	0.13***	1.00						
S&P Rating	0.01	0.02	1.00					
Guarantors	-0	-0.03**	-0.05***	1.00				
Sponsors	-0.01	-0.01	-0.02**	-0.04***	1.00			
Covenants	0.03***	0.04***	0.01	-0.02*	0	1.00		
Senior Debt	0.06***	-0.03***	0.03***	-0.03***	0.02*	0.46***	1.00	
Borrower Presence	0.03***	-0.06***	0.01	-0	0.01	0.01	0.01	1.00

	Syndicated Loan Issues	Overheads	Concentration	Stock Markets	Private Bond Markets	Public Bond Markets	Abroad Loan Prohibited	Mincar	Credit Risk	NPL Definition	Creditor Rights	Rule of Law
Syndicated Loan Issues	1.00											
Overheads	-0.39***	1.00										
Concentration	-0.29***	0.05***	1.00									
Stock Markets	0.44***	-0.12***	0.20***	1.00								
Private Bond Markets	0.55***	-0.36***	-0.45***	0.15***	1.00							
Public Bond Markets	-0.29***	0.08***	-0.22***	-0.06***	0.22***	1.00						
Abroad Loan Prohibited	0.89***	-0.37***	-0.44***	0.12***	0.51***	-0.19***	1.00					
Mincar	-0.45***	0.37***	0.17***	0.09***	-0.18***	0.14***	-0.42***	1.00				
Credit Risk	-0.40***	0.51***	0.21***	-0.24***	-0.38***	0.16***	-0.36***	0.03***	1.00			
NPL Definition	-0.21***	0.04***	-0.10***	0.40***	-0.37***	0.31***	-0.11***	0.13***	-0.02**	1.00		
Creditor Rights	0.23***	-0.48***	0.34***	0.40***	0.09***	-0.28***	0.20***	-0.14***	-0.66***	-0.11***	1.00	
Rule of Law	0.53***	-0.29***	0.03***	0.67***	0.29***	0.08***	0.17***	0.12***	-0.32***	0.25***	0.15***	1.00

Note: ***, ** and * correspond to coefficients significantly different from zero at 1%, 5%, and 10% level respectively.

Reference # 42J-2008-06-01-01