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## Bank ownership around the world

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# Bank Ownership Around the World

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# Bank Ownership Around the World

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## Abstract\*

This paper builds a dataset on bank ownership that covers more than 6,500 banks in 181 countries (59 low-income economies, 72 middle-income economies, and 50 high-income economies) over 1995-2020. I show that until 2010, there was a reduction in state-ownership of banks and an increase foreign ownership. However, the Global Financial Crisis interrupted or reversed these trends. At the country level, the relationship between bank ownership and each of GDP growth and financial depth is mixed: regressions with country fixed effects indicate that the presence of foreign-owned banks is positively associated with future economic growth and state-ownership is negatively but not robustly associated with future financial depth. Bank-level regressions show that state-owned banks are less profitable and have a higher share of non-performing loans than their private (domestic or foreign) counterparts. State-owned and foreign-owned banks located in developing economies pay and charge lower interest rates than their domestic private counterparts. There is also evidence that state-owned banks stabilize credit in the presence of domestic shocks while foreign banks amplify external shocks. In terms of domestic shocks, foreign banks are not significantly different from their domestic private counterparts.

**JEL Codes:** G21 ; G28 ; G32 ; F21, F36 ; O16

**Keywords:** State-owned banks; Foreign-owned banks; Economic growth; Financial depth; Non-performing loans; Credit cyclicality

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## 1 Introduction

This paper builds and describes a novel dataset on bank ownership covering more than 6,500 banks in 181 countries (50 high-income economies, 72 middle-income economies, and 59 low-income economies) over 1995-2020. The paper focuses on both state and foreign ownership and, for each bank-year included in the sample, it codes which fraction of each bank is owned by government entities or foreign-owned. Bank-level data are also aggregated at the country-year level to form macro-level indicators of bank ownership. The paper then uses both bank-level data and country-level data to study the links between bank ownership and country characteristics, the relationship between bank ownership and each of economic growth and financial depth, the relationship between bank ownership and bank performance, and the role of bank ownership in the transmission of domestic and international macroeconomic shocks.

Understanding, documenting, and analyzing the impact of bank ownership is particularly important for low-income economies that are often characterized by small bank-based financial sectors with pervasive financial frictions. This paper enhances existing empirical research by incorporating more current data and considering the simultaneous influence of both foreign and government-owned banks, which previous studies have seldom examined together (Cull et al., 2018).

The late 1980s and early 1990s were characterized by a sea change in the consensus view on the benefits of financial globalization and the role of the state in finance. Policy reforms based on this emerging consensus resulted in significant changes in bank ownership across both developed and developing economies. Privatization led to a reduction of the role of the state in the financial sector and more open capital markets led to an increase in the share of banks owned by foreigners. In high-income economies, the share of state-owned banks decreased from 15% in 1995 to 6% in 2008. Over the same period the share of foreign banks increased from 19% to 34%.<sup>1</sup> In emerging and developing economies, state ownership of banks decreased from 24% in

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<sup>1</sup> These are simple cross-country averages using the SOE1 and FOR1 measures of ownership described in Section 2.

1995 to 14% in 2015 and foreign ownership increased from 24% in 1995 to 38% in 2010.

These trends were then interrupted or reversed by the Global Financial Crisis (GFC). In the aftermath of the GFC, bank nationalization led to an increase of state ownership which, in advanced economies, peaked at 9% in 2014 and it then decreased again, reaching 5% in 2020. The presence of foreign banks, instead, remained stable around 32-33% over 2009-2020. In developing and emerging economies, the presence of state-owned banks increased slightly to 15-16% over 2016-2020. The share of foreign banks hovered around 38% over 2010-2013 and then decreased to 36% over 2013-20.<sup>2</sup>

There are different views on the costs and benefits of foreign-owned and state-owned banks. On the one hand, entry of foreign-owned banks can bring new technology, risk management techniques, political independence, and foster competition and efficiency. Levine (1996) highlights three channels through which foreign banks can ameliorate financial frictions and improve financial development: (i) competition that spurs domestic banks to cut costs and improve quality; (ii) incentives for better auditing and rating institutions; and (iii) pressure on governments to enhance regulation and supervision. These potential benefits are particularly important in low-income economies that tend to have underdeveloped domestic banking sectors (Goldberg, 2004). Thanks to diversification, foreign banks are also likely to be less sensitive to local shocks (Galindo et al., 2005). On the other hand, foreign-owned banks might be poorly suited to process soft information and thus reduce access to finance for small and opaque firms that operate in poor countries (Detragiache et al., 2008). Moreover, foreign banks can act as propagators of external financial shocks (IMF, 2009 and Adams-Kane et al., 2017).

The debate on the potential role of state-owned bank is, if possible, even more heated than that on the role of foreign banks (for surveys, see La Porta et al., 2022 and Levy Yeyati et al., 2007). While state-owned banks can play a key role in addressing market

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<sup>2</sup> I also looked at small (defined by using different thresholds of total GDP) low-income economies to see if my data allow to track the decline of correspondent banks documented by Rice et al. (2020). But since these banks tend to be small, the decline cannot be observed in the aggregated data.

failures and promoting economic growth (this is the social or development view; see Atkinson and Stiglitz, 1980 and Gerschenkron, 1962), agency costs and political failures can lead to inefficiencies and resource misallocation (Shleifer and Vishny, 1994, World Bank, 2001, Kornai, 1979).

### *Related Literature*

The empirical literature on the effects of foreign and government ownership of banks is vast and I will not survey it here (for a recent survey, see Cull et al. 2018). I will however describe a few papers that are closely related to my analysis. La Porta et al. (2002) built a country-level dataset on state ownership of banks that goes back to 1970 and, using a cross-section of countries, showed that state ownership is associated with lower future financial depth and GDP growth. The results of La Porta et al. (2002) could be affected by the presence of unobserved factors that are jointly correlated with state ownership of banks and the outcome of interest. Levy Yeyati et al. (2007) try to address this issue by controlling for country fixed effects and find a weak *positive* relationship between state-ownership and financial depth. In Panizza (2023), I use a longer sample and find no robust correlation between state-ownership of banks and either successive growth or financial depth.

In this paper, I augment the baseline regressions of Panizza (2023) by jointly controlling for government and foreign ownership of banks. When I do not include fixed effects, I find no significant correlation between bank ownership and each of economic growth and financial depth. However, regressions that include country fixed effects show that foreign ownership is significantly and positively correlated with growth and government ownership is negatively and significantly correlated with financial depth. This latter result is in line with the existing evidence that state-ownership of banks is negatively associated with the diffusion of bank branches and ATM machines (Beck et al., 2007). The finding that the presence of foreign bank is positively correlated with growth is consistent with the results of Bruno and Hauswald (2014) who study a sample of 81 advanced and emerging economies and Schnabel and Seckinger (2019) who focus on European banks.

While there are many papers that show that state-owned banks are less profitable than private banks (for a survey see Cull et al., 2018), in Panizza (2023) I show that recent data paint a more nuanced picture and that there are large differences across developing regions. Evidence on foreign banks is also mixed. In advanced economies, foreign banks are less profitable than domestic banks (Berger et al., 2000, Claessens et al., 2001) but the opposite is true in developing economies (Demirgüç-Kunt, and Huizinga, 1999, and Micco et al. 2007).<sup>3</sup> I find that state-owned banks are less profitable than domestic private banks. However, I do not find any difference between the profitability of foreign banks and domestic private banks in either advanced or developing economies. I also corroborate existing evidence that state-owned banks have more non-performing loans than their private counterparts. Instead, there is no difference between the share of non-performing loans of foreign and domestic private banks.

The fact that state-owned banks are less profitable and have more non-performing loans than their private counterparts suggests that there is an opportunity cost related to their presence. However, this does not necessarily mean that state-owned banks should be privatized. As these institutions may not maximize profits but social welfare, an efficient public bank could lose money in projects with negative private present value but with positive externalities or social benefits (Fernández-Arias et al., 2020). For instance, I show that state-owned banks located in developing economies pay lower interest rates and charge lower rates to their customers (the same applies to foreign-owned banks). The fact that state-owned banks pay lower interest rates is not necessarily a good thing because it could be driven by financial repression or by the presence of implicit or explicit guarantees that distort competition. However, the fact that these state-owned banks also charge lower rates suggests that borrowers can potentially benefit from their presence.

I also explore the role of bank ownership in the transmission of domestic and external shocks. There is evidence that lending by state-owned banks is less procyclical than lending by private banks (see Panizza, 2023 for recent results and a review of the

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<sup>3</sup> Claessens and Van Horen (2012) show that this heterogeneity depends on both bank and country characteristics.

literature). The evidence on foreign banks is instead mixed. There is a quasi-consensus that foreign banks play a useful stabilizing role in the presence of domestic shocks (especially during banking crises) and that they amplify foreign shocks (Cull et al., 2018). In this paper, I extend the approach of Micco and Panizza (2006) and Panizza (2023) to jointly test for the role of domestic and foreign banks in amplifying or stabilizing domestic and foreign shocks. My results are consistent with the existing evidence that state-owned banks contribute to stabilizing domestic shocks and that foreign-owned banks amplify external shocks (on the latter, see Morais et al., 2019, who use proprietary loan-level, Mexican data).<sup>4</sup> However, I do not find that foreign banks contribute to stabilizing domestic real or financial shocks: the coefficients often go in the right direction but they are never statistically significant.

### *Outline of the paper*

The rest of the paper is organized as follows. Section 2 describes the construction of the bank-level and country-level datasets and describes trends on bank ownership and correlations between bank ownership and country characteristics. Sections 3 and 4 use country-level data to study the relationship between bank ownership and each of GDP growth and financial depth. Section 5 moves to bank-level data and describes how bank ownership relates to bank profitability, non-performing loans, net interest margins, and interest revenues and expenses. Section 6 studies whether bank ownership affects the relationship between loan growth and domestic and external shocks and whether state-owned banks pay a price in terms of future profitability for their credit stabilizing role. Section 7 concludes by providing suggestions for future research.

## **2 Data, Trends, and Correlates of Bank Ownership**

This section provides a brief description of the construction of the bank-level and country-level databases of bank ownership, illustrates the main trends in state and

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<sup>4</sup> There is, however, substantial heterogeneity. For a detailed discussion of the role of global banks in the transmission of international shocks, see Buch and Goldberg (2020).



foreign ownership, and discusses the correlation between bank ownership and economic, institutional, and political country characteristics.

## 2.1 Bank-level Data

I source bank-level information on income and balance sheet statements over 1995-2020 from Fitch Connect. As discussed in Panizza (2021, 2023), there are three key issues with this dataset:

- (i) Fitch Connect does not report ownership information for every bank included in the dataset. Even when available, ownership is only reported for the last available year.
- (ii) Fitch Connect does not always separate banks from non-bank financial intermediaries.
- (iii) Fitch Connect reports multiple observations for individual banks (depending on consolidation levels and accounting standards) and does not clearly identify the main units of large banking groups.

I address these issues by following the same steps described in Panizza (2021, 2023). For state ownership, I update my data to 2020 and for foreign ownership, I use the same hand-coding procedure used to classify state-ownership.<sup>5</sup> For a subset of banks for which I could not find ownership information, I use information from Claessens and Van Horen (2015).<sup>6</sup>

In building ownership shares, I follow, La Porta et al. (2002) and classify ownership by foreign governments as private rather than state ownership. The rationale for this choice is that banks owned by foreign governments are unlikely to have a social mandate that focuses on the host country. I exclude from the sample central banks, Islamic banks, multilateral banks, and non-bank financial institutions (for instance,

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<sup>5</sup> Thanks to Matteo Ficarra for his help in this extremely tedious task.

<sup>6</sup> One caveat with these data is that they end in 2009 and do not report the share of foreign ownership but simply a dummy that takes value 1 for foreign-owned banks. In the bank-level dataset, I include a dummy that identifies bank-years for which ownership was coded using Claessens and Van Horen's (2015) data.

leasing and factoring companies). I include development banks but compute ownership shares with and without development banks.<sup>7</sup>

After cleaning and coding the data, I am left with an unbalanced panel of about 6,500 banks (of which about 200 are development banks) in 181 countries over the period 1995-2020 and a total of over 95,000 observations for which I have information on total assets (nearly 92,000 observations if I exclude development banks).

Table 1 reports summary statistics for return on assets, non-performing loans as a share of total loans, net interest margin, interest expenditure, interest income, and total assets (all ratios are Winsorized at 99%). The top panel uses data for all countries and the other three panels separate countries across income groups. For this table, I code as state-owned all the banks which have a state-ownership of at least 50% and as foreign-owned all the banks with a foreign ownership of at least 50%. I obtain similar results if I define ownership using a 20% threshold as I did in Panizza (2023).

A comparison of the three groups of banks for the full sample of countries shows that the average state-owned bank is more than twice as large as the average bank, and it is slightly less profitable (average ROA is 0.88 versus 0.83 in state-owned banks). State-owned banks also have a higher share of non-performing loans (9.4% versus 6.5%), a slightly higher net interest margin (3.9 versus 3.8), and higher interest expenses (5 versus 3.7). Foreign-owned banks, instead, tend to be smaller than the typical bank and have higher profitability and net interest margins but also higher non-performing loans. However, non-performing loans of foreign banks are lower than those of state-owned banks.

Most of these patterns are unchanged if we focus on banks in advanced and middle-income economies. One exception is that in these group of countries state-owned banks tend to have lower net interest margins than the average bank (1.9 versus 2.5 in advanced economies and 4.8 versus 5.5 in middle income economies).

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<sup>7</sup> The bank-level dataset includes a variable that allows to identify development banks.

Low-income economies also have similar patterns as banks in the full sample. However, in low-income economies, the difference between the share of non-performing loans in state-owned banks and the private domestic banks is much larger (15% versus 10%) and the interest charged by state-owned and foreign-owned banks is lower than that charged by their private domestic counterparts (the difference is 1.5 percentage points).

## 2.2 Country-level Data

After coding ownership at the bank-level, I build a series of country-year-level indicators of bank ownership. For the first indicator, I follow La Porta et al. (2002) and calculate the country-year percentage of state ownership by weighting the assets of each bank by the share of government ownership in a specific bank-year and then dividing by total banking assets in the same country-year. Formally, government ownership in country  $i$ , year  $t$  is given by:

$$SOE1_{i,t} = \frac{\sum_{b=1}^B g_{b,t} A_{b,t}}{\sum_{b=1}^B A_{b,t}} \quad (1)$$

where  $g_{b,t}$  is the share of government ownership of bank  $b$  in year  $t$ ,  $A_{b,t}$  are the assets of bank  $b$  in year  $t$ , and  $B$  is the number of banks in country  $i$ , year  $t$ .

Similarly, foreign ownership is given by:

$$FOR1_{i,t} = \frac{\sum_{b=1}^B f_{b,t} A_{b,t}}{\sum_{b=1}^B A_{b,t}} \quad (2)$$

where  $f_{b,t}$  is the share of foreign ownership of bank  $b$  in year  $t$  and all other variables are as in Equation (1).

Next, I build two indexes that assume that certain ownership thresholds give full control. I start by assuming that a 20% ownership share gives full controls (I call the resulting indicators SOE2 and FOR2). In building these measures, I use the same

approach used for SOE1 and FOR1 but set  $g_{b,t} = 1$  if government ownership is greater than 20% and  $g_{b,t} = 0$  if it is smaller than 20%. I use the same approach for foreign ownership. If both state and foreign ownership are greater than 20%, I set  $g_{b,t} = 1$  (and  $f_{b,t} = 0$ ) if government ownership is greater than foreign ownership, and the other way around if foreign ownership is greater than government ownership. If both ownership shares are greater than 20% and identical, I set  $g_{b,t} = 1$ .

I then build two additional ownership variables (SOE3 and FOR3) using a 50% instead than 20% ownership threshold. As SOE1-3 and FOR1-3 only include commercial banks, I also build country-year state-ownership measures that include development banks.

Tables 2-3 report summary statistics for the country-level indicators described above and the correlation across indicators.<sup>8</sup> As expected, including development banks, which tend to be large and state-owned, increases the level of state ownership in both advanced and developing economies (Table 2). However, the different indicators of state ownership remain highly correlated (Table 3).

State ownership of banks tends to be more prevalent in developing economies without large difference between middle-income and low-income economies. If we focus on SOE1, we find that in advanced economies the state owns about 8% of bank assets, in middle-income economies state ownership is 20%, and in low-income economies 17%. Among emerging and developing regions, state-ownership is particularly large in South Asia (47%) and in East Asia and Pacific (29%). Sub-Saharan Africa and Latin America and the Caribbean, instead, have relatively low levels of state-ownership. There is also substantial dispersion in state ownership within regions and over time (Figures 1-3).

Advanced economies have lower foreign ownership shares than emerging and developing economies and, within the group of emerging and developing economies, low-income economies have the highest share of foreign bank assets (38% for FOR1

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<sup>8</sup> The country-year dataset of bank ownership is available at <https://www.upanizza.com/general-4>

versus 29% in middle-income economies). Looking across geographical regions, foreign-owned banks are particularly important in Eastern Europe and Central Asia and in Sub-Saharan Africa. Instead, they are less important in South Asia, the Middle East and North Africa, and East Asia. Also in this case, there are significant differences within regions (Figure 4) and across time. Foreign ownership has increased in all income groups (Figure 5) and geographical regions, including regions that started with a limited presence of foreign-owned banks, such as East Asia, South Asia, and Latin America and the Caribbean (Figure 6).

To move beyond simple regional average, I follow La Porta et al. (2002) and explore what country characteristics are correlated with state and foreign ownership of banks. I focus on a set of country specific variables that measure macroeconomic conditions, economic openness, institutional quality, financial depth, the prevalence of the state in the economy, and political orientation. Besides the fact that I use a different set of country characteristics, there are two key differences between my analysis and that of La Porta et al. (2002). First, while they only focus on state-ownership, I study both state and foreign ownership. Second, they only use cross-sectional data for the mid-1990s, and I use a panel that covers 1995-2020.

I measure macroeconomic conditions with the log of GDP per capita (in constant PPP dollars), real GDP growth over the previous five years, and the log of inflation (top panel of Table 6).<sup>9</sup> In most country groups, state ownership (measured with and without including development banks) and foreign ownership are negatively correlated with GDP per capita. However, in low-income economies state ownership of commercial banks is positively correlated with income per capita. In the full sample of countries, state ownership is positively correlated with real GDP growth. This is also the case in middle- and low-income economies. However, the correlation is rarely statistically significant in middle-income economies. The correlation between GDP growth and state ownership is instead negative in advanced economies. Finally, the correlation between inflation and state ownership is generally positive, except when we focus on low-income economies and include development banks.

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<sup>9</sup> When  $\text{inflation} < 1$ , I set  $\text{inflation} = 1$ . Thus,  $\ln(\text{inflation}) \geq 0$

Foreign ownership is always negatively correlated with income per capita and positively correlated with GDP growth. Although, the correlation with growth is not statistically significant in middle- and low-income economies. Finally, foreign ownership is positively correlated with inflation in advanced economies and negatively correlated with inflation in low-income economies.

As proxies for economic openness, I use trade (import plus export over GDP), FDI inflows over GDP, the Chinn and Ito (2006) index of capital account openness, and the Lane and Milesi-Ferretti (2001) index of financial globalization (external assets plus external liabilities over GDP). By and large, economic openness is negatively correlated with state-ownership of banks (bottom panel of Table 6). Although the correlation coefficients are not always statistically significant. Moreover, state ownership of commercial and development banks is positively and significantly correlated with FDI inflows in high-income economies. As expected, foreign ownership tends to be positively correlated with openness. However, the correlation coefficients are not always statistically significant and, in one case (capital account openness in high-income economies), the correlation with foreign ownership is negative and statistically significant.

As proxies for institutional quality, I use 6 variables from the World Government Indicators (Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption) and two variables from the International Country Risk Guide (Democracy and Bureaucratic Quality). Most of these variables are negatively and significantly correlated with state-ownership of banks (La Porta et al, 2002, find similar results). The only exception is bureaucratic quality which is positively (but not significantly) correlated with state ownership in low-income economies (Table 7).

In the full sample of countries, foreign ownership is positively and significantly correlated with political stability and negatively and significantly correlated with most other variables that measure institutional quality. Voice and accountability, as well as democracy, show a positive correlation with foreign ownership, although the

relationship is not statistically significant. In high-income economies, foreign ownership is positively correlated with democracy, not significantly correlated with voice and accountability and political stability, and negatively correlated with the remaining institutional variables. In middle-income economies, foreign ownership is negatively correlated with government effectiveness, and bureaucratic quality and positively correlated with voice and accountability, political stability, and regulatory quality. Finally, in low-income economies most measures of institutional quality are positively and significantly correlated with foreign ownership of banks (the exception is bureaucratic quality).

I measure financial development with three indicators of domestic credit scaled by GDP (domestic credit to the private sector, domestic credit to the private sector provided by banks, total domestic credit), a measure of creditors' rights, and a credit information index. In the full sample of countries, most measures of financial depth are negatively correlated with state-ownership of banks (Table 8). The exception is the creditor information index which is not significantly correlated with state-ownership. Foreign ownership is also negatively correlated with most financial development variables.<sup>10</sup> The exception is the index of creditors' rights which is positively correlated with foreign ownership. Results for high income economies are like those for the full sample of countries. The only exception is the credit information index which, in advanced economies, is negatively correlated with state ownership of banks. In middle income economies, the correlation between the five financial development indicators and state-ownership of banks is negative but not always statistically significant. Foreign ownership is instead negatively correlated with the three measures of domestic credit and positively correlated with creditors' rights. In low-income economies, domestic credit is positively correlated with state-ownership and negatively correlated with foreign ownership, while the opposite is true for creditors' rights.

As legal origin is associated with financial depth (La Porta et al., 1998), I also compare ownership shares across different legal origin groups (bottom panels of Table 8). I do

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<sup>10</sup> Note that these are simple correlations. This result could thus be driven by the fact that the presence of foreign-owned banks is negatively correlated with income per capita which, in turn, is positively correlated with financial depth.

not find large differences in bank ownership across the two main legal origins (French civil law and English common law).

Finally, I explore the link between bank ownership and two measures of the presence of the state in the economy (government consumption over GDP and public sector employment over total formal employment) and two measures of the government's political orientation (left wing and right wing). In the full sample of countries, I find a negative correlation between state ownership of banks and each of government consumption and right-wing government orientation and a positive correlation between left wing orientation and state ownership of banks (Table 9). While the correlations between state ownership of banks and political orientation are as expected, the negative correlation of state-ownership with government consumption is puzzling.<sup>11</sup> As expected, I find a positive correlation between public sector employment and state ownership of banks (this correlation is not significant in high income economies).

The political variables are also significantly correlated with foreign ownership and suggest that foreign ownership is positively associated with the presence of left-wing governments and less prevalent in the presence of right-wing governments. This suggests that, rather than being pro-market, right-wing governments tend to be protectionist. The negative correlation between foreign ownership and right-wing governments is present in both high-income and low-income economies, but not in middle-income economies. The positive correlation between left wing governments and foreign ownership is instead driven by low-income economies.

### **3 Bank Ownership and GDP Growth**

According to the development view, state-owned banks should promote economic growth by mitigating market failures and financing projects with high social returns. However, state-owned banks may end up having a negative impact on growth because of agency costs or political failures. There are also potential costs and benefits related

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<sup>11</sup> It is however in line with the cross-sectional analysis of La Porta et al. (2002).



to the presence of foreign banks. On the one hand, the entry of foreign banks can promote growth by improving the working of the domestic financial system. On the other hand, foreign banks could crowd-out domestic institutions and reduce credit to small and medium enterprises.

But what do the data say? Existing work that focuses on state-ownership of banks yields mixed results. The coefficients of Table 6 show a positive correlation between growth and each of state and foreign ownership in the full sample of countries. Nevertheless, the fact that the correlation between state ownership and growth is negative in high income economies and positive in middle- and low-income economies suggests that there are several variables that are likely to be jointly correlated with state ownership and growth. Regression analysis is thus necessary to control for at least some of these variables.

In a pure cross-country set up, La Porta et al. (2002) found a negative correlation between state-ownership and economic growth. However, Levy Yeyati et al. (2007) showed that these results are sensitive to the sample and period used in the analysis. In Panizza (2023), I use more recent data and find that there is a weak and rarely statistically significant *positive* correlation between state-ownership of banks and subsequent growth.

There is less disagreement on the role of foreign-owned banks. Most studies find that foreign ownership is positively correlated with growth (Bruno and Hauswald, 2014).

To probe further, I estimate the following model:

$$GR_{i,t/(t-5)} = \beta_0 + \beta_1 y_{i,t-5} + \beta_2 SOE_{i,t-5} + \beta_3 FOR_{i,t-5} + \mathbf{X}_{i,t-5} \mathbf{B} + \theta_i + \varepsilon_{i,t} \quad (3)$$

Where  $GR_{i,t/(t-5)}$  is the growth rate of real income per capita of country  $i$  between year  $t - 5$  and year  $t$ ,  $y_{i,t-5}$  is the log of initial income per capita,  $SOE_{i,t-5}$  and  $FOR_{i,t-5}$  measure state and foreign ownership (I use SOE1 and FOR1, respectively),  $\mathbf{X}_{i,t-5}$  is a matrix of controls that includes credit to the private sector over GDP,

average years of education of the adult population, government consumption over GDP, trade openness, and inflation, and  $\theta_i$  are country fixed effects (I also estimate the model without fixed effects).

To avoid choosing an arbitrary starting point, I estimate Equation (3) by including all possible five-year spells. As the presence of overlapping five-year spells creates MA(4) errors even if the original errors are *i.i.d.*, I cluster the standard errors by country. This procedure corrects for arbitrary departures from independence within each country.

Note that it is difficult to establish whether there is a *causal* relationship between bank ownership and economic growth. For instance, a negative relationship between state-ownership of banks and economic growth could be consistent with both theories that suggest that state-owned banks are particularly useful in countries with pervasive market and institutional failures and theories that suggest that state ownership of banks is the source of such failures (Rodrik, 2012). Similarly, a positive correlation between economic growth and foreign ownership of banks could be driven by the fact that foreign banks decide to locate in countries with good growth prospects. A negative correlation between foreign ownership and economic growth could instead be driven by the fact that foreign banks decide to settle in countries with poorly working financial sector to exploit their competitive advantage with respect to local banks.

I partly address these issues by including a rich set of controls and country fixed effects that capture time-invariant factors that are jointly correlated with bank ownership and economic growth. However, I am aware that I cannot fully solve the endogeneity problem described above.

I start by estimating Equation (3) without including country fixed effects for the full sample of countries (Column 1 of Table 10) and then for different sub-samples (columns 2-5 of Table 10). I find that state ownership of banks is positively correlated with economic growth in the next five years and that the coefficient is statistically significant in the full sample, in the samples that only include developing economies (columns 3-5). The correlation between state ownership and growth is instead positive

but not statistically significant in high-income economies (column 2). In developing economies, foreign ownership of banks is generally positively associated with growth but rarely statistically significant. In high-income economies, the correlation between foreign ownership and growth is negative and statistically significant at the 10% confidence level.<sup>12</sup>

The results are somewhat different for the models that include country fixed effects (columns 6-10 of Table 10). When I control for time invariant country characteristics, the correlation between state ownership and growth remains positive but not statistically significant. The correlation between foreign ownership and growth, instead, becomes positive for all subgroup of countries, and statistically significant for all emerging and developing economies for the sample of middle-income economies.

The finding that state ownership is positively, albeit not always significantly, correlated with growth is in line with the results of Panizza (2023) where I estimate a model like that of Equation (3) but without controlling for foreign ownership. The positive and sometimes statistically significant relationship between foreign ownership and growth is instead consistent with the consensus view that foreign ownership is positively associated with economic growth.

The fact that the correlation between state-ownership and successive growth remains positive but is no longer significant when I control for country-fixed effects is somewhat puzzling. If state-owned banks are present in countries with time-invariant non-observable (to the econometrician) deep institutional failures, we expect that implicitly controlling for these failures should amplify the positive coefficient of state-owned banks found in the regression without fixed effects.<sup>13</sup>

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<sup>12</sup> All other coefficients are as expected. Initial income, government consumption, and inflation are negatively correlated with growth and education and openness are positively correlated with growth. The only exception is credit to the private sector, which is rarely statistically significant and, when statistically significant, it is negatively correlated with growth (see column 2). For a discussion of the evolving correlation between credit to the private sector and GDP growth see Arcand et al. (2015).

<sup>13</sup> This argument comes from the standard omitted variable bias formula. Assume that the true model is:  $GR = \alpha + \beta SOE + \gamma X + u$  and that  $X$  is an unobservable institutional (failure) variable measure which is negatively associated with growth ( $\gamma < 0$ ) and positively correlated with state-ownership. If we estimate  $GR = \alpha + \beta SOE + u$ , we get that:  $\hat{\beta} = \beta + \gamma \frac{Cov(SOE, X)}{Var(SOE)}$ . Since  $Cov(SOE, X) > 0$ , we have  $\gamma \frac{Cov(SOE, X)}{Var(SOE)} < 0$  and  $\hat{\beta} < \beta$ .

There are two explanations for these results. The first is that state-owned banks are more likely to operate in countries with a better institutional framework. This view, is however, in contrast with the correlations of Table 7 which show that state-ownership is negatively correlated with the quality of institutions. Another possibility is related to the fact that the ownership variables tend to have limited within-country variation and the inclusion of fixed effects leads to imprecise estimates of their correlation with growth (for a detailed discussion, see Barro 2015).

Be as it may, panel data show no indication of the negative correlation between state-ownership of banks and growth found in studies that only use cross sectional data.

#### **4 Bank Ownership and Financial Depth**

Because of their intertemporal nature, financial contracts tend to be more information sensitive than spot transactions. Asymmetric information can lead to market failures that reduce the profitability of lending to small and informationally opaque borrowers. These imperfections are a standard justification for government intervention in financial markets.<sup>14</sup> Informational failures are also important for the role of foreign-owned banks. While foreign banks that operate in poor countries can benefit from economies of scale and better risk management technology, they may suffer from less local knowledge and be in a worse position when they need to assess soft information which are necessary to evaluate informationally opaque small firms (Detragiache et al., 2008).

The correlations of Table 8 show that the presence of state-owned banks is negatively associated with domestic credit in high-income economies and positively associated with domestic credit in low-income economies. These results are in line with the hypothesis that state-owned banks could play a useful role in countries characterized

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<sup>14</sup> Another standard justification for government intervention in the financial sector is that private banks may not finance projects with a high social return if the projects are perceived to be too risky (Fernández Arias et al., 2020).

by pervasive informational failures. In the case of foreign-owned banks, instead, there is a negative correlation with domestic credit in all group of countries.

As in the case of GDP growth, I now check whether these results hold when I control for a series of variables which are likely to be jointly correlated with both bank ownership and financial depth. I estimate the following model:

$$PC_{i,t} = \beta_0 + \beta_1 y_{i,t-5} + \beta_2 SOE_{i,t-5} + \beta_3 FOR_{i,t-5} + \mathbf{X}_{i,t-5} \mathbf{B} + \theta_i + \varepsilon_{i,t} \quad (4)$$

Where  $PC_{i,t}$  is credit to the private sector over GDP in country  $i$  year  $t$ ,  $y_{i,t-5}$  is the log of initial income per capita,  $SOE_{i,t-5}$  and  $FOR_{i,t-5}$  measure state and foreign ownership (I use SOE1 and FOR1, respectively),  $\mathbf{X}_{i,t-5}$  is a matrix of controls that includes inflation and five dummies that track the country legal origin (French legal origin is the excluded group), and  $\theta_i$  are country fixed effects. I also estimate the model without country fixed effects. When I include country fixed effects, I do not include the time-invariant legal origin dummies.

We I do not include country fixed effects, I find that the correlation between state ownership and credit to the private sector is often positive (it is however negative for high-income economies), and it is statistically significant for low-income economies (columns 1-5 of Table 11). The correlation between foreign ownership and credit to the private sector is always negative but only statistically significant at the 10% confidence level in the sample that includes all developing and emerging economies (Column 3).

When I control for country fixed effects, the correlation between state ownership and credit to the private sector becomes negative and marginally significant for high income economies (column 7) and negative and insignificant for all other country groups. The correlation with foreign ownership, instead, is never statistically significant.

Also in this case, the consequences of including fixed effects are puzzling. If unobserved institutional failures that have a negative effect on financial depth were to

be positively correlated with state-ownership, we should find that including fixed effects should reinforce the positive correlation between state-ownership of banks and credit to the private sector. In this case, however, we find that the correlation between state-ownership and financial depth goes from being positive and not statistically significant to negative and sometimes statistically significant.

Summing up, while previous work which uses older data and focused on the cross-sectional correlation between state ownership and financial depth found a strong negative correlation between state-ownership of banks and each of financial depth and economic growth, more recent data do not fully support the view that “state ownership tends to stunt financial sector development, thereby contributing to slower growth.” (World Bank, 2001 p. 123).

## 5 Bank Ownership and Performance

In this section, I use bank-level data to analyze the correlation between ownership and bank performance in terms of profitability (measured with returns on assets), non-performing loans (scaled by total gross loans), net interest margin, interest payments (as percentage of interest-bearing liabilities), and interest income (as percentage of interest earning assets). All regressions take the following form:

$$PERF_{b(i),t} = \alpha_0 + \alpha_1 SOE_{b(i),t} + \alpha_2 FOR_{b(i),t} + \mathbf{X}_{b(c),t} \mathbf{A} + \theta_{i,t} + \xi_{s(b)} + \varepsilon_{b(i),t} \quad (5)$$

Where  $PERF_{b(i),t}$  is one of the performance indicators described above for bank  $b$  in country  $i$  in year  $t$ ;  $SOE_{b(i),t}$  and  $FOR_{b(i),t}$  are dummy variables that take value one if 50% or more of bank  $b$  in country  $i$  in year  $t$  is state-owned or foreign-owned;  $\mathbf{X}_{b(c),t}$  is matrix of bank-level controls (for profitability and non-performing loans,  $\mathbf{X}_{b(c),t}$  includes log assets, customer deposits scaled by assets, gross loans scaled by assets, and interest expenditure scaled by assets; for net interest margins, interest income and interest expenditure  $\mathbf{X}_{b(c),t}$  only includes log assets);  $\theta_{i,t}$  are country-year fixed effects; and  $\xi_{s(b)}$  are bank type (sector) fixed effects.

In the set-up of Equation (5) *SOE* and *FOR* measure the performance of state-owned and foreign-owned banks with respect to private domestically owned banks (this is the excluded group).

State-owned banks are always less profitable than domestic private banks (Table 12). The difference is particularly large in developing countries and, within this group, in low-income economies. These results are in line with what I found in Panizza (2023) where I did not control for foreign ownership. In that paper, I also show that there is substantial heterogeneity over time and across countries (for instance, state-owned banks are very profitable in East Asia and have low levels of profitability in East Europe and Central Asia). The bottom panel of Table 12 shows that over 2010-2020 state-owned banks located in high-income economies are not significantly different in terms of profitability with respect to their private counterparts but that there is still a large profitability gap in low-income economies.<sup>15</sup> There are no statistically significant differences in profitability between foreign-owned banks and domestic private banks.

State-owned banks tend to have more non-performing loans than domestic private banks in all country groups (top panel of Table 13). However, the difference between non-performing loans of state-owned and domestic private banks located in middle-income economies is not statistically significant when I focus on the 2010-2020 (bottom panel of Table 13). Foreign-owned banks have fewer non-performing loans than their domestic counterparts, but the difference is rarely statistically significant (never statistically significant post 2010).

I find significantly lower net interest margins for state-owned banks located in advanced economies and for foreign-owned banks located in emerging and developing economies (top panel of Table 14). These results are stronger during 2010-2020 (bottom panel of Table 14).

By decomposing the interest margin into interest payments and interest income, I find that in developing economies state-owned and foreign-owned banks receive and

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<sup>15</sup> I arbitrarily split the sample in 2010 to compare period before and after the global financial crisis. The results are similar if I use 2009 or 2010.

charge lower interest rates than their private domestic counterparts (Tables 15 and 16). In advanced economies, instead, state-owned banks pay higher interest rates and charge interest rates which are not significantly different from those charged by their domestic private counterparts. This asymmetry is the source of the lower net interest margin for state-owned bank located in advanced economies documented in Table 14. Foreign-owned banks located in advanced economies are not significantly different from their domestic private counterparts.

## 6 Bank Ownership and Response of Credit to Domestic and External Shocks

Levy Yeyati et al., (2007) suggest that a possible rationale for state-ownership of banks is that procyclical lending of private banks may reduce the effectiveness of countercyclical macroeconomic policies. There is a similar rationale for favoring the entry of foreign banks that, because of their global presence, may be less sensitive to local shocks (Galindo et al., 2005). Nevertheless, there are tradeoffs as foreign banks could amplify international shocks or shocks in the source country (Adams-Kane et al. 2017).

Micco and Panizza (2006) were the first to use bank-level data to show that lending by state-owned banks in emerging and developing economies is less procyclical than private bank lending.<sup>16</sup> Here, I follow their methodology but also include external shocks and jointly control for the role of state-owned and foreign-owned banks. I start by estimating the following model:

$$\begin{aligned}
 LOANGR_{b(i),t} = & SOE_{b(i),t}(\alpha_0 + \alpha_1 DOM_{i,t} + \alpha_2 EXT_t) + \\
 & + FOR_{b(i),t}(\beta_0 + \beta_1 DOM_{i,t} + \beta_2 EXT_t) + \mathbf{X}_{b(i),t} \mathbf{B} + \theta_{i,t} + \delta_b + \varepsilon_{b(i),t} \quad (6)
 \end{aligned}$$

Where  $LOANGR_{b(i),t}$  is the growth rate of net loans (measured in USD) of bank  $b$  located in country  $i$ , in year  $t$ ;  $DOM_{i,t}$  is a measure of domestic economic conditions

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<sup>16</sup> Multiple subsequent studies have confirmed this result using both cross-country data (World Bank, 2012, Brei and Schlarek, 2013, Cull and Martinez-Peria, 2013, Coleman and Feler, 2015, Bertay et al., 2015, De Haas et al., 2015, Duprey 2015, Chen et al., 2016; Allen et al., 2017; Panizza, 2022) as well as by concentrating on specific countries (Önder and Özyıldırım, 2013, and Bonomo et al., 2015)



in country  $i$ , year  $t$ ,  $EXT_t$  is a measure of external economic conditions,  $\mathbf{X}_{b(i),t}$  are bank-level controls (lagged log assets and customer deposits scaled by assets),  $\theta_{i,t}$  are country-year fixed effects, and  $\delta_b$  are bank fixed effects. I exclude US banks from the sample because, given the size of the US economy it is impossible to separate domestic from external shocks. All results are robust to including US banks.

In the set-up of Equation (6),  $\alpha_1$  and  $\alpha_2$  measure how lending by state-owned banks react to domestic and external shocks, while  $\beta_1$  and  $\beta_2$  measure how foreign-owned banks react to these shocks (the main effect of the shocks is captured by the country-year fixed effects). As Equation (6) controls for bank fixed effects  $\alpha_0$  and  $\beta_0$  are identified by banks that change ownership. The interpretation is thus different from the interpretation of the ownership dummies in Equation (5) which did not include bank fixed effects.

I start by using domestic GDP growth as a measure of domestic economic conditions (Micco and Panizza, 2006, and Panizza, 2023) and the broad dollar index as a measure of external conditions (an increase of the broad dollar index tends to be associated with tighter external financial conditions; see Shin, 2019, Avdjiev et al., 2019 and Hofman and Park, 2020). I find that  $\alpha_1$  is always negative and often statistically significant (it is not statistically significant in advanced economies, see columns 3 and 8 of Table 17) and  $\beta_1$  is never statistically significant. The first result corroborates Micco and Panizza (2006) and Panizza's (2023) finding that state-owned banks contribute to stabilizing credit over the domestic business cycle but that this countercyclical role of state-owned banks is only present in emerging and developing economies. The second result suggests that lending by state-owned banks is not affected by external financial shocks (to be more precise: there is no difference between the way in which an external shock affects lending by state-owned bank and the way in which it affects the lending of private domestic banks). I obtain similar results if I substitute the dollar index with the Fed Funds rate.

As state-owned banks tend to be larger than domestic private banks and foreign-owned banks tend to be smaller than domestic private banks (Table 1), I also augment

Equation (6) with the interaction between the log of lagged assets and each of  $DOM_{i,t}$  and  $EXT_t$ . The last three columns of Table 17 show that my results are robust to augmenting the model with these interactions and that larger banks tend to stabilize credit in the presence of external shocks.

Focusing on foreign-owned banks, I find that  $\alpha_2$  is positive and statistically significant in advanced economies (it is not statistically significant in emerging and developing countries) and  $\beta_2$  is always negative and statistically significant. These results indicate that lending by foreign-owned banks amplifies foreign shocks (i.e., lending by these banks decreases when external financial conditions tighten) and does not contribute to stabilizing credit over the domestic business cycle (if anything, lending by foreign-owned banks is procyclical in advanced economies).

Next, I measure domestic economic conditions with a dummy that takes value 1 during banking crises (the data are from Laeven and Valencia, 2020). The interaction between the banking crisis dummy and each of SOE and FOR is positive and not statistically significant (Table 18). This result indicates that neither state-owned banks nor foreign-owned banks lend significantly more than their private domestic counterparts during banking crises.

I then use World GDP growth as an alternative measure of external economic conditions and find that  $\alpha_2 < 0$  and  $\beta_2 > 0$  (Table 19). This result suggests that state-owned bank contribute to stabilizing credit with respect to external growth shocks while foreign-owned banks amplify these shocks. I still find that that  $\alpha_1$  is negative and statistically significant: state-owned banks appear to stabilize credit in the presence of both domestic and external growth shocks.

I also explore the role of terms of trade and the real exchange rate. The main advantage of these measure of external conditions is that they also vary at the country level. Their main problem is that they are not fully driven by external factors. Be as it may, Tables 20 and 21 show results that are broadly in line with those of the previous analysis but the interactions with foreign ownership are rarely statistically significant.

It is possible that, by stabilizing credit over the business cycle, state-owned banks pay a price in terms of lower profitability or higher non-performing loans. During economic downturns, credit conditions tend to worsen, and because state-owned banks are less likely to decrease credit as much as private banks, they may acquire a greater percentage of poor-quality loans, leading to reduced profits and increased NPLs in the future. To test for this possibility, I build impulse responses using Jordá's (2005) local projections method. Formally, I estimate the following equation:

$$PERF_{b(i),t+h} = SOE_{b(i),t}(\alpha_{0,h} + \alpha_{1,h}DOM_{i,t} + \alpha_{2,h}EXT_t) + FOR_{b(i),t}(\beta_{0,h} + \beta_{1,h}DOM_{i,t} + \beta_{2,h}EXT_t) + \mathbf{X}_{b(i),t}\mathbf{B}_h + \theta_{i,t} + \delta_b + \varepsilon_{b(i),t} \quad (7)$$

With  $h = 1, 2, 3, 4$ . There is some evidence that future profits are positively correlated with lagged growth for state-owned banks and negatively correlated with lagged growth for foreign-owned banks and that the opposite is true for NPL (Tables 21 and 22). While these results are consistent with the idea that state-owned banks do pay a price in terms of profitability (or higher NPLs) for their credit stabilization role, the coefficients are rarely statistically significant. The results are similar for net interest margins, with margins being positively correlated with past growth for state-owned banks and negatively correlated with past growth for foreign-owned banks (Table 23)

## 7 Conclusions and Directions for Future Research

Using a novel dataset of bank ownership that covers more than 6,500 banks in 181 countries over 1995-2020, I show that in developing economies the presence of foreign banks tends to be positively associated with higher GDP growth, but it is not significantly correlated with financial depth. The presence of state-owned banks is instead positively correlated with growth and negatively correlated with financial depth. But these correlations are not always statistically significant.

State-owned banks are less profitable and have a higher share of non-performing loans than their private counterparts. Instead, foreign banks are not significantly different from domestic private banks. State-owned banks located in advanced economies tend to have low net interest margins. This result is driven by the fact that they pay higher

rates on their interest-bearing liabilities and do not charge higher rates on their assets. In the case of state-owned and foreign banks located in developing economies, there is no difference in net interest margins, but these banks pay and charge lower interest rates than their domestic private counterparts.

In line with previous evidence, I find that state-owned banks contribute to credit stabilization in the presence of domestic shocks and that foreign-owned banks tend to amplify external shocks. However, I do not find that foreign-owned banks stabilize credit in the presence of domestic shocks.

The analysis presented in this paper only scratches the surface of what it can be done with the newly assembled dataset of bank ownership. The results of this paper are thus exploratory and the paper is more a research agenda than a comprehensive analysis of the cost and benefits of state and foreign ownership of banks. An incomplete list of directions for future research include:

- Using bank-level data to study the heterogeneity of bank and country characteristics within ownership groups. For instance, while Detragiache et al. (2008) show that foreign banks have a negative effect on domestic credit in low-income economies, Claessens and Van Horen (2014) show that the relationship between the presence of foreign banks and credit to the private sector depends on their market share, on institutional quality, and distance from the source country. The database described in this paper will allow to update these results and explore further sources of heterogeneity.
- Using bank-level data to build granular instrumental variables and then study the causal effect of bank lending on macro-level economic outcomes. Specifically, Gabaix and Koijen (2020) show that a few large firms account for large share of economic activity and that, by extracting idiosyncratic shocks to these firms from aggregate shocks, it is possible to estimate the causal relationship of, say, bank lending on economic activity. The dataset of this paper will allow exploring if bank ownership matters for the effect of bank lending on economic activity.

- Expanding and updating existing work that studies how foreign ownership affects competition within the domestic banking system by using both country-level measures of competition (Claessens and Laeven, 2004 and Levy-Yeyati and Micco, 2007) and bank-level measures of market power (Delis et al., 2016).
- Studying how bank characteristics relate to the role of foreign banks in the transmission of shocks. At this stage, the dataset does not include information on the parent country of foreign-owned banks, but this could be added without excessive effort. Information on parent country could help in studying how international financial shocks propagate across countries.
- Studying the interaction between domestic fiscal conditions and the stabilization role of state-owned banks. For instance, while Ture (2021) finds that credit countercyclicality only holds in low debt countries, in Panizza (2023), I do not find any difference in countercyclicality between high and low debt countries. If anything, I find that countercyclicality is higher, albeit, not significantly higher, in high debt countries.
- Studying whether state-owned banks are more countercyclical when fiscal policy is more procyclical (in Panizza, 2021, I provide some suggestive evidence in this direction). Another interesting question relates to studying whether different types of banks react differently to positive and negative shocks.
- Studying why state and foreign-owned banks pay and charge lower interest rates. Does this finding depend on bank-specific characteristics or on country characteristics, such as government credibility or the quality of deposit insurance?
- Studying how different types of banks behave during banking crises in both host and source countries and assessing whether the structure of the banking system has a causal effect on the likelihood of observing a banking crisis. The

bank-level dataset described in this paper will allow to go beyond simple binary indicators of generalized banking crises and look at bank balance sheets to identify the roots of banking crises.

- Studying the links between politics and each of bank lending and performance along the lines of Micco et al. (2007), Khwaja and Mian (2005), and Sapienza (2004). The basic correlations of Tables 7 and 8 also show interesting and, perhaps, puzzling patterns between bank ownership (especially foreign ownership) and each of institutional quality and financial depth. In future work, it would be interesting to go beyond these simple correlations and explore in greater detail the direction of the link between bank ownership, politics, and institutional quality.

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**Table 1: Bank-level Summary statistics**

	N. Obs.	Mean	Std. dev.	N. Obs.	Mean	Std. dev.	N. Obs.	Mean	Std. dev.
All countries									
	All Banks			State-Owned Banks			Foreign-Owned Banks		
ROA	92,083	0.881	2.030	7,355	0.827	2.057	21,927	0.997	2.368
Total Assets	95,365	19,935	116,761	9,386	43,921	226,673	22,347	6,694	30,003
NPL/Loans	58,448	6.471	10.538	5,015	9.386	12.412	13,399	7.946	12.263
Net Int. Margin	87,428	3.848	3.518	8,715	3.934	3.832	20,068	4.448	3.858
Inter. Income	87,143	7.561	5.912	8,690	8.606	5.812	19,993	8.234	6.086
Inter. Exp.	86,202	3.895	3.753	8,569	5.040	3.826	19,808	3.919	3.601
Advanced Economies									
ROA	54,109	0.63	1.56	2,193	0.50	1.58	9,457	0.71	1.93
Total Assets	55,559	25,694	118,297	3,069	39,131	83,679	9,626	12,455	43,886
NPL/Loans	30,836	4.61	7.92	1,252	7.40	10.41	4,422	6.88	10.76
Net Int. Margin	51,527	2.53	2.07	2,909	1.95	2.08	8,625	2.57	2.54
Inter. Income	51,441	4.94	3.45	2,919	4.99	3.71	8,611	5.35	4.17
Inter. Exp.	50,637	2.61	2.46	2,802	3.52	3.00	8,408	3.04	2.89
Middle Income Economies									
ROA	29,255	1.17	2.49	4,167	0.95	2.13	9,034	1.09	2.50
Total Assets	30,763	15,066	129,602	5,109	56,485	299,354	9,226	3,055	10,397
NPL/Loans	21,414	8.09	12.31	3,127	9.06	11.83	6,555	8.20	13.08
Net Int. Margin	27,854	5.47	4.18	4,741	4.79	3.96	8,377	5.32	3.85
Inter. Income	27,733	11.25	6.83	4,707	10.52	5.90	8,333	10.04	6.45
Inter. Exp.	27,536	5.97	4.60	4,701	6.10	4.11	8,302	4.82	4.11
Low Income Economies									
ROA	8,719	1.49	2.59	995	1.02	2.54	3,436	1.55	2.92
Total Assets	9,043	1,117	3,832	1,208	2,955	8,040	3,495	430	711
NPL/Loans	6,198	10.17	13.09	636	14.89	16.59	2,422	9.21	12.41
Net Int. Margin	8,047	6.67	4.30	1,065	5.56	4.70	3,066	7.35	4.27
Inter. Income	7,969	11.61	5.90	1,064	10.04	5.49	3,049	11.45	6.10
Inter. Exp.	8,029	4.88	3.77	1,066	4.37	2.87	3,098	3.86	3.27

**Table 2: State Ownership of Banks by Country Groups**

This table reports average state ownership of banks by income group and geographical region. The top three row of each panel only include commercial banks and the bottom three rows also include development banks.

	All		AE		MIC		LIC		EAP	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
SOE1	0.15	0.21	0.08	0.13	0.19	0.22	0.17	0.25	0.29	0.24
SOE2	0.18	0.25	0.11	0.18	0.23	0.26	0.18	0.27	0.36	0.29
SOE3	0.15	0.23	0.07	0.14	0.20	0.24	0.16	0.27	0.30	0.27
SOE1 (with DB)	0.19	0.23	0.11	0.14	0.23	0.25	0.20	0.26	0.36	0.27
SOE2 (with DB)	0.21	0.26	0.14	0.18	0.26	0.27	0.20	0.28	0.42	0.31
SOE3 (with DB)	0.18	0.25	0.11	0.15	0.23	0.26	0.19	0.28	0.37	0.30
	ECA		LAC		MNA		SAS		SSA	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
SOE1	0.15	0.22	0.13	0.17	0.23	0.24	0.47	0.24	0.10	0.18
SOE2	0.17	0.26	0.14	0.18	0.29	0.27	0.52	0.27	0.10	0.19
SOE3	0.15	0.25	0.14	0.18	0.22	0.26	0.49	0.27	0.09	0.19
SOE1 (with DB)	0.16	0.22	0.15	0.17	0.29	0.28	0.48	0.25	0.14	0.20
SOE2 (with DB)	0.19	0.26	0.16	0.18	0.34	0.30	0.53	0.27	0.14	0.22
SOE3 (with DB)	0.16	0.25	0.15	0.18	0.27	0.30	0.50	0.27	0.12	0.21

**Table 3: Correlation between different measures of state ownership**

This table reports average state ownership of banks by income group and geographical region. The top three row of each panel only include commercial banks and the bottom three rows also include development banks.

	SOE1	SOE2	SOE3	SOE1 (with DB)	SOE2 (with DB)	SOE3 (with DB)
SOE1	1.00					
SOE2	0.95	1.00				
SOE3	0.97	0.91	1.00			
SOE1 (with DB)	0.94	0.90	0.91	1.00		
SOE2 (with DB)	0.90	0.96	0.87	0.95	1.00	
SOE3 (with DB)	0.92	0.87	0.95	0.97	0.93	1.00

**Table 4: Foreign Ownership of Banks by Country Groups**

This table reports average foreign ownership of banks by income group and geographical region.

	All		AE		MIC		LIC		EAP	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
FOR1	0.32	0.29	0.20	0.25	0.29	0.25	0.38	0.30	0.20	0.24
FOR2	0.38	0.33	0.22	0.28	0.35	0.29	0.49	0.36	0.22	0.27
FOR3	0.32	0.32	0.20	0.27	0.29	0.28	0.40	0.36	0.19	0.26
	ECA		LAC		MNA		SAS		SSA	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
FOR1	0.50	0.29	0.26	0.23	0.19	0.22	0.14	0.14	0.46	0.28
FOR2	0.55	0.30	0.29	0.26	0.28	0.32	0.19	0.20	0.60	0.32
FOR3	0.51	0.31	0.27	0.24	0.18	0.27	0.12	0.15	0.49	0.35

**Table 5: Correlation between different measures of foreign ownership**

	FOR1	FOR2	FOR3
FOR1	1.00		
FOR2	0.95	1.00	
FOR3	0.96	0.92	1.00

**Table 6: Macroeconomic conditions, Openness and Bank Ownership**

This table shows the correlation for all countries and different income groups between different measures of bank and state ownership and a series of variables measuring macroeconomic conditions and economic openness.

	SOE1		SOE1 with DB		FOR1	
<b>Macroeconomic conditions</b>						
All Countries						
ln(GDP PC)	-0.1111	***	-0.2164	***	-0.2149	***
Growth	0.1185	***	0.094	***	0.0765	***
ln(Infl)	0.251	***	0.2338	***	-0.0731	***
High Income Economies						
ln(GDP PC)	-0.13	***	-0.10	***	-0.41	***
Growth	-0.05		-0.06	**	0.25	***
ln(Infl)	0.22	***	0.15	***	0.09	***
Middle Income Economies						
ln(GDP PC)	-0.13	***	-0.10	***	-0.02	***
Growth	0.07	*	0.04		0.04	
ln(Infl)	0.25	***	0.22	***	-0.21	***
Low Income Economies						
ln(GDP PC)	0.09	***	0.10	***	-0.30	***
Growth	0.22	***	0.20	***	-0.01	
ln(Infl)	0.12	***	0.16	***	-0.17	***
<b>Economic openness</b>						
All Countries						
Trade Open	-0.1765	***	-0.1794	***	0.2102	***
FDI Infl/GDP	-0.0536	***	0.0019		-0.0046	
KA Open	-0.2775	***	-0.262	***	-0.0205	
LMF	-0.0796	***	-0.0926	***	0.0489	***
High Income Economies						
Trade Open	-0.1071	***	-0.1701	***	0.321	***
FDI Infl/GDP	-0.06	**	0.0943	***	-0.02	
KA Open	-0.13	***	-0.1117	***	-0.16	***
LMF	-0.07	***	-0.1131	***	0.08	***
Middle Income Economies						
Trade Open	-0.2884	***	-0.2461	***	0.2386	***
FDI Infl/GDP	-0.2069	***	-0.2108	***	0.1724	***
KA Open	-0.3158	***	-0.3336	***	0.1989	***
LMF	-0.1279	***	-0.1323	***	0.1702	***
Low Income Economies						
Trade Open	-0.0454		-0.0357		0.1362	***
FDI Inflows/GDP	-0.1087	***	-0.0902	***	0.1939	***
KA Open	-0.1525	***	-0.1046	***	0.036	
Lane & MF	-0.0655	**	-0.0401		0.1591	***

**Table 7: Institutions and Bank Ownership**

This table shows the correlation for all countries and different income groups between different measures of bank and state ownership and a series of variables measuring institutional quality.

	SOE1	SOE1 with DB	FOR1
All Countries			
Voice & Acc.	-0.2936 ***	-0.2876 ***	0.0173
Pol. Stab.	-0.2186 ***	-0.2152 ***	0.0526 ***
Gov. Eff.	-0.2169 ***	-0.2012 ***	-0.1366 ***
Reg. Qual.	-0.3453 ***	-0.3303 ***	-0.0345 **
Rule of Law	-0.2242 ***	-0.2087 ***	-0.0953 ***
Control of Corruption	-0.2088 ***	-0.1935 ***	-0.0958 ***
Democracy	-0.2120 ***	-0.2056 ***	0.0267
Bur. Qual	-0.1547 ***	-0.1534 ***	-0.1704 ***
High Income Economies			
Voice & Acc.	-0.1039 ***	-0.0561 *	0.0230
Pol. Stab.	-0.1407 ***	-0.0940 ***	0.0153
Gov. Eff.	-0.1416 ***	-0.1246 ***	-0.2987 ***
Reg. Qual.	-0.2627 ***	-0.2423 ***	-0.1240 ***
Rule of Law	-0.1237 ***	-0.0934 ***	-0.2987 ***
Control of Corruption	-0.1443 ***	-0.1278 ***	-0.3081 ***
Democracy	-0.0243	-0.0165	0.0645 **
Bur. Qual	-0.1518 ***	-0.1633 ***	-0.2935 ***
Middle Income Economies			
Voice & Acc.	-0.2293 ***	-0.2617 ***	0.0937 ***
Pol. Stab.	-0.1712 ***	-0.1886 ***	0.1273 ***
Gov. Eff.	-0.1332 ***	-0.1654 ***	-0.1036 ***
Reg. Qual.	-0.3359 ***	-0.3630 ***	0.0916 ***
Rule of Law	-0.0873 ***	-0.1331 ***	-0.0288
Control of Corruption	-0.0801 ***	-0.1122 ***	0.0075
Democracy	-0.1548 ***	-0.1553 ***	-0.0140
Bur. Qual	-0.0063 ***	-0.0174	-0.231 ***
Low Income Economies			
Voice & Acc.	-0.2763 ***	-0.3112 ***	0.2163 ***
Pol. Stab.	-0.0360	-0.0697 **	0.2304 ***
Gov. Eff.	-0.0381	-0.0466	0.1563 ***
Reg. Qual.	-0.3962 ***	-0.4048 ***	0.2956 ***
Rule of Law	-0.1174 ***	-0.1040 ***	0.2281 ***
Control of Corruption	-0.0365	-0.0328	0.2671 ***
Democracy	-0.1714 ***	-0.1512 ***	0.1485 ***
Bur. Qual	0.0016	0.0228	-0.0308



**Table 8: Financial Depth and Bank Ownership**

This table shows the correlation for all countries and different income groups between different measures of bank and state ownership and a series of variables measuring financial depth. The table also compares ownership shares across types of legal origin for the full group of countries and for only emerging and developing economies.

	SOE1		SOE1_DB		FOR1	
<b>All Countries</b>						
Dom. Cred. to Priv. Sect/GDP	-0.1398	***	-0.14	***	-0.2223	***
Dom. Cred. By Bank to Priv. Sect/GDP	-0.112	***	-0.1111	***	-0.1693	***
Tot. Domestic Credit/GDP	-0.1943	***	-0.1529	***	-0.3474	***
Creditors' Rights	-0.2371	***	-0.2784	***	0.2381	***
Credit Information Index	0.0397		0.0049		-0.1279	***
<b>High Income Economies</b>						
Dom. Cred. to Priv. Sect/GDP	-0.1807	***	-0.1853	***	-0.3104	***
Dom. Cred. By Bank to Priv. Sect/GDP	-0.1487	***	-0.1393	***	-0.1928	***
Tot. Domestic Credit/GDP	-0.3048	***	-0.2536	***	-0.5406	***
Creditors' Rights	-0.4006	***	-0.4442	***	0.2666	***
Credit Information Index	-0.0276		0.002		-0.2678	***
<b>Middle Income Economies</b>						
Dom. Cred. to Priv. Sect/GDP	-0.0509	*	-0.0768	***	-0.0882	***
Dom. Cred. By Bank to Priv. Sect/GDP	-0.0130		-0.0347		-0.0599	**
Tot. Domestic Credit/GDP	-0.1497	***	-0.0163		-0.1738	***
Creditors' Rights	-0.2170	***	-0.2669	***	0.2941	***
Credit Information Index	0.011		-0.0838	*	-0.0251	
<b>Low Income Economies</b>						
Dom. Cred. to Priv. Sect/GDP	0.1543	***	0.1256	***	-0.1598	***
Dom. Cred. By Bank to Priv. Sect/GDP	0.1454	***	0.1156	***	-0.1831	***
Tot. Domestic Credit/GDP	0.2103	**	0.1639	*	-0.4207	***
Creditors' Rights	-0.1241	**	-0.1461	***	0.1627	***
Credit Information Index	0.1808	***	0.1337		0.0149	
<b>Bank ownership and legal origin</b>						
<u>Average share by Legal Origin (All countries)</u>						
French	15%		17%		31%	
Common Law	15%		18%		30%	
German	11%		30%		2%	
Scandinavian	14%		18%		15%	
Socialist	20%		23%		36%	
<u>Average share by Legal Origin (EMDEs)</u>						
French	16%		17%		32%	
Common Law	18%		22%		33%	
German	23%		23%		0%	
Scandinavian	37%		37%		40%	
Socialist	22%		25%		30%	

**Table 9: Presence of the state in the economy and political orientation and Bank Ownership**

This table shows the correlation for all countries and different income groups between different measures of bank and state ownership and a series of variables measuring the presence of the state of the economy and political orientation of the government.

	SOE1		SOE1_DB		FOR1	
All Countries						
Govt Cons/GDP	-0.0912	***	-0.0343	**	0.0224	
Pub. Sect. Emp./Tot Emp	0.2291	***	0.2217	***	-0.0305	
Largest party in Govt is left	0.0828	***	0.0532	***	0.0430	**
Largest party in Govt is right	-0.1194	***	-0.114	***	-0.0814	***
High Income Economies						
Govt Cons/GDP	0.0700	**	0.1300	***	-0.1200	***
Pub. Sect. Emp./Tot Emp	0.0529		0.0800	**	-0.3474	***
Largest party in Govt is left	0.008		-0.0132		-0.0206	
Largest party in Govt is right	0.0396		0.0370		-0.1050	***
Middle Income Economies						
Govt Cons/GDP	-0.0918	***	-0.0100		0.1088	***
Pub. Sect. Emp./Tot Emp	0.2902	***	0.2800	***	0.1439	***
Largest party in Govt is left	0.1415	***	0.1000	***	0.0103	
Largest party in Govt is right	-0.0927	***	-0.0837	***	0.0397	
Low Income Economies						
Govt Cons/GDP	-0.0269		-0.0034		0.1900	***
Pub. Sect. Emp./Tot Emp	0.2208	***	0.2003	***	-0.2231	***
Largest party in Govt is left	0.0653	**	0.0424		0.1684	***
Largest party in Govt is right	-0.1363	***	-0.1443	***	-0.1240	***

**Table 10: GDP Growth and Bank Ownership**

This table reports a set of regressions where the dependent variable is annual real per capita GDP growth over a five-year period and the explanatory variables the lagged value of the share of state-owned banks (SOE); the share of foreign-owned banks (FOR), the log of initial GDP (y), the log of lagged credit to private sector over GDP (PC), the log of lagged government consumption over GDP (Gov Cons), the lag of the log of trade openness (Open), and the lag of log inflation (Infl).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
y <sub>t-5</sub>	-0.925*** (0.305)	-2.583*** (0.613)	-0.829** (0.374)	-1.945*** (0.469)	-0.251 (0.524)	-5.441*** (0.819)	-8.573*** (1.566)	-4.827*** (0.856)	-4.815*** (1.018)	-5.290*** (1.589)
SOE <sub>t-5</sub>	2.896*** (0.774)	1.751 (1.170)	2.880*** (0.902)	2.503** (1.069)	2.727*** (0.902)	1.112 (0.732)	1.529 (1.500)	0.852 (0.737)	0.850 (1.219)	0.428 (1.331)
FOR <sub>t-5</sub>	0.672 (0.489)	-1.312* (0.703)	1.226* (0.672)	1.182 (0.790)	1.867* (1.050)	1.724** (0.758)	0.990 (1.029)	2.295** (0.905)	3.296*** (1.166)	0.331 (1.600)
PC <sub>t-5</sub>	0.040 (0.247)	-0.865*** (0.269)	0.248 (0.316)	-0.002 (0.407)	0.256 (0.307)	-0.751*** (0.259)	-0.582* (0.289)	-0.714** (0.346)	-0.941** (0.433)	-0.051 (0.664)
EDU <sub>t-5</sub>	1.866*** (0.607)	2.638*** (0.842)	1.467** (0.700)	2.536** (0.979)	0.150 (0.724)	4.814*** (1.324)	-0.054 (3.358)	4.974*** (1.451)	4.522** (2.034)	4.368** (2.117)
Gov Cons <sub>t-5</sub>	-1.004*** (0.374)	-0.540 (0.710)	-1.444*** (0.418)	-0.889** (0.373)	-2.052*** (0.609)	0.344 (0.502)	2.706** (1.025)	-0.084 (0.510)	0.593 (0.688)	-0.762 (0.762)
Open <sub>t-5</sub>	0.484** (0.219)	1.159*** (0.338)	0.493 (0.332)	0.466 (0.432)	0.750 (0.481)	1.108** (0.434)	3.106** (1.157)	0.890* (0.527)	1.530 (1.089)	0.716 (0.526)
Infl <sub>t-5</sub>	-0.254* (0.138)	-0.839*** (0.216)	-0.161 (0.164)	-0.256 (0.194)	-0.041 (0.235)	-0.423*** (0.093)	-0.898*** (0.186)	-0.256*** (0.090)	-0.401*** (0.130)	-0.124 (0.132)
Const.	7.012*** (1.716)	23.594*** (5.681)	7.011*** (2.406)	15.209*** (3.707)	4.088 (3.797)	40.027*** (6.920)	73.333*** (15.463)	33.702*** (7.000)	32.900*** (9.284)	36.062*** (11.181)
N. Obs	2,371	770	1,517	934	583	2,371	770	1,517	934	583
R2	0.168	0.357	0.154	0.236	0.185	0.267	0.443	0.245	0.298	0.183
Countries	127	44	83	47	36	127	44	83	47	36
Country FE	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Sample	All	AE	EMDE	MIC	LIC	All	AE	EMDE	MIC	LIC

Robust standard errors clustered at the country level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 11: Credit to the private Sector and Bank Ownership**

This table reports a set of regressions where the dependent variable is credit to the private sector and the explanatory variables the lagged value of the share of state-owned banks (SOE); the share of foreign-owned banks (FOR), the log of initial GDP (y), the lag of log inflation (Infl) and a set of dummy controlling for English, German, Scandinavian, and socialist legal origin.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SOE <sub>t-5</sub>	0.507 (11.461)	-42.090 (34.486)	12.316 (11.487)	15.527 (16.705)	16.793** (7.996)	-18.216** (8.356)	-47.132* (26.833)	-3.278 (4.344)	-5.499 (7.058)	-2.055 (4.906)
FOR <sub>t-5</sub>	-13.077 (8.334)	-22.713 (19.794)	-10.850* (5.662)	-8.691 (8.944)	-5.135 (6.823)	-8.092 (6.355)	-23.254 (16.681)	-0.105 (4.627)	0.413 (6.452)	-2.984 (6.472)
y <sub>t-5</sub>	11.679*** (2.187)	3.589 (11.328)	7.297*** (2.043)	4.467 (4.114)	14.890*** (3.169)	30.867*** (4.023)	55.222*** (16.767)	26.302*** (3.405)	23.813*** (3.758)	31.784*** (6.717)
Infl <sub>t-5</sub>	-6.101*** (1.256)	-3.541 (3.020)	-5.636*** (1.312)	-7.915*** (2.134)	-1.058 (1.061)	-0.002 (0.607)	3.889* (1.936)	-1.013** (0.496)	-1.804** (0.729)	0.176 (0.409)
ENG	5.728 (5.509)	21.040 (15.460)	0.438 (4.501)	4.349 (6.726)	-7.321 (4.648)					
GER	0.485*** (0.068)	0.416*** (0.078)	0.409*** (0.090)	0.428*** (0.109)	0.277** (0.137)					
SCAN	23.003* (11.895)	26.481* (15.605)	6.874 (6.216)		3.949 (7.664)					
SOC	-5.318 (3.253)	-5.193 (9.783)	-4.659 (3.350)	-1.630 (4.189)	-15.602** (6.704)					
Constant	-69.340*** (20.530)	27.232 (120.830)	-32.609* (16.916)	-6.437 (35.868)	-94.960*** (24.913)	-227.477*** (37.028)	-481.793*** (175.802)	-191.037*** (29.614)	-173.547*** (35.040)	-223.988*** (51.540)
N. Obs	2,700	808	1,841	1,112	729	2,700	808	1,841	1,112	729
R2	0.557	0.269	0.405	0.311	0.445	0.190	0.178	0.344	0.344	0.372
Countries	143	42	99	55	44	143	42	99	55	44
Country FE	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Sample	All	AE	EMDE	MIC	LIC	All	AE	EMDE	MIC	LIC

Robust standard errors clustered at the country level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 12: Bank profitability and Bank Ownership**

This table reports a set of bank-level regressions where the dependent variable is return on assets (ROA) and the explanatory variables are two dummies controlling for state and foreign ownership (defined using the 50% ownership threshold), log total assets customer deposits over assets, loan over assets and interest expenditure over assets. All regressions include country-year fixed effects and fixed effects controlling for bank type (sector fixed effects).

	(1)	(2)	(3)	(4)	(5)
	1995-2020				
SOE	-0.3182*** (-5.429)	-0.1575*** (-2.603)	-0.5305*** (-6.492)	-0.4638*** (-5.213)	-0.9304*** (-4.618)
FOR	0.0206 (0.472)	0.0248 (0.472)	0.0062 (0.093)	-0.0268 (-0.372)	0.1339 (0.815)
ln(Assets)	0.0799*** (8.349)	0.0364*** (3.776)	0.2153*** (10.658)	0.1882*** (8.946)	0.4472*** (6.921)
Cust. Dep./Assets	-0.0043*** (-5.287)	-0.0039*** (-4.449)	-0.0094*** (-5.562)	-0.0106*** (-5.792)	-0.0033 (-0.778)
Loan/Assets	-0.0057*** (-6.460)	-0.0059*** (-5.890)	-0.0105*** (-5.651)	-0.0104*** (-5.105)	-0.0090** (-2.114)
Interest Exp./Assets	0.1399*** (15.038)	0.2341*** (14.290)	0.1237*** (12.342)	0.1187*** (10.857)	0.1446*** (6.061)
Constant	0.2946** (2.320)	0.2775* (1.824)	0.2223 (1.089)	0.3741* (1.710)	-1.2871** (-2.366)
N. Obs	74,659	45,261	29,778	23,083	6,695
R2	0.277	0.254	0.270	0.234	0.384
	2010-2020				
SOE	-0.2483*** (-3.036)	-0.1323 (-1.367)	-0.3833*** (-3.511)	-0.2866** (-2.314)	-0.8611*** (-3.602)
FOR	0.0557 (0.946)	0.0577 (0.740)	0.0443 (0.555)	0.0261 (0.294)	0.1270 (0.699)
ln(Assets)	0.1391*** (9.290)	0.0506*** (3.015)	0.2932*** (10.694)	0.2474*** (8.635)	0.6873*** (8.230)
Cust. Dep./Assets	-0.0033** (-2.443)	-0.0034** (-2.021)	-0.0078*** (-3.394)	-0.0092*** (-3.664)	-0.0072 (-1.264)
Loan/Assets	-0.0023* (-1.871)	-0.0026* (-1.862)	-0.0067*** (-2.611)	-0.0058** (-2.080)	-0.0108* (-1.783)
Interest Exp./Assets	0.1396*** (10.490)	0.2289*** (8.595)	0.1266*** (9.328)	0.1193*** (8.059)	0.1561*** (4.993)
Constant	-0.5164** (-2.484)	-0.0936 (-0.322)	-0.8504*** (-3.033)	-0.5630* (-1.857)	-2.9535*** (-3.975)
N. Obs	29,784	16,641	13,217	10,016	3,201
R2	0.263	0.254	0.251	0.217	0.350
Sample	ALL	AE	EMDE	MIC	LIC
Country-year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 13: Non-Performing Loans and Bank Ownership**

This table reports a set of bank-level regressions where the dependent variable is non-performing loans over gross loans and the explanatory variables are two dummies controlling for state and foreign ownership (defined using the 50% ownership threshold), log total assets customer deposits over assets, loan over assets and interest expenditure over assets All regressions include country-year fixed effects and fixed effects controlling for bank type (sector fixed effects).

	(1)	(2)	(3)	(4)	(5)
	1995-2020				
SOE	2.8143*** (6.269)	2.6872*** (3.828)	2.4699*** (4.716)	2.0961*** (3.862)	4.4607*** (3.022)
FOR	-0.5009* (-1.733)	-0.4933 (-1.128)	-0.5189 (-1.367)	-0.7093* (-1.707)	0.1444 (0.161)
ln(Assets)	-0.5791*** (-10.347)	-0.6450*** (-8.499)	-0.4552*** (-4.963)	-0.4743*** (-4.967)	-0.1936 (-0.568)
Cust. Dep./Assets	-0.0295*** (-3.902)	-0.0433*** (-4.159)	-0.0165 (-1.414)	-0.0190 (-1.491)	-0.0064 (-0.236)
Loan/Assets	-0.0522*** (-7.418)	-0.0391*** (-4.325)	-0.0815*** (-6.968)	-0.0809*** (-6.418)	-0.0884*** (-2.911)
Interest Exp./Assets	0.0876** (2.399)	0.3099*** (2.681)	0.0619 (1.633)	0.0761* (1.789)	-0.0308 (-0.464)
Constant	15.1678*** (15.625)	14.5514*** (9.489)	15.9588*** (13.275)	15.9333*** (12.266)	15.3627*** (4.945)
N. Obs	48,565	26,434	22,510	17,604	4,906
R2	0.395	0.429	0.352	0.320	0.440
	2010-2020				
SOE	1.9370*** (3.792)	2.6201*** (3.848)	1.2057** (2.010)	0.7688 (1.236)	3.2580** (1.996)
FOR	-0.3986 (-1.097)	-0.4589 (-0.781)	-0.4529 (-0.996)	-0.8172 (-1.635)	0.7109 (0.690)
ln(Assets)	-0.5556*** (-7.539)	-0.7158*** (-6.126)	-0.4096*** (-3.913)	-0.4170*** (-3.834)	-0.2612 (-0.668)
Cust. Dep./Assets	-0.0248** (-2.151)	-0.0437** (-2.450)	-0.0054 (-0.383)	-0.0080 (-0.519)	0.0022 (0.067)
Loan/Assets	-0.0520*** (-5.124)	-0.0422*** (-2.942)	-0.0765*** (-5.211)	-0.0748*** (-4.655)	-0.0864** (-2.489)
Interest Exp./Assets	0.0440 (0.910)	0.3454** (2.151)	-0.0092 (-0.177)	-0.0138 (-0.227)	0.0123 (0.189)
Constant	15.1167*** (10.457)	16.2749*** (6.381)	14.7572*** (9.390)	14.8184*** (8.542)	13.8040*** (3.987)
N. Obs	23,922	12,590	11,405	8,756	2,649
R2	0.405	0.447	0.375	0.331	0.498
Sample	ALL	AE	EMDE	MIC	LIC
Country-year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 14: Net Interest Margin and Bank Ownership**

This table reports a set of bank-level regressions where the dependent variable is the net interest margin and the explanatory variables are two dummies controlling for state and foreign ownership (defined using the 50% ownership threshold), log total assets customer deposits over assets, loan over assets and interest expenditure over assets. All regressions include country-year fixed effects and fixed effects controlling for bank type (sector fixed effects).

	(1)	(2)	(3)	(4)	(5)
	1995-2020				
SOE	-0.1654 (-1.382)	-0.3871*** (-3.970)	-0.0727 (-0.431)	0.0020 (0.010)	-0.4322 (-1.122)
FOR	-0.2201*** (-2.846)	-0.1084 (-1.197)	-0.2699** (-2.198)	-0.3346** (-2.482)	-0.0471 (-0.164)
ln(Assets)	-0.2702*** (-17.761)	-0.2078*** (-15.734)	-0.3776*** (-11.340)	-0.4170*** (-12.044)	-0.0907 (-0.851)
Constant	5.9167*** (47.981)	4.2319*** (37.444)	8.3425*** (34.588)	8.4481*** (32.146)	7.2844*** (11.522)
N. Obs	86,516	51,444	35,470	27,626	7,844
R2	0.509	0.340	0.401	0.362	0.507
	2010-2020				
SOE	-0.2297 (-1.331)	-0.4935*** (-4.104)	-0.1751 (-0.748)	-0.0572 (-0.215)	-0.6459 (-1.323)
FOR	-0.2727*** (-2.688)	0.0133 (0.118)	-0.4493*** (-2.936)	-0.4963*** (-2.881)	-0.2602 (-0.787)
ln(Assets)	-0.2325*** (-11.262)	-0.1500*** (-8.498)	-0.3515*** (-8.430)	-0.3803*** (-8.707)	-0.1468 (-1.101)
Constant	5.5814*** (31.474)	3.4565*** (22.243)	8.2188*** (24.724)	8.2172*** (22.556)	7.6195*** (8.633)
N. Obs	38,071	21,084	17,077	13,171	3,906
R2	0.509	0.268	0.387	0.328	0.527
Sample	ALL	AE	EMDE	MIC	LIC
Country-year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 15: Interest Expenses and Bank Ownership**

This table reports a set of bank-level regressions where the dependent variable is the interest expenses over average interest-bearing liabilities and the explanatory variables are two dummies controlling for state and foreign ownership (defined using the 50% ownership threshold), log total assets customer deposits over assets, loan over assets and interest expenditure over assets All regressions include country-year fixed effects and fixed effects controlling for bank type (sector fixed effects).

	(1)	(2)	(3)	(4)	(5)
	1995-2020				
SOE	-0.3456*** (-3.564)	0.4337*** (4.767)	-0.6884*** (-5.366)	-0.7262*** (-4.899)	-0.4981** (-2.168)
FOR	-0.4675*** (-7.093)	0.0320 (0.418)	-0.9278*** (-9.315)	-0.8842*** (-7.931)	-1.0731*** (-4.970)
ln(Assets)	-0.0530*** (-4.320)	0.0269** (2.301)	-0.1681*** (-6.687)	-0.1212*** (-4.612)	-0.5157*** (-6.429)
Constant	4.4427*** (45.537)	2.3625*** (24.306)	7.2825*** (41.050)	7.2246*** (37.356)	8.3362*** (17.422)
N. Obs	85,293	50,555	35,131	27,305	7,826
R2	0.701	0.638	0.646	0.653	0.600
	2010-2020				
SOE	-0.3334*** (-2.607)	0.3066*** (2.990)	-0.6462*** (-3.863)	-0.6999*** (-3.538)	-0.4163 (-1.439)
FOR	-0.5746*** (-7.197)	-0.0682 (-0.723)	-0.9509*** (-8.303)	-0.9335*** (-7.271)	-1.0461*** (-4.185)
ln(Assets)	-0.0679*** (-4.668)	0.0018 (0.140)	-0.1460*** (-5.136)	-0.1053*** (-3.546)	-0.4689*** (-5.441)
Constant	3.4261*** (27.704)	1.1791*** (10.770)	6.0260*** (26.845)	5.8497*** (24.091)	7.6555*** (12.905)
N. Obs	37,621	20,633	17,073	13,162	3,911
R2	0.663	0.353	0.552	0.562	0.519
Sample	ALL	AE	EMDE	MIC	LIC
Country-year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



**Table 16: Interest Income and Bank Ownership**

This table reports a set of bank-level regressions where the dependent variable is the interest income over average earning assets and the explanatory variables are two dummies controlling for state and foreign ownership (defined using the 50% ownership threshold), log total assets customer deposits over assets, loan over assets and interest expenditure over assets All regressions include country-year fixed effects and fixed effects controlling for bank type (sector fixed effects).

	(1)	(2)	(3)	(4)	(5)
	1995-2020				
SOE	-0.6086*** (-4.027)	-0.2303 (-1.616)	-0.8504*** (-4.075)	-0.8016*** (-3.434)	-0.9896** (-2.168)
FOR	-0.6978*** (-6.365)	-0.1698 (-1.360)	-1.1626*** (-6.790)	-1.1773*** (-6.094)	-1.1245*** (-3.084)
ln(Assets)	-0.2325*** (-11.438)	-0.1327*** (-7.256)	-0.3981*** (-9.232)	-0.3792*** (-8.342)	-0.5947*** (-4.689)
Constant	9.5098*** (57.419)	6.0417*** (38.553)	14.5131*** (46.274)	14.3824*** (41.390)	15.6240*** (21.028)
N. Obs	86,209	51,358	35,249	27,483	7,766
R2	0.693	0.539	0.588	0.585	0.601
	2010-2020				
SOE	-0.6933*** (-3.243)	-0.2725 (-1.556)	-0.9715*** (-3.402)	-0.8834*** (-2.709)	-1.2618** (-2.219)
FOR	-0.8497*** (-5.692)	-0.1414 (-0.894)	-1.3410*** (-6.062)	-1.3510*** (-5.246)	-1.3396*** (-3.371)
ln(Assets)	-0.2526*** (-8.987)	-0.1489*** (-5.626)	-0.3876*** (-7.125)	-0.3752*** (-6.568)	-0.5222*** (-3.087)
Constant	8.5956*** (35.739)	4.5990*** (19.779)	13.4397*** (31.373)	13.1630*** (27.935)	14.9109*** (13.559)
N. Obs	38,195	21,106	17,179	13,254	3,925
R2	0.648	0.293	0.489	0.471	0.550
Sample	ALL	AE	EMDE	MIC	LIC
Country-year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 17: Loan Growth**

This tables reports a set of bank-level regressions where the dependent variable is annual net loan growth and the explanatory variables are the lagged net loans, a dummy that takes value 1 for state-owned banks (using the 50% ownership threshold), a dummy that takes value 1 for foreign-owned banks (using the 50% ownership threshold), the interaction between these dummies and each of domestic real GDP growth and the broad dollar index, the log of lagged total assets also interacted with domestic real GDP growth and the broad dollar index and customer deposits over assets. Regressions do not include US banks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Net Loans) <sub>t-1</sub>	-13.2038*** (-20.141)	-17.1409*** (-14.528)	-14.7843*** (-11.507)	-20.6736*** (-8.864)	-18.4780*** (-7.593)	-35.8888*** (-12.920)	-17.1345*** (-14.524)	-14.7812*** (-11.502)	-20.6442*** (-8.865)
SOE	-3.5342 (-0.579)	-8.5531 (-1.386)	-8.7164 (-0.920)	-8.8366 (-1.010)	-11.2536 (-1.168)	10.5339 (0.594)	-4.0429 (-0.630)	-6.6880 (-0.663)	-0.1205 (-0.014)
SOExGR	-0.5153*** (-4.608)	-0.4043*** (-3.379)	-0.3728 (-1.353)	-0.4553*** (-3.314)	-0.3743*** (-2.627)	-1.2653*** (-3.432)	-0.3889*** (-3.146)	-0.3945 (-1.424)	-0.4626*** (-3.241)
FOR	24.5731*** (4.322)	24.1625*** (4.194)	31.5491*** (3.633)	22.4025*** (2.800)	19.8781** (2.180)	41.1028*** (2.704)	23.6874*** (4.122)	31.4974*** (3.635)	20.9429*** (2.615)
FORxGR	-0.0198 (-0.164)	0.0330 (0.272)	0.4720** (2.241)	-0.1557 (-1.045)	-0.0428 (-0.269)	-0.7302* (-1.783)	0.0321 (0.266)	0.4725** (2.247)	-0.1583 (-1.066)
SOExDollar Index	0.0045 (0.072)	0.0523 (0.838)	0.0463 (0.469)	0.0683 (0.831)	0.0672 (0.736)	0.0937 (0.526)	0.0011 (0.017)	0.0243 (0.229)	-0.0305 (-0.367)
FORxDollar Index	-0.2148*** (-3.892)	-0.2207*** (-3.931)	-0.2548*** (-3.206)	-0.2182*** (-2.732)	-0.1950** (-2.153)	-0.3488** (-2.197)	-0.2147*** (-3.837)	-0.2532*** (-3.195)	-0.2020** (-2.528)
Ln(assets) <sub>t-1</sub> xGR							-0.0140 (-0.478)	0.0205 (0.487)	0.0052 (0.124)
Ln(assets) <sub>t-1</sub> xDollar Index							0.0386*** (3.035)	0.0137 (0.911)	0.0841*** (3.608)
Ln(assets) <sub>t-1</sub>		3.5560*** (2.835)	3.5852** (2.558)	4.8345** (1.963)	3.6140 (1.384)	15.1702*** (4.859)	0.1880 (0.110)	2.3439 (1.215)	-2.6599 (-0.792)
(Cust. Dep/Assets) <sub>t-1</sub>		0.0171 (0.838)	0.0294 (1.059)	0.0149 (0.504)	0.0214 (0.667)	-0.0131 (-0.194)	0.0166 (0.809)	0.0281 (1.003)	0.0176 (0.594)
Constant	98.4715*** (22.504)	97.7551*** (18.030)	84.3478*** (10.541)	103.5952*** (14.286)	102.2159*** (12.178)	103.7261*** (9.229)	97.5972*** (18.023)	84.3207*** (10.543)	103.3799*** (14.273)
N. Obs	78,712	75,152	42,453	32,699	25,475	7,224	75,152	42,453	32,699
R2	0.405	0.423	0.362	0.466	0.441	0.573	0.423	0.362	0.467
Sample	ALL	ALL	AE	EMDE	MIC	LIC	ALL	AE	EMDE
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CY FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 18: Loan Growth**

This tables reports a set of bank-level regressions where the dependent variable is annual net loan growth and the explanatory variables are the lagged net loans, a dummy that takes value 1 for state-owned banks (using the 50% ownership threshold), a dummy that takes value 1 for foreign-owned banks (using the 50% ownership threshold), the interaction between these dummies and each of a banking crisis dummy and the broad dollar index, the log of lagged total assets also interacted with a banking crisis dummy and the broad dollar index and customer deposits over assets. Regressions do not include US banks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Net Loans) <sub>t-1</sub>	-13.1599*** (-20.071)	-16.9822*** (-14.446)	-14.5919*** (-11.336)	-20.5576*** (-8.897)	-18.3810*** (-7.622)	-35.6562*** (-12.960)	-16.9721*** (-14.439)	-14.5929*** (-11.333)	-20.5287*** (-8.896)
SOE	-10.5467* (-1.742)	-13.5299** (-2.262)	-14.7510 (-1.553)	-15.0281* (-1.776)	-16.3050* (-1.746)	-4.4270 (-0.242)	-8.2349 (-1.327)	-11.0248 (-1.087)	-6.8844 (-0.801)
SOExBKCR	1.7130 (0.971)	0.4965 (0.241)	3.2106 (1.042)	-1.1468 (-0.399)	-0.9390 (-0.317)	0.0584 (0.007)	-0.1786 (-0.083)	2.2596 (0.702)	0.0691 (0.023)
FOR	23.6500*** (4.191)	24.0623*** (4.236)	30.2094*** (3.339)	21.0049*** (2.736)	20.1007** (2.299)	34.7815** (2.392)	23.7748*** (4.193)	30.5864*** (3.389)	19.5281** (2.538)
FORxBKCR	0.6127 (0.352)	0.1387 (0.077)	0.5123 (0.234)	-0.4509 (-0.143)	0.1871 (0.057)	-7.6616 (-0.761)	0.0799 (0.045)	0.5253 (0.240)	-0.2650 (-0.084)
SOExDollar Index	0.0589 (0.950)	0.0913 (1.476)	0.0936 (0.922)	0.1200 (1.487)	0.1102 (1.231)	0.2026 (1.094)	0.0334 (0.518)	0.0547 (0.502)	0.0252 (0.307)
FORxDollar Index	-0.2065*** (-3.759)	-0.2194*** (-3.966)	-0.2288*** (-2.778)	-0.2085*** (-2.717)	-0.2002** (-2.311)	-0.2995* (-1.931)	-0.2144*** (-3.884)	-0.2294*** (-2.795)	-0.1930** (-2.513)
Ln(asetts) <sub>t-1</sub> xBKCR							0.4317 (1.346)	0.5575* (1.695)	-0.5551 (-0.691)
Ln(asetts) <sub>t-1</sub> Dollar Index							0.0441*** (3.541)	0.0246 (1.596)	0.0801*** (3.738)
Ln(asetts) <sub>t-1</sub>		3.4069*** (2.741)	3.4365** (2.471)	4.6950* (1.927)	3.4801 (1.348)	15.0109*** (4.833)	-0.5701 (-0.337)	1.1485 (0.583)	-2.3537 (-0.738)
(Cust. Dep/Assets) <sub>t-1</sub>		0.0153 (0.755)	0.0246 (0.889)	0.0156 (0.528)	0.0229 (0.713)	-0.0161 (-0.241)	0.0151 (0.742)	0.0240 (0.862)	0.0178 (0.602)
Constant	98.1551*** (22.429)	97.8596*** (18.113)	84.4305*** (10.569)	103.6539*** (14.396)	102.3482*** (12.301)	102.9432*** (9.210)	97.8648*** (18.157)	84.5861*** (10.612)	103.2972*** (14.366)
N. Obs	79,014	75,444	42,659	32,785	25,541	7,244	75,444	42,659	32,785
R2	0.405	0.423	0.360	0.468	0.444	0.572	0.424	0.360	0.469
Sample	ALL	ALL	AE	EMDE	MIC	LIC	ALL	AE	EMDE
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CY FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 19: Loan Growth**

This tables reports a set of bank-level regressions where the dependent variable is annual net loan growth and the explanatory variables are the lagged net loans, a dummy that takes value 1 for state-owned banks (using the 50% ownership threshold), a dummy that takes value 1 for foreign-owned banks (using the 50% ownership threshold), the interaction between these dummies and each of domestic real GDP growth and World Growth , the log of lagged total assets also interacted with domestic real GDP growth and World GDP growth, and customer deposits over assets. Regressions do not include US banks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Net Loans) <sub>t-1</sub>	-13.1885*** (-20.123)	-17.1441*** (-14.532)	-14.7755*** (-11.524)	-20.6777*** (-8.864)	-18.4874*** (-7.595)	-35.8373*** (-12.952)	-17.1371*** (-14.526)	-14.7775*** (-11.521)	-20.6524*** (-8.867)
SOE	-1.5157 (-0.592)	-2.1480 (-0.808)	-3.1594 (-1.128)	-0.6249 (-0.129)	-2.4383 (-0.464)	17.1825*** (2.613)	-2.3605 (-0.885)	-3.2856 (-1.171)	-1.0721 (-0.221)
FOR	3.6185 (1.263)	2.8190 (0.980)	6.1157 (1.241)	2.0945 (0.560)	2.1177 (0.469)	6.7276 (1.505)	2.9997 (1.044)	6.4874 (1.315)	2.0934 (0.559)
SOExGR	-0.3985*** (-3.130)	-0.3156** (-2.378)	-0.1506 (-0.390)	-0.3742** (-2.557)	-0.2462 (-1.631)	-1.3624*** (-3.445)	-0.3019** (-2.288)	-0.1637 (-0.423)	-0.3524** (-2.432)
FORxGR	-0.1473 (-0.985)	-0.0762 (-0.511)	-0.0111 (-0.035)	-0.1091 (-0.635)	0.0239 (0.131)	-0.7077 (-1.535)	-0.0815 (-0.546)	-0.0182 (-0.057)	-0.1188 (-0.693)
SOExWorld GR	-0.6269*** (-2.651)	-0.6357** (-2.497)	-0.6647 (-1.485)	-0.7369** (-2.197)	-0.9847*** (-2.595)	0.3869 (0.634)	-0.5777** (-2.269)	-0.5795 (-1.287)	-0.6652** (-1.985)
FORxWorld GR	0.7093*** (2.755)	0.6377** (2.471)	1.2197** (2.548)	0.2081 (0.649)	0.0501 (0.137)	0.7934 (1.305)	0.6382** (2.471)	1.2256** (2.558)	0.1907 (0.595)
Ln(assets) <sub>t-1</sub> xGR							0.3987 (1.286)	0.5353* (1.684)	-0.5898 (-0.777)
Ln(assets) <sub>t-1</sub> xWorld GR							0.0466*** (3.850)	0.0244* (1.659)	0.0861*** (4.100)
Ln(assets) <sub>t-1</sub>		3.5892*** (2.861)	3.6089** (2.576)	4.8851** (1.984)	3.6740 (1.407)	15.0807*** (4.837)	-0.5994 (-0.359)	1.3504 (0.709)	-2.6856 (-0.841)
(Cust. Dep/Assets) <sub>t-1</sub>		0.0161 (0.791)	0.0278 (1.005)	0.0143 (0.483)	0.0209 (0.650)	-0.0140 (-0.210)	0.0159 (0.780)	0.0273 (0.980)	0.0169 (0.569)
Constant	98.4278*** (22.497)	97.6548*** (18.014)	84.2839*** (10.541)	103.3382*** (14.252)	101.8404*** (12.138)	104.6507*** (9.293)	97.6620*** (18.054)	84.4169*** (10.582)	102.9452*** (14.212)
N. Obs	78,712	75,152	42,453	32,699	25,475	7,224	75,152	42,453	32,699
R2	0.405	0.423	0.362	0.466	0.441	0.572	0.423	0.362	0.467
Sample	ALL	ALL	AE	EMDE	MIC	LIC	ALL	AE	EMDE
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CY FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 20: Loan Growth**

This tables reports a set of bank-level regressions where the dependent variable is annual net loan growth and the explanatory variables are the lagged net loans, a dummy that takes value 1 for state-owned banks (using the 50% ownership threshold), a dummy that takes value 1 for foreign-owned banks (using the 50% ownership threshold), the interaction between these dummies and each of domestic real GDP growth and the percentage change in terms of trade , the log of lagged total assets also interacted with domestic real GDP growth and the percentage change in terms of trade, and customer deposits over assets. Regressions do not include US banks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Net Loans) <sub>t-1</sub>	-13.8490*** (-19.609)	-18.1417*** (-13.926)	-15.7804*** (-11.161)	-20.7051*** (-8.725)	-18.4318*** (-7.461)	-36.1655*** (-12.843)	-18.1496*** (-13.934)	-15.7833*** (-11.163)	-20.7229*** (-8.730)
SOE	-1.1736 (-0.422)	-1.4995 (-0.519)	-1.5913 (-0.527)	-1.0051 (-0.216)	-3.6034 (-0.701)	19.1379*** (3.012)	-1.6469 (-0.569)	-1.5958 (-0.530)	-1.2174 (-0.261)
SOExGR	-0.5592*** (-4.919)	-0.4922*** (-4.119)	-0.4411* (-1.928)	-0.5257*** (-3.790)	-0.4535*** (-3.192)	-1.2568*** (-3.192)	-0.4494*** (-3.626)	-0.4496* (-1.930)	-0.4628*** (-3.188)
FOR	4.2711 (1.386)	4.2176 (1.339)	-0.0148 (-0.004)	5.9604 (1.449)	5.7398 (1.118)	11.5064*** (2.635)	4.1926 (1.331)	-0.0221 (-0.006)	5.9597 (1.448)
FORxGR	-0.0047 (-0.038)	0.0255 (0.208)	0.2203 (1.135)	-0.0475 (-0.305)	0.0654 (0.388)	-0.5707 (-1.362)	0.0239 (0.195)	0.2243 (1.159)	-0.0510 (-0.328)
SOExΔTOT	-10.4572* (-1.935)	-6.1463 (-0.975)	-1.5240 (-0.104)	-6.9293 (-1.033)	-6.6512 (-0.862)	-10.8201 (-1.010)	-7.2430 (-1.120)	-3.3926 (-0.225)	-8.2612 (-1.190)
FORxΔTOT	-2.3828 (-0.503)	-3.2449 (-0.663)	2.8180 (0.221)	-3.9418 (-0.729)	-3.9213 (-0.631)	-10.0151 (-1.015)	-2.9846 (-0.606)	3.9069 (0.308)	-3.5428 (-0.649)
Ln(asetts) <sub>t-1</sub> xGR							-0.0367 (-1.242)	0.0183 (0.450)	-0.0528 (-1.242)
Ln(asetts) <sub>t-1</sub> xDTOT							1.0491 (0.764)	2.8849 (1.316)	1.3067 (0.771)
Ln(asetts) <sub>t-1</sub>		3.9594*** (2.816)	4.2324*** (2.621)	4.6667* (1.865)	3.3743 (1.272)	15.5066*** (4.873)	4.0558*** (2.882)	4.2093*** (2.610)	4.8430* (1.930)
(Cust. Dep/Assets) <sub>t-1</sub>		0.0372* (1.734)	0.0589** (1.994)	0.0251 (0.831)	0.0332 (1.005)	-0.0131 (-0.191)	0.0378* (1.764)	0.0587** (1.984)	0.0261 (0.862)
Constant	103.4718*** (21.862)	100.8354*** (16.760)	88.0430*** (9.438)	103.4856*** (13.436)	102.2500*** (11.361)	102.6481*** (8.825)	100.8026*** (16.773)	88.0852*** (9.441)	103.6233*** (13.489)
N. Obs	67,785	64,807	33,826	30,981	23,982	6,999	64,807	33,826	30,981
R2	0.418	0.436	0.385	0.464	0.438	0.570	0.436	0.386	0.464
Sample	ALL	ALL	AE	EMDE	MIC	LIC	ALL	AE	EMDE
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CY FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 21: Loan Growth**

This tables reports a set of bank-level regressions where the dependent variable is annual net loan growth and the explanatory variables are the lagged net loans, a dummy that takes value 1 for state-owned banks (using the 50% ownership threshold), a dummy that takes value 1 for foreign-owned banks (using the 50% ownership threshold), the interaction between these dummies and each of domestic real GDP growth and the percentage change in the real exchange rate, the log of lagged total assets also interacted with domestic real GDP growth and the change in the percentage real exchange rate, and customer deposits over assets. Regressions do not include US banks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Net Loans) <sub>t-1</sub>	-11.9988*** (-16.472)	-15.7051*** (-12.398)	-14.8478*** (-11.528)	-17.9272*** (-5.566)	-16.2432*** (-5.024)	-38.3401*** (-7.585)	-15.7092*** (-12.403)	-14.8498*** (-11.531)	-17.9469*** (-5.570)
SOE	-3.1337 (-1.054)	-4.4719 (-1.469)	-5.4156 (-1.603)	-2.7009 (-0.390)	-6.8542 (-0.943)	17.7093 (1.464)	-4.4862 (-1.472)	-5.2390 (-1.552)	-2.9976 (-0.433)
SOExGR	-0.4468** (-2.297)	-0.3969* (-1.772)	-0.4347 (-1.393)	-0.5227* (-1.704)	-0.5133 (-1.578)	-1.2444 (-1.613)	-0.3971* (-1.773)	-0.4908 (-1.564)	-0.4586 (-1.502)
FOR	9.5888*** (2.775)	9.6690*** (2.851)	11.6498** (2.401)	7.6669 (1.584)	12.4789** (2.314)	1.6541 (0.203)	9.6523*** (2.846)	11.6757** (2.407)	7.7017 (1.587)
FORxGR	0.2700* (1.834)	0.3273** (1.774)	0.4438* (1.937)	0.2023 (1.012)	0.3247 (1.465)	-0.1816 (-0.410)	0.3317** (2.203)	0.4377* (1.916)	0.2064 (1.026)
SOExΔRER	-4.3201 (-0.487)	5.3237 (0.544)	-25.0267 (-1.321)	14.6872 (1.281)	17.8846 (1.502)	-25.2668 (-0.681)	10.2217 (1.028)	-17.1415 (-0.914)	16.9450 (1.433)
FORxΔRER	-16.3586* (-1.926)	-15.3503* (-1.786)	-20.9190 (-1.532)	-11.4597 (-1.025)	-16.7410 (-1.378)	9.8460 (0.322)	-14.9807* (-1.735)	-21.2723 (-1.562)	-10.7366 (-0.950)
Ln(asetts) <sub>t-1</sub> xGR							0.0043 (0.115)	0.0350 (0.805)	-0.0416 (-0.588)
Ln(asetts) <sub>t-1</sub> xDRER							-3.5539* (-1.951)	-4.7967** (-2.121)	-1.4782 (-0.517)
Ln(asetts) <sub>t-1</sub>		3.1365** (2.274)	3.8779*** (2.764)	2.5519 (0.733)	1.3347 (0.382)	19.6043*** (3.147)	3.1483** (2.283)	3.8205*** (2.727)	2.7170 (0.778)
(Cust. Dep/Assets) <sub>t-1</sub>		0.0396* (1.735)	0.0274 (0.975)	0.0682* (1.771)	0.0678* (1.669)	0.0997 (0.873)	0.0398* (1.744)	0.0275 (0.975)	0.0695* (1.799)
Constant	91.3688*** (18.160)	90.7451*** (13.999)	82.1057*** (10.178)	99.1126*** (9.395)	99.8560*** (8.755)	76.8932*** (3.646)	90.5642*** (13.976)	81.9940*** (10.159)	99.0764*** (9.403)
N. Obs	59,115	56,519	40,940	15,579	13,254	2,325	56,519	40,940	15,579
R2	0.376	0.395	0.353	0.442	0.425	0.555	0.395	0.354	0.442
Sample	ALL	ALL	AE	EMDE	MIC	LIC	ALL	AE	EMDE
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CY FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 22: Returns on Assets: Local projections**

This tables reports a set of bank-level regressions where the dependent variable is return on assets (at time t; t+1; t+2; t+3) and the explanatory variables are as in Table 12

	h=0	h=1	h=2	h=3
ALL				
SOExGR	0.0052 (0.711)	0.0159* (1.87)	0.0125 (1.526)	-0.0039 (0.443)
FORxGR	-0.0096 (1.505)	-0.0142* (1.81)	-0.0258*** (3.273)	-0.0254*** (3.049)
SOExDollar Index	-0.0035 (1.058)	-0.0039 (1.05)	-0.0011 (0.254)	0.0051 (1.151)
FORxDollar Index	0.0005 (0.211)	-0.0002 (0.050)	-0.0028 (0.823)	-0.0061* (1.741)
EMDE				
SOExGR	0.0056 (0.651)	0.0179* (1.831)	0.0151 (1.566)	-0.0043 (-0.432)
FORxGR	-0.0172** (-2.042)	-0.0168 (-1.603)	-0.0305*** (-2.989)	-0.0301*** (-2.711)
SOExDollar Index	-0.0025 (-0.514)	-0.0033 (-0.604)	0.0012 (0.192)	0.0096 (1.450)
FORxDollar Index	0.0027 (0.714)	-0.0008 (-0.175)	-0.0049 (-0.923)	-0.0104* (-1.919)
MIC				
SOExGR	0.0058 (0.606)	0.0221** (2.081)	0.0166 (1.585)	-0.0098 (-0.886)
FORxGR	-0.0198** (-2.053)	-0.0208* (-1.738)	-0.0248** (-2.176)	-0.0238** (-1.963)
SOExDollar Index	-0.0022 (-0.395)	-0.0022 (-0.352)	0.0022 (0.317)	0.0105 (1.436)
FORxDollar Index	0.0037 (0.847)	-0.0010 (-0.189)	-0.0044 (-0.732)	-0.0094 (-1.520)
LIC				
SOExGR	0.0090 (0.490)	0.0005 (0.019)	0.0180 (0.743)	0.0354* (1.870)
FORxGR	-0.0038 (-0.283)	0.0099 (0.515)	-0.0479** (-2.467)	-0.0536** (-2.338)
SOExDollar Index	-0.0049 (-0.484)	-0.0095 (-0.760)	-0.0021 (-0.151)	0.0078 (0.509)
FORxDollar Index	-0.0024 (-0.309)	-0.0010 (-0.098)	-0.0071 (-0.641)	-0.0153 (-1.492)

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 22: Non-performing Loans: Local projections**

This tables reports a set of bank-level regressions where the dependent variable is non-performing loans (at time t; t+1; t+2; t+3) and the explanatory variables are as in Table 13

	h=0	h=1	h=2	h=3
ALL				
SOExGR	0.0346 (0.891)	-0.1337** (2.025)	-0.0199 (0.354)	-0.1395* (1.848)
FORxGR	0.0417 (1.547)	0.1074** (2.013)	0.0189 (0.398)	0.1314** (2.514)
SOExDollar Index	0.0307** (1.985)	0.0787*** (2.966)	0.0641*** (2.759)	0.0630** (2.091)
FORxDollar Index	-0.0013 (0.101)	0.0102 (0.397)	0.0024 (0.112)	0.0145 (0.537)
EMDE				
SOExGR	0.0930* (1.957)	0.0331 (0.484)	-0.1381* (-1.676)	-0.1525 (-1.643)
FORxGR	0.0704** (2.086)	0.0002 (0.004)	0.0881 (1.336)	0.1017 (1.584)
SOExDollar Index	0.0611*** (2.906)	0.1067*** (3.372)	0.1145*** (3.249)	0.0889** (2.206)
FORxDollar Index	-0.0086 (-0.474)	-0.0146 (-0.491)	-0.0036 (-0.102)	-0.0004 (-0.010)
MIC				
SOExGR	0.0942* (1.932)	0.0016 (0.022)	-0.1072 (-1.158)	-0.0783 (-0.829)
FORxGR	0.0548 (1.620)	-0.0429 (-0.800)	0.0658 (0.998)	0.1099* (1.714)
SOExDollar Index	0.0437* (1.952)	0.0855** (2.520)	0.1053*** (2.790)	0.0861** (2.074)
FORxDollar Index	-0.0085 (-0.412)	-0.0114 (-0.344)	0.0046 (0.121)	-0.0019 (-0.048)
LIC				
SOExGR	0.0658 (0.446)	0.1736 (0.992)	-0.2629* (-1.694)	-0.4755** (-2.068)
FORxGR	0.1508 (1.344)	0.2138 (0.916)	0.1790 (0.859)	-0.0055 (-0.027)
SOExDollar Index	0.1317** (2.369)	0.1742** (2.158)	0.1350 (1.493)	0.0716 (0.577)
FORxDollar Index	-0.0145 (-0.390)	-0.0365 (-0.556)	-0.0383 (-0.450)	0.0336 (0.347)

Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



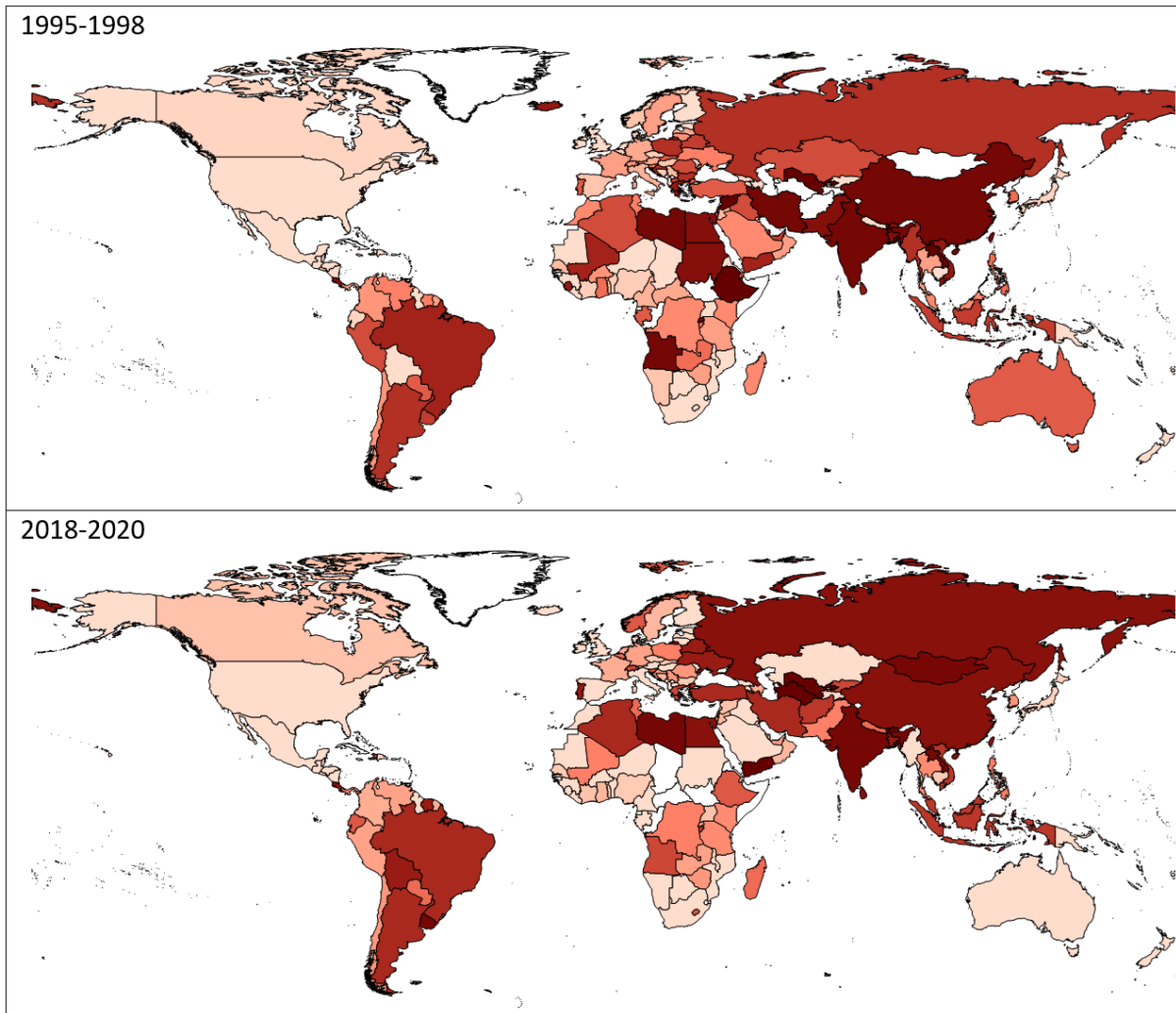
**Table 23: Net interest margin: Local projections**

This tables reports a set of bank-level regressions where the dependent variable is net interest margin (at time t; t+1; t+2; t+3) and the explanatory variables are as in Table 14

	h=0	h=1	h=2	h=3
ALL				
SOExGR	0.0248* (1.951)	0.0441*** (3.008)	0.0053 (0.447)	0.0093 (0.740)
FORxGR	-0.0152* (1.952)	-0.0297*** (3.105)	-0.0208** (2.188)	-0.0138 (1.426)
SOExDollar Index	0.0030 (0.859)	0.0054 (1.045)	0.0107* (1.771)	0.0143** (2.217)
FORxDollar Index	-0.0002 (0.073)	0.0039 (1.202)	0.0029 (0.752)	0.0009 (0.213)
EMDE				
SOExGR	0.0259* (1.653)	0.0464** (2.484)	-0.0015 (-0.101)	0.0040 (0.250)
FORxGR	-0.0240** (-2.101)	-0.0406*** (-3.039)	-0.0281** (-2.172)	-0.0157 (-1.141)
SOExDollar Index	0.0045 (0.798)	0.0108 (1.279)	0.0151 (1.564)	0.0192* (1.858)
FORxDollar Index	-0.0026 (-0.624)	0.0028 (0.466)	0.0019 (0.279)	-0.0002 (-0.023)
MIC				
SOExGR	0.0313* (1.780)	0.0509** (2.420)	-0.0106 (-0.624)	-0.0023 (-0.131)
FORxGR	-0.0286** (-2.186)	-0.0440*** (-2.884)	-0.0342** (-2.346)	-0.0201 (-1.284)
SOExDollar Index	0.0064 (0.974)	0.0132 (1.365)	0.0164 (1.502)	0.0225** (1.974)
FORxDollar Index	-0.0022 (-0.455)	0.0030 (0.442)	0.0025 (0.315)	-0.0008 (-0.090)
LIC				
SOExGR	-0.0152 (-0.780)	0.0022 (0.094)	0.0491 (1.560)	0.0570** (2.282)
FORxGR	-0.0018 (-0.108)	-0.0271 (-1.324)	0.0044 (0.187)	0.0140 (0.664)
SOExDollar Index	-0.0032 (-0.326)	-0.0004 (-0.024)	0.0076 (0.412)	-0.0016 (-0.066)
FORxDollar Index	-0.0047 (-0.589)	0.0014 (0.119)	-0.0021 (-0.156)	0.0006 (0.043)

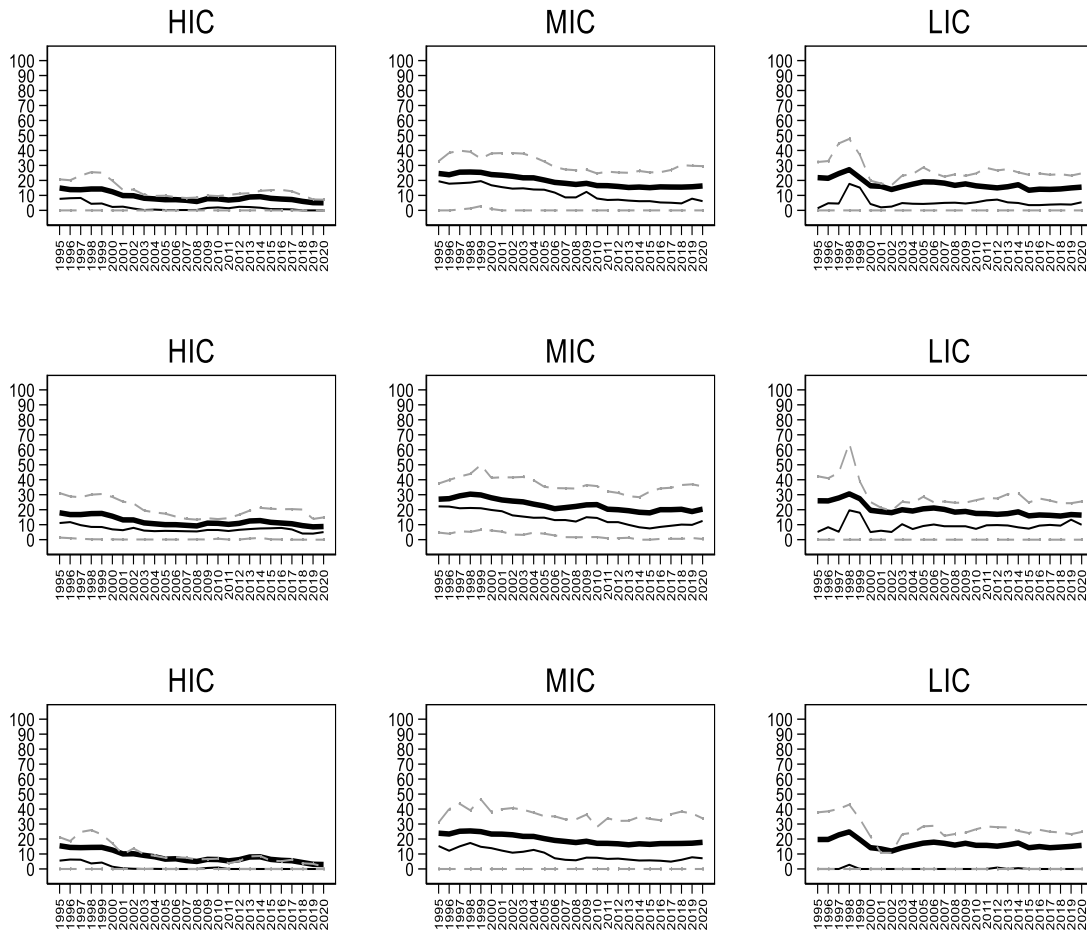
Robust t- statistics clustered at the bank level in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Figure 1: Share of State-Owned Banks**



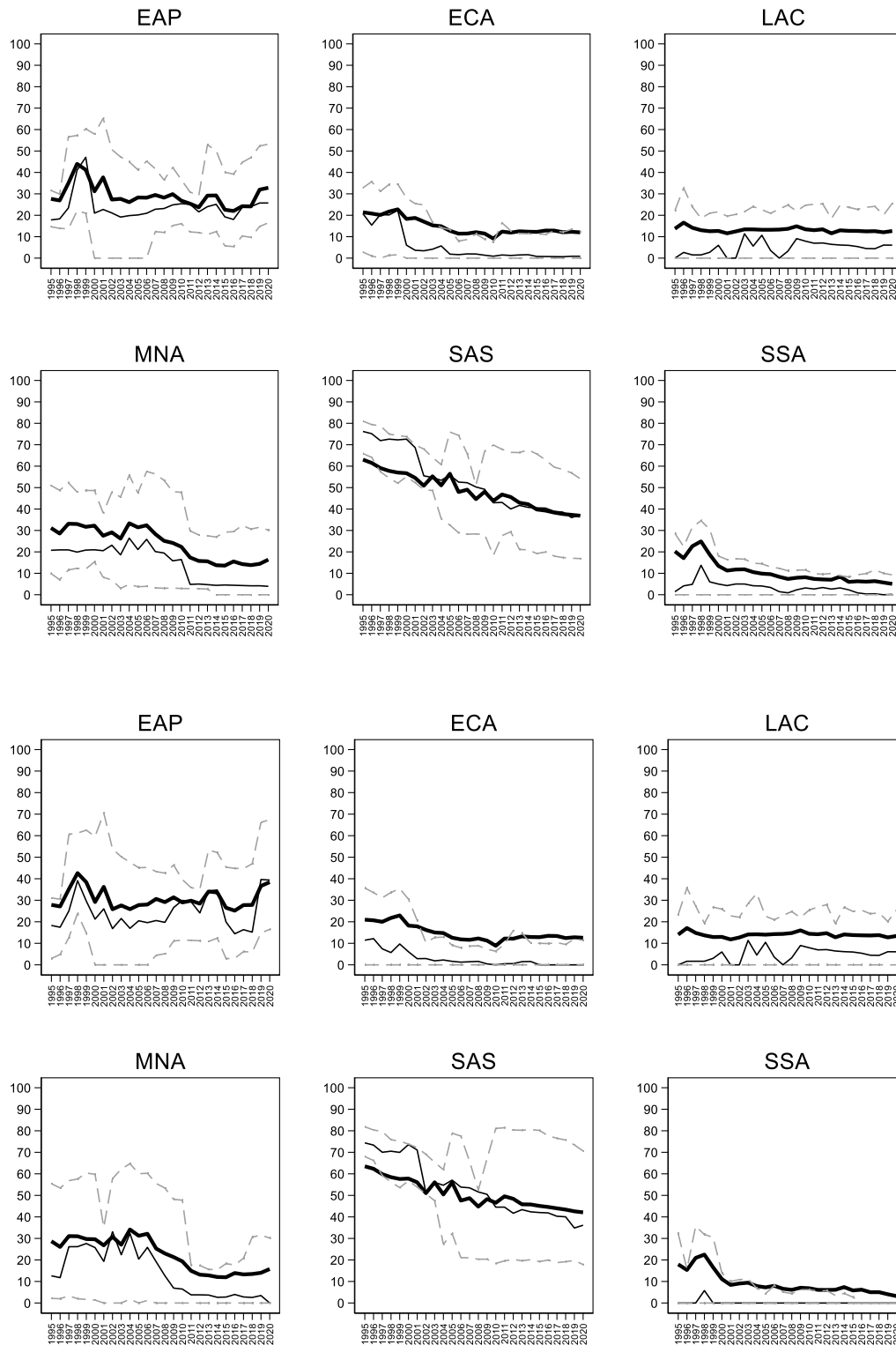
**Figure 2: Evolution of State-Ownership by Income Group**

This figure plots the average (thick solid line), median (think solid line) and the interquartile range (dashed lines) of the share of state-owned banks (as measured by SOE1) in high income (HIC), middle-income (MIC) and low-income (LIC) economies. The top three panels only include commercial banks and use SOE1, the middle panels also include development banks while still using SOE1, the bottom panels only use commercial banks and measure ownership with SOE3.

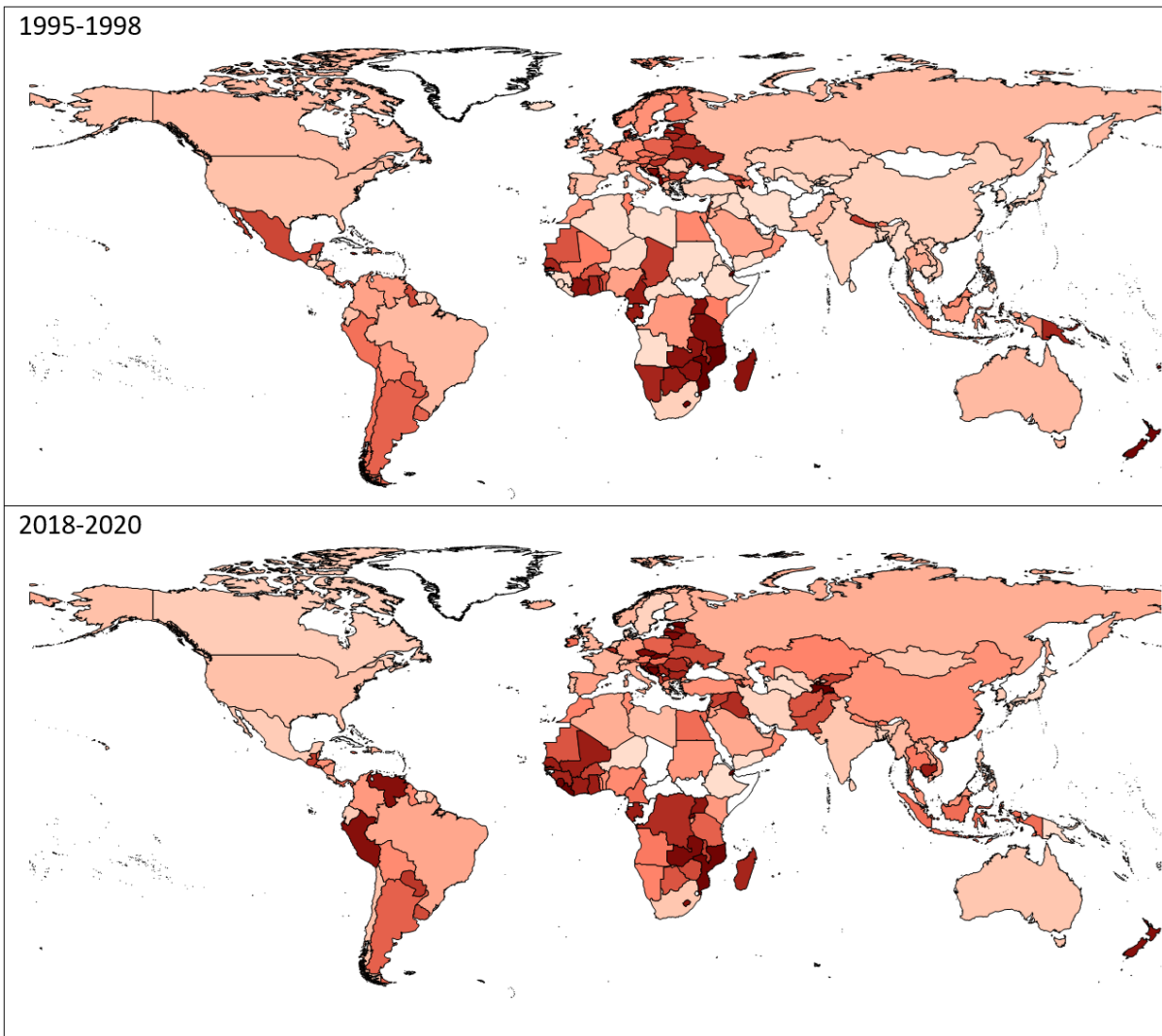


**Figure 3: Evolution of State-Ownership by Region**

This figure plots the average (thick solid line), median (thin solid line) and the interquartile range (dashed lines) of the share of state-owned banks (as measured by SOE1) in East Asia and Pacific (EAP), East Europe and Central Asia (ECA), Latin America and Caribbean (LAC), Middle East and North Africa (MNA), South Asia (SAS), and Sub-Saharan Africa (SSA). The data only include commercial banks. The top two panels use SOE1 and the bottom two SOE3.

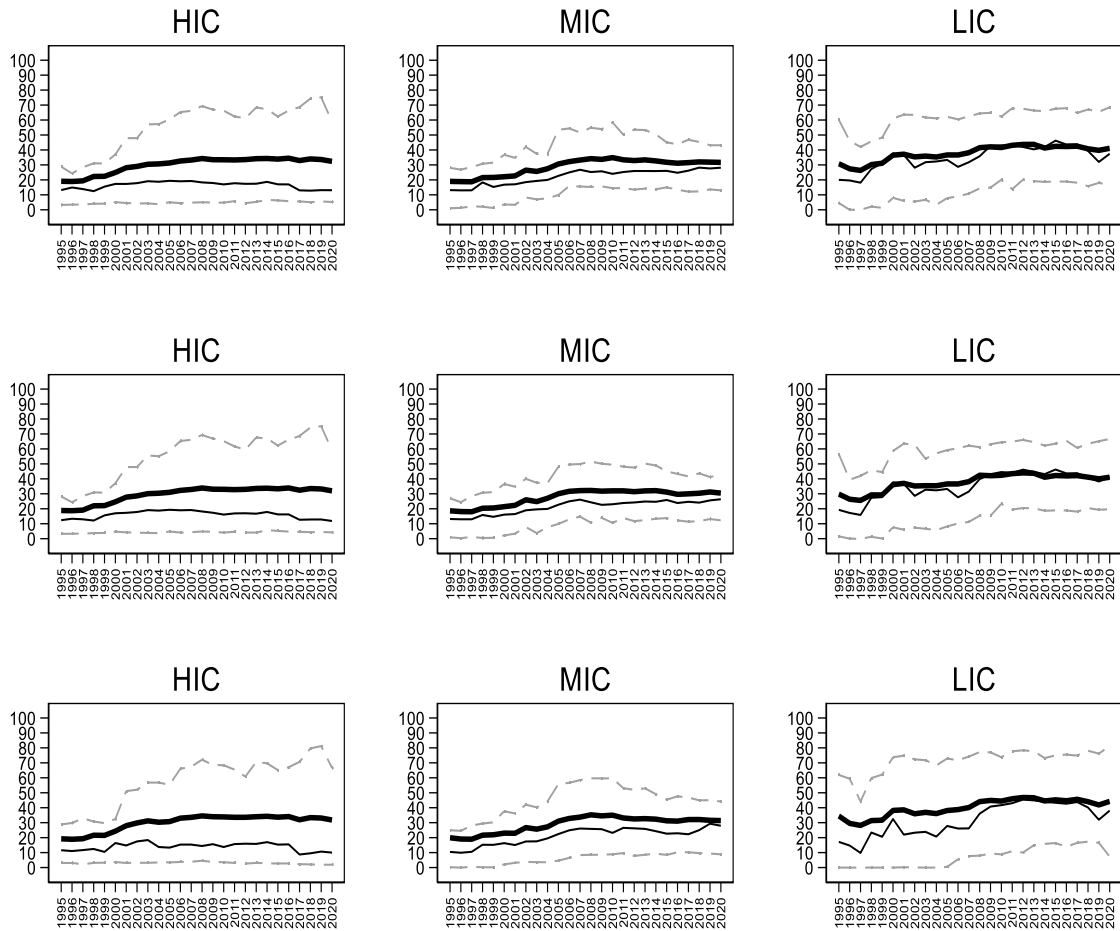


**Figure 4: Share of Foreign-Owned Banks**



**Figure 5: Evolution of Foreign-Ownership by Income Group**

This figure plots the average (thick solid line), median (think solid line) and the interquartile range (dashed lines) of the share of foreign-owned banks (as measured by FOR1) in high income (HIC), middle-income (MIC) and low-income (LIC) economies. The top three panels only include commercial banks and use FOR1, the middle panels also include development banks while still using FOR1, the bottom panels only use commercial banks and measure ownership with FOR3.



**Figure 6: Evolution of Foreign-Ownership by Region**

This figure plots the average (thick solid line), median (thin solid line) and the interquartile range (dashed lines) of the share of foreign-owned banks (as measured by FOR1 in East Asia and Pacific (EAP), East Europe and Central Asia (ECA), Latin America and Caribbean (LAC), Middle East and North Africa (MNA), South Asia (SAS), and Sub-Saharan Africa (SSA). The data in only include commercial banks. The top two panels use FOR1 and the bottom two FOR3.

