The Real Effect of Foreign Banks[*]

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Abstract

Although foreign banks can act as catalysts for financial and economic development their role remains controversial because they might simply displace local lenders thereby tightening firms' overall access to credit. To settle this issue we study their effect on real economic activity in a large cross-section of developing and advanced countries whose industrial sectors differ in their external financing needs. We find that foreign banks alleviate the consequences of financial constraints and increase real growth. The greater their presence the less does external financial dependence impede firm performance. Foreign banks also mitigate the adverse consequences of banking crises on growth but do not significantly affect economic activity in advanced countries with well-functioning financial markets. Our results provide strong evidence that foreign entry alleviates financial constraints without hurting economic growth prospects, especially in developing countries whose companies often lack access to alternative sources of finance.

1 Introduction

Access to finance and, by extension, a well functioning financial sector are of central importance for economic growth and development. Starting with King and Levine (1993) and, more recently, Rajan and Zingales (1998) a growing body of literature has shown that a country's level of financial development has a direct bearing on its economic prospects (see, e.g., Beck *et al.,* 2000). In particular, inefficient domestic banking systems often constrain growth because firms with external financing needs lack access to credit, especially in developing countries. In this context, the role of foreign banks in mitigating financial inefficiencies is ambiguous. On the one hand, foreign lenders can act as catalysts for financial development through superior expertise (Claessens *et al.*, 2001), provide new sources of financing (BIS, 2001 and 2006), and might induce consolidation in fragmented banking systems (Gelos and Roldos, 2004), which all can improve the efficiency of local intermediation and availability of credit (Beck *et al.*, 2004).[1] On the other hand, foreign entry might exert competitive pressures on domestic banks which, in response, cut back their own lending activities (Giannetti and Ongena, 2007) to such a degree that the overall availability of credit decreases (Gormley, 2007). Hence, the effect of foreign banks on domestic economic activity is both an important empirical and policy question all the more that existing work offers conflicting predictions and contradictory empirical evidence.

We propose to fill this gap in the literature by investigating the incidence of foreign banks on firm growth and by identifying the economic channels through which their presence affects real economic activity. By supplying additional funds and increasing competition, foreign banks might remedy inefficiencies in domestic banking systems, thereby lowering borrowing costs and increasing the access to credit for local firms. However, in the presence of informational asymmetries entry by outsiders with superior lending expertise might lead to market segmentation through "cream-skimming" so that local banks cut back their own lending (see Dell'Arricia and Marquez, 2006, Detragiache *et al.*, 2008, or Sengupta, 2007). Hence, greater competition can also reduce access to credit (Petersen and Rajan, 1995).

To assess the net real effect of foreign banks on their host economies we examine how outside entry affects the link between financial dependence and industrial growth, which we measure as

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[1] See Goldberg (2007) for a survey on the effects of foreign direct investment in banking.

the growth in real value added by industry and country, in a panel of 81 developed and developing countries. Our primary variable of interest is an interaction term between an index of financial dependence and the share of total domestic banking assets held by foreign lenders, which we take from World Bank data described in Claessens *et al.* (2008). As in Rajan and Zingales (1998) we measure the former as the fraction of investment not funded by retained earnings for US firms from 1980 to 1989, which we also update to the period from 1980 to 1999 as a robustness test.[2] By interacting country attributes (presence of foreign banks) and an exogenous industry benchmark (external financial dependence) in a difference-in-difference framework we isolate the impact of foreign banks on real economic activity while avoiding joint-endogeneity and reverse-causality concerns. A plethora of time, country, and industry fixed effects address potential omitted-variable biases.

We find that foreign banks consistently and significantly mitigate the adverse consequences of financial constraints for firm performance. The greater an industry's dependence on external finance in a given country the more their presence increases real growth. To put this effect into perspective, an industry in the 75th percentile of financial dependence in a country in the 75th percentile of foreign-bank presence would grow 1.17 percentage points faster than those located at the corresponding 25th percentiles. The impact is even more pronounced for firms in developing countries, who often have access to alternative sources of funds. By contrast, foreign banks do not significantly affect firm performance by relaxing external financing constraints in low-income countries as opposed to mid- and high-income ones.

In a similar vein, bank entry - be it *de novo* or incremental - unambiguously and immediately lessens the negative effects of financial dependence on real economic activity. However, the first foreign bank has a much greater impact on real economic activity than further entry, especially in developing countries. The mode of entry also matters. Only banks entering through acquisitions significantly and consistently improve the performance of more financially dependent firms. Since entering banks face considerable informational and legal obstacles acquisitions provide access to local lending expertise which helps in overcoming asymmetric-information problems and in estab-

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[2]Using a benchmark of external dependence derived from US data presupposes that financial constraints result from industry characteristics, which are reasonably invariant across countries and time (see also the discussion in Rajan and Zingales, 1998 on this point). To test the robustness of our results to this assumption, we repeat the analysis not only with an updated version of the financial-dependence variable but also various industry attributes.

lishing lending relationships. By contrast, greenfield investments do not offer any informational advantages to the entering bank or its borrowers, which might explain their lack of statistical significance. The fact that this acquisition-entry effect is significantly larger in developing countries, where informational and legal problems in credit markets loom larger than in advanced economies, offers further support for our interpretation. Indeed, the inclusion of variables measuring the existence of credit bureaus and registries or of well-defined creditor rights and their enforcement does not affect the relation between foreign banks and firm performance and is only statistically significant on their own for advanced economies, where such mechanisms function well enough to facilitate financial intermediation.

We also relate the impact of foreign banks on growth to the occurrence of banking crises, financial development, and the quality of legal and political institutions in host countries. We find that foreign banks mitigate the adverse consequences of (local) banking crises on growth (see Kroszner *et al.*, 2007 or Dell'Ariccia *et al.*, 2008) to the point of insignificance. In the presence of foreign entry, banking crises only affect growth negatively in African countries, which have dysfunctional financial systems and very low foreign-bank penetration, whereas their impact is statistically insignificant in all other developing and advanced economies. Our results are robust to the inclusion of a host of interaction terms between financial dependence and measures of financial, legal, and political development. Decomposing such institutional effects by level of economic development we find the following symmetry: foreign banks continue to relax the financing constraints and improve firm performance in developing but not advanced countries whereas independent financial and legal development only contributes to real economic activity in advanced but not developing economies.

Our main contribution consists in isolating the impact of foreign banks on real economic activity net of the competitive reaction of the local banking sector. Furthermore, we identify the lessening of external financial constraints on firm growth and the overcoming of informational obstacles in financial intermediation as the two major economic channels through which foreign banks improve firm performance in their host countries. At the same time our difference-in-difference methodology avoids the joint-endogeneity and identification problems which typically affect studies of growth and financial or institutional development. Since we carefully control for omitted-variable biases and test extensively for residual joint endogeneity our results reflect the independent, exogenous effect of foreign banks on domestic firm growth.

We are not aware of any studies which explore the real effects of foreign-bank entry on local economic activity. In terms of related empirical evidence Claessens *et al.* (2001) report that foreign-bank entry lowers profit margins among domestic bank which is consistent with the findings in Detragiache *et al.* (2008) that foreign ownership of local banks is negatively related to aggregate measures of banking sector performance. Berger, Klapper, and Udell (2001), Haber and Musacchio (2004), and Mian (2006) provide evidence that foreign banks tend to finance only larger, more established firms. Similarly, Giannetti and Ongena (2007) find for a sample of Eastern European countries that firm-level sales and asset growth are positively related to the share of foreign lending, particularly for larger firms. However, all these studies focus on lending by nonlocal institutions which does neither take into account the response by the domestic banking sector nor provide evidence on the consequences of foreign-bank entry for the host country's economic performance.

The one exception is Gormley (2007) who on the basis of Indian data finds that firms are less likely to obtain credit after foreign entry because of a systematic drop in domestic lending. However, it is unclear what the net impact on economic activity might be and whether the findings generalize to other countries, which is central to our analysis. Focusing on financial development in poor countries rather than growth, Detragiache *et al.* (2008) argue that foreign banks benefit high-end customers but may hurt other borrowers, thereby worsening overall welfare, and find empirical support for their predictions. They report that credit growth is slower and credit less readily available in developing countries with higher foreign-bank penetration, but not in more advanced economies. However, they do not address the consequences of foreign banks for firm performance or real economic activity.

From a methodological perspective, our work is closest related to Rajan and Zingales (1998), who first studied the incidence of financial development on real growth in a difference-in-difference framework, as well as Kroszner *et al.* (2007) and Dell'Ariccia *et al.* (2008) who employ the methodology to analyze the incidence of banking crises on firm performance. Similarly, Cetorelli and Gambera (2001), Cetorelli and Strahan (2006), and Bonaccorsi di Patti and Dell'Ariccia (2004) use this approach to assess the effects of market structure or bank competition on, respectively, access to credit by young firms and firm creation whereas Bertrand *et al.* (2007) apply it to banking deregulation.

The paper is organized as follows. In the next section we review the theoretical literature on the

consequences of foreign-bank entry and distill pertinent empirical predictions. Section 3 describes our data and estimation strategy. In Section 4, we analyze the effects of foreign-bank presence on host countries' real economic activity. Sections 5 and 6 study entry effects and the incidence of foreign banks on firm performance during local banking crises. In Sections 7 and 8 we examine how country and industry attributes interact with foreign-bank presence in explaining countries' differential economic activity and carry out various robustness tests. The last section discusses further implications and concludes. We relegate all tables to the Appendix.

2 Consequences of Foreign-Bank Entry

There is a common perception that foreign banks alleviate financial constraints, improve the access to credit, and lower borrowing costs thereby improving the economic performance of their host countries.[3] Entry by foreign institutions, which, especially in developing countries, often have access to superior lending expertise and a larger pool of capital, potentially increases the supply of loanable funds to domestic firms. At the same time, their presence might hurt local banks which cut back their lending activities to an extent that the overall supply of credit falls. Whether foreign entry improves the availability of credit and lowers borrowing costs therefore depends on the competitive reaction of the local banking sector. For instance, Detragiache *et al.* (2008) posit that foreign banks are better than domestic banks at generating "hard" but not "soft" information, which is consistent with evidence in Agarwal and Hauswald (2006) on the effect of distance on soft-information production. Depending on the parameter configuration foreign-bank entry can both increase or decrease cost-efficiency, access to credit, and welfare. Hence, the overall impact of foreign banks on real economic activity and welfare is an empirical question which our paper attempts to settle.

In the presence of significant informational asymmetries Dell'Arricia and Marquez (2004) and Sengupta (2007) show that the high cost of acquiring borrower-specific information might induce entrants, i.e., foreign banks, to only lend to the best credit risks, thereby engaging in "cream-skimming" which is consistent with empirical evidence in Berger, Klapper, and Udell (2001), Haber

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[3]For instance, Japan, the US, and EU argue in a joint memo to the World Trade Organization that "[p]olicies that impede competition, such as entry restrictions and restrictions on foreign banks, have been shown to raise the cost of financial services and hurt economic performance" (WTO Document 05-2335, June 2005).

and Musacchio (2004), and Mian (2006). Consequently, domestic banks face a deteriorating borrower pool and reduce their lending activities so that greater competition hurts the local banking sector and, on average, might worsen domestic firms' access to credit (Petersen and Rajan, 1995 or Gormley, 2007). Hence, we would expect entry to hurt local economic growth if foreign banks were to hold a significant informational advantage through, for instance, superior lending expertise.

At the same time, entrants can suffer from adverse selection if the domestic banking sector holds an informational advantage (Dell'Ariccia and Marquez, 2004) because, for instance, foreign banks are unable to distinguish between bad credit risks rejected by the incumbent, i.e., local banks, and new borrowers shopping around for lower interest rates (Broecker, 1990; Dell'Ariccia *et al.*, 1999). Hence, the foreign banks' success critically depends on its ability to attract good credit risks away from local banks (e.g., Gehrig, 1998). In this case, the presence of foreign banks might negatively affect local firm performance by exacerbating external financing constraints for marginal credit risks, or at most, have no effect.

In this context, the mode of entry becomes important. Entry through acquisitions provides access to local lending expertise which allows foreign banks to overcome asymmetric-information problems and compete more effectively against domestic incumbents whereas greenfield investments do not offer any informational advantages to the entering bank.[4] Hence we would expect entry through acquisitions to have a larger immediate effect on local economic activity the greater the informational obstacles are, e.g., in developing countries or economies without information-sharing mechanisms such as credit bureaus or registries.

Dell'Ariccia *et al.* (1999) show that incumbent banks can use informational asymmetries to block entry by less informed outsiders.[5] The mere fact that we observe a fair amount of entry (in 69 of the 87 countries in our sample) suggests that it occurs in situations in which either the informational asymmetries are not too large to begin with because either foreign entrants had superior information collection and processing expertise (inverting the asymmetric-information problem) or borrower-specific information is available through means such as credit bureaus, well developed financial markets, foreign borrowing by firms, etc., which all level the informational playing field. Hence, we would expect entry to occur only if either information dissemination

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[4]However, Claeys and Hainz (2006) argue that greenfield investments force entrants to use their superior credit-screening expertise to overcome informational barriers and find empirical evidence to this effect.

[5]See Buch (2003) for evidence that large information barriers discourage entry by foreign banks.

mechanisms exist or entering banks can overcome their competitive disadvantage through superior credit assessments (prior experience, credit-scoring technology, etc.) or a local acquisition.[6]

Furthermore, Sengupta (2007) predicts that both ex ante better information, e.g., through acquisitions or information-sharing mechanisms, and ex post stronger legal protection can facilitate the entry of low-cost outside competitors. However, poor legal protection can prevent the use of collateral as an effective means to successfully sort borrowers so that a host country's level of legal development becomes important in determining foreign entrants' ability to successfully lend to firms and alleviate financing constraints. These results also suggest that linkages might exist between foreign banks, financial development, and the legal and informational environment, which could create joint-endogeneity problems unless properly controlled for.

3 Data Description and Methodology

The analysis draws on two principal data sources: the UN Industrial Statistics compiled by the UN Industrial Development Organization (UNIDO) and the World Bank's database on foreign banks described in Claessens *et al.* (2008). We start with a total of 91 countries for which we have both data on foreign-bank penetration from the World Bank and value added by industry from UNIDO. To maximize sample size we construct an unbalanced panel of country-industry observations with industry data at the three- and four-digit ISIC level. Since our foreign-bank data only goes back to 1995 and UNIDO country coverage becomes unreliable after 2003 these two years fix the sample period. We exclude the US, which serves as a benchmark to construct an index of external financial dependence, to avoid endogeneity problems. Furthermore, we drop three countries with less than 10 industry-year observations[7] (Algeria, Swaziland, Uganda) and lose six countries (Barbados, Finland, Greece, Italy, Jamaica, Macedonia) with insufficient balance-sheet information on banks in some estimations so that our core sample consists of 22 advanced and 59 developing countries.

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[6]See Petersen and Rajan (2002) or Degryse and Ongena (2005) on banks' ability to lend over longer distances.

[7]Countries with only 10 industry-year observations do not offer sufficient information to estimate differential effects across time and space. However, all our results are robust to their inclusion.

3.1 Data Description

The sample comprises of 3,111 financial institutions in 1995 (3,137 in 2003) including 673 foreign owned ones (1,008 in 2003), which have been operating for at least one year in a host country with at least five active intermediaries.[8] Although the primary source is BankScope the World Bank's database also draws on banks' annual and corporate-governance reports, central banks, regulatory agencies, local stock exchanges, SEC form F-20, parent company's reports, The Economist Intelligence Unit, Factiva, The Banker, etc. (see Claessens *et al.*, 2008 for details). A lender is considered foreign-owned if 50% or more of its shares are directly owned by foreigners, i.e., indirect ownership is not taken into account except through shell-corporations established for tax reasons. The database also traces ownership in special cases involving M&A, relocation of the owner, changes in ownership during financial crises, and other extraordinary corporate events.

The dependent variable measures firm performance as real growth in industrial value added (*Growth*), which we compute as the yearly difference in the logarithm of value added for 36 manufacturing industries from the UNIDO statistics adjusted for inflation using CPI data from the International Financial Statistics published by the International Monetary Fund. We winsorize the growth data at the 1st and 99th percentile to avoid outlier problems; however our estimations are robust to the inclusion of such observations (results not reported). Table 1 shows that growth across industries and countries averages from -0.48% to -0.37% for developing and advanced economies, respectively, with an overall mean of -0.44% over the sample period.

We capture foreign-bank penetration primarily in terms of the share of domestic banking assets held by foreign-owned local institutions (*ForBkAS*) and their share in total loans outstanding (*ForBkLS*). Table 2 tabulates the number of foreign-owned institutions active in each country in our sample and their asset share. We see that, on average, the presence of foreign banks has grown from 6 to about 8.5 institutions (developing countries: from 7.2 to 10; advanced countries: 2.5 to 3.9) over the sample period with an overall mean of 7.6. During the same time their share of domestic banking assets (*ForBkAS*), our key explanatory variables, has doubled from 18% to 36.15% (developing countries: from 19.84% to 38%, advanced countries: 12% to 29.24%). Our

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[8]The World Bank data provides year-by-year information on ownership structure and financial data for over 5,000 banks. Together with the ownership information on domestic institutions the database covers 94% of all banks in BankScope, which itself comprises more than 95% of banking assets worldwide.

data also contains information on the foreign institutions' mode of entry after 1995 so that we can decompose the foreign-owned share of domestic banking assets in terms of greenfield investment ($ForBkAS \cdot 1_{Green}$) or acquisition ($ForBkAS \cdot 1_{M\&A}$). In robustness tests, we employ alternative measures of foreign-bank presence such as their number ($ForBkNum$) and their share of the local banking sector in terms of institutions ($ForBkNumS$).

To assess the effect of foreign banks on real economic activity we interact their share of local banking assets with an index of external financial dependence ($FinDep$) based on US firm-level data to avoid joint-endogeneity and simultaneity-bias concerns. We take the data from Rajan and Zingales (1998) as updated by Kroszner *et al.* (2007), who compute financial dependence as the share of capital expenditure not financed with cash flow from operations on the basis of Compustat. The index is then simply the median for US manufacturing firms during the 1980s (see Table 1). As a robustness check, we also use an updated version of the financial-dependence variable for the period from 1980 to 1999 ($FinDep1999$).

3.2   Methodology

To assess the impact of foreign banks on host countries we examine whether local industries which depend more heavily on external finance grow faster as a result of their presence. One methodological problem, which typically arises in such a study, is the joint endogeneity of entry and growth and the resulting causality problem: the faster an economy grows the more likely banks might be to enter. To sidestep such issues we estimate difference-in-difference specifications relying on an exogenous index of financial dependence estimated on the basis of US firm's external financing needs which *de facto* becomes a benchmark. To the extent that firms in industries, which are more dependent on external finance, grow faster in the presence of foreign banks it is more likely that outside entry into domestic banking sectors has an independent beneficial effect on real economic activity.

We test this hypothesis by estimating variations of the following linear model of industry i's growth defined as the first difference in the logarithm of its real value added in country j in year t :

$$Growth_{ijt} = \alpha_0 + \gamma FinDep_i \cdot ForBkAS_{jt} + \delta Share_{ijt-1} + \sum_{it} \alpha_{it} 1_i \cdot 1_t + \sum_{jt} \beta_{jt} 1_j \cdot 1_t + \varepsilon_{ijt} \quad (1)$$

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Our key variable interacts the financial dependence of industry i ($FinDep_i$) with the share of domestic banking assets in country j held by foreign institutions in year t ($ForBkAS_{jt}$). To account for the tendency of larger industries to grow more slowly we include the lagged share of industry i in country j's value added ($Share_{ijt-1}$), which corrects for such base effects. In the interest of parsimonious specification we control for time, country, and industry fixed effects by interacting industry-year ($1_i \cdot 1_t$) and country-year ($1_j \cdot 1_t$) binary variables, which take values of 1 for country i, industry j, and year t, and 0 otherwise.

If, on the one hand, foreign banks overall relax financing constraints for local firms we would expect the coefficient γ on the $FinDep_i \cdot ForBkAS_{jt}$ interaction term to be positive and statistically significant. If, on the other hand, foreign lenders exacerbate financing constraints by simply displacing local banks, which in response to entry cut back their own lending activities, the coefficient γ will be negative. Hence, the sign and statistical significance of the interaction term's coefficient allows us to unambiguously assess the aggregate effect of foreign banks on real economic activity in the host countries. Our collection of country-year and industry-year dummy variables should sufficiently control for country-, industry-, and time-specific shocks and, therefore, address potential omitted-variable problems.

We estimate all specifications by OLS and report P-values based on clustered standard errors which are adjusted for heteroscedasticity within countries and industries and for first-order autocorrelation across time. As robustness tests, we vary the country selection and estimate key specifications with and without the African countries which often exhibit a negligible foreign-bank presence and suffer from dysfunctional local banking systems.

4 Foreign Banks and Economic Growth

Table 3 reports the results from estimating our main specification in Equation (1). We see that foreign banks are unambiguously beneficial for real economic activity: the coefficient on the interaction term $FinDep \cdot ForBkAS$ is consistently positive and statistically significant at the 5% level (Specification 1) or better (Specifications 2 to 4). Hence, the activities of nonlocal lenders relaxes external financing constraints and allows financially more dependent firms to grow faster even after taking into account the competitive reaction of the domestic banking sector. To put this effect

into perspective, an industry in the 75th percentile of $FinDep$ in a country in the 75th percentile of $ForBkAS$ would grow 1.17 percentage points faster than those located at the corresponding 25th percentiles.[9] The effect is even more pronounced for firms in developing countries whose real growth at the 75th percentiles would exceed that of firms at the 25th one by 2.12 percentage points (Specification 3).

Dropping the African countries, whose dysfunctional banking systems might bias the results, doubles both the coefficient of the interaction term and the differential real-growth effect (Specifications 2 and 4). Our results are consistent with Beck *et al.* (2004) who find that a greater foreign-bank presence in developing countries leads to more readily available credit to small and medium-sized firms. In addition, we identify the economic channel - lessening firms' external financial dependence - through which foreign banks can stimulate local economic activity. When we measure the presence of foreign banks by their share of loans outstanding ($ForBkLS$) we obtain virtually the same results so that we continue to work with foreign-bank assets which more accurately reflect the commitment of nonlocal institutions to their host countries.[10]

We next decompose the impact of foreign banks according to the host countries' level of economic development and income by interacting our main variable $FinDep \cdot ForBkAS$ with appropriate binary variables drawn from the IMF country classification. Specification 5 confirms that foreign banks affect real economic activity more in developing countries than in advanced ones. Taking into consideration the host country's level of income shows that foreign banks have a statistically significant (positive) impact on growth only in mid- and high-income countries (Specification 6). By contrast, their effect is not statistically significant for low-income countries. Repeating this estimation without the 18 African countries, which rank among the poorest in the world and our sample, shows that the income effects do not depend on sample selection (Specification 7). Our results agree with findings based on survey data (Clarke *et al.*, 2006 or de Haas and Naaborg, 2005) that foreign banks benefit not only large but also small and medium-sized enterprises prevalent in these economies, which dominate the mid-income category, primarily through increased local lending.

Table 4 summarizes a first set of robustness tests for our main model in terms of sample

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[9]We compute the differential growth effects as $\widehat{\gamma} \cdot \left(FinDep_{75} \cdot \overline{ForBkAS}_{75} - FinDep_{25} \cdot \overline{ForBkAS}_{25} \right)$.

[10]The correlation between the shares of foreign banks in domestic assets and loans is 0.9864.

selection and variable definitions. To assess the differential impact of foreign and local banks on financial dependence and real growth we decompose the ratio of local banking assets to GDP as an indicator of banking-system development into its foreign-held ($ForBkAGDP$) and domestic ($DomBkAGDP$) components. In line with our previous results and the literature on the importance of financial development for growth (see Beck $et\ al.$, 2000 and the references therein) we find that both foreign-bank penetration and local bank development relax external financing constraints and contribute to firm performance (Specifications 1 and 2). However, the effect is almost seven times more pronounced for foreign than domestic banks and more important for developing than advanced economies, which corroborates our earlier findings.

We next restrict our sample to countries with at least 50 industry-year observations or only those with active foreign banks, i.e., $ForBkAS > 0$, (Specifications 3 and 4, Table 4) and see that the results are virtually unchanged in comparison to those of Specification 1 in Table 3. Similarly, our key interaction variable retains its statistical significance when we only include observations with foreign-bank penetration in the first and fourth quartile (Specification 5). Comparing the respective coefficient estimates shows that foreign banks are particularly important for relaxing financing constraints at the margin: the effect for countries in the first quartile is almost 30 times larger than for those in the fourth one. Replacing the financial-dependence variable with an updated version provided in Kroszner $et\ al.$ (2007) estimated as the fraction of investment not financed through retained earnings for US firm from 1980 to 1999 (Specification 6) yields results which are very comparable to the main specification so that we continue to work with the original $FinDep$ variable.

To check the robustness of our variable measuring the degree of foreign-bank penetration we alternatively use the number of foreign institutions ($ForBkNum$) and their share of the local banking sector in terms of banks ($ForBkNumS$). Replacing the share of domestic assets held by foreign banks with their number does not alter our original results with and without the African subsample (Specifications 7 and 8). However, Specifications 9 and 10 show that both the magnitude and statistical significance are markedly different for two reasons when we measure foreign-bank penetration as the fraction of foreign institutions. Not only does $ForBkNumS$ exhibit little variation over time but, contrary to the asset share of foreign banks, it also does not take into account the growth of foreign lending relative to the credit extended by domestic institutions.

Since we do not distinguish between firms borrowing from domestic and foreign banks and rely on a measure of the importance of outside lenders relative to the local ones our results provide resounding evidence for the overall beneficial impact of foreign banks on real economic activity. Even after controlling for credit to the industrial sector by domestic banks we find that lending by local affiliates of foreign banks lessens financial dependence and improves firm performance. Our findings suggest that instead of displacing domestic credit foreign banks unambiguously lessen external financial dependence and contribute to the faster growth of financially constrained firms. They are consistent with the results in Clarke, Cull, and Martinez-Peria (2006) who report that entrepreneurs in countries with high levels of foreign-bank ownership perceive interest rates and access to loans as smaller constraints to their operations. Studying foreign entry in Latin-American countries Martinez-Peria and Mody (2004) find that a higher presence of foreign banks leads to lower costs of all banks operating in the market so that the improved efficiency of the local banking sector might similarly benefit firms.

5 Foreign Entry, Information, and Creditor Rights

Having identified one channel through which foreign banks improve growth prospects in their host economies - the relaxation of external financing constraints - we now turn to the postulated second one: superior lending expertise and, especially, the overcoming of informational obstacles. To this end, we investigate the mode of entry in addition to its long-term consequences and the incidence of local mechanisms facilitating lending on real economic activity in the presence of foreign lenders.

5.1 Foreign Entry

We study three different aspects of entry. Our sample contains 18 countries without any foreign-bank presence in 1995 so that we can define a binary variable for *de novo* entry (*DeNovo*) which takes the value 1 from the year onwards an outside institution becomes active and 0 otherwise. We similarly create a variable *AddBk* for incremental entry which takes the value 1 onwards from the year at least one additional foreign institution enters into one of the 69 markets with at least one active nonlocal bank in 1995. We also consider total entry (*Entry*) by combining both *de novo* (in 6 countries) and incremental entry (in 63 countries). Our variable construction is meant to capture

the long-term effects of entry. As robustness tests we define corresponding binary variables which take the value 1 in the year of entry and 0 otherwise, compute the foreign asset share $ForBkAS$ for entering institutions only, and restrict our sample to countries with entry but do not report any results which are similar to the tabulated long-run effects.

We first investigate pure entry effects by interacting our entry variables with $FinDep$. Specification 1 in Table 5 shows that all entry confounded exacerbates financial dependence and hurts real economic activity: the coefficient on the $FinDep \cdot Entry$ interaction term is negative and statistically significant. However, splitting total entry into *de novo* and incremental effects shows that this result is due to the impact of additional entry by foreign banks (Specification 2). The coefficient on $FinDep \cdot DeNovo$ is positive whereas the one on $FinDep \cdot AddBk$ is negative, albeit much more statistically significant than the former one. Further decomposing each entry effect by level of economic development (Specification 3) shows that incremental entry into emerging economies drives the aggregate negative-coefficient estimate. One interpretation is that additional entry into such markets is more likely to eventually crowd out local lending than *de novo* entry, thereby exacerbating financial constraints.

However, the preceding analysis neglects the fact that entry effects might vary with foreign-bank penetration. Entry into credit markets in which nonlocal institutions only hold a small share of banking assets should have a much more beneficial impact on economic activity than into countries with a significant foreign-banking presence where further entry might disproportionately displace local lending and thus tighten the overall access to credit. To test this hypothesis we now weight entry by the importance of foreign institutions in the local banking system by interacting our key term $FinDep \cdot ForBkAS$ with the entry variables.

Specification 4 shows that the results for $FinDep \cdot ForBkAS \cdot Entry$ are virtually indistinguishable from our main model (Specification 1, Table 3). We interpret this finding as very strong evidence that foreign entry indeed relaxes external financing constraints rather than simply displacing local lending. Decomposing $Entry$ into *de novo* and incremental effects reveals that both types of entry benefit economic growth but that the former is much more important in terms of economic (and statistical) significance (Specification 5 in Table 5). Specifications 6 to 8, which further decompose entry effects by level of economic development, indicate that these results stem from entry into developing countries and, in particular, *de novo* entry.

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5.2 Mode of Entry

We next turn our attention to the mode of entry. Given that entering institutions often face significant information costs[11] the choice of entry through a greenfield investment (building up local lending expertise from scratch) or through an acquisition (buying existing lending expertise) holds very different implications for both the entrant's success and its impact on economic growth. Given that local incumbents are typically thought to hold an informational advantage (see, e.g., Sengupta 2007) entry by acquisition, which provides access to local information,[12] should result in more successful lending activities. Especially when combined with superior foreign credit-assessment expertise acquisitions should have a more beneficial impact on economic growth than greenfield investments.

To investigate this conjecture we determine the nature of all entry after 1995 and create binary variable 1_{Green} and $1_{M\&A}$ which take the value 1 for greenfield investments and acquisitions by each entrant, respectively, and 0 otherwise. Since our data does not allow us to trace the mode of entry back in time we create a further binary variable 1_{1995} for all entry before 1995. Using these variables we now decompose $ForBkAS$ in terms of foreign asset shares by entry mode and interact the resulting variables with $FinDep$.

Specification 1 in Table 6 reveals that entry by M&A has a highly significant statistical and economic effect on local economic activity whereas greenfield investments appear irrelevant. Combining both modes whenever known (Specification 2) or distinguishing between greenfield, M&A, or unknown entry prior to 1995 (Specifications 3 and 4) confirms these findings both in terms of the statistical significance and economic magnitude. Further decomposing entry-mode effects by level of economic development shows that acquisitions are the only statistically significant entry mode. Also, their impact on real growth is much more pronounced in developing countries, in which typically less information on borrowers is available and proprietary lending expertise is more important, than advanced ones (Specifications 4 to 8). The results strongly suggest that informational considerations matter for the overall impact of foreign banks on their host economies so that

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[11]See, e.g., Dell'Arricia and Marquez (2006) or Sengupta (2007) for theoretical arguments and Buch (2003) for empirical evidence.

[12]Bouckaert and Degryse (2006) distinguish between information about repayment behavior and borrower type; although public information might be available about the former only an acquisition would grant entrants access to the latter.

we now examine the role of local sources for borrower information and of legal arrangements in the presence of foreign-bank activity.

5.3 Borrower Information and Creditor Rights

Credit markets rely on significant institutional infrastructure to fulfill their function of steering capital toward its most productive uses. In particular, they require mechanisms to collect and disseminate information relevant to credit decisions such as credit registries or bureaus[13] and to specify and enforce debt contracts, i.e., well defined creditor rights and efficient enforcement procedures. Hence, we add interaction terms between financial dependence and variables indicating the existence of public credit registries (binary variable $CredReg$) or private credit bureaus (binary variable $CredBur$) and an index of creditor rights ($CredRts$) all taken from Djankov *et al.* (2007), a measure of the quality of debt-contract enforcement ($DebtEnf$ from Djankov *et al.*, 2006), and an index of legal (procedural) formalism ($Form$) derived in Djankov *et al.* (2003) to our main model.

We pursue two objectives with this line of investigation. On the one hand, the contribution of institutions facilitating financial intermediation to real economic activity is of interest in its own right. For instance, Jappelli and Pagano (2002) report that more information sharing is associated with with a higher ratio of private credit to GNP and less default. Similarly, Miller (2003) reports that information from credit registries significantly augments banks performance in Latin America. On the other hand, the addition of the relevant interaction terms allows us to assess the presence of residual joint endogeneity, i.e., the danger that foreign banks only enter into countries with sufficiently developed ambient institutions which contribute to economic growth in their own right. Starting with the latter, the results in Table 7 suggest that residual endogeneity is not an issue. Comparing the results across all specifications with our original estimation results (Specification 1, Table 3) we see that the economic and statistical significance of $FinDep \cdot ForBkAS$ barely change.

Regarding mechanisms which alleviate informational asymmetries such as public credit registries (Specification 1) or private credit bureaus (Specification 3) the lack of statistical significance suggest

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[13]Credit bureaus and registries improve banks' applicant-specific information thereby easing adverse selection problems (Jappelli and Pagano, 2002), level the informational playing field, which improves borrowers' incentives to perform (Padilla and Pagano, 1997), and act as a disciplining device reducing moral hazard in repayment (Padilla and Pagano, 2000). By contrast, Bouckaert and Degryse (2006) argue that partial information sharing through credit bureaus or registries can deter entry.

that they do not contribute to real economic activity. However, decomposing these informational variables by a country's level of economic development reveals an interesting pattern (Specifications 2 and 4). Credit-information collection and sharing devices have a statistically significant but economically small impact on growth in advanced countries but are insignificant in developing ones. One possible explanation revolves around the quality of publicly available information about borrowers which is typically higher in advanced economies. Given the generally poor quality of such information in emerging markets, potential users discount its existence and prefer to collect their own intelligence. In fact, these findings are consistent with our earlier results on acquisitions, especially Specifications 5 and 6 in Table 6, which exhibit a particularly large and significant effect on economic growth through the superior access to local information implied by this entry mode.

When we add interaction terms with creditor rights and the efficiency of enforcing debt contracts enforcement appears more important for firm performance than rights *per se* (Specifications 5 and 7). Once again, institutional development only matters in advanced economies where contractual rights and their enforcement help to relax external financing constraints but do not affect growth in developing ones presumably due to their uncertain nature (Specifications 6 and 8). These findings are consistent with the results in Haselmann *et al.* (2005) and Giannetti and Ongena (2007) who report that lenders' and, especially, foreign banks' willingness to provide credit is positively related to creditor protection and their ability to enforce their claims (collateral law). These findings are further borne out by the results from including an interaction term with legal formalism, which measure substantive and procedural statutory intervention in judicial cases at lower-level civil trial courts. The higher the index, the more procedural, interventionist, and typically inefficient the judicial process becomes. Although the interaction term is statistically insignificant on its own (Specification 9) it negatively affects real economic activity in developing countries by increasing the adverse effects of financial dependence but is statistically insignificant in advanced economies (Specification 10).

6   Banking Crises in the Presence of Foreign Banks

Domestic banking crises unambiguously exacerbate firms' financial dependence and thus hurt economic activity (Kroszner *et al.*, 2007 and Dell'Ariccia *et al.*, 2008). To the extent that their

occurrence represents an exogenous event they permit us to directly test our hypothesis that foreign banks contribute to firm performance through a relaxation of financing constraints. Since foreign-owned institutions typically fund themselves abroad through their parent companies they are less exposed to local economic conditions and can continue to lend to firms even when the domestic banking sector has become unable to do so. Hence, we would expect growth in financially dependent industries to be less affected by banking crises the greater the foreign-bank presence. In particular, countries with underdeveloped financial systems, i.e., few alternatives to bank finance such as well developed capital markets or access to foreign borrowing, should most benefit from the relaxation of external financing constraints through foreign banks.

On the basis of the World Bank's database on banking crises (see Caprio and Klingebiel, 2003) we define a binary variable $Crisis$, which takes the value 1 in the year of the crisis' inception and the two subsequent years, and 0 otherwise. Although 31 countries in our sample experienced systemic problems in their banking system we sometimes lose 6 of them because we do not have value-added information for the crisis years.

We first replicate the results in Kroszner $et\ al.$ (2007) and Dell'Ariccia $et\ al.$ (2008) who have shown that banking crises hurt real economic activity by exacerbating the negative consequences of financial dependence on firm growth. In Specification 1 of Table 8 we estimate our main model in Equation (1) with an interaction term between financial dependence and banking crises ($FinDep \cdot Crisis$) instead of our usual $FinDep \cdot ForBkAS$ one. We find that during crisis periods the growth rate of industries which are more dependent on external finance declines relatively more than that of industries which are financially less dependent.

Having established that our sample conforms to previous findings about the negative impact of banking crises on industry growth we next add back our key explanatory variable interacting financial dependence and foreign-bank presence $FinDep \cdot ForBkAS$. Specification 2 shows that the financial-dependence and banking-crisis interaction term now becomes statistically insignificant, but just so (P-value of 10.81%). However, this result is entirely due to the African countries. Once we drop them from the sample (Specification 3), the crisis interaction term becomes statistically insignificant (P-value of 55.80%) whereas the foreign-bank interaction term retains its customary magnitude and statistical significance at 1%. Repeating the estimation for the whole sample but decomposing $Crisis$ with indicator variables for Africa (all developing economies), developing

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countries outside Africa, and advanced economies confirms this conjecture (Specification 4). Dropping Africa from the sample (Specification 5) and decomposing the $Crisis$ variable by income level (Specification 6) further corroborates this explanation.

We next interact $FinDep \cdot ForBkAS$ with the $Crisis$ variable to directly test whether the presence of nonlocal lenders alleviates or exacerbates the negative consequences of financial turmoil for firm growth. Although Specification 6 seems to suggest that foreign institutions aggravate the negative impact of banking crises on real economic activity through external financing constraints (large, negative statistically coefficient on $FinDep \cdot ForBkAS \cdot Crisis$) Specifications 7 (Africa dropped from the sample) and 8 (decomposed $Crisis$ variable) reveal that again the result is entirely due to the African subsample. The (large, negative) coefficient of $FinDep \cdot ForBkAS \cdot Crisis$ is only statistically significant for African countries.

Taken together, the effects of foreign banks on real economic activity during banking crises offer important policy lessons. Our results indicate that foreign banks reduce the impact of a domestic "credit crunch" on financially dependent firms during a banking crisis. They mirror the finding in Dell'Ariccia *et al.* (2008) that banking crises have a stronger impact in countries whose private sector has less access to foreign capital markets. Nevertheless, foreign banks can have an additional destabilizing impact on host countries during economic and financial crises affecting banking sectors in low-income countries, especially in Africa. In these economies, dysfunctional regulatory, legal, and financial structures do not permit local banks to effectively compete with foreign entrants, which stop lending, call in loans, or engage in cream-skimming. Such actions further destabilize local intermediaries and the host economy and presumably deepen the effect of banking crises on firms.

However, once countries attain a certain level of economic and, hence, institutional development, i.e., mid-income and developing economies outside Africa, foreign banks actually mitigate the adverse consequences of banking crises on financial dependence and firm performance. Sheltered from local financial turmoil through their affiliation with foreign parent companies they continue to lend to firms with promising investment opportunities even after the domestic banking sector has stopped to do so in response to systemic problems. As a result, far from playing a destabilizing role foreign institutions actually relax financial constraints on firms precisely during times when such impediments to growth are particularly damaging to real economic activity.

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7 Host-Country Institutions and Growth

Although our approach should address potential simultaneity-bias issues we are nevertheless concerned about residual joint-endogeneity between foreign-bank entry and growth. As robustness tests, we now relate real economic activity to country characteristics, whose incidence on firm performance through their effect on financial dependence is interesting in its own right.

7.1 Financial Development

We begin our robustness tests by adding interaction terms between financial dependence and various measures of a host country's financial development, i.e., $FinDep \cdot FinDev$, to our main model in Equation (1). Financial development matters for two reasons. First, well developed financial markets allow firms easier access to funding thereby diminishing their dependence on both domestic and foreign lenders. Second, a host country's level of financial development, which Rajan and Zingales (1998) have shown to relax external financing constraints and thus to contribute to real growth, might also affect an institution's entry decision, thereby causing potential endogeneity problems. We measure financial development $FinDev$ in terms of local credit to the private sector as a fraction of GDP ($PrivCredit$), local stock market capitalization as a fraction of GDP ($StMktCap$), local stock market turnover as a fraction of market capitalization ($StMktTurn$), local stock value traded as a fraction of GDP ($StValTrad$), and local bonds outstanding issued by private firms as a fraction of GDP ($PrivBond$).[14]

We first estimate our main model with only a $FinDep \cdot PrivCredit$ interaction term as in Rajan and Zingales (1998) to verify that our sample yields comparable results, which is indeed the case (coefficient estimate of 0.0327 with a P-value of 2.90%, results not reported). Comparing the estimates in Tables 9 and 3 shows that our results are robust to the inclusion of different financial-dependence and financial-development interaction terms. The coefficient estimates for our key variable $FinDep \cdot ForBkAS$ and their statistical significance remain very comparable to those in Table 3. Measuring financial development in terms of private credit as a fraction of GDP ($PrivCredit$) reveals an interesting symmetry across levels of economic development. In developing countries, foreign-bank lending is crucial in mitigating the consequences of financial dependence

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[14]All data come from the World Bank's Financial Development and Structure Database; see Beck et al. (1999) for a detailed description of the data and variable definitions.

for firm performance but aggregate private credit, which is not statistically significant, apparently not so. By contrast, the statistical and economic significance is reversed for advanced economies where the extent of private credit but not the presence of foreign lenders matters for real economic activity.

This pattern also holds for alternative measures of financial development with two exceptions (see Table 9). Stock-market capitalization (as a fraction of GDP) does not seem to contribute to firm growth *per se* (Specification 3) or decomposed by economic-development level (Specification 4), which is probably a reflection of the variable's poor performance as a measure of financial-market development.[15] Indeed, turnover measures (Specifications 5 and 6), which are a better measure of market depth and, hence, financial development, are not only statistically significant but their decomposition by economic-development level conforms to the previously identified pattern. The second exception concerns private bonds outstanding as a fraction of GDP, i.e., the existence of a well established corporate bond market, which significantly lessens firms' external financial dependence and increases their performance on its own (Specifications 9 and 10).

Taken together, we interpret these results as evidence that the previously identified beneficial effects of foreign banks for real economic activity are robust to various measures of financial development. However, alternative means to alleviate external financial constraints on firm growth exist in advanced economies, which reduces the importance of foreign banks for real economic activity in these countries. Several conclusions follow. First, foreign banks as source of funds and intermediation expertise are much less important in the presence of well established local financial markets and institutions. Second, foreign banks are only one mechanism to improve economic performance through a reduction in firm's dependence on external funding. These findings suggest that developing countries might want to invest in financial and, more generally, institutional development to further real economic activity, a topic we turn to next.

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[15]High ratios of stock-market capitalization to GDP are often due to developing countries' small GDP and the presence of a few large firms typically concentrated in the commodities sector. Similarly, stock-market capitalization might not be representative of market depth because the free-float is often small in emerging economies. In advanced economies, firms have alternative means to raise funds so that stock-market capitalization alone might not satisfactorily measure financial development, either.

7.2 Institutional Development

The general level of institutional development of a country and its economic, financial, and political stability are often key factors in foreign-direct investment decisions. Hence a foreign bank's perception of legal and country risk, which are typically correlated with economic development, is crucial for entry into a given market. To ascertain whether the resulting potential joint endogeneity is of concern we proceed as before and add an interaction term of financial dependence with various measures of the host country's level of institutional development, i.e., $FinDep \cdot InstDev$, to our main model in Equation (1). We measure the latter with the International Country Risk Guide (ICRG) index family. $ICRGFin$ and $ICRGPol$ are the financial and political stability indices, respectively, whereas $ICRGLaw$, $ICRGGov$, and $ICRGBur$ measure a host country's quality of law enforcement, government effectiveness, and quality of bureaucracy.[16]

The virtually unchanged magnitude and statistical significance of the $FinDep \cdot ForBkAS$ coefficients in Table 10 indicate that our methodology successfully addresses joint-endogeneity and simultaneity-bias problems. The decomposition into developing- and advanced-economy effects reveals that the previously noted financial-development pattern continues to hold (Specification 2). Foreign banks only matter for real growth in developing but not advanced countries, whereas financial development and stability lessen the external financial dependence of firms and improves their performance in developed but not emerging economies. Specifications 3 and 4 show that political stability and reliable law enforcement both spur real economic activity by relaxing financing constraints and that the latter exhibits the usual country-decomposition pattern (Specifications 5).

Both government efficiency and bureaucratic quality contribute to higher growth of financially more dependent firms even in the presence of foreign banks (Specifications 6 and 7). To the extent that both variables are correlated with the efficiency of regulatory institutions we can also view them as instruments for the quality of banking regulation all the more that $ICRGBur$ specifically includes regulatory quality as one of the index' components. When we decompose the variable by host-country level of economic development (Specification 8) we see not only that the foreign-bank-country effect is unchanged, i.e., foreign banks only relax financial constraints on firm growth in developing countries, but also that regulatory quality as an instrument for banking regulation

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[16]The higher the index the greater a country's stability or its institutional development; see www.prsgroup.com for more details on the indices.

spurs real economic activity both in advanced and emerging economies. Hence, good banking regulation and supervision independently matter in developing countries, too presumably because they facilitate efficient intermediation and remove obstacles to domestic lending thereby increasing firms' access to credit.

8 Joint Endogeneity and Industry Characteristics

As a further robustness test we next address joint-endogeneity concerns directly through instrumental-variable estimation. Since there does not seem to exist a natural instrument for foreign-bank penetration we first construct one by regressing the share of domestic banking assets held by nonlocal institutions ($ForBkAS$) on a constant, and The Heritage Foundation's Financial Freedom and The Center for Systemic Peace Polity Indices. We then replace $ForBkAS$ in our main specification with the fitted values from the first-stage regression. We see from Specification 1 in Table 11 that the statistical significance of the interaction term remain very comparable to the results in Table 3 but that the coefficient is much larger. However, the effect's magnitude is quite comparable in economic terms. A firm at the 75th percentile of $FinDep$ and the fitted values of $ForBkAS$ would grow 3.4 percentage points faster instead of 1.17 percentage points in the original specification than one located at the corresponding 25th percentiles.

To assess the robustness of our financial-dependence variable we compute the benchmark for young (only firms public for less than 10 years) and mature (only firms public for at least 10 years) companies and separately interact it with foreign-bank penetration. Specifications 2 and 3 show that foreign banks significantly lessen the adverse effect of financial dependence on the performance of mature firms only and that the results are very comparable to our base specification in Table 3. The finding that mature rather than young firms, which typically have greater financing needs, benefit most from the presence of foreign lenders is consistent with previous results that foreign banks tend to lend to more established firms (see, e.g., Haber and Musacchio, 2004, or Mian, 2006).

To further test whether our financial-dependence benchmark indeed captures financing constraints we next add interaction terms of $ForBkAS$ with industry characteristics, which might affect the firms' access to credit, to our main model. We consider the median ratio of intangible ($Intang$) to fixed or tangible ($Tang$) to total assets for US firms in Compustat from 1980 to1999,

an indicator variable for industries primarily manufacturing durable goods (Dur), R&D intensity ($R\&D$: median ratio of fixed assets to employees for US firms in Compustat 1980 to 1999), and capital intensity ($CapInt$: median ratio of R&D expenditure to sales for US firms in Compustat 1980 to 1999). Specifications 4 to 8 in Table 11 indicate that once again both the magnitude and statistical significance of the $FinDep \cdot ForBkAS$ coefficients remain very comparable to the original estimates with the exception of Specification 7 in which our key variable loses its statistical significance. However, in this case as in most other ones the industry interaction term is not statistically significant, either. We interpret these results as evidence that, indeed, our financial dependence variable captures external financing constraints on firms rather than general industry characteristics.

9   Discussion

This paper examines the overall consequences of foreign-bank entry for real economic activity including the competitive reaction of local lenders. If foreign entry displaces domestic lending to a degree that the overall access to credit falls then the performance of firms more heavily dependent on external finance should suffer disproportionately more and lead to a reduction in their real growth. We apply this insight to a wide cross-section of developing and advanced economies in a difference-in-difference framework to properly account for the endogenous reaction of local lenders while addressing potential joint-endogeneity problems. At the same time, this approach permits us to identify the economic channels through which foreign banks contribute to their host countries' growth.

We find that industries more heavily dependent on external finance perform significantly better in the presence of foreign banks. We interpret this result as evidence that foreign banks, overall, lessen the financial dependence of firms thereby allowing them to grow faster, especially in developing countries where financial constraints limit firm growth even more severely (see Demirguc-Kunt and Maksimovic, 2002). Such effects are particularly beneficial during banking crises. Indeed, we find that industries heavily dependent on external finance only suffer a statistically insignificant contraction during a banking crisis in countries with a higher foreign-bank presence. However, our results also indicate that in low income or African countries, which often have dysfunctional

banking systems, foreign banks lead to more severe contractions in real economic activity during crisis periods.

In addition to relaxing external-financing constraints our analysis identifies means to overcome informational asymmetries such as acquisitions, which give entering institutions access to local lending expertise, or credit bureaus and registries, which are repositories of "hard" corporate information, as a second channel through which foreign banks improve the growth prospects of financially dependent firms. This channel is particularly important in developing countries where ill-functioning legal institutions and corporate opaqueness exacerbate informational problems. The resulting credit-market inefficiencies are particularly harmful to firms heavily dependent on external finance so that foreign banks become even more important by providing alternative means to relax financial constraints. By contrast, domestic financial systems and access to global capital markets typically help firms overcome financial impediments to growth in advanced economies so that foreign banks have a lesser impact on real economic activity.

Our findings hold several policy implications. First and foremost, foreign banks stimulate real economic activity and stabilize firm performance in times of crisis, especially in mid- and high-income countries. Hence, fears that their presence might destabilize the local economy appear misplaced. However, at the same time our results reveal that countries must have attained a certain level of institutional maturity for foreign banks to significantly improve firm growth. Hence, countries might wish to invest in legal and financial institutions, which beyond the beneficial effects through foreign banks and more efficient financial intermediation should contribute to higher real economic activity in their own right.

Decomposing the foreign-bank effects by income or economic-development levels allows us to identify capital-market access and local lending expertise as necessary conditions and well-functioning legal and financial systems as sufficient conditions for foreign banks to relax financial constraints on firm performance. Since the latter are prerequisites for the former their existence in advanced economies explains the much diminished effect of foreign banks in such countries when we control for the host country's institutional and economic development. These findings suggest that legal and political institutions and, in particular, financial regulation and oversight can independently alleviate financial constraints on firm performance. We leave this question for future research.

Appendix

Table 1: **Summary Statistics**

Variable	Description	Obs	Mean	Std Dev	Min	Max	1 Quart	Median	3 Quart
$Growth$	Ind. real VA growth all (87)	11042	-0.44%	29.00%	-116.48%	102.97%	-9.99%	0.76%	10.17%
$Growth \cdot 1_{Dev}$	Ind. real VA growth dev. (62)	6960	-0.48%	33.61%	-116.48%	102.97%	-13.33%	1.10%	13.37%
$Growth \cdot 1_{Adv}$	Ind. real VA growth adv. (25)	4082	-0.37%	18.70%	-116.48%	102.97%	-6.59%	0.35%	6.70%
$FinDep$	Financial dependence 1980-1989	36	0.3190	0.4000	-0.4500	1.4900	0.0700	0.2300	0.4500
$FinDep1999$	Financial dependence 1980-1999	36	-0.0144	0.5666	-1.1400	2.4300	-0.2800	-0.0300	0.0575
$ForBkAS$	Foreign-bank asset share	705	27.52%	30.57%	0.00%	100.00%	1.42%	14.70%	47.13%
$ForBkAS \cdot 1_{Dev}$	Foreign-bank asset share adv.	524	29.27%	29.30%	0.00%	100.00%	2.82%	18.66%	49.92%
$ForBkAS \cdot 1_{Adv}$	Foreign-bank asset share - dev.	181	22.44%	33.56%	0.00%	100.00%	0.00%	3.61%	33.32%
$ForBkLS$	Foreign-bank loan share	705	27.43%	30.81%	0.00%	100.00%	1.01%	14.34%	47.84%
$ForBkNum$	Number of foreign banks	783	7.5977	10.1763	0	57	1	4	9
$ForBkNumS$	Foreign bank number share	783	27.80%	24.03%	0.00%	100.00%	7.69%	23.08%	43.48%
$Entry$	Foreign entry dummy	783	0.5275	0.4996	0.0000	1.0000	0.0000	1.0000	1.0000
$ForBkAS \cdot 1_{Green}$	Greenfield foreign-bank asset sh.	732	6.99%	16.08%	0.00%	91.95%	0.00%	0.00%	2.75%
$ForBkAS \cdot 1_{M\&A}$	M&A foreign-bank asset share	684	2.02%	6.62%	0.00%	76.59%	0.00%	0.00%	1.12%
$Share$	Share of industry in VA	11042	0.0404	0.0572	<0.0001	0.7646	0.0081	0.0217	0.0506
$CredReg$	Public credit registries	729	0.4897	0.5002	0	1	0	0	1
$CredBur$	Private credit bureaus	729	0.4938	0.5003	0	1	0	0	1
$CredRts$	Creditor rights index	647	1.8686	1.1894	0	4	1	2	3
$DebtEnf$	Debt enforcement index	62	54.73	25.21	6.06	96.01	37.08	52.09	78.00
$From$	Legal formalism index	72	3.65	1.09	0.73	6.01	2.98	3.66	4.34
$Crisis$	Banking crisis indicator	783	11.62%	32.07%	0	1	0	0	0
$PrivCred$	Private credit/GDP	746	0.5151	0.4249	0.0308	2.0068	0.1799	0.3699	0.7441
$StMktCap$	Stock-market capitalization/GDP	676	45.67%	55.03%	0.04%	373.62%	12.34%	26.76%	57.86%
$StMktTurn$	Stock-market turnover/cap.	669	45.67%	88.29%	0.08%	1601.71%	7.92%	26.86%	59.23%
$StValtrad$	Stock value traded/GDP	685	23.90%	41.50%	0.00%	277.56%	1.08%	4.99%	29.03%
$PrivBond$	Private bonds outstanding/GDP	321	21.21%	19.70%	0.00%	129.58%	3.39%	16.45%	34.98%
$ICRGFin$	ICRG Financial Stability Index	735	36.43	6.05	15.63	50.00	33.13	36.79	40.08
$ICRGPol$	ICRG Political Stability Index	735	70.58	11.96	34.29	94.63	62.13	71.33	79.75
$ICRGLaw$	ICRG Law&Order Index	735	4.20	1.37	0.50	6.00	3.00	4.00	5.00
$ICRGGov$	ICRG Government Eff. Index	735	8.85	1.62	3.00	11.58	7.83	9.17	10.00
$ICRGBur$	ICRG Bureaucracy Quality Ind.	735	2.55	1.03	0.00	4.00	2.00	2.33	3.29
$Intang$	Intangible asset fraction	36	8.83%	9.06%	0.00%	43.00%	2.50%	7.00%	11.50%
$Tang$	Tangible asset fraction	36	30.61%	12.96%	12.00%	62.00%	20.00%	28.00%	40.00%
Dur	Durable goods	36	47.22%	50.63%	0.00%	100.00%	0.00%	0.00%	100.00%
$R\&DInt$	R&D intensity	36	0.0372	0.0964	0.0000	0.5800	0.0100	0.0100	0.0200
$CapInt$	Capital intensity	36	36.2217	42.3206	7.1200	244.6300	16.8200	21.6550	39.3850

This table summarizes our key variables in terms of their mean, standard deviation ("Std Dev"), minimum ("Min"), maximum ("Max"), and their 25th ("1 Quart"), 50th (Median), and 75th ("3 Quart") percentiles. We tabulate the dependent variable, the real growth in value added of 36 manufacturing industries, for all 87, the 62 developing, and the 25 advanced countries according to the IMF country classification. We winsorize the growth data at the 1st and 99th growth percentile to address potential outlier problems. See Section 3 for a description of the variables.

Table 2: **Foreign-Bank Presence 1995 to 2003**

Panel A: Advanced Countries

Country	Foreign Banks			Fraction of Foreign Banks			Asset Share of Foreign Banks		
	1995	2003	Average	1995	2003	Average	1995	2003	Average
Australia	0	2	0.78	0.00%	20.00%	7.90%	0.00%		0.00%
Austria	0	1	0.44	0.00%	4.00%	1.76%	0.00%	29.77%	16.48%
Belgium	4	5	4.44	17.39%	26.32%	20.55%	1.14%	79.92%	46.58%
Canada	13	14	14.56	59.09%	60.87%	61.71%	4.17%	3.61%	3.64%
Cyprus	3	4	3.22	25.00%	28.57%	24.73%	7.13%	9.52%	7.16%
France	2	3	2.44	5.71%	10.00%	7.46%	3.83%	4.00%	3.83%
Germany	2	3	2.44	6.67%	11.11%	8.36%	0.05%	0.37%	0.47%
Hong Kong	7	10	8.33	30.43%	45.45%	36.67%	43.67%	58.61%	48.36%
Iceland	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ireland	11	15	13.00	78.57%	83.33%	80.03%	100.00%	100.00%	100.00%
Israel	1	1	1.00	8.33%	8.33%	8.33%	0.38%	0.75%	0.64%
Japan	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Korea	0	4	1.22	0.00%	28.57%	8.24%	0.00%	47.06%	14.00%
New Zealand	1	3	2.78	16.67%	33.33%	33.80%		94.10%	96.21%
Norway	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Portugal	1	4	2.00	6.67%	25.00%	12.82%		0.68%	1.19%
Singapore	2	3	2.89	22.22%	30.00%	29.88%	6.75%	41.93%	39.04%
Slovenia	1	5	2.22	7.69%	38.46%	17.31%	3.53%	23.17%	10.22%
Spain	4	3	3.67	12.50%	10.71%	11.91%	33.32%	82.12%	59.49%
Sweden	0	1	0.44	0.00%	11.11%	5.09%	0.00%		0.00%
Switzerland	9	10	10.00	39.13%	40.00%	40.13%	1.25%	1.63%	1.94%
United Kingdom	1	2	2.00	4.35%	7.69%	7.65%		15.52%	17.53%
Mean Advanced	2.55	3.86	3.22	14.44%	21.76%	17.67%	12.00%	29.24%	21.13%

Panel B: Developing Countries - Africa

Country	Foreign Banks			Fraction of Foreign Banks			Asset Share of Foreign Banks		
	1995	2003	Average	1995	2003	Average	1995	2003	Average
Benin	3	5	4.33	60.00%	71.43%	67.83%	52.76%	48.83%	50.73%
Botswana	3	4	3.44	75.00%	57.14%	63.73%	61.91%	69.65%	59.66%
Cameroon	3	5	3.89	50.00%	55.56%	49.49%	82.42%	77.84%	78.94%
Egypt	2	6	4.33	6.25%	18.75%	13.54%	0.76%	9.35%	4.97%
Ethiopia	1	3	2.00	9.09%	50.00%	28.56%	24.34%	98.27%	64.86%
Ghana	5	9	6.78	50.00%	60.00%	49.89%	33.71%	62.23%	54.95%
Ivory Coast	4	8	5.67	66.67%	80.00%	69.29%	66.94%	92.41%	77.61%
Kenya	11	11	10.78	23.91%	26.83%	24.55%	36.69%	45.66%	40.26%
Malawi	2	4	2.44	33.33%	50.00%	36.77%		48.99%	23.90%
Mauritius	6	10	8.22	60.00%	71.43%	69.08%	11.93%	38.77%	42.20%
Morocco	5	5	5.00	35.71%	38.46%	37.55%	14.43%	17.91%	16.08%
Niger	3	5	4.11	75.00%	83.33%	79.63%	100.00%	67.54%	83.29%
Nigeria	3	6	4.44	4.92%	8.82%	6.85%	3.31%	5.99%	5.29%
Senegal	4	7	5.44	50.00%	63.64%	56.77%	92.47%	59.57%	71.02%
South Africa	7	6	6.89	16.28%	15.00%	14.88%	1.13%	1.48%	2.28%
Tanzania	5	11	8.56	55.56%	57.89%	55.28%		96.28%	63.51%
Tunisia	5	7	5.67	35.71%	43.75%	37.10%	6.37%	18.31%	11.28%
Zimbabwe	3	3	3.00	21.43%	15.79%	17.65%	35.12%	40.27%	31.29%

Panel C: Developing Countries ex Africa

Country	Foreign Banks 1995	2003	Average	Fraction of Foreign Banks 1995	2003	Average	Asset Share of Foreign Banks 1995	2003	Average
Argentina	26	26	32.44	22.03%	34.21%	32.05%	22.51%	33.56%	38.43%
Bangladesh	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Barbados	2	4	2.22	50.00%	100.00%	55.56%		100.00%	93.51%
Bolivia	5	7	6.00	29.41%	53.85%	42.24%	8.34%	34.98%	28.80%
Brazil	37	52	50.44	22.70%	34.44%	30.58%	4.80%	21.25%	15.57%
Bulgaria	5	16	10.89	18.52%	57.14%	38.65%	0.70%	74.81%	33.98%
Chile	16	13	15.44	50.00%	48.15%	51.69%	5.58%	35.68%	22.27%
Colombia	8	7	9.44	19.05%	24.14%	24.92%	10.21%	12.29%	19.89%
Costa Rica	8	10	9.56	14.81%	20.83%	18.40%	24.82%	23.93%	32.58%
Czech Republic	14	14	14.89	41.18%	53.85%	48.17%	48.92%	86.26%	66.17%
Ecuador	7	5	6.78	17.95%	22.73%	21.58%		12.28%	7.92%
El Salvador	2	8	5.11	16.67%	57.14%	35.01%		65.06%	22.46%
Haiti	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Honduras	4	5	4.78	19.05%	25.00%	21.30%	2.91%	9.92%	5.28%
Hungary	20	25	24.56	60.61%	89.29%	76.67%	29.20%	94.17%	79.52%
India	5	7	5.89	6.41%	9.09%	7.60%	0.36%	5.01%	3.52%
Indonesia	26	26	26.33	25.74%	37.14%	30.53%	3.51%	20.90%	8.46%
Iran	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Jamaica	2	3	2.33	20.00%	33.33%	24.69%		51.25%	49.46%
Jordan	1	1	1.00	11.11%	10.00%	10.12%	1.50%	1.51%	1.43%
Kuwait	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Latvia	2	6	5.22	8.70%	28.57%	23.48%	17.45%	43.48%	47.77%
Lithuania	0	6	2.67	0.00%	66.67%	27.19%	0.00%	91.95%	46.07%
Macedonia	2	8	4.00	16.67%	47.06%	26.89%		49.43%	31.74%
Malaysia	15	13	14.11	30.61%	28.26%	28.59%	19.15%	15.69%	17.13%
Mexico	13	21	19.11	29.55%	53.85%	43.17%	15.13%	81.76%	34.26%
Moldova	1	6	4.00	9.09%	42.86%	29.65%	18.82%	36.20%	45.88%
Mongolia	0	1	0.11	0.00%	14.29%	1.59%	0.00%	20.32%	2.26%
Oman	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Panama	54	49	52.22	70.13%	67.12%	67.89%	79.08%	61.26%	65.29%
Peru	10	12	12.44	45.45%	80.00%	62.92%	31.10%	94.88%	69.37%
Philippines	2	4	5.00	5.41%	10.81%	12.08%		15.54%	10.77%
Poland	14	34	26.89	29.17%	69.39%	53.32%	10.21%	73.99%	47.11%
Qatar	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Romania	4	19	12.67	20.00%	70.37%	44.30%	46.18%	50.43%	33.34%
Russia	20	36	27.11	9.09%	16.82%	12.28%	14.22%	10.62%	16.15%
Slovakia	9	16	11.22	42.86%	94.12%	57.18%	1.18%	97.43%	40.41%
Sri Lanka	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Trinidad and Tobago	2	3	2.67	25.00%	30.00%	28.33%	14.23%	11.69%	14.38%
Turkey	6	9	8.11	11.11%	21.95%	14.81%		2.55%	2.45%
Uruguay	34	30	33.78	79.07%	81.08%	78.80%	31.79%	52.52%	43.68%
Venezuela	6	13	11.78	11.54%	28.26%	21.85%	8.17%	37.76%	27.65%
Yemen	0	0	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Yugoslavia	1	14	4.78	3.23%	31.11%	12.12%		40.09%	21.20%
Mean Developing	7.18	10.06	9.10	25.65%	38.22%	31.38%	19.84%	37.96%	29.32%
Mean All	6.01	8.49	7.60	22.82%	34.05%	27.80%	17.96%	36.15%	27.52%

This table provides information on the number of local banks controlled by foreign owners ("Foreign Banks:" $ForBkNum$), their share in terms of institutions ("Fraction of Foreign Banks:" $ForBkNumS$), and the share of domestic banking assets held by foreign-controlled institutions ("Asset Share of Foreign Banks:" $ForBkAS$) in 1995, 2003, and the average over the sample period by country. Using geographical location and the IMF's classification into advanced and emerging economies we divide the countries into three subsamples which we report in separate panels (Advanced, Developing - Africa, and Developing ex Africa). Panel C contains the means for all developing countries and the overall sample.

Table 3: **Foreign Banks, Financial Dependence, and Growth**

Specification	1	2	3	4	5	6	7
Constant	-0.1206	-0.1205	-0.0159	-0.0166	-0.1209	-0.1215	-0.1209
	(0.0277)	(0.0291)	(0.7479)	(0.7402)	(0.0289)	(0.0275)	(0.0290)
$FinDep \cdot ForBkAS$	0.0556	0.0676	0.1006	0.1307			
	(0.0450)	(0.0094)	(0.0208)	(0.0018)			
$FinDep \cdot ForBkAS \cdot Dev$					0.0778		
					(0.0284)		
$FinDep \cdot ForBkAS \cdot Adv$					0.0564		
					(0.0535)		
$FinDep \cdot ForBkAS \cdot Low$						-0.0096	0.5572
						(0.8820)	(0.1731)
$FinDep \cdot ForBkAS \cdot Mid$						0.0787	0.0763
						(0.0291)	(0.0322)
$FinDep \cdot ForBkAS \cdot High$						0.0635	0.0575
						(0.0340)	(0.0477)
Share	-0.2824	-0.2223	-0.3829	-0.3478	-0.2202	-0.2853	-0.2202
	(0.0000)	(0.0010)	(0.0000)	(0.0006)	(0.0012)	(0.0000)	(0.0012)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,738	8,304	6,464	5,030	8,304	9,738	8,304
Adjusted R^2	23.20%	26.41%	24.85%	29.05%	26.41%	23.21%	26.43%
Sample Countries	All	All ex Afr.	Developing	Dev. ex Afr.	All ex Afr.	All	All ex Afr.
Number of Countries	81	63	59	41	63	81	63

The preceding table reports coefficient estimates by OLS for our main model in Equation (1)

$$Growth_{ijt} = \alpha_0 + \gamma FinDep_i \cdot ForBkAS_{jt} + \delta Share_{ijt-1} + \sum_{it} \alpha_{it} 1_i \cdot 1_t + \sum_{jt} \beta_{jt} 1_j \cdot 1_t + \varepsilon_{ijt}$$

and their P-values in parentheses, which are computed on the basis of clustered standard errors adjusted for heteroskedasticity across industries and countries and correlation within. At the bottom we provide the number of country-year-industry observations, the adjusted R^2, details on the sample selection, and the number of countries for each specification. Since African countries typically have few active foreign institutions and often dysfunctional local banking systems we report most of the estimations both with and without the African subsample as a first robustness check.

The dependent variable is industry i's growth in country j and year t ($Growth_{ijt}$), which is defined as the first difference in the logarithm of the industry's annual real value added. The key explanatory variable interacts an index of financial dependence $FinDep_i$ of industry i, which we measure as the median of the average fraction of investment not financed through retained earnings for US firms from 1980 to 1989 (see Rajan and Zingales, 1998), with $ForBkAS_{jt}$, the share of local banking assets in country j held by foreign institutions in year t. The control variables are the lagged share of industry i in country j ($Share_{ijt-1}$), which corrects for base effects in industry growth, and industry-year ($1_i \cdot 1_t$) and country-year ($1_j \cdot 1_t$) binary variables, which take values of 1 for industry j in country i and year t, and 0 otherwise to control for time, country, and industry fixed effects. In Specifications 5 to 7 we further decompose foreign-bank effects by interacting $ForBkAS_{jt}$ with binary variables indicating the host countries' level of economic development ("Developing" Dev or "Advanced" Adv) or their income levels (Low, Mid, and $High$), respectively, using the IMF's country classification.

Table 4: **Foreign Banks, Financial Dependence, and Growth: Robustness Tests**

Specification	1	2	3	4	5	6	7	8	9	10
Constant	-0.1184	-0.1159	-0.1210	-0.0154	0.2617	-0.1171	-0.0789	-0.0821	-0.0823	-0.0852
	(0.0280)	(0.0307)	(0.0284)	(0.7438)	(0.5636)	(0.0307)	(0.0336)	(0.0274)	(0.0280)	(0.0233)
$FinDep \cdot ForBkAGDP$	1.0946									
	(0.0368)									
$FinDep \cdot DomBkAGDP$	0.1697									
	(0.0884)									
$FinDep \cdot ForBkAGDP \cdot Dev$		1.2385								
		(0.0661)								
$FinDep \cdot DomBkAGDP \cdot Dev$		0.0012								
		(0.9926)								
$FinDep \cdot ForBkAGDP \cdot Adv$		0.7261								
		(0.0956)								
$FinDep \cdot DomBkAGDP \cdot Adv$		0.3060								
		(0.0163)								
$FinDep \cdot ForBkAS$			0.0523	0.0507						
			(0.0594)	(0.0922)						
$FinDep \cdot ForBkAS \cdot 1_{25}$					2.8313					
					(0.0936)					
$FinDep \cdot ForBkAS \cdot 1_{75}$					0.1012					
					(0.0013)					
$FinDep1999 \cdot ForBkAS$						0.0491				
						(0.0391)				
$FinDep \cdot ForBkNum$							0.0530	0.0705		
							(0.0087)	(0.0018)		
$FinDep \cdot ForBkNumS$									0.0010	0.0011
									(0.1095)	(0.0893)
Share	-0.2942	-0.3016	-0.2562	-0.3931	-0.3578	-0.2837	-0.1254	-0.0613	-0.126	-0.0602
	(0.0000)	(0.0000)	0.0001	(0.0000)	(0.0000)	(0.0000)	(0.0051)	(0.2157)	(0.0050)	(0.2236)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,599	9,599	9,238	7,826	4,063	9,738	11,042	9,543	11,042	9,543
Adjusted R^2	23.37%	23.39%	24.20%	25.68%	21.82%	23.20%	18.87%	21.10%	18.85%	21.06%
Sample Countries	All	All	$N > 50$	$ForBk > 0$	$ForBk$	All	All	Ex Afr.	All	Ex Afr.
Number of Countries	79	79	61	66	53	81	87	69	87	69

The above table summarizes the results from various robustness tests in terms of sample selection and variable definitions for our main model in Table 3. We first decompose the ratio of banking assets to GDP into its foreign-held ($ForBkAGDP$) and domestic ($DomBkAGDP$) components, which we also interact with indicators for a country's level of economic development (Specifications 1 and 2). Next, we restrict our sample to countries with more than 50 industry-year observations ($N > 50$) or only those with active foreign banks ($ForBkAS > 0$). In Specification 5 we only include country-year observations in the first and fourth quartiles of foreign-bank penetration ($ForBkAS \cdot 1_{25}$ and $ForBkAS \cdot 1_{75}$, respectively). Specification 6 uses an updated version of the financial-dependence variable $FinDep1999_i$, which measures financial dependence as the fraction of investment not financed through retained earnings for US firm from 1980 to 1999, provided in Kroszner et al. (2007). To assess the robustness of our variable measuring the degree of foreign-bank penetration we alternatively use the number of foreign institutions (Specifications 7 and 8: $ForBkNum$) and their share of the local banking sector in terms of banks (Specifications 9 and 10: $ForBkNumS$); in these specifications we drop the industry-year fixed effects to avoid collinearity problems due to lack of variation in the number of foreign banks and to achieve better identification. For further details, see the notes to Table 3.

Table 5: **Foreign-Bank Entry**

Specification	1	2	3	4	5	6	7	8
Constant	-0.1184	-0.1178	-0.1161	-0.1206	-0.1204	-0.1206	-0.1205	-0.1202
	(0.0124)	(0.0126)	(0.0131)	(0.0279)	(0.0280)	(0.0279)	(0.0292)	(0.0294)
$FinDep \cdot Entry$	-0.0347							
	(0.0206)							
$FinDep \cdot DeNovo$		0.0438						
		(0.1008)						
$FinDep \cdot AddBk$		-0.0380						
		(0.0118)						
$FinDep \cdot DeNovo \cdot Dev$			0.0730					
			(0.1437)					
$FinDep \cdot DeNovo \cdot Adv$			0.0415					
			(0.1623)					
$FinDep \cdot AddBk \cdot Dev$			-0.046					
			(0.0051)					
$FinDep \cdot AddBk \cdot Adv$			-0.004					
			(0.8374)					
$FinDep \cdot ForBkAS \cdot Entry$				0.0580				
				(0.0413)				
$FinDep \cdot ForBkAS \cdot DeNovo$					0.1328			
					(0.0029)			
$FinDep \cdot ForBkAS \cdot AddBk$					0.0524			
					(0.0790)			
$FinDep \cdot ForBkAS \cdot Entry \cdot Dev$						0.0570	0.0679	
						(0.0930)	(0.0539)	
$FinDep \cdot ForBkAS \cdot Entry \cdot Adv$						0.0600	0.0543	
						(0.1393)	(0.1768)	
$FinDep \cdot ForBkAS \cdot DeNovo \cdot Dev$								0.1205
								(0.0108)
$FinDep \cdot ForBkAS \cdot DeNovo \cdot Adv$								0.1236
								(0.2072)
$FinDep \cdot ForBkAS \cdot AddBk \cdot Dev$								0.0624
								(0.1070)
$FinDep \cdot ForBkAS \cdot AddBk \cdot Adv$								0.0508
								(0.2198)
Share	-0.3182	-0.3207	-0.3288	-0.282	-0.2825	-0.2822	-0.2188	-0.2196
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0013)	(0.0012)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,042	11,042	11,042	9,738	9,738	9,738	8,304	8,304
Adjusted R^2	22.67%	22.69%	22.71%	23.20%	23.20%	23.20%	26.40%	26.40%
Africa	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Number of Countries	87	87	87	81	81	81	63	63

This table reports the results from estimating the incidence of foreign-bank entry on local economic growth. To this end, we create three binary variables capturing different aspects of foreign entry: $DeNovo$ which takes the value 1 from the year onwards the first foreign bank moves into one of the 18 countries without an international-banking presence in 1995 and 0 otherwise, $AddBk$ which takes the value 1 whenever at least one additional foreign bank enters a given country with a foreign bank presence in 1995 and 0 otherwise, and $Entry$ which takes the value 1 from the time onwards that a foreign bank enters a given country and 0 otherwise. We first interact the entry variables with $FinDep$ to assess pure entry effects and then weight those by the importance of foreign banks in a country by repeating the analysis with $FinDep \cdot ForBkAS$. All estimations are by OLS with country-year and industry-year fixed effects; the reported P-values are computed from clustered standard errors that are adjusted for heteroscedasticity across and correlation within countries and industries. See Section 5 for a description of the variables and the notes to Table 3 for further methodological details.

Table 6: **The Mode of Entry**

Specification	1	2	3	4	5	6	7	8
Constant	-0.1324	-0.1327	-0.1264	-0.1269	-0.1247	-0.1269	-0.1254	-0.1271
	(0.0060)	(0.0060)	(0.0180)	(0.0172)	(0.0186)	(0.0192)	(0.0178)	(0.0185)
$FinDep \cdot ForBkAS \cdot 1_{1995}$			-0.0475	-0.0333				
			(0.4043)	(0.5092)				
$FinDep \cdot ForBkAS \cdot 1_{M\&A}$	0.1316		0.1284					
	(0.0028)		(0.0041)					
$FinDep \cdot ForBkAS \cdot 1_{Green}$	-0.0008		0.2642					
	(0.9976)		(0.2482)					
$FinDep \cdot ForBkAS \cdot (1_{Green} + 1_{M\&A})$		0.1256		0.1504				
		(0.0018)		(0.0004)				
$FinDep \cdot ForBkAS \cdot 1_{1995} \cdot Dev$					-0.0916	-0.0274	-0.0713	-0.0182
					(0.2563)	(0.7748)	(0.3389)	(0.8488)
$FinDep \cdot ForBkAS \cdot 1_{1995} \cdot Adv$					0.0263	0.0127	0.0166	0.0047
					(0.5608)	(0.7688)	(0.6905)	(0.9029)
$FinDep \cdot ForBkAS \cdot 1_{M\&A} \cdot Dev$					0.1639	0.1402		
					(0.0037)	(0.0186)		
$FinDep \cdot ForBkAS \cdot 1_{M\&A} \cdot Adv$					0.0999	0.0861		
					(0.0532)	(0.0722)		
$FinDep \cdot ForBkAS \cdot 1_{Green} \cdot Dev$					0.2629	0.3117		
					(0.2817)	(0.1815)		
$FinDep \cdot ForBkAS \cdot 1_{Green} \cdot Adv$					6.8507	6.5527		
					(0.1135)	(0.1351)		
$FinDep \cdot ForBkAS \cdot (1_{Green} + 1_{M\&A}) \cdot Dev$							0.1768	0.1598
							(0.0005)	(0.0037)
$FinDep \cdot ForBkAS \cdot (1_{Green} + 1_{M\&A}) \cdot Adv$							0.0948	0.0812
							(0.0629)	(0.0838)
Share	-0.3533	-0.3481	-0.3356	-0.3351	-0.3379	-0.2214	-0.3369	-0.2276
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0032)	(0.0000)	(0.0022)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,787	9,295	7,570	7,905	7,570	6,441	7,905	6,701
Adjusted R^2	19.89%	21.71%	18.50%	19.65%	18.54%	21.13%	19.66%	22.40%
Africa	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Number of Countries	84	85	73	73	73	54	73	57

This table summarizes the results from estimating the effects of foreign banks' mode of entry on local economic growth. To this end, we create the following three indicator variables capturing the mode of foreign entry: 1_{Green} and $1_{M\&A}$ which for each entering institution after 1995 take the value 1 from the year of entry onwards for greenfield and acquisition, respectively, and 0 otherwise, and 1_{1995} which takes the value 1 for all active foreign banks in 1995 onwards. Note that the three binary variables sum to one so that we can split the share of domestic banking assets held by foreign institutions according to their mode of entry, i.e., $ForBkAS_{jt} = ForBkAS_{jt} \cdot 1_{1995,jt} + ForBkAS_{jt} \cdot 1_{Green,jt} + ForBkAS_{jt} \cdot 1_{M\&A,jt}$. In the analysis, we replace $ForBkAS$ in the $FinDep \cdot ForBkAS$ interaction term with any combination of foreign banks' asset share by mode of entry. All estimations are by OLS with country-year and industry-year fixed effects; the reported P-values are computed from clustered standard errors that are adjusted for heteroscedasticity across and correlation within countries and industries. See Section 5 for a description of the variables and the notes to Table 3 for further methodological details.

Table 7: **Local Credit-Market Institutions**

Specification	1	2	3	4	5	6	7	8	9	10
Constant	-0.0782	-0.0798	-0.0821	-0.0804	-0.0794	-0.0838	-0.1073	-0.1049	-0.119	-0.1079
	(0.0354)	(0.0321)	(0.0280)	(0.0312)	(0.0328)	(0.0251)	(0.0497)	(0.0518)	(0.0240)	(0.0297)
$FinDep \cdot ForBkAS$	0.0688		0.0478		0.0539		0.0643		0.0623	
	(0.0114)		(0.0713)		(0.0523)		(0.0151)		(0.0267)	
$FinDep \cdot ForBkAS \cdot Dev$		0.128		0.1278		0.1171		0.1197		0.173
		(0.0024)		(0.0010)		(0.0087)		(0.0058)		(0.0003)
$FinDep \cdot ForBkAS \cdot Adv$		0.0389		0.008		0.0106		0.013		0.0056
		(0.2859)		(0.8262)		(0.7287)		(0.6551)		(0.8570)
$FinDep \cdot CredReg$	-0.0061									
	(0.6249)									
$FinDep \cdot CredReg \cdot Dev$		-0.0246								
		(0.1777)								
$FinDep \cdot CredReg \cdot Adv$		0.0285								
		(0.0644)								
$FinDep \cdot CredBur$			0.0146							
			(0.1489)							
$FinDep \cdot CredBur \cdot Dev$				-0.0216						
				(0.2588)						
$FinDep \cdot CredBur \cdot Adv$				0.0356						
				(0.0003)						
$FinDep \cdot CredRts$					0.0049					
					(0.2465)					
$FinDep \cdot CredRts \cdot Dev$						-0.0016				
						(0.8302)				
$FinDep \cdot CredRts \cdot Adv$						0.0151				
						(0.0003)				
$FinDep \cdot DebtEnf$							0.0006			
							(0.0251)			
$FinDep \cdot DebtEnf \cdot Dev$								0.0005		
								(0.3431)		
$FinDep \cdot DebtEnf \cdot Adv$								0.0008		
								(0.0108)		
$FinDep \cdot Form$									-0.0112	
									(0.1609)	
$FinDep \cdot Form \cdot Dev$										-0.0174
										(0.0425)
$FinDep \cdot Form \cdot Adv$										0.0023
										(0.8218)
Share	-0.1285	-0.0489	-0.1296	-0.052	-0.1482	-0.0783	-0.2352	-0.2636	-0.264	-0.2795
	(0.0070)	(0.3387)	(0.0069)	(0.3105)	(0.0026)	(0.1396)	(0.0006)	(0.0007)	(0.0001)	(0.0001)
Industry-Year Dummies	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,278	7,933	9,278	7,933	8,779	7,456	7,906	7,445	8,650	7,642
Adjusted R^2	19.50%	22.12%	19.51%	22.15%	19.59%	22.37%	27.55%	28.63%	23.96%	26.52%
Africa	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number of Countries	76	59	76	59	76	59	57	52	67	54

This table reports the results from interacting financial dependence with local institutions contributing to well-functioning credit markets in addition to $ForBkAS$. Such institutions include the existence of public credit registries (binary variable $CredReg$) or private credit bureaus (binary variable $CredBur$) taken from Djankov et al. (2007), an index of creditor rights ($CredRts$, also from Djankov et al., 2007), a measure of the quality of debt-contract enforcement ($DebtEnf$ from Djankov et al., 2006), and an index of the degree of legal (procedural) formalism ($Form$) derived in Djankov et al. (2003). As before, we distinguish between developing (Dev) and advanced (Adv) host countries according to the IMF's country classification. See Section 5 for a description of the variables and the notes to Table 3 for further methodological details.

Table 8: **Foreign Banks and Banking Crises**

Specification	1	2	3	4	5	6	7	8	9
Constant	-0.1208	-0.1148	-0.1182	-0.1169	-0.1163	-0.1154	-0.1124	-0.1172	-0.1137
	(0.0105)	(0.0255)	(0.0283)	(0.0258)	(0.0270)	(0.0252)	(0.0310)	(0.0303)	(0.0306)
$FinDep \cdot Crisis$	-0.0473	-0.0437	-0.0168						
	(0.0655)	(0.1081)	(0.5580)						
$FinDep \cdot Crisis \cdot Africa$				-0.1462					
				(0.0320)					
$FinDep \cdot Crisis \cdot Dev$				-0.0362	-0.0359				
				(0.2684)	(0.2732)				
$FinDep \cdot Crisis \cdot Adv$				0.0729	0.0672				
				(0.1335)	(0.1585)				
$FinDep \cdot ForBkAS$		0.0557	0.0666				0.0725	0.0699	
		(0.0429)	(0.0109)				(0.0058)	(0.0077)	
$FinDep \cdot ForBkAS \cdot Africa$				0.0439					0.0628
				(0.4991)					(0.3427)
$FinDep \cdot ForBkAS \cdot Dev$				0.0872	0.0824				0.0958
				(0.0164)	(0.0207)				(0.0089)
$FinDep \cdot ForBkAS \cdot Adv$				0.0549	0.0485				0.0574
				(0.0716)	(0.0995)				(0.0557)
$FinDep \cdot Crisis \cdot Low$						-0.1294			
						(0.0979)			
$FinDep \cdot Crisis \cdot Mid$						-0.0464			
						(0.1390)			
$FinDep \cdot Crisis \cdot High$						0.0727			
						(0.1347)			
$FinDep \cdot ForBkAS \cdot Low$						0.0379			
						(0.5708)			
$FinDep \cdot ForBkAS \cdot Mid$						0.0836			
						(0.0212)			
$FinDep \cdot ForBkAS \cdot High$						0.0533			
						(0.0771)			
$FinDep \cdot ForBkAS \cdot Crisis$							-0.2334	-0.0875	
							(0.0469)	(0.4920)	
$FinDep \cdot ForBkAS \cdot Crisis \cdot Africa$									-0.3393
									(0.0478)
$FinDep \cdot ForBkAS \cdot Crisis \cdot Dev$									-0.2229
									(0.1576)
$FinDep \cdot ForBkAS \cdot Crisis \cdot Adv$									0.2122
									(0.3538)
Share	-0.3199	-0.2841	-0.2229	-0.2916	-0.2245	-0.2897	-0.2849	-0.2226	-0.2868
	(0.0000)	(0.0000)	(0.0010)	(0.0000)	(0.0010)	(0.0000)	(0.0000)	(0.0010)	(0.0000)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,042	9,738	8,304	9,738	8,304	9,738	9,738	8,304	9,738
Adjusted R^2	22.67%	23.23%	26.41%	23.32%	26.44%	23.30%	23.26%	26.41%	23.31%
Africa	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes
Number of Countries	87	81	63	81	63	81	81	63	81

This table reports the results from analyzing the incidence of local banking crises on domestic growth in the presence of foreign banks. Using the list of banking crises compiled in Caprio and Klingebiel (2003) we define a binary variable $Crisis$ which takes the value 1 in the year of the crisis' inception and the two subsequent years. We again decompose the effects by using binary variables for the host countries' level of economic development ("Developing" Dev or "Advanced" Adv) or their income levels (Low, Mid, and $High$), respectively, using the IMF's country classification. Sometimes we also distinguish between developing countries in Africa ($Africa$) and the rest of the world (Dev with slight abuse of notation). See the notes to Table 3 for further methodological details.

Table 9: **Foreign Banks and Financial Development**

Specification	1	2	3	4	5	6	7	8	9	10
Constant	-0.11	-0.1091	-0.1202	-0.1198	-0.1176	-0.1179	-0.1192	-0.1197	-0.1138	-0.115
	(0.0389)	(0.0414)	(0.0299)	(0.0317)	(0.0323)	(0.0328)	(0.0305)	(0.0319)	(0.0394)	(0.0386)
$FinDep \cdot ForBkAS$	0.0656		0.0628		0.0675		0.0561		0.0668	
	(0.0259)		(0.0150)		(0.0102)		(0.0269)		(0.0391)	
$FinDep \cdot PrivCredit$	0.0365									
	(0.0195)									
$FinDep \cdot ForBkAS \cdot Dev$		0.1268		0.0883		0.1053		0.0907		0.0954
		(0.0019)		(0.0196)		(0.0051)		(0.0154)		(0.1317)
$FinDep \cdot ForBkAS \cdot Adv$		0.0223		0.0453		0.0408		0.0315		0.0519
		(0.4475)		(0.1244)		(0.2220)		(0.2529)		(0.0899)
$FinDep \cdot PrivCredit \cdot Dev$		0.024								
		(0.5373)								
$FinDep \cdot PrivCredit \cdot Adv$		0.0448								
		(0.0124)								
$FinDep \cdot StMktCap$			0.0032							
			(0.8220)							
$FinDep \cdot StMktCap \cdot Dev$				0.0041						
				(0.8365)						
$FinDep \cdot StMktCap \cdot Adv$				0.011						
				(0.5400)						
$FinDep \cdot StMktTurn$					0.0257					
					(0.0215)					
$FinDep \cdot StMktTurn \cdot Dev$						0.0145				
						(0.4969)				
$FinDep \cdot StMktTurn \cdot Adv$						0.0327				
						(0.0066)				
$FinDep \cdot StValTrad$							0.0245			
							(0.1266)			
$FinDep \cdot StValTrad \cdot Dev$								0.044		
								(0.1844)		
$FinDep \cdot StValTrad \cdot Adv$								0.0327		
								(0.0683)		
$FinDep \cdot PrivBond$									0.0973	
									(0.0293)	
$FinDep \cdot PrivBond \cdot Dev$										0.1192
										(0.2838)
$FinDep \cdot PrivBond \cdot Adv$										0.1016
										(0.0357)
Share	-0.305	-0.2481	-0.2205	-0.2369	-0.2382	-0.258	-0.2448	-0.2647	-0.288	-0.2726
	(0.0000)	(0.0006)	(0.0003)	(0.0006)	(0.0001)	(0.0002)	(0.0002)	(0.0003)	(0.0045)	(0.0067)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,400	7,966	8,892	7,971	8,764	7,843	8,980	8,038	4,693	4,671
Adjusted R^2	23.20%	26.54%	24.48%	26.73%	24.81%	27.13%	24.84%	27.07%	27.13%	27.30%
Africa	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number of Countries	79	61	70	58	69	57	71	59	33	32

This table reports the results from including an interaction term of financial dependence with the host country's level of financial development, i.e., $FinDep_i \cdot FinDev_{jt}$, to our main model in Table 3 in addition to the key variable $FinDep \cdot ForBkAS$. We measure the financial development $FinDev_{jt}$ of country j in year t in terms of local credit to the private sector as a fraction of GDP ($PrivCredit$), local stock market capitalization as a fraction of GDP ($StMktCap$), local stock market turnover as a fraction of market capitalization ($StMktTurn$), local stock value traded as a fraction of GDP ($StValTrad$), and local bonds outstanding issued by private firms as a fraction of GDP ($PrivBond$). As before, we distinguish between developing (Dev) and advanced (Adv) host countries according to the IMF's country classification and drop the African countries, which often have dysfunctional financial systems, from the sample in the corresponding estimations. See Section 7 for a description of the variables and the notes to Table 3 for further methodological details.

Table 10: **Financial Stability, Legal Institutions, and Government Effectiveness**

Specification	1	2	5	3	4	6	7	8
Constant	-0.0938	-0.0986	-0.1074	-0.1112	-0.1073	-0.1134	-0.1031	-0.1017
	(0.0750)	(0.0582)	(0.0438)	(0.0291)	(0.0347)	(0.0321)	(0.0441)	(0.0473)
$FinDep \cdot ForBkAS$	0.0592		0.0442	0.0594		0.0564	0.0489	
	(0.0318)		(0.1097)	(0.0308)		(0.0382)	(0.0771)	
$FinDep \cdot ForBkAS \cdot Dev$		0.1271			0.1227			0.1099
		(0.0026)			(0.0036)			(0.0137)
$FinDep \cdot ForBkAS \cdot Adv$		0.0112			0.0118			0.0101
		(0.7042)			(0.6861)			(0.7318)
$FinDep \cdot ICRGFin$	0.0045							
	(0.0034)							
$FinDep \cdot ICRGFin \cdot Dev$		0.0022						
		(0.2667)						
$FinDep \cdot ICRGFin \cdot Adv$		0.0032						
		(0.0554)						
$FinDep \cdot ICRGPol$			0.0016					
			(0.0094)					
$FinDep \cdot ICRGLaw$				0.0206				
				(0.0004)				
$FinDep \cdot ICRGLaw \cdot Dev$					0.0131			
					(0.1530)			
$FinDep \cdot ICRGLaw \cdot Adv$					0.0198			
					(0.0033)			
$FinDep \cdot ICRGGov$						0.0218		
						(0.0113)		
$FinDep \cdot ICRGBur$							0.0263	
							(0.0004)	
$FinDep \cdot ICRGBur \cdot Dev$								0.0261
								(0.0676)
$FinDep \cdot ICRGBur \cdot Adv$								0.0303
								(0.0008)
Share	-0.306	-0.2417	-0.3003	-0.3012	-0.2427	-0.3877	-0.3142	-0.2493
	(0.0000)	(0.0006)	(0.0000)	(0.0000)	(0.0005)	(0.0000)	(0.0000)	(0.0004)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,533	8,209	9533	9533	8209	7879	9533	8209
Adjusted R^2	23.59%	26.81%	0.2355	0.2359	0.2682	0.2393	0.236	0.2684
Africa	Yes	No	Yes	Yes	No	Yes	Yes	No
Number of Countries	79	63	79	79	63	59	79	63

This table reports the results from including an interaction term of financial dependence with various measures of the host country's level of institutional development, i.e., $FinDep_i \cdot InstDev_{jt}$, to our main model (see Table 3). We measure the institutional development $InstDev_{jt}$ of country j in year t with the ICRG index family of financial, economic, and political stability and various subindices. $ICRGFin$ and $ICRGPol$ are the financial and political stability indices, respectively, whereas $ICRGLaw$, $ICRGGov$, and $ICRGBur$ measure a host country's quality of law enforcement, government effectiveness, and quality of bureaucracy. The higher the indices the greater a country's stability or its institutional development. See Section 7 for a description of the variables and the notes to Table 3 for further methodological details.

Table 11: **Instrumental-Variable Estimation and Industry Characteristics**

Specification	1	2	3	4	5	6	7	8
Constant	-0.0751	0.1835	-0.1174	-0.1198	-0.1192	-0.1227	-0.1211	-0.1195
	(0.1465)	(0.2334)	(0.0339)	(0.0285)	(0.0312)	(0.0260)	(0.0271)	(0.0293)
$FinDep \cdot \widehat{ForBkAS}$	0.3264							
	(0.0095)							
$FinDepYng \cdot ForBkAS$		0.0091						
		(0.6342)						
$FinDepMat \cdot ForBkAS$			0.0908					
			(0.0142)					
$FinDep \cdot ForBkAS$				0.0548	0.0554	0.0449	0.0423	0.0548
				(0.0484)	(0.0451)	(0.0971)	(0.1632)	(0.0474)
$Intang \cdot ForBkAS$				-0.0453				
				(0.5991)				
$Tang \cdot ForBkAS$					-0.0195			
					(0.8422)			
$Dur \cdot ForBkAS$						0.0301		
						(0.0710)		
$R\&DInt \cdot ForBkAS$							0.2201	
							(0.2054)	
$CapInt \cdot ForBkAS$								-0.0002
								(0.7505)
Share	-0.2967	-0.271	-0.27	-0.2824	-0.2825	-0.2798	-0.2829	-0.2836
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,150	9,389	9,347	9,738	9,738	9,738	9,738	9,738
Adjusted R^2	23.77%	23.91%	22.95%	23.20%	23.20%	23.22%	23.20%	23.20%
Africa	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Countries	69	81	81	81	81	81	81	81

This table reports the results from further robustness tests. To assess potential joint-endogeneity problems Specification 1 reports the results from using instrumental-variable (IV) estimation for our main model in Table 3. We first regress $ForBkAS$ on a constant, and The Heritage Foundation's Financial Freedom and Center for Systemic Peace Polity Indices by OLS. We then use the fitted values $\widehat{ForBkAS}$ from the first-stage regression in lieu of $ForBkAS$ in our main specification. The other estimations assess the robustness of our financial-dependence variable $FinDep$ by separately computing the benchmark for young ($FinDepYng$: only firms public for less than 10 years) and mature ($FinDepYg$: only firms public for at least 10 years) companies and by adding interaction terms of $ForBkAS$ with industry characteristics such as intangible ($Intang$) or tangible ($Tang$) asset dominance, an indicator variable for durable goods (Dur), R&D intensity, i.e. R&D expenditure as a fraction of assets ($R\&D$), and capital intensity ($CapInt$) to our main specification. See Section 8 for a description of the variables and the notes to Table 3 for further methodological details.

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