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\* Views expressed are those of the authors and do not necessarily reflect official positions of De Nederlandsche Bank.

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## Abstract

This paper provides a critical assessment of the costs and benefits of foreign bank ownership. It reviews the extensive literature on the impact of foreign banks and uses a unique database on bank ownership, covering 129 countries, to (re-)examine a number of the issues discussed. It documents (changes in) foreign bank presence between 1995 and 2009, highlighting important differences across host and home countries and strong bilateral patterns. It finds that foreign banks tend to outperform domestic banks in developing countries, countries with weak institutions and where foreign banks do not play a major role. In addition, being from a geographically close home country increases the profitability of foreign banks. In terms of impact, it shows that foreign banks can deter domestic financial sector development in developing countries, countries with weak institutions and where foreign banks play a minor role. Examining the impact of foreign banks on financial stability, it finds that during the global crisis, foreign banks reduced credit more compared to domestic banks in countries where they had a small role, but not when dominant or funded locally. These findings show that, when analyzing the impact of foreign bank presence accounting for heterogeneity, including bilateral ownership, is crucial.

**JEL Classification Codes:** F21, F23, G21

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## 1. Introduction

The global financial crisis reinvigorated the debate on the cost and benefits of financial integration in general and foreign bank ownership in particular. While before the crisis the general consensus was that the benefits of foreign bank ownership (greatly) outweigh its costs, especially in emerging markets and developing countries, in the wake of the crisis views have become more diverse. Concerns have been raised about the impact of foreign banks on financial stability as foreign parent banks can act as international transmitters of shocks. Therefore, a critical review of our knowledge with respect to the impact of foreign bank ownership, highlighting the many dimensions through which it affects domestic financial systems, is valuable. This is what this paper intends to do.

Banks have enlarged their global footprint in the past two decades using two avenues. On the one hand, they increased the provision of cross-border credit to other banks and to corporates. On the other hand, they expanded their global reach by establishing a presence abroad through a branch or a subsidiary. Indeed, over the period 1995-2009, 560 foreign investments took place, increasing the average share (in terms of numbers) of foreign banks in local banking systems from 20 to 34 percent.<sup>1</sup> Having established a physical presence allowed them to lend to host country firms and households using funds raised locally or from international capital markets, including through funding from the parent. While foreign bank presence increased sharply, and not many countries were left out, much variation still exists among countries. In some countries, foreign banks today comprise virtually the whole financial system, but in others they play no or only a very marginal role.

Presence of foreign banks, and increases therein, can be beneficial for the host market in several ways. First, foreign bank presence tends to lower the cost of financial intermediation and increases its quality. Second, it increases access to financial services for (certain types of) firms and households. Third, it enhances the financial and economic performance of borrowers. These benefits result from an increase in competition, product, technology and know-how spillovers, and an acceleration of domestic reform. Furthermore, international banks that are diversified can more easily absorb shocks occurring in the host markets and therefore can be a more stable source of capital. The magnitude of these benefits, however, depends on the characteristics of the local market and of the foreign banks themselves: in some cases benefits are large, while in others they are only marginal (see review papers by Clarke, Cull, Martinez Peria and Sanchez, 2003, Claessens, 2006 and Chopra, 2007)

At the same time, foreign bank presence can also involve costs and risks for the host country. If foreign banks tend to select only the best customers, domestic banks can be left with a worsening credit pool which can hurt their profitability and willingness to lend. In some cases, the net impact of foreign bank presence on credit provision can therefore be negative, as their credit provision is more than offset by reduced credit from domestic banks (Detragiache, Gupta and Tressel, 2008). In addition, foreign banks can be a channel through which shocks in one country, e.g., the home market, are transmitted and affect the supply of credit in another country (Peek and Rosengren 1997, 2000). Therefore, foreign banks can introduce financial instability.

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<sup>1</sup> These numbers are based on the bank ownership database of Claessens and Van Horen (2013a) and therefore only reflect foreign investments where the foreign affiliate is included in Bankscope as a separate identity. As such, some investments through branches and, especially, through representative offices are not captured.

This paper reviews the debate on the benefits and costs of foreign bank presence. It reviews what is known but also what is not yet known and provides some new insights. The rest of the paper is structured as follows. It starts with an overview of the growth in foreign bank presence over the past two decades and the factors driving the location decision of foreign banks. It highlights differences in foreign bank presence across countries and the heterogeneity among foreign banks. Section three then examines how foreign banks differ from domestic banks and what conditions affect foreign banks' performance. The paper then continues with a critical assessment on how foreign banks impact financial development and financial stability. It finishes with some final remarks on policy and future research.

## **2. Trends in foreign bank presence**

The bank ownership database, constructed by and discussed in detail in Claessens and Van Horen (2013a), provides very detailed information on the changes in foreign bank ownership that took place between 1995 and 2009.<sup>2</sup> As a summary, Figure 1 provides an overview of foreign bank penetration in 1995 compared to 2009. It is evident that many countries experienced a sharp increase in the share of foreign banks over the period analyzed, with relative importance, in terms of numbers, increasing from 20 percent in 1995 to 34 percent in 2009. This increase results from two counteracting trends. On the one hand, due to consolidation driven by technological changes, deregulation as well as the occurrence of financial crises, the number of domestic banks decreased. On the other hand, foreign bank presence increased through many foreign direct investments.

Figure 1 also makes clear that large differences exist across countries. Penetration has especially been rising fast over the sample period in emerging markets and developing countries. While in 1995 market shares were 18 and 24 percent in emerging markets and developing countries respectively, in 2009 they had increased to 36 and 45 percent in these groups (Figure 2). As a result, foreign banks now play important roles in financial intermediation in many of these countries, with average loan, deposit and profit shares between 42 and 50 percent. In contrast, in OECD countries, financial intermediation remains mostly the prerequisite of domestic banks, with average foreign bank loan, deposit and profit shares of about 20 percent.

Within the emerging market and developing country group, substantial regional differences exist though. Foreign bank ownership expanded fastest in Eastern Europe and Central Asia, with penetration in this region now second largest, at 47 percent. Growth was also strong in South Asia (increase of 120 percent), but as the base was very low, penetration in this region remains relatively limited, only 14 percent. Latin America saw very strong growth early in the period, but after 1999, in the aftermath of the Brazilian and Argentine crises, many foreign banks exited the region and new entries remained limited until investment picked up again in 2006. Still for Latin America, the share went up considerably, from 25 to 39 percent.

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<sup>2</sup> The database contains ownership information of 5,324 banks over the period 1995-2009. For each year a bank is active during the sample period its ownership, domestic or foreign, is determined. When foreign owned, the home country of the largest foreign shareholder is provided. The database includes 137 countries, thus covering high-income, emerging markets and developing countries. For each country, the coverage is comprehensive, with banks included roughly accounting for 90 percent or more of banking system assets. The database includes 8 offshore countries, these are excluded from the analyses in this paper.

Foreign bank penetration in Sub Saharan Africa, already high in 1995 at 31 percent, in part due to colonial links, rose further over the period and in 2009 was over 50 percent.

What factors, besides entry restrictions, can explain why foreign bank penetration is high in some but low in other countries? The literature has identified several factors. Earlier studies found evidence that foreign bank investment tends to correlate with trade and general FDI flows, indicating that foreign banks tend to follow their customers (Grosse and Goldberg, 1991; Brealey and Kaplanis, 1996). Host country expected economic growth and local bank inefficiencies (Focarelli and Pozzolo, 2000), and low costs and efficient regulations (Buch and DeLong, 2004) have also been found to be important drivers.

Besides having access to clients with growth potential and an institutional environment where claims can be legally enforced, being able to acquire and use information efficiently is important as well. A bank collects and processes information to screen and monitor borrowers and projects for creditworthiness and riskiness, and more generally to reduce agency issues. This way a bank can offer its customers financial services at better terms than other providers may (Rajan, 1992). To obtain this advantage, the bank needs to be able to acquire, use and exploit information about local clients. Theory indicates that this is easier when the loan officer is close to the client and when distance between the (foreign) affiliate and headquarters is short (Aghion and Tirole, 1997; Petersen and Rajan, 2002; Stein, 2002). This suggests that distance is an important factor driving location decisions. Indeed, a number of empirical studies have shown that the probability of investment is greater when countries are geographically, culturally or institutionally close (Galindo, Micco and Serra, 2003; Berger, Buch, DeLong and DeYoung, 2004; Focarelli and Pozzolo, 2005; Claessens and Van Horen, 2013b).

However, in a multi-country world with many banks seeking investment opportunities, the entry decision is not made in isolation and the whole set of competitors needs to be considered. Claessens and Van Horen (2013b) therefore examine the role of “competitor remoteness” - the weighted average distance of all competing banks to a host country - on the location decision of a foreign bank. They find that, besides distance, competitor remoteness importantly drives location decisions, with effects stronger for non-OECD home and host countries, when the scale of foreign bank inward and outward investment is limited, and for host countries where foreign banks dominate.

Given the findings of the importance of “distance,” it is not surprising to see some strong bilateral patterns in our data. The top panel in Table 1 shows that banks from OECD countries (the biggest group of investors, owning about 70 percent of all foreign banks) tend to invest mostly in emerging markets or other OECD countries. And banks from emerging markets tend to invest in developing countries or emerging markets, while banks from developing countries tend to invest in other developing countries or emerging markets. So banks seem to seek out those host countries that are relatively similar in income levels and institutional development to their home market, presumably after taking into account the degree of competition and growth opportunities in the host market.

Furthermore, foreign bank presence tends to be regionally concentrated (bottom panel Table 2). Splitting countries in four broad geographical regions that cut across income groups (America, Asia, Europe, and Middle East and Africa), shows that the share of foreign banks coming from countries within the region is always more than 50% (the diagonal in Table 1). The highest intraregional share in 2009 is, maybe surprisingly, found for Middle East and Africa, more than 70%.

### **3. Performance of foreign banks**

The previous section showed that foreign banks are important in many countries. But how does the behavior of foreign banks compare to that of domestic banks? It is obviously very difficult to capture the (different) business models of banks and how these compare between foreign and domestic banks. Table 2 nevertheless provides some insights using information from financial statements. It shows the mean values of a number of balance sheet variables and tests whether these differ significantly between foreign and domestic banks, with significance at the 10 percent level indicated by bold marked coefficients. It turns out that for almost all indicators, foreign banks differ from domestic banks.

The table first examines the loan to asset ratio to see how foreign and domestic banks differ with respect to their asset side, i.e., their lending activities. Taking all countries together, foreign banks on average have lower loan to asset ratios than domestic banks do. This suggests that foreign banks are less involved in traditional forms of financial intermediation (i.e., lending) than domestic banks and more in other, less-traditional forms. However, in emerging markets the reverse is true. In these countries, foreign banks tend to be more active in lending (the highest for all income groups), even more so than domestic banks. A possible explanation is that in these countries foreign banks tend to be more committed, as they often entered a market through the acquisition of a (large) domestic bank with a large number of retail clients.

The table next shows the loan to deposits ratio. This ratio proxies both for the degree to which the bank is active in lending and for its dependency on wholesale funding relative to (local) deposit funding. The ratio is on average higher for domestic banks than for foreign banks, consistent with the notion that foreign banks are relatively less active in lending. This is especially so for the group of developing countries. However, in emerging markets, foreign banks tend to have higher loan to deposits ratios than domestic banks do. This suggests that in these countries foreign banks are relatively more active in lending and are also able to attract non-deposit sources of funding (including from their parent banks).

Third, we examine the liquidity position of foreign compared to domestic banks. In all countries (except for the group of other high-income countries), foreign banks have significant more liquid assets than domestic banks do. The difference is especially high in OECD countries, and less so in emerging markets. On the one hand, this suggests that foreign banks operate more conservatively compared to domestic banks, as they have greater liquidity buffers. On the other hand, since this liquidity measure also includes tradeable securities, varying from government bonds to asset-backed securities, it probably also reflects foreign banks' general greater activity in capital markets. Since some of these activities were important triggers for the recent financial crisis, the overall meaning of the higher liquidity ratios of foreign banks for financial stability is not so clear.

When comparing leverage, that is the ratio of equity to (unweighted) assets, foreign banks tend to be less leveraged compared to domestic banks, especially in OECD and developing countries, with less of a difference in other high-income countries and emerging markets. Also, in terms of capital adequacy, that is the ratio of equity to risk-weighted assets, foreign banks tend in general to have higher ratios than domestic banks do, with differences across income groups similar to those for leverage. The one exception is that in emerging markets, foreign banks have similar leverage but higher capital adequacy ratios, which implies that foreign banks hold portfolios with lower risk weights. Finally, in other high-income countries and emerging markets, foreign banks tend to provision less for non-performing loans, maybe because they tend to target better quality firms. Together, this suggests that foreign banks are in

general more conservative than domestic banks are with respect to their asset composition and capital buffers.

This comparison shows that foreign and domestic banks differ substantially in terms of their asset mix and funding structures. How does this translate in the performance of foreign banks compared to domestic banks? Berger and Mester (1997) show that the strategic focus of a bank, and its funding and asset mix affect its performance. However, other factors likely matter as well as foreign banks can have several advantages over domestic banks. By servicing clients in more than one country, they can achieve efficiency and scale gains (see Berger 2007 for a review of the literature on economies of scale). By being larger, for example, they may be able to afford more sophisticated models giving them superior risk management skills. Furthermore, as they can diversify risks better, they may be able to undertake investments with higher idiosyncratic risk, but also higher return. And by spreading best-practice policies and procedures over more than one country, they may achieve productivity gains. In addition, funding costs may be lower for foreign banks as they tend to have more diversified funding bases, including access to liquidity from their parent banks.

At the same time, foreign banks are likely to incur additional costs and face greater barriers in financial services provision compared to domestic banks. They may have less information compared to local banks on how to do business in the host country, putting them at a disadvantage, at least until they have been in the country for some time. Foreign banks might be exposed to unfair treatment by host country government and customers. And diseconomies might arise because of difficulties operating and monitoring from a distance or having to work in an institutional environment that is culturally or otherwise different. Depending on which effects dominate, which will vary by bank and host and home characteristics, foreign banks may perform better or worse in the host country compared to domestic banks.

In practice indeed, studies on the performance of foreign banks find different results. Studies focusing on the US find that foreign owned banks perform significant worse than domestic banks do (see, among others, DeYoung and Nolle 1996, and Mahajan, Rangan and Zardkoohi 1996). For other industrialized countries, however, studies find that foreign banks perform better (Sturm and Williams 2004) or not different from domestic banks (Vander Venet 1996). When studying foreign banks in developing countries, many studies find that foreign banks outperform domestic banks (Grigorian and Manole 2006; Berger, Hasan and Zhou 2009). Others, however, find the opposite (Nikiel and Opiela 2002; Yildirim and Philippatos 2007) or no significant difference between domestic and foreign banks (Crystal, Dages and Goldberg 2001; Mian 2003).

Claessens and Van Horen (2012) have tried to reconcile these different findings by studying the performance of foreign relative to domestic banks in 51 developing countries and emerging markets over the period 1999 to 2006, accounting for differences in host and home country characteristics. Their measure of bank performance is profitability (measured as profit before taxes divided by total assets, ROA), a comprehensive reduced form measure. They find that foreign banks tend to perform better when larger and having a bigger market share. Foreign banks also perform better when from a high income country, when regulations in the host country are relatively weak, and when from home countries with the same language and similar regulation as the host country.



We extend the analysis of Claessens and Van Horen (2012) here using the same empirical model but with a larger set of 74 countries, including also advanced countries.<sup>3</sup> To avoid the impact of the recent financial crisis, performance is measured over the period 1999 to 2007. The variable of interest is a foreign ownership dummy which is one if the bank is foreign owned in a particular year (based on information in the bank ownership database of Claessens and Van Horen, 2013a). The analysis further controls for a number of commonly used bank characteristics, including three variables that capture risk taking of the bank: ROA volatility, average growth of the bank's loans and bank leverage (equity to asset ratio). In addition, it includes the market share of the bank, its loan to asset ratio, the ratio of deposit and short-time funding to total liabilities, a dummy capturing whether the bank exited the market within 4 years after entry, and the number of years it has been active in the country. In addition to these bank characteristics, the regression includes country-year fixed effects to control for any unobserved country characteristics including those that varied over time. The model is estimated using OLS regressions with robust standard errors, where observations are weighted with the inverse of the number of banks in the host country to prevent any bias due to differences in market size.<sup>4</sup>

A visual presentation of the findings is provided in Figure 3 which shows for each regression the point estimate of the foreign ownership dummy, with its 5 and 95 percent confidence intervals. The results show that for the full set of countries, foreign banks on average outperform domestic banks. Profitability of foreign banks is 0.3 percentage points higher than that of domestic banks. This is economically meaningful given that mean profitability is 1.6. However, when the sample is split in developing countries, emerging markets and high income countries, results show striking differences. Confirming the findings of Claessens and Van Horen (2012), foreign banks are especially profitable compared to domestic banks in developing countries. This is also the case for emerging markets but the difference is much less pronounced. In contrast, foreign banks tend to underperform compared to domestic banks in high income countries, a finding in line with the results of DeYoung and Nolle (1996), and Mahajan, Rangan and Zardkoohi (1996).

Next, we proceed by splitting the sample of host countries along different dimensions. A number of studies have found evidence that the behavior of foreign banks might relate to their relative importance in the host country (see, e.g., Claessens and Lee, 2003 and Claessens and Van Horen, 2013a). To examine whether this also has an impact of the profitability of foreign banks, the sample is split between those countries where foreign banks control less than half of the assets and countries in which they hold more than half. This shows clearly that foreign banks are especially profitable in countries where they do not dominate. In countries where they dominate, their performance on average does not differ from that of domestic banks.

An additional question is whether institutional characteristics matter in how well foreign banks tend to perform. Using two World Bank Doing Business indicators, the sample is split between countries where costs of contract enforcement are high (above median costs in our sample) and where they are low (below median), and between countries where credit information is low (below median) and where it is high

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<sup>3</sup> To limit endogeneity bias, only countries that are sufficiently open for foreign entry are included (at least 3 foreign banks are active over the entire sample period) and for which there is a large enough control group of domestic banks (at least 3 domestic banks are active over the entire sample period).

<sup>4</sup> Since in the first years after starting up a bank or acquiring an existing bank profitability is likely affected by start-up costs, observations for the first 2 years the (foreign or domestic) bank is active or acquired are excluded.

(above median). In countries where the cost of contract enforcement is high or the availability of credit information is low, foreign banks tend to be more profitable compared to domestic banks.<sup>5</sup> Although it is difficult to pinpoint exactly what factors drive these results, they suggest that foreign banks tend to cherry pick their customers and only provide financial services to high-margin clients in countries where institutions are weak and where they only have a relatively small share of the market. The next section looks deeper into this issue by examining the link between foreign bank presence and private credit creation.

Finally, there is the question whether distance matters for performance. Claessens and Van Horen (2012) find that foreign banks from home countries with the same language and similar regulations as in the host country perform better. Their results suggest that being close to a host country is important for foreign banks to perform well, potentially because it eases the collection of soft information and/or transmission of this information to the headquarters of the bank (for theory and empirical evidence see, for example, Aghion and Tirole, 1997; Stein, 2002; Berger, Miller, Petersen, Rajan and Stein, 2005; Liberti 2005; Liberti and Mian, 2009; Cerqueiro, Degryse and Ongena, 2009). This issue is re-examined here by splitting the sample in two groups of host countries: those with distant foreign banks and those with close foreign banks, based on the average kilometer distance between the host and home country of all foreign banks active in the host country. It shows, as theory would predict, that foreign banks tend to perform better (relative to domestic banks) when headquartered in countries relatively close (average distance is below the median distance in our sample of countries) but not when they are relatively distant (average distance is above the median distance).

#### **4. Foreign banks' impact on domestic banking systems**

Many studies have examined the consequences of foreign bank ownership on domestic banking systems. Before the crisis, the general consensus was that the benefits of foreign banks greatly outweigh costs in many dimensions (see review papers by Clarke, Cull, Martinez Peria and Sanchez, 2003, Claessens, 2006 and Chopra, 2007). Since the global financial crisis there has been some revision of this view. This section reviews ideas put forward in the literature and provides some new evidence on the local market impact of foreign banks under two headings: access to financial services and financial stability.

##### *Access to financial services*

In general, studies (Claessens, Demirguc-Kunt, and Huizinga, 2001 and later studies, e.g., Mian, 2003, Berger, Clarke, Cull, Klapper and Udell, 2005) have found that greater foreign bank presence coincides with lower overall costs of financial intermediation (measured by, among others, margins, spreads and overheads). Also, evidence exists of better quality financial intermediation with more foreign entry, e.g., lower loan-loss provisioning and better economic performance of borrowers (Martinez Peria and Mody, 2004). A number of factors are thought to be behind these effects. First, foreign bank presence can increase competition in the host country. Second, the entry of foreign banks can lead to the introduction of new, more diverse products, greater use of up-to-date technologies, and know-how. In addition, foreign

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<sup>5</sup> Results are very similar when only looking at the sub-sample of emerging markets and developing countries.

banks can pressure governments to improve regulation and supervision, increase transparency, and more generally catalyze domestic reform (Levine 1996 and Mishkin, 2007).

However, the literature also shows that these effects tend to depend on some conditions. For example, limited general development and entry barriers seem to hinder the effectiveness of foreign banks (Garcia Herrero and Martinez Peria, 2007; Demirguc-Kunt, Laeven and Levine, 2004). Also, the relative size of foreign banks' presence appears to matter: with more limited entry (as a share of the total host banking system), fewer spillovers arise, suggesting the existence of a threshold effect (Claessens and Lee, 2003). Furthermore, as shown in the previous section, important interplays exist between host country characteristics, the distance of the home country to the host country and foreign banks' performance in the local market.

In terms of access to financial services, greater foreign bank presence seems to help, although here results depend (even) more on individual bank characteristics. Clarke, Cull and Martinez Peria (2002) find that foreign bank entry improves financing conditions for enterprises of all sizes, although larger firms benefit more. Beck, Demirgüç-Kunt and Maksimovic (2004) and Berger, Hasan and Klapper (2004) instead conclude that a larger foreign presence leads to a greater availability of credit to SMEs. Brown, Ongena, Popov and Yesin (2011), on the other hand, find evidence of greater access to finance for more transparent firms when more foreign banks are present in a country. Giannetti and Ongena (2012) show that large and foreign firms are more likely to have a relationship with a foreign bank, while small firms tend to be served by private domestic banks. In addition, they find that an increase in foreign bank presence increases the probability that a firm gets access to bank loans, which holds for all types of firms.

The extent to which foreign banks contribute on net to access to finance and financial sector development thus remains debated. Although some studies have looked at the relationship between private credit and foreign bank ownership, surprisingly little is known under what conditions foreign ownership positively relates to private credit and when negatively. Some suggest that foreign banks "cherry pick" borrowers. If this is the case, foreign bank presence can undermine access to financial services as it worsens the remaining credit pool available for domestic banks, lowering overall financial sector development. This could be especially so in low-income countries where relationship lending is important. Indeed, the results in the previous section are indicative of some cherry-picking behavior among foreign banks in these types of countries. Furthermore, especially examining the relationship between foreign bank presence and financial sector development, Detragiache, Gupta and Tressel (2008) show that greater presence of foreign banks in low income countries indeed is associated with less credit being extended. However, Cull and Martinez Peria (2011) show that this relationship disappears, or even reverses once crisis-induced acquisition of (distressed) banks by foreigners is accounted for.

While providing interesting new insights, these studies only accounted for some of the heterogeneity found among foreign banks. Therefore in a recent paper, Claessens and Van Horen (2013a) re-examine the relationship between foreign bank presence and levels of private credit to explore in more detail how country characteristics affect this relationship. Following the methodology of Detragiache, Gupta and Tressel (2008), they use cross-country regressions over a sample of 111 countries; a sample that is much more diverse than that of Detragiache, Gupta and Tressel (2008), since it represent all levels of development, not just low-income countries.

The results of Claessens and Van Horen (2013a) indicate that several host country characteristics, not only the general development of the country, seem to matter. They find for the whole sample a negative relation between foreign bank presence and growth in private credit to GDP. However, when splitting the sample across income groups, they find no statistically significant relationship between private credit and foreign bank presence for emerging markets and high-income countries. For the group of developing countries, on the other hand, they find a negative relationship, in line with the findings of Detragiache, Gupta and Tressel (2008). A one standard deviation increase in foreign presence is associated with a decline in private credit of 5 percentage points for this group of countries (compared to a mean private credit to GDP ratio of 20 percent). However, splitting the sample across other dimension, the authors find that foreign banks' negative impact on credit also occurs when foreign banks have a limited market share, when enforcing contracts is costly, and when credit information is limited available. These results are very much in line with the previous section and suggest that in certain types of markets foreign banks are more likely to be niche players that cherry-pick their customers. This benefits their own profitability, but negatively affects credit provision to the private sector as a whole.

#### *Financial stability*

The role of foreign banks with respect to lending stability has been a topic high on the policy and research agenda since the start of the global financial crisis. As a starting point, it is important to realize that foreign banks can offer valuable diversification services and can absorb shocks occurring in the host market. Several papers have highlighted how foreign banks can enhance financial stability when crises occur in the host country. Studying crisis episodes in (mainly) emerging markets and developing countries several studies show that due to support of the parent banks, foreign affiliates do not need to rein in their credit supply during a financial crisis in the host country, while domestic banks do have to contract their lending (see, among others, Crystal, Dages and Goldberg, 2001; De Haas and Van Lelyveld, 2006, 2010).

At the same time, and especially after the recent crisis, concerns have been raised that foreign banks can be a source of contagion. When faced with capital or funding shocks at home, foreign banks might withdraw from cross-border banking activities to redirect lending at home. This can translate in a reduction in capital that parents lend to their foreign affiliates, which in turn can have a negative impact on the supply of credit by these affiliates in the host market. The seminal studies of Peek and Rosengren (1997, 2000) show indeed that (funding) shocks to parent banks can be transmitted to their foreign subsidiaries with negative consequences for their lending. Schnabl (2012), on the other hand, shows that the negative liquidity shock resulting from the Russian default led international banks to reduce lending to both domestic and foreign-owned Peruvian banks, which in turn reduced lending to Peruvian firms. However, although parent banks did reduce their lending to Peruvian banks in general, they continued to support their own Peruvian affiliates.

Findings of recent studies focusing specifically on the recent global financial crisis suggest that at the height of the crisis global banks were transmitting shocks across borders through their affiliates. De Haas and Lelyveld (2013), for example, compare foreign banks with large domestic banks and find that the former group on average contracted their lending more. De Haas, Korniyenko, Loukoianova and Pivovarsky (2011) find similar results for a sample of Eastern European countries. Popov and Udell (2012) show that if banks in the vicinity of the firm were experiencing distress at the onset of the global

financial crisis, the likelihood of a firm being credit constrained increased. This transmission of bank distress to firm access to credit also took place when shocks occurred to the balance sheet of the parents of the foreign owned subsidiaries.

Other recent studies suggest, however, that also with respect to financial stability one cannot look at foreign subsidiaries as one homogeneous group. Cull and Martinez Peria (2012) show that in Eastern Europe, loan growth by foreign banks fell more than that of domestic private banks during the crisis, but that in Latin America foreign banks did not contract their loans at a faster pace. The distinction between the two continents seems to be driven by the fact that foreign banks in Latin America were mostly funded through a domestic deposit base with most of the lending denominated in domestic currency, in part forced by regulatory requirements. This allowed them to maintain lending even when parent banks were hit by a funding shock. Furthermore, Cetorelli and Goldberg (2012) show that global banks actively manage their inter-office positions: when faced with a funding shock, they tend to reallocate capital within the holding towards “important” subsidiaries. While they do not study the lending behavior of subsidiaries, their results do suggest that some affiliates might be forced to curb lending due to a reduction in funding from the parent, whereas other affiliates do not feel this pressure or might even be in a better position compared to domestic banks to continue to extend credit.

It is therefore insightful to investigate under which conditions funding shocks to parent banks negatively affected local lending by subsidiaries during the global financial crisis and when not. Using the extensive database on bank ownership of Claessens and Van Horen (2013a) allows us to not only compare many domestic and foreign banks active in various regions, but also the behavior of different types of foreign banks in different types of host countries. Specifically, we examine how differences in levels of development, relative market share, distance between home and host country and having access to local deposits affected the stability of lending of foreign banks during the global financial crisis.

Using a sample of 3,615 banks, of which 1,198 foreign owned, active in 117 countries over the period 2005-2009, we examine whether loan growth of foreign banks differed from that of domestic banks in 2009. The main variable of interest is the interaction between a dummy which is one if the bank is foreign owned and a dummy which is one if the year equals 2009. To control for different bank business models, funding structures and strategies, the regressions also include a number of bank level variables, such as bank size, leverage, liquidity and deposit structures which impacts are allowed to differ in 2008 and 2009, and, in addition, bank fixed effects. Furthermore, all regressions include country-year fixed effects to control for (time-varying) differences in credit demand across countries. The model is estimated using fixed-effects OLS, clustering observations at the bank level, and excluding observations below the 1<sup>st</sup> and above the 99<sup>th</sup> percentile of loan growth to reduce the impact of possibly influential outliers.<sup>6</sup> The methodology is the same as used in the Working Paper version of Claessens and Van Horen (2013a), where more details and additional regressions can be found.<sup>7</sup>

A visual presentation of the findings is provided in Figure 4 which shows for each regression the point estimate of the parameter of interest and its 5 and 95 percent confidence interval. A negative value indicates that foreign banks reduce credit more compared to domestic banks in 2009. The results show for the full set of countries that foreign banks indeed reduced credit by 6 percentage points more in 2009

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<sup>6</sup> Results are very similar when adding a lagged dependent variable and estimating using OLS or difference GMM.

<sup>7</sup> IMF Working Paper No. 12/10

compared to domestic banks. This difference is large as the mean credit growth in 2009 was only 5 percent. However, when we split the sample again with respect to income levels, it is evident that only in developing countries and emerging markets there exists a significant difference between foreign and domestic banks, but not in high-income countries.

A distinct difference is visible when the sample is split in countries where foreign banks hold less than 50 percent of the domestic assets and countries in which they hold more than 50 percent. In the first group, the loan growth of foreign banks in 2009 compared to that of domestic banks is 7 percentage points less. However, in countries where foreign banks dominate, they actually do not show any difference in their loan growth in 2009 compared to domestic banks. This result clearly indicates how important it is to allow for heterogeneity across foreign banks when examining their (crisis) behavior.

Next, it is tested whether the impact of foreign ownership on lending differs in countries where foreign banks are distant and in those where they are close: based on the average kilometer distance between the host and home country of all foreign banks active in the host country. Results indicate that the average distance of the foreign banks located in the host country does not have an impact on lending stability during the global financial crisis.

Finally, it is examined whether having access to local deposits is important for the stability of lending by foreign banks during a financial crisis. In principle the relationship can go two ways. On the one hand, foreign banks that are large local deposit takers might be less affected by shocks to their parent's balance sheets. On the other hand, as shown by Cetorelli and Goldberg (2012), parent banks faced with funding shocks might be inclined to transfer funds from those subsidiaries more active in local deposit taking (their core funding markets). Splitting countries in host countries where foreign banks on average have a high share of deposits and countries where they have a low share shows that in both groups of host countries foreign banks were reducing credit in 2009 by about 6 percentage points more compared to domestic banks.<sup>8</sup> On a host country level we find therefore no difference with respect to having access to local deposits. However, interacting the foreign ownership dummy with the ratio of deposits to liabilities at the bank level (results shown in the Working Paper version of Claessens and Van Horen 2013a), it is found that foreign banks that have a strong deposit base reduce credit significantly less compared to foreign banks that are funded less by deposits. This shows that the funding structure of foreign banks is very important with respect to the stability of credit provisioning when parent banks are hit by a shock.

Summarizing, the results show that on average foreign banks reduced lending more compared to domestic banks during the global crisis, but only in emerging markets and developing countries and in countries where they capture less than half of the banking sector and when lacking local funding. Foreign banks, therefore, seem to have contributed to financial instability but only under certain circumstances. However, other recent studies show that it is important to bring some further nuance to this story. Ongena, Peydro and Van Horen (2012), for example, find that in Eastern European countries foreign banks indeed reduced lending more compared to locally-funded domestic banks. However, they did not compared to domestic banks that had financed their pre-crisis lending by borrowing from the international capital market. A finding in line with Schnabl (2012). Furthermore, De Haas and Van Horen (2012, 2013) find that banks

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<sup>8</sup> To split the sample the average deposit to liability share of all foreign banks in a particular host country in 2007 is calculated. A host country is included in the group of low deposit countries when this average share is below the median of all host countries and is included in the group of high deposit countries when above the median.

when faced with a funding shock reduce their cross-border lending, but are more likely to stay committed to countries in which they have a subsidiary. Their findings show that the presence of a subsidiary increases the stability of cross-border lending during a financial crisis, especially in countries with weak institutions.

Concluding, foreign ownership can have a positive impact on financial stability since cross-border lending is more stable during a crisis when global banks made a commitment to the country in terms of bricks and mortar. Furthermore parents can and do support their affiliates in times of stress. When parents are faced with a funding shock, however, this can adversely impact the lending of their subsidiaries. Whether this transmission indeed takes place, however, depends importantly on local conditions and the business model of the subsidiary. Collectively, these results point again at the importance of considering heterogeneity of foreign banks when analyzing their impact.

## **5. Conclusions**

The main conclusion from a critical review of the literature is that when studying foreign banks' behavior they should not be looked upon as a homogeneous group. Rather, when faced with growth opportunities or shocks, foreign banks from different home countries and with different characteristics will tend to operate and act in different ways in different host countries. To show this point, the paper first reviewed the factors mentioned in the literature that explain foreign bank entry. It then reviewed studies on the relative performance of foreign banks, highlighting substantial differences in findings. It showed that these differences in part arise because of variations in the level of development and the quality of institutions of the host country, the size and monopoly power of foreign banks active in the country, and the distance between home and host country. These factors together were shown to importantly determine the profitability of foreign banks, also relative to domestic banks.

In terms of the impact that foreign banks have on domestic financial systems, the literature also found varying results, with some arguing that foreign banks decrease domestic credit and introduce financial instability, while others finding the opposite. The paper showed that many of the factors driving entry and relative performance influence the impact foreign banks have on the development of the domestic financial sector and on financial stability. For example, only in low-income countries and in countries where foreign banks play a minor role or when institutions are weak, is a larger foreign bank presence associated with lower private credit. Furthermore, while foreign banks on average reduced credit more compared to domestic banks during the recent global financial crisis, they did not so when important in the host country and when they funded themselves importantly through local deposit taking.

All this research of foreign banks has great policy relevance. For example, the finding that foreign banks that are funded by deposits tend to pose fewer risks, while banks that rely more on short-term, wholesale funding represent a greater risk, has implications for regulation and supervision. A case can be made for requiring foreign owned banks to hold certain amounts of deposits, as is already mandatory for subsidiaries operating in many Latin American countries. Another important lesson is that banks operating across national borders can pose risks to the host country. With rules and responsibilities for cross-border regulation and supervision not well defined, there is a clear danger that measures taken at the home country are in that nation's (short-term) interest, but they might not be optimal from a

supra-national perspective. Therefore, common rules on interventions and resolution to prevent spillovers, including those arising from bank failures, are ideally introduced globally.

The findings also have implications for the shape of the world's financial sector going forward, especially in light of the recent crisis and the changes it is bringing to global banking. Being close to advanced home countries for example, is not necessary to attract banking FDI. This matters for countries with poorly developed financial systems located far from major home countries, but relatively close to a few, less developed home countries. While the perils that some of the large global banks currently face may push the global banking system towards some consolidation, foreign bank ownership is not likely to diminish any time soon. However, the origin of banks crossing borders will likely change over time. With a number of emerging markets becoming more similar to high income countries and realizing that being cultural close is a major asset in cross-border banking, it might well be that in the future banking groups from these countries will start to play an increasingly important role, especially in their own region.

Results also suggest a number of areas for further research. One area is to investigate in more detail why distance matters. What makes distance such a barrier in the acquisition and transfer of information? Is it because of differences in "transportation" costs or because of differences in existing networks for transferring information? Does distance matter equally regardless how the international bank is internally organized? Is it true that foreign banks closer to their headquarters can make loans easier and better, with lower risks and less need for loan-loss provisioning? Related, how does distance impact a foreign bank's local operations? Do foreign banks that come from closer home countries make more loans to informationally-intensive borrowers, at lower risks? And do banks from closer home countries have a greater impact on domestic financial systems, with less concern for financial stability? Few of these topics have yet been studied.



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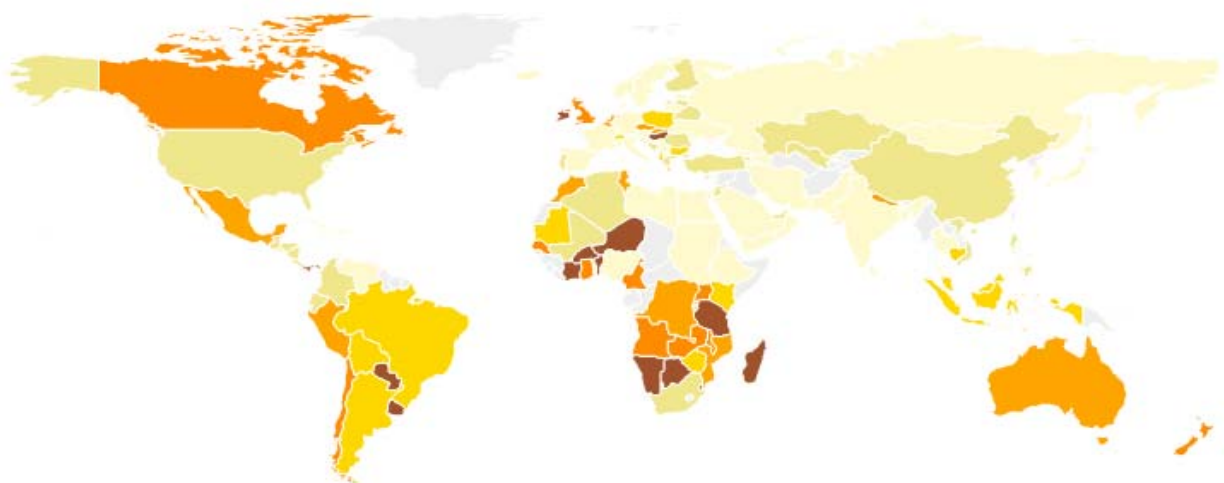
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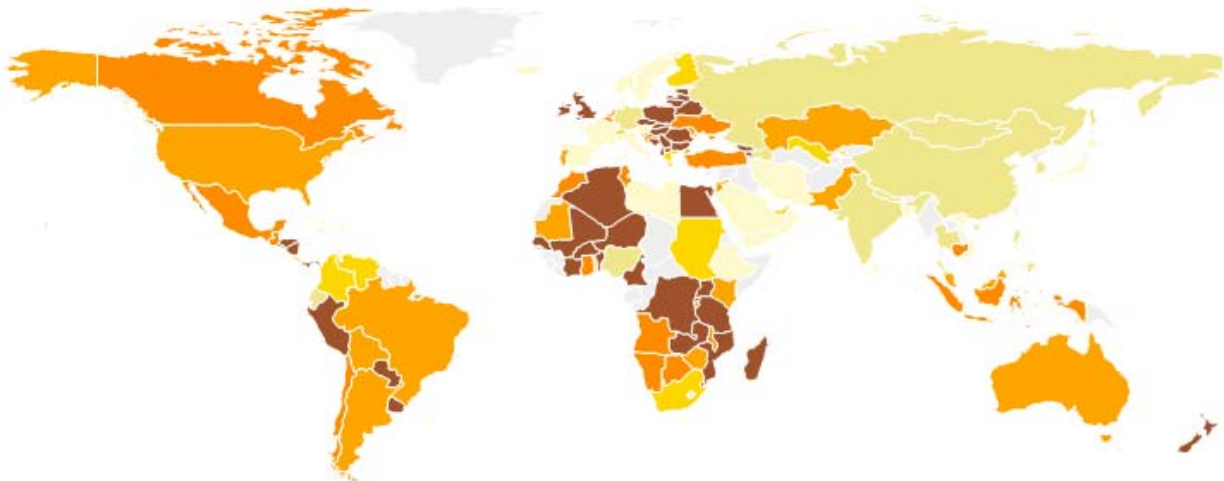
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**Figure 1**  
**Foreign Bank Presence, 1995 and 2009**



percentage of foreign banks among total banks, 1995

- Less than 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 to 50
- More than 50

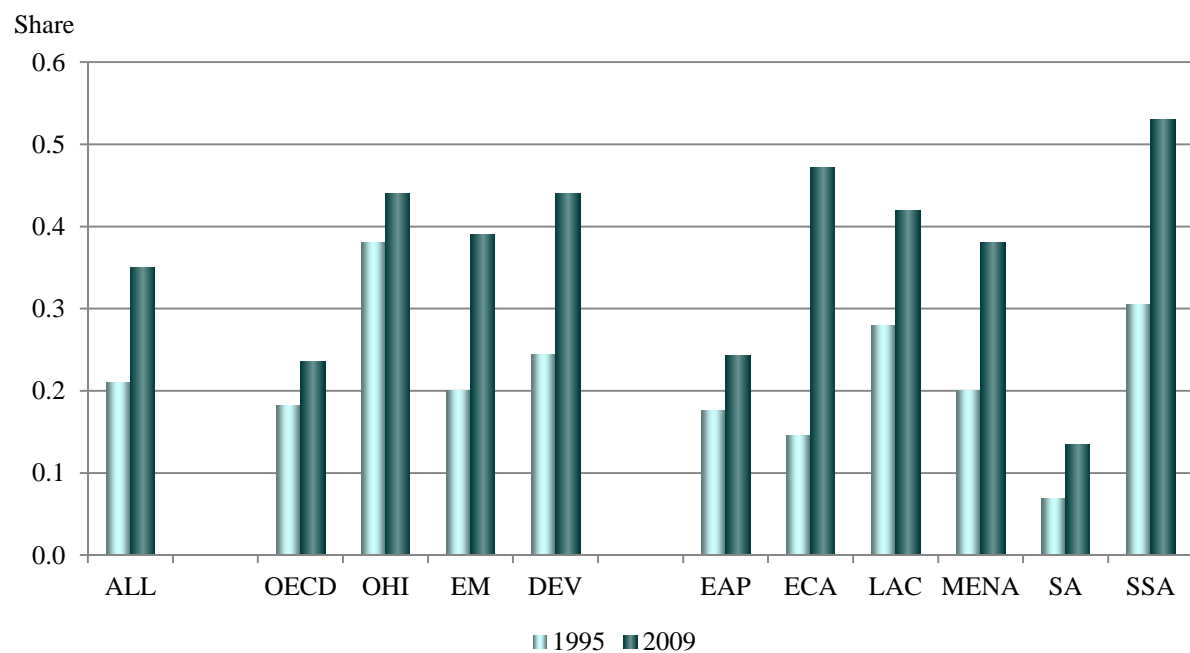


percentage of foreign banks among total banks, 2009

- Less than 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 to 50
- More than 50

Source: Claessens and Van Horen (2013a)

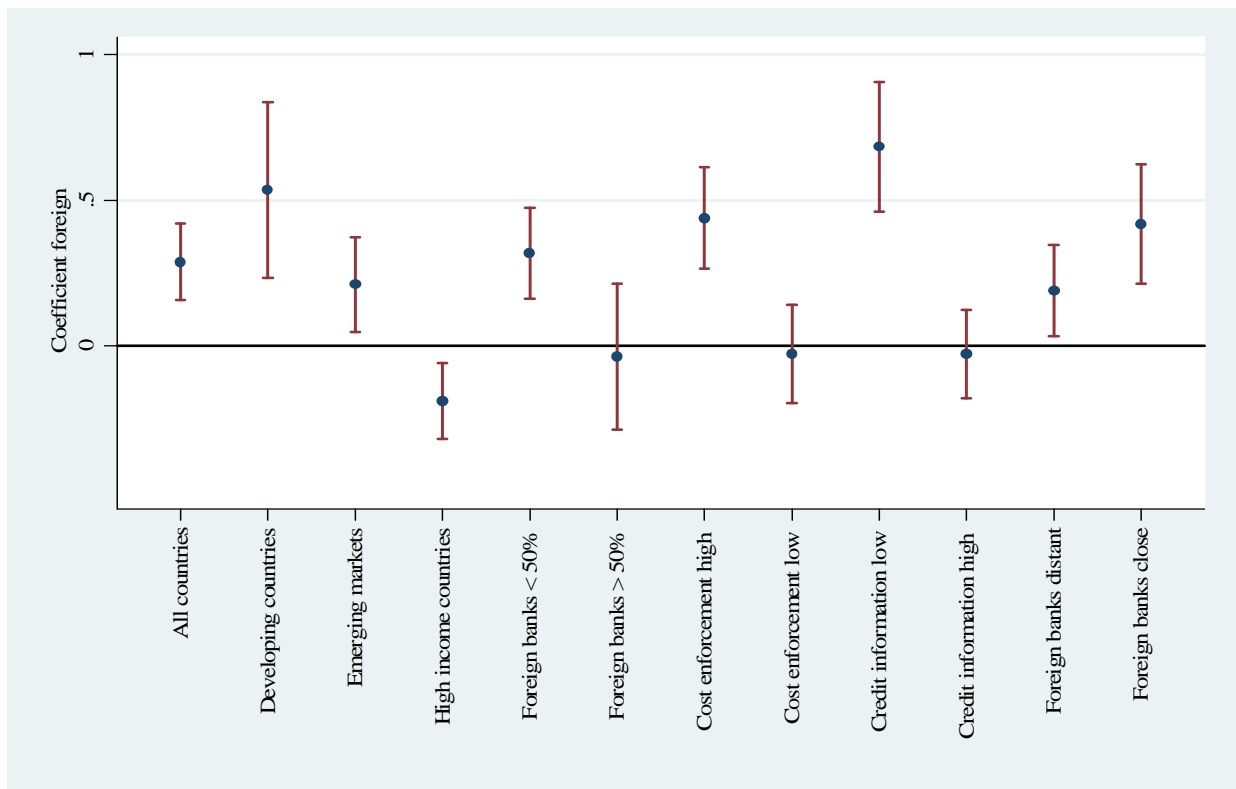
**Figure 2**  
**Share of foreign banks by income level and region, 1995 and 2009**



Source: Claessens and Van Horen (2013a)

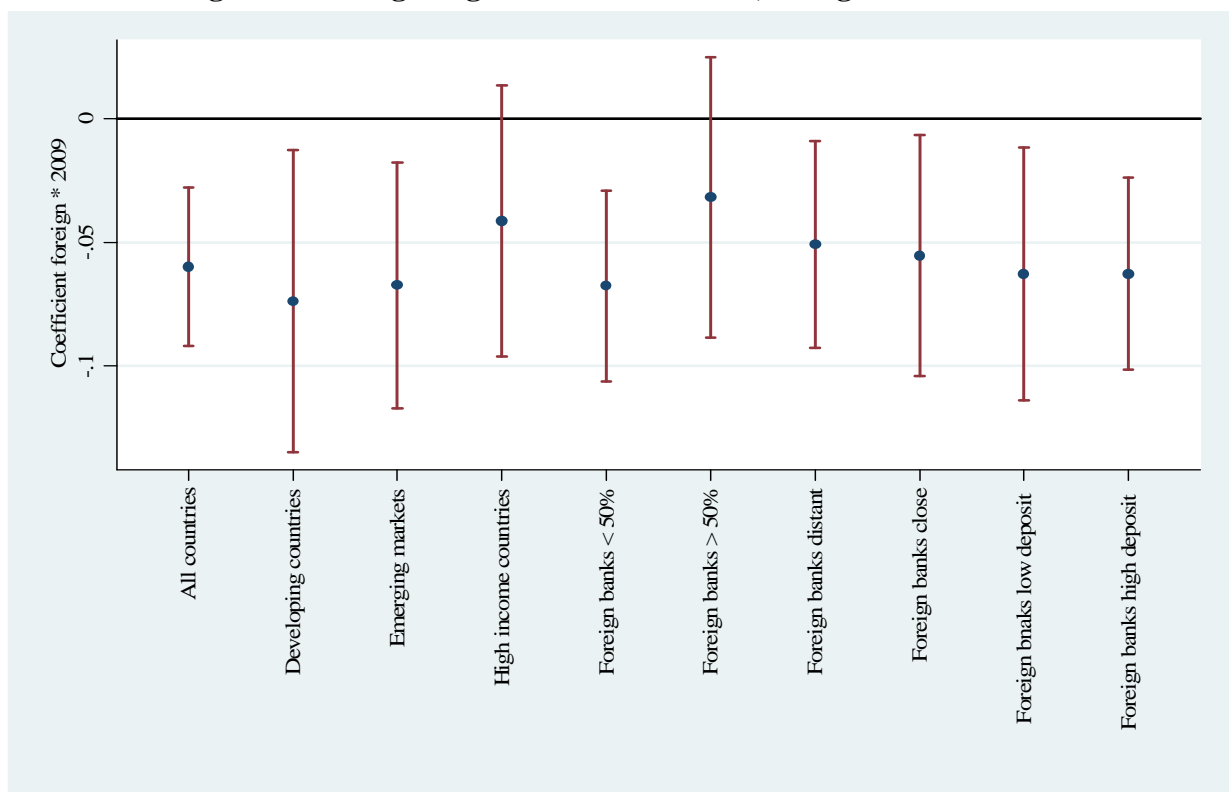
Note: OECD includes all core OECD countries. Other high-income countries includes all countries classified as high-income by the World Bank in 2000 but not belonging to the OECD. Emerging markets includes all countries that are included in the Standard and Poor's Emerging Market and Frontier Markets indexes and that were not high-income countries in 2000. Developing countries includes all other countries. The regions represent the regional classification as used by the World Bank.

**Figure 3**  
**Profitability of foreign banks**



*Note:* The figure shows the point estimates and 5 and 95 percent confidence intervals of the foreign ownership dummy in a regression estimated using different country samples. The different country samples are described in the main text. All regressions include several bank level controls (see main text) and country-year fixed. The model is estimated using OLS with robust standard errors, where observations are weighted with the inverse of the number of banks in the host country.

**Figure 4**  
**Credit growth during the global financial crisis, foreign vs domestic banks**



*Note:* The figure shows the point estimates and 5 and 95 percent confidence intervals of the foreign ownership dummy interacted with a dummy which is one if the year is 2009 in a regression estimated using different country samples. All regressions include several bank level controls (see main text), bank and country-year fixed effects. The model is estimated using OLS with standard errors clustered at the bank level.



**Table 1**  
**Number and share of foreign banks from home to host income group and region, 2009**

Number and share of foreign banks from home country present in host country	<i>Host income group</i>								Total	
	<i>OECD</i>		<i>OHI</i>		<i>EM</i>		<i>DEV</i>			
	Nr.	Share	Nr.	Share	Nr.	Share	Nr.	Share	Nr.	Share
<i>Home income group</i>										
<i>OECD</i>	272	0.31	18	0.02	413	0.47	180	0.20	883	1
<i>Other high-income</i>	10	0.14	4	0.06	38	0.54	18	0.26	70	1
<i>Emerging markets</i>	40	0.15	17	0.06	94	0.35	117	0.44	268	1
<i>Developing countries</i>	7	0.07	2	0.02	25	0.26	63	0.65	97	1

Number and share of foreign banks from home country present in host country	<i>Host region</i>								Total	
	<i>AMERICA</i>		<i>ASIA</i>		<i>EUR</i>		<i>MEA</i>			
	Nr.	Share	Nr.	Share	Nr.	Share	Nr.	Share	Nr.	Share
<i>Home region</i>										
<i>AMERICA</i>	128	0.58	24	0.11	56	0.25	12	0.05	220	1
<i>ASIA</i>	22	0.17	83	0.63	19	0.14	8	0.06	132	1
<i>EUR</i>	121	0.15	61	0.08	522	0.66	85	0.11	789	1
<i>MEA</i>	4	0.02	11	0.06	32	0.18	130	0.73	177	1

Source: Claessens and Van Horen (2013a)

Note: In the top panel of the table OECD includes all core OECD countries. Other high-income countries includes all countries classified as high-income by the World Bank in 2000 but not belonging to the OECD. Emerging markets includes all countries that are included in the Standard and Poor's Emerging Market and Frontier Markets indexes and that were not high-income countries in 2000. Developing countries includes all other countries. In the bottom part of the table, countries are grouped in four geographical regions irrespective of the income level of the countries. "America" includes Canada, United States and all countries in Latin American and the Caribbean, "Asia" includes all countries in Central, East and South Asia and the Pacific countries including Japan, Australia and New Zealand. "Europe" includes all Western and Eastern European countries. "MEA" includes all countries in the Middle East and North and Sub-Saharan Africa.

**Table 2**  
**Differences in balance sheet between domestic and foreign banks (2007)**

		<b>Loan to assets</b>	<b>Loan to deposits</b>	<b>Liquid assets to total assets</b>	<b>Equity to assets</b>	<b>Capital ratio</b>	<b>LLR to assets</b>
<i>All countries</i>							
	Domestic	<b>0.58</b>	<b>1.17</b>	<b>0.22</b>	<b>0.12</b>	<b>0.17</b>	0.02
	Foreign	<b>0.49</b>	<b>1.10</b>	<b>0.33</b>	<b>0.15</b>	<b>0.22</b>	0.02
<i>Income groups</i>							
<i>OECD</i>							
	Domestic	<b>0.65</b>	<b>1.27</b>	<b>0.17</b>	<b>0.09</b>	<b>0.13</b>	0.01
	Foreign	<b>0.43</b>	<b>1.15</b>	<b>0.37</b>	<b>0.11</b>	<b>0.18</b>	0.01
<i>Other high-income</i>							
	Domestic	0.54	0.92	0.29	0.14	<b>0.19</b>	<b>0.02</b>
	Foreign	0.52	1.06	0.30	0.13	<b>0.16</b>	<b>0.01</b>
<i>Emerging markets</i>							
	Domestic	<b>0.51</b>	<b>1.12</b>	<b>0.26</b>	0.15	<b>0.18</b>	<b>0.03</b>
	Foreign	<b>0.54</b>	<b>1.25</b>	<b>0.29</b>	0.15	<b>0.22</b>	<b>0.02</b>
<i>Developing countries</i>							
	Domestic	<b>0.54</b>	<b>1.06</b>	<b>0.26</b>	<b>0.16</b>	<b>0.23</b>	0.03
	Foreign	<b>0.49</b>	<b>0.87</b>	<b>0.35</b>	<b>0.18</b>	<b>0.26</b>	0.03

Source: Claessens and Van Horen (2013a) and Bankscope

Note: OECD includes all core OECD countries. Other high-income countries includes all countries classified as high-income by the World Bank in 2000 but not belonging to the OECD. Emerging markets includes all countries that are included in the Standard and Poor's Emerging Market and Frontier Markets indexes and that were not high-income countries in 2000. Developing countries includes all other countries. All balance sheet variables are measured in 2007.

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