

FOREIGN BANKS AND FINANCIAL STABILITY IN THE NEW EUROPE

Alicia García Herrero, Daniel Navia Simón

Introduction

The last decade has witnessed an unprecedented increase in the activities of international banks in emerging markets; a trend that has been nowhere more apparent than in accession countries. At the present time, no other emerging region has a higher level of foreign participation in banking and financial markets. Foreign institutions act as market leaders in most accession countries, with two thirds of the assets of the domestic banking systems owned by their branches and subsidiaries. These figures are even more remarkable if we consider the fact that only ten years ago these countries financial systems¹ were practically closed to foreign participation².

The fast penetration of foreign banks has been welcomed by accession countries. The contribution of foreign banks was instrumental for the smooth transition of their financial systems. The capital injected by foreign banks was crucial in the success of privatizations programs and the restructuring of banking systems after the crises experienced in some of the transition economies. Although harder to quantify, the impact of the management skills introduced by foreign banks on the efficiency and scope of financial intermediation is also widely recognized. While there is plenty of room for further improvement, size and efficiency were probably the most important objectives of liberalization programs in these countries. As a result, a general consensus that foreign banks have been beneficial for accession countries has emerged in the last years.

Now that privatization processes are mostly concluded in the majority of these countries, the attention of bankers and policy makers alike has partially shifted from size and efficiency to stability. Do foreign banks contribute to greater financial stability? Since foreign banks constitute a fundamental part of accession countries' banking systems, the answer to this question is probably more relevant for them than for any other region of the world. Several theoretical arguments have been advanced for a positive, but also for a negative, role of foreign banks as regards financial stability. Some of them are not entirely contradictory but rather refer to different aspects of financial stability or different forms of foreign bank activities. The existing empirical evidence tends to support the hypothesis that foreign banks have a neutral or even positive effect on financial stability. Nonetheless, more applied research in this area is still needed. It seems that the debate will remain open for some time to come.

The objective of this chapter is to summarize the actual state of the debate and suggest some venues for further research that have not been fully considered in previous contributions. The structure is as follows. Section 2 analyzes the recent evolution of foreign bank activities in accession countries, including a brief comparison with other areas of the world. Section 3 reviews the literature on the role of foreign banks in financial stability. Given the scarcity of results for accession countries, inference is sometimes drawn from the findings in other groups of countries. Section 4 concludes and suggests possible directions for future research.

The Evolving Role of Foreign Banks: Size and Composition of Foreign Banks' Lending to Accession Countries

Two features stand out in the evolution of international bank lending to accession countries. First, the impressive growth of total lending, which exceeded 200.000 million dollars by end-2002, from less than 30.000 in 1993³. Second, the rapidly increasing trend towards local operations

¹ The views expressed in this chapter are the authors' and do not necessarily reflect those of Banco de España.

² It should be noted that the article focuses on Eastern and Central Europe countries so several of the conclusions are of limited value in the cases of Cyprus and Malta.

³ The source of this data is the BIS consolidated statistics, namely foreign claims from BIS reporting countries.

by foreign banks through subsidiaries and branches, as opposed to cross-border lending¹. Figures 1 and 2 clearly show these two features.

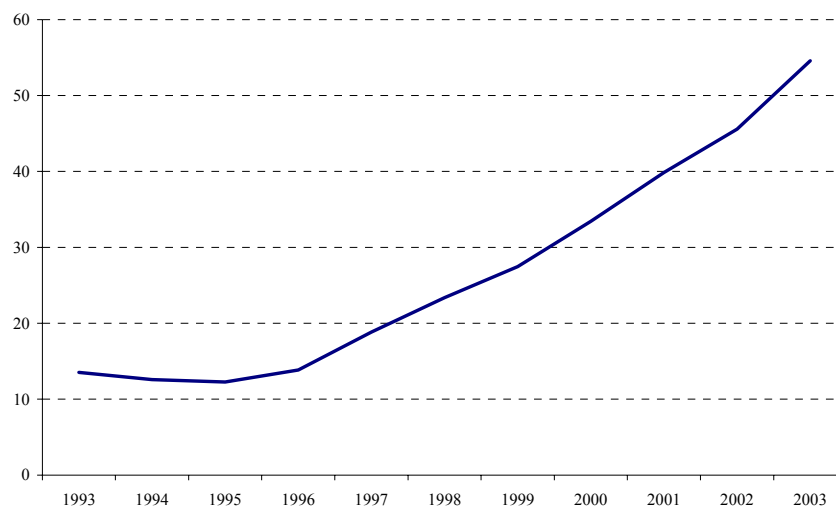


Fig. 1. Foreign Claims to Accession Countries (as a % of GDP) 1991-2003

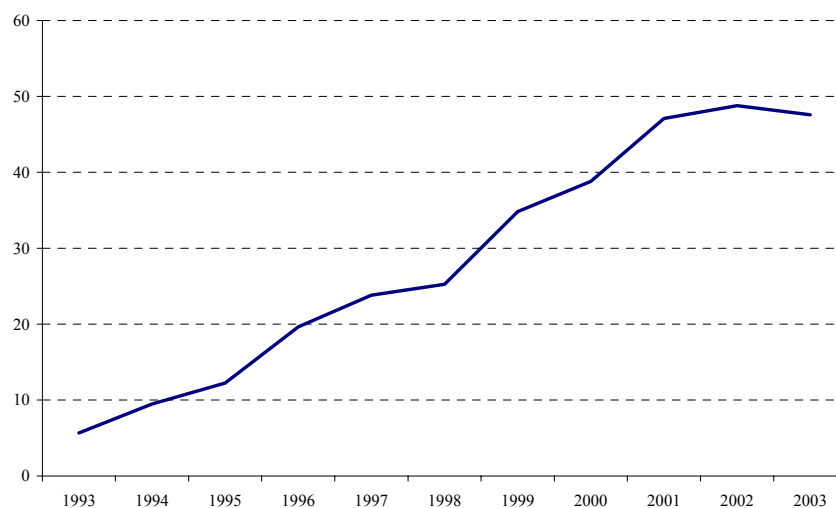


Fig. 2. Local Claims in Local Currency (as a % of Foreign Claims) 1993-2003

Total claims on accession countries by foreign banks have increased from 14% of GDP in 1993 to 54% in 2003. This figure is much larger than in other regions of the world where foreign bank lending is perceived to be very important, such as Latin America, where it reached 29% of

¹ Due to limitations in the BIS International Banking Statistics, we use the term “cross-border lending” to refer to BIS reporting banks’ “international claims”, which include pure cross-border lending plus the local claims of their foreign affiliates in foreign currency. On the other hand, the measure of local activity that can be drawn from the BIS statistics only includes local claims of their foreign affiliates in local currency. As a result, the amount of local activity by foreign banks is biased downward, the more so the more dollarized/euroized a country is.

their combined GDP in 2003¹. Moreover, the expansion of foreign bank lending has been faster in accession countries than in Latin America. It grew 40 points of GDP in accession countries during the last decade, as opposed to 8 points of GDP in the second group. When we look at the composition of foreign claims, the trend is more similar. Local activity represents 48% of total foreign bank claims in accession countries today, from less than 5% in 1993. The corresponding figures in Latin America are 54% of total foreign claims today and 10% in 1993².

While these two trends are common to all accession countries, the aggregate picture hides important differences between them. As Table 1 shows, some countries already had an important exposure to foreign lending in 1993, mainly through cross-border operations. This is the case of Cyprus, Hungary, Malta and, to a lesser extent, Poland and the Czech Republic. On the contrary, foreign lending was almost insignificant in Estonia, Latvia, Lithuania, Slovenia and Slovakia. In 2002, however, foreign lending represented more than 20% of GDP in every accession country, and more than 40% in seven of them. Local activity, although growing as a percentage of total foreign lending in every country except Cyprus, remains relatively small in Slovenia and Estonia. In contrast, it is the main source of foreign financing in the Czech Republic, Poland and Slovakia and represents about one third of total lending in the rest of the countries.

Table 1

Foreign Claims in Accession Countries (1994-2002)

	Foreign Claims (% of GDP)		Local Claims in Local Currency (% of Foreign Claims)	
	2002	1994	2002	1994
Cyprus	81	50	1	0
Czech Republic	61	14	67	27
Estonia	85	1	2	0
Hungary	55	23	35	8
Latvia	32	0	29	0
Lithuania	23	1	31	0
Malta	228	54	31	0
Poland	40	8	57	7
Slovakia	58	3	62	0
Slovenia	31	5	18	0

Source: BIS, IFS and authors' calculations.

Foreign Banks and Financial Stability

Some of the apparent contradictions in the debate on the effect of foreign bank in financial stability can, in our view, be traced back to two potential sources of confusion. First of all, assertions are sometimes made without being explicit about the specific measure of financial stability being considered. Very frequently, "stability" is identified as a situation of low volatility of asset prices. This identification is too simplistic, since it is not hard to think of situations where complete stability of asset prices was the result of the poor functioning of the financial system, generally because of over-regulation.

It is important to recognize that financial stability is a complex concept with many dimensions. Among the very many definitions, Padoa-Schiopa (2002) offers a relatively general one,

¹ Average of the seven largest countries, Brazil, México, Argentina, Chile, Colombia, Venezuela and Peru.

² This is so notwithstanding the underestimation of the local activity of foreign banks (and over-estimation of their cross-border operations) inherent in the available data (See footnote 1 on page 47).

namely “a condition where the financial system is able to withstand shocks without giving way to cumulative processes which impair the allocation of savings to investment opportunities and the processing of payments in the economy”. While conceptually satisfactory, this definition is too vague for the purposes of the present chapter.

We shall, therefore, focus on the three aspects of financial stability that seem to be more closely related to the debate about the effect of foreign banks in financial stability: the volatility of credit supply, the probability of banking crises and the potential for contagion. Although the distinction between these three facets of financial stability is not always clear-cut, we find this separation useful for analytical purposes. We shall, thus, structure our analysis along these three dimensions.

Table 2

Differences Between Cross-border and Local Operations of Foreign Banks

Market	Wholesale	Retail
Operative centre	Home country	Host country
Supervision	Home market regulator	Host regulator of the affiliate and home regulator for the conglomerate
Regulatory constraints	Low	Domestic and home regulation applies
Capital requirements	For the parent	For the affiliate and/or the conglomerate

The second source of confusion is due to the different nature of international banks' activities in any host country. At a minimum, a distinction between cross-border lending and local activity is warranted. Cross-border lending tends to be more wholesale oriented than local activity, particularly if the latter is conducted by large foreign-owned banks. The decision making process of granting a cross-border loan or expanding local activity by a foreign affiliate is also different, taken at the home country in the first case and being more decentralized in the second. This has a bearing for financial stability since the home country conditions are, in principle, more likely to affect cross-border lending than the local activity of foreign affiliates and the opposite is true for host country conditions. Table 2 summarizes the most important differences between cross-border lending and local activity from a financial stability perspective.

The Impact of Foreign Banks on the Volatility of Credit Supply

Substantial attention has been devoted to the effects of foreign banks lending on the stability of credit supply. However, as previously mentioned, volatility of credit supply *per se* is not always a bad thing. As long as changes in the supply of funds are related to variations in fundamentals, increased volatility could be the result of sounder lending policies and could conceivably be a positive indicator of financial stability. Nevertheless, microeconomic models of banking have shown that, if no regulatory constraints are put in place, informational asymmetries and misaligned incentives make it likely that banks take excessive risks during expansionary periods and cut their credit lines too drastically during slowdowns. In this setting, excessive credit volatility results in the emergence of a pattern of booms and busts that is very damaging for long-term economic growth. A stable financial system should be able to smooth fluctuations in credit supply, without impairing the efficient allocation of resources among economic agents.

There are theoretical arguments to think that the participation of foreign banks in a financial system – as long as better managed and capitalized than domestic banks – could mitigate the underlying problems that contribute to the emergence of credit cycles. First, they should tend to reduce informational asymmetries and incentive problems. Foreign banks introduce better management practices, such as more sophisticated risk control procedures and more transparent decision processes. Under normal conditions, competitive pressure on domestic banks will result in the diffusion of these practices to the rest of the financial system. Moreover, surveillance of lending practices is reinforced by the control of the parent bank over its affiliate. Finally, the need to preserve the value of their international franchises makes foreign banks less prone to suffer from

some of the problems that traditionally have affected domestic banks in emerging economies: connected lending, corruption or fraud.

Another reason to suspect that foreign participation in the banking system may help reduce the volatility of credit lies in the higher capitalization of international banks compared to that of their domestic rivals. In a typical boom and bust credit cycle, when economic activity slows down, loan loss provisions increase and solvency ratios worsen. In response, banks cut their credit lines, in an attempt to restore the health of their balance sheets. The fact that international banks tend to be better capitalized than their domestic counterparts makes them more able to withstand losses on their assets (either cross-border or local) before resorting to credit cuts. This is specially the case of accession countries, where the relatively high capitalization¹ of their banking systems can be traced back to the privatization processes and the acquisition of domestic banks by foreigners. The same line of arguments goes for another important phenomenon which has mitigated financial instability in emerging countries; this is "flight to quality". In several banking crisis episodes in this decade, foreign banks have attracted large amounts of deposits which had fled from other domestic banks perceived as unsafe. Although it may induce the collapse of some institutions, such process is more beneficial than outright capital flight from depositors, as would usually happen in the absence of well capitalized banks that are perceived as such².

On the other hand, some hypotheses suggest that foreign banks could increase the volatility of credit. These are usually based on the conception that geographic diversification by international banks may result in higher local volatility for individual countries. It is generally accepted that international banks have a wider scope for geographic diversification than their domestic competitors. Although this higher diversification will result in lower aggregate risk for the international bank, the reallocation of capital among individual countries may result in a more volatile credit supply at a local level. If international banks' portfolio allocation is more sensitive to economic fluctuations than domestic banks', a high presence of foreign banks will result in a more procyclical credit supply.

Before analyzing the empirical evidence, it is interesting to note that the arguments above may have a different weight when applied to cross-border lending or to local activity. As regards the reduction in information and incentive distortions, it seems natural to consider that gains derived from foreign participation in the banking system will mostly accrue when it involves subsidiaries and branches. On the contrary, the cross-border operations of international banks are typically centralized under the parent and remain relatively isolated from the domestic banking system. This makes them more dependent on home country developments and, thus, potentially more volatile.

As regards the effects of diversification, cross-border operations need to be backed directly by the parent's capital. If the parent chooses to cut its exposure in a country, it will be easier to do it on a specific cross-border loan than on a claim related to a foreign direct investment. Given this higher flexibility, cross-border lending is sometimes used as a way of testing the waters of new markets. This is so because fixed investments in the country can only be liquidated quickly at a substantial loss. Moreover, other countries will show comprehensible reticence to accept banks that have a reputation of abandoning their investments at the first sight of problems. Finally, cross-border lending is subject to less strict regulatory constraints. Branches and, to a larger extent, subsidiaries of foreign banks face more strict regulatory limitations. As such, it is not clear why foreign affiliates' assets should be more geographically diversified than domestic banks'.

The empirical evidence available tends to support the view that foreign banks do not increase the volatility of credit³. For selected countries in Latin America, Dages et al. (2000) show that subsidiaries and branches of foreign banks with a long-term presence in the host country showed stronger credit growth than domestic rivals even in periods of local economic downturns.

¹ As of 2001, no accession country showed a capital to assets ratio lower than 12,5%.

² It should be acknowledged that sometimes state-owned banks attract deposits because they are perceived to have a full implicit guarantee from the government.

³ For an exception, see Morgan and Strahan (2003).

Martinez Peria et al. (2002) find that cross-border plus local lending in foreign currency by foreign banks was less volatile than aggregate domestic credit, despite having higher average growth. Moreover, credit by foreign banks did not retrench in periods of crisis at the host markets. Finally, Peek and Rosengren (2000), for Latin America, and De Haas and Lelyveld (2002), for the three largest accession countries, find that cross-border lending did decrease during economic downturns in the host country, but its reduction was compensated by the expansion in the credit supply of subsidiaries of foreign banks¹.

In sum, there seems to be a growing consensus that foreign banks can help reduce the volatility of credit. More precisely, this beneficial effect is due to the activities of subsidiaries and branches of foreign banks, whereas the impact of cross-border lending is not so clear-cut.

Foreign Banks and the Probability of Banking Crises

As for financial stability, the literature offers several definitions of banking crises. Early definitions concentrated on bank panics, while more recent definitions have adopted a wider scope². An example of the latter is Gupta (1996), who characterizes a banking crisis as a situation where liabilities exceed the market value of banks' assets, leading to portfolio shifts or to deposit runs and/or the collapse of financial institutions and/or government intervention. While being useful for descriptive purposes, such broad definitions generally make no attempt to investigate into the causes of crises. Broadly speaking, banking crises come in two different flavours, according to the underlying fragility that causes them: illiquidity or insolvency.

The first is related to the lack of liquidity. Starting from Diamond and Dybvig (1983), the focus is on liquidity shocks and the fractional nature of banking systems. Banking crises are the result of liquidity shocks, where ex-ante solvent institutions are forced to liquidate their assets by excess liquidity demand on the part of their depositors. There are several ways to relate banking crises stemming from liquidity problems to foreign banking. For example, Buch et al. (2003) extend the model by Allen and Gale (2000) and show that increased financial integration can help reduce the probability of liquidity crises. In addition, to the extent that liquidity needs are not perfectly correlated among regions³, cross-border interbank lending allows for a better diversification of shocks. Moreover, financial integration stemming from the direct operation of foreign banks in a country's financial sector can reduce the dependence on domestic liquidity as far as foreign banks have access to financing from the parent (see Stein, 1997). This is certainly the case of branches and, to a much lesser extent, of subsidiaries. Note also that these advantages are likely to be substantial for accession countries, since their small relative size should allow for the hedging of their liquidity risks by drawing on the pool of liquidity available in EU financial markets.

The other source of bank fragility and banking crises is related to solvency, and not so much liquidity. In this vein, solvent financial systems should be able to withstand aggregate risks, such as macroeconomic shocks, more easily. As for the impact of foreign ownership on the probability of such type of crises, several issues are worth mentioning. On the one hand, subsidiaries of foreign banks are typically better capitalized and managed than their domestic competitors. This would, in itself, increase the solvency of the whole banking system. On the other hand, it is widely accepted that the entry of foreign banks tends to increase competition and reduce the profitability of the banking system as a whole. If profitability becomes too low because of over-competition, this could be a problem for solvency in the future. The empirical evidence up to date suggests that the first effect is likely to be dominant. Demigürcü-Kunt, Levine and Min (1998) and Levine (1999) find that a high presence of foreign banks reduces the probability of banking crises⁴. This is proba-

¹ In a more recent paper, the authors qualify the previous result and circumscribe the expansion of credit to greenfield subsidiaries. Privatized banks, on the contrary, showed a pattern similar to that of their domestic competitors.

² For a brief review of alternative definitions of banking crisis, see Garcia Herrero and Del Rio (2003).

³ Their calculations show that the correlation of deposits between accession and EU countries is substantially smaller than between individual EU members.

⁴ Nevertheless, recent studies by Barth et al. (2002) and Beck et al. (2003) find no direct relation between foreign ownership and the probability of crises. What these authors do find, however, is a direct relationship between restrictions to the entry of foreign banks and banking crises.

bly because emerging countries are still far away from over-competition and profitability –albeit lower – is still high for international standards. These findings are in line with recent results in the empirical literature that challenge the notion of a trade-off between competition and stability, thereby weakening the case for a negative impact of foreign entry over financial stability. In the case of accession countries, this case may be even weaker, since in many of them foreign banks substituted fragile and/or state owned banks, whose negative effect over financial stability has been empirically documented on many occasions.

Foreign Banks and Financial Contagion

Vulnerability of the banking systems to external shocks is a cause of financial fragility. The transmission of external economic fluctuations or external crises results in the loss of autonomy of domestic economic policies and can have substantial effects on welfare. As such, contagion phenomena are a source of concern for policy makers. Foreign ownership of the banking system or a high dependence on cross-border credits might result in increased vulnerability to external shocks. This issue has received a substantial attention in the recent literature. A natural classification for contagion phenomena related to the presence of foreign banks distinguishes according to the source of the shock being transmitted.

A first source of concern is the possibility that economic fluctuations (or even financial crises) in the home country of an international bank could translate into the credit supply of its foreign affiliates and its cross-border financing. It is generally argued that capital regulations at home may force international banks to reduce their credit supply to accession countries in response to adverse economic conditions in their home markets, which can be considered a wealth effect. However, since home investment projects will be less profitable during home market slowdowns, parents could choose to dedicate a higher share of their resources to accession countries, in an attempt to improve their overall profitability, implying a substitution effect.

The empirical literature confirms the existence of a link between the home country's cycle and the amount of credit foreign banks offer. Whether wealth or substitution effects are prevalent, however, remains a subject of debate. Peek and Rosengren (1997) show that the collapse of the Japanese stock market reduced the supply of credit by Japanese branches in the US. Therefore, their results provide evidence of the prevalence of the wealth effect. On the contrary, De Haas and Lelyveld (2003) show that local subsidiaries of foreign banks expanded their credit in Eastern and Central European countries during economic slowdowns in their parents' home markets, pointing to important substitution effects. Martinez Peria et al. (2002) do not find a clear pattern for Latin American economies. While Japanese and Canadian banks' lending seemed to be more influenced by wealth considerations, for French, German, Spanish, British and US banks the substitution effect seemed more important. These apparently contradictory results could be interpreted as evidence that the relationship between the home market's economic cycle and foreign lending is influenced by national and bank specific characteristics¹.

A second source of financial contagion is related to the transmission of shocks between countries sharing a similar distribution of international lenders. Under these circumstances, the occurrence of a crisis in a country could potentially force international banks to reduce their exposure in other areas. In this vein, the existence of a common lender could generate the transmission of crisis. Note, however, that for this possibility to become a reality, common lenders should satisfy two conditions. First, their exposure in the country where the crisis originates should be high. Otherwise, the reallocation of funds due to the crisis is likely to be of little significance. Second, financing in the receiving host country should be highly concentrated in those creditors.

Although some empirical evidence supports the risk of a common lender channel for financial contagion², these two conditions seem too stringent to be met in practice. In the case of

¹ Martinez Peria et al. (2002) present evidence that the relationship between home market cycle and foreign lending gets weaker as international banks gain more experience in the host country. De Haas and Van Lelyveld (2003) find that this link exists only for greenfield banks.

² See Kaminsky and Reinhart (1999) on the role of Japanese banks during the Asian crisis.

accession countries, the high concentration of borrowing and foreign ownership of banks in some countries (Germany, Belgium and Italy mainly) has risen some alerts about the possibility that a shock to any accession country could easily translate to the whole region. However, the size of German and Belgian exposures to these countries is small when compared to their total international lending (around 3% and 6%), which reduces this potential risk.

Conclusions

All in all, the above arguments and empirical evidence seem to be supportive of a neutral or positive role of foreign banks in the financial stability of emerging countries. First of all foreign banks seem to increase the stability of credit supply. Second, there is no evidence that foreign ownership increases the probability of a banking crisis, but rather the opposite. Finally, as regards contagion, there are arguments to think that foreign banks could potentially increase the vulnerability of the host economy to external shocks but the conditions for this risk to materialize are fairly stringent. Moreover, given the typically high current account deficits in developing economies, it is not clear whether alternative forms of foreign finance (namely, portfolio flows) would be less prone to spread contagion.

Several arguments suggest that this beneficial role could be further enhanced in the case of accession countries. Most of them are related to their special position as future EU members and the likely consequences of their convergence processes. In many cases, the opening of banking systems in other emerging areas has been accompanied by incomplete or unsatisfactory reform of financial institutions. On the contrary, EU accession will act as a catalyser for the harmonization of banking regulations. The high involvement of foreign banks in accession economies will greatly facilitate this harmonization and reduce the risks associated with it. In this sense, the degree to which foreign banks can be expected to import best practices from their home market is higher than in other emerging areas. Beyond that, as real integration with the EU advances the risk of asymmetric shocks between investor and host countries will be lower. This will reduce the scope for the occurrence of situations where the interests of international banks and the needs of host economies collide.

Nevertheless, several areas of debate still remain open and more research into this area is still needed. Further empirical efforts in the distinction between cross-border and local activity is an area where more research is likely to yield interesting results. Another potentially rewarding subject, especially for accession countries, would be the link between economic cycles in the home market and foreign banks' lending. Beyond establishing the factors that influence the sign of this relationship, theoretical analyses of its potential implications in the synchronization of economic fluctuations between the EU and accession countries would be very valuable.

References

1. Allen, F. and D. Gale, (2000), 'Financial Contagion' *The Journal of Political Economy* 108, pp. 1-33.
2. Crystal, J., G. Dages and L.S. Goldberg, (2002), 'Has foreign bank entry led to sounder banks in Latin America?', *Current Issues in Economics and Finance* Volume 8 Number 1, Federal Reserve Bank of New York.
3. Barth, J., G. Caprio and R. Levine (2002), 'Bank Regulation and Supervision: What Works Best?' NBER Working Paper 9323, November 2002.
4. Beck T., A. Demigürcü-Kunt and R. Levine (2003), 'Bank Concentration and Crises' NBER Working Paper 9921, August 2003.
5. Buch, C.M., J. Kleinert and P. Zajc (2003), 'Foreign Bank Ownership: A Bonus or Threat for Financial Stability' in *Securing Financial Stability: Problems and Prospects for New EU Members*, SUERF Studies 2003/4.

6. De Haas, R. and I. Van Lelyveld, (2002), 'Foreign Bank Penetration and Private Sector Credit In Central and Eastern Europe', DNB Staff Reports No. 91/2002, De Nederlandsche Bank, Amsterdam.
7. De Haas, R. and I. Van Lelyveld, (2003), 'Foreign Banks and Credit Stability in Central and Eastern Europe: Friends or Foes? A panel data analysis', MEB Series no. 2003-04/Research Series Supervision no. 58, De Nederlandsche Bank, Amsterdam.
8. Diamond, D.W., and P.H. Dybvig (1983), 'Bank runs, deposit insurance and liquidity' *The Journal of Political Economy* 105, 928-956.
9. Garcia Herrero A. and P. Delrio (2003), 'Financial Stability and the Design of Monetary Policy' Bank of Spain Working Paper 0315.
10. Gupta, P. (1996), 'Currency crises, banking crises and twin crises: a comprehensive review of the literature', mimeo, International Monetary Fund.
11. Demigürç-Kunt, A., R. Levine and H.G. Min (1998), 'Opening to Foreign Banks: Issues of Stability, Efficiency and Growth' In Proceedings of the Bank of Korea Conference on the Implications of Globalization of World Economic Financial Markets, December 1998.
12. Kaminsky, G. and C. Reinhart (2000), 'On crisis, contagion and confusion', *Journal of International Economics*, 51, 145-168.
13. Levine, R. (1999), 'Foreign Bank Entry and Capital Control Liberalization: Effects on Growth and Stability' University of Minnesota, mimeo.
14. Martinez Peria, M.S., A. Powell, and I. Vladkova (2002), 'Banking on Foreigners: The Behaviour of International Bank Lending to Latin America, 1985-2000' World Bank Working Paper 2893.
15. Morgan, D.P. and P.E. Strahan. (2002), 'Foreign Bank Entry and Business Volatility: Evidence from U.S. States and Other Countries', Central Bank of Chile Working Paper 229, October 2003.
16. Padoa-Schioppa, T. (2002), 'Central banks and financial stability: exploring a land in between', paper presented at the Second ECB Central Banking Conference The transformation of the European financial system, Frankfurt am Main, October 2002.
17. Peek, J. and S.E. Rosengren (2000), 'Implications of the Globalization of the Banking sector: the Latin American Experience' *New England Economic Review*, September/October, pp. 45-63.
18. Peek, J. and S.E. Rosengren (1997), 'Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States', *The American Economic Review*, 87:4, pp. 495-505.
19. Stein, J. (1997), 'Internal Capital Markets and the Competition for Corporate Resources', *Journal of Finance*, 52, pp. 111-134.