

# Domestic bank intermediation in emerging market economies during the 2008-09 crisis

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Article\*\*

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**Abstract**

*This paper analyses bank intermediation in emerging market economies (EMEs) at the height of the 2008-09 global financial crisis. The analysis is based on central bank responses to a BIS questionnaire prepared in July 2009, and thus provides a unique snapshot that can be used for studies of commercial banking activity in EMEs before and after the crisis. EME banks by and large adjusted to the crisis in ways that stabilised their financial positions. On the funding side, they reduced reliance on wholesale markets and sought to attract retail deposits. On the lending side, banks slowed new lending, shifted towards less risky loans and increased their holdings of government bonds. In an effort to boost liquidity, banks shortened the maturity of their assets, relied less on the interbank market and increased the scope of their transactions with central banks. Foreign and domestically-owned banks adjusted to the crisis in similar ways.*

*Keywords: emerging market economies, global financial crisis, bank intermediation, bank business models, domestic- and foreign-owned banks*

**1 INTRODUCTION**

Emerging market economies were significantly affected by the 2008-09 global financial crisis. Nevertheless, compared with their experience in previous crises, EMEs generally displayed resilience. The peak period of stress in EME financial markets was also comparatively limited, with severe pressures in the aftermath of the Lehman Brothers bankruptcy in mid-September 2008, and improved stability and signs of recovery starting in the third quarter of 2009.

Around this time – more precisely in July 2009 – the Bank for International Settlements (BIS) sent a comprehensive questionnaire to over 20 major EME central banks, asking them about the key aspects of domestic bank intermediation during the crisis: changes in bank business models (funding, lending, liquidity operations) and how foreign-owned banks' responses compared with those of home-owned banks.<sup>1</sup> The analysis in this paper is based entirely on the responses to this questionnaire and subsequent discussions among Deputy Governors from EME central banks in January 2010. The paper thus provides a unique snapshot of EME commercial banking activity at the peak of the global financial crisis. As central banks provided their own preferred data series, no attempt was made to extend the analysis to the period after 2009. Rather, the purpose here is to provide a simple analytical insight into this rare crisis experience, which can then be used by researchers studying banking in EMEs before and after the global financial crisis.<sup>2</sup>

<sup>1</sup> The discussion refers to 21 EMEs from Asia (China, Hong Kong SAR, India, Korea, Malaysia, the Philippines, Singapore, Thailand); Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru); emerging Europe (the Czech Republic, Hungary, Poland, Turkey); the Middle East (Israel, Saudi Arabia); and South Africa.

<sup>2</sup> Country-specific experiences are discussed in Al-Hamidy (2010), Babicky (2010), Banai et al. (2010), Bank of Israel (2010), Guinigundo (2010), Ibrahim (2010), Kozinski (2010), and South African Reserve Bank (2010).

The main finding is that, despite the great variety of financial intermediation and bank ownership structures in EMEs, by and large, banks adjusted to the crisis as in a textbook scenario. On the funding side, they reduced their reliance on wholesale markets and increased their efforts to attract retail deposits. On the lending side, they reduced the growth of new loans to firms and households, shifted towards less risky types of loans and increased their holdings of government bonds. On the liquidity side, banks shortened the maturity of their assets, relied less on the interbank market and started doing more business with central banks.

Foreign and domestic banks broadly adjusted to the crisis in the same way. Initially, there were some differences in the speed of adjustment, but by end-2009 both domestic and foreign banks moved in the same direction and adjusted their funding, lending and liquidity operations to a similar extent. The funding model seems to have mattered more for adjustment than bank ownership.

This paper is divided into four sections. Section 2 reviews the structure of financial intermediation in EMEs. Section 3 analyses the structure of bank funding before and during the 2008-09 crisis. Section 4 looks at changes in bank lending patterns. Section 5 evaluates domestic and foreign-owned bank responses at the peak of the crisis and discusses the incentives for establishing subsidiaries versus branches after the crisis. Section 6 concludes.

## 2 STRUCTURE OF FINANCIAL INTERMEDIATION IN EMEs

To understand how banks in different EMEs reacted at the peak of the crisis, it is useful to start by analysing the structure of domestic financial intermediation. The relative importance of banks differs greatly both within and among emerging market regions. This section looks at the relative size of banks, non-bank financial institutions (NBFIs), equity markets and bond markets in EMEs; the ownership structure of domestic banking systems; and the legal form of incorporation of foreign banks' affiliates (i.e., subsidiaries vs. branches). Each of these elements is potentially relevant for explaining the observed trends in financial intermediation at the peak of the crisis.

For instance, banks were generally more affected than NBFIs by the crisis so, other things being equal, one would expect countries with larger non-bank financial sectors to have experienced fewer disruptions in domestic financial intermediation. Similarly, one would expect countries with more developed domestic bond markets to have experienced less financial market upheaval than those relying mostly on international bond markets.

Regarding the ownership structure, one view is that problems in international banks' domestic markets (i.e., US, UK, German, French, etc. markets) inevitably led those banks to withdraw from EMEs. A classic example is the large-scale withdrawal of Japanese banks from emerging Asia during the 1997-98 crisis.

When Japanese banks experienced problems in their domestic market as a result of declines in equity and real estate prices, they had to shrink their balance sheets to maintain their capital adequacy requirements. The resulting pullback provided a major impetus to the crisis that was unfolding in emerging Asia at the time.

A competing view is that international banks consider some emerging markets of strategic importance for their overall business strategy. Therefore, it is in their vital interest to support operations in these markets during the crisis (de Haas and Lelyveld, 2004; EBRD, 2009). The case in point is banks from smaller western European countries (e.g., Austria, Belgium) that established a dense network of subsidiaries in central and eastern Europe (CEE). These subsidiaries generated the lion's share of profits at the group level in the second half of the 2000s, and were therefore vitally important for the financial performance of parent banks.

Yet another view is that in crisis periods lending by state-owned banks tends to be less procyclical than lending by foreign and private domestic banks. For instance, during the crises in emerging Asia and Latin America in the 1990s, state-owned banks expanded credit faster (or cut credit to a smaller extent) than domestic and foreign-owned private banks (Hawkins and Mihaljek, 2001). A similar experience was reported in some EMEs during the current crisis.

Finally, the legal form of incorporation of foreign banks' affiliates may matter during a crisis. Foreign bank affiliates are often of small importance from the parent banks' perspective, but systemically important for the host country. One issue that arises in this context is how the host country authorities might deal with the loss of liquidity and disruptions in the domestic payment system if the parent institution decides to cut back support for such an affiliate. Other things being equal, one would expect the authorities in countries where foreign banks are present as subsidiaries to be better equipped to preserve liquidity and stability, because subsidiaries are standalone entities with their own capital and are supervised by both host country supervisor and, on a consolidated basis, by the parent's supervisory authority.

## 2.1 BANKS VERSUS OTHER FINANCIAL INTERMEDIARIES

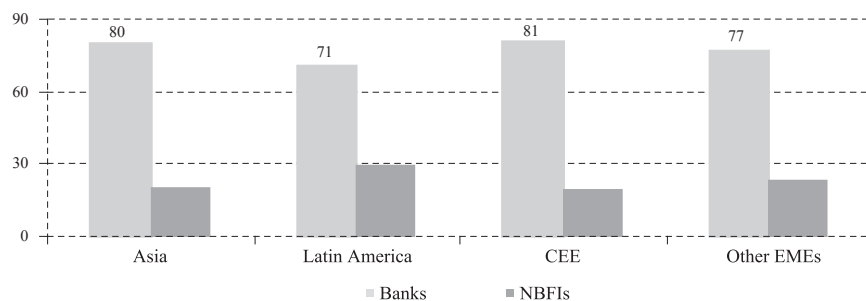
Banks in EMEs were much larger than NBFIs on the eve of the crisis and accounted, on average, for 70-80% of total financial sector assets in 2007 (graph 1).<sup>3</sup> However, there were large differences across countries. In Latin America, for instance, the share of banks in the combined assets of banks and NBFIs ranged from around 50% (Chile and Colombia) to 98% (Argentina), while in other EMEs it ranged from 65% (Israel, Korea, Malaysia) to 95% or higher (Hong Kong SAR, the Philippines, South Africa).

<sup>3</sup> Unless otherwise noted, regional figures in the text, graphs and tables refer to simple averages of countries in a region. These are: China, Hong Kong SAR, India, Korea, Malaysia, the Philippines, Singapore and Thailand (emerging Asia); Argentina, Brazil, Chile, Colombia, Mexico and Peru (Latin America); the Czech Republic, Hungary, Poland and Turkey (CEE); and Israel, Saudi Arabia and South Africa (other EMEs).

The relative shares of banks and NBFIs remained stable through 2009. However, there were some exceptions: banks in India and Peru increased their share of total assets by 7 percentage points (pp) between 2006 and 2009; and in Hungary and Poland by 3-4 pp. Banks retreated compared to NBFIs on a larger scale only in Israel (by 5 pp), Colombia (3 pp) and Mexico (2 pp).

### GRAPH 1

*Banks vs. NBFIs, as a percentage of total financial sector assets, 2007*



*Source: Central bank questionnaires.*

Differences in the structure of financial intermediation were even larger when stock and bond markets are considered. At end-2007, when EMEs were still unaffected by the crisis, stock market capitalisation was close to or higher than the local GDP in more than half of EMEs in our sample of 21 countries (table 1). Stock markets were also larger than the local banking system – in some cases two–three times so – in Chile, Colombia, Hong Kong SAR, India, Peru, Saudi Arabia, Singapore and South Africa. Many countries, including Brazil, the Czech Republic, Hungary and emerging Asian economies, also had fairly large local bond markets, ranging in size from 50% to over 100% of local GDP. Overall, countries in emerging Asia stood out in terms of the size and diversity of their financial systems, followed by Israel, Chile, South Africa, Brazil, central European countries and Saudi Arabia (table 1).

These data suggest that many EMEs were not quite “emerging” in terms of the size and diversity of their financial sectors. Although the crisis had a huge impact on stock markets in many EMEs – equity prices fell by 20-40% between end-2007 and end-2009 – other segments of EMEs’ financial sectors were unaffected or else expanded.

The data in table 1 also show that the financial sectors of the majority of EMEs could not be characterised as bank-centred: NBFIs, equity and bond markets matched or exceeded the size of the local banking sector in many countries. A comprehensive assessment of the impact of the crisis on financial intermediation in EMEs would therefore need to go beyond the narrow banking sector, on which the rest of this paper will focus.

TABLE 1

*Structure of financial intermediation, 2007, as a percentage of GDP*

	Banking system assets	NBFIs' assets	Stock market capitalisation	Domestic bonds outstanding	Total
<b>Emerging Asia</b>					
Singapore	656	108	308	58	1,131
Hong Kong SAR	641	38	800	25	1,504
China	210	–	–	50	260
Malaysia	206	110	26	85	427
Korea	160	94	98	103	455
Thailand	131	47	79	57	313
India	83	62	157	42	345
<b>Latin America</b>					
Chile	102	98	131	26	357
Brazil	101	23	95	71	290
Mexico	44	19	39	34	135
Argentina	36	1	22	29	88
Peru	33	32	97	21	
<b>Central and eastern Europe</b>					
Hungary	108	24	80	56	267
Czech Republic	106	37	27	60	230
Poland	71	36	92	38	236
Turkey	69	10	40	34	153
<b>Other EMEs</b>					
Israel	148	112	110	34	404
South Africa	127	6	150	43	327
Saudi Arabia	75	–	135	–	210

*Source: Central bank questionnaires.***2.2 OWNERSHIP STRUCTURE OF BANKS**

EMEs differed considerably in terms of the ownership structure of their banks. Banking systems in Asia had, on average, a fairly balanced ownership structure (graph 2). Compared to other emerging market regions, Asia also stood out in terms of the relative importance of state-owned banks and other banking institutions (cooperative banks, credit unions, etc.). However, this was mainly due to the large size of the state and cooperative sectors in China and India. In Latin America, foreign and private domestic banks each accounted for about 40% of banking system assets, and state-owned banks for the remaining 20%. In CEE, foreign-owned banks dominated, accounting for over 60% of total banking system assets on average, and often much more in individual countries. In other EMEs – Israel, Saudi Arabia and South Africa – private domestic banks were dominant, account-

ing for 80% of total assets, with the remainder split between foreign and state-owned banks.

## GRAPH 2

*Ownership structure of emerging market banks, 2009, as a percentage of total banking system assets*



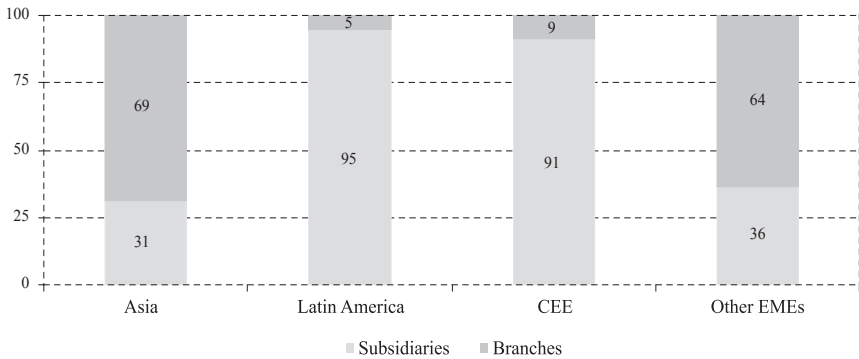
Source: Central bank questionnaires.

Again, regional averages masked considerable country differences. With the exception of the Czech Republic and Saudi Arabia, where foreign and private domestic banks accounted for, respectively, 96% and 98% of total banking system assets, different forms of ownership were well represented in almost all EMEs. For instance, private domestic banks accounted for more than 50% of total assets in Brazil, Colombia, Israel, Malaysia, Peru, the Philippines, South Africa, Thailand and Turkey, and foreign-owned banks accounted for more than 50% of total assets in Hong Kong SAR, Hungary, Mexico, Peru, Poland and Singapore (appendix graph A1). State-owned banks had a strong presence (more than 30% of total assets) in Argentina, Brazil, China, India and Korea. The ownership structure of banks in EMEs remained fairly stable through 2009. This contrasts with developments in earlier financial crises affecting EMEs, when major changes were taking place in the structure of the banking industry (see Mihaljek, 2006; Turner, 2008).

Regarding the legal form of foreign banks' presence in EMEs, subsidiaries were dominant in Latin America and CEE, while branches accounted for about two thirds of foreign banks' assets in Asia and other EMEs (graph 3). In Colombia, Malaysia, Mexico and Peru, foreign banks operate only as subsidiaries, while in China, India, Saudi Arabia and South Africa they operate only as branches. Unlike the overall ownership structure, the legal form of foreign banks' operations has changed in several EMEs: from 2006 to 2009, the relative share of branches increased by 15 pp in Korea, 8 pp in Hungary, 4 pp in Israel and 3 pp in Poland. But in Chile and South Africa, the subsidiaries' shares increased by over 6 pp.

## GRAPH 3

Foreign bank subsidiaries and branches, 2009, as a percentage of total assets of foreign banks' affiliates



Source: Central bank questionnaires.

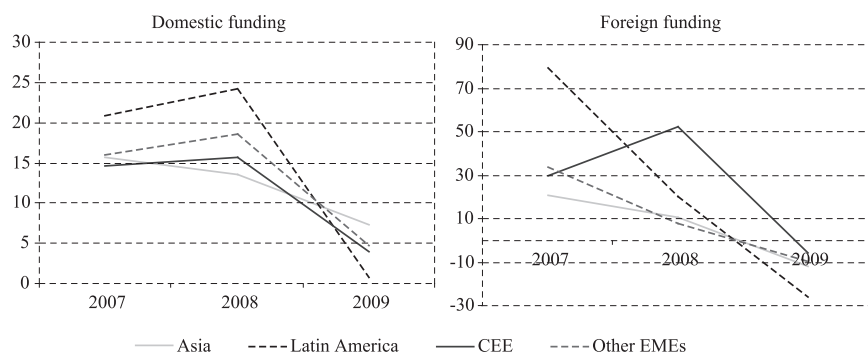
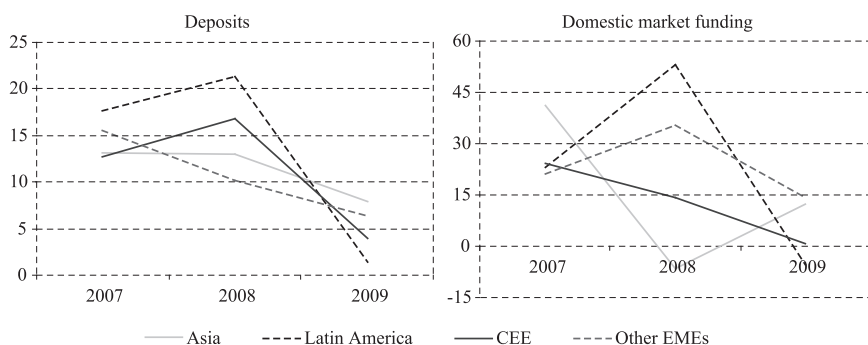
### 3 BANK FUNDING

In the run-up to the 2008–09 crisis, the funding of banks in EMEs was characterised by two main trends: first, domestic deposits were generally growing more slowly than bank lending, resulting in rising loan to deposit ratios; and second, banks in EMEs were increasingly relying on foreign sources in order to fund the rapid expansion of credit. These trends were particularly pronounced in CEE, parts of Latin America, South Africa and Korea.

With the onset of the crisis in October 2008, both domestic and foreign sources of bank funding in EMEs largely evaporated. Growth rates of domestic funding plunged from 15–25% year-on-year in 2007–08, to 0–7% in 2009 (graph 4, left-hand panel). The retrenchment in foreign funding was even more dramatic, especially in Latin America and CEE (right-hand panel). The banking systems in virtually all EMEs recorded negative growth of foreign funding for the full year 2009.

Among domestic sources of funding – borrowing from other domestic financial institutions and bonds and money market instruments issued by banks in domestic markets – both deposit growth and market-based funding slowed sharply in 2009 (graph 5). This is not surprising in view of the severity of the real and financial shocks that hit the EMEs in the first half of 2009: the collapse in exports depressed the growth of customer deposits (left-hand panel), while disruptions in local inter-bank and securities markets led to the sharp fall in domestic market funding (right-hand panel). During the second half of 2009, as global and local financial markets gradually recovered, banks in several Asian countries, including China, India, the Philippines and Thailand, started again to issue securities in domestic markets, mostly short-term money market instruments.



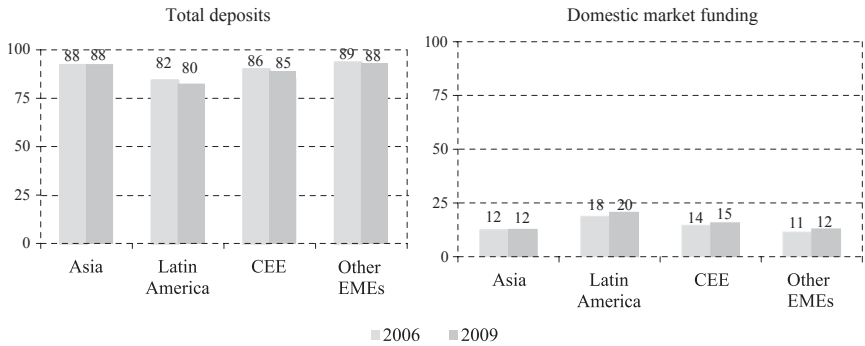
**GRAPH 4***Funding of emerging market banks, year-on-year growth rates, in per cent**Source: Central bank questionnaires.***GRAPH 5***Domestic funding, year-on-year growth rates, in per cent**Source: Central bank questionnaires.*

In relative terms, the shock to deposits was generally stronger than that to domestic funding. As indicated in graph 6, the share of deposits in domestic liabilities decreased in all emerging market regions with the exception of Asia, while the share of domestic money and bond market funding was slightly higher in three out of four regions in 2009 than in 2006.

The situation with foreign funding was similar. Short-term liabilities plunged everywhere in 2009, recording average growth rates from -10% to -40% year-on-year (graph 7, left-hand panel). Long-term liabilities dropped precipitously in CEE, where banks had for years relied on longer-term funding provided by international banks, and in Latin America, especially Brazil and Chile (right-hand panel). Long-term liabilities increased modestly only in emerging Asia. These developments reflected disruptions in global money markets on the one hand, and a temporary halt in cross-border credit flows to EMEs on the other.

**GRAPH 6**

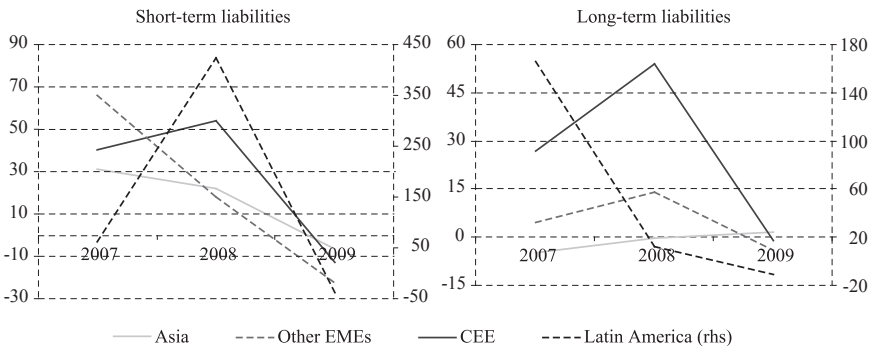
*Composition of domestic funding, as a percentage of domestic liabilities*



Source: Central bank questionnaires.

**GRAPH 7**

*Foreign funding, year-on-year growth rates, in per cent (both left- and right-hand sides)*

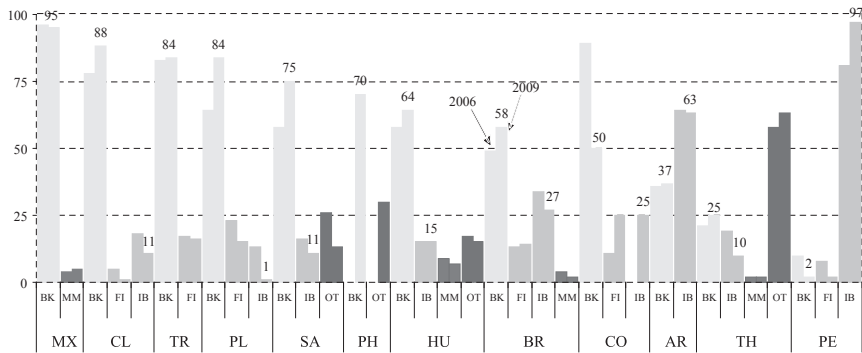


Source: Central bank questionnaires.

Disturbances in the international money and bond markets seem to have had a bigger impact on the composition of foreign funding than disruptions in cross-border bank flows. As indicated in graph 8, with the exception of Colombia, Mexico and Peru, the share of cross-border bank funding in total foreign liabilities was still higher in 2009 than in 2006, while the share of international money market instruments and bonds issued by EME banks was generally lower (Peru was a notable exception in bond issuance). The funding of EME banks by other foreign financial institutions – as well as from other foreign sources – was lower as a percentage of foreign liabilities in almost all the countries in 2009 compared with 2006.

## GRAPH 8

Composition of foreign funding, as a percentage of foreign liabilities



Note: BK = cross-border loans provided by foreign banks; FI = loans provided by other foreign financial institutions; MM = international money market instruments issued by emerging market banks; IB = international bonds issued by emerging market banks; OT = other sources of foreign funding.

Source: Central bank questionnaires.

Central banks clearly identified problems in domestic and foreign funding in their contributions to the BIS meeting of Deputy Governors of emerging market economies. For instance, Brazilian banks often turn to international banks for credit lines for exporters. Their access to export credit lines was significantly restrained for some time during the crisis, prompting the central bank to provide a trade credit facility to banks until the access to foreign sources of credit gradually resumed.

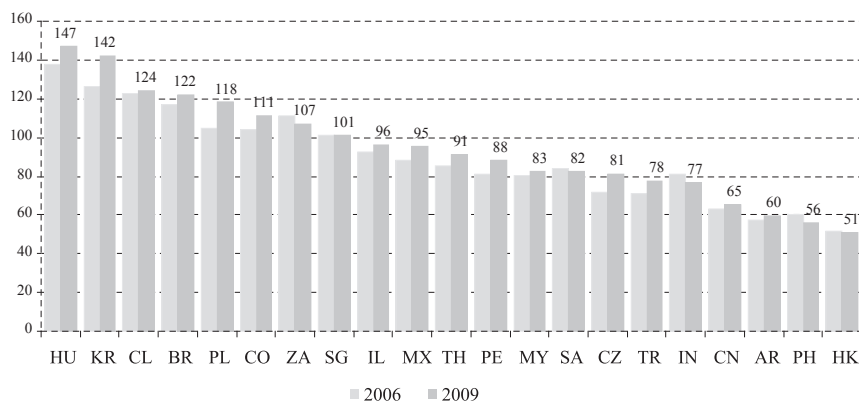
In Mexico, some smaller- and medium-sized banks launched aggressive campaigns to increase funding from retail depositors by offering very attractive interest rates, while others expanded their branch networks. Some Mexican banks also increased the proportion of liabilities held as liquid assets, while others called back some assets and reduced their lending commitments as a temporary measure to get through the crisis. Competition for deposits also strengthened in Hong Kong SAR, Korea and Hungary. In Poland, banks replaced maturing domestic interbank exposures with borrowing from foreign banks (mainly parent companies), and made efforts to raise more stable domestic sources such as deposits from non-financial clients (mainly households). This was, however, accompanied by a “deposit price war” that negatively affected banks’ financing costs and increased pressure on their interest margins.

Despite evidence of funding pressures in a large number of EMEs, many central banks felt that the financial crisis had no major impact on the funding strategies of banks operating in their domestic market. The main reason for this was that many emerging market banks did not rely extensively on either domestic or foreign market funding – they generally had a sufficient pool of local deposits to fund

loans to their clients. As shown in graph 9, roughly two thirds of EMEs in our sample had loan-to-deposit ratios below 100% in 2009, despite a widespread increase in these ratios since 2006. Another reason was that local interbank markets by and large continued to function normally through the crisis – although, admittedly, these markets were not as important a source of liquidity as in advanced economies.

### GRAPH 9

*Loan to deposit ratios<sup>1</sup>, in per cent*



<sup>1</sup> Total loans as a percentage of total deposits. For Singapore, domestic banks only.

Sources: Central bank questionnaires; BIS calculations.

Another source of funding – the securitisation of bank loans – was also affected by the crisis. In most EMEs, securitisation was not widespread, but plans for its development were well-advanced in some countries prior to the crisis. In India, securitisation was mostly based on retail loans and was not too complex. With the crisis, securitisation decreased in volume, but was expected to resume in the future. In China, there were several pilot programmes for the securitisation of bank loans. However, with loan-to-deposit ratios of around 60%, the motivation for securitisation was relatively low. The central bank nevertheless promoted the development of a legal infrastructure and regulatory framework for securitisation because of concerns that banks might start moving riskier loans off their balance sheets by selling them to trust companies; these had already been in trouble several times in the previous decade because of investments that were too risky. In Saudi Arabia, the authorities were approached by the banking industry on the issue of securitisation prior to the crisis. However, with bank loans already growing at annual rates of more than 25%, the Saudi Arabian Monetary Authority decided that it was not in the interest of financial stability to provide a further boost to credit growth by developing a framework for securitisation. By contrast, the authorities in South Africa gave a push to securitisation by lowering the loan-to-value ratio for mortgage loans during the crisis.

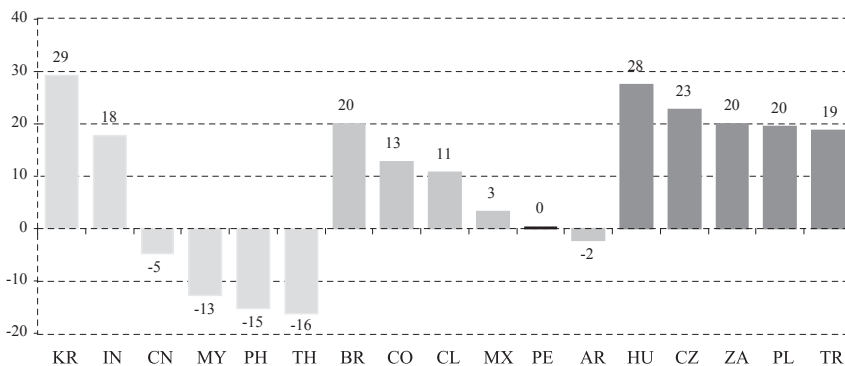
#### 4 BANK LENDING

Before the crisis spread from advanced to emerging market economies in October 2008, private sector credit had expanded rapidly in most EMEs. The expansion was particularly pronounced in CEE, Brazil, Chile, Korea and South Africa. Credit stagnated or decreased as a percentage of GDP only in a few Asian and Latin American economies (graph 10).

The great credit expansion resulted from a combination of cyclical, structural and policy factors that were in place from 2002 onwards. Low real interest rates and the strong growth of the global economy were the key cyclical factors. Rapid financial sector development and growing economic and financial integration of EMEs with advanced economies were the major structural forces. More disciplined macroeconomic policies and greater emphasis on financial stability in EMEs were also contributing elements. Together, these factors provided incentives for portfolio diversification by global investors and led to a surge in capital flows to EMEs, which funded much of the credit expansion (Mihaljek, 2009). In addition, the balance sheets of commercial banks in some EMEs with fixed exchange rates expanded as a result of prolonged foreign exchange intervention by central banks resisting currency appreciation.

#### GRAPH 10

*Domestic bank credit to the private sector, end-2002 to August 2008, cumulative change in end-period stocks, as a percentage of GDP*

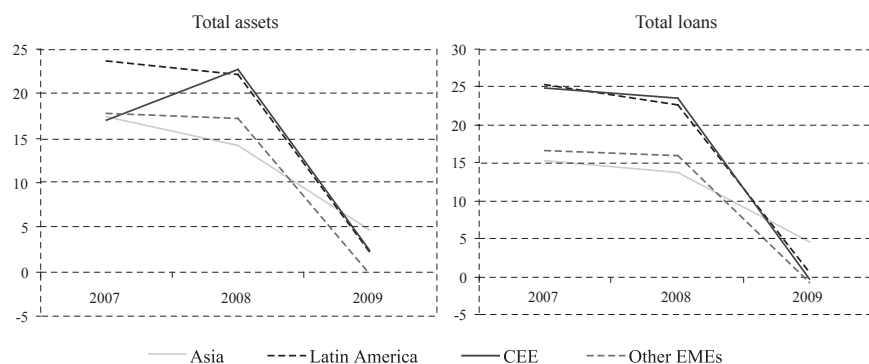


Source: IMF, 2014.

Following the onset of the crisis in the main financial centres in August 2007, the growth of total bank assets and loans began to slow down in most EMEs (graph 11). As the crisis spread in October 2008, credit growth decelerated sharply. Apart from some Asian and Latin American countries, most EMEs recorded negative credit growth rates in 2009. It is striking, for instance, how similar the average rate of decline was in CEE and Latin America (right-hand panel).

**GRAPH 11**

Total assets and loans of banks in EMEs, year-on-year growth rates, in per cent

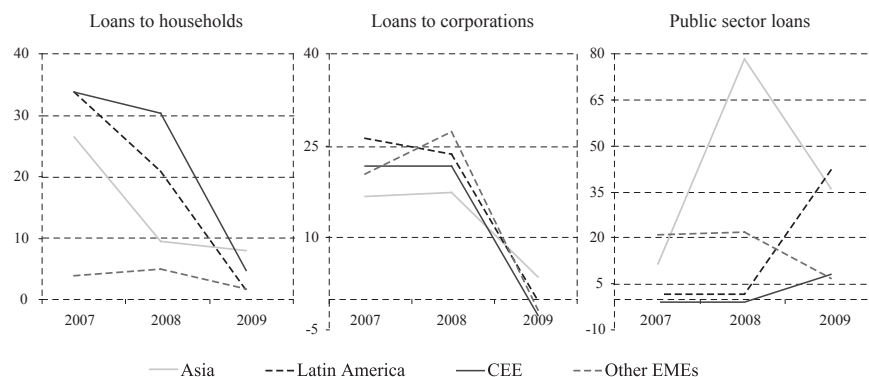


Source: Central bank questionnaires.

Corporate credit growth decelerated sharply in all emerging market regions in 2009 (graph 12, centre panel). The slowdown in household lending was pronounced in CEE and Latin America, and more moderate in Asia and other EMEs (left-hand panel). Lending to the public sector increased in CEE, and in particular in Latin America, while in Asia and other EMEs, public sector lending decreased (right-hand panel).

**GRAPH 12**

Domestic credit growth, year-on-year growth rates, in per cent



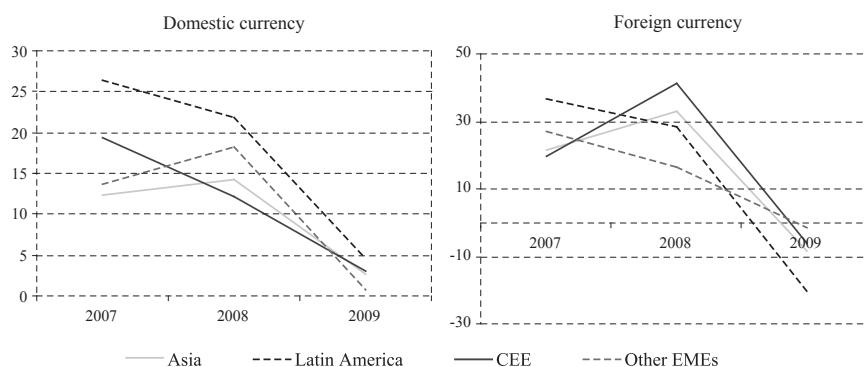
Source: Central bank questionnaires.

In terms of the currency composition of loans, foreign currency loans decreased much faster than domestic currency loans in 2009 (graph 13). While the rates of decrease across regions were quite similar in 2009, it is interesting to note that foreign currency lending in CEE *increased* during 2008, despite the ongoing crisis

in many western European countries, where most banks operating in CEE have headquarters. As a result, foreign currency loans accounted for about 35% of total outstanding domestic bank credit in CEE in 2009, compared with 15-18% in other emerging market regions. This was a major source of vulnerability during the crisis, especially since a quarter of foreign currency loans were taken by households, which in most cases do not have foreign currency income and cannot hedge exchange rate risk due to the lack of hedging instruments. One should note, however, that foreign currency lending was more a question of banking product development than a problem of currency substitution induced by macroeconomic instability, although some macroeconomic developments did play a role in the spread of foreign currency lending, including fiscal deficits in Hungary, which kept domestic interest rates high.

### GRAPH 13

*Domestic and foreign currency loans, year-on-year growth rates, in per cent*



*Source: Central bank questionnaires.*

There were also some significant changes in the composition of bank assets other than loans. Holdings of long-term securities fell sharply in CEE and Latin America, and increased in Asia and other EMEs in 2009 (appendix graph A2, left-hand panel). In CEE, the reduction in long-term bond holdings was limited to domestic corporate and government bonds, while foreign bond holdings increased sharply (appendix graph A3). Banks in Asia and other EMEs also increased their foreign bond holdings in 2009. In addition, banks in most EMEs increased their holdings of short-term securities (appendix graph A2, right-hand panel).

Central bank contributions to the meeting of EME Deputy Governors provided further detail on these developments. In Hungary, India, Korea, Singapore, South Africa, Thailand and Turkey, credit growth slowed sharply as credit demand fell and banks tightened their credit standards and price and non-price credit terms. In Argentina and the Philippines, the composition of domestic credit shifted from the household sector before the crisis towards the corporate sector in 2009. In South

Africa, in contrast, corporate lending decreased more than loans to households due to a sharp contraction in output. China was an important exception: the growth rate of total loans doubled in 2009 to 30% year-on-year by end-October.

Banks in several countries (including Brazil, the Czech Republic and South Africa) shortened the maturity of lending and often voluntarily increased their holdings of statutory liquid assets. This was also the case with commercial banks in India and Turkey, which significantly increased their holdings of government securities. In Korea, banks expanded their short-term placements in money market funds.

In Poland, there was a significant disruption of the domestic interbank deposit market. In response, banks limited the growth of credit to the economy (especially the non-financial corporate sector), raised the share of highly marketable treasury securities in their assets, and increased holdings of central bank bills and deposits at the central bank.

### 5 DOMESTIC VERSUS FOREIGN-OWNED BANKS

Reflecting the diversity of ownership forms and market positions of banks in EMEs, the responses of domestic and foreign-owned banks to the crisis have been quite varied and cannot be easily categorised.

A number of central banks in countries with both low and high shares of foreign bank ownership (e.g., Brazil, Hong Kong SAR, Korea, Malaysia, Saudi Arabia, Singapore and Thailand) reported that there were no major differences in the reactions of domestic and foreign-owned banks during the crisis. For instance, South Africa's largest foreign-owned bank (which is the second largest bank in the country) responded to the crisis like the domestic banks. In Thailand, both foreign and local banks became more cautious in lending to risky businesses (especially small- and medium-sized enterprises, which was also the case in Korea); and reduced their off-balance sheet transactions, especially in foreign currency derivatives. The main difference was that foreign-owned banks reduced household loans and increased secured lending slightly, while the Thai banks increased household loans and kept secured lending unchanged.

Similarly, in Hong Kong SAR, both local and overseas banks cut back loans to the corporate and household sectors sharply after the onset of the crisis. One difference was that locally incorporated banks were more aggressive in securing stable funding in the retail market by offering more attractive time deposit rates. In Singapore, some foreign banks cut back lending to non-core customers and complex trading activities as part of restructuring measures undertaken by parent banks worldwide. Overall, however, these cutbacks were not significant. In Saudi Arabia, liquidity from head offices decreased temporarily for some foreign bank branches, which restricted their usual role in interbank funding and lending to



various sectors in the economy. Nevertheless, one foreign bank branch was able to issue an Islamic bond (sukuk) to fund its Saudi assets during the crisis.

Among the countries with a moderate share of foreign-owned banks (i.e., 15-30% of total banking sector assets), foreign-owned banks generally reduced domestic credit faster than private domestic banks, for instance in Argentina, Turkey, and among smaller foreign banks in South Africa. Similarly, foreign-owned banks in Colombia were quite procyclical in consumer lending. In Argentina and Turkey, the decline in credit by the private banks – both foreign and domestic – was partly offset by increased lending by the state-owned banks.

The funding responses of private domestic banks and foreign-owned banks also differed in some countries. In Turkey, for instance, foreign-owned banks reduced interbank borrowing much more than private domestic banks (this was also the case in the Philippines), and issued subordinated debt to offset the decline in cross-border loans. Foreign-owned banks also significantly increased the amount of funds raised from repo transactions, while the private domestic banks reduced their funding through repos.

It is interesting to note that reactions to the crisis differed even among some foreign-owned banks. In South Africa, smaller foreign-owned banks whose parents were more exposed to the global financial turmoil were cut off from head office funding and had to reduce their exposures to the corporate sector. If the news about their foreign owners was bad, they tried to emphasise how they were de-linked and independent; if the news was good, they stressed the willingness of their parents to stand by them.

Among the countries where foreign-owned banks play a key role in domestic financial intermediation, the question of domestic versus foreign-owned banks was less relevant than the question whether foreign banks helped to maintain financial stability through the crisis. On this issue, experiences varied. In Mexico, some subsidiaries – especially those whose parents were in trouble – initially reduced credit faster than other banks, although later on, domestic banks also cut back their lending. Many foreign-owned banks in Mexico ended up lending to parent banks.<sup>4</sup> Some parent banks also transferred loans to large Mexican firms from the books of the head office to the books of the subsidiaries in order to reduce the head office leverage. Foreign bank subsidiaries also reduced their risk positions and trading activity in the foreign exchange and sovereign debt markets.

In contrast to the situation in Mexico, in Hungary parent banks fulfilled their support function during the crisis, showing no signs of withdrawing funds from their subsidiaries. In addition to stabilising the position of subsidiaries, parent banks

<sup>4</sup> This was also the case in some central European countries – in particular the Czech Republic and Slovakia – in the last quarter of 2008 and the first quarter of 2009 (see Mihaljek, 2010).

provided them with foreign currency funding and increased the role of intragroup foreign currency swaps. On the other hand, domestically owned banks received government loans to strengthen their liquidity position during the crisis, and the central bank provided foreign currency liquidity under its swap facility. Both local and foreign-owned banks reduced their profit targets for 2009, started competing for deposits, and cut back loans to risky industries such as construction.

The experience of Poland was somewhere between these extremes. Foreign-owned banks generally reduced corporate credit and expanded household credit faster than Polish-owned banks. They kept on providing foreign currency loans (though at a much diminished rate), while Polish-owned banks largely stopped providing such loans, replacing them with local currency loans. Foreign-owned banks also closed their liquidity funding gap faster than domestically owned banks. In particular, at the height of the crisis in Q4 2008, foreign-owned banks withdrew earlier than domestic banks from the interbank market, preferring to deal with the central bank rather than with other commercial banks. This lack of confidence was “imported” from the outside: parent banks apparently instructed their Polish subsidiaries to withdraw from the local interbank market. But, on the whole, parent banks did not abandon their subsidiaries in Poland or elsewhere in CEE during the crisis. They broadly maintained their cross-border credit lines and lending in domestic currency, thus acting as a stabilising force during the crisis and demonstrating that these markets were of strategic importance to them (see Mihaljek, 2010).

A related issue is whether parent banks will convert some of their emerging market subsidiaries into branches after the crisis. Over the past decade, centralisation of the decision-making process in global financial institutions has led to a system in which subsidiaries operate more or less like branches. In the European Union, this development has been facilitated by the adoption of the single EU banking passport.

Branch banking was often attractive to host country authorities in the past because it seemed to provide greater incentives to foreign banks to transfer know-how and technology to EMEs. With the crisis, however, the focus of host country authorities has shifted towards financial stability issues. This has made subsidiaries more attractive for some host countries because of the possibility of ring-fencing their assets and of regulating them more tightly than branches. In response, some foreign banks considered at the time the possibility of turning their subsidiaries into branches if the local regulation of subsidiaries’ activities increased significantly after the crisis.

However, there has also been a movement away from foreign bank branches in some countries. In China, the authorities expressed an interest in expanding the role of foreign-owned banks – which were at the time present only as branches –

to subsidiaries in the future. One reason for this was the high concentration of some activities in foreign bank branches: with just 2% of total banking system assets, foreign bank branches accounted for 50% of derivatives and 18% of foreign currency trading before the crisis. Another was the desire to encourage foreign-owned banks to lend and fund their activities in China in the future. Malaysia had some positive experience with this approach – by requiring foreign banks to operate as subsidiaries, the authorities ensured that banks had a level playing field and entered the crisis with sufficient capital. By contrast, the authorities in India were reluctant to grant foreign banks the full national treatment given to domestic banks, out of concern that foreign banks could come to dominate some market segments.

In summary, in many EMEs where foreign-owned banks do not play a key role in domestic financial intermediation, the differences in the reactions of local and foreign-owned banks at the peak of the crisis were small and discernible mainly in the details of their funding and lending operations. In particular, there were no noticeable changes in the composition of the loan portfolios of the two groups of banks at the peak of the crisis. In EMEs where foreign banks played a somewhat bigger role they generally adjusted their balance sheets faster and more deeply than domestic banks. Finally, in EMEs where foreign-owned banks were the dominant financial intermediaries, reactions to the crisis depended on the exposure of parent institutions, the financial health of subsidiaries, and the strategic importance of subsidiaries for parent banks. In the end, financial stability was preserved both in those EMEs where parent banks fulfilled their support function and in those where they withdrew funds from subsidiaries. However, the latter often required some extraordinary efforts on the part of central banks to stabilise the local financial markets.

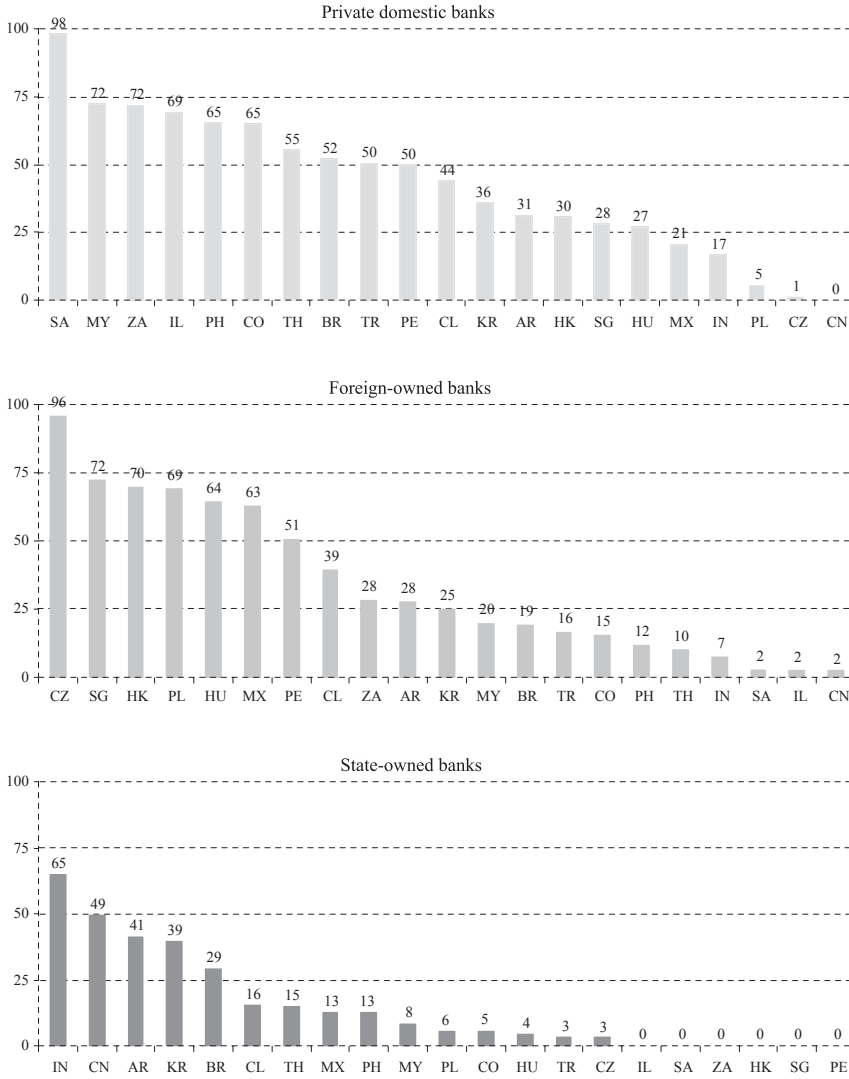
## 6 CONCLUSION

This paper analysed a unique data set on the behaviour of EME banks at the peak of the crisis in 2008-09. The data were provided by 21 emerging market central banks to the BIS in late 2009, and as such represent a useful benchmark for studies of EME banking activity before and after the global financial crisis.

At the height of the crisis, EME banks clearly sought to stabilise their financial position: on the funding side, they borrowed less in wholesale markets and started attracting retail deposits; on the lending side, they reduced new loans to firms and households, shifted towards less risky loans, and increased their holdings of government bonds. In an effort to boost liquidity, banks shortened the maturity of their assets, relied less on the interbank market and increased the scope of their transactions with central banks. The differences in the reactions of local and foreign-owned banks at the peak of the crisis were generally small and depended on the relative size of foreign-owned banks and exposure of parent institutions.

Subsequent developments have shown that the sharp decline in credit growth bottomed out in most major EMEs during 2010. Owing to resilient economies and strong domestic demand, the rebound in banking activity in emerging Asia and Latin America was quite pronounced through mid-2012. In emerging Europe, the rebound was more subdued in this period (with the exception of Turkey), reflecting spillovers from the sovereign debt crisis in the euro area. Since mid-2012, credit growth has slowed in emerging Asia and Latin America, as central banks took measures to address the signs of overheating. Within a relatively short period of four to five years, banking activity in EMEs has thus experienced a full cycle – from the peak in 2007-08, to the trough in the first half of 2009, to another peak in mid-2012 – demonstrating considerable resilience and stability along the way. In particular, no major EME bank has failed or posed a systemic risk in this period.

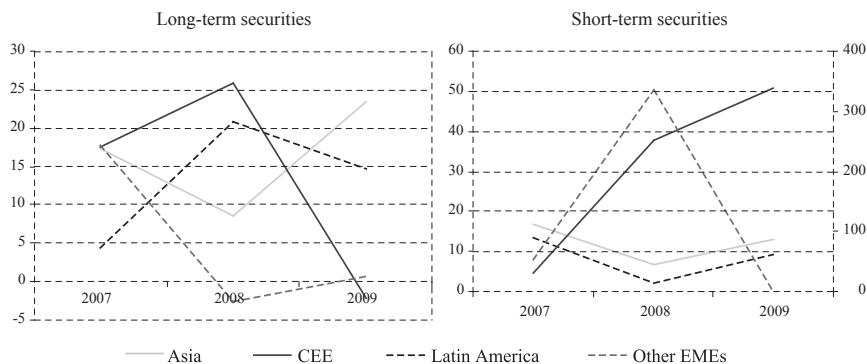
**GRAPH A1**  
*Ownership structure of banking systems in EMEs, 2009, as a percentage of total banking system assets*



Source: Central bank questionnaires.

**GRAPH A2**

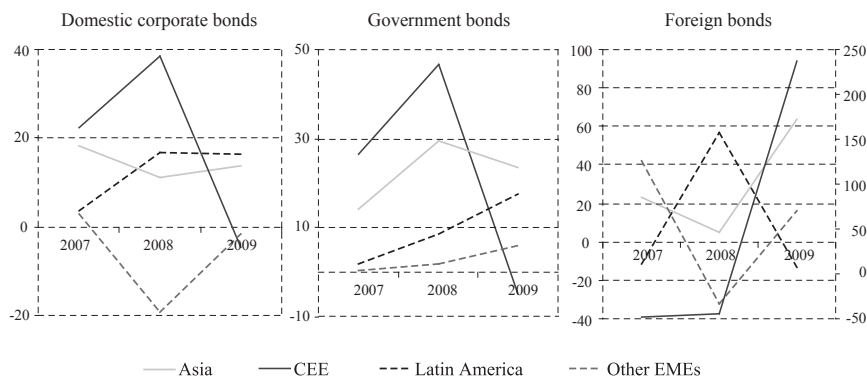
*Holdings of securities by banks in emerging markets, year-on-year growth rates, in per cent (both left- and right-hand sides)*



Source: Central bank questionnaires.

**GRAPH A3**

*Holdings of long-term securities by banks in emerging markets, year-on-year growth rates, in per cent (both left- and right-hand sides)*



Source: Central bank questionnaires.

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