

Distance Constraints:

The Limits of Foreign Lending In Poor Economies

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Abstract

As foreign banks expand into emerging markets, do they face extra informational and agency constraints due to greater *distance* between the CEO and her loan officers? Using a new quarterly panel data set of 80,000 loans over 7 years, I show that greater cultural and geographical *distance* leads foreign banks to further avoid lending to “informationally difficult” yet fundamentally sound firms requiring relational contracting. Greater *distance* also makes them less likely to bilaterally renegotiate, and less successful at recovering defaults. Differences in bank size, legal institutions, or unobserved borrower heterogeneity cannot explain these results. The *distance constraints* identified in this paper can be economically large enough to permanently exclude certain sectors of the economy from financing by foreign banks.

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“while the [*foreign*] banks easily provide funds to multinationals, and even large domestic firms, small and medium-size firms complained of a lack of access to capital. International banks’ expertise - and information base - lies in lending to their traditional clients”

_____ Stiglitz (2003, pg. 69)

The relationship between the organizational structure of a firm and the type of activities it chooses to perform has been of core interest to economists since Coase (1937). An important question in this debate is how informational and agency *distance* between the CEO and her employees shapes the nature of information acquisition and the types of activities performed within the firm. Existing theoretical work such as Stein (2002), and Aghion and Tirole (1997) predicts that greater *distance* between the CEO and her employees will lead to less delegation of discretionary powers to the employees, and hence less reliance on soft information by the firm.

Perhaps nowhere is this issue more relevant today than banking. Globalization of economic activity has led many banks from developed countries to travel long distances not just geographically but also culturally and institutionally to lend to emerging markets. Since banking is an information-intensive industry, the theoretical work cited above suggests that *distance* should have an important impact on the type and nature of foreign bank lending in emerging markets. I focus on foreign bank lending in emerging markets because the informational and agency issues related to *distance* are more relevant in markets where institutional, legal and informational environment is weak.

As an example of how *distance* may reduce the delegation of power and reliance on soft information by a bank, consider a U.S. bank opening a branch in an emerging economy. Suppose the emerging economy is *distant* from the U.S. in terms of its culture, language, and social linkages. This “cultural gap” can make it difficult for the local loan officers to successfully communicate intangible factors, such as a potential borrower’s trustworthiness, to the U.S. headquarter. For example, if the local loan officer is not trained in the U.S. academic system, he may not be able to speak the “cultural language” of top U.S. management. Similarly it may be difficult for the top management to verify a piece of soft information without having independent social links of their own in the emerging market. As a result of these communication and monitoring difficulties the U.S. bank would not allow its local loan officers to use subjective evaluations when making lending decisions. Instead it will require these officers to only rely on strict “credit score” criteria based on easily verifiable hard information such as audited earnings. Thus costs related to *distance*, i.e. *distance constraints*, may prevent the U.S. bank from lending to profitable soft information firms.

This paper investigates such constraints by using a new data set with detailed quarterly loan level information on each of the 80,000 business loans given out by the private banking sector of Pakistan from 1996 to 2002. Given the question at hand, the data set has two useful features. First, there is significant variation in the organizational *distance* of banks. The data includes local as well as foreign banks with varying degrees of geographical, cultural, and institutional distance between the CEO and her local loan officer. Second the loan level data is quite detailed, allowing me to measure the nature of banks' activities and their outcomes at a micro level. For example, I know the type and identity of each loan borrower, the amount of the loan, its default rate, whether the loan went into litigation or renegotiation in case of default, and the amount recovered from default.

Using this data, I explore how *distance* shapes the nature of loans given out by foreign banks. I start with a very broad definition of *distance* that includes, (i) communication, information, and cultural distance correlated with greater geographical separation, (ii) hierarchical distance due to bank size, and (iii) institutional distance due to legal and regulatory differences between a bank's country of origin and Pakistan. I then test if this broad definition of *distance* has any impact on the nature of lending by categorizing banks as either "domestic" (i.e. banks headquartered in Pakistan), or "foreign" (banks headquartered outside Pakistan). This simple categorization shows a number of interesting results.

First, consistent with Stiglitz's comment, lending by foreign banks is fairly limited in scope. Foreign banks systematically shy away from lending to "soft information" firms requiring relational contracting and greater discretion for the local loan officer. These are small firms, firms in smaller cities, firms not affiliated with a major business group, firms seeking first time loans, and firms seeking long term relational financing.

Second, despite making more soft information loans, domestic banks do *not* have higher default rates than foreign banks. In fact taking the interest and recovery rates into account, lending by domestic banks is *as profitable* as lending by foreign banks.

Third, consistent with foreign banks avoiding relational lending, I find that foreign banks are less than half as likely to bilaterally renegotiate (they litigate more) in case of default compared to domestic banks. Foreign banks are also less than half as successful as domestic banks at recovering defaults. These results are not driven by unobserved borrowers characteristics as they are robust to the inclusion of borrower fixed effects.

The results above indicate that costs related to the broad definition of distance, i.e. *distance*

constraints, prevent foreign banks from lending to soft information firms. Similarly the lack of discretion prevents foreign bank loan officers from being as successful as domestic banks at relational activities such as renegotiation and recovery.

I next try to define what “distance” means. For example, is it cultural distance, hierarchical distance (bank size), institutional distance, or a combination thereof? The variation among foreign banks in their “distance travelled” allows me to address this question. I find that *distance constraints* are stronger, the more *geographically or culturally distant* a foreign bank is. Other measures of distance such as bank size and institutional distance are not correlated with *distance constraints*.

A final question that I address in this paper relates to the broader macroeconomic picture. Even if *distance constraints* are important in shaping the way foreign banks lend to firms, one could ask how economically important these constraints are? For example, are the constraints large enough so that in the absence of domestic banks, many soft information firms would not be given credit? Or are the costs small enough so that in the absence of domestic banks, foreign banks would be willing to lend to such soft information firms at only slightly higher costs? Although it is a difficult question to answer, I exploit the late entry of domestic banks due to earlier regulatory restrictions to show that in the absence of domestic banks, a large number of the “soft information” firms would *not* be given credit. Thus *distance constraints* not only exist but their magnitude can be large enough to permanently exclude certain sectors of the economy from financing by foreign banks.

Pakistan is a good place to study the effects of *distance constraints*. First, such constraints are more likely to be important in low income economies like Pakistan with poor information flows and weak legal environment. Second, foreign banks have been part of Pakistan’s banking system since independence for over 50 years. This paper therefore looks at a mature market where foreign banks have had ample time to try and adjust to the local environment if feasible.

The results of this paper should be of interest to a wide range of audience. From a banking policy perspective, theoretical work on how information, agency and enforcement problems can limit access to credit¹ has led to the hunt for factors that exacerbate these problems. In the context of *distance*, this work has mostly focused on how distance between a borrower and his bank impacts the success and nature of their relationship.² However, the role of distance between controlling

¹For example, Stiglitz and Weiss (1981), Diamond (1991), and more recently Holmstrom and Tirole (1997).

²See for example, Petersen and Rajan (1994, 2002), Rajan (1992), Hoshi, Kashyap, and Sharfstein (1990, 1991), Berger et al (2002), and Bonaccorsi and Gobbi (2001).

shareholders and their loan officer has largely been overlooked.³ With reference to globalization of financial institutions, this second definition of distance is the more important source of variation to explore. This paper suggests that there is a limit to how much a poor country can rely on foreign lending when it comes to informationally difficult borrowers. It also highlights the importance of strengthening domestic financial institutions and suggests a rationale for the reliance of early “miracle” successes of Japan and then East Asian economies on domestic banks.⁴

Outside of banking, an influential recent literature in organizational theory and corporate finance talks about the importance of distance between the top management and its employees. Rajan and Wulf (2003) extensively document a flattening of the firms’ organizational structure in the U.S. from the mid 80’s to late 90’s. In light of theoretical work such as Garciano (2000), Qian (1994) and Stein (2002), it appears that changes in information and production technology have allowed firms to flatten-out in order to minimize the cost of distance between the CEO and her lower management. This paper adds to this literature by measuring the value of flattening-out on important outcomes such as the decision to extend credit, default, recovery and the nature of bank-borrower relationship.

More broadly the question of why aggregate foreign capital flows to poor countries are so low has been a core question of interest in the development and growth literature. Lucas (1990) outlined two broad approaches for answering this question, one involving differences in human capital and another involving capital market imperfections. This paper identifies *distance constraints* as an important element of capital market imperfections that limit the scope of foreign capital. The paper also suggests that at least in the context of Pakistan, there is little empirical support for some of the alternative explanations of the “foreign capital paradox”, including weak political enforcement by foreign banks and institutional or legal differences.

Similarly, from an international finance perspective, this paper provides evidence on why foreign capital favors short term lending and avoids long term relationship contracts. Such features of international financial flows have often been blamed for financial fragility and the ensuing crises in emerging economies (e.g. Rajan and Zingales (1998)).

The paper proceeds as follows. The next section formally defines *distance* and its corresponding *constraints*. Section II describes the data and its institutional background. Section III presents the basic differences in the lending patterns of foreign and domestic banks. Section IV then tests for

³Liberti (2003) is a note-worthy exception

⁴Guiso, Sapienza, and Zingales (2004) also point out the importance of local financial development for entrepreneurship and competition.

distance constraints and section V discriminates between different definitions of *distance constraints*. Section VI tests for the importance of the ex-post enforcement mechanism and Section VII evaluates the economic importance of *distance constraints*. Section VIII concludes.

I Why Should Distance Matter?

In an emerging economy like Pakistan with no separate legal or regulatory restrictions for foreign banks, why might foreign banks have different lending patterns than domestic banks? Anecdotal evidence such as the quote by Stiglitz in the introduction suggests that there is some inherent attribute of foreign banks that limits their scope in emerging economies. This section provides two broad hypotheses in this regard.

A. The Distance Constraints Hypothesis

An obvious candidate for explaining foreign bank lending pattern is the “distance” travelled by them before entering an emerging economy. Figure I outlines the formal definition of *distance* in this paper: It is the distance between the controlling shareholder (the CEO or *principal*) of a foreign bank residing in her home country (say the U.S.) and the loan officer (the *agent*) operating in a developing country (Pakistan in our case). Notice that my definition of distance (labelled (1) in Figure I) is different from another possible definition of distance (labelled (2) in Figure I) that measures the distance between the loan officer and his borrower. Papers such as Peterson and Rajan (1994 and 2002) have looked at the impact of this second distance on lending behavior. However, when discussing the constraints faced by foreign banks in developing countries, it is natural to think that definition (1) of distance is the more important source of variation.

There are different metrics one can use to measure the *distance* shown in Figure I. In this paper, I consider three different metrics and later test which is more relevant in practice.

(i) *Geographical or Cultural Distance*: It measures the geographical separation between the CEO and her loan officer. Since in my data distance from Pakistan is also highly correlated with cultural differences, geographical distance can be thought of as synonymous with cultural differences.

(ii) *Hierarchical Distance (due to bank size)*: This measures the number of organizational layers or hierarchies between the CEO and her loan officer. The hierarchical distance can be proxied by the overall size of the bank, since larger banks (such as multi-national banks) will be more hierarchical on average.

(iii) *Institutional Distance*: This measures the difference between home and host country’s legal and regulatory framework.

All three metrics of distance imply that foreign banks will have higher informational, agency, or enforcement costs when operating in emerging economies. For example, there are natural reasons to believe that greater physical distance between a principal and her agent would lead to higher informational and agency costs for foreign banks.⁵ Similarly, working in an environment with a different corporate culture, legal environment, or regulatory framework might increase the asymmetry in information and make it more difficult for the CEO of a foreign bank to design policies that are specifically tailored for the developing country. With regards to bank size, papers such as Berger et al (2002) have already highlighted the reluctance of large banks to lend to soft information firms because of informational constraints.

In the face of higher info-agency or enforcement costs, there are some common predictions regarding foreign lending that I collectively refer to as *distance constraints*. The main prediction in this regard is that foreign banks will find it more difficult to lend to “soft information” firms that require high information and monitoring intensive relationship loans. Moreover, foreign banks will be weaker at *relational* functions such as renegotiation and recovery of bad loans that also require strong information and control mechanisms. To see which of the definitions of distance is more relevant, one can test how *distance constraints* covary with each of the three definitions respectively.

The discussion above of the different definitions of distance and the ensuing *distance constraints* mostly focused on theoretical arguments. However, there is anecdotal and qualitative evidence that suggests foreign banks face these types of constraints in developing economies. For example, it is widely believed that large multi-national banks use very strict “credit scoring” methods that force the local bank managers to rely on hard information and do not leave much discretion in their hands to use soft information (Cole, Goldberg, and White (1999)). On the enforcement side a number of articles in the Indian business press talk about banks outsourcing the credit card default recoveries to local thugs and mafias⁶. What is less known however is whether foreign banks will also be willing to outsource to such mafia. On the cultural and institutional front, Berger, Klapper, and Udell (2001) find that foreign banks headquartered in other South American nations

⁵Papers such as Coval and Moskowitz (2001) have shown that physical distance matters even in the mutual funds sector where the nature of information is a lot less opaque, and the agency issues less severe than banking.

⁶See “Credit Constraints” by Ajay Shah in Business Standard (22 March 2000), or “A parallel agenda for the RBI” by R. Jagannathan in Rediff.com (Nov 5, 2002)

are more likely to lend to small Argentine businesses than foreign banks headquartered in other countries.

B. The Risk Preferences Hypothesis

The *distance constraints* hypothesis can be tested empirically. However as with any empirical study, one would like to ensure that no alternative explanation is responsible for part or all of the results. Suppose one finds that foreign banks are less likely to lend to soft information firms compared to private domestic banks. This would be consistent with the *distance constraints* hypothesis above. However, an alternative explanation of the same finding could be differences in attitudes towards risk or differences in *risk preferences* between foreign and domestic banks.

Why might domestic and foreign banks differ in their *risk preferences*? The idea is based on the belief that domestic banks may be more willing to take on higher levels of risk because of the moral hazard or option value associated with limited liability of banks. Foreign banks on the other hand may not be willing to take such high levels of risk because of their “franchise value” at risk, and the added supervision by their home regulatory authority. For example, if a foreign bank takes too much risk in a developing country, leading to a fear of bank failure, it will have large negative consequences through reputation on its operations worldwide. Hence, anticipating such loss of franchise value through risky behavior, foreign banks will end up devising internal monitoring mechanisms to curb their level of risk (see e.g. Demsetz, Saldenber, and Strahan (1996)). Similarly as foreign banks are also subject to their home country regulatory authority, they may have stricter external monitoring and supervision than private domestic banks.⁷

To guarantee that the empirical results are not driven by *risk preferences*, I will directly measure the riskiness of loans given out by domestic banks, their net loan return, and test directly for evidence such as “related lending” and “evergreening”.

II Data

A. Institutional Environment

Since the data used in this paper comes from Pakistan, it will be instructive to give a brief institutional background of the banking sector in Pakistan. Pakistan in the 1950s and 1960s had

⁷The *risk preferences* explanation can go in the other direction as well. For example, one could argue that foreign banks should actually have a *higher* preference for risk locally as they can more easily diversify themselves internationally. I ignore this explanation as none of the empirical results are consistent with it.

a liberalized banking structure open to both foreign and domestic banks. However, this changed in the early 1970s when the government decided to nationalize all private domestic banks in the country. The nationalization was interesting in the sense that only the domestic banks were nationalized. The foreign banks were left to operate as before, although limits were placed on the size of their operation. As a result of this institutional history, all foreign banks operating in Pakistan were set up as new banks, i.e. none of them were buyouts of existing private domestic banks. By 1990 government banks dominated the banking sector as they held 92.2% of total assets, while the rest belonged to foreign banks.

However, weaknesses and inefficiencies in the financial structure that emerged after nationalization, finally forced the government to initiate a broad based program of reforms in the financial sector in the beginning of 1991. These reforms included: (i) privatization of one of the government banks⁸, (ii) allowing entry of new private domestic and foreign banks, (iii) setting up of a centralized credit information bureau (CIB) to track loan-level default and other information⁹, (iv) issuance of new prudential regulations to bring supervision guidelines in-line with international banking practices (Basel accord), and (v) granting autonomy to the State Bank of Pakistan that regulates all banks.

As a result of these reforms, the country saw a spurt of growth in the private (particularly domestic) banking sector. As discussed, before 1990 banking was dominated by the government with a complete absence of any local private banks. The fact that foreign banks still operated is an important observation as it highlights that foreign banks have had a longer stay in the banking history of Pakistan than domestic private banks. Thus any limitations of foreign banks found in this paper cannot be attributed to a shorter time to adjust to the local climate compared to private domestic banks. Once the banking sector was liberalized in 1990, it led to a sharp rise in the private domestic banking industry, which soon rivaled both the traditional government banking sector as well as the older foreign banking sector. By the end of 1996, which is the start of the data period in this paper, government, private domestic, and foreign banks provided 54%, 23%, and 23% of the overall bank lending respectively.

A note on the application of “Islamic banking” in Pakistan is also warranted here. The government of General Zia in the early 1980s in the hope of gathering political support issued an injunction that all banking in the country should be done according to Islamic law. However, the

⁸Another government bank was also privatized in theory, but it was simply “sold” to existing employees of the bank and hence does not count as a proper privatization.

⁹The data set given to me by the State Bank of Pakistan is part of this CIB database.

new law was only a cosmetic change. It did not change any of the real functions of banks other than re-labeling “interest” as “profit” on deposits, and as “mark up” on loans. For all practical purposes, banking in Pakistan is done the same way as in the rest of the world.

In terms of post-1990 regulation environment, both domestic and foreign banks are allowed to enter and operate in the banking sector. The important fact for this paper is that both domestic and foreign banks are subject to the *same* prudential regulations and banking rules. As such differences between foreign and private domestic banks cannot be attributed to differential treatment by the regulatory authorities.

B. Basic Data Description

The data set used in this paper has quarterly loan level data on *all* corporate bank loans outstanding in Pakistan during the 7 year period from 1996-2002. This translates into a panel data set of 165,004 loans given out during this time period. A loan is defined by a unique bank-firm pair. So if the same firm gets 4 different loans from the same banks over the 7 year period, I define them as a single “loan”. Given the scope of this paper, I restrict the data to 79,323 private loans given out by the foreign and private domestic banks during the sample period. In other words, I drop the 85,185 loans given out by government banks, and the 496 loans given out by private banks *to* government firms¹⁰. As is well known, lending by government banks raises all sorts of different issues such as lending for “social reasons” which are beyond the scope of this paper, and hence I remove these loans from the current study¹¹. The data was provided by the State Bank of Pakistan which supervises and regulates all banking activity in the country.

After taking out government loans, there are a total of 588,546 loan-quarter observations. These observations are spread over 25 quarters (April 1996 to April 2002), 90 private banks, and 62,253 unique borrowers. Although I will use the time dimension of the panel data whenever needed, for most of the analyses it will be convenient to “cross-sectionalize” the panel data before analysis. This involves converting all values into real 1995 rupees (Rs.), and then taking the time average of each loan, thus making a “loan” (i.e. a bank-firm pair) the unit of observation. A loan is identified by a borrower and his corresponding bank. The cross-sectionalized version of our data then has 79,323 observations or loans. Notice that this number is greater than the number of unique borrower (62,253) because a single borrower may be borrowing from more than one bank. Another point to

¹⁰Keeping these government firms in the sample does not change any of the results in a significant way.

¹¹The role of government lending will be looked at in future work.

keep in mind is that the initial panel data set is not a complete panel. The number of loans in any given quarter ranges goes from 15,952 in the beginning of sample to 31,727 towards the end, as new loans are given out and old loans retired. Panel A of Table I summarizes these basic characteristics of the data set.

To carry out the empirical tests in this paper, banks were characterized into “foreign” and “domestic”. The categories were defined based on the location of the controlling shareholders of the bank. Given this classification, 22 banks were classified as “foreign”, and 68 as “domestic”. The 22 foreign banks comprise of countries in Europe, Middle East, US, and Japan. The two types of banks segment the private banking sector quite evenly. As Panel B of Table I shows, the market share of private banking sector is 49% and 51% each for foreign and domestic banks. As there are many more private domestic banks, they are smaller than foreign banks on average.

Table I gives the broad coverage of the data set. In terms of details, the data set has loan-level information on the identity of the borrower and its bank, the amount of the loan, the amount overdue, duration of overdue, breakup by principal and interest, break up by type of loan (fixed, working capital, etc.), group affiliation of the borrower, bank branch where the loan was issued, new loans given out in the past quarter, and in case of default loan recovered and loan under litigation. I will next describe each of these variables in detail.

C. Measuring Hard Information

An important variable of interest in this paper is going to be some measure of the “type” of firm, where type refers to the nature of information required to lend to the firm. As was pointed out earlier, the literature on relationship banking points out that “soft information” firms are more likely to require close relationship lending. The differentiating feature between hard and soft information is that unlike hard information, soft information pertains to intangible factors such as “potential” and “ability” that cannot be verifiably conveyed. For example, consider the case of a local bank manager (the agent) trying to convey information about a potential borrower to his ultimate boss (the principal). If the information is “soft” such as the information acquired through repeated personal interviews about the borrower’s ability and honesty, then the branch manager will have difficulty in credibly conveying the information. Consequently, if the principal wants the branch manager to use such information in lending decisions, then she must “trust” the manager by giving him “discretion”. On the other hand if the information were “hard” such as a borrower’s audited earnings or exports, then it can be credibly shown to the principal.

Using the loan level details, I first construct different variables measuring the “hardness” of information. (summary statistics are given in Panel A of Table II):

(i) *Size*. The total borrowing by a firm from all the banks in the country (including foreign, domestic, and government banks) is used as a proxy for borrower size. I then divide up the firms into five size categories using 99, 95-99, 75-99, 50-75, and 0-50 percentiles as the cutoff criteria. The cutoff criteria were used given the skewed distribution of lending, with 65% of total lending going to the top 1% of firms by size. The percentage of total lending, and the number of loans in each category are given in Panel A of Table II. *Size* proxies for “hard information” under the assumption that the bigger a borrower is, the more credible would be its information because of audited reports and reputation. Conversely the smaller a borrower is, the softer would be its informational content (e.g. Berger et al (2002) also use small size to proxy for soft information).

(ii) *Location*. This variable captures the size of the city the borrower is located in. It takes on three values big, medium and small. Borrowers located in the three largest cities (city population greater than 2 million) are coded big, while those in cities with population between 0.5-2 and 0-0.5 million are coded as medium and small respectively¹². The distribution of lending across location is also highly skewed with the large cities getting 89% of the lending. As with size, location proxies for “hard information” under the assumption that borrowers in large cities would have better auditing and credit reputation, and those in small cities softer information.

(iii) *Foreign*. This variable captures whether the firm (borrower) is a foreign firm or not. There are only 493 loans given out to foreign firms in the data, but they represent about 18% of the overall private lending. Being a foreign firm proxies for hard information because foreign firms are likely to have better credit reputation, and harder informational content.

(iv) *Group Size*. It is well known that the group or network that a firm belongs to is an important determinant of the firm’s credit worthiness in developing countries (Khanna and Palepu (2002)). An important feature of my data set is that I have information including names and tax identification numbers of all directors of a firm. This allows me to classify firms into “groups” based on their ownership information. In particular, I classify two firms into the same group if they have a director in common. Forming groups in this way creates three distinct category of firms: (a) Stand-Alone Firms - these are firms whose directors do not sit on the board of any other firm (comprising 12% of private lending); (b) Intermediate Group Firms - these are firms that belong to intermediate

¹²Karachi, Lahore, and Rawalpindi/Islamabad are coded as "big", Faisalabad, Gujranwala, Multan, Sialkot, Sargodha, Peshawar, Quetta, and Hyderabad are coded as "medium", and the remaining cities and towns are coded as "small".

size groups, defined as groups consisting of 2 to 50 firms (19% of private lending), and (c) Large Conglomerate Firms - these are firms which belong to the large conglomerates, defined as groups consisting of more than 50 firms each (67% of private lending). Of the 79,323 total loans in the data set, I do not have ownership (and hence group) information for 16,508 loans comprising 2% of the overall private lending. As the literature on groups also highlights, firms belonging to larger groups are more likely to have better credit reputation, and harder information. Group size therefore serves as the fourth proxy for hard information.

(v) *No. of Creditors*. This variable captures the number of creditors (banks) that a firm borrows from. Note that when constructing this variable, loans from government banks were also taken into account. Since it is easier for credit worthy borrowers, and borrowers with less soft information to borrow, one would expect number of creditors to be positively correlated with hard information.

(vi) *Loan Type*. This variable represents the type of loan taken by the borrower. A loan can be classified into one of four different types: fixed (long term), working capital (short term), letter of credit, and guarantees. The first two types of loans are funded, whereas the last two are non-funded. The non-funded loans are also of short term nature generally. I use loan type as a proxy for hard information because relationship loans are likely to be of longer duration than transaction loans. In other words if a bank has difficulty monitoring a borrower in the long run, it would like to keep its maturity of loans shorter.

Panel B of Table II reports the correlation matrix for the six proxies for hard information. Since the six proxies are measuring the same firm attributes, it is not surprising that most of them are positively correlated to each other. However they are not perfectly correlated, and as such each measure will provide some independent information for testing the various hypotheses.

D. Other Variables:

Panel C of Table II represents the summary statistics for other loan level variables. These include loan amount, amount under default (also separated by duration of default), whether a defaulted loan is under litigation, and the fraction of loan recovered in case of default. I present the summary statistics of these variables both un-weighted and loan-size weighted. Given the skewed size distribution of the data set seen in Panel A, there might be a concern that the summary statistics are driven by “economically insignificant” small loans which are high in numbers. For this reason, I also report the weighted statistics. As Panel C shows, it turns out that the results do not change much by weighting. The mean loan size is about 6.7 million Rs. (median is 0.97 million Rs.),

while the mean default rate is about 4.5% overall. Similarly, banks litigate about a third of the time the borrower defaults, and recover at least part of their defaulted loan about 40% of the time. Although I do not have interest rate information at the loan level, I do have this information at the bank-branch level, which I will use later in the empirical analysis.

III Differences in Lending Composition

Given the above data, I can now explore how *distance* between the ultimate CEO of a bank and her local loan officer shapes the nature of loans given out by foreign banks. Section I outlined three different definitions of *distance*, namely geographical or cultural, size, and institutional. Since the three definitions of distance have some common predictions regarding the type of lending and success at relational lending, I start with a broad definition of distance that includes all the three types mentioned above. This broad definition of distance separates banks into “domestic” (i.e. banks headquartered in Pakistan), and “foreign” (banks headquartered outside Pakistan). As section II pointed out, there are 68 domestic and 22 foreign banks in the data.

Table I showed that foreign and domestic banks have roughly equal market shares. I first test if the two types of banks differ in the composition of their loans. Figure II gives an overview of this test. For each of the six measures of hard information discussed in the preceding section, it plots the distribution of aggregate lending for both foreign and domestic banks. The plots consistently show that regardless of the definition of hard information used, foreign banks lend significantly more to hard information firms compared to domestic banks.

Domestic banks make less than 40% of their loans (by value) to the top 1% of firms by size, whereas foreign banks make more than 80% of their lending to these firms (Fig II-a). Almost a 100% of the foreign bank financing is concentrated in the big three cities, whereas domestic banks lend a little over 20% of their loans to small and medium sized cities as well (Fig II-b). More than 20% of foreign lending goes to foreign firms operating in Pakistan, while only 3% of domestic lending goes to such firms (Fig II-c). Foreign banks are also significantly more likely to lend to firms that are part of large groups (conglomerates). A little over 80% of the foreign banks’ lending goes to firms in the large conglomerate, whereas only 40% of the domestic banks’ lending goes to such firms (Fig II-d). Foreign banks are also more likely to lend to firms which already have multiple sources of credit available to them. Almost 90% of their lending goes to firms which have four or more banks as their creditors. Comparatively only 50% of domestic banks’ lending goes to

such firms (Fig II-e). Finally, a look at the maturity structure of loans reveals that foreign banks are more likely to lend out short-term loans such as working capital, guarantees, and letters of credit compared to domestic banks which lend out more long-term fixed capital loans (Fig II-f). As pointed out earlier, these longer term loans are more likely to involve relationship lending.

There are two econometric limitations of the graphical analysis in Figure II that need to be addressed. First it does not tell us whether the differences between foreign and domestic banks are significant in a statistical sense. Second it does not tell us whether the different measures of hard information have an *independent* effect on the lending distribution, i.e. whether differences in lending with respect to a given variable would remain once I control for the remaining measures of hard information. The second point is important only insofar as we want to make sure that the result in Figure II are not manifestations of the same effect (e.g. “the size effect”). This can be a concern given that most of the proxies for hard information are positively correlated with each other. To address these limitations of the graphical analysis, Table III repeats the exercise of Figure II in a statistical framework.

Recall that in the cross-sectionalized version of the data set, the unit of observation is a loan, identified by a bank-firm pair. For any given variable measuring hard information such as “firm size”, I can test whether the value-weighted mean of that variable for domestic banks is different from that for foreign banks. For each hard information variable, Table III computes these means and also their differences. The results confirm Figure II. The differences in value-weighted means are positive and statistically significant for all variables except loan-type.

Table III also reports the difference in the mean of hard information proxies after controlling for the remaining measures. Given positive correlations between the different measures in Table II, this is done to check whether each measure has an independent effect. The results show that even after putting in all of the remaining five measures of hard information as controls, most of the differences between foreign and domestic banks remain significant.

At this stage it is worth discussing the proper computation of standard errors. Although the data set is at the loan level, loans from the same bank are likely to be correlated. I therefore cluster the standard errors at bank-level (90 banks in all) throughout this paper. Standard error estimates should be fairly conservative in this paper as a result.

IV Testing For Distance Constraints

The results of the preceding section support the observation made by Stiglitz in the beginning of this paper¹³. Foreign banks appear to shy away from information and monitoring intensive “soft information” firms. The results are consistent with the theory of *distance constraints* outlined in section I that argues that higher informational, agency and enforcement costs for foreign banks prevent them from lending to “soft information” firms.

However, as section I explained, one needs to be careful before attributing these results to differential costs for foreign and domestic banks. In particular, there could be an alternative *risk preferences* explanation where “soft information” is simply a proxy for riskier firms that domestic banks prefer more than foreign banks due to the limited liability moral hazard problem.

In this section I compare the default risk of loans, their relational attributes such as renegotiation, recovery, and litigation, and finally interest rates to discriminate between the *risk preferences* and *distance constraints* hypotheses. While the *risk preferences* hypothesis predicts high risk and low returns for domestic bank loans, the *distance constraints* hypothesis predicts better ability of domestic banks to perform relational functions such as renegotiation and recovery.

A. Loan Default

Figure III plots the cumulative density function of lending with respect to default rates for domestic and foreign banks. Although the default rate for domestic banks is slightly higher than that of foreign banks on average (6.0% vs. 3.5% for foreign), as columns (1) and (2) of Table IV show, the difference is not statistically significant. Moreover, default rate by itself does not convey the full picture regarding risk. The net risk of a loan not only depends on the default rate, but also on the interest rate charged on the loan as well as the recovery from loan in case of default. This is done in the following sections.

A general point to take away from Figure III is that the probability distribution of default rates is bipolar. Loans are either not in default at all (default rate close to 0), or completely in default (default rate close to 1). This implies that running regressions with the default rate as the dependent variable is almost like running a linear probability model. All regressions therefore report the heteroskedasticity consistent standard errors.¹⁴

¹³There is similar evidence from other countries. For example, Clarke et al (2000) find that foreign banks in Argentina devote a disproportionately part of their loan portfolio to large companies compared to private domestic banks (35% vs. 20%).

¹⁴The standard concern with linear probability models that the predicted probabilities may lie outside of the unit

B. Recovery, Renegotiation, and Litigation Conditional on Default

As section I highlighted, if foreign banks face higher information, agency, and enforcement costs because of *distance constraints*, then they will avoid making relationship specific loans which are more information and monitoring intensive. Some of the evidence in section III already hints at the possibility of domestic banks being involved in more relationship specific lending. For example, domestic banks are much more likely to be the sole creditor of its borrower than foreign banks. Similarly they are more likely to lend to borrowers in need to relationship specific banks such as small firms, local firms, and firm without prior access to credit. In this section, I further investigate if domestic banks are better at relationship specific activities such as bilateral renegotiation, and recovery in case of default.

I have data on recovery, renegotiation, and litigation for the last five quarters of the data (April 2001 to April 2002). The central bank did not collect this information prior to that. Since I am only interested in comparing the behavior of banks conditional on default, I restrict myself to the set of loans that were in default during the last five quarters. There are 5,762 such loans in the data set.

Columns (3) through (6) in Table IV compare the behavior of domestic and foreign banks conditional on default. I construct a 0/1 variable indicating whether there was *any* recovery on the defaulted loan or not. Both weighted and un-weighted results (columns (3) and (4)) show that foreign banks recover something from only around 19% of their defaulted loans, whereas domestic banks recover from around 45% of their defaulted loans. The difference of about 26% is both large economically, and significant statistically. Moreover, this difference is robust to putting in all the possible controls in a very non-parametric way, such as dummies for city location, foreign firm, loan type, borrower size, group size, number of creditors, and industry affiliation. The robustness to different types of controls shows that the results are unlikely to be driven by differences in the type of borrower. For example, one interpretation of controls is that domestic banks have higher recovery rates even when we compare borrowers in the same city, of the same size, belonging to the same industry, with similar loan type, and similar credit background.

Next I test for the behavior of banks in case a loan defaults. A bank has two options in case of default by a borrower. It can either try to bilaterally renegotiate with the defaulter, or it can involve a third-party to mediate in the form of litigation. A bank with better relational skills is more likely to renegotiate. Since I have information in the data set on whether a bank chooses to

interval is not a concern in our framework as we only compute differences across bank types.

litigate or renegotiate, I test if foreign banks are more likely to litigate than domestic banks.

Comparing the propensity to litigate, the un-weighted results (column (6)) show that foreign banks are significantly more likely to take a defaulter to court rather than renegotiate with it. Foreign banks take a defaulter to court 63% of the time compared to only 24% for domestic banks. The result is robust to putting in the complete set of controls as before. The difference however disappears once the averages are taken after weighing each observation by the size of the loan (column (5)). In the weighted results, domestic banks litigate about 33% while foreign banks only litigate marginally higher at about 39%. This suggests that foreign banks are less likely to litigate on their larger defaults. However, the un-weighted results shed some interesting light on the type of average default faced by foreign and domestic banks. The results are consistent with a story that domestic banks make more relationship loans, which allows them to renegotiate more, and successfully so as their recovery rates suggest.

Although the recovery and unweighted renegotiation results were robust to all types of controls, one may still argue that unobserved borrower characteristics are responsible for these results. This however is unlikely to be the case given that all observable characteristics showed that domestic bank borrowers have “softer” characteristics. Apriori these are likely to be firms with lower probability of successful renegotiation and recovery.

Nevertheless, the details of the data set allow me to directly address the unobserved heterogeneity criticism by completely controlling for any potential borrower level heterogeneity. Table V does so by repeating Table IV after putting in borrower fixed effects. Thus Table V only looks at firms that borrow from *both* types of banks. Comparing the default rates of such borrowers, columns (1) and (2) in Table V show that there is no significant difference in the default rate across the two banks. It is important to point out here that there are no automatic “cross-default” clauses in the banking laws of Pakistan. Thus theoretically it *is* possible for a firm to default to one bank but not another. It would be the loan covenants that would determine whether this is legal. Thus results of column (1) and (2) can also be interpreted as suggesting that both domestic and foreign banks are equally tough at monitoring the seniority of their loans and enforcing their loan covenants.¹⁵

Columns (3) through (6) restrict the data to only those borrowers who default to both domestic and foreign banks. I can thus compare the recovery and renegotiation rates across domestic and foreign banks for the *same* firm. The results show that even for the same firm, foreign banks have

¹⁵In a related work, a similar exercise shows that government banks are excessively lax at monitoring their loan covenants.

significantly lower recovery rates (about 13 percentage points lower), and tend to litigate more at the expense of renegotiation. This is strong evidence that foreign banks are weaker at relational contracting than domestic banks.

C. Interest Rates, and Loan Level Return

An important difference between the *distance constraints* and *risk preferences* hypotheses lies in their predictions regarding the overall profitability of loans given out by foreign and domestic banks. Under the *risk preferences* view, domestic banks would be willing to make high risk and low NPV loans because they do not fully internalize the downside of loans. However according to *distance constraints*, the soft information loans given out by domestic banks will be as profitable as the hard information loans given out by foreign banks. To test the two theories, I compute and compare the gross return on loans for domestic and foreign banks. The return on a loan depends on the interest rate, default rate, as well as recovery rate in case of default. In particular, the gross return (R_j) from a typical loan of bank j is given by:

$$(1 + R_j) = (1 - \delta_j)(1 + i_j) + \delta_j q_j$$

where δ is the default rate, i the loan interest rate, and q the percentage of loan recovered in case of default.

The data set does not have interest rate information at the loan-level. However, the central banks does collect the average weighted interest rate for each bank branch. I can therefore compute for both domestic and foreign banks, the average interest rate charged on their loans (weighted by the size of the loan). The result shows that the interest rate charged by domestic banks is indeed higher than foreign banks. For example, the rupee-weighted lending rates in June 2002 were 10.75% and 12.75% for foreign and domestic banks respectively. The higher interest rate for domestic banks is not surprising given that their loans had slightly higher default rates.

I can now compute the gross return from a typical loan given out by foreign and domestic banks. From the analysis so far, we know that foreign and domestic banks have default rates of 3.5% and 6.0%, recovery percentage of 10.2% and 20.4%, and interest rates of 10.75% and 12.75% respectively. Plugging in all these numbers into the formula above, shows that the gross loan return for *both* banks is the same 7.2%!

Loan level results show that the gross return from loans for foreign and domestic banks is the

same. However, the tests do not tell us anything about the costs incurred by foreign and domestic banks in making these loans. Therefore, to test for overall efficiency of banks, I compare their overall profitability. Unfortunately the overall profitability numbers are only available for 33 of the banks (21 foreign and 12 domestic). Using this data, the difference in return on assets between domestic and foreign (domestic-foreign) is only 0.27%, which is both economically and statistically insignificant. Thus domestic and foreign banks have similar overall costs as well.

To summarize, Tables IV and V show that loan by domestic and foreign banks have similar risk characteristics in terms of net default rate and loan return. On the other hand, domestic banks have more than twice as high recovery rates as foreign banks, and are more than twice as likely to renegotiate in case of default. These results were robust to the many non-parametric controls and even firm fixed-effects. The relative failure of foreign banks at recovery of bad loans, and at renegotiation is consistent with the notion that foreign banks have a disadvantage at performing relational functions due to *distance constraints*. As the theory suggested, distance related information, agency, and enforcement costs hinder the success of foreign banks at relational contracting. Consequently foreign banks prefer arms length transaction, avoid bilateral renegotiation, and are less successful at recoveries.

The results also negate any alternative explanation based on *risk preferences*. Contrary to the *risk preferences* prediction, loans made by domestic banks do not have significantly higher default rates, and in fact were as profitable as loans made by foreign banks. In addition, the results of renegotiation and recovery are also not consistent with the *risk preferences* explanation. If domestic banks preferred to take on riskier loans then there is no reason to believe that they would be better at renegotiation and recovery of bad loans. One could have argued that some unobserved heterogeneity of those riskier loans made it easier to recover loans conditional on default. However as Table V showed, even when looking at the *same* borrower borrowing from both foreign and domestic banks, domestic banks tend to be better at recovery and renegotiation.

Although the *risk preferences* view is rejected by the data as I find no evidence of extreme risk taking by domestic banks, one may argue that the data does not accurately capture the “true” level of risk taken by domestic banks. This may be a concern if domestic banks are engaged in “related lending”, i.e. lending to themselves and close associates, and hide the default of bad related loans by rolling them over (a.k.a. “evergreening”). La Porta et al (2003) for example show evidence of pervasive related lending by domestic banks in Mexico. Since I have complete information on the identity of the borrower as well as major shareholders (directors) of individual banks, I can also

construct the same measure of “relatedness” that La Porta et al (2003) construct, and test for the presence of related lending in my data.

A loan between a bank and its borrower is classified as “related” if the bank and the firm share a “related director” in common. The director of a firm is defined as “related” to the bank it borrows from if either the director itself, or its siblings/children/father/spouse is a director of the bank. Notice that since the owners of foreign banks are foreign, the “related” definition can only be applied to domestic banks. The results show that after classifying borrowers in this fashion only 4.2% of the lending by domestic banks is given to “related” firms, compared to 20% in Mexico. Moreover, there is no significant difference in the default rate of related vs. unrelated loans. The results therefore show that unlike Mexican domestic banks related lending is not a concern in my data set.¹⁶

V What are Distance Constraints Made Of?

The broad definition of *distance* separated banks into foreign and domestic, and showed the effects of *distance constraints* on the type and nature of lending by banks. However, as section I highlighted, “distance” can have a number of different interpretations. In particular, the section highlighted three different interpretations of distance. In this section I consider each of these interpretation in turn and test which one is the most likely determinant of *distance constraints* found above. The tests are based on the simple observation that if *distance constraints* are driven by a particular definition of distance, then the constraints should be stronger for a more “distant” foreign bank.

A. Is “Distance” Culture / Geography?

The first interpretation of distance is based on the idea that as physical distance between the top management (CEO) of a foreign bank and its local loan officers in an emerging market increases, so do information and agency costs between the two parties. There could be a number of reasons for these higher costs. In most cases and certainly for the foreign banks in my data set, as physical distance is highly correlated with culture, language, and social customs. This would make the top management less familiar with the local economic, political, and social environment. The lack of such “soft knowledge” can make it difficult for top management to understand and verify “soft information” conveyed by the local loan officers.

¹⁶ As a related work on government lending in Pakistan shows, the lack of “related lending” by domestic banks could be because all such demand for “corrupt” loans is soaked up by the government banks in Pakistan.

Similarly when two countries are further apart geographically and culturally, there is less people to people interaction between the two societies. In other words, social networks between the two countries are not very deep or broad. This too has implications for the ease of communication, particularly when it comes to soft information. For example, if the top management hears great things about an entrepreneur or new industry from the local loan officer, it is easier for them to verify this piece of soft information if they have some independent personal contacts in the local country. Greater social interaction would also make it easier to gather information and hence monitor the local loan officers of the bank.

Another factor which can play a crucial role in the successful communication of “soft information” is common training or education. It may be easier for U.S. banks to “trust” the local loan officers if they went through the U.S. universities for training. Common traditions like this make it easier for employees to communicate with each other. For example, an academic can judge an applicant’s recommendation better if he knows something about the background of the person writing the recommendation.

As geographical distance inside a bank reduces, so will all these factors related to culture, communication, and trust. The consequence would be a greater ability of the CEO and top management to rely on soft information from the local loan officers and consequently give them more discretion. It is partly for this reason that companies often prefer to expand to geographically proximate regions first. For example, Korean conglomerates expanded into Asian countries first before expanding to Europe and the U.S. Similarly, the recent growth in IT and call center outsourcing to India has been led by U.S. companies that had Indian expatriates in top management who could then communicate successfully with the outsourced Indian firms.

To see if informational and agency costs related to cultural and geographical distance are responsible for *distance constraints*, I test if *distance constraints* bind harder the more geographically and culturally distant a foreign bank is. I first classify foreign banks into two categories based on geographical and cultural distance from Pakistan: (i) Asian, and (ii) Non-Asian. Asian foreign banks belong to countries in Asia (Japan and the Middle-East), whereas Non-Asian foreign banks belong to US and Europe. Of the 22 foreign banks, 11 are Asian and 11 are Non-Asian. I then test if the main *distance constraints* results so far are stronger for Non-Asian foreign banks, and weaker (but still present) for Asian foreign banks.

Panel A of Table VI tests if lending composition is more skewed towards hard information firms for Non-Asian foreign banks than Asian foreign banks. It repeats the tests of Table III, but this

time compares the value-weighted means of hard information proxies for Non-Asian and private domestic banks to the Asian foreign banks. The results show that for almost all the different proxies, the mean is higher for Asian foreign banks than private domestic banks. But more importantly the mean for Non-Asian foreign banks is even higher than that of Asian foreign banks, and the differences are significant.

Similarly, results on recovery and litigation in Panel B of Table VI show that *distance constraints* bind harder for more geographically distant banks. For example, recovery rates are low for Asian banks compared to domestic banks, but they are even lower for Non-Asian banks compared to the Asian banks. Similarly, Asian banks litigate significantly more than domestic banks, but Non-Asian banks litigate even more than Asian banks. All difference are both economically and statistically significant (except for the weighted litigation results as usual). The results of Table VI therefore support the view that cultural, communication and agency costs related to geographical and cultural distance amplify *distance constraints*.

B. Is “Distance” Size?

As Table I showed, foreign banks are bigger than domestic banks on average. But since there are many more domestic than foreign banks, the largest domestic banks are as big (and sometimes bigger) than foreign banks. However, the size of a foreign bank in Pakistan does not necessarily capture its true “scale” from an organizational perspective. As I am interested in the “distance” between the CEO and her local officers, the correct measure of size should include the worldwide operations of a foreign bank. With this definition of size, one would expect that larger foreign banks have greater number of organizational layers or hierarchies between the CEO and her loan officer in Pakistan. In other words, bank size can be used as a proxy for “hierarchical distance”, and one could argue that our *distance constraints* results were driven by differences between large and small banks. For example, even in the absence of any informational or agency effects of geographical distance, large size by itself may lead foreign banks to rely on hard information instead of soft information because of their “hierarchical” nature. This point is emphasized in a recent paper by Berger et al (2002) in which they compare large and small bank lending within the U.S.

To test if size can explain *distance constraints*, I first construct a worldwide measure of bank size using the BankScope data set. For each foreign bank, I construct its worldwide size by summing its assets across all the countries it operates in. I then repeat the regressions of Table VI, but this time also include log of bank size in the regressions. If bank size is an important determinant of *distance*

constraints, then (i) *distance constraints* should be stronger for bigger banks, and (ii) the effect of geographical and cultural distance will diminish with the inclusion of bank size variable. However Table VII shows that none of this is true, thus casting doubt on the plausibility of a size based explanation. Although the regressions shown in Table VII use only log of bank size, I get similar results even after interacting log bank size with bank type dummies. It is also worth pointing out that there is significant overlap in banks size across different bank types.

C. Is “Distance” Institutions?

The third possible explanation for *distance constraints* presented in section I dealt with differences in legal and regulatory framework, or “institutional distance”, between Pakistan and foreign banks’ country of origin. Such differences could make it difficult for the foreign bank to adapt to local banking practices. Consequently foreign banks may only rely on simple arm’s length transaction loans that do not require any special knowledge or adaptation to the local legal environment. Under this “institutional distance” explanation, geographical and cultural distance may just be a proxy for institutional distance.

To test for the plausibility of an institution based explanation of *distance constraints*, I construct three measures of institutional distance. (i) Legal Distance: This variable is 0 if the foreign bank’s legal origin is the same as Pakistan (i.e. British) and 1 otherwise. (ii) Regulatory Distance: This variable is the difference in regulatory requirements between Pakistan and the foreign bank’s country of origin according to the cross-country database of bank regulation and supervision compiled by Barth, Caprio, and Levine (2001). (iii) Income Distance: This variable measures the log of difference in income per capita between the foreign bank’s country of origin and Pakistan. I then repeat the regressions of Table VI, but this time also include the three measures of institutional distance interacted with foreign dummy. If institutional distance is important then, (i) *distance constraints* should be stronger for more institutionally distant banks, and (ii) the effect of geographical distance will diminish with the inclusion of institutional distance variables. However none of this is true, thus casting doubt on the plausibility of an institution based explanation.¹⁷

The results above show that cultural, communication and agency costs associated with greater geographical separation can lead foreign banks to rely less on soft information and more on hard information. Bank size or institutional differences could not explain this result.

It is important to point out here that there does not have to be a monotonic relationship between

¹⁷Results not reported but available on request.

geographical distance and soft information barriers. For instance, even though the U.S. and U.K. are far apart geographically, common culture, history, language and greater interactions among the populations of the two countries can make it easier for firms in the U.S. to use soft information in the U.K. However, in the context of the foreign banks operating in Pakistan, as one moves from Asian to Non-Asian banks, geographical distance is highly correlated with factors such as common culture, history, language, and social interactions.

VI Are Distance Constraints Driven by Political Enforcement?

So far the discussion on costs associated with cultural and geographical distance has relied on the difficulty that distant foreign banks may have in accessing and verifying *information* that is soft in nature. However, one may also interpret these costs as the difficulty that foreign banks have in terms of *enforcement* of soft information firms. To illustrate this point, consider the following example. Suppose domestic and foreign banks have all the information (soft or hard) they need about a potential client. However, *information* may not be sufficient to lend to the client because given some information the bank may also need to *enforce* its loan covenants in the future. As such even if both domestic and foreign banks have the same level of information about a client, domestic banks may be better able to lend to that client because they have an edge over foreign banks in *enforcement*. In particular, this comparative advantage in enforcement may be bigger for soft information clients.

Why might domestic banks have this additional capacity to enforce? It is widely believed that access to informal and perhaps illegal social and political networks is important for contractual enforcement in developing countries. A borrower may be threatened with social, political, or even physical consequences in case he tries to abscond and default on his loans. To the extent such informal mechanisms are used in banking, one could argue that domestic banks have better access to these mechanisms. Domestic banks may be better at informal enforcement through the use of “political connections”. For example, domestic banks may have better access to politicians and government officials, which in turn may help them to threaten and discipline their borrowers.

To test whether domestic banks use political pressure to enforce their contracts, I adopt the following strategy. If political pressure is important for enforcement then domestic banks will be more successful at enforcement against “politically unconnected” firms. A firm’s default rate and recovery rate are natural candidates to measure “enforcement”. Thus a simple test could be to compare

enforcement by domestic banks against politically connected and unconnected firms respectively. However, differences in default and recovery can also be driven by unobserved differences between politically connected and unconnected firms. Therefore to take out the effects of any unobserved heterogeneity, one could do a difference-in-differences estimation by taking out the difference in enforcement between politically connected and unconnected firms borrowing from foreign banks. Since under the hypothesis in question foreign banks have no informal political connections, this second difference will only capture the unobserved differences between connected and unconnected firms. Econometrically the test can be written as:

$$Y = \alpha + \beta_1(DOM) + \beta_2(UNCON) + \beta_3(DOM * UNCON) + \varepsilon$$

where Y is an enforcement measure such as default and recovery rate, DOM is a dummy for domestic banks, and $UNCON$ is a dummy for “politically unconnected” firms. If political enforcement is an important comparative advantage for domestic banks, then β_3 should be *negative* when Y is the default rate, and *positive* when Y is the recovery rate. In other words domestic banks should be *better* at enforcement against politically unconnected firms.

I will now define how “political connectedness” of a borrower is measured. Since I have ownership information for the borrowing firms, I classify a firm as “politically connected” if any of its directors is a politician who ran in one or both of the two elections held during the 90s (1993 and 1997). Using this approach, 18% of the loans are classified as politically connected. In a related work, I show that this measure of political connections is very useful in explaining corruption and high default rates on government banks. There are thus strong reasons to believe that the political connectedness variable measures “access” to government.

Table VIII shows the results of running the regression above on default rate and recovery rates. As the results show, there is no evidence of domestic banks having stronger enforcement capacity relative to foreign banks. Therefore *distance constraints* are more likely to be driven by the informational advantages rather than an informal enforcement advantage.

VII How important are distance constraints?

This paper showed that communication and agency costs related to cultural and geographical distance make it difficult for foreign banks to lend to *profitable* soft information firms requiring close monitoring. Consequently foreign banks shy away from relationship contracts, leading to less

successful bilateral renegotiations in case of default, and lower overall recovery of bad loans. None of the alternative explanations based on differences in *risk preferences* were able to explain these results.

A legitimate question at this point concerns the overall economic importance of *distance constraints*. In particular, are *distance constraints* large enough so that if one got rid of the local private banks, a significant number of firms will lose access to credit? Or is it the case that *distance constraints* are small so that even if one got rid of local private banks, most of the soft information firms currently borrowing from these banks would switch to foreign banks at only marginally higher costs? The questions are difficult to answer in practice since one does not observe the counter-factual scenario of local private banks disappearing.

However, a useful asymmetry in the historical regulation of foreign and private domestic banks can provide an answer to the above questions. As section II pointed out, prior to 1990 private domestic banking was not allowed in Pakistan, but foreign banks were still allowed to operate under some restrictions. In other words, when the banking sector was liberalized in 1990, foreign banks enjoyed a head start over private domestic banks as they already had operations in many parts of the country. After 1990 there was no longer any asymmetry in regulation as both private domestic and foreign banks were allowed to operate and expand.

The change in regulation in 1990 presents an opportunity to estimate the economic cost of *distance constraints* by measuring the impact of the entry of new private domestic banks in areas which already had a foreign bank. If *distance constraints* are economically small in magnitude, then one would expect a lot of “switching” to private domestic banks of soft information firms that were earlier borrowing from foreign banks. These firms would have had to borrow from foreign banks because of a lack of a more efficient alternative.¹⁸ However, the same firms would switch to local private banks as soon as they became available because of the efficiency advantage. On the other hand if *distance constraints* are large in magnitude then in the absence of private domestic banks, soft information firms would find it difficult to borrow from foreign banks. Hence when private domestic banks enter the market, most of their soft information clients will be “new” first time borrowers who have never had a loan before.

Although the regulation changed in 1990, the period of my sample only begins towards the end of 1996. However despite the rapid expansion in branch network of private domestic banks in the

¹⁸Before 1990 the alternative was government banks, but related work on government banks shows that government banks were extremely inefficient when lending to these “soft informaion” firms. Instead of providing credit to such legitimate firms, government banks mostly favored the inefficient and politically powerful firms.

early 90s, there is still sufficient new branch entry during my sample period to perform the tests above.

Table IX gives the characteristics of loans given out by new bank branches for each of the three types of banks, namely domestic, Asian foreign, and Non-Asian foreign.¹⁹ The share of loans given out by new branches is much bigger for domestic banks compared to foreign banks. New bank branches of domestic banks gave out 7,104 loans compared to 1,611 loans by Asian foreign banks and only 338 loans by Non-Asian foreign banks. More importantly, Table IX shows no evidence of “switching” of soft information firms towards domestic banks.

First, Panel A shows that 78.2% of loans by new domestic bank branches were given to first time borrowers, i.e. these borrowers had no other access to credit prior to borrowing from domestic banks. Only 6.3% of new branch loans were given to borrowers with prior borrowing from foreign banks. Compared to domestic banks, only 63.4% and 38.5% of loans by new Asian and non-Asian foreign bank branches were given to first time borrowers. The differences in the percentages of first time borrowers between domestic and foreign banks are always statistically significant.

Second, Panel B shows that the loan given out by new domestic bank branches are “soft” in nature: both in comparison to overall domestic bank loans in Table III, and also in comparison to new branch loans by Asian and Non-Asian foreign banks. The evidence in Table IX thus shows that entry of new private domestic bank branches gives credit access to soft information firms that had never been able to get credit from existing foreign bank branches. Similarly less *distant* foreign banks are better able to provide first time credit to soft information borrowers. All this suggests that the cost of *distance constraints* can be sufficiently high for *distant* foreign banks to exclude certain soft information firms from getting access to credit.

VIII Concluding Remarks

The presence of foreign banks in developing countries is both large and pervasive. A look at over 1,600 banks in 101 developing countries reveals that foreign banks are present in 78 of these countries comprising at least 19% of the total banking assets, or 35% of the private banking assets. However despite the increasingly dominant role of foreign banks, not much is known empirically about their relative strengths and weaknesses.

This paper showed that the informational and agency costs related to cultural and geographical

¹⁹Some of these branches may have existed prior to 1996 for deposit taking, but they start lending during our sample period.

differences can lead foreign banks to shy away from lending to soft information firms. Such *distance constraints* also make it difficult for foreign banks to perform relational functions such as bilateral renegotiation and recovery of bad loans. However, it is important to mention that this paper should not be seen as a negative endorsement for foreign banks. As per popular perception, foreign banks are very prudent in their lending leading to low levels of default. Moreover, even though foreign banks avoid lending to soft information sectors of the economy, they can still have a positive general equilibrium effect for soft information firms by freeing up more domestic bank capital for these firms. As such introduction of foreign banks in a poor country can be a good step towards promoting banking stability and sound banking practices. However, the paper cautions against the sole reliance on foreign capital for alleviating a country's lack of financial development. A strong local financial market is essential for lending to informationally difficult soft information borrowers such as small startup firms.

A side message to take away from this paper is that domestic private banking *can* work even under less than perfect legal and regulatory environment. As a number of tests showed, private domestic banks in Pakistan do not suffer from serious moral hazard problems such as related lending or excessive risk taking. Why do private banks not engage in risky behavior? A possible answer is that the absence of a government bail out policy or deposit insurance in Pakistan keeps the cost of deposits closely linked to the status of a bank's loan portfolio. To formally test this hypothesis, I regressed the publicly available bank credit ratings on the bank-level loan default rate. The results show that the correlation of ratings to default rate is much stronger for domestic banks than foreign banks, with an R^2 of 37% and 5% respectively. The low R^2 for foreign banks is not surprising since ratings for foreign banks are influenced more by their international reputation.

In the end, a legitimate question concerns the generalizability of my results for developing countries at large. While no two countries are alike, there is evidence to suggest that the *distance constraints* identified in this paper can apply more broadly. For example, as the quote by Stiglitz suggested, the bias of foreign bank lending in developing countries towards bigger and more "hard information" firms is well-known. However the mechanisms behind *distance constraints* identified in this paper are more likely to be seen in countries with similar historical, economic, and institutional background (e.g. Bangladesh, India, Sri Lanka etc.). For certain other emerging economies such as Latin America, *distance constraints* may operate differently for historical and institutional reasons. Determining the exact nature of these constraints under different regulatory and institutional environments should be a fruitful area for future research.

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FIGURE I
Defining “Distance”

A Typical Foreign Bank

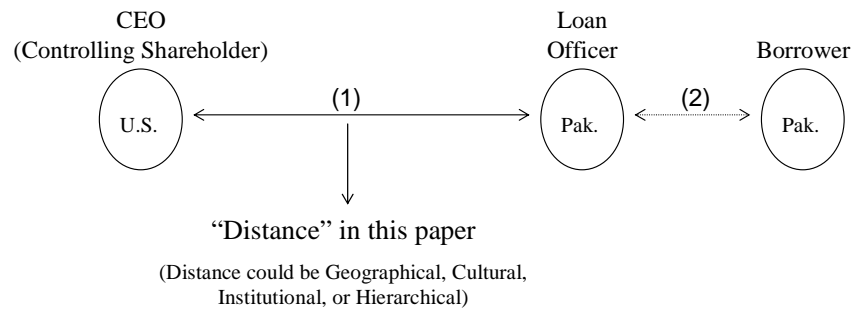


FIGURE II
Lending Composition of Domestic and Foreign Banks

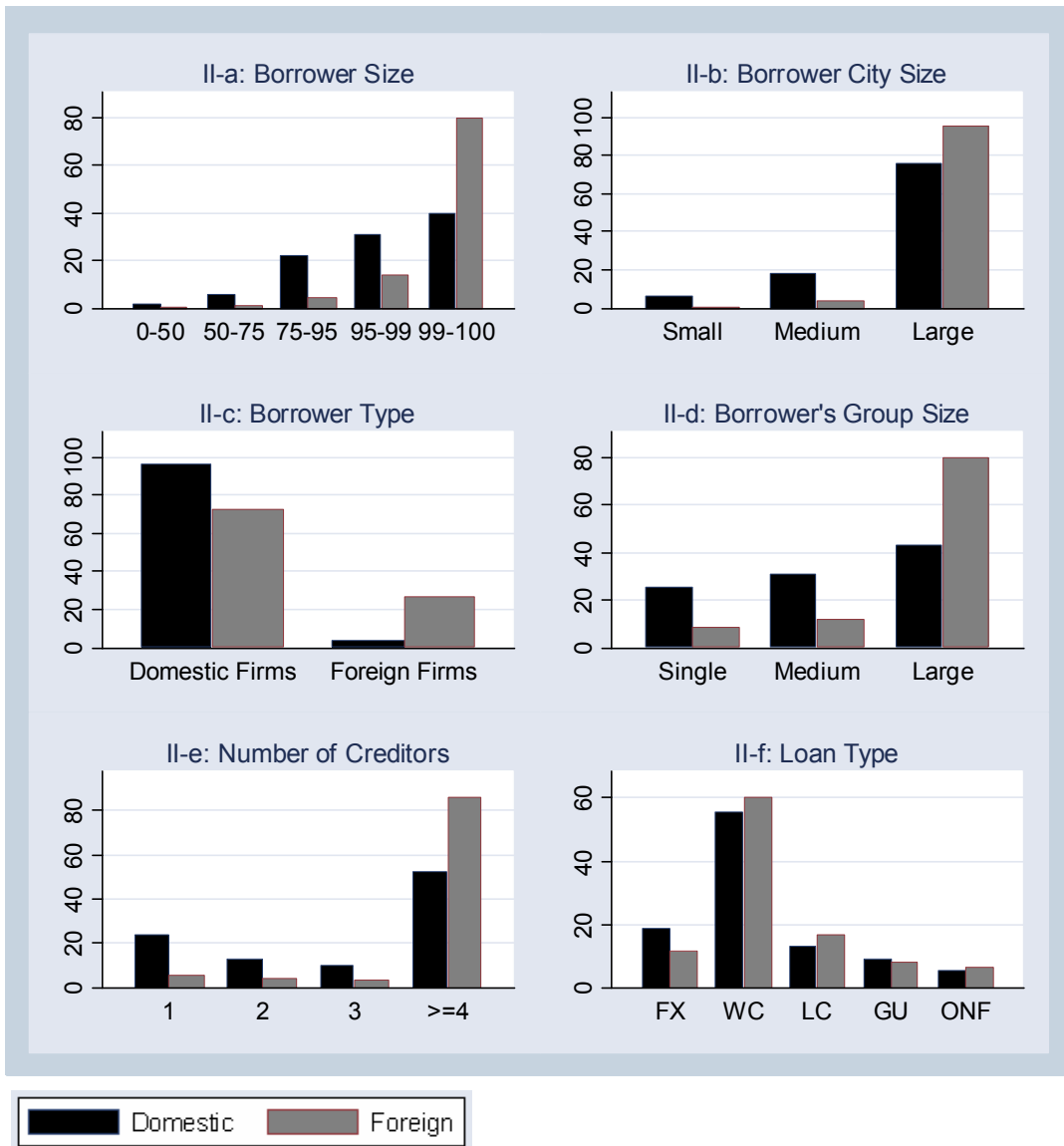
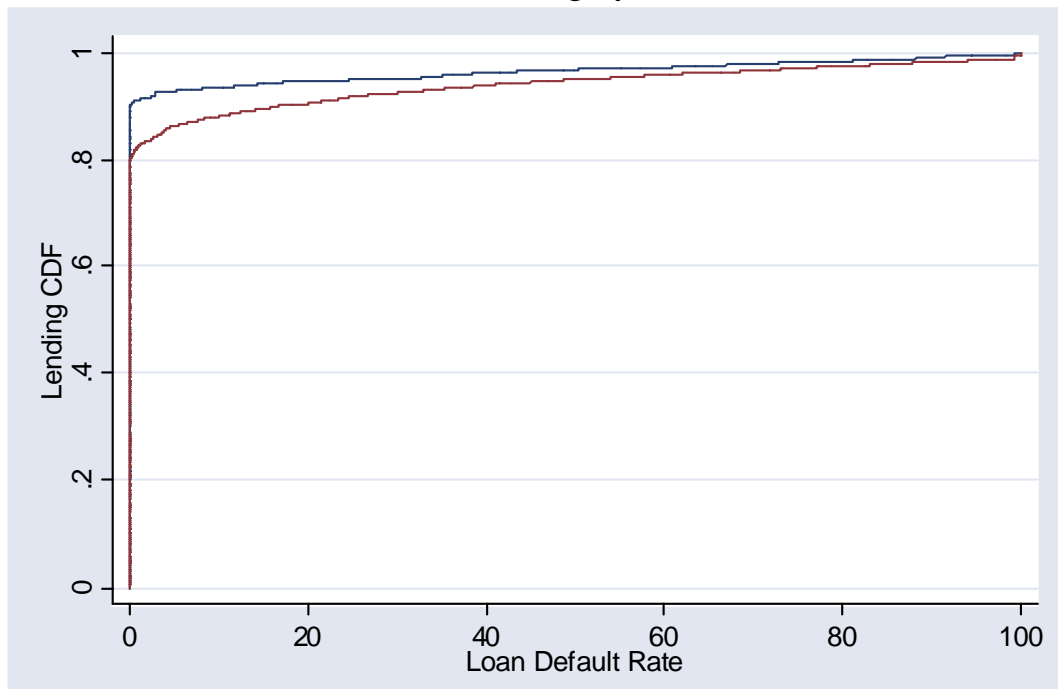


FIGURE III
CDF of Bank Lending by Default Rate



Y-axis represents the percentage of total bank lending which is at or below the default rate on the X-axis. The upper line represents foreign banks, and the lower line represents domestic banks.

TABLE I
DATA DESCRIPTION

Panel A: Data Coverage			
No. of quarters	25 (April 1996 to April 2002)		
No. of banks	90		
No. of unique borrowers	62,253		
No. of unique loans	79,323		
No. of loan-quarter observations	588,546		
	<i>Mean</i>	<i>Min</i>	<i>Max</i>
No. of loans in a quarter	24,716	15,952	31,727
No. of banks in a quarter	85.2	78	88
Panel B: Bank Classification			
	No. of banks	Loans ¹	Market Share
Foreign	22	260	49%
Private Domestic	68	268	51%

¹ in billions of 1995 Pak Rs.

TABLE II
SUMMARY STATISTICS

Panel A: "Hard Information" Variables						
<i>Size (percentile)</i>	<i>0-50</i>	<i>50-75</i>	<i>75-95</i>	<i>95-99</i>	<i>99-100</i>	
% of total lending	1%	3%	11%	20%	65%	
# of loans (79,323 total)	23,854	19,632	21,004	8,484	6,349	
<i>Location</i>	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Unclassified</i>		
% of total lending	2%	8%	89%	1%		
# of loans (79,323 total)	5,876	10,918	58,952	3,577		
<i>Foreign Firm</i>	<i>No</i>	<i>Yes</i>				
% of total lending	82%	18%				
# of loans (79,323 total)	78,830	493				
<i>Group Size</i>	<i>Stand Alone</i>	<i>Intermediate</i>	<i>Conglomerate</i>	<i>Unclassified</i>		
% of total lending	12%	18%	66%	3%		
# of loans (79,323 total)	35,510	15,504	11,801	16,508		
<i>Number of Creditors</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>>6</i>
% of total lending	13%	7%	6%	5%	3%	65%
# of loans (79,323 total)	47,319	12,152	5,388	3,022	1,783	9,659
<i>Loan Type</i>	<i>Fixed</i>	<i>Working Capital</i>	<i>Letter of Credit</i>	<i>Guarantees</i>	<i>Other</i>	
% of total lending	10%	59%	13%	8%	10%	
# of loans (79,323 total)	20,806	42,632	9,000	5,584	1,301	
Panel B: Correlation Matrix						
	<i>Size</i>	<i>Location</i>	<i>Foreign Firm</i>	<i>Group Size</i>	<i>Number of Creditors</i>	<i>Loan Type</i>
<i>Size</i>	1					
<i>Location</i>	0.03	1				
<i>Foreign Firm</i>	0.19	0.11	1			
<i>Group Size</i>	0.56	0.24	0.20	1		
<i>Number of Creditors</i>	0.66	0.19	0.20	0.58	1	
<i>Loan Type</i>	-0.02	-0.06	0.01	-0.08	-0.09	1

TABLE II (CONTINUED)
SUMMARY STATISTICS

Panel C: Other Variables					
Variable	Mean	S.D.	Min	Max	Obs.
Loan Size ('000s of 1995 Pak Rs.)	6,654	36,716	0.62	4,399,366	79,323
<i>Default Percentage:</i>					
Overall (un-weighted)	4.46	16.39	0	100	79,323
Less than a year (un-weighted)	1.36	6.88	0	100	79,323
Over a year (un-weighted)	3.65	15.96	0	100	79,323
Overall (weighted)	4.81	17.00	0	100	79,323
Less than a year (weighted)	1.25	5.84	0	100	79,323
Over a year (weighted)	4.01	16.54	0	100	79,323
<i>Conditional On Default¹:</i>					
Litigation (un-weighted)	27.92	44.87	0	100	5,762
Recovery (un-weighted)	40.07	49.01	0	100	5,762
% Recovery (un-weighted)	26.60	41.23	0	100	5,762
Litigation (weighted)	31.84	46.59	0	100	5,762
Recovery (weighted)	36.75	48.22	0	100	5,762
% Recovery (weighted)	17.43	33.38	0	100	5,762

¹ The litigation and recovery information is only available from April 2001 to April 2002

TABLE III
LENDING COMPOSITION
DIFFERENCES BETWEEN DOMESTIC AND FOREIGN BANKS

	Value-weighted Means for "Hard Information" Proxies					
	(1)	(2)	(3)	(4)	(5)	(6)
	Size	Location	Foreign Firm	Group Size	No of Creditors	Loan Type
Foreign	4.70 (0.05)	2.95 (0.02)	0.26 (0.03)	2.72 (0.04)	3.68 (0.08)	0.93 (0.03)
Domestic	4.01 (0.05)	2.72 (0.05)	0.035 (0.005)	2.23 (0.05)	2.92 (0.08)	0.81 (0.11)
Difference	0.70 (0.07)	0.24 (0.05)	0.23 (0.03)	0.50 (0.06)	0.77 (0.11)	0.12 (0.11)
Difference with controls ¹	0.13 (0.03)	0.18 (0.03)	0.11 (0.03)	0.11 (0.04)	0.08 (0.05)	0.16 (0.12)
Observations	79,323	75,746	79,323	62,815	79,323	79,323

The results are based on the cross-sectional database of 79,323 loans covering a period of 1996 to 2002. Standard errors reported in parentheses are clustered at the bank-level (90 banks in all). Size is coded 1 through 5 representing the size of borrower, Location is coded 1 through 3 representing the city size of the borrower, Foreign Firm is a dummy for whether the borrower is a multi-national, Group Size is coded 1 through 3 representing the group size of the borrower, and Loan Type is a dummy for whether the loan is a short term loan.

¹ The controls include 5 loan-type dummies, 5 borrower size dummies, dummy for whether the borrower is a foreign firm, dummy for the number of creditors the borrower has, 3 group size dummies, 134 dummies for each of the city/town of borrower, and 21 dummies for the industry of the borrower.

TABLE IV
DEFAULT, RECOVERY, AND LITIGATION

	Conditional on Default					
	Mean Default Rate (%)		Mean Recovery Rate (%)		Mean Litigation Rate (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign	3.53 (0.81)	4.32 (0.77)	18.11 (3.86)	18.96 (2.93)	38.87 (8.50)	63.18 (5.08)
Domestic	6.04 (1.98)	4.54 (1.00)	44.39 (7.33)	46.05 (10.62)	33.39 (2.28)	24.2 (5.35)
Difference	-2.52 (2.13)	-0.22 (1.25)	-26.28 (8.23)	-27.09 (10.98)	5.47 (8.63)	38.97 (7.30)
Difference with controls ¹	-2.54 (2.08)	-0.67 (1.23)	-21.0 (6.92)	-18.08 (5.99)	5.81 (7.66)	34.06 (7.70)
Weighted	Yes	No	Yes	No	Yes	No
Observations	79,323	79,323	5,762	5,762	5,762	5,762

The results are based on the cross-sectional database of 79,323 loans covering a period of 1996 to 2002. Standard errors in parentheses are clustered at the bank-level (90 banks in all). The recovery and litigation data covers the period April 2001 to April 2002.

¹ The controls include 5 loan-type dummies, 5 borrower size dummies, dummy for whether the borrower is a foreign firm, dummy for the number of creditors the borrower has, 3 group size dummies, 134 dummies for each of the city/town of borrower, and 21 dummies for the industry of the borrower.

TABLE V
DEFAULT, RECOVERY, AND LITIGATION, USING BORROWER FIXED EFFECTS

Data restricted to borrowers who borrow from both types of banks.						
	Conditional on Default					
	Default Rate (%)		Recovery Rate (%)		Litigation Rate (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign	0.47 (0.72)	0.16 (0.59)	-14 (7.30)	-13.24 (4.33)	5.2 (9.40)	13.39 (5.96)
Loan-size Weighted	Yes	No	Yes	No	Yes	No
Borrower Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,453	15,453	390	390	390	390
R-sq	0.71	0.59	0.63	0.47	0.55	0.49

Columns (1) and (2) have 4,217 fixed effects (one for each borrower lending from both domestic and government banks), Columns (3) through (6) have 101 fixed effects (one for each borrower lending from both domestic and government banks, and defaulting on both). Standard errors in parentheses are clustered at the bank-level (90 banks in all).

TABLE VI

IS "DISTANCE" GEOGRAPHY / CULTURE?

Panel A: Lending Composition - Value-weighted Means for "Hard Information" Proxies						
	Size	Location	Foreign Firm	Group Size	No. of Creditors	Loan-Type
	(1)	(2)	(3)	(4)	(5)	(6)
(Domestic - Asian Foreign)	-0.52 (0.07)	-0.16 (0.06)	-0.13 (0.04)	-0.36 (0.08)	-0.56 (0.11)	-0.12 (0.12)
Asian Foreign	4.53 (0.06)	2.87 (0.04)	0.16 (0.04)	2.58 (0.07)	3.46 (0.08)	0.93 (0.04)
(NonAsian Foreign - Asian Foreign)	0.21 (0.08)	0.10 (0.04)	0.12 (0.05)	0.17 (0.08)	0.27 (0.11)	0.01 (0.05)
Observations	79,323	75,746	79,323	62,815	79,323	79,323

Panel B: Recovery and Litigation ¹				
	Recovery		Litigation	
	(1)	(2)	(3)	(4)
NonAsian Foreign	-10.84 (8.56)	-14.99 (6.30)	0.26 (0.07)	0.14 (0.11)
Domestic	11.52 (8.13)	17.13 (7.55)	-0.18 (0.08)	-0.02 (0.08)
Loan-size Weighted	No	Yes	No	Yes
Other Controls	Yes	Yes	Yes	Yes
Observations	5,762	5,762	5,762	5,762
R-sq	0.19	0.22	0.21	0.13

In Panel A, the results are based on the cross-sectional database of 79,323 loans covering a period of 1996 to 2002. Both panels report standard errors in parentheses clustered at the bank-level (90 banks in all).

¹ The omitted category is Asian foreign banks. The weighted regressions use size of loans as weights. All regressions also include controls including the 5 loan-type dummies, 5 borrower size dummies, dummy for whether the borrower is a foreign firm, dummy for the number of creditors the borrower has, 3 group size dummies, 134 dummies for each of the city/town of borrower, and 21 dummies for the industry of the borrower. The recovery and litigation regression only use the loans in default and covering the period April 2001 to April 2002.

TABLE VII
IS "DISTANCE" SIZE?

Panel A: Lending Composition - Value-weighted Means for "Hard Information" Proxies						
	Size	Location	Foreign Firm	Group Size	No. of Creditors	Loan-Type
	(1)	(2)	(3)	(4)	(5)	(6)
Domestic Bank Dummy	-0.58 (0.07)	-0.20 (0.06)	-0.14 (0.05)	-0.41 (0.08)	-0.71 (0.08)	0.00 (0.07)
NonAsian Foreign Bank Dummy	0.40 (0.16)	0.26 (0.07)	0.17 (0.08)	0.37 (0.13)	0.84 (0.18)	-0.41 (0.21)
Log of Bank Size	-0.05 (0.03)	-0.04 (0.01)	-0.01 (0.02)	-0.05 (0.02)	-0.14 (0.04)	0.10 (0.05)
Observations	79,323	75,746	79,323	62,815	79,323	79,323

Panel B: Recovery and Litigation ¹				
	Recovery		Litigation	
	(1)	(2)	(3)	(4)
Domestic Bank Dummy	18.09 (6.61)	24.73 (5.17)	-0.24 (0.07)	-0.04 (0.08)
NonAsian Foreign Bank Dummy	-36.57 (14.80)	-50.94 (9.08)	0.47 (0.09)	0.23 (0.13)
Log of Bank Size	4.16 (1.70)	6.34 (0.95)	-0.03 (0.01)	-0.01 (0.01)
Loan-size Weighted	No	Yes	No	Yes
Other Controls	Yes	Yes	Yes	Yes
Observations	5,762	5,762	5,762	5,762
R-sq	0.20	0.25	0.22	0.13

In Panel A, the results are based on the cross-sectional database of 79,323 loans covering a period of 1996 to 2002. Both panels report standard errors in parentheses clustered at the bank-level (90 banks in all).

¹ The omitted category is Asian foreign banks. The weighted regressions use size of loans as weights. All regressions also include controls including the 5 loan-type dummies, 5 borrower size dummies, dummy for whether the borrower is a foreign firm, dummy for the number of creditors the borrower has, 3 group size dummies, 134 dummies for each of the city/town of borrower, and 21 dummies for the industry of the borrower. The recovery and litigation regression only use the loans in default and covering the period April 2001 to April 2002.

TABLE VIII
ARE DISTANCE CONSTRAINTS DRIVEN BY POLITICAL ENFORCEMENT?

	Default Rate (%)		Conditional on Default	
	(1)	(2)	(3)	(4)
Domestic	1.5 (2.03)	0.86 (1.98)	21.23 (10.61)	15.75 (8.66)
Politically UnConnected	-2.31 (0.75)	-1.71 (0.50)	-5.42 (8.46)	-5.45 (4.83)
Domestic*Politically UnConnected	1.71 (0.85)	0.47 (0.96)	3.41 (9.02)	9.76 (7.22)
Loan-size Weighted	Yes	No	Yes	No
R-sq	0.01	0	0.04	0.04
Number of Obs.	79,323	79,323	5,762	5,762

The results are based on the cross-sectional database of 79,323 loans covering a period of 1996 to 2002. Standard errors in parentheses are clustered at the bank-level (90 banks in all). The recovery data covers the period April 2001 to April 2002. Regression includes a constant as well.

TABLE IX
LENDING COMPOSITION OF NEW BANK BRANCHES OPENED AFTER 1996

Panel A: Previous Banking Experience of Borrowers

	Domestic Banks		Asian Foreign Banks		Non-Asian Foreign Banks	
	No of Loans	Percentage of Loans	No of Loans	Percentage of Loans	No of Loans	Percentage of Loans
None (First Time Bank Borrower)	5,555	78.2	1,022	63.4**	130	38.46**
Only Government Banks	471	6.6	115	7.1	4	1.2
Includes Domestic Banks	627	8.8	273	17.0	11	3.3
Includes Foreign Banks	222	3.1	72	4.5	144	42.6
Includes Domestic and Foreign Banks	229	3.2	129	8.0	49	14.5
<i>Total</i>	<i>7,104</i>		<i>1,611</i>		<i>338</i>	

Panel B: Value-weighted Means for "Hard Information" Proxies

	Size	Location	Foreign Firm	Group Size	No. of Creditors	Loan-Type
Domestic Banks	3.57 (0.17)	2.47 (0.19)	0.00 (0.00)	1.87 (0.07)	1.99 (0.30)	0.95 (0.04)
Asian Foreign Banks	4.23 (0.25)	2.34 (0.12)	0.00 (0.00)	2.34 (0.24)	3.13 (0.23)	0.95 (0.05)
NonAsian Foreign Banks	4.28 (0.19)	2.98 (0.01)	0.05 (0.04)	2.07 (0.27)	3.14 (0.25)	0.99 (0.01)

** 63.4 and 38.5 are both statistically different from 78.2 (the percentage of first time borrowers from domestic banks) at 10% and 5% significance levels respectively, with standard errors clustered at the bank level.

Standard errors (in parenthesis) are clustered at the bank-level (90 banks in all).