The Effects of Foreign Bank Entry on the Performance of Private Domestic Banks in Korea

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I. Introduction

In Korea, there has been a substantial increase in foreigners' capital participations in local financial institutions and this development was especially prominent during 1999 to 2001. This expansion was mainly due to the need to facilitate the financial sector restructuring undertaken in the wake of the 1997 financial crisis by selling off a number of not-immediately-viable domestic banks to domestic and foreign bidders. It is noteworthy that the typical mode of recent foreign entry to the Korean financial sector has been through green-field investment or M&A. In contrast, foreign bank entry through the opening of branches, which had been the most important organizational form of foreign entry until 1997, began to slow substantially from 1998.

Despite the sharp rise in the level of foreign participation in local financial institutions in many emerging markets and particularly in the second half of the 1990s, an increasing body of empirical evidence indicates that it is not wholly clear as to whether foreign entry has improved either the efficiency or the stability of domestic banking systems. Notably, it seems too early in some emerging markets, such as Korea, to draw any definite conclusions about the implications for the performance of banks in the sense that they have only very recently come under majority foreign ownership. Nevertheless, an attempt appears warranted to gain a rough idea as to whether they exhibit any distinctive differences in performance relative to other domestic banks on the basis of the financial statements of individual banks and anecdotal evidence.

Has increased foreign participation actually contributed in any substantial degree to improvement in the efficiency and stability of the domestic banking system in Korea? This paper aims to shed light on the question. To this end, the second section of this paper first reviews the main characteristics of financial sector FDI in Korea. The third section evaluates the performance of two foreign-owned banks (Kookmin Bank and Korea First Bank) and other private domestic banks by comparing their key financial conditions and operating behaviors. We then briefly probe the issue of whether there have been any stability effects from foreign bank entry in the form of the opening of branches. In addition, we carry out a more definite empirical analysis using bank panel data for identifying the efficiency effects of foreign bank entry by opening branches and of foreign entry through green field investment and M&A on domestic banks in terms of profits and costs.

II. Characteristics of Financial Sector FDI

1. Recent Trends in Financial Sector FDI

From the early 1990s, the Korean government started significantly relaxing its control over the financial sector launching a five-year financial liberalization plan in 1993[1]. Thus the liberalization process has gained momentum. What is more, the November 1998 Foreign Investment Promotion Act has made it possible to open up the vast majority of Korean business sectors including the financial sector to foreign investors. By offering tax and other incentives, the Act aimed at creating a more transparent and open environment. It seems apparent that such policies to bolster a liberalized investment environment have played a prominent role in provoking a dramatic surge of overall FDI into Korea since 1999. It rose sharply to USD 15.6 billion in 1999 from USD 8.9 billion in 1998, reaching a peak of USD 15.8 billion in 2000 before beginning to drop after 2001.

Table 1 Financial Sector FDI in Korea

USD billion

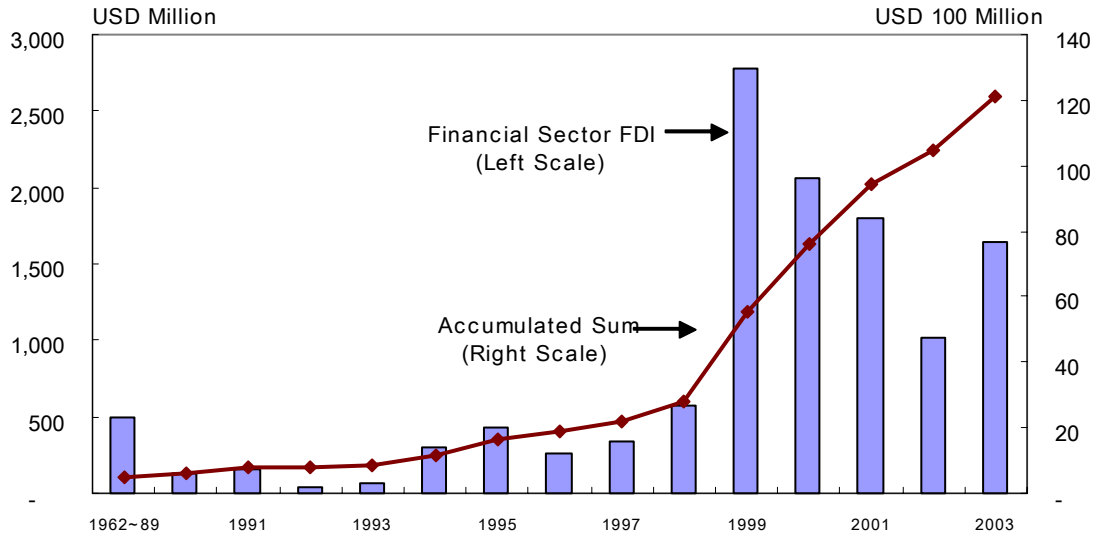
	1995	1996	1997	1998	1999	2000	'01	'02	'03
Overall FDI (A)	2.49	3.65	7.21	8.91	15.57	15.79	11.87	9.10	6.47
FS FDI (B)	0.98	0.72	0.58	0.64	2.80	2.16	1.81	1.02	1.65
Banking & Securities	0.38	0.25	0.32	0.51	2.27	1.61	1.65	0.53	-
(Branches)	0.54	0.45	0.24	0.06	0.03	0.09	0.002	0.05	-
Insurance	0.06	0.02	0.02	0.07	0.51	0.45	0.16	0.40	-
B/A (%)	39.0	19.7	8.0	7.2	18.0	13.7	15.2	11.2	25.5
A/GDP (%)	0.3	0.4	0.5	0.9	1.4	1.7	2.2	3.0	-

[1] It sought to achieve the following major liberalization measures: 1) Interest rate deregulation in four stages (from 1991 to July 1997). In accordance with this, all lending and borrowing rates, except demand deposit rates, were liberalized by 1997. 2) More managerial autonomy for banks and lower entry barriers to financial activities. This measure includes allowing freedom for banks to increase capital, to establish branches and to determine dividend payments (1994). At the same time, the measures were applicable to foreign banks attempting to open branches. The business scope of financial institutions was also enlarged by the expansion of the securities business. 3) Foreign exchange liberalization, which involved a detailed schedule for the reform of the foreign exchange market structure (1994) and a significant relaxation of the foreign exchange concentration system (1995). 4) Capital market opening. This measure allowed foreigners to invest directly in the Korean stock markets subject initially to ownership ceilings and to purchase government and public bonds and equity-linked bonds issued by SMEs (1994). More importantly, foreign commercial loans were allowed without government approval in so far as they meet the guideline established in May 1995. See Ha-Joon Chang et al. (2001).

Source: Ministry of Commerce, Industry and Energy (MOCIE)

There has also been a marked increase in financial sector FDI in 1999 mainly due to the need to facilitate the financial-sector restructuring undertaken in the aftermath of the 1997 financial crisis by selling off a number of not-immediately-viable domestic banks to domestic and foreign bidders. It soared to USD 2.8 billion in 1999 and amounted to USD 2.2 billion in 2000 and USD 1.8 billion in 2001, vastly outpacing the average annual level of USD 0.7 billion during 1994 to 1998.

Chart 1 Financial Sector FDI in Korea



Source: Ministry of Commerce, Industry and Energy (MOCIE)

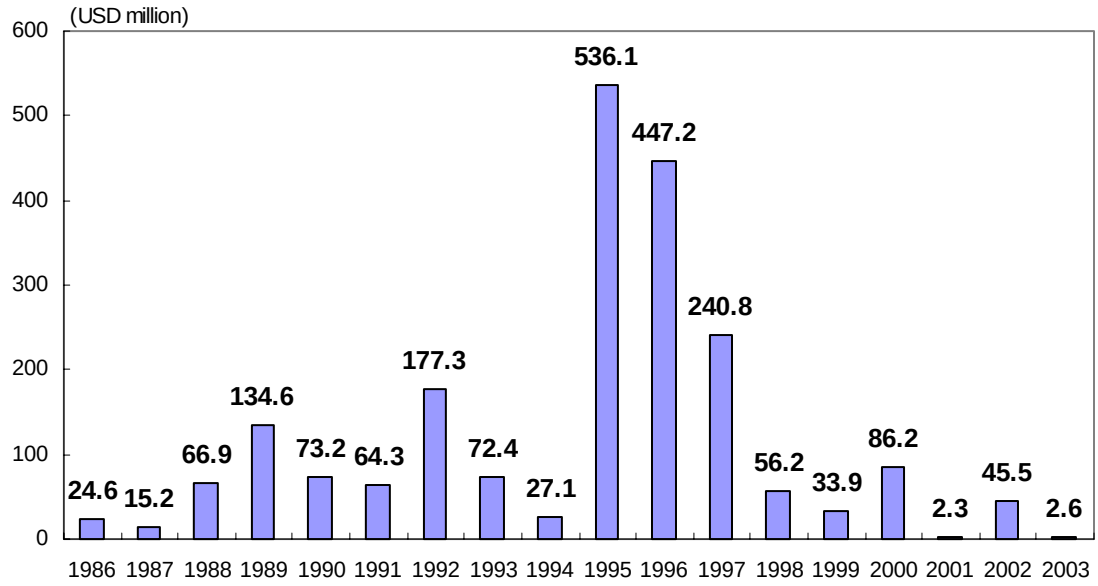
Financial sector FDI may be broken down into two categories: Foreign entry to the banking sector, the securities and the insurance through green-field investment or M&A, and foreign bank entry through opening branches and representative offices. Foreign bank subsidiaries[2], however, have never been established so far because foreign banks have been concentrating on following their customers abroad rather than offering a wider range of financial services, such as taking deposits or making loans. It is noteworthy that the pattern of foreign entry to the financial sector appears very similar to that of financial sector FDI as a whole after the crisis as shown in Table 1. Although disaggregated data on the mode of foreign entry to the financial sector are

[2] It is generally observed that subsidiaries are permitted to engage in a broader range of financial services than branches, and in many countries, they are treated and regulated in the same way as domestic banks.

not available, informal data from the MOCIE (Ministry of Commerce, Industry and Energy) reveals that around 75 per cent of foreign investment in the financial sector in 2002 was green field investment and the remainder M&A. In contrast, foreign bank entry through the opening of branches (and representative offices), which had been the most important organizational form of foreign entry until 1997, began to slow substantially from 1998. Chart 2 indicates that the increase in financial sector FDI due to foreign bank entry through opening branches was relatively strong during the three consecutive years from 1995 to 1997. This was apparently driven by the above-mentioned liberalization process that significantly lowered entry barriers, such as abolishing the Economic Needs Test (ENT, April 1994) mandated for foreign banks attempting to establish branches and the requirement to establish a representative office prior to opening a branch (May 1995). Forty foreign banks originating from fifteen countries are currently operating sixty-one branches.[3]

The upshot is that foreign entry to the financial sector through green field investment and M&A seems to have largely replaced foreign bank entry through opening branches since 1999.

Chart 2 Increase in Financial Sector FDI due to Foreign Bank Entry through the Opening of Branches



[3] Of the sixty-one foreign branches in Korea, twenty (32.8 per cent) originated from the United States and twenty (32.8 per cent) from European Countries as of the end of 2003. In particular, the personnel of the Citibank branches (1,059) plus HSBC branches (287) amounted to 52.2 per cent of the total personnel of all foreign bank branches.

Source: Balance of Payment, Bank of Korea

2. Foreign Ownership of Domestic Banks

The increase in foreign participation in the financial sector through green field investment and M&A mostly after the crisis has led to a high degree of foreign ownership with the increasing (minority) stakes and foreign management control of domestic banks and securities companies. There are seven major domestic banks - Kookmin Bank, Woori Bank, Hana Bank, Shinhan Bank, Korea Exchange Bank (KEB), Hanmi Bank, Korea First Bank (KFB). Of these banks, five are foreign-owned banks

Table 2 Foreign Ownership[1)] in Major Domestic Banks

Banks	At the end of 1997		At the end of 2003	
	Foreign Ownership	Major Shareholder	Foreign Ownership	Major Shareholder
Kookmin Bank	None (KHB:41.2%) None (Kookmin: 37.0%)	Government: 22.4% Government: 15.2%	**73.6%**	Bank of New York:10.4% Government: 0.1% Goldman Sachs: 1.1% ING Group: 3.9% [1 ED, 2 ODs]
Woori Bank	8.6%	Samsung Life Insurance: 6.60	**4.5%**	Woori Financial Group: 100 % – KDIC:86.8%
Hana Bank[2)]	21.3%	Kyobo Insurance: 7.7%	**37.2%**	KDIC: 21.7% Allianz AG: 8.2% [2 ODs]
Shinhan Bank[3)]	23.4%	Koreans resident in Japan:23.4%	**51.8%**	Shinhan Financial Group: 100% – Citibank N.A.: 4.64% – BNP Paribar: 4.6% [1OD]
Korea Exchange Bank (KEB)	2.7%	BOK: 47.9%	**71.0%**	Lone-Star: 51.0% Comerz bank: 14.8% [president, 1 vice president, 5 ODs]
Hanmi Bank	29.4%	BOA: 18.6%	**89.1%**	KAI: 15.7% [5 ODs]
Korea First Bank (KFB)	0.1%	Daehan Life Insurance Co. Ltd.: 4.9%	**48.6%**	New Bridge Capital: 48.6% [president, 3 vice presidents, 12 ODs]

Notes: 1) Foreign ownership and major shareholders are based on data as of the end of 2002. ED and OD in square brackets refer to foreign executive directors and foreign outside directors, respectively

2) Hana Bank took over Seoul Bank in early December 2002

3) Shinhan Financial Holding Company took over Choheung Bank in December 2003

Source: Shareholders' information of individual banks.

where foreigners own more than 50 per cent of shares ranging from 48.6 per cent to 89 per cent as of the end of 2003. For example, Kookmin Bank, the largest bank in Korea, was 73.6 per cent foreign-owned, with the Bank of New York (ADRS) and ING Group holding 10.4 per cent and 3.9 per cent of its equity as of the end of 2003.

This is a remarkable increase in foreign ownership of the major domestic banks, compared to the pre-crisis period where foreign ownership remained much less than 30 per cent as late as the end of 1997. As a result, foreign participation in the control of the major domestic banks at senior management level has increased considerably in recent years. A foreign president and three foreign vice presidents now directly control the KFB with twelve foreign outside directors. Similarly, in the case of Korean Exchange Bank a foreign president and one foreign vice president are directly involved in management and five foreign outside directors sit on its board. Other major domestic banks such as Kookmin Bank and Hanmi Bank also have participated in their boards by more than two foreign directors.

3. Regulations and Supervisions Related to Foreign Entry to the Domestic Financial Sector

i) Operational Funds of Foreign Bank Branches

The operational funds of the foreign bank branches are classified as Capital A funds or Capital B funds.

Capital A funds are recognized as the equity capital of foreign bank attempting to open branches in Korea. Thus they may be in line with the financial sector FDI associated with foreign bank entry. Capital A funds include local currency denominated funds that foreign bank branches must hold through their parent’s sales of funds denominated in foreign currency to the Bank of Korea, together with funds transferred from the retained earnings carried forward of the incumbent branches for an expansion of the branch network. Each foreign branch needs to provide at least KRW 3 billion (equivalent to USD 2.5 million) in Capital A funds. Foreign bank branches, however, cannot remit Capital A funds in excess of KRW 3 billion to the home country or elsewhere without the approval of the FSC. This may be a main reason why most foreign bank branches tend to hold no more than KRW 3 billion in Capital A funds even though allowed to maintain at least that amount.

Capital B funds represent the sum of the long-term loans[4] that foreign branches borrow from their parent banks (or other branches abroad) and domestically operate and of local currency denominated funds that they hold through sales of funds denominated in foreign currency to the BOK under the repurchase agreements. Since Capital B funds typically comprise long-term borrowings, they are counted as supplementary capital of foreign bank branches. Another reason for allowing Capital B funds as supplementary capital involves preventing foreign branches from limiting their scope of operations due to a relatively low level of Capital A funds. But foreign bank branches are not permitted to hold Capital B funds exceeding 200 per cent of total capital mostly due to concerns about the potential effects of over leverage on their soundness.

ii) Limit on the Foreigner Equity Holdings

In accordance with the November 1998 Foreign Investment Promotion Act, the Korean government took major steps to reduce entry barriers to the financial sector. It lifted the four-percent limit on the equity of a domestic financial institution that an individual foreigner can hold. This applies to foreigners engaging in the financial sector such as the banking, securities and insurance sectors. In this instance, their total assets and business volume should be recognized as adequate compared to the average level of the relevant business sector. Furthermore, their financial status must be maintained adequately when evaluated with respect to the BIS capital adequacy ratio (8 per cent) and credit ratings by international credit rating agencies. It is possible for a foreigner engaging in the financial sector to hold less than 10 per cent of the total equity of a domestic financial institution by simply reporting this to the Financial Supervisory Commission (FSC).

A foreigner seeking to establish a joint financial institution or branches in Korea, however, can hold more than 10 per cent of the total equity of domestic financial institutions provided that approval is obtained from the Financial Supervisory Commission. Approval is granted step by step at 25 per cent, 33 per cent and 100 per cent level.

It is noteworthy that Korean nationals are allowed to hold the equity of domestic financial institutions by following the same procedure as foreigners, only within the specific limit approved by the FSC for foreigners or reported by foreigners. This may put foreigners (non-residents) on a better footing than Korean nationals (residents) in penetrating the domestic banking sector and competing effectively with domestic banks.

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[4] The Governor of the FSS may deduct long-term loans from Capital B funds if such funds have not been operated in Korea

III. The Effects of Foreign Bank Entry on the Performance of Private Domestic Banks

This section aims to shed light on the efficiency effects of foreign bank entry. To this end, we first evaluate the performance of two foreign-owned banks (Kookmin Bank and KFB) and other private domestic banks by comparing their key financial conditions and operating behaviors. It seems too early to draw any definite conclusion about the implications for the performance of banks that have recently come to have majority foreign ownership (mostly after 1999). Nevertheless, an attempt appears warranted to gain a rough idea as to whether they exhibit any distinctive differences in performance relative to other domestic banks on the basis of the financial statements of individual banks and anecdotal evidence. We then briefly probe into the issue of whether there have been any stability effects from foreign bank entry in the form of the opening of branches. In addition, we carry out a more definite empirical analysis using bank panel data for identifying the efficiency effects of foreign bank entry by opening branches on private domestic banks in terms of profits and costs.

1. An Evaluation of the Performance of Two Foreign-Owned Banks and Private Domestic Banks

To compare the performance of foreign-owned banks with those of other domestic banks, we first choose two banks that have recently come to have majority foreign ownership: Kookmin Bank having the highest foreign ownership (73.6 per cent as of the end of 2003) among the five foreign-owned domestic banks and Korea First Bank (KFB) which is run by a foreign CEO, with foreign ownership now amounting to 48.6 per cent.

Comparing the key financial conditions of these two foreign-owned banks with those of other private domestic banks suggests that they have not differed systematically in performance in the post-crisis period and foreign-owned banks have rather been inferior to the private domestic banks in the areas of loan growth and profits. The annual loan growth of the two foreign-owned banks has been broadly similar to the average annual loan growth rate of all private domestic banks in 2001, although having been substantially less than that of all domestic banks as well as some

other major banks such as Shinhan Bank in 2002. The annual loan growth of Kookmin Bank was 22.9 per cent and 26.5 per cent respectively from the end of 2001 to the end of 2002, compared to the 33.6 per cent of all private domestic banks and the 33.7 per cent of Shinhan Bank.

It is worth noting that both Kookmin Bank and KFB have been more aggressive in pursuing retail-banking expansion than other private domestic banks since 2000. KFB in particular showed a marked increase in the consumer lending-to-total lending ratio from mere 20.7 per cent in 1997 to 67.9 per cent in 2003, outpacing the average consumer lending ratio (55 per cent in 2003) of all private domestic banks.

Table 3 Consumer Lending Ratios[1] of Two Foreign-Owned Banks and Domestic Banks

Per cent

	1997	1998	1999	2000	2001	2002	2003
KFB	20.7	17.5	22.0	49.1	62.7	65.2	67.9
Kookmin Bank	66.6	61.7	56.9	58.0	63.4	63.7	65.5
Domestic Banks[2]	35.5	34.3	36.1	40.8	51.3	54.8	55.0

Note: 1) Consumer lending-to-total lending ratio
2) Nation-wide commercial banks excluding regional banks

Source: Financial Supervisory Service (FSS)

The two foreign-owned banks and other private domestic banks have also engaged in similar deposit-based funding. Table 4 shows that Kookmin Bank and KFB maintained 71.8 per cent and 69.9 per cent of demand deposits to total assets respectively as of the end of 2003, slightly higher than the average ratio (68.3 per cent) of demand deposits of all private domestic banks. In particular, KFB showed a higher share of demand deposits to total deposit, 19.6 per cent, as of the end of 2003, compared to the average ratio of all private domestic banks (10 per cent).

Table 4 Funding and Liquid Assets of Two Foreign-Owned Banks

Per cent

	Deposits/total assets[1]				Liquid assets/total assets[2]			
	1997	2001	2002	2003	1997	2001	2002	2003
Korea First Bank	57.1	66.4	72.2 (11.3)	68.9 (19.6)	17.1	11.3	9.6	10.2
Kookmin Bank	-	73.4	71.8 (10.9)	71.8 (11.4)	-	5.4	3.1	3.8
Domestic Banks[4]	61.0	69.8	69.0 (10.0)	68.3 (10.0)	18.8	8.1	6.7	7.1

Notes: 1) Deposit includes deposits in both local currency (Won) and foreign currency

2) Liquid assets consist of cash and checks, due from BOK or other banks, foreign currency and bills and drafts bought
3) Demand deposit –to-total deposit ratio is reported in parenthesis
4) Nation-wide commercial banks excluding regional banks
Source: Financial Supervisory Service (FSS)

It seems apparent that there were no compellingly obvious differences in liquid asset ratios between these two foreign-owned banks and other private domestic banks in the post-crisis period. This pattern may reflect the fact that foreign-owned banks did not need to maintain higher liquidity levels because they relied heavily on deposit financing.

Data on bank profits in Table 5 reveal that Korea First Bank (KFB) in particular showed substantially lower ROA and ROE in 2002 than the average ratios of all private domestic banks. The ROA and ROE of KFB over the fourth quarter of 2001 through the fourth quarter of 2002 stood at just 0.4 per cent and 6.3 per cent respectively, while the equivalent ratios for all domestic banks remained at 0.6 per cent and 11.0 per cent. What is more, the profits of both Kookmin Bank and KFB dropped slightly in 2003 mainly due to their higher loan loss provisioning than other domestic counterparts.

There is also the issue of whether increased foreign participation has contributed to any operational differences between foreign-owned and other domestic banks. Although institutional reform of corporate governance has been pursued including the outside directors and audit committees, a qualitative evaluation by the Financial Supervisory Service (FSS) reveals no significant operational differences between foreign-owned and other domestic banks. Primarily, the lack of expertise on the part of outside directors and ineffective selection procedures were perceived as underlying the allegedly less-than satisfactory functioning of the Board of Directors of most foreign-owned and domestic banks.

Table 5 ROA and ROE of Foreign-owned Banks and Domestic Banks

Per cent

	ROA				ROE			
	1997	2001	2002	2003	1997	2001	2002	2003
Korea First Bank	1.1	0.9	0.4	△0.04	26.8	15.2	6.3	△0.82
Kookmin Bank	1.0	0.8	0.8	△0.34	18.0	12.6	13.0	△6.28
Domestic Banks[1)]	△0.5	0.8	0.6	0.1	△10.8	16.3	11.0	1.99

Note: 1) Nation-wide commercial banks excluding regional banks
Source: Financial Supervisory Service (FSS)

It has been argued that foreign bank entry makes it possible to improve the quality, pricing and availability of financial services in the domestic financial market by enabling the application of more modern banking skills and technology (Levine, 1996). However, as noted earlier, KFB showed a tendency to concentrate on retail-oriented lending, rather than providing enhanced financial services and pursuing portfolio diversification through the use of advanced banking technology and skilled banking personnel. It seems most likely that KFB has not played satisfactorily the role that had been originally hoped for. Kookmin Bank was also by no means outstanding in these aspects. What is more, KFB has not been aggressive in addressing non-performing loans and asset quality deterioration arising under the foreign CEO's control. Such behavior appears to be closely associated with the 'put back option'[5] that was provided to its foreign company upon taking over the previously weak KFB.

2. An Evaluation of the Stability Effects of Foreign Bank Entry through the Opening of Branches

Table 6 shows that while the deposit-to-asset ratio for foreign bank branches declined somewhat, their proportions in total assets of both borrowings from head offices (Due to Head Office and Branches) and derivatives instrument liabilities and accounts payable increased in both 2002 and 2003. Note that their borrowings (mostly short-term) from their head offices and branches[6] (23.7 per cent of total assets) in 2003, which outpaced deposit-taking (15.5 per cent of total assets), tended to play a role as the most important funding sources, together with derivatives instrument liabilities and accounts payable (31.7 per cent of total assets). In particular, although foreign bank branches showed a decreased deposit ratio after 2002, it seems clear that they contributed marginally to the stability of the domestic deposit market at the height of the Asian financial crisis. In 1998, domestic depositors tended to shift their funds away from finance companies and small banks toward large banks, especially foreign banks such as Citibank and HSBC that were perceived as sounder than the local banks,

[5] This foreign takeover actually took place only subject to the condition that the foreign owners were given a positive incentive to resolve non-performing loans. This incentive was that if loans inherited from the previously weak KFB that were classified as performing turn sour, these loans could be sold to the government. Non-performing loans were then recovered by the bank. However, when the bank is able to transform a non-performing loan into a performing loan by restructuring the borrowing firm at the time of takeover, it gains from doing so. See Graham (2001).

[6] Such a sharp increase in borrowings from the head offices and branches was due to the branches' need to provide short-term funds denominated in foreign currency for currency swaps with domestic insurance companies.

which were mostly stricken with bad loans. That this "flight-to-quality" phenomenon took place may be confirmed by the increase in 1998 in deposits with foreign bank branches, as opposed to domestic banks.[7] In the operation of assets, however, foreign bank branches exhibited stronger investment securities growth in the years from 2001 through 2003, with their securities-to-total asset ratio exhibiting high levels ranging from 26 to 32 per cent. This reflected an increase in investment in Monetary Stabilization Bonds (central bank obligations) and government bonds, due to their need

Table 6 Assets & Liabilities of Foreign Bank Branches

Per cent

		European Bank Branches			American Bank Branches			All Foreign Branches		
		2001	2002	2003	2001	2002	2003	2001	2002	2003
Liabilities	Deposit [1)]	15.0	13.3	12.4	39.3	36.1	33.0	22.4	18.1	15.5
	Call Money	21.4	18.7	18.9	14.3	11.3	14.9	17.3	13.8	15.0
	Due to Head Office &	29.8	28.7	15.2	11.3	17.6	13.1	25.8	32.2	23.7
	Derivatives Instrument Liabilities & Accounts Payable	6.1	13.6	11.1	7.0	10.2	9.1	20.6	22.7	31.7
Assets	Securities	30.7	41.3	34.9	26.9	27.1	18.9	26.9	31.7	26.2
	Loans[2)]	16.1	16.6	12.6	23.0	20.9	20.3	20.9	23.8	21.0
	Bills Bought in Foreign Currency	5.1	4.1	3.3	7.3	4.3	3.9	7.1	5.2	5.0
	Derivatives Instrument Assets & Accounts Receivables	22.0	25.1	38.1	20.7	24.5	29.8	19.2	21.0	31.3

Notes: 1) CDs included

[7] Deposits of domestic banks and foreign bank branches are as follows

unit : USD billon

	1996	1997	1998	1999	2000	2001	2002
Domestic commercial banks:	326.4	353.7	251.4	298.2	337.1	266.7	288.6
	(16.9)	(8.4)	(-28.9)	(18.6)	(13.0)	(-20.9)	(8.2)
Foreign bank branches:	3.8	3.8	3.9	5.2	7.1	8.8	10.0
	(-2.2)	(-1.1)	(4.2)	(31.7)	(37.8)	(22.6)	(13.6)

* Annual growth rate of deposits in parenthesis

2) Inter-bank loans in foreign currency are included
Source: Financial Supervisory Service (FSS)

to hedge foreign exchange and interest rate risk resulting from increase in currency swaps with domestic insurance companies and the enlargement of their country limits on investment in securities.

Foreign bank branches showed relative weakness in profits through 2002, as is revealed by the fact that both their ROAs and ROEs fell sharply in 2002 to levels much lower than those of domestic banks. This is because their non-interest income, such as gains on foreign currency trading and trading of derivatives, was reduced mainly due to strengthened competition among foreign bank branches and to the improved creditworthiness of domestic banks (Table 7). However, foreign banks maintained higher share of liquid assets through 2003, in comparison with domestic banks. This reflected their relatively larger investments in liquid and lower-risk assets such as MSBs and government bonds. They also consistently maintained lower non-performing loan ratios and higher risk-based capital ratios than domestic banks, although domestic banks also showed improvement in those indicators over the past three years. These findings provide some support for the view that the overall financial conditions and performances of foreign bank branches tend to be stronger than those of domestic banks. In addition, it seems most likely that greater foreign bank participation contributed to the increased banking competition, as evidenced by the reduced non-interest income from the trading of foreign currency and derivatives, and thereby to reduced profits.

Table 7 Major Indicators of Bank Performance

Per cent

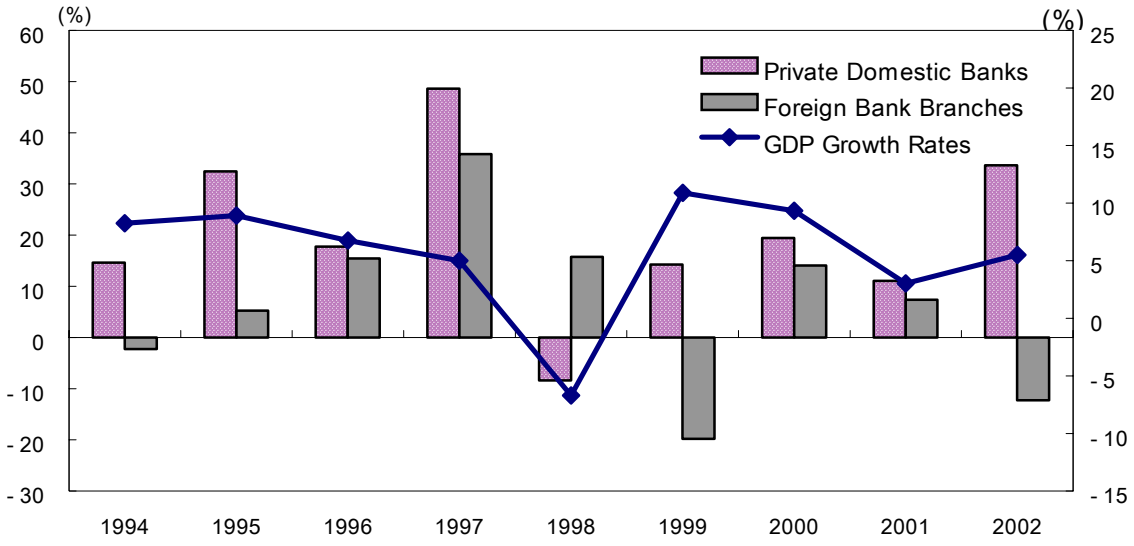
	Foreign Bank Branches				Domestic Banks			
	2000	2001	2002	2003[3)]	2000	2001	2002	2003[3)]
ROA[1)]	1.58	1.06	0.50	0.57	△0.54	0.80	0.56	0.1
ROE[1)]	18.14	13.27	7.59	8.01	△0.81	16.30	10.95	1.99
Liquidity Ratio[2)]	114.0	129.6	136.08	125.55	113.9	100.6	111.0	109.51
NPL Ratio	1.03	1.11	0.56	0.76	6.6	2.9	2.0	2.19
BIS Capital Ratio	26.82	27.62	19.88	24.85[3)]	10.53	10.81	10.52	10.7[3)]

Notes: 1) Both ROEs and ROAs are ratios over the relevant periods
2) Liquidity ratio refers to the proportion to total liquid liabilities of liquid assets
3) Figures are based on data as of the end of September 2003

Source: Financial Supervisory Service (FSS)

A key issue to examine is whether movements in foreign banks' lending were more closely tied to economic conditions than those in domestic banks. Chart 3, which compares real GDP growth rates with the loan growth rates of foreign bank branches and private domestic banks, indicates that foreign bank branches did not "cut and run" when faced with the severe economic slowdown in 1998 following the financial crisis, despite the fact that domestic banks did cut off credit lines to their customers. However, they tended to cut back on lending substantially when economic recovery was under way in 1999, in sharp contrast with domestic banks. This result suggests that the lending pattern of foreign bank branches over the post-crisis period in particular tended to be counter-cyclical, with that of domestic banks being more or less pro-cyclical. It is nevertheless by no means clear that foreign bank branches played a role of mitigating the pro-cyclical pattern of lending by private domestic banks and, in particular thereby contributed somewhat to the Korean economy's withstanding the severe slowdown following the crisis, in the sense that the scale of lending by foreign bank branches in fact remains very small relative to that of domestic banks (Table 8).

Chart 3 Comparison of Real GDP Growth Rates with Loan Growth Rates between Foreign Bank Branches and Private Domestic Banks



Source: Banking Statistics, Financial Supervisory Service (FSS)

Table 8 Total Lending of Foreign Bank Branches and Private Domestic Banks

USD billion, per cent

	1997	1998	1999	2000	2001	2002
Domestic Banks[1)]	201.5	126.2	169.2	212.4	206.7	285.0
Foreign Bank Branches	8.8	7.0	6.6	7.9 (3.6)	7.4 (3.4)	6.7 (2.3)

Note: 1) Nine nation-wide commercial banks excluding regional banks
2) Total lending of foreign bank branches to that of all private domestic banks ratio is reported in parenthesis

Source: Banking Statistics, Financial Supervisory Service (FSS)

There has also been concern about the issue of whether foreign bank branches show a tendency of "cherry picking" the most creditworthy domestic firms and individuals. From the findings of one of the most recent FSS audits, it seems apparent that most foreign bank branches in Korea tend to concentrate on wholesale banking such as trade finance and project finance, and private banking such as custody business and cash management service (CMS) as well as on trade of foreign exchange, bonds and derivative products. In particular, Citibank and HSCB have also tended to undertake retail-banking activities. These foreign banks, however, have been targeting the creditworthy domestic customers, while focusing especially on more stringent loan enforcements than domestic banks by using advanced credit risk evaluation methods. Under these conditions, it appears not totally implausible that domestic banks have been led to deal with less creditworthy (more risky) customers such as SMEs[8] and to thus increase the overall riskiness of their portfolios. Consistent with foreign banks' cherry-picking strategy, HSBC, one of the leading foreign banks currently operating in Korea, exhibited a markedly low overdue mortgage loan ratio of 0.28 per cent as of the end of 2002, compared to the equivalent ratio of 2.0 per cent recorded at Kookmin Bank.[9] The reason why HSBC had such a low overdue loan ratio may be traced back to several factors. First, it was able to enter the mortgage loan market earlier than Kookmin Bank and preempt creditworthy customers, while offering mortgage loans at the lowest lending rate. Second, it also showed more defensive behavior in offering

[8] This result may have arisen in part from the fact that the mandatory ratio for lending to SMEs has since February 1999 been set lower for foreign bank branches at 35 per cent than the equivalent ratios for commercial banks and regional banks, which are 45 per cent and 60 per cent respectively.

[9] HSBC also showed a low overdue consumer loan ratio of 0.85 per cent as of the end of 2003, compared to the equivalent ratio of 2.35 per cent at Kookmin Bank.

mortgage loans (primarily long-term) – keeping its loan-to-value ratio at no more than 60 per cent over the past two years, even when major domestic banks including Kookmin Bank raised it up to 70 to 80 per cent.

Overall, it is not wholly clear as to whether a greater foreign bank presence contributed to a more stable banking system. Even though they tended to mitigate the pro-cyclical pattern of lending by domestic banks, the overall scale of lending by foreign bank branches remained very small relative to that of domestic banks. They also sought to cherry pick the most creditworthy customers.

3. Empirical Evidence of Efficiency Effects of Foreign Bank Entry on Private Domestic Banks[10]

i) Efficiency Effects of Foreign Bank Entry through the Opening of Branches

We first turn to the question of whether foreign bank entry through the opening of branches had some significant effects on both profits and costs of private domestic banks (nationwide banks and regional banks combined) by competing with them in the loan market. To address the question, we estimated the following regression equation using panel data. Data used cover from 1987 to 2000 on an annual basis.

Econometric specification and data

$$Y_{i,t} = \alpha_i + \gamma X_{i,t} + \delta FB_{i,t} + \xi_{i,t}$$
$$i = 1, \ldots, N, \quad t = 1, \ldots, T.$$

Where the lower subscript i represents the individual local banks existing in each year t and t covers from 1987 to 2000 (fourteen years), $Y_{i,t}$ is a measure to proxy for the performance of a local bank i in a given year t, $FB_{i,t}$ refers to the foreign bank penetration through the opening of branches in a given year t and $X_{i,t}$ denotes a vector of the control variables other than $FB_{i,t}$ that might affect the local banks' performance. We selected the average amount of total loans made by foreign bank branches as a percentage of the average amount of loans made by local bank i to proxy for $FB_{i,t}$. Here foreign banks originate from twelve countries: the United States, Japan, France, the

United Kingdom, Canada, Australia, Netherlands, Germany, Hong Kong, Singapore, India and Pakistan. These countries are selected because they have maintained at least one local branch in Korea every year during the sample period. The level of return on assets (ROA) or return on equity (ROE), standard measures of profit, was used as the dependent variable to capture the effects of foreign bank penetration through the opening of branches to the local loan market on local banks' profits. To gain an insight into whether the foreign bank entry through the opening of branches raises the cost efficiency of the local banks, either operating expenses relative to total assets (EXP) or total costs relative to total assets (TCOST) was included as the dependent variable. The control variables considered comprise both micro and macro factors[11]. Micro factors involve the following bank characteristics of individual local banks expressed as percentages of total assets: equity capital/total assets (CAP), securities holding/total assets (SEC), bank loan/total assets (LOAN), fixed assets/total assets (FIX) and allowance for credit loss/total assets (PROV). In particular, operating expenses as a percentage of total assets (EXP) was considered as an explanatory variable when the dependent variable was either ROA or ROE. The growth rate of real GDP (RGDP), the inflation rate based on the Consumer Price Index (INF) and the real interest rate (RINT) were selected to control for macro conditions.[12]

Empirical Results

A pretest indicates that most of the correlation coefficients between independent variables are generally found to be much lower than 0.7. This may suggest that including all independent variables in the regression equation would not pose any serious problem of multi-collinearity.

The results are shown in Table 9. In the profit equations ([1] and [2]), *FB*, the primary interest of this analysis, does not have a significant positive coefficient. The result confirms that both ROA and ROE proxied for the profits of local banks' activities appear not to be dependent on foreign bank penetration through the opening of branches to the local loan market in an important way. However, the coefficient estimate of FB in the expenditure equation [3] turns out to be significantly negative at the 5 per cent level. This may imply that allowing foreign banks to enter through opening branches more likely helps improve the efficiency of domestic banks in terms

[11] See Demirguc-Kunt and Huizinga (1998).

[12] Bank characteristics used are taken from the Bank Management Statistics issued by the Financial Supervisory Service of Korea and the Monthly Research and Statistics issued by the Bank of Korea for the bank loan amount of foreign bank branches. Macro-economic indicators are from the Monthly Research and Statistics.

Table 9 The Effects of Foreign Bank Entry through the Opening of Branches on the Performance of Private Domestic Banks (1987~2000)

Number	[1]	[2]	[3]	[4]
Estimation method	Random effects	Random effects	Fixed effects	Random effects
Dependent variable	ROA	ROE	EXP	TCOST
Constant	-2.3182 (-1.46)	-34.8496 (-0.71)	-	10.8328*** (4.35)
CAP	0.1069*** (3.01)	3.0520*** (2.78)	0.0058 (0.46)	-0.2300*** (-4.07)
SEC	-0.0495** (-2.18)	-1.9437*** (-2.74)	0.0075 (0.91)	0.1860*** (4.91)
LOAN	-0.0137 (-0.55)	-0.1690 (-0.22)	0.0316*** (3.40)	0.0179 (0.50)
FIX	-0.2615*** (-2.67)	-7.8413** (-2.59)	0.1679*** (8.26)	0.5733*** (5.22)
PROV	0.0248 (0.19)	10.7096*** (2.66)	-0.0094 (-0.48)	0.1364 (0.64)
EXP	1.1639*** (3.07)	17.5733 (1.55)	-	-
RGDP	0.1691*** (4.58)	1.3806 (1.19)	0.0276*** (3.89)	-0.4105*** (-6.63)
INF	0.0930 (1.31)	2.0463 (0.92)	0.0435*** (2.63)	-0.1396 (-1.19)
RINT	0.0269 (0.40)	2.0056 (0.95)	0.0100 (0.82)	-0.0766 (-0.66)
FB	0.0042 (0.47)	-0.0413 (-0.15)	-0.0053** (-2.30)	-0.0252** (-2.01)
No. of obs.	172	172	173	173
Adj-R^2	0.56	0.27	0.84	0.57
F-test	6.84	3.33	13.53	4.21
Hausman test	W = 9.55	W = 5.64	W = 19.39	W = 10.89

Notes:1) t-value calculated with White(1980) Heteroskedasticity-consistent standard errors are reported in parentheses. The symbol *** indicates a significance level of 1 per cent or less, ** between 1 and 5 percent, and * between 5 and 10 per cent.

2) F-value is used for examining the hypothesis that an individual country has the same constant terms.

3) The Hausman test statistics will be distributed asymptotically as χ^2 with k (the number of independent variables) degree of freedom under the null hypothesis that the random effects estimator is correct. Note that the chi-squared test is based on the Wald criterion.

of costs presumably through competition with foreign banks which would in turn induce domestic banks to cut down on operating expenditures.[13] This evidence seems to be broadly in line with the hypothesis that foreign bank entry through the opening of branches tends to render the domestic banking market more competitive and thereby force domestic banks to operate more efficiently. In particular, LOAN and FIX variables representing bank characteristics as well as key macroeconomic indicators (RGDP and INF) have the expected positive signs. Not surprisingly, there are no substantial differences in the results for replacing TCOST as a dependent variable with EXP in equation [4]. In fact, foreign bank entry (FB) also has a significant negative sign in equation [4], while some control variables such as CAP and RGDP have the unexpected negative signs, as opposed to the results in equation [3].

Overall, as the evidence in Table 9 reveals, foreign bank penetration through the opening of branches to the domestic banking sector did contribute to greater cost efficiency on the part of private domestic banks, presumably by intensifying competitive pressures. But there is no evidence that foreign bank entry has improved local banks' profits.[14] One plausible explanation for these seemingly odd results may be that cost efficiency resulting from foreign bank entry through the opening of branches has been overshadowed by the accompanying profit reduction.

We also estimated the regression equation (1) over the past pre-crisis period from 1987 to 1997 and then compared the results presented in Table 10 with those in Table 9, with a view to taking into consideration any structural change in the Korean financial market that may have occurred in the aftermath of the crisis. As it turns out, the coefficient of FB in each equation estimated over the pre-crisis period did not substantially differ from that estimated over the whole period. This may be interpreted as meaning that the 1997 financial crisis has not changed domestic banking system

[13] This evidence appears to be consistent with the findings of Claessens-Demirguc Kunt-Huizinga (1998), which indicate that there is some evidence that the overall expenses of domestic banks are negatively affected by foreign bank entry. They interpreted these results as arising from their greater efforts to achieve cost efficiency as they assimilate superior banking techniques and practices of foreign entrants.

[14] Hwang et al.(2001) also tested whether the foreign banks' entry did affect domestic banks' profitability using either asset share or deposit share as a measure of foreign penetration. However, they found that the foreign penetration through opening branches reduced domestic banks' profitability presumably due to strengthened competition among domestic banks.

efficiency in terms of both profits and costs significantly enough for a different conclusion to be arrived from that above.

Table 10 The Effects of Foreign Bank Entry through the Opening of Branches on the Performance of Private Domestic Banks(1987～1997)

Number	[5]	[6]	[7]	[8]
Estimation method	Fixed effects	Random effects	Random effects	Fixed effects
Dependent variable	ROA	ROE	EXP	TCOST
Constant	-	9.4208 (0.71)	-0.5499 (-1.32)	-
CAP	0.0365* (1.71)	0.4023* (1.67)	0.0059 (0.76)	-0.1532*** (-3.81)
SEC	-0.0644*** (-4.51)	-0.2290 (-1.22)	0.0227*** (4.12)	0.1287*** (5.34)
LOAN	-0.0346** (-2.49)	0.1942 (1.16)	0.0252*** (4.81)	0.0546** (2.42)
FIX	-0.0387 (-0.69)	-0.2784 (-0.42)	0.1507*** (9.24)	0.1624** (2.19)
PROV	-0.2382 (-0.94)	-6.9234*** (-3.08)	0.1185* (1.73)	1.8578*** (5.68)
EXP	1.2485*** (5.13)	0.9864 (0.45)	-	-
RGDP	0.0057 (0.22)	0.8448* (1.75)	0.0323** (2.31)	-0.0603 (-1.30)
INF	0.0666** (2.45)	0.3123 (0.53)	0.0112 (0.65)	0.1828*** (3.65)
RINT	-0.1144* (-1.87)	-2.7747*** (-3.71)	-0.0460** (-2.19)	0.5477*** (5.73)
FB	0.0052 (1.33)	0.0298 (0.50)	-0.0070*** (-4.35)	-0.0158*** (-2.67)
No. of obs.	137	137	138	138
Adj-R^2	0.63	0.23	0.83	0.77
F-test	10.95	3.64	13.72	15.81
Hausman test	W = 31.65	W = 9.13	W = 16.79	W = 55.25

Notes: 1) t-value calculated with White Heteroskedasticity-consistent standard errors is reported in parentheses. The symbol *** indicates a significance level of 1 per cent or less; ** between 1 and 5 percent; * between 5 and 10 per cent

2) F-value is used for examining the hypothesis that an individual country has the same constant terms.

3) The Hausman test statistics will be distributed asymptotically as χ^2 with k (the number of independent variables) degree of freedom under the null hypothesis that the random effects estimator is correct. Note that the chi-squared test is based on the Wald criterion.

ii) Efficiency Effects of Increased Foreign Ownership of Domestic Banks

Next we turn to another empirical analysis for identifying the effects on the performance of private domestic banks of foreign entry mostly through green-field investment and M&A after the 1997 financial crisis. To this end, we estimated the following regression equation using panel data that cover from 1999 to 2001 on an annual basis.

Econometric specification and data

$$Y_{i,t} = \alpha_i + \gamma X_{i,t} + \delta F0_{i,t} + \xi_{i,t}$$
$$i = 1, \ldots, N, \quad t = 1999, 2000, 2001.$$

where the lower subscript *i* denotes the individual domestic banks existing in each year t. All dependent variables and control variables considered here other than $F0_{i,t}$ are the same as those in both Table 9 and 10. $F0_{i,t}$ denotes foreigner ownership of the private domestic banks (nationwide banks and regional banks combined). T covers from 1999 to 2001 (three years) due to a paucity of $F0_{i,t}$ data. Note that the regression equations using panel data were estimated on the basis of the fixed effects due to the small size of the sample data.[15]

Table 11 reports the results of regressions investigating the effects of foreign ownership of individual domestic banks on their efficiency in terms of both profits and costs. Table 11 shows that the foreign ownership variable (*F0*) has a significant negative coefficient in the profit equations ([9] and [10]), indicating that the private domestic banks having higher levels of foreign ownership registered lower profits. This result may reflect the fact that these banks seemed more willing to address asset quality deterioration and hence took higher loan provisions rather than pursuing a strategy of recording high profits. Additionally, the estimated coefficients of the foreign ownership variable (*F0*) in the cost equations ([11] and [12]) turned out to be insignificantly negative and very small. This suggests that the foreign ownership of individual

[15] When the sample size is relatively small, it is not instructive to rely on a Hausman test to decide which model to use. In general, the fixed effects estimator still produces consistent estimates of the identifiable parameters when the random effects model is preferred. Furthermore, the fixed effects estimator produces efficient estimates when the fixed effects treatment suffers from a problem of omitted variables.

domestic banks, meanwhile, did not lead to cost reduction in recent years.

Thus the findings may be supportive of a potential for the foreign ownership of private domestic banks to contribute to the greater soundness of the domestic banking system.

Table 11 The Effects of Foreign Bank Entry on the Performance of Private Domestic Banks (1999～2001)

Number	[9]	[10]	[11]	[12]
Estimation method	Fixed effects	Fixed effects	Fixed effects	Fixed effects
Dependent variable	ROA	ROE	EXP	TCOST
CAP	3.4101 (1.38)	3.6539*** (4.31)	-0.0031 (-0.22)	-0.5523 (-1.03)
SEC	-5.3795 (-0.67)	5.0873 (0.18)	0.0151** (2.55)	0.4486** (2.54)
LOAN	-4.2729*** (-4.14)	-1.7563*** (-4.58)	0.0050 (1.07)	0.9677*** (4.94)
FIX	3.0242** (2.44)	1.1890** (2.71)	0.1731*** (4.50)	-3.4272** (-2.45)
PROV	-3.3873 (-0.29)	7.5037* (2.07)	0.0076 (0.82)	0.0622 (0.17)
EXP	3.2453 (1.23)	-2.6279 (-0.32)	-	-
RGDP	0.3116 (1.48)	1.5386* (1.88)	0.0067 (0.50)	-0.0012 (-0.35)
INF	2.5868*** (3.55)	1.0776*** (3.60)	0.0003 (0.85)	-0.0275** (-2.67)
FO	-0.0631** (-2.49)	-2.1598** (-2.36)	-0.0076 (-0.04)	-0.0009 (-1.56)
No. of obs.	48	48	48	48
Adj-R^2	0.54	0.67	0.92	0.54

Notes: 1) t-value calculated with White (1980) Heteroskedasticity-consistent standard errors is reported in parentheses. The symbol *** indicates a significance level of 1 per cent or less; ** between 1 and 5 percent; * between 5 and 10 per cent.

IV. Concluding Remarks

In this paper, we focused on addressing the question of whether increased foreign participation actually led to improvement in the efficiency and the stability of the domestic banking sector in Korea. A number of major findings can be drawn as follows.

First, comparing the key financial indicators of two foreign-owned banks (Kookmin Bank and Korea First Bank (KFB)) with those of other private domestic banks reveals that there were no compellingly obvious differences in profits in 2001 and 2002. Notably, KFB showed lower ROA and ROE in 2002 than the average ratios for private domestic banks as a whole. These two foreign-owned banks have been more aggressive in pursuing retail banking expansion, rather than providing enhanced financial services or pursuing portfolio diversification through the use of advanced banking services and skilled banking personnel. It also appears that they showed no significant operational differences in terms of corporate governance, compared to private domestic banks.

Second, it is by no means clear as to whether a greater foreign bank presence contributed to a more stable banking system. Even though they tended to mitigate the pro-cyclical pattern of lending by domestic banks, the overall scale of lending by foreign bank branches in fact remained very small relative to that of domestic banks. They also sought to cherry pick the most creditworthy customers. Thus it appears not totally implausible that domestic banks have been led to deal with less creditworthy customers such as SMEs, and hence increase the overall riskiness of their portfolios.

Third, empirical analysis to address the question of whether foreign bank penetration through the opening of branches had some efficiency effects on private domestic banks reveals that it did contribute to greater cost efficiency on the part of private domestic banks, presumably by intensifying competitive pressures. But there is no evidence that foreign bank entry has improved local banks' profits. One plausible explanation for these results may be that cost efficiency resulting from foreign bank entry through the opening of branches has been overshadowed by the accompanying profit reduction.

Finally, we also investigated the effects of foreign ownership of individual domestic banks on their efficiency. This revealed that private domestic banks having higher levels of foreign ownership registered lower profits. This result may be associated with the fact that these banks seemed more willing to address asset quality deterioration and hence took higher loan provisions rather than pursuing a strategy of registering larger profits. It was found, however, that the foreign ownership of individual banks did not lead to cost reduction in recent years. Overall, the findings may suggest a potential for the foreign ownership of private domestic banks to contribute to the greater soundness

of the domestic banking system.

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