Foreign banks in India: liabilities or assets?

Saibal Ghosh

Reserve Bank of India

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SAIBAL GHOSH[1]

Abstract: Using data on Indian banks for 1996-2007, the article examines the impact of foreign banks on the domestic banking sector. The analysis suggests that foreign bank penetration improves profitability and asset quality, although it dampens spreads. The results are robust to alternate measures of foreign bank presence. In addition, foreign banks appear to impact the maturity of credit portfolio of domestic banks. Finally, the results also support the fact that foreign banks typically charge lower interest rates as compared to domestic banks.

JEL classification: G 21; P 52

Key words: foreign banks; non-performing loans; credit allocation; interest rates; India

Introduction

In emerging markets, the presence of foreign banks has increased substantially, particularly during the present decade. Such presence of foreign banks has raised several important questions: (a) what draws foreign bank to a country? (b) which (foreign) banks expand abroad? (c) how does mode of entry affect behaviour? and (d) how does foreign bank presence impinge on domestic profitability? The paper focuses on the final question, examining, in particular, on the impact of foreign banks on domestic bank performance, focusing on India as a case study. Our analysis suggests that foreign bank penetration improves profitability and asset quality, although it dampens spreads. The results also indicate that a rise in number of foreign bank initially lowers overheads as domestic banks reap the benefits of modern banking techniques, which, in turn, necessitates an increase in overheads.

A number of factors make the banking sector in India an interesting case to study the interlinkage between foreign bank presence and domestic bank performance. First, over the 1990s, India has undergone liberalization of the banking sector with the objective of enhancing efficiency, productivity and profitability (Government of India, 1991). Second, the banking sector witnessed important transformation, driven by the need for creating a market-driven, productive and competitive economy in order to support higher investment levels and accentuate growth. Third, most studies on foreign bank performance are either in the nature of cross-national studies (Terrel, 1986; Claessens *et al*, 2001; Hermes and Lensink, 2003; Martinez Peria and Mody, 2004; Detragiache *et al,* 2008) or banking markets in developed (Goldberg and Saunders, 1981; McFadden, 1994; Williams, 1998; Haas and Lelyveld, 2002), transition (Hsselmann, 2006) and MENA (Lee, 2002) countries. Little, if any by way of systematic empirical research, is available on this aspect for leading emerging economies. The issue as to the interplay between domestic bank performance and foreign bank presence in emerging markets as India where the financial system is pre-dominantly bank-based and government-owned remains a moot issue. The findings so obtained may have implications for the design of regulatory policies in other emerging economies.

[1] The views expressed and the approach pursued are strictly personal.

2 Literature and relevant hypothesis

There are only a handful of empirical studies that directly examine the impact of liberalising foreign bank entry on the domestic banking market. Using bank-level data for 80 developed and developing countries for the period 1980-95, Claessens *et al.* (2001) finds that an increase in foreign bank presence lowers profitability, non-interest income and overall operating expenses of domestic-owned banks. These results are interpreted as evidence that foreign bank entry improves the efficiency of national banking markets.

Previous studies into foreign banks participation and net interest margins (Hermes and Lensink 2002, 2003) have established that foreign banks entry is associated with higher interest margins of banks in the short run. Quite often, authors have found that there is no statistically significant relationship between net interest margin and foreign banks' share. This indicates that net interest margin is probably related to other factors, for example, overall competition on the market, banks' own market share, money market interest rates, etc. Unite and Sullivan (2003) observed that foreign banks entry is inversely associated with interest rate spreads of domestic banks, but only in case of those banks that are affiliated to a family business group. In effect, the competition engendered by the presence of foreign banks leads to a weakening of the banking relationship that these affiliated banks exhibit with certain domestic banks, leading to a decline in their spreads. Focusing on country studies, Denizer (1999) examined the effect of foreign entry on Turkish banks. The analysis supports the fact that foreign entry reduced domestic profitability and overhead expenses. Typically, a rise in competition is associated with a decline in net interest margins. As we expect a rise in competition in the market when the foreign banks' share increases, we postulate H1:

H1: The net interest margin of a bank in a given country is negatively correlated with foreign banks' market share in that country

A larger foreign bank presence can enhance the competitiveness of the banking sector. Greater competition is desirable for several reasons: to enhance efficiency of financial services, stimulate innovation and to contribute to overall stability. Available evidence appears to suggest that foreign ownership is associated with improved efficiency. Demirguc-Kunt *et al.* (2003) find that greater bank concentration is associated with lower bank efficiency in emerging economies. These observations lead us to the following hypothesis:

H2: The efficiency of domestic banks in a given country is positively correlated with foreign banks' share in that country

A higher foreign banks' share in the market is associated with lower overhead costs of banks, which indicates higher efficiency. Domestic banks typically react to foreign bank entry with higher overhead costs, especially in the short-run, presumably because they intend to

retain their clientele base in the face of increased competition by greater investments in technology and manpower. We propose the following hypothesis:

H3: The overhead costs of domestic banks in a given country are (*typically*) *negatively correlated with the foreign bank's share in that country.*

The ratio of a bank's profits to its total assets reflects the overall profitability outcome of the bank. Foreign banks entry is usually expected to have a positive effect on the competition in the banking market and therefore, *via* lower net interest margins, is expected to exert a negative effect on banks' profitability. Based on these considerations, we propose the following hypothesis:

H4: The ratio of pre-tax profits to the total assets of domestic banks in a given country are negatively correlated with foreign banks' share in that country

The effect of foreign banks entry on banks' NPLs is ambiguous because foreign banks entry may have both positive and negative effects on the quality of loans. Foreign banks are more likely to exhibit better credit risk management techniques and as a result, higher foreign ownership could entail "cherry picking" of the best borrowers. On the other hand, if better credit risk management by foreign banks impels domestic banks to improve their credit evaluation skills, the effect of greater foreign bank presence on domestic banks' NPLs could be negative. These factors lead us to advance the following hypothesis:

H5: Foreign banks' share in the country has either a positive or a negative impact on the non-performing loans of domestic banks

Foreign banks could also impact loan maturity and composition. Foreign banks might bring in hot money, which can be easily withdrawn in a crisis (Rodrik and Velasco, 1999). Foreign banks may also use shorter loan maturities to mitigate the risks of credit default and asymmetric information (Ortiz-Molina and Penas, 2008). This leads us to our final hypothesis:

H6: Foreign bank entry is associated with lower overall lending rates, although the impact on loan maturity and composition is ambiguous

There is also a body of literature that highlights the importance of an effective banking regulatory system. Demirguc-Kunt and Detragiache (1998) demonstrated that countries with weak institutional environment are faced with greater prospects of instability in their banking sector for some time immediately following liberalization. La Porta *et al.* (1997) investigate how certain legal and political features evolve and demonstrate that a country's legal system is determined primarily by its culture and history. Rajan and Zingales (2000) expand on this work and demonstrate a link between political considerations and the institutional impediments to financial development. Overall, these studies report that many countries do not develop

efficient financial and legal systems, even when it is generally agreed to be economically beneficial, because of political-economy considerations.

3. Foreign bank presence in India: Salient features

The market access for foreign financial service providers to undertake 'banking activity' as defined under Section 6 of the *Banking Regulation Act, 1949*, is limited to branch operations of a foreign bank licensed and supervised as a bank in its home country. The different forms of market access by foreign suppliers of banking services include (a) representative office, which cannot undertake any banking business or any commercial activity; they can, however, undertake activities such as correspondent banking, loan syndication or risk management for companies engaged in raising money overseas and international trade financial such as buyers/suppliers credit to the Indian importers; (b) agency arrangements with individuals, firms/companies or other organisations in India; and (c) equity participation in domestic Indian banks (upto a maximum of 40% for non-resident Indians and associated overseas corporate bodies, including no more than 20% stake for foreign financial institutions)[2].

The number of licences is fixed in conformity with India's commitment made to World Trade Organisation, which are presently 12 licences (both for new and expansion by existing banks) per year. However, off-site ATMs are treated as separate places of business and need separate branch licenses, as under Section 23 of the Banking Regulation Act, 1949, but these licenses are not to be included in the ceiling of 12 licenses mentioned above.

As on March 31, 1993, there were 24 foreign banks operating in India with 138 bank offices. By end-March 1996, this number increased to 39 which accounted for 7.9 per cent of total assets of scheduled commercial banks. The number stood at 44 by end-March 1999, with their share in total assets of SCBs being 8.1 per cent. At end-March 2007, consequent upon some mergers/consolidation in this segment internationally, the number of foreign banks was 29 with 273 branches; their share in total assets of commercial banks was roughly 8 per cent (Table 1). Taken in conjunction with these two banks, the total deposit and loan market share of foreign banks is around the 20 percent mark.

Based on the announcements in the Union Budget 2005-06, the RBI announced roadmap for entry of foreign banks. The salient features of these guidelines were as follows:

- Foreign banks wishing to establish presence in India for the first time could either choose to operate through branch presence or set up 100 wholly owned subsidiaries (WOS).
- For new and existing foreign banks, it is proposed to go beyond the existing WTO commitments of 12 branches in a year. Branch licensing procedure will continue to be as per the current practice.
- In the first phase, foreign banks already operating in India will be allowed to convert their existing branches to WOS following the one-mode presence criterion.

[2] In the Federal Budget 2003-04, this limit has been raised to 74 per cent.

4. Empirical framework and database

To assess the impact of foreign bank presence on bank performance, while controlling for the macro and institutional environment, following Claessens *et al* (2001), we estimate regressions of the following form:

$$y_{s,t} = \varphi_0 + \varphi_1 \ B_{s,t-1} + \varphi_2 \ Z_t + \varphi_3 \ M_t + \varepsilon_{it} \qquad \textbf{(2)}$$

where *s* indexes bank and *t* denotes year; **φ** s' are the parameters to be estimated.

In (2), the dependent variable (*y*) is assumed to be a function of bank-level controls (*B*) lagged one period to avoid endogeneity problems, time-varying banking industry specific variables (*Z*), including measures of foreign bank penetration and macroeconomic controls (*M*), such as real GDP growth and real interest rate.

4.1 Dependent variables

To measure bank performance, we employ five sets of dependent variables: *NIM* as a measure of bank competition, *RoA* as the measure of bank profitability, *Overhead* as a measure of bank operating costs, *NPLs* as a measure of bank soundness and *CIR* as a measure of bank efficiency. Most of these variables are fairly standard in the literature and have been employed in previous studies of this genre (Claessens et al., 2001; Hermes and Lensink, 2004).

When we examine the impact of foreign bank presence on credit allocation, the dependent variable (*y*) is re-defined as $\ln[p_{s,t} / (1-p_{s,t})]$, where p is the share of loans: by sector, by maturity and by security of bank *s* at time *t*, the remaining variables are the same as in (2) earlier. In terms of credit allocation, we consider the following variables: private sector credit, two variables capturing credit maturity: cash credit and term loan, and one variable capturing the collateralization of loan - secured credit. All the variables are defined as ratios to total credit. Finally, we explore the impact of foreign bank presence on bank lending rate. In our empirical specification, following previous literature (Martinez Peria and Schmukler, 2001), we define the lending rate as the interest earned on loans to total loans.

4.2 Foreign bank variable

Of particular interest in (2) is the foreign bank variable. We consider three variables which encapsulate foreign bank existence. The first is the asset share of foreign banks, the second is the number of foreign banks to total commercial banks (*FB_Number*) and finally, the ratio of foreign bank branches to total metropolitan commercial bank branches (*FB_Branch*). We scale *FB_Branch* by total number of metropolitan branches (as opposed to total bank branches) in order to take into account the fact that foreign bank presence is typically confined to metropolitan areas and therefore, their competition is more with metropolitan branches of other bank groups.

4.3.Bank-specific controls

We include four bank-specific variables: bank size, bank liquidity, capital adequacy ratio (CAR) and share of rural and semi-urban branches. The natural logarithm of total assets (SIZE) is included to capture any scale efficiency effects. We hypothesize that a domestic bank's response to foreign bank entry may be related to domestic bank's size, which proxies for the extent of its relationship and reputation. Having more concrete relationships and an enhanced reputation are expected to be positively correlated with the relative size of the bank. The CRAR is included to capture different levels of risks across banks with low ratios indicating relatively risky positions (Ghosh, 2004). With a sizeable presence in rural and semi-urban areas, domestic

4.4 Banking industry variables

The banking industry level variables include a proxy for bank concentration and a measure of market power of banks. Contextually, in their cross-country study, Demirguc Kunt *et al.* (2004) and Martinez Peria and Mody (2004) find bank concentration to be a significant and influential factor in determining net interest margin. The measure of market power is the Herfindahl index of loan concentration, defined as the sum of squares of loan market share.

4.5 Macroeconomic variables

Consistent with the literature (Martinez Peria and Mody, 2004; Demirguc Kunt *et al.,* 2004), the macroeconomic variables included are a measure of short-term real interest rate and the growth rate of real GDP. The measure of economic growth is included to control for any effect that general increases in economic activity may have on banks' operations.

The sample comprises of 47 banks, including all state-owned banks, 13 old private and 6 *de novo* private (operational post inception of reforms) for the period 1996-2007, yielding a total of 517 bank-years.[3] We employ a balanced dataset. This excludes the possibility that the results are biased due to the fact that we have different number of observations for different banks.

5. Results and discussion

5.1 Baseline regressions

The results of the empirical analysis are presented in Table 2. The results in Col. (1) show that foreign bank penetration is positively related to profits, and negatively to spread, overhead expenses and non-performing loans. The analysis supports H1 and H3, but is contrary to H4. The positive relation with the profitability measure in essence, indicates that foreign bank penetration lowers the level of competition in the banking sector.

[3] One year of observation is lost owing to inclusion of lagged values of bank-specific controls

These results are echoed in Col. (2), where foreign bank indicator is measured in terms of physical presence. In particular specifically, greater foreign bank presence lowers overheads and NPLs.

In Col. (3) the evidence indicates that profitability improves and NPLs declines with a rise in foreign bank outreach. In addition, the evidence concurs with H2: foreign bank presence is efficiency-enhancing.

Turning to bank-specific controls, we find that bigger banks are more profitable and efficient, although they also have higher operating costs. This can be interpreted to mean that size allows for greater diversification, allowing domestic banks to reap scale economies, perhaps at the cost of higher expenses. Domestic banks are compelled to maintain higher capitalization under the impact of foreign entry in order to sustain their spreads. At the same time, well-captialized banks are found to have lower NPLs. The inverse relation between capital and risk (NPLs) has been widely documented, both in the Indian context (Das and Ghosh, 2005) and in the international context (Kwan and Eisenbis, 1997; Rime, 2001; Stolz, 2009).

Turning to ownership dummies, the evidence indicates that SOBs have higher spreads, although their profitability and efficiency levels are low as compared to old private banks. The evidence appears to indicate that higher market concentration has certain benefits, but it also comes at a cost. On the one hand, higher loan concentration improves margins as banks are able to generate “rents”, but it also makes banks less efficient, leading to higher overheads and cost-income ratios.

Our results are at variance to those of Claessens *et al.* (2001). First, both indicators of foreign bank entry are statistically significant at conventional levels, unlike the aforesaid mentioned study wherein only one indicator of foreign bank entry is significant. Second, there seem to a negative relationship between foreign bank presence and most cost and income variables, although the effect on interest margin is not so clear-cut. This would suggest that the relationship between foreign bank entry and domestic bank performance has non-linear properties. It might well be possible that foreign bank entry has both positive and negative effects on income, profits and costs. On the positive side, technology spillovers of new banking techniques and better management practices may lead domestic banks to initially raise their costs in order to implement such practices. However, over time, as such practices get imbibed in domestic banks, they are able to proactively compete with their foreign counterparts. At the same time, with increased competition arising out of foreign bank entry, there might be a flight of good-quality customers to foreign banks, which, over time, would get reflected in a weakening of loan portfolio of domestic banks. This would, in effect, necessitate higher loan loss provisioning by domestic banks (i.e., higher costs). The effect might be compounded for domestic banks owing to the smaller base of loan portfolio of these banks, implying fewer possibilities for them to diversify risks.

5.2 Credit allocation

The evidence presented in Table 3 indicates that foreign banks – whether defined in terms of penetration or physical presence – have an impact on loan maturity, although its impact on loan collateralizability or sectoral composition is not significant. In terms of the impact on loan maturity, the findings suggest that foreign banks lend less at the short-term and more at long-term than domestic banks. Presumably because foreign banks extend loans based on "hard" information, they enter into relationship lending with informationally transparent firms, on a long-term basis. These results appear consistent with previous studies for emerging markets, which support the idea that foreign banks are more adept in lending to transparent firms (Mian, 2007; Gormley, 2008; Giannetti and Ongena, 2006).

5.3 Lending rates

Looking at lending rates, the results indicate that foreign bank penetration and outreach have a dampening impact on lending rates of domestic banks. In terms of penetration, it is observed that foreign banks charge their borrowers anywhere between 1.73 to 1.77 percent less per year. The results as also the magnitudes are consistent with previous studies which report that lending rates charged by foreign banks are typically lower as compared to domestic counterparts (Dell'Ariccia and Marquez, 2004; Clayes and Hainz, 2006).

6. Concluding remarks

The article seeks to demonstrate the impact of foreign bank entry on the performance of domestic banks in India. Towards this end, we combined bank-level micro data with macroeconomic and banking industry-level indicators to estimate foreign bank entry effects. In line with the realities of Indian markets, foreign bank presence is measured in three distinct ways – asset share, branch share (in metropolitan areas) and number of foreign banks. The evidence serves to demonstrate that foreign bank penetration improves profitability and asset quality, although it dampens spreads.

To summarize, the overall conclusion reached in the analysis is that the benefits of foreign bank presence appear to overwhelm the costs, implying they are more of "assets" as opposed to "liabilities". Further research, would of course be necessary to ascertain whether the mode (greenfield *versus* takeover) and type (branch *versus* subsidiary) of foreign bank presence exerts any perceptible impact on domestic bank performance.

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Table 1: Share of banking market (per cent)

Year/ Bank group	Assets	Loans	Deposits
1993			
Public sector banks (PSB)	86.5	88.1	87.3
Old private banks (OPB)	4.6	4.6	5.1
New private banks (NPB)	--	--	--
Foreign banks (FB)	6.4	4.8	5.4
2002			
PSB	75.3	74.4	80.5
OPB	6.1	6.5	6.7
NPB	11.4	11.5	12.1
FB	7.3	7.5	5.4
2007			
PSB	70.5	72.7	73.9
OPB	4.6	4.7	5.1
NPB	16.9	16.2	15.3
FB	7.9	6.4	5.6

Source: RBI (various years)

Table 2. Foreign Bank Entry and Domestic Bank Performance

	Lagged (foreign bank variable)			Lagged (Bank-specific controls)			Bank-industry controls		Ownership dummies			
Variable	Asset	Number	Branch	Size	Liquidty	CAR	H-loan	Conc	SOB	NPB	Const.	Adj. R-squared
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A												
NIM	**-0.09 (0.05)[a]**							Yes				0.25
RoA	**0.29 (0.09)[a]**							Yes				0.17
Overhd	**-0.02 (0.006)[a]**							Yes				0.48
NPL	**-0.01 (0.004)[a]**							Yes				0.43
Panel B												
NIM		0.0006 (0.015)						Yes				0.25
RoA		0.02 (0.017)						Yes				0.17
Overhd		**-0.002 (0.0009)[b]**						Yes				0.48
NPL		**-0.18 (0.057)[a]**						Yes				0.43
Panel C												
NIM			-0.003 (0.089)					Yes				0.25
RoA			**0.77 (0.228)[a]**					Yes				0.19
Overhd			-0.0007 (0.002)					Yes				0.47
NPL			**-0.15 (0.079)[c]**					Yes				0.43

Standard errors (clustered by bank) are within parentheses
a, b and c denote statistical significance at 1, 5 and 10, respectively

Table 3. Foreign banks and credit allocation

	Lagged (Foreign bank variable) (natural log)			Lagged (Bank-specific controls)			Bank-industry controls		Ownership dummies			
Variable	Asset	Number	Branch	Size	Liqudty	CAR	H-loan	Conc	SOB	NPB	Const.	Adj. R-square
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A												
Cash cred.	**-1.3 (0.4)[a]**			YES	YES	YES	YES	YES	YES	YES	YES	0.34
Pvt. loan	0.19 (0.2)			YES	YES	YES	YES	YES	YES	YES	YES	0.53
Panel B												
Cash cred.		**-0.63 (0.2)[b]**		YES	YES	YES	YES	YES	YES	YES	YES	0.34
Pvt. loan		0.27 (0.2)		YES	YES	YES	YES	YES	YES	YES	YES	0.53
Panel C												
Cash cred.			-0.07 (0.1)	YES	YES	YES	YES	YES	YES	YES	YES	0.33
Pvt. loan			-0.09 (0.1)	YES	YES	YES	YES	YES	YES	YES	YES	0.53

Standard errors (clustered by bank) are within parentheses
a, b and c denote statistical significance at 1, 5 and 10, respectively

Table 4. Foreign banks and lending rate

			Lagged (Bank-specific controls)			Bank-industry controls		Ownership dummies			
Asset	Number	Branch	Size	Liquidity	CAR	H-loan	Conc	SOB	NPB	Const.	Adj. R-squared
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
-1.7 (0.362)[a]			YES	YES	YES	YES	YES	YES	YES	YES	0.59
	-0.09 (0.07)		YES	YES	YES	YES	YES	YES	YES	YES	0.59
		-1.7 (0.608)[a]	YES	YES	YES	YES	YES	YES	YES	YES	0.59

Standard errors (clustered by bank) are within parentheses
a, b and c denote statistical significance at 1, 5 and 10, respectively