Do Foreign Bank Affiliates Cut Their Lending More Than the Domestic Banks in a Financial Crisis?

Robert Dekle

Department of Economics

USC

Mihye Lee

Bank of Korea[*]

Nov, 2012

Abstract

We contribute to the literature on the international transmission of balance sheet shocks that pummeled the banks of the industrialized countries in 2008 and 2009. We examine over time bank level data on 20,000 banks located around the world. Our identification strategy relies on the differential responses of foreign and domestic banks to the post-Lehman 2008 crisis. If in a particular market, say in Korea, a foreign-affiliated bank's (Citibank, Korea's) lending falls by more than a domestic bank's (Kookmin's) lending, then we attribute this additional decline to the tightening of the foreign affiliates internal capital market at its headquarters. We control for the decline in market conditions common to all banks in a particular region by the decline in lending by the banks other than the foreign affiliated bank. We find evidence that internal capital markets do indeed affect cross-border lending. In particular, European bank affiliates in Latin America and Asia cut their lending by more than the domestic banks located in these regions. Our main original contribution is our focus on these regional effects.

1 Introduction

As part of liberalizing their international capital markets, countries open up their banking sector, by allowing foreign banks greater entry and perform a larger variety of banking activities. As with other forms of capital liberalization, the presence of foreign banks may bring in more international capital, raising the recipient country's level of physical investment and growth. Foreign banks add to domestic competition, enhance financial and economic performance of their borrowers, and lower the costs of financial intermediation (Claessens and van Horen, 2011). The presence of foreign banks can also lead to supervisory, regulatory, and institutional improvements in the country (Mishkin, 2009).

The financial crisis of 2008, however, raised questions about the beneficial effects of allowing foreign bank entry. When the tightening of global liquidity affected the world economy after the Lehman collapse in September 2008, banks cut their international exposure, especially to emerging market countries. From 2007 to 2008, international bank loans fell by 80 percent, from $500 billion to $100 billion. This decline in international bank loans helped fuel the very sharp decline in output abroad in 2009 and after, especially in emerging market countries (Didier et al., 2011). Didier et al. (2011) attribute the decline in output in emerging markets to a reinforcing pattern in which a decline in foreign banks loans triggered collapses in domestic asset prices and in the domestic financial systems of emerging markets.

In this paper, we examine the international transmission of balance sheet shocks that pummeled the banks all over the world in 2008 and 2009. We interpret the post-Lehman financial crisis of 2008 and 2009 not only as a shock to banks in the U.S., but also to banks worldwide. After the Lehman shock, the crisis broadened and deepened globally, as evidenced by government policies to support balance sheets in at least 39 countries (Levy and Schich, 2010). We trace out the impact of these bank balance sheet shocks on multinational and domestic banks. Given our identification strategy, we observe which foreign banks reduced their lending by more than the other banks in a region. Specifically, we find that European bank affiliates in Latin America and in Asia reduced their bank lending by more than the other banks operating in those regions. We examine bank level

data for 193 countries, both the domestic banks located in these countries and the foreign affiliates of the foreign banks. In total, there are over 20,000 banks in our sample (see Table 1).

We apply the "difference-in-difference" methodology to identify the differential responses of foreign and domestic banks to the financial crisis. For example, the balance sheets of banks exposed to U.S. subprime mortgages may have been more affected than the balance sheets of Korean domestic banks. If in a particular market, say in Korea, a foreign-affiliated bank's (say, Citibank, Korea) lending fell by more than a domestic bank's (say, Kookmin's) lending, then it is likely that the foreign bank is responding to the tightening of its balance sheets at its headquarters. We control for the decline in market conditions common to all banks in a particular country by the decline in lending by the other banks in that country. If foreign banks from a particular region cut their lending by more than the other banks lending in that country, we attribute this decline in foreign bank lending to the adverse balance sheet conditions facing the foreign banks in their home region.[1]

We find that some foreign banks adversely affected by the original liquidity shock to their parent bank's balance sheet cut their local lending in markets abroad. This cut in lending was particularly large for lending by European banks in the Asian and Latin American markets.

We also show that there is a strong link between the cut in lending by a particular foreign bank, and the level of sovereign debt in the country that the foreign bank is headquartered. Banks in European countries with high sovereign debt levels cut their lending by more than the banks headquartered in other countries.

Our results are robust to several specification changes. First, our results are robust to including and excluding the fixed effects of countries that the banks are lending in.

---

[1]The greater cut in foreign affiliate lending may also reflect the fact that foreign affiliates care less about their franchise value than the domestic banks. Given our identification strategy, when a foreign affiliate cuts its lending by more than the other banks, we cannot distinguish whether this behavior is because the foreign affiliate has a greater balance sheet shock, or that the foreign affiliate has the same balance sheet shock as the other banks, but simply cares less about its franchise value than the other banks.

Second, our results our robust to changing the definition of the dependent variable, the "the change in bank lending" from: $\frac{\Delta Loans_{ijt}}{Assets_{ijt-1}}$ to $\ln Loan_t - \ln Loan_{t-1}$. Third, our results are also robust to including additional bank and country level explanatory variables. Specifically, we include an index of the openness of a country's capital markets (Chinn and Ito, 2008), and show that the more open the capital markets, the less the decline in lending in that country following a financial crisis.

Our results are robust to different periods overlapping the financial crisis. Our basic specification is estimated on a sample from 2003 to 2009. The period 2008-2009 is the post-crisis period and 2003-2007 is defined as the pre-crisis period. We also estimate on an alternative sample from 2006-2009, with 2006-2007 defined as the pre-crisis period.

In addition, as a "placebo", we estimate our specification on a period overlapping the 2001 recession. Although the 2001 recession was global, the recession was mild and damage to bank balance sheets were minimal. Given our hypothesis that the financial crisis caused declines in foreign bank affiliate lending and that there was no financial crisis in the 2001 recession, we should not see any effect of the 2001 recession on cross-border bank lending. Indeed, our "placebo" estimates show that during the 2001 recession, there were no cross-border lending effects by foreign bank affiliates.

Our paper is organized as follows. In the next Section, we review the previous literature. Our paper is one of the first to use the "difference-in-difference" technique in identifying the differential lending behavior of foreign affiliated banks. We are also one of the first to focus on regional effects: how foreign affiliated banks from various regions differ in the lending behavior. Section 3 explains our "difference-in-difference" estimation procedure. Section 4 describes the data set. Section 5 presents the main results, and Section 6 shows some additional robustness estimates. Section 7 shows that foreign affiliated banks from more highly indebted countries cut their lending by more during a financial crisis. Section 8 concludes.

2 Review of the Literature

Ours is one of the first papers to use bank level data that includes mostly non-U.S. banks to show how financial shocks originating abroad can differentially affect the lending behavior of both foreign-affiliated and domestic banks. Previous authors have shown that funding shocks to parent banks can be transmitted to their foreign subsidiaries with negative effects on their lending. The earlier research mostly focused on the foreign lending of only one country, such as Japan (Peek and Rosengren, 1999) or the U.S. (Cetorelli and Goldberg, 2011). The study of a large sample of non-U.S. foreign-affiliated banks including the affiliates of European banks is important, since these banks may face different liquidity shocks than U.S. banks.

When a bank is confronted with a shock to the liabilities side of its balance sheet, one response would be to cut lending. A shock to bank liabilities, such as a bank run that reduces the amount of deposits that require reserves, or a tightening of the interbank market that makes it difficult for a bank to meet its reserve requirements may – if the bank cannot replace its deficient bank liabilities – result in a reduction in bank lending activity. As Houston, James, and Marcus (1997) and Houston and James (1998) show, if the private information a bank has about the value of its portfolio creates adverse selection and moral hazard problems which makes it costly to issue debt or if capital requirements limit the ability to issue insured deposits, then it follows that banks with limited internal funds may be forced to curtail loan growth, if it is hit by an adverse shock to its balance sheet.

Recent papers that have looked at non-U.S. banks in finding international spillovers of the shocks to bank balance sheets include Popov and Udell (2012), De Haas and Van Lelyveld (2011), Ongena, Alcalde, and Van Horen (2011), and Claessens and Van Horen (2011). Popov and Udell (2010) find for emerging European countries that foreign subsidiaries reduced their lending by more, as compared to domestic banks. De Haas and Lelyveld(2011) compared the loan growth of foreign subsidiaries of large multinational banking groups with large domestic banks and find similar results to Popov and Udell. Ongena, Alcalde and Van Horen (2011) and Claussens and Van Horen (2011) find that

foreign banks reduced lending by more than local domestic banks, and is most similar to this paper. However, none of the previous authors examined how the lending behavior of foreign banks depend on the regions that they are from and where they are lending.

Our paper examines over 20,000 banks originating from and operating in most of the countries in the world. We also have a long sample spanning from 1999 to 2009, allowing us to compare the effects of the 2001 recession with that of the 2008 crisis. With the exception of Claussens and Van Horen (2011), the earlier studies of international spillovers of banking shocks have examined much more limited time spans and samples of banks and countries. A broad spectrum of countries needs to be studied since the effects of a balance sheet shock on a foreign bank affiliates' lending may differ, depending on the distance of the host country from the home country (of the foreign bank), and on the business and institutional environments of the host country. The paper most similar to ours, Claussens and Van Horen(2011), use similar banking data (Bankscope and other sources), but their empirical identification strategy is different from ours, in that we employ a "difference-in-difference" strategy in indentifying the effect of ownership (foreign or domestic) on lending in a particular country. Moreover, Claussens and Van Horen do not focus on regional effects–how foreign banks from regions such as Europe have different lending behavior than foreign banks from other regions, such as the U.S.

3   Identification Methodology

We examine whether in response to a liquidity shock to its parent's balance sheet, a foreign affiliated bank will cut its lending to a particular market abroad, over and above the cut in lending by the other banks located in that market.

The basic idea is that sources of funds for banks matter in the supply of bank loans. The sources of funds for a domestic bank in a foreign market include local deposits, other local sources such as the local interbank market, and cross-border interbank borrowing. For a global bank operating in a foreign market, there is in addition, an internal capital

market, which includes funding from affiliates located elsewhere and from headquarters located in the home country.

In the international transmission of shocks, both cross-border interbank borrowing and cross-border funding from the bank headquarters matter. In a crisis, a foreign-owned bank hit by a liquidity shock like that of 2008-2009 will reduce its international lending. With regards to its foreign affiliates, the foreign bank may reduce funding to foreign affiliates or actively start transferring funds from its affiliates abroad to sustain its headquarters balance sheet.

Domestic banks may also find that cross-border interbank borrowing has dried up, and may cut lending, if it cannot substitute other sources for this foreign borrowing. For example, say there is a domestic bank that engages only in lending within Korea, but borrows from an American bank in the cross-border interbank market. Faced with an initial adverse shock to its liabilities, if the American bank cuts its lending to the Korean bank, the U.S. bank's liability shock will be transferred to the Korean bank, and the lending of the Korean bank may also decline.

The post-Lehman crisis in 2008 was global.[2] Given the fact that post-2008, the liquidity crisis was global, we cannot simply attribute the decline in say, a U.S. bank's branch lending abroad as responding only to the balance sheet deterioration of its headquarters in the U.S. The U.S. bank branch may be responding non-U.S. and local conditions. In our identification strategy, we control for the effect of non-U.S. and local conditions by observing the decline in lending by the other banks in that market. The excess decline in lending in the particular market abroad by the U.S. bank should then reflect the tightening of balance sheet conditions specific to the U.S. bank, i.e., in the U.S. market.

Specifically, we apply a "difference-in-difference" methodology to examine the impact of foreign ownership of a bank on domestic lending during times of crisis.

---

[2]As evidence for the tightened global liquidity, the Federal Reserve expanded its swap lines with 14 central banks.

We use bank level data to estimate the following specification:

$$\frac{\Delta Loans_{ijt}}{Assets_{ijt-1}} = \alpha + \beta * crisis_t + \mu_k * foreign\ owned_{kt} + \gamma_k * crisis_t * foreign\ owned_{kt} \tag{1}$$
$$+ \theta * bank_{ijt} + countrydummy_j + e_{ijt}$$

where $\frac{\Delta Loans_{ijt}}{Assets_{ijt-1}}$ is the change in loans divided by the assets of bank i, lending in country j, at time $t - 1$; "crisis" is a dummy variable that takes on a value of 1 in the post-crisis years, in the years 2008 and 2009; "foreign-owned" is a dummy variables that takes on a value of one if the bank is an affiliate of a foreign bank in one of the three regions, k: 1) U.S., 2) European, or 3) non-U.S., non-European. "Bank$_{ijt}$" are various bank specific control variables that affect lending. "Countrydummy" is a vector of dummy variables that take on a value of one for each country j.

As described in the next Section, our data allows us to distinguish among the ownership types of the banks located in a given country. The ownership types are "domestic", and "foreign", and among the foreign-owned banks, we distinguish between those that are affiliated with 1) U.S. banks, 2) European banks, and 3) non-European, non-U.S. banks (eg. Japanese banks). A bank affiliate is defined as "U.S. owned" or "European owned" if the owner of the bank with the highest ownership percentage is headquartered in the U.S. or in Europe. Non-European, Non-U.S. banks are banks headquartered in all other countries such as Japan and Mexico.

We identify the impact of foreign (U.S., European, non-U.S., non-European) ownership of a local bank as follows. Suppose that the occurrence of the 2008 Lehman "crisis" is exogenous to the level of lending in a country, which is reasonable if the country is located outside of the U.S. (but not in the U.S. where the subprime mortgage crisis originated).

Then,

if $\beta < 0$, then all banks on average cut their lending during the "crisis" years, compared to the years before.

if $\beta + \gamma_k < 0$, the foreign-owned banks from region k cut their lending during the "crisis" years, compared to the years before.

if $\gamma_k < 0$, the foreign-owned banks from region k cut their lending by more than the

other banks during the "crisis" years.

Thus, we can interpret β as the impact the crisis had on decreasing total bank lending in the country, and $\beta + \gamma_k$ as the impact the crisis had on foreign bank lending in that country. γ_k reflects the additional cut in lending, solely owing to the fact that the bank was from foreign region k.

In the usual "difference-in-difference" terminology, the foreign bank owned by a country in region k is the "treatment" group, and the other banks are in the "control" group. If we assume that the bank and unobserved country specific variables are controlled for by $bank_{ijt}$ and $countrydummy_j$, then γ_k will capture the differential effects of the crisis on the lending by the foreign banks from region k.

4   Description of Data

Table 1 describes the data used for the empirical analyses. In the analysis of this paper, we use the Bankscope database. Bankscope is a database containing financial information on over 20,000 banks worldwide. It provides detailed information on European banks, North American banks, and other major banks throughout the world; it also has bank ownership information.

We classify the banks operating in any particular country as U.S.-owned, Europe-owned, Non-U.S., Non-European (say, Japanese or Brazilian) owned, or domestically owned. For example, if the bank is located in Korea and the ultimate owner country of the bank is Korean, then it is classified as a domestically owned bank. If the Korean owned bank is located in Singapore, then the bank is classified as a Non-U.S, Non-European (foreign) bank in Singapore. A Brazilian bank operating in Argentina is classified as foreign, but the same bank is classified as domestic in Brazil.

To define ownership, we use the ultimate ownership database of the Bvd Bankscope data. The ultimate ownership database defines a bank's ultimate owner country by the shareholders with the highest direct or total percentage of ownership. For example, the ultimate owner of Citibank Korea Inc. is the U.S. bank, Citicorp.

Table 1 also summarizes the changes in loans divided by assets according to the region where the bank is lending. For example, the third row summarizes those banks which operate in the U.S. Based on the whole sample, we can see that the loan-to-asset ratio decreased from 0.10 to 0.07 during the recent U.S. credit crisis in 2007-2008. In contrast to the banks in the U.S., banks in Latin American and Asian countries tended to increase their lending during the recent credit crisis.

Table 2 shows the ratio of lending by U.S. and European Banks in each region in our sample. Overall, European banks in our sample account for 15 - 20% of total global lending and U.S. banks account for 5-8% of the total global lending. The European shares of lending in Latin America and Africa in our sample are especially high, with 20% and 30% of total lending in these countries.

5   Empirical Results

5.1   Results for U.S. Bank Lending

We examine whether during the 2008-2009 financial crisis, the bank affiliate's country of ownership played a significant role in determining bank lending patterns. For each specification, we present the results including and excluding country fixed-effects (of where the bank or foreign bank affiliate is lending). We divide our sample of countries in which the banks are lending (the countries in which the lending bank is physically located) into: All (all countries), Europe [3], Latin America[4], Asia[5], Africa[6], and the U.S. and Canada.

---

[3]France, Ukraine, Spain, Sweden, Norway, Germany, Finland, Poland, Italy, United Kingdom, Romania, Belarus, Greece, Bulgaria, Iceland, Hungary, Portugal, Serbia, Austria, Czech Republic, Ireland

[4]Brazil, Colombia, Mexico, Argentina, Venezuela, Peru, Chile, Guatemala, Ecuador, Cuba, Haiti, Bolivia, Dominican Republic, Honduras, Paraguay, El Salvador, Nicaragua, Costa Rica, Puerto Rico, Panama, Uruguay, Guadeloupe, Martinique, French Guiana

[5]Afghanistan, Bahrain, Bangladesh, Bhutan, Brunei, Cambodia, China, East Timor, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kazakhstan, Korea Rep. Of, Kuwait, Kyrgyzstan, Laos, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Burma, Nepal, Oman, Pakistan, The Philippines, Qatar, Russia, Saudi Arabia, Singapore, Sri Lanka, Syria, Taiwan, Tajikistan, Thailand, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Vietnam, Yemen

[6]Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Canary Islands, Cape Verde, Central African Republic, Ceuta, Chad, Comoros, Cote d'Ivoire, Congo, Congo, Democratic, Djibouti,

For the foreign bank affiliates, the bank level characteristics refer not to the headquarters' balance sheet or on a consolidated basis, but only to the balance sheet of the bank affiliate in the country.

We first estimate (1) without the controls:

$$\frac{\Delta Loans}{Assets} = c + a_0 * crisis + a_1 * USBD$$
$$+ a_2 * crisis * USBD + e \tag{2}$$

where $USBD$ denotes a dummy variable which takes on a value of one, if the bank affiliate is owned by the U.S. parent. We first estimate (2) for all the banks in our sample. We then estimate (2) separately for each region that the banks are lending. We classify 2003-2007 as the pre-crisis period, and 2008-2009 as the post-crisis period.

Based on the equation (5.1), we examine how ownership affected lending during the crisis. The Z test results ($a_0 < 0$) show that the crisis led to a decrease in lending on average for all banks located in Asia and Africa at the 1% and the 5% significance level, respectively.

Next, we ask whether during the crisis, the U.S. owned banks cut lending by more than the other banks. If the answer is yes, then $a_2 < 0$. The Z test results indicate that this is true for U.S. bank lending in the U.S. and Canada at the 5% significance level. Of course, since the crisis originated in the U.S., e , the error term and the crisis dummy are likely to be correlated, resulting in biased coefficient estimates for this particular sample.

5.2   Results for European and Non-U.S., Non-European Bank Lending

Table 4 divides ownership into : European-owned and non-European owned banks. The interaction term between the European-owned bank dummy and the crisis dummy is negative, and it is statistically significant in Latin America. European banks appear to

---

Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Madeira, Malawi, Mali, Mauritania, Mauritius, Mayotte, Melilla, Morocco, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Western Sahara, Zambia, Zimbabwe

have cut their lending more than the other banks in the Latin America market. These results are robust to the inclusion of country (of where the banks are located) fixed-effects.

In the following specifications, we classify ownership into three different categories: U.S., Europe, with the other banks as the baseline (including the domestic banks).

$$\frac{\Delta Loans}{Assets} = c + a_0 * crisis + a_1 * USBD + a_2 * crisis * USBD + a_3 * EBD + a_4 * crisis * EBD + e$$
(3)

where EBD denotes whether the bank's ultimate owner is located in Europe. In this specification, if the crisis cut lending more for European-owned banks than for U.S.-owned banks, then $a_4 < a_2 < 0$. The Z test results ($a_4 < a_2 < 0$), however, are not significant in any sample, suggesting that European-owned banks did not cut their lending compared to U.S.-owned banks. However, as before European banks cut their lending in Latin America more than the other banks (excluding the U.S.-owned banks).

Table 5 shows the results when we add bank control variables 1) the ratio of Tier 1 to total assets at time $(t-1)$ and 2) the log of assets. These bank-level characteristics are at the bank or bank-affiliate level. Most bank level characteristics appear to be significant in a majority of the samples, except in Europe. Specifically, the more capitalized and larger the bank, the greater the change in lending.

When we include bank level variables, the interaction of the Europe-owned bank dummy and the crisis dummy turns negative and significant not only in Latin America but also in Asia. These results again suggest that banks owned by European countries cut their lending by more than the other banks in Latin America and Asia during the crisis. U.S. banks, however, do not appear to cut their lending any more than the other banks (excluding the European-owned banks).

As a robustness check, Table 6 shows the results based only on a sample between 2006 and 2009 (excluding the years 2003-2005), using the same specification in Table 5 without the country fixed-effects. The findings from the previous Table remain the same, except that the interaction of the European owned dummy and the crisis dummy becomes insignificant in Asia, though it is still negative.

11

In Tables 7 and 8, we add a fourth ownership variable, "Foreign-dummy," which takes on the value of one when the bank is owned by a non-European, non-U.S. foreign country. For example, for Korea, the "Foreign-dummy" takes on a value of one when the bank is owned by a foreign (non-Korean) country such as Japan, but not U.S. or European owned. Thus, the "baseline" from which changes are measured include only the domestic banks. We split Asia into emerging Asia and Japan. We also interact the ownership variables with the "capital market openness index" from Chinn and Ito (2006). Again, European affiliated banks cut loans more than the domestic banks in Latin America. In addition, non-U.S., non-European foreign affiliated banks in Asia cut their lending more than the domestic banks in Asia. Regardless of how we define ownership, the "capital market openness index" has a positive effect. The decline in bank lending is less in countries with more open capital markets.

5.3   Additional Robustness Checks

Here we perform two additional robustness checks. First, instead of using $\frac{\Delta Loans}{Assets}$ as a dependent variable, we will use an alterative measure of the change in loans, $\ln Loan_t - \ln Loan_{t-1}$.

The results for equation (3) in Table 9 confirm that all of the results in the previous Tables hold. In fact, with $\Delta \ln Loan$ as the dependent variable, U.S. owned banks in Asia actually cut their lending by more during the crisis than the other banks. Consistent with the previous findings, European owned banks in Latin America cut their lending by more than the other banks.

We also re-examine the role of capital market openness. Similar to the previous results, capital market openness has a positive effect on bank lending in Asia and Africa (with country fixed-effects).

Our second robustness test is to run the same specification using a different sample, the data overlapping the post-2001, but excluding the 2008 crisis. The 2001 recession was shallow and brief; damage to the balance sheets of banks were minimal. Our empirical framework is designed to test whether internal capital markets are important in the in-

ternational transmission of financial shocks. Since financial shocks were not important in the 2001 recession, we should not find any evidence of the international transmission of financial shocks in our estimates using only the pre- and post-2001 recession sample. We define 1999 and 2000 as the pre-recession period, and 2001 and 2002 as the post-recession period.

Table 11 depicts the results. The recession effect is not significant except in Asia. The interaction of the U.S.- owned dummy and the recession dummy variable is not significant in any of the regions. Table 12 shows the results that include the post-2001 recession dummy interacted with the European-owned dummy. None of these interacted variables are significant; we cannot detect the effects of that 2001 recession on international lending.

5.4 Why did European-bank affiliates cut their lending?

Why was the cross-border lending of European banks particularly affected by the crisis? One reason is that European banks are large holders of the debt of their own governments. If the deep recession following the 2008-Lehman crisis lowered the abilities of European governments to pay back their debt, then the value (price) of the government bonds held by the European banks will decline, damaging the balance sheets of the banks. Unfortunately, we do not have data on government bond holdings for most of the banks. From the limited availability of data, we do know that in many heavily indebted European countries, local banks are heavy buyers of their own country's bonds. Banks and insurance companies overall own 32 percent of Greek bonds. The four largest Greek banks alone own 25 percent of all Greek government bonds. The four largest Italian banks by themselves own 12 percent of Italian government bonds outstanding. The ownership of Spanish government bonds is even more concentrated. The two largest Spanish banks, Banco Santander and Banco Bilbao, alone own 15.1 percent of all Spanish government bonds. (The data are from the Bloomberg terminal.)

In the absence of comprehensive bank government bond ownership data, we have data on the outstanding debt to GDP ratios of the governments of each of the foreign bank

affiliates. The assumption is that the higher the debt-to-GDP ratio in a given country, the more the banks in that country hold their own government's debt. In the results below, for all of the foreign bank-affiliates, we interact their home country's debt-GDP ratio with the crisis dummy variable.

The results in Table 13 and 14 show that during the financial crisis, foreign bank affiliates from highly indebted countries cut their lending by more than the other banks. Our results imply that banks from countries with high government indebtedness cut their lending abroad by more. Since many of the banks from highly indebted countries are from Europe, European bank affiliates have tended to cut their foreign lending by more than the banks from other regions.

6   Conclusion

In this paper, we examine the period before and after the post-2008 Lehman collapse period to see if the nationalitiy of the bank in a particular market matters in how much the bank cuts its lending. While banks on average cut their lending after the crisis, European bank affiliates located in Latin America and Asia cut their lending by more than the other banks located in those regions. If the balance sheets of the parents of the European bank branches were the most harmed by the crisis, then our results imply that internal capital markets matter in the international transmission of financial shocks. Since in our sample, European bank affiliates accounted for at least 20 percent of the total loans in the Latin American banking system, the withdrawal of loans from European-bank affiliates should have had a large effect on the transmission of European financial shocks to Latin America.

References

Cetorelli, N., and Goldberg, L. (2012). Banking Globalization, Monetary Transmission, and the Lending Channel. *Journal of Finance*.

Cetorelli, N., and Goldberg, L. S. (2008). Banking globalization, monetary transmission, and the lending channel. Discussion paper.

Cetorelli, N., and Goldberg, L. S. (2010). Global Banks and International Shock Transmission: Evidence from the Crisis. NBER Working Papers 15974, National Bureau of Economic Research, Inc. URL http://ideas.repec.org/p/nbr/nberwo/15974.html.

Chinn, M. D., and Ito, H. (2008). A New Measure of Financial Openness. *Journal of Comparative Policy Analysis: Research and Practice*, 10(3): 309–322. DOI 10.1080/13876980802231123. URL http://www.tandfonline.com/doi/abs/10.1080/13876980802231123.

Claessens, S., and van Horen, N. (2011). Foreign Banks: Trends, Impact and Financial Stability. DNB Working Papers 330, Netherlands Central Bank, Research Department. URL http://ideas.repec.org/p/dnb/dnbwpp/330.html.

de Haas, R., and van Lelyveld, I. (2011). Multinational Banks and the Global Financial Crisis. Weathering the Perfect Storm? DNB Working Papers 322, Netherlands Central Bank, Research Department. URL http://ideas.repec.org/p/dnb/dnbwpp/322.html.

Demirgüç-Kunt, A., and Huizinga, H. (1999). Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence. *The World Bank Economic Review*, 13(2): pp. 379–408. ISSN 02586770. URL http://www.jstor.org/stable/3990103.

Didier, T., Hevia, C., and Schmukler, S. L. (2011). How resilient were emerging economies to the global crisis ? Policy Research Working Paper Series 5637, The World Bank. URL http://ideas.repec.org/p/wbk/wbrwps/5637.html.

Houston, J., James, C., and Marcus, D. (1997). Capital market frictions and the role of internal capital markets in banking. *Journal of Financial Economics*, 46(2): 135–164. URL `http://ideas.repec.org/a/eee/jfinec/v46y1997i2p135-164.html`.

Houston, J. F., and James, C. (1998). Do bank internal capital markets promote lending? *Journal of Banking & Finance*, 22(6-8): 899–918. URL `http://ideas.repec.org/a/eee/jbfina/v22y1998i6-8p899-918.html`.

Jose Luis Peydro Alcalde, S. O., and van Horen, N. (2011). Shocks Abroad, Pain at Home? Bank-Firm Level Evidence on Financial Contagion during the 2007-2009 Crisis. Discussion paper.

Khwaja, A. I., and Mian, A. (2008). Tracing the Impact of Bank Liquidity Shocks: Evidence from an Emerging Market. *American Economic Review*, 98(4): 1413–42. URL `http://ideas.repec.org/a/aea/aecrev/v98y2008i4p1413-42.html`.

Levy, A., and Schich, S. (2010). The Design of Government Guarantees for Bank Bonds. DOI http://dx.doi.org/10.1787/fmt-2010-5km7k9tp8t40. URL `/content/article/fmt-2010-5km7k9tp8t40`.

Mishkin, F. S. (2009). Why We Shouldn't t Turn Our Backs on Financial Globalization. *IMF Staff Papers*, 56(1): 139–170. URL `http://ideas.repec.org/a/pal/imfstp/v56y2009i1p139-170.html`.

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(1): 30–45. URL `http://search.proquest.com/docview/233032344?accountid=14749`.

Popov, A., and Udell, G. F. (2010). Cross-border banking and the international transmission of financial distress during the crisis of 2007-2008. Working Paper Series 1203, European Central Bank. URL `http://ideas.repec.org/p/ecb/ecbwps/20101203.html`.

Popov, A., and Udell, G. F. (2012). Cross-border banking, credit access, and the financial

crisis. *Journal of International Economics*, 87(1): 147–161. URL `http://ideas.repec.`
`org/a/eee/inecon/v87y2012i1p147-161.html`.

Rose, A. K. (2004). Do We Really Know That the WTO Increases Trade? *American Economic Review*, 94(1): 98–114. DOI 10.1257/000282804322970724. URL `http://`
`www.aeaweb.org/articles.php?doi=10.1257/000282804322970724`.

Table 1: Description of Sample

	Pre-2001 Recession		2001 Recession		After Recession and Pre-Crisis					Crisis	
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number of Countries	186	188	187	185	188	189	191	192	193	192	191
Total Number of Banks	21,030	21,728	21,984	22,804	23,074	23,537	24,795	22,915	22,868	22,511	21,791
– Number of U.S. Banks	792	845	880	905	928	942	962	940	927	927	908
– Number of European Banks	1,258	1,367	1,459	1,557	1,627	1,825	1,879	1,882	1,909	1,925	1,871
– Number of U.S. Banks with Foreign Affiliates	144	169	179	188	194	200	201	209	215	219	208
– Number of European Banks with Foreign Affiliates	465	506	533	560	583	642	678	685	714	716	681
– Foreign[+] Banks with Foreign Affiliates	740	812	888	931	972	1,053	1,097	1,109	1,139	1,160	1,137
Total Loans/Assets		0.10	0.07	0.15	0.11	0.27	1.63	3.01	0.16	0.28	0.19
–U.S.		0.12	0.10	0.19	0.07	0.25	0.10	0.17	0.10	0.10	0.04
–U.S. and Canada		0.12	0.10	0.19	0.07	0.25	0.10	0.17	0.11	0.10	0.04
–Europe		0.11	0.03	0.18	0.19	0.20	7.83	12.32	0.20	0.72	0.17
–Latin America		0.07	0.06	-0.07	0.07	1.44	0.60	0.19	0.26	0.09	0.53
–Asia		0.06	-0.03	0.04	0.12	0.12	0.15	0.11	0.11	0.13	1.07
–Africa		0.04	0.10	0.17	0.26	0.11	0.11	0.20	0.25	0.10	0.09
–U.S. Banks		0.15	0.12	0.11	0.11	2.10	0.10	0.92	0.20	0.08	0.13
–European Banks		0.06	0.06	0.15	0.21	1.06	18.83	37.77	0.35	0.14	0.28
–U.S. Banks with Foreign Affiliates		0.07	0.06	0.10	0.18	0.15	0.06	0.15	0.20	0.02	-0.03
–European Banks with Foreign Affiliates		0.08	0.06	0.07	0.16	2.17	0.16	0.23	0.29	0.09	0.05
–Foreign[+] Banks with Foreign Affiliates		0.05	0.06	0.10	0.11	0.15	0.18	0.12	0.22	0.82	2.18
Tier 1 Capital/Assets	0.12	0.11	0.11	0.11	0.14	0.14	1.53	0.13	0.12	0.12	0.16
– U.S. Banks	0.12	0.12	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13
– European Banks	0.38	0.09	0.30	0.09	0.10	0.09	0.24	0.23	0.09	0.09	0.10
– U.S. Banks with Foreign Affiliates	0.11	0.12	0.13	0.16	0.18	0.20	0.16	0.15	0.15	0.15	0.19
– European Banks with Foreign Affiliates	0.10	0.10	0.12	0.11	0.12	0.10	0.58	0.53	0.12	0.11	0.12
– Foreign[+] Banks with Foreign Affiliates	0.13	0.13	0.16	0.15	0.15	0.14	0.14	0.14	0.13	0.14	0.15

[1] Banks are defined as U.S. banks if the ultimate owner of a bank is the U.S.

[2] Banks are defined as European banks if the ultimate owner of a bank is a European country.

[3] U.S. banks that are located outside of U.S.

[4] European owned banks that are outside of Europe.

[5] Foreign[+] owned banks which are neither U.S. nor European banks.

[6] Total Loans/Asset is defined as $\frac{\Delta Loans}{Assets}$.

[7] The ratio of Tier 1 capital to assets.

Table 2: Lending by U.S. and European Banks

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
U.S. Banks/Total Lending	All	0.0530	0.0578	0.0615	0.0630	0.0585	0.0554	0.0685	0.0576	0.0540	0.0519	0.0485
	North America	0.1943	0.1999	0.2071	0.2194	0.2194	0.2351	0.2582	0.2403	0.2360	0.2314	0.2467
	Europe	0.0097	0.0096	0.0095	0.0103	0.0108	0.0097	0.0137	0.0130	0.0133	0.0150	0.0107
	Latin America	0.0819	0.0874	0.0818	0.0877	0.0461	0.0771	0.0618	0.0541	0.0378	0.0442	0.0365
	Asia	0.0055	0.0059	0.0050	0.0060	0.0060	0.0063	0.0063	0.0079	0.0091	0.0068	0.0067
	Africa	0.0017	0.0017	0.0019	0.0019	0.0013	0.0007	0.0007	0.0010	0.0008	0.0013	0.0008
European Banks/Total Lending	All	0.1464	0.1469	0.1574	0.1731	0.1806	0.2129	0.1952	0.2189	0.2329	0.2218	0.2241
	North America	0.0280	0.0280	0.0383	0.0363	0.0365	0.0485	0.0744	0.0636	0.0496	0.0541	0.0490
	Europe	0.3843	0.3993	0.4121	0.4210	0.4233	0.4347	0.4168	0.4301	0.4584	0.4522	0.4693
	Latin America	0.1936	0.2119	0.2134	0.1953	0.1998	0.2022	0.1838	0.1887	0.1794	0.1883	0.1663
	Asia	0.0040	0.0036	0.0044	0.0073	0.0077	0.0081	0.0098	0.0168	0.0221	0.0195	0.0160
	Africa	0.2935	0.3186	0.3024	0.3071	0.3541	0.3627	0.3603	0.3431	0.3338	0.2961	0.3096

Table 3: Effects of Ownership on Bank Lending

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	1.0913		0.1093***	1.1126	0.2307	0.8245	0.1632
	(37.0949)		(0.0220)	(25.0537)	(1.6752)	(13.9288)	(0.6002)
U.S. Owned Dummy	-0.5176		0.4591***	-7.6009	-0.1916	-1.7494	-0.1061
	(2.4888)		(0.0889)	(14.8817)	(0.8040)	(5.5104)	(0.2907)
Crisis Dummy	-0.9030		-0.0462	-2.8040	-0.0343	-0.0576***	-0.0609*
	(0.7707)		(0.0519)	(3.4467)	(0.3523)	(0.0158)	(0.0364)
(U.S. Owned Dummy*Crisis)	0.4198		-0.3896*	2.6607	-0.1125	-0.0650	-0.0670
	(3.7949)		(0.1998)	(27.9386)	(1.8313)	(0.1567)	(0.3449)
R-squared	0.0002		0.0003	0.0002	0.0037	0.0010	0.0139
Without Country Fixed-Effects							
Constant	0.96**	0.109***	0.1094***	3.0366*	0.3305**	0.8119	0.1876***
	(0.4701)	(0.0221)	(0.0220)	(1.7294)	(0.1508)	(0.6572)	(0.0269)
U.S. Owned Dummy	-0.4591	0.4623***	0.4591***	-2.9181	-0.1453	-0.7209	-0.1339
	(2.4595)	(0.0895)	(0.0889)	(14.7101)	(0.7993)	(5.4576)	(0.2862)
Crisis Dummy	-0.8736	-0.0453	-0.0461	-2.8743	-0.0121	-0.0575***	-0.0748**
	(0.7659)	(0.0523)	(0.0519)	(3.4427)	(0.3514)	(0.0158)	(0.0361)
(U.S. Owned Dummy*Crisis)	0.4485	-0.3929*	-0.3896*	2.7107	-0.1432	-0.0650	-0.0573
	(3.7935)	(0.2009)	(0.1998)	(27.9305)	(1.8311)	(0.1567)	(0.3445)
R-squared	0.0000	0.0003	0.0003	0.0000	0.0000	0.0000	0.0007
Number of Observations	206,335	104,100	104,794	45,343	8,476	19,612	5,601

Since we use country dummy to estimate country fixed-effects, for a single country (U.S.), we do not report the result using country fixed effects.

Table 4: Effects of Ownership on Bank Lending with Europe Owned Dummy

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	0.5871		0.1374***	-2.6850	-0.0095	0.8239	0.2909
	(37.0886)		(0.0214)	(23.1388)	(2.3258)	(13.9275)	(0.8628)
Europe Owned	9.3224***		-0.0002	12.762***	1.7878***	-1.8218	-0.0164
	(1.9378)		(0.3329)	(4.4571)	(0.5313)	(3.8079)	(0.0817)
Crisis Dummy	-0.0085		-0.0691	0.0592	0.1391	-0.0565***	-0.0567
	(0.7845)		(0.0502)	(3.8629)	(0.3635)	(0.0159)	(0.0393)
(Europe Owned Dummy*Crisis Dummy)	-12.0996***		-0.0752	-14.1116*	-1.9654*	-0.0743	-0.0333
	(2.8565)		(0.7034)	(8.3154)	(1.1679)	(0.1038)	(0.0999)
R-squared	0.0004		0.0000	0.0004	0.005	0.0010	0.0139
Without Country Fixed-Effects							
Constant	0.2389	0.1374***	0.1375***	0.4315	0.1786	0.8199	0.1893
	(0.4791)	(0.0215)	(0.0214)	(1.9205)	(0.1549)	(0.6632)	(0.0288)
Europe Owned Dummy	9.9124***	-0.0138	0.0006	12.7766***	1.6767***	-0.5587	-0.0225
	(1.7768)	(0.3504)	(0.3322)	(4.2838)	(0.5237)	(3.6808)	(0.0785)
Crisis Dummy	-0.0066	-0.0686	-0.0691	0.0430	0.1557	-0.0564	-0.0726
	(0.7799)	(0.0506)	(0.0502)	(3.8580)	(0.3626)	(0.0159)	(0.0390)
(Europe Owned Dummy*Crisis Dummy)	-12.1705***	-0.0574	-0.0751	-14.2537*	-1.947*	-0.0742	-0.0193
	(2.8534)	(0.7491)	(0.7034)	(8.3098)	(1.1682)	(0.1038)	(0.0996)
R-squared	0.0001	0.0000	0.0000	0.0002	0.0012	0.0000	0.0007
Number of Observations	206,335	104,100	104,794	45,343	8,476	19,612	5,601

Table 5: Effects of Ownership on Bank Lending including Bank-Level Characteristics

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	-5.223		-1.983***	-0.3408	-0.2909	-0.9816	0.075
	(6.9392)		(0.2318)	(1.6466)	(0.8208)	(26.0164)	(0.3499)
Lag(Tier1/Assets)	0.0001		2.8715***	0.0079	0.00004**	1.3515***	0.0021
	(0.0003)		(0.1896)	(0.0797)	(0.00002)	(0.0595)	(0.0017)
Log(Assets)	0.3393***		0.0934***	0.0337	0.0227	0.0776***	0.0022
	(0.0413)		(0.0119)	(0.0440)	(0.0200)	(0.0079)	(0.0079)
U.S. Owned Dummy	-0.0058		0.3256***	-1.502	-0.0319	-3.5419	-0.1303
	(0.5456)		(0.0811)	(1.5563)	(0.2529)	(12.4590)	(0.0964)
Europe Owned Dummy	-(0.7273)		-(0.3073)	-(0.3713)	(0.1712)	-(5.4337)	-(0.0192)
	(0.5488)		(0.3194)	(0.2586)	(0.1409)	(9.0794)	(0.0426)
Crisis Dummy	-0.2123***		-0.0708	-0.2921	-0.1076***	-0.0504***	-0.0645**
	(0.0471)		(0.0460)	(0.2178)	(0.0377)	(0.0061)	(0.0261)
(U.S. Owned Dummy*Crisis Dummy)	-0.5407***		-0.4121**	1.444	-0.055	-0.0538	0.0101
	(0.1822)		(0.1773)	(2.1683)	(0.2335)	(0.0422)	(0.1476)
(Europe Owned Dummy*Crisis Dummy)	-0.0824		-0.1652	0.5039	-0.2889***	-0.0727**	-0.0234
	(0.2587)		(0.7116)	(0.4295)	(0.0993)	(0.0322)	(0.0592)
R-squared	0.0012		0.0027	0.0131	0.2159	0.0014	0.0446
Without Country Fixed-Effects							
Constant	-5.4963***	-1.9631***	-1.9318***	-0.2856	-0.6091	-0.1057	0.1691
	(0.7269)	(0.2311)	(0.2282)	(0.7533)	(0.5027)	(1.6314)	(0.1072)
Lag(Tier1/Assets)	0.0001	2.8742***	2.859***	0.0026	0.00004**	1.3514***	0.0019
	(0.0003)	(0.1901)	(0.1894)	(0.0800)	(0.00002)	(0.0595)	(0.0017)
Log(Assets)	0.2932***	0.0923***	0.0907***	0.0285	0.0429*	0.0775***	-0.0007
	(0.0365)	(0.0118)	(0.0117)	(0.0357)	(0.0236)	(0.0079)	(0.0053)
U.S. Owned Dummy	0.1737	0.3321***	0.3306***	-0.3165	-0.1729	-1.7482	-0.126
	(0.5396)	(0.0814)	(0.0810)	(1.5279)	(0.3111)	(12.1327)	(0.0947)
Crisis Dummy	-0.1967***	-0.0692	-0.0692	-0.2606	-0.132***	-0.0504***	-0.0422*
	(0.0466)	(0.0461)	(0.0460)	(0.2069)	(0.0377)	(0.0061)	(0.0231)
(U.S. Owned Dummy*Crisis Dummy)	-0.5354***	-0.4164**	-0.4128**	0.205	-0.0299	-0.0538	-0.0059
	(0.1821)	(0.1781)	(0.1773)	(2.1646)	(0.2431)	(0.0422)	(0.1466)
(Europe Owned Dummy*Crisis Dummy)	-0.1693	-0.4918	-0.4784	0.2737	-0.2681***	-0.0727**	-0.0547
	(0.2512)	(0.6687)	(0.6397)	(0.3638)	(0.0945)	(0.0322)	(0.0442)
R-squared	0.0001	0.0028	0.0027	0.0003	0.0028	0.0001	0.0125
Number of Observations	125,643	102,047	102,399	11,129	755	6,457	861

Table 6: Effects of Ownership on Bank Lending based on 06-09 sample

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
Constant	0.2721	-1.5861***	-1.5522***	-7.91	-0.4409	-0.5674	0.182
	(1.7453)	(0.2420)	(0.2383)	(6.1307)	(0.5950)	(2.1324)	(0.1576)
Lag(Tier1/Assets)	0.00004	2.2424***	2.2298***	3.6691***	0.00004*	2.1802***	0.3623***
	(0.0002)	(0.1856)	(0.1849)	(1.2266)	(0.00002)	(0.1004)	(0.1317)
Log(Assets)	0.0019	0.0749***	0.0731***	0.369	0.0359	0.1178***	0.0015
	(0.0853)	(0.0123)	(0.0121)	(0.2303)	(0.0279)	(0.0213)	(0.0076)
U.S. Owned Dummy	0.4718	0.4522***	0.45***	-0.8474	-0.1162	-2.2808	-0.2293
	(2.1957)	(0.1019)	(0.1013)	(33.0830)	(0.4190)	(15.3741)	(0.1600)
Europe Owned Dummy	8.7773***	-0.2786	-0.2479	12.5998*	0.1246	-2.1834	-0.0845
	(2.1437)	(0.4018)	(0.3813)	(7.4702)	(0.2040)	(10.1868)	(0.0713)
Crisis Dummy	-0.0813**	-0.0395	-0.0398	-0.3229***	-0.136***	-0.0566***	-0.1493***
	(0.0342)	(0.0370)	(0.0368)	(0.0981)	(0.0435)	(0.0083)	(0.0344)
(U.S. Owned Dummy*Crisis Dummy)	-0.5521***	-0.5064***	-0.5017***	0.3436	-0.0906	-0.0716	0.0907
	(0.1300)	(0.1419)	(0.1412)	(0.9679)	(0.3130)	(0.0561)	(0.2090)
(Europe Owned Dummy*Crisis Dummy)	-0.1754	-0.1298	-0.149	0.0724	-0.2905**	-0.0558	0.0394
	(0.1684)	(0.5801)	(0.5526)	(0.1867)	(0.1164)	(0.0418)	(0.0856)
Number of Observations	49,102	37,443	37,608	5,496	615	3,086	590

Table 7: Effects of Ownership on Bank Lending Interacted with Capital Market Openness

	ALL	Europe	Latin America	Japan	Asia[+]	Africa
With Country Fixed-Effects						
Constant	-2.8039	0.6856	-0.3362		-0.3914	-2.343
	(41.8846)	(32.1806)	(0.8417)		(37.2857)	(1.6806)
Lag(Tier1/Assets)	0.00003	0.0065	0.00004**		1.5414***	0.0011
	(0.0004)	(0.1154)	(0.00002)		(0.0815)	(0.0020)
Log(Assets)	-0.0179	-0.1252	0.0248		0.0632***	0.1399***
	(0.1447)	(0.3023)	(0.0207)		(0.0099)	(0.0302)
U.S. Owned Dummy	-3.2778	-9.2717	-0.0448		-1.5362	-0.3024
	(11.1071)	(23.1919)	(0.2614)		(19.3712)	(0.8240)
Europe Owned Dummy	5.8607	6.7655	0.1226		-1.8384	-0.0757
	(3.5772)	(5.2560)	(0.1482)		(12.3644)	(0.2777)
Foreign[+] Owned Dummy	1.594	-15.1048	-0.0832		21.1148**	-0.059
	(5.4726)	(12.8232)	(0.1802)		(8.4322)	(0.2383)
Crisis Dummy	-0.3447**	-0.7435**	-0.111***		-0.1171***	-0.244***
	(0.1494)	(0.3225)	(0.0398)		(0.0107)	(0.0432)
(U.S. Owned Dummy*Crisis Dummy)	0.35	0.8875	-0.0863		0.0352	0.1823
	(1.5114)	(4.8375)	(0.3788)		(0.0551)	(0.2527)
(Europe Owned Dummy*Crisis Dummy)	0.0243	0.3645	-0.4222***		-0.018	0.1014
	(0.6554)	(1.4032)	(0.1468)		(0.0386)	(0.0846)
(Foreign[+] Owned Dummy*Crisis Dummy)	0.2199	0.5661	0.0153		-0.1091***	0.095
	(0.6123)	(1.9338)	(0.1943)		(0.0258)	(0.0756)
(Openness*U.S. Owned Dummy*Crisis Dummy)	-0.0652	-0.1622	0.0341		-0.0695	-0.0243
	(0.8313)	(2.3606)	(0.2874)		(0.0558)	(0.1097)
(Openness*Europe Owned* Dummy*Crisis Dummy)	0.042	0.0662	0.1935		0.0848**	-0.0089
	(0.2872)	(0.5740)	(0.1536)		(0.0382)	(0.0375)
(Openness*Foreign[+] Dummy*Crisis Dummy)	0.0091	0.0104	0.0217		0.0398**	0.0355
	(0.3162)	(0.8938)	(0.1301)		(0.0190)	(0.0307)
R-squared	0.0025	0.0027	0.2156		0.0032	0.0050
Without Country Fixed-Effects						
	ALL	Europe	Latin America	Japan	Asia[+]	Africa
Constant	0.0159	1.5265	-0.6064	-5.7425***	-1.3601	-1.6833***
	(3.3183)	(6.6081)	(0.5250)	(0.3794)	(2.9679)	(0.5405)
Lag(Tier1/Assets)	0.00003	0.0074	0.00004**	1.2731***	1.5414***	0.001
	(0.0004)	(0.1154)	(0.00002)	(0.0986)	(0.0813)	(0.0020)
Log(Assets)	0.0138	-0.0492	0.0434*	0.2427***	0.0632***	0.0914***
	(0.1428)	(0.2987)	(0.0246)	(0.0158)	(0.0098)	(0.0269)
U.S. Owned Dummy	-0.2637	-0.3999	-0.1924	-0.0914	-0.2111	-0.0846
	(10.7307)	(22.4958)	(0.3233)	(0.5125)	(18.6495)	(0.7781)
Europe Owned Dummy	7.1779**	9.1699*	0.0237		-0.0691	-0.0526
	(3.3300)	(5.0156)	(0.1860)		(11.7440)	(0.2572)
Foreign[+] Owned Dummy	5.1757	-0.2621	-0.1676		20.1122***	0.1273
	(4.8816)	(11.7480)	(0.2229)		(7.8054)	(0.2104)
Crisis Dummy	-0.3543**	-0.7564**	-0.1339***	0.0047	-0.1171	-0.2195***
	(0.1492)	(0.3224)	(0.0404)	(0.0076)	(0.0107)	(0.0430)
(U.S. Owned Dummy*Crisis Dummy)	0.3393	0.8864	-0.0808		0.0352	0.1512
	(1.5110)	(4.8371)	(0.3980)		(0.0550)	(0.2540)
(Europe Owned Dummy*Crisis Dummy)	0.0059	0.3198	-0.4244***		-0.0181	0.0967
	(0.6550)	(1.4022)	(0.1538)		(0.0385)	(0.0850)
(Foreign[+] Owned Dummy*Crisis Dummy)	0.204	0.5327	0.0637		-0.1091***	0.0926
	(0.6120)	(1.9334)	(0.1983)		(0.0257)	(0.0758)
(Openness*U.S. Owned Dummy*Crisis Dummy)	-0.0484	-0.1036	0.053	-0.0801**	-0.0695	-0.0087
	(0.8309)	(2.3602)	(0.3155)	(0.0333)	(0.0557)	(0.1101)
(Openness*Europe Owned Dummy*Crisis Dummy)	0.0516	0.0847	0.2096	-0.0575	0.0848**	0.0022
	(0.2870)	(0.5736)	(0.1715)	(0.3284)	(0.0381)	(0.0374)
(Openness*Foreign[+] Owned Dummy*Crisis Dummy)	0.028	0.081	-0.0066		0.0398**	0.0396
	(0.3159)	(0.8933)	(0.1360)		(0.0189)	(0.0305)
R-squared	0.0003	0.0003	0.0032	0.0012	0.0022	0.0004
Number of Observations	21,504	11,091	743	2,886	3,145	854

Foreign[+] Owned Dummy denotes banks that are neither owned by U.S. nor European countries.
Asia[+] denotes Asian countries excluding Japan.

Table 8: Effects of Ownership on Bank Lending Interacted with Capital Market Openness

With Country Fixed-Effects								
	ALL	U.S.	U.S. and Canada	Europe	Latin America	Japan	Asia$^+$	Africa
Constant	-9.6752		-2.0144***	12.0897	-0.343		-0.4558	0.2448
	(25.5808)		(0.2334)	(29.5079)	(0.8409)		(37.2723)	(0.3558)
Lag(Tier1/Assets)	0.0001		2.8878***	0.0065	0.00004**		1.5376***	0.0018
	(0.0003)		(0.1902)	(0.1154)	(0.00002)		(0.0814)	(0.0017)
Log(Assets)	0.6137***		0.0951***	-0.1268	0.0245		0.0653***	0.0004
	(0.0524)		(0.0120)	(0.3023)	(0.0206)		(0.0098)	(0.0080)
U.S. Owned Dummy	-0.5427		0.3213***	-9.302	-0.0424		-1.5074	-0.169*
	(1.8647)		(0.0812)	(23.1800)	(0.2579)		(19.3642)	(0.1004)
Europe Owned Dummy	4.3405**		-0.3184	6.7691	0.159		-1.8548	-0.0551
	(1.8519)		(0.3195)	(5.2539)	(0.1447)		(12.3599)	(0.0463)
Foreign$^+$ Owned	1.0544		-0.2245	-15.2298	-0.087		21.1158**	-0.0986**
	(2.6508)		(0.2437)	(12.8524)	(0.1778)		(8.4292)	(0.0411)
Crisis Dummy	-0.4313**			-0.7778	-0.1221**		-0.1244***	-0.1193***
	(0.1943)			(0.9624)	(0.0569)		(0.0109)	(0.0329)
(U.S. Owned Dummy*Crisis Dummy)	-0.5971***		-0.4134**	0.6579	-0.0538		0.0230	0.0282
	(0.1851)		(0.1774)	(3.3319)	(0.2356)		(0.0539)	(0.1504)
(Europe Owned Dummy*Crisis Dummy)	-0.1912		-0.1678	0.5125	-0.285***		-0.0032	0.0103
	(0.2739)		(0.7116)	(0.6295)	(0.1007)		(0.0382)	(0.0633)
(Foreign$^+$ Owned Dummy*Crisis Dummy)	-0.0802		-0.1466	0.598	0.0356		-0.0986***	0.0955*
	(0.3490)		(0.5323)	(1.6542)	(0.1285)		(0.0253)	(0.0544)
(Openness*Crisis Dummy)	0.0471		-0.0285	0.0144	0.0133		0.0231***	0.0278*
	(0.0793)		(0.0188)	(0.3770)	(0.0481)		(0.0066)	(0.0151)
R-squared	0.0022		0.0028	0.0027	0.2165		0.0032	0.0571

Without Country Fixed-Effect								
	ALL	U.S.	U.S. and Canada	Europe	Latin America	Japan	Asia$^+$	Africa
Constant	-11.7407***	-2.0394***	-2.0025***	1.5661	-0.579	-5.7425***	-1.4048	0.2452
	(1.0798)	(0.2355)	(0.2325)	(6.6071)	(0.5246)	(0.3794)	(2.9669)	(0.1184)
Lag(Tier1/Assets)	0.0001	2.9035***	2.886***	0.0074	0.00004**	1.2731***	1.5375***	0.0017
	(0.0003)	(0.1909)	(0.154)	(0.1154)	(0.00002)	(0.0986)	(0.0812)	(0.0017)
Log(Assets)	0.6125***	0.0963***	0.0944***	-0.0511	0.0421	0.2427***	0.0653***	-0.0028
	(0.0517)	(0.0121)	(0.0119)	(0.2987)	(0.0246)	(0.0158)	(0.0098)	(0.0057)
U.S. Owned Dummy	-0.0985	0.3228***	0.3219***	-0.4322	-0.1834	-0.0914	-0.1804	-0.1637*
	(1.8523)	(0.0816)	(0.0812)	(22.4837)	(0.3187)	(0.5125)	(18.6433)	(0.0990)
Europe Owned Dummy	5.0069***	-0.362	-0.3265	9.1601*	0.0712	-0.1413	-0.0808	-0.0541
	(1.6481)	(0.3303)	(0.3192)	(5.0118)	(0.1814)	(0.8065)	(11.7401)	(0.0448)
Foreign$^+$ Owned Dummy	3.5559	-0.2717	-0.2429	-0.2575	-0.1697		20.1147**	-0.0727*
	(2.3846)	(0.2575)	(0.2417)	(11.7936)	(0.2191)		(7.8028)	(0.0376)
Crisis Dummy	-0.446**			-0.8477	-0.1327**		-0.1244***	-0.0874***
	(0.1936)			(0.9602)	(0.0554)		(0.0109)	(0.0313)
(U.S. Owned Dummy*Crisis Dummy)	-0.5956***	-0.4167**	-0.4131**	0.7655	-0.0279	-0.1968**	0.0230	0.0433
	(0.1850)	(0.1781)	(0.1774)	(3.3314)	(0.2453)	(0.0818)	(0.0539)	(0.1488)
(Europe Owned Dummy*Crisis Dummy)	-0.1828	-0.1501	-0.1707	0.5133	-0.2829***		-0.0032	0.0107
	(0.2738)	(0.7425)	(0.7116)	(0.6295)	(0.1019)		(0.0381)	(0.0621)
(Foreign$^+$ Owned Dummy*Crisis Dummy)	-0.0543	-0.1614	-0.1472	0.6772	0.0565		-0.0986***	0.0956*
	(0.3490)	(0.5682)	(0.5323)	(1.6538)	(0.1303)		(0.0253)	(0.0513)
(Openness*Crisis Dummy)	0.0533	-0.0286	-0.0285	0.0383	-0.0008	0.0019	0.0231***	-0.0023
	(0.0790)	(0.0189)	(0.0188)	(0.3761)	(0.0448)	(0.0031)	(0.0066)	(0.0103)
R-squared	0.0004	0.0028	0.0027	0.0003	0.0043	0.0012	0.0022	0.0178
Number of Observations	124,126	102,047	102,399	11,091	743	2,886	3,145	835

Table 9: Effects of Ownership on Bank Lending based on $\Delta \ln Loan_t$

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	0.2368		-0.8326***	0.0677	-0.4426	-2.0006***	-0.8292
	(0.1613)		(0.0211)	(0.1204)	(0.6472)	(0.2502)	(0.7493)
Lag(Tier1/Assets)	0.00002		3.1777***	0.0135***	0.00002	1.764***	0.0021
	(0.00002)		(0.0168)	(0.0036)	(0.00002)	(0.0832)	(0.0031)
Log(Assets)	-0.0052***		0.0328***	0.0113***	0.0357**	0.097***	0.0506**
	(0.0012)		(0.0011)	(0.0034)	(0.0145)	(0.0076)	(0.0196)
U.S. Owned Dummy	0.012		0.0061	-0.2397**	-0.1433	-0.1887**	-0.3235
	(0.0112)		(0.0078)	(0.0990)	(0.1873)	(0.0954)	(0.2747)
Europe Owned Dummy	0.068***		-0.0132	0.0094	0.046	-0.0393	-0.1425
	(0.0126)		(0.0290)	(0.0197)	(0.1044)	(0.0747)	(0.1079)
Crisis Dummy	-0.0855***		-0.0756***	-0.1759***	-0.2013***	-0.0707***	-0.1861***
	(0.0023)		(0.0021)	(0.0102)	(0.0395)	(0.0108)	(0.0476)
(U.S. Owned Dummy*Crisis Dummy)	-0.0388***		-0.0459***	0.0238	-0.0376	-0.1513*	0.0321
	(0.0094)		(0.0079)	(0.1031)	(0.2230)	(0.0788)	(0.2535)
(Europe Owned Dummy*Crisis Dummy)	-0.1359***		-0.1826***	-0.0313	-0.192*	-0.1606***	0.0251
	(0.0122)		(0.0325)	(0.0200)	(0.1037)	(0.0597)	(0.1095)
R-squared	0.0234		0.1952	0.0377	0.1138	0.0713	0.1191
Without Country Fixed-Effects							
Constant	0.2359***	-0.8172***	-0.8253***	0.1045*	-0.6716**	-1.0505***	-0.0396
	(0.0207)	(0.0209)	(0.0211)	(0.0626)	(0.3348)	(0.1364)	(0.3021)
Lag(Tier1/Assets)	0.00002	3.1696***	3.1778***	0.0139***	0.00002	1.5948***	0.0019
	(0.00002)	(0.0167)	(0.0168)	(0.0036)	(0.00002)	(0.0808)	(0.0031)
Log(Assets)	-0.0042***	0.032***	0.0324***	0.0054*	0.0484***	0.0454***	0.0157
	(0.0011)	(0.0011)	(0.0011)	(0.0030)	(0.0157)	(0.0059)	(0.0152)
U.S. Owned Dummy	0.0013	0.0121	0.0065	-0.222**	-0.234	-0.1829*	-0.1759
	(0.0115)	(0.0076)	(0.0078)	(0.0971)	(0.2038)	(0.1005)	(0.2971)
Europe Owned Dummy	0.111***	-0.0411	-0.0192	0.0256	0.0294	-0.0137	-0.094
	(0.0121)	(0.0296)	(0.0290)	(0.0193)	(0.1151)	(0.0766)	(0.1133)
Crisis Dummy	-0.0838***	-0.0748***	-0.0755***	-0.1782***	-0.2133***	-0.0484***	-0.126***
	(0.0023)	(0.0021)	(0.0021)	(0.0100)	(0.0391)	(0.0106)	(0.0468)
(U.S. Owned Dummy*Crisis Dummy)	-0.0401***	-0.0472***	-0.0458***	0.0083	0.0018	-0.1433*	-0.021
	(0.0094)	(0.0079)	(0.0079)	(0.1027)	(0.2304)	(0.0796)	(0.2563)
(Europe Owned Dummy*Crisis Dummy)	-0.1357***	-0.1572***	-0.1833***	-0.0286	-0.2064**	-0.1446**	0.0057
	(0.0122)	(0.0339)	(0.0325)	(0.0200)	(0.1043)	(0.0603)	(0.1113)
R-squared	0.0054	0.1982	0.1952	0.027	0.0228	0.0181	0.0031
Number of Observations	124,099	100,596	100,945	11,100	747	6,415	860

Table 10: Effects of Ownership on Bank Lending based on $\Delta \ln Loan_t$ Interacted with Capital Market Openness

With Country Fixed-Effects							
	ALL	U.S.	U.S. and Canada	Europe	Latin America	Japan	Asia	Africa
Constant	1.1366***		-0.8441***	-0.1923	-0.5330		-1.5062***	-0.2638
	(0.1934)		(0.0212)	(0.1504)	(0.5672)		(0.3416)	(0.7564)
Lag(Tier1/Assets)	0.00002		3.1791***	0.0138***	0.00002		1.7116***	0.0022
	(0.00002)		(0.0168)	(0.0037)	(0.0000)		(0.1144)	(0.0031)
Log(Assets)	-0.0055***		0.0334***	0.0177***	0.0358**		0.1177***	0.047**
	(0.0013)		(0.0011)	(0.0038)	(0.0149)		(0.0111)	(0.0198)
U.S. Owned Dummy	0.0137		0.0044	-0.3216***	-0.1421		-0.218*	-0.2569
	(0.0117)		(0.0078)	(0.1081)	(0.1899)		(0.1244)	(0.2818)
Europe Owned Dummy	0.0675***		-0.0179	-0.0050	0.0273		-0.0697	-0.1222
	(0.0133)		(0.0290)	(0.0223)	(0.1064)		(0.0877)	(0.1139)
Foreign+ Owned Dummy	-0.0086		-0.1078***	-0.2335***	-0.0730		0.0665	0.0312
	(0.0191)		(0.0235)	(0.0580)	(0.1313)		(0.0597)	(0.0974)
Crisis Dummy	-0.2281***			-0.4378***	-0.2974***		-0.1978***	-0.2092***
	(0.0091)			(0.0314)	(0.0604)		(0.0205)	(0.0613)
(U.S. Owned Dummy*Crisis Dummy)	-0.0423***		-0.0464***	0.1207	-0.0527		-0.0758	-0.0697
	(0.0094)		(0.0079)	(0.1060)	(0.2247)		(0.1101)	(0.2600)
(Europe Owned Dummy*Crisis Dummy)	-0.1208***		-0.1832***	-0.0165	-0.1716		-0.0667	-0.0114
	(0.0126)		(0.0325)	(0.0207)	(0.1049)		(0.0758)	(0.1174)
(Foreign+ Owned Dummy*Crisis Dummy)	-0.0092		-0.055**	0.2242***	0.0203		0.0103	-0.0511
	(0.0168)		(0.0251)	(0.0537)	(0.1321)		(0.0511)	(0.0998)
(Openness*Crisis Dummy)	0.0605***		-0.0307***	0.1061***	0.0995**		0.0372***	0.0736***
	(0.0037)		(0.0008)	(0.0124)	(0.0499)		(0.0134)	(0.0273)
R-squared	0.0237		0.1953	0.0395	0.1194		0.0957	0.124

Without Fixed-Effects							
	ALL	U.S.	U.S. and Canada	Europe	Latin America	Japan	Asia	Africa
Constant	0.2411***	-0.8325***	-0.8393***	0.0156	0.6255*	-2.7221***	-1.1964***	-0.1466
	(0.0218)	(0.0210)	(0.0212)	(0.0701)	(0.3485)	(0.2812)	(0.1997)	(0.3203)
Lag(Tier1/Assets)	0.00002	3.171***	3.1793***	0.0141***	0.0000	2.5706***	1.4687***	0.0020
	(0.00002)	(0.0167)	(0.0168)	(0.0037)	(0.0000)	(0.1461)	(0.1108)	(0.0031)
Log(Assets)	-0.0044***	0.0328***	0.0331***	0.01***	0.0471***	0.1097***	0.0575***	0.0200
	(0.0011)	(0.0011)	(0.0011)	(0.0034)	(0.0163)	(0.0117)	(0.0091)	(0.0158)
U.S. Owned Dummy	0.0031	0.0100	0.0046	-0.2509**	-0.2554	-0.1897	-0.2535*	-0.1342
	(0.0119)	(0.0076)	(0.0078)	(0.1058)	(0.2066)	(0.1918)	(0.1345)	(0.3047)
Europe Owned Dummy	0.1266***	-0.0453	-0.0230	0.0261	0.0062	-0.4768	-0.1023	-0.0682
	(0.0126)	(0.0295)	(0.0290)	(0.0216)	(0.1176)	(0.3007)	(0.0927)	(0.1193)
Foreign+ Owned Dummy	0.0756***	-0.137***	-0.1179***	-0.1408**	-0.1022		0.0437	0.0931
	(0.0180)	(0.0245)	(0.0233)	(0.0548)	(0.1428)		(0.0621)	(0.0970)
Crisis Dummy	-0.1537***			-0.3481***	-0.2634***		-0.1602***	-0.1272**
	(0.0080)			(0.0283)	(0.0548)		(0.0203)	(0.0610)
(U.S. Owned Dummy*Crisis Dummy)	-0.0417***	-0.0476***	-0.0463***	0.0779	0.0041	-0.327**	-0.0511	-0.0653
	(0.0094)	(0.0079)	(0.0079)	(0.1056)	(0.2323)	(0.1309)	(0.1111)	(0.2618)
(Europe Owned Dummy*Crisis Dummy)	-0.1322***	-0.1576***	-0.1838***	-0.0206	-0.1898*		-0.0492	-0.0150
	(0.0126)	(0.0339)	(0.0325)	(0.0207)	(0.1056)		(0.0770)	(0.1193)
(Foreign+ Owned Dummy*Crisis Dummy)	-0.0275	-0.0469*	-0.0552**	0.174***	0.0536		0.0041	-0.0310
	(0.0167)	(0.0270)	(0.0251)	(0.0532)	(0.1334)		(0.0517)	(0.0988)
(Openness*Crisis Dummy)	0.0296***	-0.0304***	-0.0307***	0.0681***	0.0441	0.0207***	0.0132	0.0280
	(0.0033)	(0.0008)	(0.0008)	(0.0111)	(0.0404)	(0.0047)	(0.0123)	(0.0219)
R-squared	0.0056	0.1984	0.1953	0.0236	0.024	0.0234	0.0262	0.0027
Number of Observations	122,598	100,596	100,945	11,062	735	2,864	3,136	852

Table 11: Effects of Ownership on Bank Lending During the Recession (1)

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	0.4324 (83.1749)		0.111*** (0.0260)	0.3682 (50.1496)	0.2829 (1.9382)	0.4272 (0.5725)	-0.0889 (1.3815)
U.S. Owned Dummy	-1.1532 (5.4790)		0.5168*** (0.1047)	-14.6718 (32.7612)	-0.2148 (0.9070)	-0.0628 (0.2014)	-0.0814 (0.3532)
Recession Dummy	-0.1531 (0.9753)		-0.0144 (0.0737)	-0.8259 (4.5607)	-0.3251 (0.4660)	-0.093*** (0.0194)	-0.0559 (0.0540)
(U.S. Owned Dummy*Recession Dummy)	-0.2584 (4.8793)		-0.4754 (0.3002)	1.4336 (38.9428)	0.0908 (2.5764)	0.0548 (0.1901)	0.0306 (0.5508)
R-squared	0.0003		0.0003	0.0003	0.0053	0.0091	0.0139
Without Country Fixed-Effects							
Constant	1.4072 (0.9912)	0.1107*** (0.0261)	0.1112*** (0.0259)	4.8484 (3.7109)	0.3734 (0.1714)	0.1341*** (0.0226)	0.1981*** (0.0322)
U.S. Owned Dummy	-0.8792 (5.4097)	0.5201*** (0.1053)	0.5168*** (0.1047)	-4.7170 (32.3629)	-0.1824 (0.9021)	-0.0541 (0.2018)	-0.1156 (0.3461)
Recession Dummy	-0.1680 (0.9748)	-0.0136 (0.0741)	-0.0145 (0.0737)	-0.8816 (4.5588)	-0.3169 (0.4659)	-0.095*** (0.0194)	-0.0518 (0.0538)
(U.S. Owned Dummy*Recession Dummy)	-0.2836 (4.8787)	-0.4773 (0.3022)	-0.4753 (0.3002)	0.8296 (38.9375)	0.2693 (2.5786)	0.0537 (0.1901)	0.0264 (0.5506)
R-squared	0.0000	0.0003	0.0003	0.0000	0.0001	0.0020	0.0004
Number of Observations	165,018	85,286	85,813	35,838	8,476	19,612	5,601

Table 12: Effects of Ownership on Bank Lending During the Recession (2)

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	0.4325 (83.1527)		0.1109*** (0.0261)	-8.3870 (50.3124)	0.2718 (1.9369)	0.4272 (0.5726)	0.1185 (0.8875)
U.S. Owned Dummy	-0.5242 (5.4806)		0.5169*** (0.1047)	-8.5742 (32.8838)	-0.0036 (0.9085)	-0.0655 (0.2016)	-0.0835 (0.3539)
Europe Owned Dummy	12.9464*** (3.9653)		0.0246 (0.3876)	19.4995** (9.5070)	2.0476 (0.6015)	-0.0567 (0.1411)	-0.0142 (0.0983)
Recession Dummy	-0.0342 (1.0086)		-0.0145 (0.0738)	-0.1395 (5.0664)	-0.1573 (0.4864)	-0.0941*** (0.0196)	-0.0504 (0.0586)
(U.S. Owned Dummy*Recession Dummy)	-0.3783 (4.8862)		-0.4754 (0.3002)	0.7695 (39.0067)	-0.0678 (2.5785)	0.0560 (0.1902)	0.0251 (0.5514)
(Europe Owned Dummy*Recession Dummy)	-1.6198 (3.9546)		0.0153 (1.2136)	-3.1300 (11.6353)	-1.8315 (1.6841)	0.0601 (0.1452)	-0.0365 (0.1509)
R-squared	0.0004		0.00003	0.00004	0.0070	0.0091	0.0140
Without Country Fixed-Effects							
Constant	0.2429 (1.0339)	0.1106*** (0.0262)	0.111*** (0.0260)	0.5645 (4.1769)	0.1976 (0.1798)	0.1336*** (0.0230)	0.2005*** (0.0347)
U.S. Owned Dummy	0.2851 (5.4154)	0.5202*** (0.1053)	0.5169*** (0.1047)	-0.4331 (32.4058)	-0.0065 (0.9032)	-0.0536 (0.2019)	-0.1179 (0.3467)
Europe Owned Dummy	14.251*** (3.6172)	0.0091 (0.4081)	0.0270 (0.3866)	20.2688** (9.0859)	1.9087*** (0.5925)	0.0178 (0.1380)	-0.0174 (0.0940)
Recession Dummy	-0.0380 (1.0082)	-0.0138 (0.0742)	-0.0145 (0.0738)	-0.1709 (5.0643)	-0.1409 (0.4863)	-0.096** (0.0196)	-0.0466 (0.0584)
(U.S. Owned Dummy*Recession Dummy)	-0.4136 (4.8856)	-0.4771 (0.3022)	-0.4753 (0.3002)	0.1188 (39.0014)	0.0933 (2.5809)	0.0548 (0.1902)	0.0212 (0.5511)
(Europe Owned Dummy*Recession Dummy)	-1.6624 (3.9536)	0.0504 (1.2722)	0.0150 (1.2136)	-3.1598 (11.6337)	-1.9112 (1.6858)	0.0594 (0.1451)	-0.0347 (0.1506)
R-squared	0.0002	0.0003	0.0003	0.0002	0.0016	0.0021	0.0005
Number of Observations	165,018	85,286	85,813	35,838	6,913	15,417	4,389

Table 13: Effects on Lending of Debt-GDP Ratio of Countries of the Foreign Bank Affiliates (1)

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	1.1399		0.1321	0.2525	0.4164	3.9582	0.9083***
	(18.3268)		(0.3450)	(1.4946)	(0.4072)	(81.3291)	(0.3024)
U.S. Owned Dummy	-0.7554		0.1956	-0.0051	0.0450	-3.9441	-0.1164
	(2.0055)		(0.3662)	(0.6135)	(0.0800)	(14.5305)	(0.1370)
Europe Owned Dummy	-0.6790		0.0098	0.2182	-0.0286	-5.0321	0.0223
	(1.3968)		(0.5607)	(0.3968)	(0.0534)	(10.6967)	(0.0617)
Crisis Dummy	-0.1412		-0.1754	-0.0261	-0.1358***	-0.1187	-0.0945
	(0.2214)		(0.1371)	(0.2923)	(0.0397)	(0.1420)	(0.1358)
(PUBOND*Crisis Dummy)	-0.0434		0.0766	-0.2741	-0.19**	0.0723	-0.2085
	(0.3875)		(0.2640)	(0.5103)	(0.0860)	(0.1612)	(0.3417)
R-squared	0.0054		0.0005	0.0106	0.0782	0.0031	0.0957
Without Country Fixed-Effects							
Constant	1.5496**	0.1114	0.1321	0.2515	0.3024***	3.8357	0.2241***
	(0.7343)	(0.4224)	(0.3450)	(0.3600)	(0.0308)	(3.3154)	(0.0533)
U.S. Owned Dummy	-1.2405	0.2158	0.1956	-0.1256	0.0673	-3.7777	-0.1557
	(1.2717)	(0.4408)	(0.3662)	(0.6097)	(0.0724)	(13.7708)	(0.1306)
Europe Owned Dummy	-1.1076	0.0344	0.0098	0.2380	-0.0219	-3.5626	0.0314
	(1.0236)	(0.6425)	(0.5607)	(0.3716)	(0.0509)	(9.3905)	(0.0566)
Crisis Dummy	-0.1205	-0.1824	-0.1754	0.0857	-0.139***	-0.1172	-0.2213*
	(0.2201)	(0.1481)	(0.1371)	(0.2802)	(0.0388)	(0.1420)	(0.1175)
(PUBOND*Crisis Dummy)	-0.0854	0.0942	0.0766	-0.5021	-0.1804**	0.0703	0.1372
	(0.3843)	(0.2870)	(0.2640)	(0.4817)	(0.0834)	(0.1612)	(0.2882)
R-squared	0.0001	0.0005	0.0005	0.0011	0.0588	0.0001	0.0288
Number of Observations	11,993	2,270	2,373	3,759	857	1,765	490

Table 14: Effects on Lending of Debt-GDP Ratio of Countries of the Foreign Bank Affiliates (2)

	ALL	U.S.	U.S. and Canada	Europe	Latin America	Asia	Africa
With Country Fixed-Effects							
Constant	1.1323		0.1095	0.2293	0.4055	3.9554	0.9045***
	(18.3247)		(0.3545)	(1.5239)	(0.3899)	(81.3393)	(0.3026)
U.S. Owned Dummy	-0.7161		0.2196	0.0743	0.0742	-3.9482	-0.1455
	(2.0174)		(0.3778)	(0.7995)	(0.0895)	(14.5351)	(0.2295)
Europe Owned Dummy	-0.583		0.0544	0.2399	0.0011	-4.9996	0.1061
	(1.4090)		(0.5830)	(0.4957)	(0.0605)	(10.7001)	(0.0955)
Crisis Dummy	-0.0686		-0.1182	0.012	-0.1226***	-0.1118	-0.0938
	(0.2736)		(0.2436)	(0.5287)	(0.0426)	(0.1525)	(0.1362)
(U.S. Owned Dummy*Crisis Dummy)	-0.0608		-0.045	-0.1164	-0.0538	0.0053	0.0093
	(0.3343)		(0.1708)	(0.7524)	(0.0734)	(0.4681)	(0.2831)
(Europe Owned Dummy*Crisis Dummy)	-0.1447		-0.0772	-0.0341	-0.0459	-0.0484	-0.1389
	(0.2802)		(0.2666)	(0.4605)	(0.0493)	(0.3099)	(0.1219)
(PUBOND*Crisis Dummy)	-0.0467		0.0454	-0.2809	-0.1787**	0.0687	-0.0033
	(0.3877)		(0.2835)	(0.5152)	(0.0868)	(0.1638)	(0.3991)
R-squared	0.0054		0.0005	0.0107	0.0814	0.0031	0.0987
Without Country Fixed-Effects							
Constant	1.5011**	0.0764	0.1095	0.2113	0.2911	3.8328	0.1773***
	(0.7416)	(0.4346)	(0.3545)	(0.4472)	(0.0318)	(3.3162)	(0.0652)
U.S. Owned Dummy	-1.1978	0.2527	0.2196	-0.0351	0.0987	-3.7812	-0.1574
	(1.2907)	(0.4548)	(0.3778)	(0.7969)	(0.0843)	(13.7769)	(0.2228)
Europe Owned Dummy	-1.0094	0.0900	0.0544	0.2806	0.0074	-3.5294	0.1161
	(1.0403)	(0.6676)	(0.5830)	(0.4784)	(0.0587)	(9.3949)	(0.0859)
Crisis Dummy	-0.0458	-0.0927	-0.1182	0.1521	-0.126***	-0.1102	-0.1976*
	(0.2724)	(0.2972)	(0.2436)	(0.5178)	(0.0416)	(0.1524)	(0.1189)
(U.S. Owned Dummy*Crisis Dummy)	-0.0645	-0.0705	-0.0450	-0.1339	-0.0538	0.0050	-0.0278
	(0.3342)	(0.2108)	(0.1708)	(0.7517)	(0.0730)	(0.4680)	(0.2760)
(Europe Owned Dummy*Crisis Dummy)	-0.1478	-0.1010	-0.0772	-0.0652	-0.0450	-0.0490	-0.1482
	(0.2802)	(0.3099)	(0.2666)	(0.4597)	(0.0491)	(0.3099)	(0.1143)
(PUBOND*Crisis Dummy)	-0.0888	0.0465	0.0454	-0.5120	-0.1689**	0.0666	0.2978
	(0.3844)	(0.3162)	(0.2835)	(0.4857)	(0.0840)	(0.1637)	(0.3183)
R-squared	0.0002	0.0005	0.0005	0.0011	0.0613	0.0001	0.0324
Number of Observations	11,993	2,270	2,373	3,759	857	1,765	490

Appendix : Variable Definitions

The dependent variable is defined as $\frac{\Delta Loans_{i,j,t}}{Assets_{i,j,t-1}}$ where i denotes the country in which a bank is located, j denotes the bank and t denotes time. As explanatory variables, the ratio of Tier 1 capital to assets in $(t-1)$ which is defined $\frac{Tier\ 1\ Capital_{i,j,t-1}}{Assets}$, the ratio of the problem loans to total loans $\frac{Total\ Problems\ loans_{i,j,t-1}}{Loans_{i,j,t-1}}$. In addition, a bank's liquidity, which is the ratio of liquid assets to assets in time $(t-1)$, and size variable $\log(assets_t)$ are also calculated. We define the crisis dummy variable as 1 if the fiscal year is 2008 and 2009; otherwise it is denoted as 0. We also define the recession dummy variable as 1 if the year is 2001 and 2002; otherwise it is 0.

For capital market openness, we use the Chinn-Ito index[7] which takes on higher values, the more open a country is to cross-border capital transactions. The capital openness measures by year and region are depicted in the Appendix Table below.

Table A.1: Summary of Capital Market Openness

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
All	2.09	2.09	2.06	2.10	2.11	2.11	2.08	2.02	1.99	2.01	1.99
Europe	2.28	2.27	2.30	2.32	2.32	2.33	2.36	2.36	2.36	2.35	2.35
Latin America	0.51	0.55	0.48	0.63	0.87	1.07	1.15	1.09	1.07	1.17	1.04
Asia	1.32	1.48	1.40	1.37	1.30	1.23	1.17	1.13	1.10	1.28	1.12
Africa	-0.50	-0.57	-0.52	-0.52	-0.48	-0.49	-0.49	-0.47	-0.50	-0.39	-0.47

---

[7]We use the data from `http://web.pdx.edu/~ito/Chinn-Ito_website.htm` and use the variable "kaopen" as a measure of capital market openness.More detailed data descriptions for construction of the data can be found at Chinn and Ito (2008)