How Did Foreign Bank Lending Change during the Recent Financial Crisis? Evidence from a Very Comprehensive Dataset*

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Abstract

Foreign banks are often accused of spreading or exacerbating the consequences of financial crises. Research is often handicapped by incomplete datasets – using aggregate or portfolio-level information or loans to publicly-listed borrowers only. Using data from 50 countries and over 18,000 individual loans before and during the recent global financial crisis, we examine foreign and domestic lending. We investigate both quantity and price effects, compare private and public borrowers, and include borrower characteristics and bank-borrower relationships. We find important differences in bank behavior when comparing U.S. versus non-U.S. banks and borrowers, public versus private borrowers, and relationship versus non-relationship loans.

Keywords: Foreign Banks, Financial Crises, Bank Loans, Relationship Lending, Private and Public Firms
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1. Introduction

Foreign bank lending during financial crises is an important policy issue. These banks are often accused of either spreading or exacerbating the economic consequences of crises by significantly cutting back credit supply in host countries. Specifically, foreign banks are alleged to cut bank lending in host nations in response to adverse balance sheet conditions at home, spreading crises from country to country (De Haas and Van Horen, 2012a). They are also purported to decrease credit to businesses in the host country more than do domestic banks during financial crises, perhaps because they suffer from more serious informational opacity problems, or because they are less willing to take significant risks in host nations. We argue in this paper that the issue of foreign banks reducing credit during financial crises is more nuanced and requires use of a more comprehensive dataset than has been employed in most of the existing literature.

Many research papers address these issues, but have frequently been handicapped by the use of incomplete datasets. These studies typically analyze loan quantity effects only, rather than including loan pricing, which would help to develop a fuller picture of changes in credit supply. They often use aggregate- or portfolio-level information, rather than studying individual loans, which sacrifices a significant amount of relevant information. In some cases, they analyze the effects on publicly-listed borrowers only, rather than including private firms for which bank credit is more important. They usually do not control for borrower characteristics, and so have difficulty distinguishing between the effects on safer versus riskier borrowers and differentiating between loan supply and demand effects. The research often does not distinguish between relationship and non-relationship borrowers, making it difficult to explore the informational opacity question. Finally, many of the studies include data from only one or a small set of countries, making it challenging to draw general conclusions.

We address these data deficiencies in this study by using a very comprehensive dataset that combines information from a number of sources using a substantial amount of human resources. Data on bank ownership and other characteristics and condition are taken from Bureau van Dijk's BankScope. Additional information on foreign versus domestic ownership is from Claessens and van Horen (2014), which is considered to be the more accurate source. These data are hand-matched with Thomson's Loan Pricing Corporation DealScan dataset, which provides loan characteristics and bank-borrower relationship information. We use computerized fuzzy matching in combination with manual verification to map borrowers in DealScan with the Bureau van Dijk's Orbis database, allowing us to obtain borrower characteristics and listing status. The computerized matching is required because of the size of the Orbis database, which contains data on over 10 million private and public firms. Since Orbis only contains the

most recent listing status, additional information on historical listing status is obtained from Bureau van Dijk's Osiris. The final dataset contains over 18,000 loans with bank, loan, borrower, and relationship information from 2004 to 2011 for 50 countries (25 developed and 25 developing) around the world. The data collection, matching, and processing consumed three economists and five research assistants who jointly speak over 10 languages several years to complete.

This paper contributes to several strands of the literature on the costs and benefits of foreign banks. Although there are some micro studies using data from a specific country[1], most papers on foreign banks rely on cross-country aggregate data. For example, Detragiache, Gupta, and Tressel (2008) use country-level data to show that credit to the private sector is lower in countries with more foreign banks. Bruno and Hauswald (2009) use country-level data on foreign bank entry to show that external-finance-dependent industries grow faster in countries with more foreign banks. Feyen, Letelier, Love, Maimbo, and Rocha (2014) use country-level data to show that credit growth is highly sensitive to cross-border funding shocks and this sensitivity is higher in Eastern Europe and Central Asia. Instead of country-level data, our paper uses loan-level data from 50 developed and developing countries to examine differences between foreign and domestic banks. Studying a large panel of loans from countries with varying degrees of economic development allows us to draw more general conclusions about foreign bank behavior.[2]

Some recent research also uses information on individual loans, but does not have borrower characteristics, and instead uses borrower fixed effects as controls (e.g., De Haas and Van Horen, 2012a, 2012b). Because we have detailed information on borrowers, we are able to examine the effects of individual borrower characteristics, including whether the borrower is publicly listed, which turns out to be crucial to our results. We are able to allow borrower conditions and the sensitivities of loan spreads to these to change during the financial crisis, which indeed occurs in our dataset. In addition, we are not restricted to look only at borrowers with multiple loans as is required by the use of borrower fixed effects. Borrower with multiple loans may not be representative of borrowers as a whole. A few papers use borrower information, but they analyze either a single country or a limited set of developing countries (e.g., Ongena, Peydro, and van Horen, 2013). Our dataset contains over 18,000 loans with information on banks, loans, borrowers, and relationships.

[1] Mian (2006) uses loan data from Pakistan to show that greater distance between foreign bank headquarters and their local branches lead foreign banks to avoid lending to small borrowers. Gormley (2010) uses foreign bank entry data at the district level from India to show that the presence of foreign banks may adversely affect the performance of small local firms.

[2] Other papers that discuss the benefits and costs of foreign banks include Levine (1996); Berger, DeYoung, Genay, and Udell (2000); Claessens, Demirguc-Kunt, and Huizinga (2001); Beck, Demirguc-Kunt, and Maksimovic (2004); and Giannetti and Ongena (2008).

Our paper is closely related to the recent work of Giannetti and Laeven (2011). They show that foreign banks rebalance their loan portfolios in favor of domestic borrowers during the crisis period (flight home). Consistent with their finding, we find that foreign lending is affected by the crisis more than domestic lending. Our paper adds to their work by documenting the interplay between flight home and flight to quality. For example, we show that the contraction on foreign lending is concentrated among private borrowers.

One of the most popular topics in the financial crisis literature is the balance-sheet effect. In foreign bank context, the balance-sheet effect refers to the notion that foreign banks may behave differently from domestic banks because of their balance-sheet conditions at home. Foreign banks may cut their lending in host countries to accommodate adverse balance-sheet conditions at home (e.g., Peek and Rosengren (2000); Schnabl (2010); Popov and Udell (2010)).[3] The balance sheet channel is also recently extended to include bank losses in some foreign markets affecting lending in other foreign markets. Popov and van Horen (2015) show that lending by foreign banks with sizeable holdings of sovereign bonds of Greece, Ireland, Italy, Portugal, and Spain was significantly reduced relative to non-exposed banks. However, the balance sheet channel may be offset in some circumstances. Claessens and van Horen (2013) find that foreign lending is not much reduced in countries where the foreign banks have dominant roles or are funded locally. Our paper documents that foreign and domestic banks differ not only during financial crises, but during normal times as well. In addition to balance-sheet conditions, we find that foreign and domestic banks react differently to crises due to the difference in information problems between the banks and their borrowers (e.g., whether borrowers are public or private).

This paper is also related to the literature on credit rationing. Starting with Stiglitz and Weiss (1981), numerous papers, including those in the relationship lending literature, document the importance of asymmetric information on bank lending.[4] More recent papers introduce the recent financial crisis as a quasi-natural experiment to test credit rationing theories and find that the effects of the recent financial crisis are not uniform across borrowers. De Haas and van Horen (2012b) find that foreign banks reduce lending by more in geographically distant countries and in markets where they are less experienced or connected. Claessens and van Horen (2015) similarly find that foreign banks are shifting lending to a more regional focus. The crisis tends to have more severe impacts on borrowers with no access to bond markets (Santos, 2011), riskier borrowers with fewer tangible assets (Popov and Udell, 2012), and

[3] An interesting counterexample is Detragiache and Gupta (2004), who document that foreign banks in Malaysia did not abandon the local market during the Malaysian financial crisis despite receiving less government support than domestic banks.

[4] See, for example, Berger and Udell (1992, 1995) and Petersen and Rajan (1994).

borrowers applying for new loans (Ivashina and Scharfstein, 2010).[5] In this paper, we take advantage of the informational heterogeneity between foreign and domestic banks, between U.S. and non-U.S. banks and borrowers, between safer and riskier borrowers, and between relationship and non-relationship borrowers as additional layers of identification. Our results support the notion that credit rationing differs across all of these dimensions.

Finally, there is a recent interest in the corporate finance literature on differences between public and private firms (e.g., Gao, Li, and Harford (2013); Maksimovic, Phillips, and Yang (2013); Michaely and Roberts (2012)). Our paper contributes to this literature by studying credit availability to these two types of firms using a dataset that includes borrower and bank characteristics.

Our main results are consistent with the main findings in the literature – that foreign banks contract their supplies of credit more than domestic banks during financial crises. However, our details on loan quantities, spreads, and other contract terms; borrower characteristics; and bank-borrower relationships in many countries allow us to draw additional conclusions about the nature of this contraction in credit and provide a more complete picture than this literature. We find important differences between quantity and price effects, between listed and private firms, between safer and riskier borrowers, and between relationship and non-relationship borrowers. Finally, because the recent financial crisis originated in the U.S. and because this country has the most developed capital markets, we also distinguish between the effects involving U.S. banks and borrowers versus the rest of the world and find some additional interesting differences.

To sample some of the new results in the paper, the net reduction in lending by both foreign and domestic banks during the recent financial crisis was primarily concentrated among private borrowers, which tend to be riskier than public borrowers. Surprisingly, credit increased slightly for public borrowers. The decline in lending during the recent financial crisis was substantially greater for non-relationship borrowers than for relationship borrowers. The declines were also greater for poorly-rated firms than investment-grade firms, although both experienced declines in credit. Declines were larger for U.S. banks and U.S. borrowers reflecting that the impact of the crisis was more severe in the U.S.

In term of pricing, all-in spreads (total fees and interest paid over LIBOR) increased the least during the crisis for foreign banks and private borrowers, consistent with significant quantity rationing by foreign banks and of private borrowers, which tend to be relatively risky. The difference in spread between public

[5] Other papers that study the effect of financial crises on bank lending include Bae, Kang, and Lim (2002); Ongena, Smith, and Michalsen (2003); Gan (2007); Puri, Rocholl, and Steffen (2009); Carbó-Valverde, Rodríguez-Fernández, and Udell (2012); and Presbitero, Udell, and Zazzaro (2012).

and private borrowers increased during the crisis, and was larger among non-U.S. borrowers, consistent with expectations that that information problems may be more severe outside the U.S. Lending by U.S. banks domestically to public borrowers appears to be associated with interest-rate insurance (spreads that did not increase as much as in other cases). The sensitivities of spreads to borrower risk substantially increased during the recent financial crisis, especially for private borrowers.

Our findings highlight the importance of including borrower-level information. First, loan spreads are heavily influenced by borrower characteristics – including borrower characteristics in the loan spread equations substantially increases the R-squared. Second, there is a drastic shift in sensitivities of loan spreads to borrower characteristics during the crisis period. Studies that use firm fixed-effects to control for borrower characteristics are not able to capture this fact. Third, as noted above, the estimated effects of the financial crisis on the difference between foreign and domestic banks change substantially when after controlling for borrower characteristics.

The rest of this paper is organized as follows. Section 2 outlines the conceptual framework. Section 3 discusses data sources and sample construction and gives descriptive statistics. Section 4 compares the quantities of loans of foreign and domestic banks during normal times and financial crisis, while Section 5 compares the loan spreads of foreign and domestic banks during these time periods. Section 6 examines differences between U.S. and non-U.S. banks and borrowers, and Section 7 compares the treatment of relationship and non-relationship borrowers. Section 8 presents additional tests. Section 9 provides conclusions.

2. Conceptual Framework

The goal of this paper is to examine how foreign and domestic banks behave toward borrowers in terms of quantities and prices of loans during normal times and the recent financial crisis. Our paper is structured to answer the following four questions:

(1) How do loan quantities change between normal times and the recent crisis for foreign and domestic banks and for public and private firms?

We examine the percentage change in total loans, loans by foreign and domestic banks, and loans to public and private borrowers. We also investigate how the quantities of loans with different Standard and Poor's credit rating categories change between the two time periods. Changes in the quantities of loans will give us the first indication as to which types of lenders and borrowers suffer more from the financial crisis.

We also analyze lending quantities in a probit framework. More specifically, we estimate the likelihood that a pre-crisis lender will continue to lend to its (pre-crisis) borrowers during the crisis period. For each pre-crisis loan, our dependent variable is probability that there will be at least one loan with the same bank-borrower pair during the crisis period. Our explanatory variables are Foreign Bank dummy, Public Borrower dummy, U.S. Bank dummy, U.S. Borrower dummy, Relationship dummy, as well as various controls for loan contract terms, purposes, and borrower characteristics. This probit regression helps us understand how bank, borrower, and loan characteristics jointly affect quantity rationing during the crisis period.

(2) How do loan spreads from foreign and domestic banks differ and how do they change between normal times and the recent crisis?

We run regressions of the all-in loan spreads on a foreign bank dummy and variously include controls for loan contract terms, purposes, and borrower characteristics. We divide our observations into normal times and crisis years to examine how the loan contract terms change during the crisis. We further divide the subsamples into loans to public borrowers and loans to private borrowers. The coefficients on Foreign Bank dummy from different subsamples indicate whether foreign and domestic banks differ in their lending to public and private borrowers during normal times and the crisis period. The advantage of estimating the loan contract term equations across subsamples (as opposed to using a Crisis dummy as another explanatory variable) is that we do not impose the restriction that the coefficient estimates must be similar across all subsamples. Indeed, we find that some of these coefficients change dramatically between the periods.

(3) How do the effects of the financial crisis on loan quantities and spreads differ between U.S. and non-U.S. banks and between U.S. and non-U.S. borrowers?

To study the differential impacts of the financial crisis on loan quantities, we divide our observations into U.S. bank, non-U.S. bank, U.S. borrower, and non-U.S. borrower subsamples and examine the percentage changes in total loans, loans by foreign and domestic banks, and loans to public and private borrowers for these subsamples. To assess the differential impacts of the financial crisis on loan spreads, we regress these spreads on Foreign Bank dummy, U.S. Bank (or U.S. Borrower) dummy, and their interaction using subsamples of loans to public and private borrowers during normal times and financial crisis and compute the different effects from the estimated coefficients.

(4) How do the effects of the financial crisis on loan quantities and spreads differ between relationship and non-relationship borrowers?

We divide our loan sample into borrowers with and without prior lending relationship with their lenders. We then examine spreads of foreign and domestic banks during normal times and the crisis, controlling for borrower public status.

We also perform a number of additional tests to ensure our results are robust. First, we control for lender characteristics other than foreign bank dummy to rule out the possibility that our results are driven by other characteristics of foreign banks, rather than their foreignness. Specifically, we control for banks size, equity, profitability, liquidity, and non-performing loans. Second, we examine whether our results differ between developed and developing countries. We divide our sample into developed and developing countries and examine how the aggregate quantities of loans changed between normal times and crisis. We also regress spreads on Foreign Bank dummy, Developed Country dummy, and their interaction. Third, we control for the omitted cross-country cross-industry differences by including the full set of country and industry fixed effects. We also use Country x Year fixed effects to capture any components of loan demand driven by country-level time-varying economic conditions. Fourth, a concern is that our crisis period (2008-2011) is perhaps too long so we use a shorter crisis period: 2008-2009. Fifth, to provide a potential explanation for our finding that the contraction in loan quantities during the crisis is greater for U.S. banks, we verify that U.S. banks suffer greater capital losses, more profit decreases, more non-performing loans, and more loan loss provisions during the recent financial crisis. Sixth, we split our sample based on lender capitalization (Bank Equity/Gross Total Assets) and re-estimate the spread regressions using each subsample. Seventh, we cluster standard errors at the country and industry levels as a robustness check (as opposed to robust standard errors we used in other specifications) to account for the possibility that shocks to loan spreads are correlated within a country or within an industry.

3. Data and Sample Construction

Bank Data

We construct a 2004-2011 annual dataset of all the banks available in 50 countries (25 developed and 25 developing).[6] Our sources for bank ownership data are Bureau van Dijk's BankScope and Claessens and Van Horen (2014). The combined database covers approximately 30,000 banks. It provides ownership

[6] We separate the developed countries from developing countries by whether the country is a high-income economy according to the World Bank's Atlas Method. Developed countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States. Developing countries include Argentina, Brazil, Chile, China, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, New Zealand, Peru, Philippines, Poland, Russia, Slovakia, South Africa, Thailand, Turkey, and Venezuela.

information on banks around the world. The Foreign Bank dummy takes the value of one if bank and borrower are from different countries and zero otherwise (borrower data are discussed below). We base our bank's country on nationality of the owner. For example, Citibank Thailand is classified as a U.S. bank, not a Thai bank. When there is a discrepancy between the two data sources, we use the classification in Claessens and Van Horen (2014), which is considered more accurate. Bank condition data are also obtained from BankScope.

Loan and Relationship Data

Our main source for loan data is Loan Pricing Corporation's DealScan, which contains information on over $2 trillion of corporate and middle market commercial loans. We use information on over 18,000 on loans around the world and have loan contract information on over 10,000 of these. Our primary variables are loan quantities and loan spread, defined as total fees and interest paid over LIBOR per dollar drawn down. We also collect from DealScan other loan contract terms: Loan Size, the natural log of deal amount in constant 2005 U.S. Dollars; Maturity measured in months; and Collateral, a dummy which indicates whether collateral is pledged. We also use four dummies to describe loan purposes: Acquisition and Recapitalization; Capital Expenditure; Refinancing; and Back-Up Line.

DealScan is also used to measure lending relationships. The relationship variable is a dummy for whether the lead bank on the deal was also a lead bank in another deal during the past five years (from t-5 to t-1).

Table 1 reports the basic characteristics of loans in our sample, as well as borrower information.

[INSERT TABLE 1 HERE]

Borrower Data

Our main source for borrower data is Bureau Van Dijk's Orbis, which contains financial statement information on over 10 million public and private firms around the world. We capture borrower characteristics by constructing four key variables that describe borrower size, profitability, leverage, and asset tangibility. Size is defined as natural log of total assets. Profitability is defined as return on assets. Leverage defined as total liabilities divided by total assets. Asset tangibility is a dummy variable taking the value of one if the firm reports tangible assets with non-zero value.

We also construct a dummy for whether the firm is public versus private because of the differences in asymmetric information problems and risk between the two types of borrower. A concern is that listing information from Orbis only reflects the most recent status of the firm and it is thus possible that currently listed firms were private at the time of the loans. Conversely, public borrowers might decide to go private

or become delisted. We mitigate this concern by obtaining IPO and delisting dates from Bureau van Dijk's Osiris, which contains detailed information on approximately 80,000 companies, including all listed firms and major delisted firms around the world. We adjust current listing status in Orbis using Osiris data to ensure that the listing status reflects firm status at the time the loan was extended.

Additional borrower dummy variables are taken from DealScan: Corporation dummy, Government dummy, Financial Industry dummy, Manufacturing Industry dummy, High-Tech Industry dummy, and four dummies representing S&P's senior debt rating categories, A, B, C, and D, with the omitted category being unrated. Manufacturing Industry dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association.

Merging the Data from Different Sources

A major challenge is to merge the information in BankScope, DealScan, and Orbis/Osiris, as there is no common identifier in the three databases. We manually match banks in BankScope with lead arrangers in DealScan by bank names and nationalities. For loans with multiple lead arrangers, we assign the largest lead arranger as the lender. We match firms in Orbis/Osiris with borrowers in DealScan by firm name and nationality. There are over 10 million firms in Orbis so manual matching is not feasible. Since names in the three datasets might be spelled differently, we use an approximate matching algorithm. First, we standardize the names in each database by Anglicizing the words and eliminating common suffixes (such as corporation, incorporated, and limited liability) in different languages. Second, we compute a Levenshtein distance which measures the similarity between names in different databases. Third, we retain all the perfect matches based on Levenshtein distance and discard all observations that do not appear to match at all. Finally, we match the borderline observations (similarity scores between 90% and 100%) manually. This algorithm resulted in over 33,000 observations with bank and loan information, and over 18,000 observations that additionally have borrower information.

There are around 100,000 DealScan loans from the 50 countries during our sample period. Out of these loans, XXX loans can be matched to Orbis and 33,000 loans can be matched to both Orbis and BankScope. We further restrict our sample to loans whose borrower financial statement information (size, profitability, leverage, and asset tangibility) is complete, resulting in the sample of 18,000 loans. While it is possible that this matching procedure creates selection bias in favor of certain types of lenders or borrowers, we argue that this potential bias is unlikely to affect our main conclusion. Since we focus on the changes between normal times and the crisis period, if the selection bias across lenders and borrowers does not vary greatly over time, the bias should already be differenced away.

4. Changes in Bank Lending Quantities between Normal Times and the Financial Crisis

Table 2 provides key statistics on how the aggregate quantities of loans changed between normal times and crisis years. Normal times is defined as 2004 to 2007 while the crisis is defined as 2008 to 2011. We choose 2008-2011 as the crisis period because it covers both the subprime crisis in the U.S. that spilled over to other countries and the European debt crisis. Since these periods have the same number of years, the aggregate quantities of loans during these periods are comparable. In Panel A, we report the percentage change in total loans, loans by foreign and domestic banks, and loans to public and private borrowers. Several striking facts emerge from observation of the table. We find that the number of loans dropped by 17.65 % between normal times and the crisis. This may be due to bank capital and liquidity problems, accentuated information asymmetry problems, and increased risk of default during the crisis.

[INSERT TABLE 2 HERE]

Both foreign and domestic banks cut back on their lending. However, foreign banks contracted their lending much more compared to domestic banks (37.29 % versus 12.17 %). Between public and private borrowers, contractions only occurred among private borrowers. The number of loans to private borrowers dropped by 38.23 % whereas the number of loans to public borrowers actually increased by 8.51 %. The concentration of the decline among private borrowers is not surprising because banks have less information about private borrowers. These borrowers are generally riskier and were pushed closer to default during the crisis, perhaps resulting in more credit rationing of these firms. Within the subsample of loans to private borrowers, foreign banks contracted their lending much more than domestic banks (over 50 % versus 33.8 %). Lending to public borrowers had minor changes. Public borrowers received less credit during the crisis from foreign banks (-8.68 %), but more credit from domestic banks (+11.68 %). The increase in loans to public firms from domestic banks is potentially due to flight to quality during the crisis as banks shift their portfolios from riskier to safer borrowers and from more opaque to more transparent ones.

Overall, these facts are consistent with credit rationing theories. Foreign banks are more likely to suffer from asymmetric information than domestic banks. Private borrowers are more likely to be more opaque than public borrowers. Therefore, the effects of financial crisis which exacerbates information problems should fall primarily on foreign banks and private borrowers. An alternative explanation is that both foreign and domestic banks are more likely to have strong relationships with borrowers in their own countries. This predicts that foreign banks withdraw credit more than domestic banks in their host countries to the extent that strong relationships are associated with liquidity insurance. That is, banks

may provide implicit insurance against financial crises for the strongest relationship borrowers. (See Gatev and Strahan (2006) for details.)

In Table 2 Panel B, we explore alternative breakdowns of bank and borrower types. We find that the declines in quantity of loans during the recent financial crisis are concentrated among U.S. banks and borrowers. The number of loans dropped by 44.81% for U.S. banks but increased by 4.8% for non-U.S. banks. Similarly, the number of loans dropped by 42.1% for U.S. borrowers but increased by 6.1% for non-U.S. borrowers. Later, we will verify that U.S. banks faced higher capital pressure than non-U.S. banks. U.S. bank had lower capital before the crisis and the capital ratio fell by more during the crisis period.

We also directly compare relationship and non-relationship borrowers. We define lending relationship as whether the borrower has borrowed from the lender in the past five years (from t-5 to t-1). Since past relationship can alleviate asymmetric information problems, banks may deem relationship borrowers less risky. We indeed find more contraction among non-relationship borrowers during the financial crisis. The number of loans to relationship and non-relationship borrowers dropped by 8.82% and 23.21%, respectively. However, the difference between relationship and non-relationship borrowers are not as pronounced as the difference between public and private borrowers.

Turning to Table 2 Panel C, we also investigate how the quantities of loans with different Standard and Poor's credit rating categories change between the two time periods. The number of loans to A rated, B rated, and C rated borrowers dropped by 22.28%, 47.89%, and 50.88%, respectively. We find more contraction among worse-rated borrowers potentially because the recent financial crisis exacerbated the risk of these borrowers more than those of better-rated borrowers. The aforementioned flight to quality may also help explain this observation. The number of loans to D rated borrowers went up from 21 to 26 loans. This exception may be due to the small number of D rated loans, or some of the higher-rated borrowers that slipped into D rating during the crisis.

In Table 2 Panel D, we examine the composition of borrowers during normal times and the financial crisis. Within each category of banks (foreign and domestic) and borrowers (public and private), we divide loans based on borrower credit ratings, and report the percentages. First, we find that foreign banks tend to lend to safer borrowers compared to domestic banks during normal times. For example, during normal times, 40% of foreign loans are granted to investment-grade (A and B rated) borrowers while only 30% of domestic loans are granted to investment-grade borrowers. Second, we find that these figures drop to 36% and 19%, respectively, during the crisis, consistent with foreign banks more often rationing risky borrowers during the crisis. Third, public borrowers tend to have better credit ratings than

private borrowers during normal times. During such times, 43% of loans to public borrowers are investment grade, while only 23% of loans to private borrowers have such ratings. Fourth, the decline in borrower quality during the crisis is more severe among public borrowers. During the crisis, the fraction of investment-grade loans drops to 28% for public borrowers and 14% for private borrowers. This finding supports the notion that the riskiest private borrowers are rationed out during the crisis. In the next section, our analysis of loan spreads also confirms this rationing theory – we find that the increase in spreads during the financial crisis is larger for domestic banks and for private borrowers.

Probit Analysis of Lending Quantities

We now analyze lending quantities in a probit framework. Following the approach of De Haas and Van Horen (2012b), we estimate the probability that a pre-crisis lender will continue to grant loans to its pre-crisis borrowers during the crisis. Our probit specification is as follows:

$$\begin{aligned}\text{Prob(Loan during Crisis| Loan before Crisis)}_{i,t} = f(&z_0 + z_1\,\text{Foreign Bank}_{i,t} + z_2\,\text{Public}_{i,t} + z_3\,\text{U.S. Bank}_{i,t} + \\ &z_3\,\text{U.S. Borrower}_{i,t} + z_4\,\text{Relationship}_{i,t} + Z_5\,\text{Other Borrower Characteristics} + \\ &z_6\,\text{Loan Size}_{i,t} + z_7\,\text{Maturity}_{i,t} + z_8\,\text{Collateral}_{i,t} + z_9\,\text{Acquisition}_{i,t} + \\ &z_{10}\,\text{Capital Expenditure}_{i,t} + z_{11}\,\text{Refinancing}_{i,t} + z_{12}\,\text{Backup Line}_{i,t} + e^{z}{}_{i,t}) \qquad (1)\end{aligned}$$

The dependent variable is the probability that for each pre-crisis loan i, there will be at least one loan with the same bank-borrower pair during the crisis period. The Loan during Crisis dummy takes the value of one if the lender of loan i pre-crisis also decides to lend to the borrower of loan i during the crisis period and zero otherwise. The explanatory variables are Foreign Bank dummy, Public dummy, U.S. Bank dummy, U.S. Borrower dummy, Relationship dummy as well as other controls. Other borrower characteristics are (1) basic characteristics of Size, Profitability, Leverage, and Asset Tangibility (2) dummies indicating whether the borrowers are corporations or governments, (3) dummies indicating whether the borrowers are in financial, manufacturing, or high-tech industries, and (4) four dummies (A, B, C, and D) for S&P's senior debt rating. The capitalized Z_5 on other borrower characteristics reflects that it is a vector of coefficients.

The results are reported in Panel E of Table 2. We find that foreign banks that lend during normal times are less likely to continue to lend during the crisis compared to domestic banks. Public borrowers are more likely to continue to receive loans during the crisis. U.S. banks are less likely than banks from other countries to continue to lend. Borrowers that have relationships with banks are more likely to continue to receive loans during the crisis. Note that the effects of lending relationships on credit availability are not mechanical since we measure relationships using lending information prior to the crisis whereas credit

availability is defined during the crisis period. In the full specification, the estimated coefficients on Foreign Bank, Public Borrower, U.S. Bank, and Relationship dummies are all statistically significant at the 1% level. The coefficient on U.S. Borrower is not statistically significant after we control for borrower rating. These results support the univariate findings in Panel A and Panel B.

The coefficients on other borrower characteristics are consistent with expectations. We find that larger borrowers with higher profitability and lower leverage are more likely to continue to receive loans during the crisis. The coefficients on Size, Profitability, Leverage are all statistically significant at the 1% level. The coefficients on rating dummies are not statistically significant, perhaps due to lack of variation in the sample. For example, we only have a few pre-crisis loans with C or D ratings in this specification. Across industries, borrowers in high-tech industries are less likely to receive loans during the crisis, compared to borrowers in financial and manufacturing industries. We also find that borrowers that receive larger loans with longer maturities during normal times are less likely to borrow again during the crisis. In contrast, borrowers with pre-crisis refinancing loans are more likely to borrow again. The coefficients on other control variables are not statistically significant. Overall, our probit regressions indicate that risky borrowers are more likely to be rationed during the crisis.

5. Loan Spreads during Normal Times and the Financial Crisis

In this section, we examine how loan spreads change between normal times and the crisis period and how they differ between foreign and domestic banks. We estimate the following baseline specification across these subsamples:

$$\text{Spread}_{i,t} = a_0 + a_1 \text{ Foreign Bank}_{i,t} + e^a{}_{i,t} \qquad (2)$$

The dependent variable is all-in spread (drawn) which is defined as total (fees and interest) annual spread paid over LIBOR for each dollar drawn down from the loan. The only explanatory variable is Foreign Bank dummy. We run equation (2) separately for the normal times and crisis subsamples, and within these subsamples we also separate out public and private borrowers. Table 3 Panel A reports the results.

[INSERT TABLE 3 HERE]

We can interpret the coefficients on the constant term (a_0) and Foreign Bank dummy (a_1) as follows. The constant term (a_0) is the mean spread for loans made by domestic banks, the coefficient on Foreign Bank dummy (a_1) is the average difference between the spreads for loans made by foreign and domestic banks, and the sum of the two (a_0+a_1) is the mean spread for loans from foreign banks. From the second column (Public Borrowers/Normal Times), the average spread of loans to public borrowers during normal times is

157.753 basis points (a_0) for domestic banks and 15.808+157.753=173.561 basis points (a_0+a_1) for foreign banks, with the difference being statistically significant. From the fifth column (Public Borrowers, Crisis), a_0 increases to 246.884 and a_1 increases to 27.1, suggesting both domestic and foreign banks increase their average spread during the crisis and that foreign banks increase them by more. From the third column (Private Borrowers, Normal Times), the average spread of loans to private borrowers during normal times is 242.341 basis points (a_0) for domestic banks. a_1 is less than a basis point so the average spread for private firms is 242.078 basis points (a_0+a_1) for foreign banks. In the sixth column (Private Borrowers, Crisis), a_0 rises to 308.417 and a_1 become negative and statistically significant at -45.805. Thus, during the crisis, rates to for foreign and domestic banks to private borrowers went up but the increase was much less for foreign banks.

Figure 1 describes the change in quantity and spread between normal times and financial crisis across categories of banks and borrowers. The percentage changes in aggregate number of loans are taken from the bottom part of the last column in Table 2 Panel A. The basis point changes are calculated from Table 3 Panel A.

[INSERT FIGURE 1 HERE]

Consider the effects of financial crisis on both number of loans and spreads in Figure 1. The number of foreign bank loans to public borrowers decreases by 8.68% and average spread increases by 100.423 basis points. It is likely that the decline in the number of loans reflects rationing of relatively risky public borrowers. However, the increase in risk due to the crisis more than offset the decrease in quantity, resulting in the spread increase. The number of domestic bank loans to public borrowers increases by 11.68% and average spread increases by 89.131 basis points. The increase in number of loans likely comes from flight to quality and liquidity insurance for relationship borrowers by domestic banks. Public firms are safer and more transparent than private firms. However, the risk is still higher during the crisis. The number of foreign (domestic) bank loans to private borrowers decreases by 50.36% (33.80%) and average spread increases by 20.534 (66.076) basis points. Private borrowers experience largest decline in number of loans and most modest increase in spread. This finding is consistent with very significant rationing of the riskiest private borrowers. Among private borrowers, the rationing effects are stronger for foreign banks which suffer more from information problems.

We also examine an alternative specification where we include the other three loan contract terms (Loan Size, Maturity, and Collateral) and loan purposes as control variables. The controls for loan purposes are the dummies indicating whether the loans are for acquisition-recapitalization, capital expenditure, refinancing, or back-up line. The reason is that these other contract terms and loan purposes may affect

the spreads. For example, if the collateral is pledged, all else equal, spreads may be lower because lenders are more protected in the event of default. Alternatively, spreads may be higher for secured loan because collateral is often required for riskier borrowers. Loans with longer maturity may also have higher spreads due to term premium. While one may argue all loan contract terms are endogenous, assuming that spreads are determined after other loan contract terms, it is appropriate control for these contract terms when assessing the effects of foreign banks. Controlling for other loan contract terms in the spread regression is a common practice in the literature (e.g., Berger and Udell (1995); Berger, Frame, and Ioannidou (2011)). As shown below, the results are qualitatively unchanged by the inclusion of these terms.

$$\text{Spread}_{i,t} = b_0 + b_1 \text{ Foreign Bank}_{i,t} + b_2 \text{ Loan Size}_{i,t} + b_3 \text{ Maturity}_{i,t} + b_4 \text{ Collateral}_{i,t} + b_5 \text{ Acquisition}_{i,t} + b_6 \text{Capital Expenditure}_{i,t} + b_7 \text{Refinancing}_{i,t} + b_8 \text{ Backup Line}_{i,t} + e^{b}_{i,t} \quad (3)$$

The results are reported in Panel B of Table 3. Panel B follow the same format as Panel A, except that the other loan contract terms and loan purposes are included.

In Panel B, the effects of Foreign Bank dummy on spread (coefficient b_1) are qualitatively similar to the ones in Panel A, but the magnitudes are different. The estimates for the normal times subsample become insignificant. The estimates for the crisis subsample remain highly significant: the coefficient b_1 is 37.804 for public firms and -41.264 for private firms. Both are significant at the 1% level. This result suggests that the effects of quantity rationing by foreign banks during the crisis period are very strong. The coefficients on other loan contract terms are consistent with expectation. Larger loans are safer. Loans with longer maturity are riskier and/or there is a term premium. Loans that required collateral are riskier consistent with most prior literature such as Berger and Udell (1990),Brick and Palia (2007), and Godlewski and Weill (2011). Among different loan purposes, loans for acquisitions have higher spreads than loans for capital expenditure, refinancing, and back up lines, suggesting that acquisitions are deemed riskier activities.

Changes in spreads between normal times and financial crisis can be driven by changes in other borrower characteristics. Foreign and domestic banks may lend to different types of borrowers.[7] So, we add borrower characteristics to the baseline specification to see whether the baseline results are driven by borrower composition. Our full specification is as follows:

$$\text{Spread}_{i,t} = c_0 + c_1 \text{ Foreign Bank}_{i,t} + c_2 \text{ Public}_{i,t} + C_3 \text{ Other Borrower Characteristics} + c_4 \text{ Loan Size}_{i,t}$$

[7] Prior literature studies other borrower characteristics only of listed firms (xxx). We extend this to private firms as well. Loan purposes have been studied to a limited degree as well (xxx).

$$+ c_5 \text{ Maturity}_{i,t} + c_6 \text{ Collateral}_{i,t} + c_7 \text{ Acquisition}_{i,t} + c_8 \text{ Capital Expenditure}_{i,t} + c_9 \text{ Refinancing}_{i,t}$$
$$+ c_{10} \text{ Backup Line}_{i,t} + e^c_{i,t} \quad (4)$$

The other borrower characteristics are (1) basic characteristics: Size, Profitability, Leverage, and Asset Tangibility (2) the dummies indicating whether the borrowers are corporations or governments, (3) the dummies indicating whether the borrowers are in financial, manufacturing, or high-tech industries, and (4) the four dummies (A, B, C, and D) for S&P's senior debt rating. The capitalized C on other borrower characteristics reflects that these are vector of coefficients.

The results are reported in Panel C of Table 3. After adding more control variables, the R-Squared's go up substantially from the range of 0.07-0.18 (in Panel B) to 0.13-0.27 (in Panel C). The majority of the coefficients on borrower characteristics are highly significant. Clearly, spreads depend in important ways on other borrower characteristics so it is important to control for these.

The coefficient on Foreign Bank dummy (c_1) is estimated at 16.56 for public firms and 8.161 for private firms during normal times. The estimated coefficient on Foreign Bank dummy is 31.85 for public firms and -35.014 for private firms during the crisis period. So, the crisis increases c_1 by 15.29 (=31.85-16.56) for public firms and decreases c_1 by 43.175 (=8.161 +35.014) for private firms. In Panel B where we do not control for borrower characteristics, the crisis increases the coefficient on Foreign Bank dummy (b_1) by 27.424 (=37.804 -10.38) for public firms and decreases b_1 by 27.102 (=41.264-14.162) for private firms.[8] Thus, we confirm that the inclusion of borrower characteristics in the regressions significantly alters the effects of financial crisis on foreign bank coefficients. Given the large and significant shifts in our key coefficients, the inclusion of borrower characteristics is crucial to our analysis.

Next, we focus on coefficients on borrower characteristics. During normal times, publicly listed, larger, more profitable, and less levered borrowers with more tangible assets have lower spreads, consistent with expectation that loans to these firms are generally less risky. Among different borrower types, loans to banks have lower spreads than loans to governments and corporate borrowers. Loans to borrowers in manufacturing industries have lower spreads and loans to borrowers in high-tech industries have higher spreads. This finding is in line with the notion that manufacturing industries are less risky while high-tech industries are more risky. Turning to the coefficients on credit ratings, those with better credit ratings generally have lower spreads, consistent with expectations.

Comparing the effects of borrower characteristics on loan spread (coefficients C_6) during normal times and the financial crisis, almost all coefficients have similar sign but the magnitudes of coefficients on

[8] The details for this calculation are shown in Panel D. In the last two rows of Panel D, we also perform the test of equality of coefficients.

leverage and junk ratings change dramatically. Comparing the coefficients in Columns 1 and 4, the coefficient on leverage goes up from 3.198 during normal times to 48.476 during the crisis. The coefficients of C rated and D rated are estimated at 87.517 and 153.141 during normal times, and 232.399 and 254.379 during the crisis. Clearly, the spreads go up more for riskier borrowers, reflecting that risk is increased more during the financial crisis for firms closer to default. In addition, changes in coefficient estimates confirm that we have to run the regressions separately for each period. Forcing the coefficients to be the same during normal times and the crisis might yield misleading results. In Panel E, we test whether the normal times and the crisis coefficients are statistically different. The tests verify that the coefficients on borrower risk (leverage and credit ratings) change significantly between normal times and the financial crisis period. This again suggests that inclusion of borrower characteristics is important to the analysis.

In sum, our evidence on loan spreads support credit rationing theories. There is a stark contrast between public and private borrowers. During the crisis, aggregate number of loans went up for public borrowers, consistent with a flight to quality, and the spreads for these borrowers went up more dramatically than for private borrowers who were likely more often quantity rationed. On the other hand, number of loans went down significantly for private borrowers and the increase in spread for private borrowers was minimal. Due to opaqueness of private firms, increase in risk during the financial crisis cannot be accurately priced and therefore many private firms were cut out from the lending market. These effects are stronger for foreign banks, suggesting information asymmetry has a strong influence on how the quantity and price of loans are determined.[9]

6. Banks and Borrowers from the United States

In this section, we examine special cases of banks and borrowers from the United States. A large fraction of our observations is from the U.S. (approximately 40%). The U.S. financial markets are the largest and most active capital markets in the world and arguably the most developed. Financial institutions in the U.S. are also known for their innovative activities and operational efficiency, even when operating in

[9] We also examine the determinants of other loan contract terms, deal size, maturity, and collateral. During normal times, foreign banks grant larger loans with longer maturities relative to domestic banks, perhaps reflecting the rationing of borrowers with more significant information problems. However, foreign banks require collateral more often, indicating that they try to use collateral to overcome the information problems. During the financial crisis, the average loan size goes up more for foreign banks, likely reflecting quantity rationing of lower quality borrowers that tend to have smaller deal size. Foreign banks also adjust maturity and collateral requirement more during the crisis: the maturity of loans granted by foreign banks dropped more while the use of collateral went up more than domestic banks. Comparing between public and private borrowers, the increase in loan size and the contraction of maturity by foreign banks are stronger among private borrowers. Overall, our evidence on loan contract terms is consistent with credit rationing theories. Banks attempt to select loan contract terms that accommodate information problems of their borrowers.

foreign nations (e.g., Berger, DeYoung, Genay, and Udell (2000)). Further, the pool of U.S. borrowers might be more transparent than those in other countries due to the better enforcement of strict regulations and the quality of certified-audit financial statements, particularly for public firms. It is therefore likely that the nature of information problems involving banks and borrowers in the United States is different from the rest of the world, making it useful to study the subsamples of U.S. banks and U.S. borrowers separately.

Table 4 illustrates how the aggregate quantities of loans changed between normal times and crisis years across four subsamples- U.S. banks, Non-U.S. banks, U.S. borrowers, and Non-U.S. borrowers. Similar to Table 2 Panel A, we report the percentage change in total loans, loans by foreign and domestic banks, and loans to public and private borrowers.

[INSERT TABLE 4 HERE]

As discussed above, the number of loans dropped more for foreign banks than domestic banks during the crisis. This effect is generally stronger for non-U.S. banks and non-U.S. borrowers. Among U.S. banks, the percentage change in number of loans during the crisis is -63.33 % for foreign banks (U.S. banks lending overseas) and -43.53 % for domestic banks (U.S. banks lending at home). Among non-U.S. banks, the percentage change in number of loans during the crisis is -33.26 % for foreign banks (non-U.S. banks lending in the U.S. and anywhere else other than their home countries) and 24.92 % for domestic banks (non-U.S. banks lending at home). Among non-U.S. borrowers, the percentage change in number of loans during the crisis is -33.26 % for foreign banks and 24.92 % for domestic banks. The result that the difference between foreign and domestic banks is smaller in the U.S. supports the notion that information problems are less severe in the U.S., compared to other countries in our sample.

The only exception to the result above is the subset of borrowers in the U.S. Among U.S. borrowers, the percentage change in number of loans during the crisis is -33.33 % for foreign banks and -43.53 % for domestic banks. In other words, U.S. banks lending domestically cut back more than foreign banks operating in the U.S. Note that U.S. banks cut back their lending more, regardless whether they lend inside or outside the U.S. – U.S. banks lending overseas decrease the number of loans by 63.33 % whereas domestic banks outside the U.S. *increase* the number of loans by 24.92 %. There are several potential explanations for this finding: U.S. banks may suffer greater capital losses at the beginning of the crisis; the U.S. may have had stricter enforcement of capital requirements (e.g., stress tests in the U.S. were generally more stringent than in the EU).

Between public and private borrowers, number of loans dropped much more for private borrowers. This effect is stronger for non-U.S. banks and non-U.S. borrowers. Among U.S. banks, the percentage change in number of loans during the crisis is -36.05 % for public borrowers and -54.84 % for private borrowers. Among non-U.S. banks, the percentage change in number of loans during the crisis is +62.75 % for public borrowers and -28.17 % for private borrowers. Among U.S. borrowers, the percentage change in number of loans during the crisis is -34.12 % for public borrowers and -51.82 % for private borrowers. Among non-U.S. banks, the percentage change in number of loans during the crisis is +76.77 % for public borrowers and -29.29 % for private borrowers. The result that the difference between public and private borrowers is smaller in the U.S. supports the notion that information problems are less severe in the U.S.

Next, we examine whether spreads of banks and borrowers from the United States differ from the rest of the world. Similar to Section 5, we divide our sample into normal times and crisis periods as well as public and private borrower subsamples. Thus, we estimate the following baseline specifications using each subsample:

$$Spread_{i,t} = d_0 + d_1 \text{ Foreign Bank}_{i,t} + d_2 \text{ U.S. Bank}_{i,t} + d_3 \text{ Foreign Bank}_{i,t} \text{ x U.S. Bank}_{i,t} + e^{d}{}_{i,t} \quad (5)$$

$$Spread_{i,t} = g_0 + g_1 \text{ Foreign Bank}_{i,t} + g_2 \text{ U.S. Borrower}_{i,t} + g_3 \text{ Foreign Bank}_{i,t} \text{ x U.S. Borrower}_{i,t} + e^{g}{}_{i,t} \quad (6)$$

The dependent variable is all-in spread. Equation (4) allows us to examine whether U.S. banks are special and Equation (5) allows us to examine whether U.S. borrowers are different. The explanatory variables are Foreign Bank dummy in both regressions, U.S. Bank Dummy in Equation (4), and U.S. Borrower Dummy in Equation (5). Interactions are also included in both equations.

Table 5 Panel A reports the results from Equation (4). We can interpret the coefficients on the constant term (d_0), Foreign Bank dummy (d_1), U.S. Bank dummy (d_2), and the interaction term (d_3) as follows. The constant term (d_0) is the mean spread for loans made by non-U.S. domestic banks, the coefficient on Foreign Bank dummy (d_1) is the average difference between the spreads for loans made by non-U.S. foreign and non-U.S. domestic banks, and the sum of the two (d_0+d_1) is the mean spread for loans from non-U.S. foreign banks. The coefficient on U.S. Bank dummy (d_2) is the average difference between the spreads for loans made by U.S. domestic and non-U.S. domestic banks, and the sum of the two (d_0+d_2) is the mean spread for loans from U.S. domestic banks. The mean spread for loans from U.S. foreign banks is the sum of all four coefficients (d_0+d_1 +d_2+d_3). Table 6 Panel A reports the results from Equation (5). The coefficients in Table 6 can be interpreted the same way we interpreted coefficients in Table 5. In Panel B of Tables 5 and 6, we calculate the mean spreads of loans in each subsample.

[INSERT TABLES 5 AND 6 HERE]

Theoretical predictions about the change in spreads are unclear. On one hand, we expect the subsamples that suffer greater contraction in the number of loans to have smaller increase in spreads. This is because the riskier borrowers are generally more quantity-rationed. On the other hand, the subsamples that suffer greater contraction in the number of loans may experience higher increase in spreads as greater contraction in number of loans indicates a weaker set of lender-borrower relationships. Strong lender borrower relationships may insure relatively low interest rate during the crisis.

Figure 2 describes the change in quantity and spread between normal times and financial crisis across categories of U.S. and non-U.S. banks and borrowers. The percentage changes in aggregate number of loans are taken from the bottom part of Table 4. The basis point changes are from Panel B of Tables 5 and 6.

[INSERT FIGURE 2 HERE]

Our results on spreads in Figure 2 are mixed. Between foreign and domestic banks, spreads generally increase more for domestic banks. Between public and private borrowers, spreads generally increase more for public borrowers. The exception is the subsample involving U.S. borrowers where the increase in spread is smaller among domestic banks and public borrowers. This result suggests that interest-rate insurance is particularly relevant for domestic lending in the U.S. That is, U.S. public firms form relationship with domestic banks and receive lower spreads than would otherwise be predicted during the crisis. This effect may be more pronounced among U.S. public firms because the lending relationship to larger/higher-quality firms is more valuable to the banks.

We also add the control variables from Section 5 to these spread equations to see if the relations continue to hold. The full specifications are as follows:

$$\begin{aligned} Spread_{i,t} = {} & f_0 + f_1\,\text{Foreign Bank}_{i,t} + f_2\,\text{U.S. Bank}_{i,t} + f_3\,\text{Foreign Bank}_{i,t} \times \text{U.S. Bank}_{i,t} + f_4\,\text{Public}_{i,t} + \\ & F_5\,\text{Other Borrower Characteristics} + f_6\,\text{Loan Size}_{i,t} + f_7\,\text{Maturity}_{i,t} + f_8\,\text{Collateral}_{i,t} + \\ & f_9\,\text{Acquisition}_{i,t} + f_{10}\,\text{Capital Expenditure}_{i,t} + f_{11}\,\text{Refinancing}_{i,t} + f_{12}\,\text{Backup Line}_{i,t} + e^{f}_{i,t} \end{aligned} \quad (7)$$

$$\begin{aligned} Spread_{i,t} = {} & h_0 + h_1\,\text{Foreign Bank}_{i,t} + h_2\,\text{U.S. Borrower}_{i,t} + h_3\,\text{Foreign Bank}_{i,t} \times \text{U.S. Borrower}_{i,t} + \\ & h_4\,\text{Public}_{i,t} + H_5\,\text{Other Borrower Characteristics} + h_6\,\text{Loan Size}_{i,t} + \\ & h_7\,\text{Maturity}_{i,t} + h_8\,\text{Collateral}_{i,t} + h_9\,\text{Acquisition}_{i,t} + h_{10}\,\text{Capital Expenditure}_{i,t} + \\ & h_{11}\,\text{Refinancing}_{i,t} + h_{12}\,\text{Backup Line}_{i,t} + e^{h}_{i,t} \end{aligned} \quad (8)$$

The results are reported in Panel C of Tables 5 and 6. Most of the key coefficients are of the same sign. However, the significance is often diminished due to the inclusion of so many additional variables. The coefficients on the control variables are similar to the ones from the specifications in Panel C of Table 3.

7. Additional Tests

Bank Characteristics

In Table 7, we control for lender characteristics other than foreign bank dummy to rule out the possibility that our results are driven by other characteristics of foreign banks rather than their foreignness. Specifically, we use five variables to control for bank financial structure and performance: Bank Size (natural log of Gross Total Assets), Bank Equity (Total Equity/ Gross Total Assets), Bank Profitability (Pre-Tax Profits/ Gross Total Assets), Bank Liquidity (Liquid Assets/ Gross Total Assets), and Bank Non-Performing Loans (NPLs/ Gross Total Assets). Non-Performing Loans refer to loans that past due for more than 90 days. Gross Total Assets is defined as Total Assets + Reserve for Impaired Loans. We use pre-tax profits instead of net profits to eliminate the effects of taxation which may differ from country to country. All the variables are measured in USD. To reduce the possibility that our results may be driven by outliers or any mistakes in the original dataset, we winsorize all the variables at 1%. We do not include these bank characteristics in the main specifications because doing so reduces the sample size substantially.

[INSERT TABLE 7 HERE]

Our main results remain unchanged. The coefficients on Foreign Bank dummy are in fact more statistically significant. Similar to Section 5, we still find that during normal times foreign banks have higher spreads than domestic banks. The increases in spreads during the crisis are smaller for foreign banks and this effect is stronger among private borrowers. Coefficients on bank characteristics are consistent with expectation. We find that larger and better-capitalized banks tend to grant loans with lower spreads. During normal times, more profitable banks have higher-spread loans but during the crisis more profitable banks have lower-spread loans. This finding supports the notion that lending to risky borrowers becomes less profitable during the crisis.

Developed versus Developing Countries

In Table 8, we examine special cases of loans in developed and developing countries. Panel A illustrates how the aggregate quantities of loans changed between normal times and crisis years and between

developed and developing countries. We report the percentage change in total loans, loans by foreign and domestic banks, and loans to public and private borrowers.

[INSERT TABLE 8 HERE]

Similar to Table 2 Panel A, we find that the number of loans dropped more for foreign banks and private borrowers during the crisis. This effect is generally stronger in developing countries. In developed countries, the percentage change in number of loans during the crisis is -38.57 % for foreign banks and -14.28 % for domestic banks. In developing countries, the percentage change in number of loans during the crisis is -30.81 % for foreign banks and 72.31 % for domestic banks.

In developed countries, the percentage change in number of loans during the crisis is 6.39 % for public borrowers and -39.92 % for private borrowers. In developing countries, the percentage change in number of loans during the crisis is 46.93 % for public borrowers and 24.92 % for private borrowers. The finding that the difference between foreign and domestic banks and between public and private borrowers is smaller in the developed countries supports the notion that information problems are less severe in the developed countries.

Next, we examine whether spreads of loans in developed and developing countries differ. We divide our sample into normal times and crisis periods as well as public and private borrower subsamples and estimate the following specification using each subsample. The results are reported in Table 8 Panel B.

$$Spread_{i,t} = j_0 + j_1 \text{ Foreign Bank}_{i,t} + j_2 \text{ Developed Country}_{i,t} + j_3 \text{ Foreign Bank}_{i,t} \text{ x Developed Country}_{i,t} + e^j{}_{i,t} \quad (9)$$

Developed Country dummy take the value of one if the borrower is from a developed country. The coefficient estimates can be interpreted in the same fashion as Section 6. We find that spreads generally increase more for domestic banks than foreign banks and increase more for public borrowers than private borrowers. The only exception is that, in developing countries, increases in spreads for domestic loans to public borrowers are smaller than foreign loans to public borrowers and domestic loans to private borrowers. A potential explanation is that the number of domestic loans to public borrowers is relatively small so the estimates might be noisier than other bank-borrower combinations.

Fixed Effect Specifications

We control for the omitted cross-country cross-industry differences by including the full set of country and industry fixed effects in Table 9 Panel A. We do not include the full set of industry fixed effects in the main specification because we prefer to focus on three industry indicators (Financial, High-Tech, and

Manufacturing dummies) that are more informative about borrower riskiness. Country fixed effects are defined by borrower countries. Industry fixed effects are defined by borrower industry using Fama-French 49-industry classification. The results are qualitatively similar to the ones in Table 3. We still find that foreign banks have higher spreads than domestic banks. The increases in spreads during the crisis are generally smaller for foreign banks. This effect comes from loans to private borrowers. In unreported regressions, we also replace Foreign Bank dummy with bank fixed effects. The results on the remaining variables are qualitatively similar.

In the main specification, we use borrower characteristics to control for loan demand. Here, we further include Country x Year fixed effects to capture any components of loan demand driven by country-level time-varying economic conditions. The results are reported in Table 9 Panel B. The main results are similar to the ones in Table 3. The increases in spreads during the crisis are generally smaller for foreign banks and this effect comes from loans to private borrowers.

[INSERT TABLE 9 HERE]

Loan Spreads of Relationship and Non-Relationship Borrowers

In this section, we divide our loan sample into borrowers with and without prior lending relationship with their lenders. We then examine how loan spreads differ between foreign and domestic banks and how they change between normal times and the crisis period. If a bank has past relationship with a borrower which produced borrower-specific durable and reusable information, the nature of asymmetric information problems might be different between relationship and non-relationship borrowers. Therefore, it is useful to see how the effects of foreign banks and financial crisis vary with this prior lending relationship.

We estimate the equations (1), (2), and (3) from Section 5 using the subsamples of relationship and non-relationship borrowers during normal times and the crisis period.

We define lending relationship as whether the lead bank was also a lead bank in another deal during the past five years (from t-5 to t-1). Table 10 Panel A reports the results from equation (1) and Table 10 Panel B reports the results from equation (2). Table 10 Panel C reports the results from equation (3).

[INSERT TABLE 10 HERE]

In Table 10 Panel A, we can interpret the coefficients on the constant term (a_0) and Foreign Bank dummy (a_1) as follows. The constant term (a_0) is the mean spread for loans made by domestic banks, the coefficient on Foreign Bank dummy (a_1) is the average difference between the spreads for loans made by

foreign and domestic banks, and the sum of the two (a_0+a_1) is the mean spread for loans from foreign banks. From the second column (Relationship Borrowers/Normal Times), the average spread of loans to relationship borrowers during normal times is 158.683 basis points (a_0) for domestic banks and 177.143 basis points (a_0+a_1) for foreign banks, with the difference being statistically significant. From the third column (Non-Relationship Borrowers/Normal Times), the average spread of loans to non-relationship borrowers during normal times is 224.489 basis points for domestic banks and 235.328 basis points for foreign banks. It is apparent the loan spreads are much lower for relationship borrowers compared to non-relationship borrowers. Moreover, relationships with foreign banks appear to have less value to borrowers than relationships with domestic banks. Prior lending relationship lowers the spread by 58.185 (= 235.328-177.143) basis points for foreign banks and 65.806 (=224.489-158.683) basis points for domestic banks.

From the fifth column (Relationship Borrowers, Crisis), the average spread of loans to relationship borrowers during the crisis period is 242.354 basis points for domestic banks and 247.85 basis points for foreign banks. From the sixth column (Non-Relationship Borrowers, Crisis), the average spread of loans to non-relationship borrowers during the crisis period is 282.509 basis points for domestic banks and 275.148 basis points for foreign banks. Similar to the results during normal times, loan spreads for relationship borrowers are lower than loan spreads for non-relationship borrowers during the crisis period. Relationships with foreign banks are less valuable to borrowers than relationships with domestic banks during the crisis as well. Relationship lowers the spread by 27.298 basis points for foreign banks and 40.155 basis points for domestic banks.

Comparing between normal times and the crisis period, loan spreads increase substantially during the crisis. For foreign banks, the increase is 70.707 basis points for relationship borrowers and 39.82 basis points for non-relationship borrowers. For domestic banks, the increase is 83.671 basis points for relationship borrowers and 58.02 basis points for non-relationship borrowers. Foreign bank lending to non-relationship borrowers suffers the smallest increase in spread. This result (together with the previous finding that foreign banks and non-relationship borrowers experience largest decline in number of loans) is consistent with very significant quantity rationing of the non-relationship borrowers which are likely to be the riskiest.

In Table 10 Panel B, we examine an alternative specification where we include the other three loan contract terms (Loan Size, Maturity, and Collateral) and loan purposes as control variables. The coefficient on Foreign Bank dummy (b_1) is estimated at 20.983 for relationship borrowers and -5.018 for non-relationship borrowers during normal times. These parameter estimates suggest that, conditional on

other loan contract terms and loan purposes, relationship with domestic banks lowers spreads more than relationship with foreign banks by 26.001 basis points. Compared to the numbers in Panel A, controlling for other loan contract terms and loan purposes makes the difference between foreign and domestic relationship stronger. The coefficient on Foreign Bank dummy is estimated at 15.009 for relationship borrowers and 3.549 for non-relationship borrowers during the crisis period. Conditional on other loan contract terms and loan purposes, relationship with domestic banks lowers spreads more than relationship with foreign banks by 11.46 basis points. The difference between foreign and domestic relationship seems to shrink during the crisis.

In Table 10 Panel C, we further control for Public dummy, other borrower characteristics, and loan purposes. The estimated coefficient on Foreign Bank dummy (c_1) is 37.379 for relationship borrowers and 1.012 for non-relationship borrowers during normal times. The estimated coefficient on Foreign Bank dummy is 6.901 for relationship borrowers and 0.521 for non-relationship borrowers during the crisis period. So, we still find that relationships with foreign banks are less valuable than relationships with domestic banks. Compared to the numbers in Panel B, controlling for borrower characteristics makes the difference between foreign and domestic relationships during normal times even stronger. In addition, the crisis decreases c_1 by 30.478 (=37.379-6.901) for relationship borrowers and 0.491(=1.012-0.521) for non-relationship borrowers. In Panel B where we do not control for borrower characteristics, the crisis decreases the coefficient on Foreign Bank dummy (b_1) by 5.974 (=20.983-15.009) for relationship borrowers and increases b_1 by 8.567 (=5.018+3.549) for non-relationship borrowers. Therefore, among relationship borrowers, the effects of financial crisis on foreign bank coefficients are greatly accentuated when we include borrower characteristics in the regressions.

[INSERT TABLE 11 HERE]

Alternative Crisis Definition

A concern is that our definition of the crisis period (2008-2011) is too long and this may result in underestimation of the crisis effects. Therefore, in Table 11, we alternatively define the crisis period to be 2008-2009. Similar to the prior results, we still find that the increases in spreads during the crisis are generally smaller for foreign banks and this effect comes from loans to private borrowers. The magnitude of the coefficients on Foreign Bank dummy during the crisis period is indeed larger under this alternative definition. The coefficients on Foreign Bank dummy during the crisis period are estimated at 33.083 for public firms and -43.563 for private firms. The magnitude of these estimates is larger than the ones in Table 3 Panel C (31.85 for public firms and -35.014 for private firms). In unreported regressions, we also

shorten the normal times window to 2006-2007 so that the number of years during normal times is equal to the number of years during the crisis period. Our main results still hold.

Capitalization of U.S. and Non-U.S. Banks

In previous section, we find that the declines in quantity of loans during the recent financial crisis are concentrated among U.S. banks operating inside and outside the U.S. In this section, we compare capitalization of U.S. and non-U.S. banks and verify that the financial crisis puts more capital pressure on U.S. banks.

[INSERT FIGURE 3 HERE]

We plot annual average of Bank Equity/Gross Total Assets of U.S. and non-U.S. banks on Figure 3. Our sample includes all banks in 50 developed and developing countries from BankScope from 2004 to 2011. We find that U.S. banks had lower capital ratios and they fell more during the crisis. Bank Equity/ Gross Total Assets in the U.S. is at the lowest in 2009. Bank capital picks up in 2010 and 2011 due to tighter regulations but it is still lower than the 2007 level.

In unreported regressions, we regress bank characteristics on the Crisis dummy. We find that Bank Loans/ Gross Total Assets and ROA are lower during the crisis. Bank NPL/Gross Total Assets and Reserve/Gross Loans are higher during the crisis. We then divide the sample in to U.S. and non-U.S. banks. The effects of the crisis on all these variables are stronger in the U.S.

Other Robustness Checks (not tabulated here for brevity)

We split our sample based on lender capitalization (Bank Equity/Gross Total Assets) and re-estimate the spread regressions using each subsample. Our finding that the increases in spreads during the crisis are smaller for foreign banks lending to private borrowers is stronger among well-capitalized banks. The data suggest that undercapitalized foreign banks are more likely to use both quantity and interest rate rationing (decrease loan quantities and increase spreads) to limit their exposure to private borrowers during the crisis.

Inferences in this paper are based on t statistics computed from robust standard errors. It is possible that shocks to loan spreads are correlated within a country or within an industry. Therefore, we cluster standard errors at the country and industry levels as a robustness check. We find that our main coefficients remain statistically significant.

8. Conclusions

We use a unique dataset that combines hand-matched and computer-matched information on banks, loans, and borrowers from 50 countries over the period 2004 to 2011. We use these data to analyze questions about the effects of financial crises on lending by foreign and domestic banks to public and private firms, with special attention paid to U.S. versus non-U.S. banks and borrowers. The analysis yields a number of interesting findings.

First, we find that the recent financial crisis led to sharp declines in the quantities of bank loans. The declines are much larger for foreign banks, and are concentrated among private and non-relationship borrowers, consistent with credit rationing where information problems are the most severe. In fact, public borrowers had a slight increase in loans during the crisis.

Second, the declines are larger for U.S. banks than non-U.S. banks and for more for U.S. borrowers than non-U.S. borrowers. The U.S. bank result is consistent with the crisis hurting U.S. banks more than others. Additional data shows that U.S. banks suffered greater capital losses, more profit decreases, more non-performing loans, and more loan loss provisions than other during the recent financial crisis, supporting this interpretation. U.S. borrowers likely suffered relatively more as well.

Third, the financial crisis resulted in significant increases in spreads for both foreign and domestic banks, particularly for loans to public and relationship borrowers. These borrowers became riskier, but obtained credit, whereas the pools of private and non-relationship borrowers did not increase in risk as much because more of the riskiest segments of them no longer received loans. The difference in spread increases between public and private borrowers is larger among non-U.S. borrowers, consistent with information problems being more severe for these borrowers. Also, some bank-borrower combinations (e.g., U.S. banks lending to domestic public borrowers) appear to be associated with significant interest-rate insurance given to relationship borrowers.

Our findings strongly suggest that it is important to include borrower characteristics in this type of study. First, public and private firms received very different treatment from their banks, a fact that would not surface without collection of this particular characteristic. Second, borrower characteristics have substantial explanatory power in loan spread regressions, allowing for more accurate estimates of all the coefficients. Third, the sensitivities of loan spreads to borrower characteristics change dramatically between normal times and financial crisis periods. In particular, the sensitivities to borrower risk go up during the crisis. Using firm fixed-effects to control for borrower characteristics does capture this finding. Third, the inclusion of borrower characteristics in the pricing equations accentuates the effects of bank foreignness for private borrowers and mutes the effects for public borrowers.

Our findings contribute to the literatures on the benefits and costs of foreign banks, financial crises, credit rationing, and corporate finance, and have several potential policy implications. First, given that foreign bank lending to private firms react more strongly to financial crises, a robust domestic banking sector may be important for protecting private borrowers from the ravages of financial crises. Given that banking sector in many countries, such as Eastern European countries, is dominated by foreign banks, this policy implication can be particularly relevant. Second, a robust capital market with significant opportunities for firms to go public may be particularly important for protecting firms from credit rationing by banks during financial crises. Finally, significant capital pressure on the banking sector during financial crises may result in substantially more credit rationing of borrowers. This might be especially harmful to the economy, since the effects tend to fall on private firms that are thought to be engines of innovation and economic growth. These findings lend support to countercyclical capital requirements to protect the economy from financial crises.

Our paper suggests that future research focus on loan-level analyses and distinguish between both types of banks and types of borrowers. This is a necessary step toward understanding of foreign and domestic bank behavior, since the effects of financial crises differ according to the degree of asymmetric information between banks and borrowers. More investigation of issues related to information problems, credit rationing, flight to quality, and interest rate insurance may be especially fruitful in the context of foreign and domestic banks during financial crises.

References

Bae, K.-H., Kang, J.-K., and Lim, C.W., 2002, The value of durable bank relationships: evidence from Korean banking shocks, Journal of Financial Economics 64, 181–214.

Beck, T., Demirguc-Kunt, A., and Maksimovic, V., 2004, Bank competition and access to finance: international evidence, Journal of Money, Credit, and Banking, 36, pp. 627-648.

Berger, A. N., DeYoung, R., Genay, H., and Udell, G. F., 2000, Globalization of Financial Institutions: Evidence from Cross-Border Banking Performance, Brookings-Wharton Papers on Financial Services 3:23-158.

Berger, Allen N., Frame S. W., and Ioannidou V., 2011, Tests of Ex Ante versus Ex Post Theories of Collateral using Private and Public Information, Journal of Financial Economics 100, 85-97.

Berger, A. N., Udell, G. F., 1990, Collateral, Loan Quality, and Bank Risk, Journal of Monetary Economics, 25: 21-42.

Berger, A. N., and Udell, G. F., 1992, Some evidence on the empirical significance of credit rationing, Journal of Political Economy 100 (October), 1047-77.

Berger, A. N., and Udell, G. F. 1995. Relationship lending and lines of credit in small firm finance, Journal of Business 68, 351–381.

Berlin, M., and Mester, L.J. 1999. Deposits and Relationship Lending, Review of Financial Studies, 12, 579-607.

Brick, Ivan E. and Darius Palia, 2007. Evidence of Jointness in the Terms of Relationship Lending, Journal of Financial Intermediation, 16, 452-476.

Bruno, V., Hauswald, R., 2008. The Real Effect of Foreign Banks Working Paper, American University, Washington DC.

Carbo-Valverde, S., Rodriguez-Fernandez, F. and Udell, G. F., 2012, Trade credit, the financial crisis, and firm access to finance. Working Paper, University of Grenada.

Claessens, S., Demirguc-Kunt, A., and Huizinga, H. 2001, How does foreign entry affect domestic banking markets? Journal of Banking and Finance, 25, 891-911.

Claessens, S. and van Horen, N., 2013, Impact of Foreign Banks, Journal of Financial Perspectives 1, 29-42.

Claessens, S. and van Horen, N., 2014, Foreign banks: Trends and impact, Journal of Money, Credit and Banking 46(1), 295-326.

Claessens, S. and van Horen, 2015, The Impact of the Global Financial Crisis on Banking Globalization, IMF Economic Review (forthcoming).

De Haas, R., and Van Horen, N., 2012a, International Shock Transmission after the Lehman Brothers Collapse: Evidence from Syndicated Lending, American Economic Review, Papers & Proceedings 102, 231–237.

De Haas, R., and Van Horen, N., 2012b, Running for the Exit? International Bank Lending During a Financial Crisis, Review of Financial Studies 26, 244-285.

Detragiache, E. and Gupta, P., 2004. Foreign Banks in Emerging Market Crises: Evidence from Malaysia, Working Paper, International Monetary Fund.

Detragiache, E., Gupta, P., and Tressel, T., 2008. Foreign Banks in Poor Countries: Theory and Evidence, Journal of Finance, 63(5).

Feyen, E., Letelier, R., Love, I., Maimbo, S.M., Rocha, R., 2014, The Impact of Funding Models and Foreign Bank Ownership on Bank Credit Growth Is Central and Eastern Europe Different?, World Bank Policy Research Working Paper 6783.

Gatev, E. and P.E. Strahan, 2006, "Banks' Advantage In Hedging Liquidity Risk: Theory and Evidence From The Commercial Paper Market," Journal of Finance 61(2), 867-892.

Gao, H., Harford, J. , Li, K., 2013, Determinants of Corporate Cash Policy: Insights from Private Firms, Journal of Financial Economics, forthcoming.

Gan, J., 2007, The Real Effects of Asset Market Bubbles: Loan- and Firm-Level Evidence of a Lending Channel, Review of Financial Studies 20, 1941-1973.

Giannetti, M. and Laeven, L.,2011. The flight home effect: Evidence from the syndicated loan market during financial crises, Journal of Financial Economics 104(1): 23–43.

Giannetti, M. and Ongena, S., 2008. Lending by Examples: Direct and Indirect Effects of Foreign Bank Presence in Emerging Markets, Journal of International Economics.

Godlewski, Christophe and Laurent Weill, 2011. Does Collateral Help Mitigate Adverse Selection? A Cross-Country Analysis, Journal of Financial Services Research, 40, 49-78.

Gormley, T.A., 2010. The Impact of Foreign Bank Entry in Emerging Markets: Evidence from India, Journal of Financial Intermediation, 19(1), 2010, 26-51.

Ivashina, V. and Scharfstein, D., 2010, Bank lending during the financial crisis of 2008, Journal of Financial Economics 97, 319–338.

Levine, R., 1996, Foreign banks, financial development, and economic growth, Journal of Economic Literature.

Maksimovic, V., Phillips, G., Yang, L., 2013, Private and public merger waves, Journal of Finance, forthcoming.

Mian, A., 2006. Distance constraints: The limits of foreign lending in poor economies, Journal of Finance 61, 1465–1505.

Michaely, R., Roberts, M.R., 2012, Corporate dividend policies: Lessons from private firms, Review of Financial Studies 25 (3), 711-746.

Ongena, Steven, David C. Smith and Dag Michalsen, 2003, Firms and their Distressed Banks: Lessons from the Norwegian Banking Crisis, Journal of Financial Economics 67.

Ongena, S., Peydro, J., and Van Horen, N., 2013, Shocks abroad, pain at home? Bank-firm level evidence on the international transmission of financial shocks, DNB Working Paper no. 385.

Peek, J. and Rosengren, E.S., 2000. Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States, The American Economic Review 90, 30-45.

Petersen, M. A., and Rajan, R. G. 1994. The benefits of firm-creditor relationships: Evidence from small business data. Journal of Finance 49 (March): 3-37.

Popov, A. and Udell, G., 2010. Cross-border banking and the international transmission of financial distress during the crisis of 2007-2008, Working Paper, European Central Bank.

Popov, A. and Van Horen, N., 2015, Exporting Sovereign Stress: Evidence from Syndicated Bank Lending during the Euro Area Sovereign Debt Crisis, Review of Finance 19, 1825-1866.

Presbitero A., Udell G., Zazzaro A., 2012, The Home Bias and the Credit Crunch: a Regional Perspective", MoFiR, Working Paper 60.

Puri, M., Rocholl, J., and Steffen, S., 2009, The impact of the US financial crisis on global retail lending, working paper, Duke University.

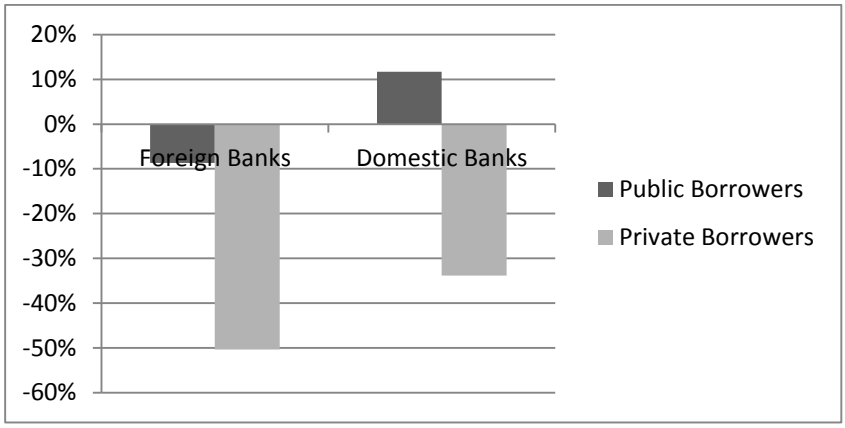
Santos, J. 2011. Bank Loan Pricing Following the Subprime Crisis. Review of Financial Studies 24, 1916–1943.

Schnabl, Philipp, 2010. Financial globalization and the transmission of bank liquidity shocks: evidence from an emerging market, Journal of Finance, forthcoming.

Stiglitz, J.E., and Weiss, A., 1981. Credit Rationing in Markets with Imperfect Information. American Economic Review 71 (June): 393-410.

Figure 1: Effects of the Financial Crisis

Percentage Changes in Number of Loans



Basis Point Changes in Loan Spreads

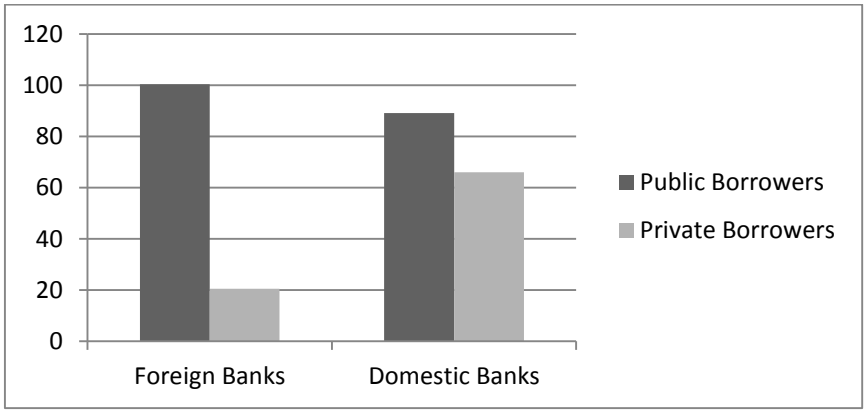


Figure 1 illustrates the change in quantity and spread between normal times and financial crisis across categories of banks and borrowers. The percentage changes in aggregate number of loans are taken from the bottom part of the last column in Table 2 Panel A. The basis point changes are calculated from Table 3 Panel A.

Figure 2: The Effects of Financial Crisis on U.S. vs. Non-U.S. Banks and Borrowers

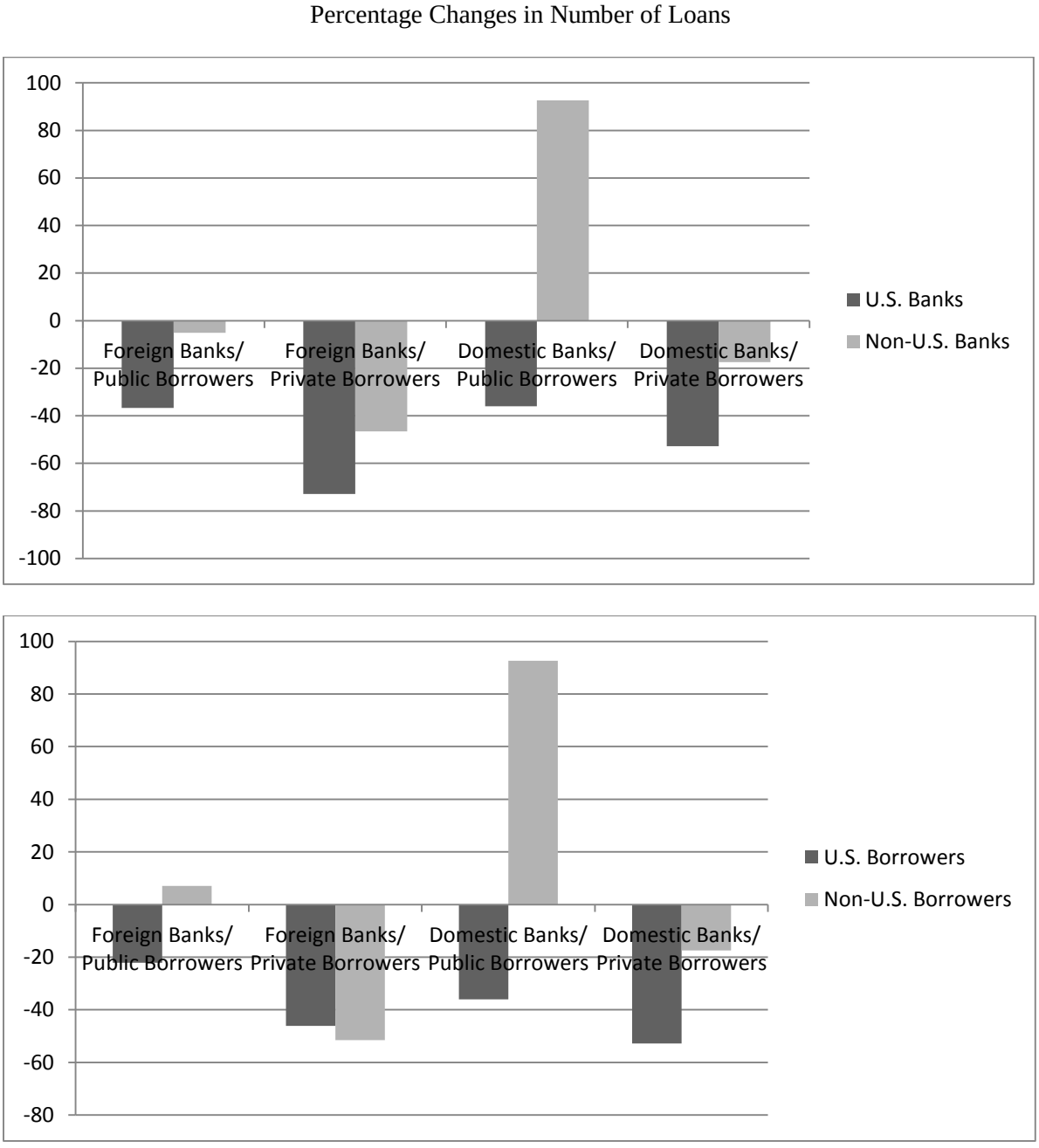


Figure 2: The Effects of Financial Crisis on U.S. vs. Non-U.S. Banks and Borrowers (Continued)

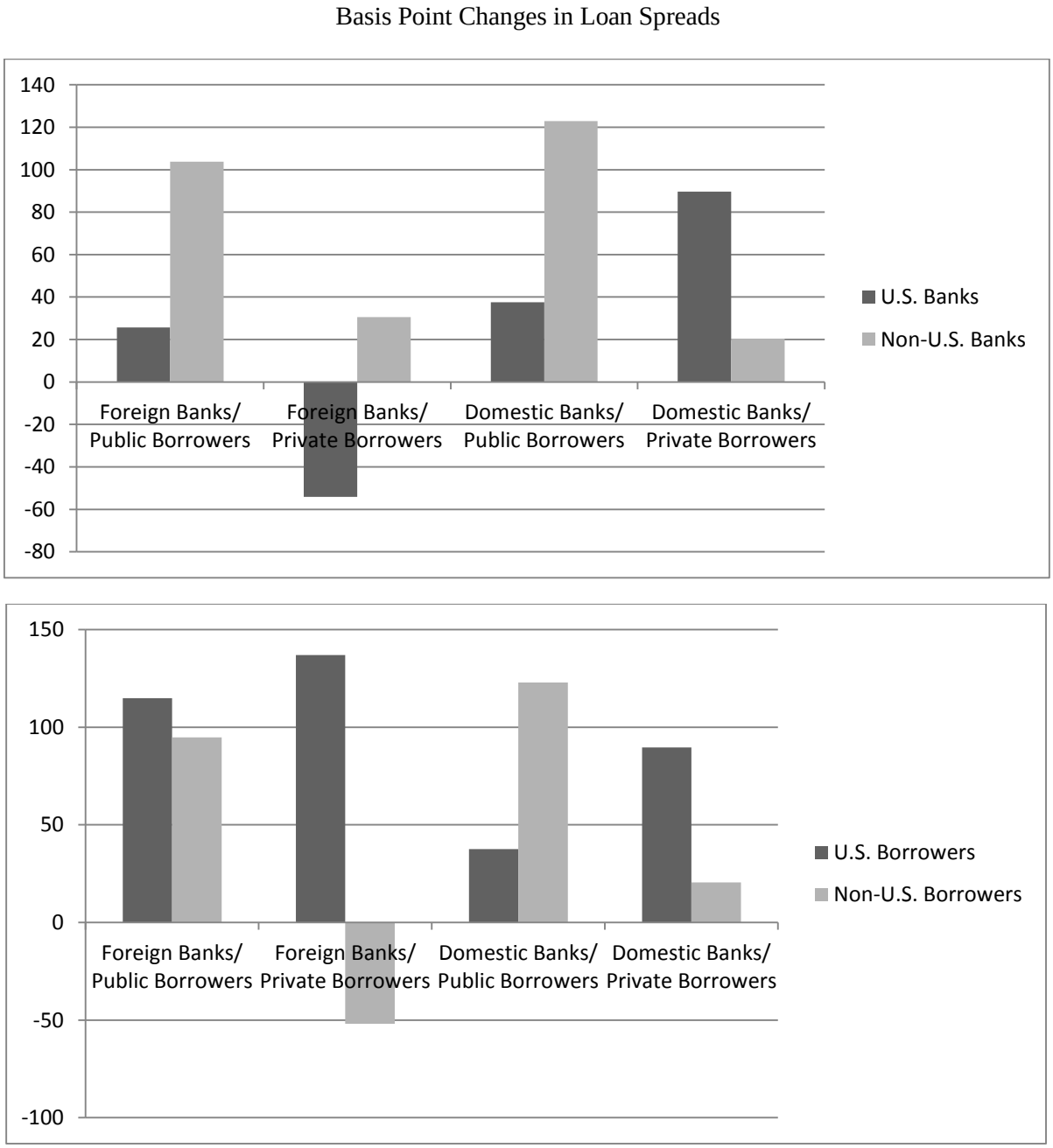


Figure 2 describes the change in quantity and spread between normal times and financial crisis across categories of U.S. and non-U.S. banks and borrowers. The percentage changes in aggregate number of loans are taken from the bottom part of Table 4. The basis point changes are from Panel B of Tables 5 and 6.

Figure 3: Capitalization of U.S. and Non-U.S. Banks

Bank Equity/ Gross Total Assets

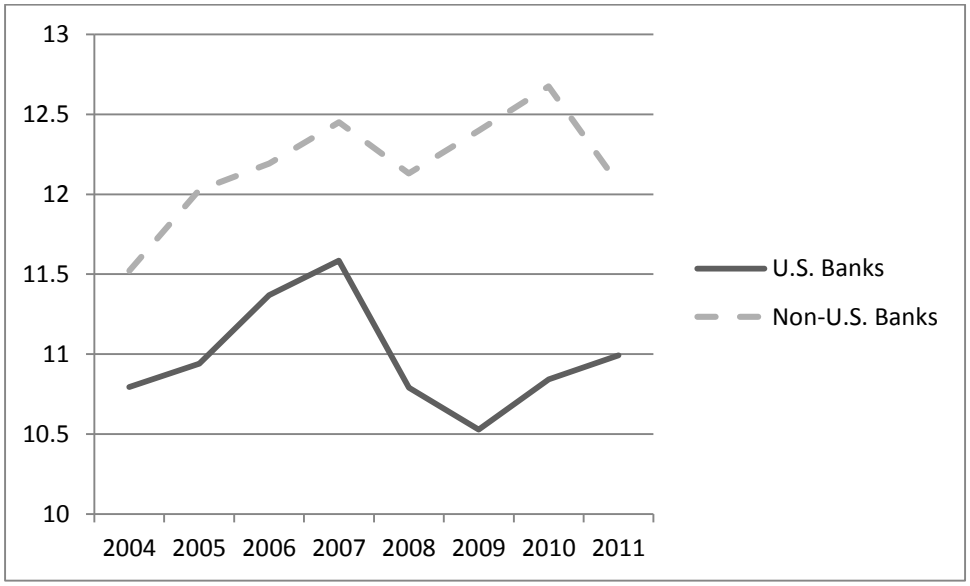


Figure 3 shows annual average of Bank Equity/Gross Total Assets of U.S. and non-U.S. banks. Our sample includes all banks in 50 developed and developing countries from BankScope.

Table 1: Descriptive Statistics

Subsample =	Number of Observations	All	Normal Times	Crisis	Foreign Banks	Domestic Banks	Public Borrowers	Private Borrowers
Loan Contract Terms								
Spread	9,868	227.77	204.55	268.79	235.71	225.34	199.70	257.65
Deal Size	18,708	14.242	14.362	14.097	14.885	14.087	14.441	14.041
Maturity	18,127	51.307	55.86	45.829	60.877	49.096	44.09	58.793
Collateral	18,736	0.278	0.32	0.227	0.351	0.26	0.261	0.295
Borrower Characteristics								
Size	18,736	12.811	12.664	12.99	13.468	12.653	14.125	11.48
Profitability	18,736	0.24	0.126	0.378	0.11	0.271	0.237	0.242
Leverage	18,736	0.345	0.262	0.445	0.377	0.337	0.367	0.322
Asset Tangibility	18,736	0.12	0.073	0.177	0.184	0.104	0.177	0.062
A Rated	18,736	0.076	0.08	0.07	0.147	0.058	0.086	0.065
B Rated	18,736	0.198	0.238	0.15	0.235	0.189	0.268	0.128
C Rated	18,736	0.009	0.011	0.007	0.013	0.008	0.01	0.008
D Rated	18,736	0.003	0.002	0.003	0.004	0.002	0.004	0.001
Corporate Borrower	18,736	0.821	0.812	0.832	0.774	0.832	0.854	0.788
Government Borrower	18,736	0.01	0.011	0.009	0.04	0.003	0.005	0.015
Financial Industry	18,736	0.029	0.039	0.016	0.1	0.012	0.008	0.05
Manufacturing Industry	18,736	0.229	0.253	0.199	0.297	0.212	0.229	0.228
High-Tech Industry	18,736	0.072	0.079	0.064	0.085	0.069	0.087	0.056
Loan Purposes								
Acquisition	18,736	0.123	0.165	0.072	0.212	0.101	0.074	0.173
Capital Expenditure	18,736	0.023	0.018	0.029	0.021	0.023	0.022	0.023
Refinancing	18,736	0.098	0.07	0.132	0.092	0.1	0.116	0.081
Backup Line	18,736	0.006	0.008	0.004	0.004	0.007	0.008	0.004

This table reports the number of observations and means of loan contract terms, borrower characteristics, and loan purposes. Our sample includes all loans in 50 developed and developing countries from DealScan with lender information from BankScope and borrower information from Orbis/Osiris. The sample period is 2004-2011. Normal times are 2004-2007. Crisis years are 2008-2011. Bank ownership data are from Claessens and Van Horen (2012)/ BankScope. Borrower listing status is from Orbis/Osiris. A-D Rated categories are constructed from S&P's Senior Debt Ratings. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association.

Table 2 Panel A: Number of Loans by Bank and Borrower Types

Number of Loans	Normal Times	Crisis Years	Percentage Changes
All Loans	10,275	8,461	-17.65
Foreign Banks	2,242	1,406	-37.29
Domestic Banks	8,033	7,055	-12.17
Public Borrowers	4,523	4,908	8.51
Private Borrowers	5,752	3,553	-38.23
Foreign Banks/Public Borrowers	703	642	-8.68
Foreign Banks/Private Borrowers	1,539	764	-50.36
Domestic Banks/Public Borrowers	3,820	4,266	11.68
Domestic Banks/Private Borrowers	4,213	2,789	-33.8

Table 2 Panel B: Alternative Breakdowns of Bank and Borrower Types

Number of Loans	Normal Times	Crisis Years	Percentage Changes
U.S. Banks	4,653	2,568	-44.81
Non-U.S. Banks	5,623	5,893	4.8
U.S. Borrowers	5,067	2,934	-42.1
Non-U.S. Borrowers	5,209	5,527	6.1
Relationship Borrowers	3,959	3,610	-8.82
Non-Relationship Borrowers	6,317	4,851	-23.21

Table 2 Panel C: Number of Loans by Bank and Borrower Credit Ratings

Aggregate Number of Loans	Normal Times	Crisis Years	Percentage Changes
A Rated	824	591	-28.28
B Rated	2,443	1,273	-47.89
C Rated	114	56	-50.88
D Rated	21	26	23.81

This table reports the number of loans during normal times and financial crisis. Normal times are 2004-2007. Crisis years are 2008-2011. Bank ownership data are from Claessens and Van Horen (2014)/ BankScope. Borrower listing status is from Orbis/Osiris. A-D Rated categories are constructed from S&P's Senior Debt Ratings.

Table 2 Panel D: Distributions of Borrower Credit Ratings across Subsamples

	Normal Times			Crisis			Crisis- Normal Times		
	All	Foreign	Domestic	All	Foreign	Domestic	All	Foreign	Domestic
A Rated	8.02%	16.09%	5.76%	6.98%	12.59%	5.87%	-1.03%	-3.51%	0.10%
B Rated	23.78%	23.90%	23.75%	15.05%	22.97%	13.47%	-8.74%	-0.92%	-10.29%
C Rated	1.11%	1.16%	1.10%	0.66%	1.64%	0.47%	-0.45%	0.48%	-0.63%
D Rated	0.20%	0.45%	0.14%	0.31%	0.36%	0.30%	0.10%	-0.09%	0.16%
Unrated	66.88%	58.40%	69.25%	77.00%	62.45%	79.90%	10.12%	4.04%	10.65%
	Normal Times			Crisis			Crisis- Normal Times		
	All	Public	Private	All	Public	Private	All	Public	Private
A Rated	8.02%	8.95%	7.28%	6.98%	8.27%	5.21%	-1.03%	-0.68%	-2.08%
B Rated	23.78%	34.53%	15.33%	15.05%	19.62%	8.73%	-8.74%	-14.91%	-6.61%
C Rated	1.11%	1.26%	0.99%	0.66%	0.82%	0.45%	-0.45%	-0.44%	-0.54%
D Rated	0.20%	0.42%	0.03%	0.31%	0.31%	0.31%	0.10%	-0.11%	0.27%
Unrated	66.88%	54.84%	76.36%	77.00%	70.99%	85.31%	10.12%	16.15%	8.95%

This table reports the composition of borrower credit rating during normal times and the financial crisis within each category of banks (foreign and domestic) and borrowers (public and private). The numbers reported in each column are percentages of loans that are granted to A, B, C, and D rated borrowers and unrated borrowers. Normal times are 2004-2007. Crisis years are 2008-2011. Bank ownership data are from Claessens and Van Horen (2014)/ BankScope. Borrower listing status is from Orbis/Osiris. A-D Rated categories are constructed from S&P's Senior Debt Ratings.

Table 2 Panel E: Probability of Receiving a Loan during the Crisis Period Conditional on Loans during Normal Times

Y=Prob(Loan after Crisis| Loan before Crisis)							
Foreign Bank	-0.436	-0.371	-0.542	-0.573	-0.589	-0.611	-0.546
	(11.13)***	(9.32)***	(11.82)***	(11.89)***	(11.93)***	(11.35)***	(9.65)***
Public Borrower		0.431	0.486	0.431	0.456	0.491	0.415
		(14.62)***	(14.75)***	(11.68)***	(12.35)***	(13.09)***	(10.92)***
U.S. bank			-0.574	-0.609	-0.625	-0.639	-0.623
			(8.07)***	(8.27)***	(8.32)***	(8.13)***	(7.94)***
U.S. borrower			-0.179	-0.142	-0.108	-0.014	0.011
			(2.65)***	(2.01)**	(1.48)	(0.18)	(0.14)
Relationship			0.735	0.701	0.702	0.688	0.625
			(23.26)***	(21.81)***	(21.67)***	(21.08)***	(18.38)***
Borrower Characteristics							
Size				0.036	0.032	0.024	0.032
				(6.23)***	(5.22)***	(3.85)***	(4.74)***
Profitability				0.22	0.218	0.208	0.208
				(6.74)***	(6.66)***	(6.38)***	(6.06)***
Leverage				-0.456	-0.451	-0.427	-0.414
				(7.68)***	(7.75)***	(7.53)***	(7.12)***
Asset Tangibility				-0.093	-0.08	-0.013	-0.036
				(1.46)	(1.26)	(0.20)	(0.55)
A Rated					0.15	0.082	0.091
					(2.41)**	(1.26)	(1.33)
B Rated					-0.131	-0.113	-0.056
					(2.94)***	(2.49)**	(1.15)
C Rated					0.205	0.235	0.354
					(1.11)	(1.26)	(1.89)*
D Rated					0.331	0.308	0.247
					(0.98)	(0.93)	(0.74)
Corporate Borrower						-0.034	0.011
						(0.76)	(0.24)
Government Borrower						0.28	0.211
						(1.84)*	(1.37)
Financial Industry						0.207	0.121
						(2.02)**	(1.13)
Manufacturing Industry						-0.262	-0.211
						(6.20)***	(4.80)***
High-Tech Industry						-0.31	-0.311
						(4.12)***	(4.06)***
Other Deal Characteristics							
Deal Size							-0.024
							(1.93)*
Maturity							-0.005
							(8.66)***
Collateral							-0.041
							(0.93)
Loan Purposes							

Acquisition							-0.073
							(1.20)
Capital Expenditure							0.105
							(0.87)
Refinancing							0.267
							(4.68)***
Backup Line							-0.287
							(1.48)
Constant	-0.829	-1.053	-1.077	-1.412	-1.375	-1.233	-0.745
	(52.19)***	(46.47)***	(36.57)***	(19.96)***	(18.38)***	(14.85)***	(4.52)***
Pseudo R-squared	0.01	0.04	0.15	0.16	0.17	0.18	0.19
N	10,275	10,275	10,275	10,275	10,275	10,275	9,897

This table reports the coefficient estimates from the loan quantity regressions. The sample contains all loans during normal times (2004-2007). The dependent variable in this regression is the probability that, for each pre-crisis loan, there will be at least one loan with the same bank-borrower pair during the crisis period. (The Loan during Crisis dummy takes the value of one if the lender of loan i also decides to lend to the borrower of loan i during the crisis period (2008-2011) and zero otherwise.) The explanatory variables are Foreign Bank dummy, Public dummy, U.S. Bank dummy, U.S. Borrower dummy, Relationship dummy as well as other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. U.S. Bank Dummy takes the value of one if the bank is from the U.S. and zero otherwise. U.S. Borrower Dummy takes the value of one if the borrower is from the U.S. and zero otherwise. The Relationship dummy takes the value of one if the lead bank on the deal was also a lead bank in another deal during the past five years (from t-5 to t-1). Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Numbers in the parentheses are the z statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 3 Panel A: Loan Spreads

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	18.062	15.808	-0.263	-0.585	27.1	-45.805
	(2.85)***	(2.27)**	(0.03)	(0.08)	(3.21)***	(3.50)***
Constant	200.223	157.753	242.341	268.926	246.884	308.417
	(64.54)***	(53.45)***	(46.67)***	(76.65)***	(67.83)***	(43.92)***
R-squared	0	0	0	0	0	0.01
N	6,301	2,910	3,391	3,567	2,178	1,389

Table 3 Panel B: Loan Spreads with Other Loan Contract Terms and Loan Purposes

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	3.14	10.38	-14.162	7.479	37.804	-41.264
	(0.51)	(1.64)	(1.46)	(1.02)	(4.66)***	(3.03)***
Other Loan Contract Terms						
Deal Size	-20.264	-21.341	-12.134	-13.065	-9.293	-13.665
	(11.01)***	(12.55)***	(3.74)***	(6.05)***	(4.03)***	(3.27)***
Maturity	1.177	0.726	1.133	0.384	0.307	0.279
	(13.13)***	(6.57)***	(8.64)***	(3.62)***	(2.08)**	(1.70)*
Collateral	82.811	80.888	86.243	70.512	85.133	55.943
	(15.26)***	(16.09)***	(9.34)***	(11.20)***	(12.99)***	(4.41)***
Loan Purposes						
Acquisition	68.493	41.973	59.248	64.963	29.917	91.337
	(10.20)***	(5.74)***	(5.68)***	(6.69)***	(2.60)***	(5.50)***
Capital Expenditure	-50.848	-20.099	-73.37	-39.512	-42.819	-0.968
	(2.18)**	(1.10)	(1.49)	(1.41)	(1.54)	(0.02)
Refinancing	-24.954	1.076	-53.458	-35.866	-15.195	-76.965
	(2.06)**	(0.10)	(2.62)***	(3.01)***	(1.36)	(2.55)**
Backup Line	-52.987	-40.711	-81.585	-130.592	-125.389	-160.356
	(2.07)**	(1.97)**	(1.61)	(3.02)***	(2.98)***	(1.66)*
Constant	382.196	397.973	295.294	407.266	331.323	459.179
	(14.11)***	(15.63)***	(6.37)***	(13.07)***	(9.92)***	(7.71)***
R-squared	0.13	0.18	0.1	0.08	0.11	0.07
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). In Panel A, the explanatory variable is Foreign Bank Dummy. In Panel B, the explanatory variables are Foreign Bank Dummy, other loan contract terms, and loan purposes. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 3 Panel C: Loan Spreads with Borrower Characteristics

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	11.174	16.56	8.161	4.865	31.85	-35.014
	(1.79)*	(2.68)***	(0.81)	(0.68)	(4.14)***	(2.57)**
Borrower Characteristics						
Public Borrower	-35.852			-43.9		
	(5.95)***			(6.30)***		
Size	-5.933	-17.366	-4.166	-4.403	-6.139	-3.021
	(5.70)***	(9.35)***	(3.01)***	(3.32)***	(2.65)***	(1.60)
Profitability	-17.477	-85.751	-10.48	-35.506	-61.714	-18.404
	(1.94)*	(4.82)***	(0.89)	(5.44)***	(7.28)***	(1.75)*
Leverage	3.198	23.903	-11.078	48.476	70.244	26.435
	(0.50)	(3.89)***	(1.06)	(6.47)***	(7.56)***	(2.12)**
Asset Tangibility	-29.317	-35.81	-36.762	-11.766	-14.26	-23.49
	(2.51)**	(4.16)***	(1.30)	(1.37)	(1.85)*	(0.98)
A Rated	-95.329	-54.829	-125.41	-88.393	-76.827	-86.233
	(8.33)***	(5.62)***	(5.59)***	(6.91)***	(5.93)***	(3.12)***
B Rated	-18.519	-3.582	-22.356	33.809	24.715	54.466
	(2.93)***	(0.63)	(1.98)**	(4.61)***	(3.40)***	(3.35)***
C Rated	87.517	101.469	96.983	232.399	162.4	382.775
	(4.20)***	(5.48)***	(2.65)***	(9.41)***	(6.85)***	(6.55)***
D Rated	153.141	173.002	45.897	254.379	255.781	228.879
	(3.55)***	(6.03)***	(0.27)	(7.16)***	(6.95)***	(3.25)***
Corporate Borrower	-12.809	-7.129	-18.152	-10.698	-6.572	-12.893
	(1.52)	(0.86)	(1.34)	(1.16)	(0.67)	(0.75)
Government Borrower	-27.433	-43.195	-14.963	22.297	9.795	26.157
	(1.01)	(1.21)	(0.39)	(0.63)	(0.27)	(0.38)
Financial Industry	-56.683	-10.345	-55.311	-84.115	-68.42	-75.842
	(2.98)***	(0.40)	(1.99)**	(3.52)***	(2.01)**	(1.98)**
Manufacturing Industry	-6.179	-11.178	-6.888	6.195	-4.12	26.976
	(1.14)	(2.28)**	(0.73)	(0.96)	(0.63)	(2.05)**
High-Tech Industry	8.716	14.51	5.634	31.977	22.955	63.647
	(1.07)	(2.15)**	(0.37)	(3.47)***	(2.63)***	(2.95)***
Other Loan Contract Terms						
Deal Size	-8.467	-3.698	-6.335	-12.36	-9.35	-13.177
	(3.96)***	(1.58)	(1.77)*	(5.11)***	(3.19)***	(2.95)***
Maturity	0.872	0.489	0.965	0.152	0.12	0.247
	(9.74)***	(4.56)***	(7.32)***	(1.46)	(0.85)	(1.53)
Collateral	66.828	51.169	71.644	47.834	57.263	24.989
	(12.14)***	(10.03)***	(7.55)***	(7.74)***	(8.99)***	(1.97)**
Loan Purposes						
Acquisition	47.996	38.328	49.295	62.999	42.336	89.616
	(7.10)***	(5.40)***	(4.65)***	(6.70)***	(3.82)***	(5.47)***
Capital Expenditure	-38.719	12.185	-93.243	-28.171	-17.156	-29.074
	(1.67)*	(0.68)	(1.90)*	(1.05)	(0.66)	(0.49)
Refinancing	-25.196	10.285	-49.851	-24.623	-4.001	-72.054
	(2.12)**	(0.96)	(2.44)**	(2.09)**	(0.37)	(2.38)**
Backup Line	-3.453	8.805	-19.639	-79.699	-84.64	-97.485
	(0.14)	(0.44)	(0.38)	(1.93)*	(2.15)**	(1.02)

Constant	355.177	419.267	308.085	483.146	407.843	485.936
	(11.97)***	(14.69)***	(6.15)***	(15.02)***	(11.38)***	(8.02)***
R-squared	0.18	0.27	0.13	0.18	0.25	0.15
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 3 Panel E: Difference in Coefficient Estimates between Crisis and Normal Times

	All		Public		Private	
	Difference	t-statistic	Difference	t-statistic	Difference	t-statistic
Foreign Bank	-6.309	(0.59)	15.29	(1.39)	-43.175	(2.29)**
Borrower Characteristics						
Public Borrower	-8.048	(0.81)				
Size	1.53	(0.77)	11.227	(3.49)***	1.145	(0.49)
Profitability	-18.029	(1.79)*	24.037	(0.91)	-7.924	(0.64)
Leverage	45.278	(3.55)***	46.341	(3.66)***	37.513	(1.99)**
Asset Tangibility	17.551	(1.77)*	21.55	(2.18)**	13.272	(0.46)
A Rated	6.936	(0.59)	-21.998	(1.78)*	39.177	(1.84)*
B Rated	52.328	(5.56)***	28.297	(2.88)***	76.822	(4.4)***
C Rated	144.882	(3.59)***	60.931	(1.52)	285.792	(2.98)***
D Rated	101.238	(1.57)	82.779	(0.98)	182.982	(2.5)**
Corporate Borrower	2.111	(0.17)	0.557	(0)	5.259	(0.26)
Government Borrower	49.73	(1.95)*	52.99	(1.47)	41.12	(1.22)
Bank Borrower	-27.432	(1.26)	-58.075	(2.21)**	-20.531	(0.68)
Manufacturing Industry	12.374	(1.54)	7.058	(0.87)	33.864	(2.19)**
High-Tech Industry	23.261	(1.59)	8.445	(0.77)	58.013	(1.32)
Other Loan Contract Terms						
Deal Size	-3.893	(0.96)	-5.652	(0.32)	-6.842	(1.68)*
Maturity	-0.72	(0.41)	-0.369	(0.91)	-0.718	(1.68)*
Collateral	-18.994	(0)	6.094	(0.87)	-46.655	(0.93)
Loan Purposes						
Acquisition	15.003	(5.68)***	4.008	(5.76)***	40.321	(2.72)***
Capital Expenditure	10.548	(1.13)	-29.341	(1.46)	64.169	(1.22)
Refinancing	0.573	(2.43)**	-14.286	(1.81)*	-22.203	(1.66)*
Backup Line	-76.246	(2.23)**	-93.445	(0.71)	-77.846	(3.02)***

This table tests whether the estimated coefficients in Table 3 Panel C significantly change between normal times and the financial crisis period. Difference Column is defined as the coefficients estimated from the crisis subsample minus the coefficients estimated from the normal times subsample. Numbers in the parentheses are the t statistics from the Chow tests. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 3 Panel E: Difference in Foreign Bank Coefficients between Panel B (without Borrower Controls) and Panel C (with Borrower Controls)

Coefficient on Foreign Bank	Normal Times			Crisis Period			Crisis Period - Normal Times		
	All	Public	Private	All	Public	Private	All	Public	Private
With Borrower Controls	11.174	16.56	8.161	4.865	31.85	-35.014	-6.309	15.29	-43.175
Without Borrower Controls	3.14	10.38	-14.162	7.479	37.804	-41.264	4.339	27.424	-27.102
With - Without Borrower Controls							-10.648	-12.134	-16.073
t-statistic							(2.79)***	(2.5)**	(2.43)**

This table compares the coefficients on Foreign Bank dummy in Table 3 Panel C (the specification that includes Borrower Controls) and the coefficients on Foreign Bank dummy in Table 3 in Panel B (the specification that does not include Borrower Controls). Numbers in Columns 1-6 of Row 1 are from Table 3 Panel C. Numbers in Columns 1-6 of Row 2 are from Table 3 Panel B. Numbers in Columns 7-9 Rows 1 and 2 are the difference between numbers in Rows 4-6 and Rows 1-3. In the last two rows of Columns 7-9, we test whether the inclusion of borrower characteristics in the regressions significantly alters the effects of financial crisis on foreign bank coefficients. Numbers in Columns 7-9 Rows 3 are the difference between numbers in Rows 1 and 2 of the same column. Numbers in the parentheses are the t statistics from the test of equality of coefficients in Columns 7-9 Rows 1 and 2. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 4 Panel A: Number of Loans of U.S. vs. Non-U.S. Banks

	U.S. Banks			Non-U.S. Banks		
Aggregate Number of Loans	Normal Times	Crisis Years	Percentage Changes	Normal Times	Crisis Years	Percentage Changes
All Loans	4,653	2,568	-44.81	5,622	5,893	4.82
Foreign Banks	300	110	-63.33	1,942	1,296	-33.26
Domestic Banks	4,353	2,458	-43.53	3,680	4,597	24.92
Public Borrowers	2,483	1,588	-36.05	2,040	3,320	62.75
Private Borrowers	2,170	980	-54.84	3,582	2,573	-28.17
Foreign Banks/Public Borrowers	79	50	-36.71	624	592	-5.13
Foreign Banks/Private Borrowers	221	60	-72.85	1,318	704	-46.59
Domestic Banks/Public Borrowers	2,404	1,538	-36.02	1,416	2,728	92.66
Domestic Banks/Private Borrowers	1,949	920	-52.8	2,264	1,869	-17.45

Table 4 Panel B: Number of Loans of U.S. vs. Non-U.S. Borrowers

	U.S. Borrowers			Non-U.S. Borrowers		
Aggregate Number of Loans	Normal Times	Crisis Years	Percentage Changes	Normal Times	Crisis Years	Percentage Changes
All Loans	5,067	2,934	-42.1	5,208	5,527	6.13
Foreign Banks	714	476	-33.33	1,528	930	-39.14
Domestic Banks	4,353	2,458	-43.53	3,680	4,597	24.92
Public Borrowers	2,784	1,834	-34.12	1,739	3,074	76.77
Private Borrowers	2,283	1,100	-51.82	3,469	2,453	-29.29
Foreign Banks/Public Borrowers	380	296	-22.11	323	346	7.12
Foreign Banks/Private Borrowers	334	180	-46.11	1,205	584	-51.54
Domestic Banks/Public Borrowers	2,404	1,538	-36.02	1,416	2,728	92.66
Domestic Banks/Private Borrowers	1,949	920	-52.8	2,264	1,869	-17.45

This table reports the number of loans of U.S. and non-U.S. banks and borrowers during normal times and financial crisis. Normal times are 2004-2007. Crisis years are 2008-2011. Bank ownership data are from Claessens and Van Horen (2014)/ BankScope. Borrower listing status is from Orbis/Osiris. In Panel A, Columns 1-3 are computed from the U.S. Bank subsample and Columns 4-6 are computed from the non-U.S. bank subsample. In Panel B, Columns 1-3 are computed from the U.S. borrower subsample and Columns 4-6 are computed from the non-U.S. borrower subsample.

Table 5 Panel A: Loan Spreads of U.S. vs. Non-U.S. Banks

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	-45.137	40.736	-52.739	28.894	85.873	-45.836
	(4.99)***	(3.21)***	(4.19)***	(2.97)***	(7.92)***	(2.64)***
U.S. Bank	-74.047	21.054	-66.109	31.744	64.215	-3.146
	(9.61)***	(1.87)*	(5.99)***	(3.91)***	(7.45)***	-0.2
Foreign Bank x U.S. Bank	105.372	-80.395	120.393	-113.286	-201.614	-27.182
	(5.76)***	(3.28)***	(4.71)***	(4.21)***	(6.35)***	(0.60)
Constant	259.498	138.26	287.045	245.011	196.911	310.648
	(37.64)***	(12.78)***	(31.64)***	(34.79)***	(25.90)***	(23.86)***
R-squared	0.02	0.01	0.01	0.01	0.04	0.01
N	6,301	2,910	3,391	3,567	2,178	1,389

Table 5 Panel B: Average Loan Spreads of U.S. vs. Non-U.S. Banks

Y= Spread; Subsample =	Normal Times		Crisis		Changes	
	Public	Private	Public	Private	Public	Private
Non-U.S. Foreign Banks	178.996	234.306	282.784	264.812	103.788	30.506
U.S. Foreign Banks	119.655	288.59	145.385	234.484	25.73	-54.106
Non-U.S. Domestic Banks	138.26	287.045	261.126	307.502	122.866	20.457
U.S. Domestic Banks	159.314	220.936	196.911	310.648	37.597	89.712

Panel A of this table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, U.S. Bank Dummy, and their interaction. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. U.S. Bank Dummy takes the value of one if the bank is from the U.S. and zero otherwise. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively. Panel B of this table reports the average loan spreads of U.S. and non-U.S. banks. The averages are computed from the coefficient estimates in Panel A.

Table 5 Panel C: Loan Spreads of U.S. vs. Non-U.S. Banks with Borrower Characteristics

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	-6.625	-2.039	-5.606	7.162	40.871	-38.356
	(0.76)	(0.18)	(0.44)	(0.74)	(3.74)***	(2.13)**
U.S. Bank	-17.969	-20.948	-10.31	-1.629	6.637	-10.291
	(2.14)**	(1.98)**	(0.80)	(0.18)	(0.66)	(0.57)
Foreign Bank x U.S. Bank	65.169	25.527	72.11	-52.692	-77.852	-38.096
	(3.57)***	(1.15)	(2.67)***	(2.02)**	(2.54)**	(0.84)
Borrower Characteristics						
Public Borrower	-32.413			-44.063		
	(5.29)***			(6.28)***		
Size	-6.108	-17.452	-4.374	-4.396	-6.249	-3.017
	(5.87)***	(9.40)***	(3.15)***	(3.32)***	(2.70)***	(1.60)
Profitability	-17.568	-89.932	-9.894	-34.927	-58.601	-19.139
	(1.95)*	(5.02)***	(0.84)	(5.21)***	(6.71)***	(1.79)*
Leverage	2.685	23.159	-10.895	48.162	69.401	24.733
	(0.42)	(3.76)***	(1.05)	(6.40)***	(7.47)***	(1.93)*
Asset Tangibility	-37.752	-40.529	-52.316	-11.297	-10.122	-25.65
	(3.16)***	(4.51)***	(1.82)*	(1.22)	(1.17)	(1.04)
A Rated	-91.845	-52.52	-120.51	-87.962	-75.071	-86.853
	(7.98)***	(5.34)***	(5.34)***	(6.88)***	(5.79)***	(3.14)***
B Rated	-13.781	-1.561	-16.678	34.157	24.825	56.155
	(2.11)**	(0.27)	(1.40)	(4.58)***	(3.39)***	(3.35)***
C Rated	92.142	103.402	99.299	231.383	160.909	383.471
	(4.40)***	(5.58)***	(2.70)***	(9.35)***	(6.80)***	(6.56)***
D Rated	157.32	173.51	52.154	253.934	254.962	230.47
	(3.65)***	(6.04)***	(0.31)	(7.14)***	(6.94)***	(3.27)***
Corporate Borrower	-13.835	-7.055	-19.328	-10.945	-6.621	-14.361
	(1.64)	(0.85)	(1.43)	(1.19)	(0.67)	(0.83)
Government Borrower	-30.018	-46.243	-16.766	25.154	15.644	26.473
	(1.11)	(1.29)	(0.43)	(0.71)	(0.42)	(0.39)
Financial Industry	-57.738	-10.658	-56.719	-85.038	-70.302	-77.816
	(3.03)***	(0.41)	(2.03)**	(3.56)***	(2.06)**	(2.03)**
Manufacturing Industry	-7.012	-11.446	-8.673	7.23	-4.175	28.713
	(1.30)	(2.33)**	(0.92)	(1.12)	(0.64)	(2.16)**
High-Tech Industry	9.869	15.21	5.634	31.929	21.595	65.133
	(1.21)	(2.25)**	(0.36)	(3.45)***	(2.46)**	(3.01)***
Other Loan Contract Terms						
Deal Size	-9.374	-3.852	-7.786	-12.162	-8.949	-13.369
	(4.35)***	(1.65)*	(2.13)**	(4.98)***	(3.04)***	(2.91)***
Maturity	0.842	0.483	0.944	0.141	0.102	0.218
	(9.25)***	(4.49)***	(6.98)***	(1.35)	(0.72)	(1.31)
Collateral	67.067	52.652	71.394	47.557	57.007	23.498
	(12.20)***	(10.22)***	(7.51)***	(7.70)***	(8.94)***	(1.84)*
Loan Purposes						
Acquisition	44.457	37.192	47.411	64.115	42.806	90.311
	(6.40)***	(5.23)***	(4.29)***	(6.80)***	(3.86)***	(5.47)***
Capital Expenditure	-42.189	9.122	-95.856	-27.365	-17.261	-23.933
	(1.81)*	(0.51)	(1.95)*	(1.02)	(0.66)	(0.40)

Refinancing	-29.818	6.458	-51.862	-25.249	-1.886	-75.276
	(2.48)**	(0.59)	(2.51)**	(2.07)**	(0.17)	(2.46)**
Backup Line	-2.073	9.272	-17.421	-80.743	-87.853	-94.468
	(0.08)	(0.46)	(0.34)	(1.95)*	(2.24)**	(0.99)
Constant	385.603	441.67	340.768	481.875	398.527	499.176
	(12.13)***	(14.39)***	(6.23)***	(13.95)***	(10.68)***	(7.26)***
R-squared	0.18	0.27	0.13	0.19	0.25	0.15
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, U.S. Bank Dummy, the interaction between Foreign Bank Dummy and U.S. Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. U.S. Bank Dummy takes the value of one if the bank is from the U.S. and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 6 Panel A: Loan Spreads of U.S. vs. Non-U.S. Borrowers

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	-47.891	-25.679	-49.738	-50.748	10.449	-125.238
	(4.83)***	(1.71)*	(3.78)***	(4.53)***	(0.76)	(6.76)***
U.S. Borrower	-74.047	21.054	-66.109	31.744	64.215	-3.146
	(9.61)***	(1.89)*	(5.99)***	(3.99)***	(7.52)***	-0.21
Foreign Bank x U.S. Borrower	90.405	72.926	83.134	122.536	49.919	209.02
	(6.66)***	(4.24)***	(3.94)***	(8.17)***	(2.89)***	(7.81)***
Constant	259.498	138.26	287.045	245.011	196.911	310.648
	(37.64)***	(12.88)***	(31.62)***	(35.46)***	(26.12)***	(24.59)***
R-squared	0.02	0.02	0.01	0.04	0.05	0.07
N	6,301	2,910	3,391	3,567	2,178	1,389

Table 6 Panel B: Average Loan Spreads of U.S. vs. Non-U.S. Borrowers

Y= Spread; Subsample =	Normal Times		Crisis		Changes	
	Public	Private	Public	Private	Public	Private
Foreign Banks/Non-U.S. Borrowers	112.581	237.307	207.36	185.41	94.779	-51.897
Foreign Banks/U.S. Borrowers	206.561	254.332	321.494	391.284	114.933	136.952
Domestic Banks/Non-U.S. Borrowers	138.26	287.045	261.126	307.502	122.866	20.457
Domestic Banks/U.S. Borrowers	159.314	220.936	196.911	310.648	37.597	89.712

Panel A of this table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, U.S. Borrower Dummy, and their interaction. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. U.S. Borrower Dummy takes the value of one if the borrower is from the U.S. and zero otherwise. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively. Panel B of this table reports the average loan spreads of U.S. and non-U.S. borrowers. The averages are computed from the coefficient estimates in Panel A.

Table 6 Panel C: Loan Spreads of U.S. vs. Non-U.S. Borrowers with Borrower Characteristics

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	-1.987	-14.71	5.209	-50.931	13.595	-110.585
	(0.21)	(1.13)	(0.39)	(4.62)***	(1.04)	(5.76)***
U.S. Borrower	-15.897	-16.306	-9.531	15.698	12.236	22.186
	(1.85)*	(1.51)	(0.73)	(1.70)*	(1.17)	(1.24)
Foreign Bank x U.S. Borrower	20.698	40.916	2.662	108.26	31.807	174.142
	(1.60)	(2.75)***	(0.12)	(7.51)***	(1.96)**	(6.55)***
Borrower Characteristics						
Public Borrower	-34.273			-53.615		
	(5.51)***			(7.65)***		
Size	-5.941	-17.124	-4.261	-2.946	-5.195	-1.727
	(5.68)***	(9.19)***	(3.04)***	(2.24)**	(2.22)**	(0.93)
Profitability	-17.198	-84.569	-10.413	-29.698	-56.486	-15.55
	(1.91)*	(4.68)***	(0.88)	(4.47)***	(6.41)***	(1.49)
Leverage	2.602	23.353	-11.13	51.295	69.366	35.472
	(0.41)	(3.80)***	(1.07)	(6.89)***	(7.47)***	(2.83)***
Asset Tangibility	-31.883	-33.434	-40.701	9.325	-4.421	16.82
	(2.62)***	(3.50)***	(1.41)	(0.99)	(0.49)	(0.68)
A Rated	-93.302	-54.176	-123.18	-89.045	-78.653	-82.694
	(8.06)***	(5.49)***	(5.43)***	(7.04)***	(6.07)***	(3.06)***
B Rated	-15.87	-3.416	-18.607	20.697	20.837	22.965
	(2.35)**	(0.59)	(1.50)	(2.76)***	(2.81)***	(1.36)
C Rated	90.923	101.824	100.346	204.014	154.956	342.376
	(4.33)***	(5.49)***	(2.72)***	(8.28)***	(6.51)***	(5.97)***
D Rated	152.638	169.51	49.186	253.431	257.461	220.282
	(3.53)***	(5.90)***	(0.29)	(7.21)***	(7.01)***	(3.20)***
Corporate Borrower	-13.115	-7.799	-18.79	-9.049	-6.931	-6.947
	(1.55)	(0.94)	(1.38)	(1.00)	(0.71)	(0.41)
Government Borrower	-29.963	-32.767	-19.299	61.846	28.42	67.553
	(1.09)	(0.90)	(0.49)	(1.76)*	(0.76)	(1.00)
Financial Industry	-57.945	-9.098	-58.962	-59.843	-67.531	-19.725
	(3.02)***	(0.35)	(2.08)**	(2.52)**	(1.98)**	(0.52)
Manufacturing Industry	-6.453	-11.705	-6.976	7.293	-4.613	31.334
	(1.19)	(2.39)**	(0.74)	(1.15)	(0.71)	(2.43)**
High-Tech Industry	10.168	14.855	6.575	28.778	20.275	64.366
	(1.24)	(2.19)**	(0.42)	(3.15)***	(2.30)**	(3.04)***
Other Loan Contract Terms						
Deal Size	-8.85	-3.993	-6.959	-10.148	-9.352	-6.23
	(4.08)***	(1.71)*	(1.89)*	(4.19)***	(3.18)***	(1.36)
Maturity	0.841	0.485	0.939	0.264	0.134	0.422
	(9.19)***	(4.52)***	(6.91)***	(2.54)**	(0.95)	(2.57)**
Collateral	66.921	51.725	71.031	44.337	54.677	26.5
	(12.16)***	(10.00)***	(7.46)***	(7.25)***	(8.50)***	(2.13)**
Loan Purposes						
Acquisition	45.061	38.316	46.7	66.905	42.066	97.694
	(6.44)***	(5.37)***	(4.19)***	(7.18)***	(3.80)***	(6.07)***
Capital Expenditure	-41.371	11.478	-97.121	-13.648	-11.762	-1.825

	(1.77)*	(0.64)	(1.96)**	(0.52)	(0.45)	(0.03)
Refinancing	-28.49	8.708	-53.048	-17.405	-0.399	-52.087
	(2.36)**	(0.80)	(2.54)**	(1.44)	(0.03)	(1.73)*
Backup Line	-2.654	8.922	-18.186	-97.396	-92.554	-100.248
	(0.10)	(0.44)	(0.35)	(2.38)**	(2.35)**	(1.08)
Constant	374.698	435.904	327.068	419.141	385.548	336.74
	(11.60)***	(14.15)***	(5.84)***	(12.03)***	(10.21)***	(4.80)***
R-squared	0.18	0.27	0.13	0.21	0.25	0.19
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, U.S. Borrower Dummy, the interaction between Foreign Bank Dummy and U.S. Borrower Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. U.S. Borrower Dummy takes the value of one if the borrower is from the U.S. and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 7: Loan Spreads with Bank and Borrower Characteristics

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	66.291	52.409	79.927	23.266	44.693	-18.927
	(6.98)***	(4.66)***	(5.01)***	(2.25)**	(3.62)***	(0.97)
Bank Characteristics						
Bank Size	-6.707	-8.082	-4.848	-5.616	-4.61	-10.149
	(2.50)**	(2.84)***	(1.02)	(2.07)**	(1.54)	(1.77)*
Bank Profitability	59.149	55.889	61.833	-17.155	-25.663	-5.706
	(6.84)***	(6.09)***	(4.01)***	(3.01)***	(3.88)***	(0.52)
Bank NPL	0.247	23.395	-23.458	7.524	8.306	6.949
	(0.03)	(2.80)***	(1.78)*	(1.62)	(1.58)	(0.79)
Bank Equity	-2.049	-2.526	-1.749	-0.613	-0.132	-1.737
	(2.74)***	(2.57)**	(1.48)	(1.13)	(0.21)	(1.69)*
Bank Liquidity	0.376	0.616	-0.025	0.28	-0.204	1.305
	(1.75)*	(2.69)***	(0.06)	(1.09)	(0.73)	(2.29)**
Borrower Characteristics						
Public Borrower	-30.327			-63.39		
	(4.70)***			(7.34)***		
Size	-5.228	-16.741	-2.541	-2.349	-5.994	-0.686
	(4.35)***	(7.87)***	(1.53)	(1.36)	(1.90)*	(0.30)
Profitability	-9.195	-76.809	3.137	-35.586	-62.584	-6.028
	(0.98)	(3.72)***	(0.25)	(4.94)***	(6.45)***	(0.55)
Leverage	3.301	24.918	-26.86	42.023	85.091	-2.885
	(0.49)	(3.67)***	(2.17)**	(4.64)***	(7.30)***	(0.20)
Asset Tangibility	-26.977	-33.886	-32.512	5.294	-4.88	30.443
	(1.82)*	(2.74)***	(0.75)	(0.49)	(0.46)	(0.93)
A Rated	-74.116	-57.694	-69.409	-85.669	-68.873	-55.254
	(6.24)***	(5.20)***	(2.65)***	(5.58)***	(4.20)***	(1.44)
B Rated	-9.252	-1.469	-10.458	40.962	27.166	78.626
	(1.37)	(0.22)	(0.80)	(4.62)***	(2.85)***	(4.02)***
C Rated	100.049	93.753	109.052	240.593	151.279	518.289
	(4.92)***	(4.56)***	(2.94)***	(9.31)***	(5.61)***	(8.14)***
D Rated	145.914	130.393		248.995	212.611	293.471
	(3.40)***	(4.04)***		(6.15)***	(4.54)***	(3.88)***
Corporate Borrower	-3.506	-5.026	-1.803	-3.36	-7.475	3.051
	(0.39)	(0.49)	(0.12)	(0.31)	(0.56)	(0.16)
Government Borrower	-41.686	-83.124	-30.381	37.403	34.072	13.277
	(0.90)	(1.26)	(0.44)	(0.72)	(0.64)	(0.11)
Financial Industry	-69.809	-24.487	-77.226	-119.74	-50.567	-166.14
	(3.21)***	(0.74)	(2.42)**	(3.78)***	(1.21)	(3.23)***
Manufacturing Industry	-4.257	-12.931	0.93	-5.441	1.234	-1.435

	(0.74)	(2.30)**	(0.08)	(0.72)	(0.15)	(0.10)
High-Tech Industry	-0.095	5.603	-1.116	25.431	38.382	-3.209
	(0.01)	(0.73)	(0.06)	(2.50)**	(3.55)***	(0.14)
Loan Purposes						
Acquisition	56.715	33.776	79.139	53.155	50.726	92.771
	(7.30)***	(4.25)***	(5.62)***	(4.78)***	(3.58)***	(4.92)***
Capital Expenditure	-61.786	-24.668	-124.061	-4.092	-3.575	85.582
	(2.38)**	(1.05)	(2.17)**	(0.14)	(0.11)	(1.24)
Refinancing	-15.566	13.729	-45.561	-43.024	-15.57	-119.428
	(1.07)	(0.96)	(1.63)	(3.33)***	(1.16)	(3.64)***
Backup Line	-1.592	7.879	2.396	-71.25	-52.598	-102.911
	(0.07)	(0.35)	(0.05)	(1.26)	(0.87)	(0.85)
Other Loan Contract Terms						
Deal Size	-17.216	-1.408	-28.467	-13.094	-8.05	-13.797
	(6.98)***	(0.51)	(6.30)***	(4.38)***	(2.05)**	(2.50)**
Maturity	0.839	0.487	1.098	0.284	0.131	0.391
	(7.02)***	(3.73)***	(5.31)***	(1.96)**	(0.67)	(1.70)*
Collateral	62.567	57.934	65.094	41.641	56.317	0.667
	(10.76)***	(9.82)***	(5.93)***	(5.76)***	(6.82)***	(0.05)
Constant	519.988	460.021	610.445	587.798	473.355	667.703
	(9.09)***	(7.39)***	(6.01)***	(9.29)***	(6.44)***	(5.38)***
R-squared	0.26	0.34	0.21	0.24	0.28	0.24
N	3,343	1,845	1,498	2,015	1,354	661

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, other bank characteristics, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Bank Size, Bank Profitability, Bank NPL, Bank Equity, and Bank Liquidity are from BankScope. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 8 Panel A: Number of Loans in Developed and Developing Countries

	Developed Countries			Developing Countries		
Number of Loans	Normal Times	Crisis Years	Percentage Changes	Normal Times	Crisis Years	Percentage Changes
All Loans	9,710	7,869	-18.96	565	592	4.78
Foreign Banks	1,872	1,150	-38.57	370	256	-30.81
Domestic Banks	7,838	6,719	-14.28	195	336	72.31
Public Borrowers	4,344	4,645	6.93	179	263	46.93
Private Borrowers	5,366	3,224	-39.92	386	329	-14.77
Foreign Banks/Public Borrowers	587	518	-11.75	116	124	6.9
Foreign Banks/Private Borrowers	1,285	632	-50.82	254	132	-48.03
Domestic Banks/Public Borrowers	3,757	4,127	9.85	63	139	120.63
Domestic Banks/Private Borrowers	4,081	2,592	-36.49	132	197	49.24

Table 8 Panel B: Loan Spreads in Developed and Developing Countries

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	-47.518	-44.128	-44.207	-113.904	-32.327	-198.041
	(1.87)*	(1.61)	(1.14)	(4.52)***	(1.10)	(4.57)***
Developed Country	68.981	6.915	126.529	-29.999	-16.26	-33.717
	(3.24)***	(0.32)	(3.79)***	(1.55)	(0.75)	(0.98)
Foreign Bank x Developed Country	87.556	70.781	71.444	129.516	67.168	176.942
	(3.33)***	(2.50)**	(1.78)*	(4.90)***	(2.19)**	(3.88)***
Constant	132.711	150.966	118.862	297.914	262.676	340.702
	(6.30)***	(6.97)***	(3.60)***	(15.65)***	(12.25)***	(10.08)***
R-squared	0.02	0.01	0.03	0.01	0.01	0.03
N	6,301	2,910	3,391	3,567	2,178	1,389

Panel A of this table reports the number of loans in developed and developing countries during normal times and financial crisis. Normal times are 2004-2007. Crisis years are 2008-2011. Bank ownership data are from Claessens and Van Horen (2014)/ BankScope. Borrower listing status is from Orbis/Osiris. Developed Country is defined as a high-income economy and Developing Country is defined as a middle-income economy or lower, according to the World Bank's Atlas method.

Panel B of this table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Developed Country Dummy, and their interaction. Developed Country Dummy takes the value of one if the borrower is from a developed country and zero otherwise. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 9 Panel A: Loan Spreads with Country and Industry Fixed Effects

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	22.845	15.657	27.719	22.425	29.649	3.699
	(3.33)***	(2.39)**	(2.38)**	(2.95)***	(3.61)***	(0.25)
Borrower Characteristics						
Public Borrower	-36.245			-52.755		
	(5.69)***			(7.05)***		
Size	-4.37	-13.119	-3.018	-2.468	-4.404	-0.598
	(4.07)***	(6.70)***	(2.07)**	(1.83)*	(1.78)*	(0.31)
Profitability	-12.14	-99.166	-2.642	-16.077	-44.82	-0.106
	(1.27)	(4.84)***	(0.21)	(2.15)**	(4.19)***	(0.01)
Leverage	1.579	24.738	-13.783	46.466	66.677	22.344
	(0.25)	(3.95)***	(1.29)	(5.92)***	(6.83)***	(1.62)
Asset Tangibility	-44.765	-44.137	-97.638	-38.472	-28.868	-85.687
	(2.15)**	(3.31)***	(0.58)	(2.53)**	(2.20)**	(1.14)
A Rated	-75.635	-57.219	-84.392	-61.179	-62.908	-57.537
	(6.40)***	(5.58)***	(3.60)***	(4.61)***	(4.67)***	(1.96)**
B Rated	-7.968	-5.101	-5.59	31.237	26.636	42.859
	(1.15)	(0.86)	(0.43)	(4.01)***	(3.47)***	(2.34)**
C Rated	91.436	81.367	113.263	199.681	156.577	346.279
	(4.39)***	(4.40)***	(3.04)***	(7.93)***	(6.45)***	(5.80)***
D Rated	189.976	182.311	94.432	257.624	246.043	261.794
	(4.40)***	(6.29)***	(0.55)	(7.27)***	(6.63)***	(3.53)***
Corporate Borrower	-18.019	-4.748	-24.35	-4.872	-8.899	-4.39
	(2.04)**	(0.55)	(1.68)*	(0.52)	(0.89)	(0.24)
Government Borrower	12.697	6.798	17.225	10.802	10.929	-3.237
	(0.46)	(0.19)	(0.43)	(0.29)	(0.27)	(0.05)
Financial Industry	-35.512	-7.34	-32.386	-121.834	-137.057	-107.884
	(1.60)	(0.27)	(0.97)	(4.15)***	(3.23)***	(2.35)**
Manufacturing Industry	-21.556	-20.492	-9.478	-21.695	-6.399	-32.923
	(0.96)	(1.08)	(0.23)	(0.81)	(0.24)	(0.57)
High-Tech Industry	10.705	29.185	5.664	18.492	44.274	7.112
	(0.66)	(2.00)**	(0.19)	(1.01)	(2.45)**	(0.17)
Loan Purposes						
Acquisition	40.401	32.251	42.223	62.117	44.317	85.544
	(5.70)***	(4.47)***	(3.66)***	(6.54)***	(3.94)***	(4.99)***
Capital Expenditure	0.359	5.686	13.298	-35.985	-28.018	17.117
	(0.01)	(0.28)	(0.22)	(1.30)	(1.00)	(0.28)
Refinancing	-3.541	17.623	-21.704	3.691	21.463	-49.286
	(0.28)	(1.52)	(0.99)	(0.26)	(1.63)	(1.29)
Backup Line	8.402	9.283	16.953	-99.851	-104.672	-79.87

	(0.33)	(0.47)	(0.33)	(2.45)**	(2.67)***	(0.86)
Other Loan Contract Terms						
Deal Size	-11.934	-7.417	-10.159	-14.7	-13.38	-9.102
	(5.33)***	(3.06)***	(2.63)***	(5.71)***	(4.35)***	(1.78)*
Maturity	0.826	0.511	0.877	0.287	-0.048	0.581
	(8.95)***	(4.67)***	(6.40)***	(2.51)**	(0.32)	(3.08)***
Collateral	60.404	44.59	66.605	40.174	46.86	20.67
	(10.91)***	(8.56)***	(6.87)***	(6.36)***	(7.04)***	(1.54)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.23	0.33	0.19	0.25	0.31	0.26
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. Country fixed effects are defined by borrower countries. Industry fixed effects are defined by borrower industry using Fama-French 49-industry classification. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 9 Panel B: Loan Spreads with Country x Year Fixed Effects

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	25.413	21.615	31.783	16.295	29.562	-8.902
	(3.69)***	(3.29)***	(2.74)***	(2.24)**	(3.91)***	(0.61)
Borrower Characteristics						
Public Borrower	-31.915			-46.615		
	(4.87)***			(6.59)***		
Size	-4.908	-15.174	-3.179	-4.56	-9.366	-2.812
	(4.56)***	(7.94)***	(2.19)**	(3.57)***	(4.23)***	(1.51)
Profitability	-8.678	-115.14	0.511	-13.862	-39.565	4.133
	(0.88)	(4.62)***	(0.04)	(1.89)*	(3.83)***	(0.35)
Leverage	2.282	21.698	-15.634	38.809	47.089	22.925
	(0.33)	(2.89)***	(1.44)	(5.22)***	(5.34)***	(1.74)*
Asset Tangibility	-40.691	-42.727	-112.587	-31.716	-29.206	-80.432
	(1.94)*	(3.09)***	(0.67)	(2.16)**	(2.42)**	(1.24)
A Rated	-86.698	-56.174	-109.635	-65.403	-56.463	-66.87
	(7.41)***	(5.56)***	(4.74)***	(5.18)***	(4.50)***	(2.40)**
B Rated	-12.675	-5.559	-11.274	21.247	20.133	27.231
	(1.85)*	(0.94)	(0.88)	(2.89)***	(2.87)***	(1.56)
C Rated	100.428	97.193	117.816	204.642	154.516	345.26
	(4.83)***	(5.27)***	(3.21)***	(8.77)***	(7.10)***	(6.20)***
D Rated	161.595	171.851	75.437	249.59	257.85	222.125
	(3.80)***	(6.02)***	(0.45)	(7.48)***	(7.65)***	(3.29)***
Corporate Borrower	-18.395	-7.995	-22.991	-7.584	-3.087	-5.835
	(2.14)**	(0.94)	(1.65)*	(0.87)	(0.34)	(0.34)
Government Borrower	18.926	-0.748	29.996	-4.362	-3.844	-12.439
	(0.68)	(0.02)	(0.72)	(0.12)	(0.09)	(0.17)
Financial Industry	-53.757	-16.619	-60.021	-59.488	-39.674	-35.968
	(2.72)***	(0.64)	(2.06)**	(2.53)**	(1.25)	(0.91)
Manufacturing Industry	0.385	-9.257	5.259	6.327	-8.283	34.564
	(0.07)	(1.85)*	(0.54)	(1.01)	(1.35)	(2.58)***
High-Tech Industry	14.597	15.876	16.608	29.832	19.738	62.81
	(1.80)*	(2.35)**	(1.06)	(3.38)***	(2.43)**	(2.82)***
Loan Purposes						
Acquisition	47.548	37.778	53.673	86.939	52.032	121.438
	(6.68)***	(5.20)***	(4.70)***	(9.38)***	(5.09)***	(7.07)***
Capital Expenditure	0.647	15.339	-12.833	-9.83	-12.775	47.089
	(0.02)	(0.76)	(0.20)	(0.36)	(0.49)	(0.76)
Refinancing	3.788	22.019	-8.959	-12.862	2.038	-68.741
	(0.30)	(1.85)*	(0.40)	(0.90)	(0.16)	(1.79)*
Backup Line	-12.939	3.024	-25.752	-66.343	-64.884	-90.832
	(0.51)	(0.15)	(0.50)	(1.71)*	(1.81)*	(1.00)
Other Loan Contract Terms						
Deal Size	-11.361	-4.883	-10.518	-12.71	-7.118	-13.079
	(5.11)***	(2.05)**	(2.75)***	(5.23)***	(2.56)**	(2.69)***
Maturity	0.854	0.575	0.918	0.608	0.248	0.802
	(9.28)***	(5.25)***	(6.74)***	(5.45)***	(1.76)*	(4.32)***
Collateral	60.225	49.856	58.135	39.632	42.016	30.161
	(10.67)***	(9.57)***	(5.79)***	(6.63)***	(6.96)***	(2.35)**
Country x Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.22	0.3	0.18	0.31	0.4	0.27
N	6,127	2,859	3,268	3,520	2,160	1,360

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. Country x Year fixed effects are defined by borrower countries. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 10 Panel A: Loan Spreads and Lending Relationship

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Relationship	Non-Relationship	All	Relationship	Non-Relationship
Foreign Bank	18.062	18.46	10.839	-0.585	5.496	-7.361
	(2.85)***	(1.71)*	(1.40)	(0.08)	(0.33)	(0.94)
Constant	200.223	158.683	224.489	268.926	242.354	282.509
	(64.54)***	(32.89)***	(56.72)***	(76.65)***	(34.27)***	(72.65)***
R-squared	0	0	0	0	0	0
N	6,301	2,209	4,092	3,567	1,135	2,432

Table 10 Panel B: Loan Spreads with Other Loan Contract Terms and Loan Purposes

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	3.14	20.983	-5.018	7.479	15.009	3.549
	(0.51)	(2.01)**	(0.65)	(1.02)	(0.90)	(0.45)
Other Loan Contract Terms						
Deal Size	-20.264	-20.682	-17.443	-13.065	-7.18	-15.352
	(11.01)***	(6.58)***	(7.51)***	(6.05)***	(1.53)	(6.50)***
Maturity	1.177	1.614	1.012	0.384	0.849	0.238
	(13.13)***	(8.85)***	(9.69)***	(3.62)***	(2.97)***	(2.21)**
Collateral	82.811	99.509	70.325	70.512	100.747	54.121
	(15.26)***	(11.11)***	(10.25)***	(11.20)***	(7.42)***	(7.95)***
Loan Purposes						
Acquisition	68.493	31.351	73.892	64.963	92.017	59.241
	(10.20)***	(2.38)**	(9.24)***	(6.69)***	(3.52)***	(6.01)***
Capital Expenditure	-50.848	-80.393	-50.443	-39.512	-95.935	-17.368
	(2.18)**	(1.47)	(1.92)*	(1.41)	(1.59)	(0.57)
Refinancing	-24.954	-22.422	-29.22	-35.866	-59.505	-20.586
	(2.06)**	(1.16)	(1.90)*	(3.01)***	(2.54)**	(1.54)
Backup Line	-52.987	-24.87	-83.452	-130.592	-131.251	-136.927
	(2.07)**	(0.77)	(2.09)**	(3.02)***	(1.65)*	(2.69)***
Constant	382.196	344.785	366.59	407.266	280.562	460.317
	(14.11)***	(7.36)***	(10.91)***	(13.07)***	(4.16)***	(13.61)***
R-squared	0.13	0.14	0.11	0.08	0.1	0.07
N	6,127	2,162	3,965	3,520	1,118	2,402

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). In Panel A, the explanatory variable is Foreign Bank Dummy. In Panel B, the explanatory variables are Foreign Bank Dummy, other loan contract terms, and loan purposes. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both relationship and non-relationship borrowers. Columns 2 and 5 are estimated from the subsample of relationship borrowers. Columns 3 and 6 are estimated from the subsample of non-relationship borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 10 Panel C: Loan Spreads, Lending Relationship, and Borrower Characteristics

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Relationship	Non-Relationship	All	Relationship	Non-Relationship
Foreign Bank	11.174	37.379	1.012	4.865	6.901	0.521
	(1.79)*	(3.49)***	(0.13)	(0.68)	(0.42)	(0.07)
Borrower Characteristics						
Public Borrower	-35.852	-41.939	-30.905	-43.9	-101.179	-24.182
	(5.95)***	(4.45)***	(3.98)***	(6.30)***	(6.63)***	(3.24)***
Size	-5.933	-1.736	-7.953	-4.403	2.213	-6.767
	(5.70)***	(0.99)	(6.12)***	(3.32)***	(0.70)	(4.93)***
Profitability	-17.477	-17.242	-14.967	-35.506	-37.933	-34.093
	(1.94)*	(1.18)	(1.31)	(5.44)***	(3.22)***	(4.29)***
Leverage	3.198	7.105	0.455	48.476	103.309	27.248
	(0.50)	(0.68)	(0.06)	(6.47)***	(5.98)***	(3.47)***
Asset Tangibility	-29.317	-27.676	-29.478	-11.766	-14.855	-11.932
	(2.51)**	(1.46)	(1.99)**	(1.37)	(0.84)	(1.27)
A Rated	-95.329	-95.768	-100.126	-88.393	-69.363	-94.922
	(8.33)***	(6.18)***	(5.81)***	(6.91)***	(3.01)***	(6.20)***
B Rated	-18.519	-38.559	-6.432	33.809	-2.037	53.409
	(2.93)***	(3.96)***	(0.78)	(4.61)***	(0.14)	(6.54)***
C Rated	87.517	172.129	55.944	232.399	289.904	217.167
	(4.20)***	(4.60)***	(2.22)**	(9.41)***	(4.82)***	(8.53)***
D Rated	153.141	34.729	198.95	254.379	306.445	236.919
	(3.55)***	(0.46)	(3.79)***	(7.16)***	(4.43)***	(5.96)***
Corporate Borrower	-12.809	8.849	-16.732	-10.698	-2.138	-19.1
	(1.52)	(0.54)	(1.67)*	(1.16)	(0.11)	(1.91)*
Government Borrower	-27.433	-42.611	-24.22	22.297	25.215	12.376
	(1.01)	(1.17)	(0.61)	(0.63)	(0.43)	(0.28)
Financial Industry	-56.683	-42.188	-73.282	-84.115	-97.567	-96.631
	(2.98)***	(1.45)	(2.79)***	(3.52)***	(2.25)**	(3.39)***
Manufacturing Industry	-6.179	-3.801	-6.381	6.195	33.246	-10.735
	(1.14)	(0.44)	(0.93)	(0.96)	(2.32)**	(1.56)
High-Tech Industry	8.716	0.631	10.205	31.977	72.064	15.982
	(1.07)	(0.05)	(1.02)	(3.47)***	(3.35)***	(1.67)*
Loan Purposes						
Acquisition	47.996	9.978	57.738	62.999	115.653	58.363
	(7.10)***	(0.75)	(7.17)***	(6.70)***	(4.61)***	(6.13)***
Capital Expenditure	-38.719	-47.248	-35.946	-28.171	-46.013	-2.203
	(1.67)*	(0.89)	(1.36)	(1.05)	(0.81)	(0.08)
Refinancing	-25.196	-30.118	-22.953	-24.623	-24.477	-11.613
	(2.12)**	(1.59)	(1.52)	(2.09)**	(1.05)	(0.89)
Backup Line	-3.453	14.795	-31.506	-79.699	-77.798	-96.82

	(0.14)	(0.46)	(0.79)	(1.93)*	(1.04)	(1.99)**
Other Loan Contract Terms						
Deal Size	-8.467	-10.447	-6.313	-12.36	-10.238	-14.558
	(3.96)***	(2.90)***	(2.34)**	(5.11)***	(1.91)*	(5.59)***
Maturity	0.872	1.159	0.779	0.152	0.521	0.063
	(9.74)***	(6.33)***	(7.45)***	(1.46)	(1.89)*	(0.59)
Collateral	66.828	86.266	54.446	47.834	84.675	35.364
	(12.14)***	(9.57)***	(7.80)***	(7.74)***	(6.37)***	(5.29)***
Constant	355.177	287.07	363.79	483.146	331.773	567.441
	(11.97)***	(5.43)***	(9.95)***	(15.02)***	(4.75)***	(16.37)***
R-squared	0.18	0.2	0.16	0.18	0.23	0.19
N	6,127	2,162	3,965	3,520	1,118	2,402

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-2011). Columns 1 and 4 are estimated from the subsample of both relationship and non-relationship borrowers. Columns 2 and 5 are estimated from the subsample of relationship borrowers. Columns 3 and 6 are estimated from the subsample of non-relationship borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.

Table 11: Alternative Definition of the Crisis Period

Y= Spread; Subsample =	Normal Times			Crisis		
	All	Public	Private	All	Public	Private
Foreign Bank	11.174	16.56	8.161	-2.351	33.083	-43.563
	(1.79)*	(2.68)***	(0.81)	(0.26)	(3.36)***	(2.59)***
Borrower Characteristics						
Public Borrower	-35.852			-51.166		
	(5.95)***			(5.75)***		
Size	-5.933	-17.366	-4.166	-4.47	-6.577	-3.214
	(5.70)***	(9.35)***	(3.01)***	(2.80)***	(2.33)**	(1.42)
Profitability	-17.477	-85.751	-10.48	-26.377	-56.284	-14.108
	(1.94)*	(4.82)***	(0.89)	(3.25)***	(4.84)***	(1.15)
Leverage	3.198	23.903	-11.078	49.439	61.673	33.219
	(0.50)	(3.89)***	(1.06)	(5.40)***	(5.44)***	(2.22)**
Asset Tangibility	-29.317	-35.81	-36.762	-4.278	-6.029	-25.616
	(2.51)**	(4.16)***	(1.30)	(0.39)	(0.64)	(0.83)
A Rated	-95.329	-54.829	-125.41	-80.817	-75.767	-70.429
	(8.33)***	(5.62)***	(5.59)***	(5.07)***	(4.99)***	(1.91)*
B Rated	-18.519	-3.582	-22.356	31.831	25.501	48.349
	(2.93)***	(0.63)	(1.98)**	(3.37)***	(2.85)***	(2.24)**
C Rated	87.517	101.469	96.983	249.624	158.845	419.83
	(4.20)***	(5.48)***	(2.65)***	(7.90)***	(5.22)***	(6.15)***
D Rated	153.141	173.002	45.897	248.606	269.842	198.042
	(3.55)***	(6.03)***	(0.27)	(6.09)***	(6.61)***	(2.45)**
Corporate Borrower	-12.809	-7.129	-18.152	-0.465	-1.146	3.7
	(1.52)	(0.86)	(1.34)	(0.04)	(0.09)	(0.17)
Government Borrower	-27.433	-43.195	-14.963	43.813	23.324	48.6
	(1.01)	(1.21)	(0.39)	(0.97)	(0.54)	(0.51)
Financial Industry	-56.683	-10.345	-55.311	-65.316	-53.724	-56.322
	(2.98)***	(0.40)	(1.99)**	(2.33)**	(1.45)	(1.22)
Manufacturing Industry	-6.179	-11.178	-6.888	11.737	1.21	29.507
	(1.14)	(2.28)**	(0.73)	(1.44)	(0.15)	(1.83)*
High-Tech Industry	8.716	14.51	5.634	37.134	29.118	65.46
	(1.07)	(2.15)**	(0.37)	(3.21)***	(2.75)***	(2.42)**
Other Loan Contract Terms						
Deal Size	-8.467	-3.698	-6.335	-10.675	-5.595	-12.949
	(3.96)***	(1.58)	(1.77)*	(3.58)***	(1.60)	(2.35)**
Maturity	0.872	0.489	0.965	-0.023	-0.134	0.141
	(9.74)***	(4.56)***	(7.32)***	(0.19)	(0.82)	(0.78)
Collateral	66.828	51.169	71.644	44.674	58.186	16.787
	(12.14)***	(10.03)***	(7.55)***	(5.74)***	(7.44)***	(1.07)
Loan Purposes						
Acquisition	47.996	38.328	49.295	58.19	31.981	90.309
	(7.10)***	(5.40)***	(4.65)***	(5.12)***	(2.44)**	(4.53)***
Capital Expenditure	-38.719	12.185	-93.243	-5.615	15.777	-14.491
	(1.67)*	(0.68)	(1.90)*	(0.18)	(0.53)	(0.23)
Refinancing	-25.196	10.285	-49.851	-28.979	-7.148	-73.597
	(2.12)**	(0.96)	(2.44)**	(1.85)*	(0.51)	(1.87)*
Backup Line	-3.453	8.805	-19.639	-95.834	-102.418	-131.253
	(0.14)	(0.44)	(0.38)	(1.81)*	(2.19)**	(0.98)
Constant	355.177	419.267	308.085	449.175	351.813	466.425
	(11.97)***	(14.69)***	(6.15)***	(11.11)***	(7.96)***	(6.21)***
R-squared	0.18	0.27	0.13	0.16	0.23	0.13
N	6,127	2,859	3,268	2,554	1,499	1,055

This table reports the coefficient estimates from the spread regressions. The dependent variable is All in Spread (drawn). The explanatory variables are Foreign Bank Dummy, Public Borrower Dummy, other borrower characteristics, loan purposes, and other loan contract terms. Foreign Bank Dummy takes the value of one if bank and borrower are from different countries and zero otherwise. Public Borrower Dummy takes the value of one if the borrower is publicly listed. Size, Profitability, Leverage, and Asset Tangibility are from Orbis. Manufacturing Industry Dummy is equal to one if the borrower's SIC code is between 2000 and 3999. High-Tech Dummy is equal to one if the borrower is in the high-tech industry according to the American Electronic Association. A-D Rated Dummies are constructed from S&P's Senior Debt Ratings. All other variables are obtained directly from DealScan. Columns 1-3 are estimated from the normal-time subsample (2004-2007). Columns 4-6 are estimated from the crisis subsample (2008-209). Columns 1 and 4 are estimated from the subsample of both public and private borrowers. Columns 2 and 5 are estimated from the subsample of public borrowers. Columns 3 and 6 are estimated from the subsample of private borrowers. Numbers in the parentheses are the t statistics computed from robust standard errors. The *, **, and *** indicate statistical significance at the 10, 5, and 1 % levels, respectively.