

The Effects of Increased Foreign Ownership on Korean Domestic Banking Industry¹

Yongil Jeon

Associate Professor of Economics
School of Economics
Sungkyunkwan University
Email: yjeon@skku.edu
Phone: 82-2-760-0487.

Insill Yi

Associate Professor of Economics
Graduate School of Economics
Sogang University
Email: insill723@sogang.ac.kr,
Phone: 82-2-705-8503

Abstract in Korean:

외환위기 이후 국내 은행산업의 판도 변화 중 가장 주목할 만 것은 외국계 자본의 진입이다. 외환위기 이전 외국계 자본의 국내 은행산업 진입은 자국 기업의 한국 진출과 동반한 지점운영의 형태로 이루어져 왔으나 당시에는 국내 은행산업 내에서 주목할 만한 영향력을 발휘하지 못했다. 반면, 외환위기 이후에는 주식시장에서 지분 매입과 M&A 등을 통한 적극적인 은행 인수의 형태를 보이면서 외국계 자본 진입의 영향력이 점차 확대되어 가고 있다. 원활한 은행산업 구조조정의 일환으로 부실은행을 정리하는 과정에서 몇몇 외국계 자본이 국내은행을 인수하게 되고 주식시장에서 포트폴리오 투자로 은행 지분을 늘려감에 따라 시중은행의 외국계자본의 지분율이 우리은행을 제외하고는 80%대 수준에 이를 정도로 국내은행 산업에 대한 외향적인 영향력이 확대되는 추세에 있다.

본 논문에서는 외국계자본 진입의 경제적 효과를 국내 은행산업에 대한 영향과 주식시장에 대한 영향으로 나누어 분석하였다. 그 동안 외국계 자본 진입이 우리나라

¹ The author acknowledges the helpful comments of Dr. Hoon Kim, and other participants at the Bank of Korea workshop.

은행산업에 미친 영향에 대한 연구는 은행산업의 경영효율성과 안정성에 대해 일관된 분석결과를 보여주지 못하고 있다. 외국계 금융기관이 본격적으로 진출한 기간이 길지 않고 다양한 요인이 병존해 있기 때문이다. 따라서 외국계 자본 진입의 경제적 효과에 대한 가설을 검증하기 위하여 국내 은행산업에 대한 영향을 대출행태, 수익성, 경영효율성, 선진금융기법의 전수 등 크게 4 가지 관점에서 분석해보았다.

2001년부터 2006년까지의 국내은행 패널자료를 분석한 결과 다음과 같은 결론을 얻었다. 첫째, 외국자본의 국내 은행산업 진입 확대로 인해 기업대출에 있어 중소기업 대출이 축소되고 대기업 대출은 확대된다는 실증적 결과는 찾아보기 어려웠다. 한편, 소비자대출에 대해서는 외국자본 진입이 양의 상관관계를 보이고 있었다. 둘째, 외국계 지분율의 증가가 자산수익률에 미치는 영향은 유의한 결과를 얻기 어려웠으나 자본수익률에는 부정적인 영향을 주고 있었다. 셋째, 경영효율성 측면에서 종업원 감축 및 지점 정리를 통한 비용절감에 대해서는 유의한 결과를 보이지 않았다. 넷째, 총 수익 중 비이자소득 비중이 증대할 것으로 예상하였으나 유의한 결과를 보이지 않았다. 마지막으로, 외환관리 수익 및 위험 관리는 양의 상관관계를, 파생상품 관련 수익은 음의 상관관계를 보이고 있어 국내 은행산업의 안정성에는 기여하는 것으로 분석되었다. 한국은행의 최근 논의에 의하면 2000년부터 2004년까지 기간을 대상으로 외국계 자본의 진입 정도를 나타내는 변수로 외국계 자본의 영향을 받고 있는 은행의 자산을 전체 은행의 자산으로 나눈 값을 사용하여 외국계 자본의 국내 은행산업 진입에 대한 효과를 분석하였다. 그 결과에 따르면 국내은행의 대기업 대출비중을 줄이고 자기자본비율 및 영업비용을 상승시키는 결과를 초래한 것으로 나타난 반면, 국내은행의 수익성, 자산 건전성, 그리고 성장성에는 유의한 영향을 미치지 못하였다. 경영안정성 측면에서는 외국자본 진입이 국내 은행에 선진경영 기법을 전수하여 그 결과로써 총 수익 중 비이자 소득의 비중이 증대할 것으로 예상하였으나 유의한 결과를 찾을 수 없었다. 따라서 종합적으로 보아 외국계자본 진입은 은행산업의 경쟁력을 제고하는 데 일부만을 기여하고 있는 것으로 판단된다.

외국자본의 국내 은행산업 진입은 외환위기 이후 정부가 도입한 여러 가지 외자유치정책과 규제완화 및 개방화 정책의 일환으로 시작되었다. 하지만 최근에는 단순한 제도 개선에 따른 효과뿐만 아니라 외국자본 입장에서 국내 은행산업이 수익성,

자산건전성, 안전성 차원에서 매력적인 투자처로 부상하고 있다. 이에 따라 은행이나 금융지주회사의 외국인 지분율은 2003년에서 2006년에 이르기까지 64.8%가량 급증하였으며 2007년에는 우리은행을 제외한 4대 은행과 금융지주회사의 외국인 지분율이 80%를 상회하고 있다. 이중 2개의 은행은 100% 외국은행으로 전환되었다.

본 논문에서는 또한 외국자본의 진입확대가 주식시장에 주는 영향을 보기 위해 포트폴리오 투자가 활발하게 이루어지고 있는 신한금융지주회사, 우리금융지주회사, 국민은행, 하나금융지주회사에 대한 2002년 1월부터 2007년 9월년까지의 이용 가능한 일별 시계열 자료를 분석하였다. 실증분석결과 신한과 하나 금융지주회사는 상대적으로 주식이 분산되어 있었으며 주가와 외국인 지분율과의 관계가 유의하게 나타나지 않았다. 반면, 국민은행은 주가가 외국인 지분율에 영향을 주고 외국인 지분율이 다시 주가에 영향을 주는 상관관계를 나타내었으며 우리금융지주회사는 주가가 외국인 지분율에 영향을 주는 것으로 나타났다. 이러한 분석결과에 의하면 외국계 자본의 진입확대가 국내 은행산업에 미치는 영향은 긍정적 효과와 부정적 효과가 병존하는 것으로 보인다. 금융의 세계화 및 규제완화를 통한 자율화 추세를 감안할 때 국내 은행산업에 대한 외국자본의 관심이 줄어들기는 어려울 것이다. 그러나 주가 상승이 외국인 지분율과 양의 상관관계를 보이고 있고 특히 국민은행의 경우 양방향의 인과 관계를 보인 것으로 보아 주가의 하락은 외국인 지분율의 하락으로 이어질 가능성이 높다. 따라서, 국내 은행의 지분율을 외국계뿐 만 아니라 국내에서도 다양하게 분산할 필요가 있다. 이런 차원에서 볼 때 국내 금융자본을 육성하기 위한 방편으로 국내 사모펀드의 대형화에 관한 규제를 완화할 필요가 있으며 공정한 영업환경을 마련해 주되 외국계 자본이 국내 은행산업에 바람직한 역할을 할 수 있도록 효율성, 수익성 및 안정성 제고 차원에서의 정책적 노력이 수반되어야 할 것이다. 또한 외국계 은행으로 전환된 국내 은행들의 상장폐지 예에서 참고 할 수 있듯이 예금자나 투자자의 정보획득이나 금융감독 당국의 감독강화 차원에서 이에 대한 적절한 개선책을 마련할 필요가 있다.

Key Words: commercial banks, foreign banks, ownership, global advantage hypothesis

JEL Classification: E5, G2

I. 서론

The financial structure of Korean banks, both foreign and domestic, experienced dramatic changes since the Asian Financial Crisis (AFC) in 1997. After the crisis, the flows of foreign capital played a significant role by injecting foreign financial resources into Korean companies to help alleviate severe liquidity problems.

Korean domestic banks have accommodated foreign capital in three different types. First, foreign capital enters through the traditional route of foreign bank branches that deal with corporate loans, which characterized Korea in the twentieth century. Second, Citibank, for example, runs both its retail and wholesale level bank business in Korea, under its own US brand name. Third, and quite differently, foreign buyers directly invest and acquire the stock of Korean domestic banks through the financial market transactions, achieving higher ownerships in Korean banks. Although those shares frequently do not come with voting rights, they do allow the foreign buyers to monitor the Korean domestic banks efficiently and effectively.

A recent major change in the Korean banking industry allowed the creation of bank holding companies (BHC), which now encompasses four main Korean BHCs -- Woori, Hana, Shinhan and Dongwon. As an exception in this recent trend, the Kookmin bank, which holds the largest assets and serves the largest customer base, remains an independent bank, not in a BHC. Further, since the Dongwon financial holding company does not hold banks, we exclude it from our analysis. The first three BHCs exhibit different characteristics and backgrounds, stemming from the process of formation. The Korean government through KDIC directly manages and supervises the Woori BHC; whereas US-originated and Japanese-originated capital manages the Hana and the Shinhan BHCs. Each BHC followed a different path to achieve increased foreign ownership and management.

In this paper, we examine the historical development of these three BHCs, such as the process of formation and the effects of foreign ownership on their performance. We measure the performance by the return on equity (available quarterly), the return of assets (available quarterly), and the stock price (available daily) for each BHC. Foreign ownership data for these BHCs exist on a daily basis between most of 2000 through much of 2007. This research will aid in understanding how the process of formation of these Korean BHCs affects their ultimate performance. This may also provide the Bank of Korea and other regulatory bodies with insight about how and when to regulate foreign ownership of Korean financial institutions. Finally, we

will explore the optimal size of Korean BHCs, which remains an unknown fact in the literature as well as in practice.²

Section II reviews the structural changes that occurred in Korean banking industry since the Asian financial crisis in 1997-1998. Those changes include the opening of Korea to foreign capital investment to the Korean banking industry and the introduction of bank holding companies. The structural changes enable us to classify Korean banks into three different groups -- foreign-operated banks, mixed groups with both foreign and domestic control of operations, and Korean-operated banks. In the last category, either Koreans or Korean government hold the majority of outstanding stock. But, holding shares of stock does not necessarily keep the voting power in the Board of Directors, which may require to relax the regulation imposed on foreign investors. The foreign-operated banks include Korean Exchange Bank (KEB), Korean Citi Bank, and Standard Chartered (SC) First Bank. Section III examines the effects of governance change from domestic to foreign ownership on bank performance. In other words, attracting foreign investment may produce different investment outcomes and returns. Section IV considers how changes in the foreign holding share affect on bank's profitability as well as on the stock performance. We hypothesize that foreign investors provide price leadership or perform the function of a leading indicator for domestic investors, who watch the investment strategies of foreign investors. But, this hypothesis may prove false, implying that the information-rich domestic investors become price-makers. The conclusion (Section V) provides the summary of our research with policy suggestions.

II. Foreign Ownership of Korean Banks and Bank Holding Companies

In this section, we analyze the determinants of foreign entry and its effects on domestic banks' performance. The two major aspects we have to pay our attention since the financial crisis are the introduction of the bank holding companies and the open the bank management and stock to foreigners. To resolve the effects of the Asian financial crisis quickly, the Korean government encouraged foreign capital inflows in banking sector. Foreign ownership in the Korean commercial banking sector increased from 33.5 percent in 1999 to 63.1 percent in 2006, on average. Korean commercial banks' foreign ownership exceeds 50 percent except for the Woori and Chunbuk banks. This expansion facilitated the bank restructuring undertaken in the wake of

² The authors thank Mr. NamJin Cho at the Hana BHC for this question.

Korean financial crisis by selling off a number of ailing domestic banks to domestic and foreign bidders.

Table 1. Foreign Capital Participation in the Korean Banking Sector

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------------------|------|------|------|------|------|------|------|------|
| Domestic banks | 33.5 | 35.9 | 37.8 | 44.4 | 47.7 | 57.7 | 63.0 | 63.1 |
| Nationwide domestic banks | 35.5 | 38.3 | 40.5 | 46.8 | 49.8 | 59.5 | 65.0 | 64.8 |
| Regional domestic banks | 3.2 | 1.9 | 4.1 | 11.2 | 23.3 | 39.0 | 40.6 | 41.3 |

Note: unit - % on average

The typical mode of foreign capital participation changed from the opening or enlarging of branches to green-field investment or mergers and acquisitions (M&A), with liberalization of financial markets giving the process momentum.³ Foreign bank participation in the banking industry can play a positive role in its developments by improving bank management efficiency, delivering advanced financial techniques, and advancing financial supervisory system.

Table 2: The Foreign Ownership of Korean Banks

| Date | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------|-------|-------|-------|-------|--------|--------|
| Woori | 0.00 | 0.63 | 4.60 | 11.58 | 11.44 | 9.52 |
| Shinhan | 52.42 | 46.27 | 51.94 | 62.88 | 57.06 | 58.9 |
| Kookmin | 71.25 | 69.78 | 73.25 | 76.05 | 85.43 | 82.7 |
| Hana | 52.02 | 28.71 | 37.15 | 66.90 | 78.15 | 80.21 |
| KEB | 26.28 | 34.52 | 62.94 | 72.00 | 74.16 | 77.06 |
| SC First | 50.99 | 50.99 | 48.56 | 48.56 | 100.00 | 100.00 |
| Citi | 36.13 | 60.97 | 89.06 | 99.87 | 99.95 | 99.95 |
| Pusan | 10.63 | 12.04 | 38.51 | 59.15 | 60.11 | 56.1 |
| Daegu | 3.78 | 20.16 | 31.43 | 55.82 | 57.76 | 65.72 |

³ Since the Agreement on the Liberalization of Trade in Financial Services of 1997, the signatories have relaxed restriction on foreign banks' entry into domestic banking sector.

| | | | | | | |
|----------|------|------|------|-------|-------|-------|
| Gwangju | 0.00 | 0.63 | 4.60 | 11.58 | 11.44 | 9.52 |
| Jeju | 0.00 | 0.00 | 0.00 | 0.04 | 0.12 | 0.11 |
| Jeonbuk | 0.10 | 0.07 | 0.25 | 12.09 | 28.96 | 28.11 |
| Kyongnam | 0.00 | 0.63 | 4.60 | 11.58 | 11.44 | 9.52 |

Note: KyungNam and Gwangju merged with Woori BHC on March 2001, so we use the data on Woori BHC. SC First merged on April 2005, but the previous data on the First bank are available from its banking management announced data. Hana BHC is used after 2005 while the previous information comes from Hana bank's bank management announcement. For the Seoul Citi Bank, we use Hanmi data before 2002 and after 2002, we use the merged bank data, available from Seoul Citi Bank management announcement. For the Hanmi bank, the foreign ownership before 2002 come from the Korea Financial Yearbook, with the summed data from the foreign names (KAI 15.46%, CHADWICK 3.42% , FREEWAY 3.42%, SCARLET 3.18%, KAB INVEST 2.46%, EAGLE 2.35%, JPMCB-CAP RE EM GTHFD 1.89%, GABLE, MADDEN 1.11% , MSCO-BLUE RIDGE 1.09%, which total 36.13%).

From the early 1990s, the Korean financial authority significantly started to relax its control over the financial sector, launching five-year financial liberalization blue prints in 1993. In April 1994, regulators significantly lowered foreign entry barriers. Regulators also abolished the economic needs test previously mandated for foreign bank investment. In May 1995 regulators further eliminated the requirement to establish a representative office prior to opening other branches. These deregulatory measures ushered in a rapid increase in foreign entry through the opening of branches. Foreign direct investment (FDI) in financial sector through the opening of branches increased from \$27.1 million in 1994, to \$536.1 million in 1995, and to \$447.2 million in 1996. The foreign entry mode in banking sector, however, met the great converting point, because of 1997 Korean financial crisis.

The Foreign Investment Promotion Act of 1998 opened up the vast majority of corporations and financial institutions to foreign investors. By offering tax and other incentives, this Act created a more transparent and open business environment. As a result, a rapid increase of FDI in financial sector occurred in 1999. The FDI in financial sector increased from \$341 million in 1997, to \$2,580 million in 1999, and to \$1,925 million in 2000.

The turning point of foreign entry to the Korean banking sector occurred in 1999. Opening branches provided the most important organizational form of foreign entry before the Asian financial crisis. But, green field investment and M&As replaced branch openings since 1999. The Ministry of Commerce, Industry, and Energy's (MOCIE's) foreign investment data

for financial sector reports that around 75 percent of foreign investment in financial sector occur as green field investment and M&As, on average.⁴

The Korean government eased long standing legal restrictions on the foreign ownership of domestic banks, including 100 percent foreign ownership. Two reasons explain why the Korean government took this action. First, the Korean government wanted to attract foreign capital into the Korean financial sector to facilitate restructuring in the financial sector. Second, the government believed that the entry of foreign equity should strengthen the financial and domestic banking systems. Actually, foreign banks began to play a substantially greater role in the domestic banking sector by 1998 and 1999. In early 1999, a group led by Goldman Sachs invested \$500 million to acquire a 17 percent stake in Kookmin Bank, Korea's largest retail bank. Commerzbank invested \$167 million to acquire one-third ownership in the Korean Exchange Bank. Moreover, New Bridge Capital invested \$417 million in fall 1999 to acquire a major stake in the Korea First Bank. These transactions generated a widespread expectation during and just after the Asian financial crisis that foreign investors would acquire a large part of the Korean banking sector, as these nationalized banks were restructured and sold off. These expectations were not realized by 2001, however. The proposed purchase of Seoul Bank by Hong Kong and Shanghai Banking Corporation (HSBC) collapsed in the second half of 2000.⁵ Moreover, the government's announced plan to sell its majority stakes in Chohung Bank and Hanvit Bank and its minority stakes in Korea First Bank and Korea Exchange Bank was abandoned in December 2000 in favor of injecting additional public funds and moving several of the financial institutions into a financial holding company.

The role that foreign capital contributed to the recovery and restructuring of the Korean banking system fell well below its initial expectation and substantially below that in parts of Latin America. For example, foreign banks controlled 45% of all banking assets in Mexico by the end of 2000, just five years after the Mexican financial crisis. Foreign financial institutions played an important role in providing capital and, thereby, boosting the economy. But, similar to other Asian countries' experience with the financial crisis, the Korean economy first plummeted and then recovered quickly, tracing out a V-shaped pattern. Thus, foreign capital played a less

⁴ Due to the lack of disaggregated data on the mode of foreign entry to the banking sector, the MOCIE data provide foreign direct investment in the financial and insurance industries.

⁵ The Korean Financial Supervisory Commission hired Deutsche Bank to restructure the bank, and it is possible that Deutsche Bank may eventually acquire a significant stake in Seoul Bank.

important role in rehabilitating the Korean banking system and boosting the Korean economy. Furthermore, the government incurred massive increases in domestic debt, associated with protecting depositors from losing their saving. After injecting the second 40 trillion Korean won of public funds, restructuring of the banking sector drew to a close. The financial performance of domestic banks improved dramatically. A remarkable increase in foreign participation through green field investment and M&As established a better business environment.

This increase in foreign entry into the financial sector through green field investment and M&As after the Asian financial crisis created a high degree of foreign ownership and foreign management control of domestic banks. Of the seven major domestic banks -- Kookmin Bank, Woori Bank, Hana Bank, Shinhan Bank, Korean Exchange Bank, Korean Citi Bank, Standard Chartered First Bank, six are foreign owned, where the foreign holding share exceeds 50 percent in August 2007. This increase in foreign ownership of major domestic Korean banks compares to the pre-Asian crisis environment, where foreign owners held less than 10 percent of major domestic banks' shares.

Whether foreign participation takes the form of wholly owned branch banks or an ownership role in Korean domestic banks, foreign financial firms provide substantial competitive pressure.

Table 3: Financial Performance of Domestic Banks

| | 1995 | 1997 | 1999 | 2001 | 2003 | 2005 | 2006 |
|--|------|-------|-------|------|------|------|------|
| BIS Capital Ratio | 9.3 | 7.0 | 10.8 | 10.8 | 10.4 | 12.4 | 12.3 |
| Non-Performing Loans to Total Loans | 5.2 | 6.0 | 13.6 | 3.3 | 2.7 | 1.3 | 0.9 |
| ROA | 0.3 | -0.9 | -1.3 | 0.8 | 0.1 | 1.2 | 1.1 |
| ROE | 4.2 | -14.2 | -23.1 | 15.9 | 2.2 | 20.3 | 15.6 |

Source: Korean Financial Supervisory Commission (unit :%)

The improved business environment within Korean banking sector facilitated a remarkable increase in foreign participation through green field investment and M&As. Moreover, this process of foreign penetration led to a high degree of foreign ownership with an increasing stake in and foreign management of domestic banks. Of the seven major domestic

banks -- Kookmin Bank, Woori Bank, Hana Bank, Shinhan Bank, Korean Exchange Bank, Korean Citi Bank, Standard Chartered First Bank, six are foreign owned banks, where foreign ownership exceeds 50 percent of shares in August 2007. This increase in foreign ownership of major domestic Korean banks compares to the pre-Asian crisis environment, where foreign owners held less than 10 percent of major domestic banks' shares. The foreign participation in banks combines ownership and management participation. The foreign participation in other financial institutions such as life insurance, non-life insurance, and securities companies focuses more on management and business control, rather than a significant ownership stake.

Currently, most major banks have adopted the financial holding company system, except for the largest bank, Kookmin Bank. The Korean government introduced the financial holding company system when it passed the Financial Holding Company Law of 2000. The goal of the legislation was to expedite restructuring of the financial sector, to promote universal banking and large-sized banks, and to accommodate the globalization of international financial markets. The subsidiary company system ran parallel with the financial holding company system. Due to more inconvenient regulation on the subsidiary company system, the financial holding company system became the main focus in banking sector. The Korean government planned to further expand and open the Korean financial markets and Korean financial institutions to promote the Korean financial markets as a North-East-Asian financial hub. Recently, the Korean government executed several important deregulatory changes.⁶ Whether foreign participation takes the form of wholly owned branch banks or a direct ownership role in domestic banks, foreign financial firms provided substantial competitive pressure. This trend will continue.

III. Foreign Ownership and Bank Management

Thirteen Korean banks existed at the end of 2006, seven nationwide banks (i.e., Shinhan, Woori, SC First, Hana, Korean Exchange, Korea Citi, and Kookmin Banks), and six regional banks (Daegu, Pusan, Jeju, Jeongbuk, Kyungnam, and Gwangju). Also, five government-supported special banks also existed and were nationwide managed. The important M&As include the following: in 2001 Kookmin Bank merged housing and commercial bank and Hanvit Bank

⁶ These changes included the additional abolition of requiring permission in capital transactions (January 2006), zero-based financial deregulation (the first step in November 2005 and second step in February 2006), deregulation of the asset management businesses (June 2005), and the early execution of the plan for foreign exchange liberalization (moved up to 2009 from 2011).

merged Peace Bank. Hanvit bank changed its name to Woori Bank, Hana Bank merged Seoul bank in 2002, Citi Bank's Seoul Branch merged Hanmi Bank in 2004, SC Seoul branch merged SC First in 2005 and Shinhan Bank merged Choheung Bank in 2006. Although KyungNam and Gwangju Banks merged with Woori BHC on March 2001, their stock still trades independently. The Woori BHC started in April 2001; Shinhan BHC, in September 2001; and Hana BHC, in December 2005. Kookmin Bank was listed in the stock market on December 19, 2001 with an IPO of 42,000 won and became fully privatized on December 17, 2003. The corporate governance, expansion process, and business styles of each BHC are examined in Keonbeom Lee, Woojin Kim (2005), which provides a policy guideline on how to regulate BHC.

Table 4: Board of Directors in Each Bank (2006)

| Bank | Resident director | Outside director | Total number of directors | Korean directors | Foreigner directors | Proportion of Foreigner directors | Foreign-holding Share percentage |
|----------|-------------------|------------------|---------------------------|------------------|---------------------|-----------------------------------|----------------------------------|
| Kookmin | 4 | 9 | 13 | 12 | 1 | 7.69% | 82.70% |
| Woori | 3 | 8 | 11 | 11 | 0 | 0.00% | 9.52% |
| Hana | 3 | 8 | 11 | 10 | 1 | 9.09% | 80.21% |
| Shinhan | 2 | 6 | 8 | 8 | 0 | 0.00% | 58.90% |
| KEB | 3 | 6 | 9 | 4 | 5 | 55.56% | 77.06% |
| SC First | 2 | 8 | 10 | 5 | 5 | 50.00% | 100.00% |
| Citi | 5 | 8 | 13 | 7 | 6 | 46.15% | 100.00% |
| Daegu | 2 | 5 | 7 | 6 | 1 | 14.29% | 65.72% |
| Pusan | 2 | 5 | 7 | 7 | 0 | 0.00% | 56.10% |
| Jeonbuk | 2 | 5 | 7 | 7 | 0 | 0.00% | 28.11% |
| Jeju | 2 | 5 | 7 | 7 | 0 | 0.00% | Shinhan BHC |
| Gwangju | 2 | 4 | 6 | 6 | 0 | 0.00% | Woori BHC |
| Kyongnam | 2 | 4 | 6 | 6 | 0 | 0.00% | Woori BHC |

Although Korea experienced a huge entry of the foreign capital, its effects on the Korean banking system and on the Korean economy are not fully realized. Using bank data from Bank Management Statistics and Korean macroeconomic data enable us to examine the empirical effects. The related literature includes Taekyu Lee(2006), Kyungseo Park, Eunjeong Lee (2006), Jongkoo Kang, Hyuneui Kim (2006), Hyungchan Jeong, Myeongcheol Lee(2006). Foreign capital favors profitability over stability, thus aiming for more aggressive management. That is,

we propose and test the following three hypotheses about foreign ownership in the Korean banking industry using panel data analysis.

Hypothesis 1. The higher the foreign holding share is, the lower is the ratio of loans to medium and small enterprises to total loans. Also, loans to households increase more than loans to enterprises.

Hypothesis 2. A higher share of foreign capital enables Korean banks to achieve business efficiencies by reducing human resources and the number of branches. That is, banks hire fewer employees with efficient local branch management. But the number of top managers remains the same in order to keep overall management continuity.

Hypothesis 3. A higher share of foreign capital enables the introduction of advanced marketing strategies that generates a higher ratio of non-interest income to interest income. In addition, the returns from foreign exchange and financial derivatives increase in importance with a higher ratio to non-interest income.

We note that Bank Management Statistics classifies banks into nationwide and regional categories. Our focus differentiates banks into ownership classifications of foreign-, mixed-, and domestic-owned banks. As a consequence, we must confine the analysis to only nationwide banks, because of data availability.

We assign the foreign dummy variable to 1 for the Korean Exchange Bank since 2003, when the Loanstar, a private equity fund, injected new capital into KEB. We also assign the foreign dummy to 1 for Citibank since 2004, and 1 for SC First since 2005

Table 5a: Test Results for Hypotheses 1-2

| | Hypothesis 1 | | Hypothesis 2 | | |
|----------------|----------------------|-------------|---------------------|----------------------|--------------------|
| | small business loans | house loans | number of employees | number of executives | Number of Branches |
| to total loans | to total loans | | | | |
| Constant | 0.308 | 0.461 | 4560.470 | 0.175 | 210.425 |

| | | | | | |
|--------------|---------|---------|-----------|---------|---------|
| | [2.66] | [3.01] | [2.16] | [0.01] | [1.58] |
| Foreign | -0.033 | 0.144 | 644.568 | -1.842 | -20.252 |
| Ownership | [-0.73] | [2.51] | [0.84] | [-0.27] | [-0.44] |
| unemployment | 0.081 | 0.011 | 174.069 | 0.738 | 1.079 |
| | [3.66] | [0.38] | [0.42] | [0.19] | [0.04] |
| GDP | -0.062 | -0.130 | -2760.527 | 5.096 | -88.967 |
| per capita | [-1.33] | [-2.18] | [-3.43] | [0.72] | [-1.81] |
| Total Assets | -0.026 | 0.097 | 6190.100 | 18.200 | 492.900 |
| | [-0.95] | [2.95] | [14.4] | [5.03] | [19.93] |
| Foreign bank | -0.014 | 0.053 | -76.128 | 2.495 | -25.780 |
| Dummy | [-0.58] | [1.68] | [-0.18] | [0.64] | [-0.94] |

Note: We transform the original data by multiplying ownership by 100, income by 1000, and total assets by 1,000,000. While the main interest goes to the coefficients of foreign ownership variable on other policy-oriented dependent variables, the macroeconomic influence and bank size were controlled by including the unemployment rate, GDP per capita and total assets. Other variables were included as robust checks, but the coefficients of the foreign ownership are stable and thus other results are omitted (available upon request)

Table 5b: Test Results for Hypothesis 3

| | net noninterest revenues | Foreign currency | foreign currency | derivatives | risk averse-related |
|--------------|--------------------------|------------------------|------------------|-------------|---------------------|
| | To net interest revenues | And derivatives to NIR | to NIR | to NIR | net revenues to NIR |
| Constant | 0.440 | 1.202 | 2.627 | -1.091 | -0.283 |
| | [2.06] | [1.45] | [1.57] | [-0.94] | [-1.09] |
| Foreign | -0.004 | 0.828 | 1.212 | -0.532 | 0.084 |
| Ownership | [-0.05] | [3.79] | [3.59] | [-2.43] | [1.71] |
| Unemployment | 0.025 | -0.149 | -0.377 | 0.176 | 0.045 |
| | [0.59] | [-0.87] | [-1.07] | [0.72] | [0.84] |
| GDP | -0.268 | -0.385 | -0.797 | 0.333 | 0.078 |
| per capita | [-3.49] | [-1.38] | [-1.47] | [0.9] | [0.93] |
| Total Assets | 0.076 | -0.138 | -0.338 | 0.203 | -0.010 |
| | [2.12] | [-1.33] | [-2.22] | [2.07] | [-0.47] |
| Foreign bank | 0.024 | -0.127 | -0.480 | 0.414 | 0.010 |
| Dummy | [0.54] | [-0.79] | [-1.67] | [2.16] | [0.23] |

Note: NIR equals net non-interest revenues.

Table 5a suggests that the foreign ownership does not significantly affect loans to medium and small enterprises, but does significantly and positively affect household loans. Since the household loans are repaid to loan providers with a higher probability, they represent the secure loans. Thus, banks with a higher foreign holding share prefer a stable loan strategy rather than a more profitable, but higher risk, loans. Also, although foreign investment alters the ownership and management of Korean banks, this foreign investment does not significantly affect the bank infrastructures such as the number of employees, executives, and branches. Thus,

we conclude that foreign ownership of Korea banks does not affect management decision making, yet.

Table 5b indicates that the foreign holding share does not change the bank's management patterns, such as interest-related activities versus non-interest related one, although we anticipated that foreign investment would provide pressures to improve the business. We do find that the higher the foreign holding share is, the higher are the foreign-related activities, and the lower are the derivative-related activities. Thus, strong evidence exists that a higher foreign holding share produces more stable and safer bank management, rather than more aggressive management practices such as derivatives.

In summary, the domestic banks in Korea did not experience much pressure from foreign owners to aggressively pursue riskier sources of revenue, but did see safer management strategies and not the more aggressive strategies. This environment provides higher protection to the investors, but it may not improve the efficiency of banks and also welfare of the Korean economy.

IV. Foreign Ownership and Profitability of bank management and in stock market

This section examines the relationship between the shareholding by foreign investors and profitability. First, using banking industry using panel data analysis, we test the following hypothesis.

Hypothesis 4. The higher the foreign holding share is, the higher is bank profitability, using measures, such as ROA and ROE.

Table 6: Hypothesis Testing on bank's profitability

| | Hypothesis 4 | |
|--------------|-------------------|--------------------|
| | ROA | ROE |
| Constant | -1.274 [-0.95] | -50.984 [-1.64] |
| Foreign | -0.243 [-0.76] | -13.541 [-2.3] |
| Ownership | 0.054 [0.2] | 32.791 [5.02] |
| unemployment | | |

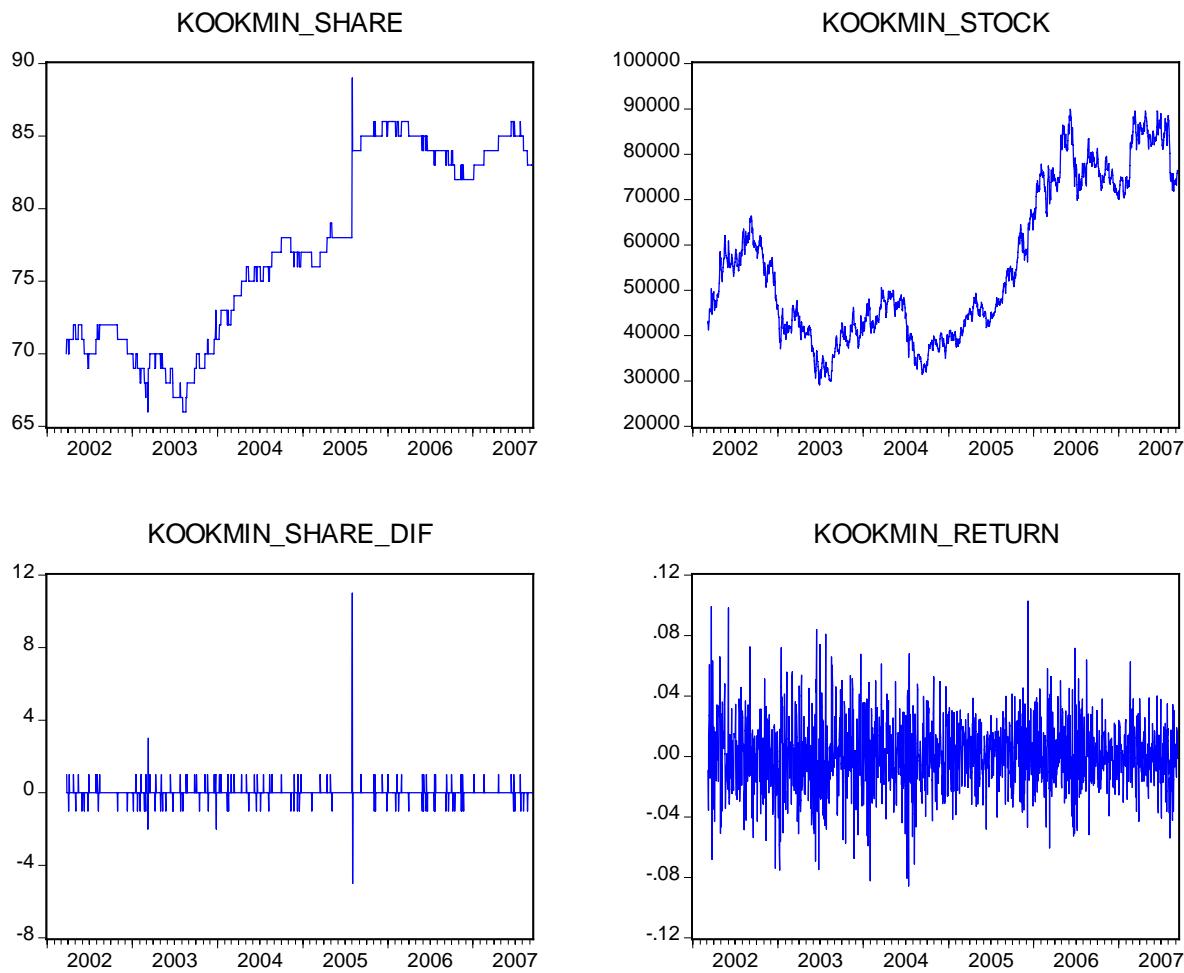
| | | |
|--------------|--------|---------|
| GDP | 1.208 | -23.762 |
| per capita | [2.73] | [-2.39] |
| Total Assets | 0.125 | 0.269 |
| | [0.84] | [0.1] |
| Foreign bank | 0.052 | 3.274 |
| Dummy | [0.21] | [0.64] |

Note: We transform the original data by multiplying ownership by 100, income by 1000, and total assets by 1,000,000.

The hypothesis test in Table 6 offer the following findings: the foreign holding share does not significantly affect ROA, but does significantly and negatively affects ROE. Since the equity more closely relates to the capital held by stock holders, the ROE more closely captures the stockholders' interest, than ROA. Therefore, the profitability of banks was worsened in a way that contrasts the interest of stockholders, including foreign investors.

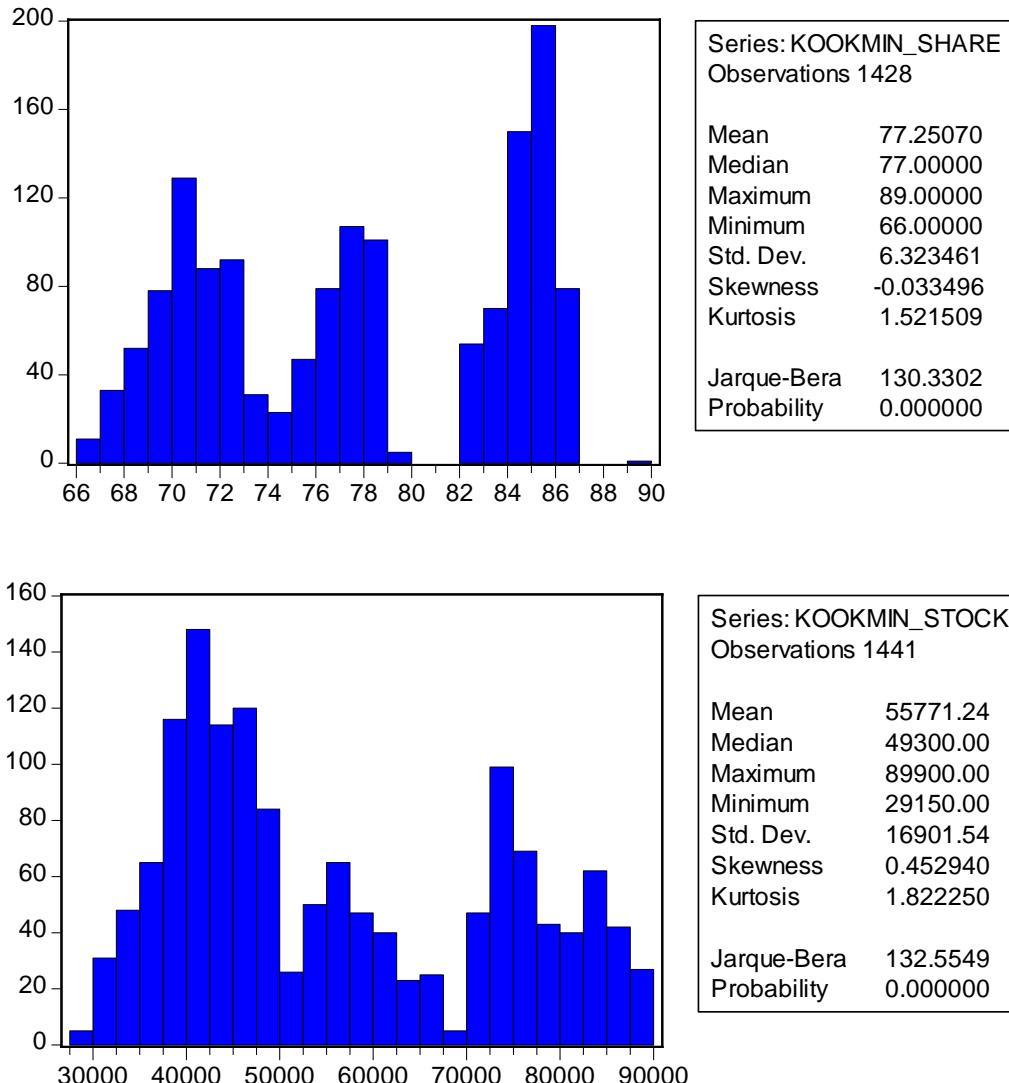
Second, we examine the effect of foreign ownership on the stock prices in each bank in Korea. We omit those banks that merged with other banks or that withdrew their listing on the stock market. Thus, we can fully check the bank performance through the stock market. Those banks announce their bank performance officially through publication and internet announcement. We examine the four major banks for the causality of foreign ownership and the stock return. Thus, rather than emphasizing the commonly used contemporaneous relationships, we employ the Granger non-causality concept with dynamic structure.

Figure 1. Foreign Ownership and Stock Price for Kookmin Bank



The Kookmin bank, the largest Korean bank by asset size, received much attention from foreign investors. Figure 1 indicates upward trends in both foreign ownership and the stock price. Foreign ownership ranges between 66 and 89 percent, staying between 80 and 85 percent since 2005. The stock price of Kookmin bank increased in 2005 from roughly 40,000 Korean Won per share at the beginning of 2005 to 80,000 Korean won at the end of 2005, as shown in Figure 1.

Figure 2: Summary Statistics for Foreign Ownership and Stock Price in Kookmin Bank



The levels for both the stock price and foreign stock share percentage exhibit trend, while the differenced series do not indicate upward trend. Thus, we incorporate these properties in the unit root tests. That is, the test of the level series includes the linear trend term, and the test of the differenced series includes a linear term. Both the augmented Dickey-Fuller test and the Phillips-Perron test indicate nonstationarity of the level series and stationarity of the differenced series.

Table 6: Unit-Root Tests for Kookmin Bank

Null Hypothesis: KOOKMIN_SHARE has a unit root
 Exogenous: Constant, Linear Trend

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -2.100769 | 0.5444 |
| Phillips-Perron test statistic | -2.077511 | 0.5574 |
| Test critical values: | | |
| 1% level | -3.964497 | |
| 5% level | -3.412967 | |
| 10% level | -3.128480 | |

Note: *MacKinnon (1996) one-sided p-values.

ADF Test Lag Length: 2 (Automatic based on SIC, MAXLAG=23)

Null Hypothesis: KOOKMIN_STOCK has a unit root

Exogenous: Constant, Linear Trend

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -1.982447 | 0.6099 |
| Phillips-Perron test statistic | -1.781253 | 0.7136 |
| Test critical values: | | |
| 1% level | -3.964439 | |
| 5% level | -3.412938 | |
| 10% level | -3.128463 | |

Note: *MacKinnon (1996) one-sided p-values.

ADF Test Lag Length: 2 (Automatic based on SIC, MAXLAG=23)

The Johansen cointegration test does not find any statistical evidence for a long-term relationship between Kookmin's stock price and its foreign holding share. Thus, we find no common factor between the two series. Thus, no long-term equilibrium exists.

Table 7: Cointegration Root Tests for Kookmin Bank

Included observations: 1425 after adjustments

Trend assumption: Linear deterministic trend

Series: KOOKMIN_STOCK KOOKMIN_SHARE

Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None | 0.004126 | 7.658090 | 15.49471 | 0.5027 |
| At most 1 | 0.001239 | 1.766559 | 3.841466 | 0.1838 |

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The short-run Granger-causality test indicates simultaneous feedback within one to two days between Kookmin Bank's stock price and the foreign holding share, but over three to five days, one-direction Granger causality emerges from the stock price to the foreign holding share. That is, when the stock price changes in the one to two day window, foreign investors respond to the stock price. Thus, the foreign investors follow the market operation as well as domestic investors in Kookmin Bank's stock. But, for a shorter period of one to two days, they actively interact with each other.

Table 8: Granger-Causality Tests for Kookmin Bank

| Null Hypothesis: | Obs | F-Statistic (p-value) | | | | |
|--|------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| | | with lag 1 | lag 2 | lag 3 | lag 4 | lag5 |
| KOOKMIN_SHARE_DIF does not Granger Cause KOOKMIN_RETURN | 1426 | 3.58618 0.05846 | 2.96495 0.05188 | 2.16757 0.09005 | 2.15442 0.07198 | 1.73215 0.12416 |
| KOOKMIN_RETURN does not Granger Cause KOOKMIN_SHARE_DIF | | 47.8874 6.8E-12 | 31.0520 6.3E-14 | 22.0310 6.0E-14 | 16.8776 1.6E-13 | 13.6752 4.6E-13 |

The Shinhan Bank, a major part of the Shinhan Bank Holding Company, exhibits different time-series trend from those of Kookmin Bank. As shown in Figure 3, the foreign holding share stabilized and fluctuated between 55 and 65 percent since 2004, but the stock price continued to increase. Thus, the formal unit-root tests incorporate different assumptions, only a constant term in foreign ownership share and a linear term in the stock price.

Figure 3. Foreign Ownership and Stock Price for Shinhan Bank

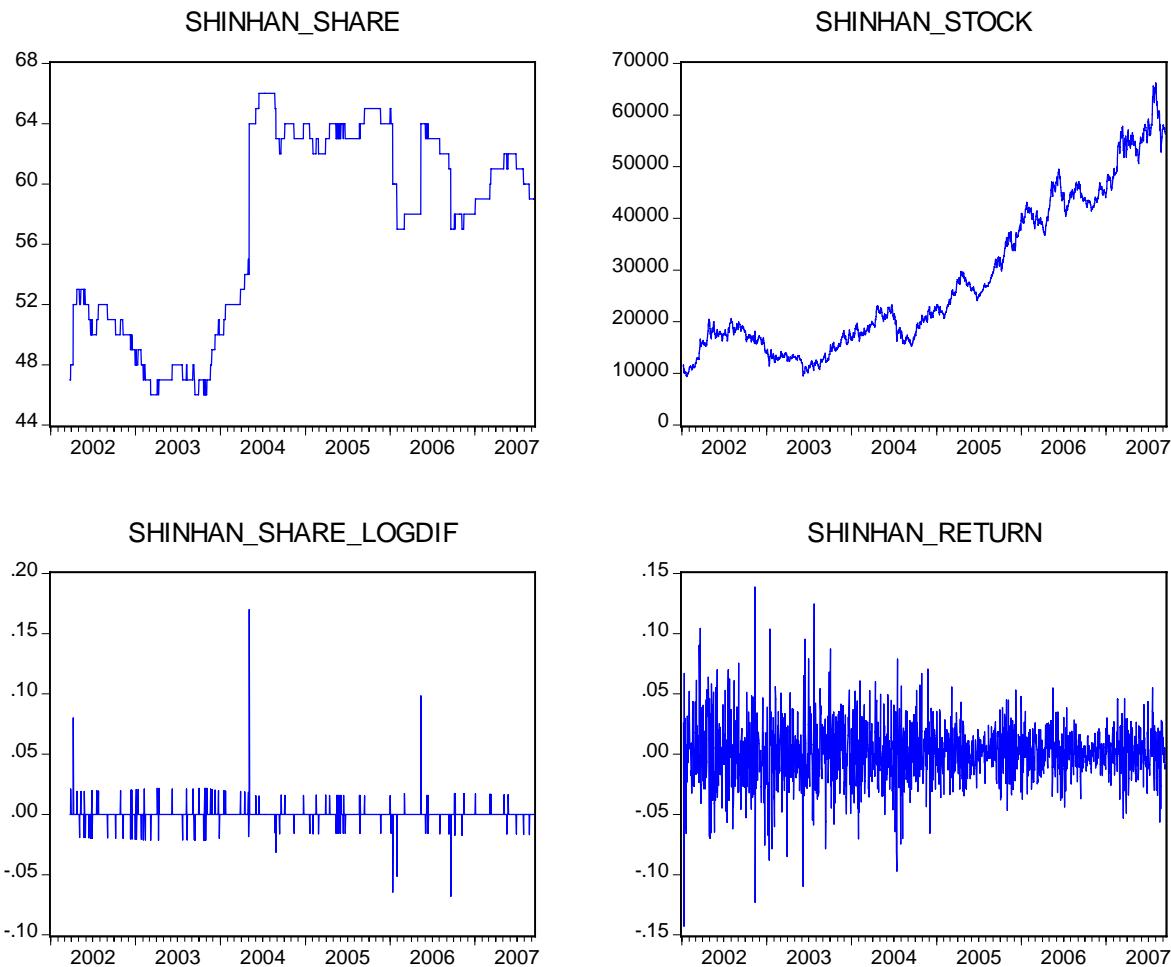


Table 9: Unit-Root Tests for Shinhan Bank

Null Hypothesis: SHINHAN_STOCK has a unit root
 Exogenous: Constant, Linear Trend

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -2.151110 | 0.5161 |
| Phillips-Perron test statistic | -1.996463 | 0.6023 |
| Test critical values: | | |
| 1% level | -3.964253 | |
| 5% level | -3.412847 | |
| 10% level | -3.128409 | |

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: SHINHAN_SHARE has a unit root

Exogenous: Constant

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -1.709785 | 0.4261 |
| Phillips-Perron test statistic | -1.714770 | 0.4236 |
| Test critical values: | | |
| 1% level | -3.434727 | |
| 5% level | -2.863360 | |
| 10% level | -2.567788 | |

No cointegration relationship exists between the foreign ownership share and the stock price, which seems natural since one series does not indicate any obvious trend while the other series includes an upward time trend. Thus, no long run relation exists between the two series for Shinhan Bank.

Table 10: Cointegration Tests for Shinhan Bank

Included observations: 1423

Series: SHINHAN_SHARE SHINHAN_STOCK

Lags interval: 1 to 4

Selected (0.05 level*) Number of Cointegrating Relations by Model

| Data Trend: | | None | None | Linear | Linear | Quadratic |
|-------------|---|--------------------------|-----------------------|-----------------------|--------------------|--------------------|
| Test Type | | No Intercept No Trend | Intercept No Trend | Intercept No Trend | Intercept Trend | Intercept Trend |
| Trace | 0 | 0 | 0 | 0 | 0 | 0 |
| Max-Eig | 0 | 0 | 0 | 0 | 0 | 0 |

*Critical values based on MacKinnon-Haug-Michelis (1999)

Also, no evidence exists of a short-run relationship between the share price and the foreign ownership share for Shinhan Bank, which is a part of the second largest BHC in Korea. This result may reflect the fact that the bank possesses diversified stockholders. The bank started as a subsidiary bank from the Japan based Korean businessman. Therefore, the shares do not exhibit any specific pattern of holding by ethnic groups.

Table 11: Granger-Causality Tests for Shinhan Bank

| Null Hypothesis: | Obs | F-Statistic (p-value) | | | | |
|---|------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| | | with lag 1 | lag 2 | lag 3 | lag 4 | lag5 |
| SHINHAN_RETURN does not Granger Cause SHINHAN_SHARE_DIF | 1426 | 1.58592 0.20812 | 1.41624 0.24297 | 0.89686 0.44210 | 0.70720 0.58701 | 0.60360 0.69722 |
| SHINHAN_SHARE_DIF does not Granger Cause SHINHAN_RETURN | | 1.88180 0.17035 | 1.06834 0.34385 | 0.80024 0.49372 | 1.08749 0.36116 | 0.86864 0.50142 |

Both the foreign ownership share and the stock price for the Woori Bank exhibit upward time trends, which we incorporate in the unit-root tests.

Figure 4. Foreign Ownership and Stock Price for Woori Bank

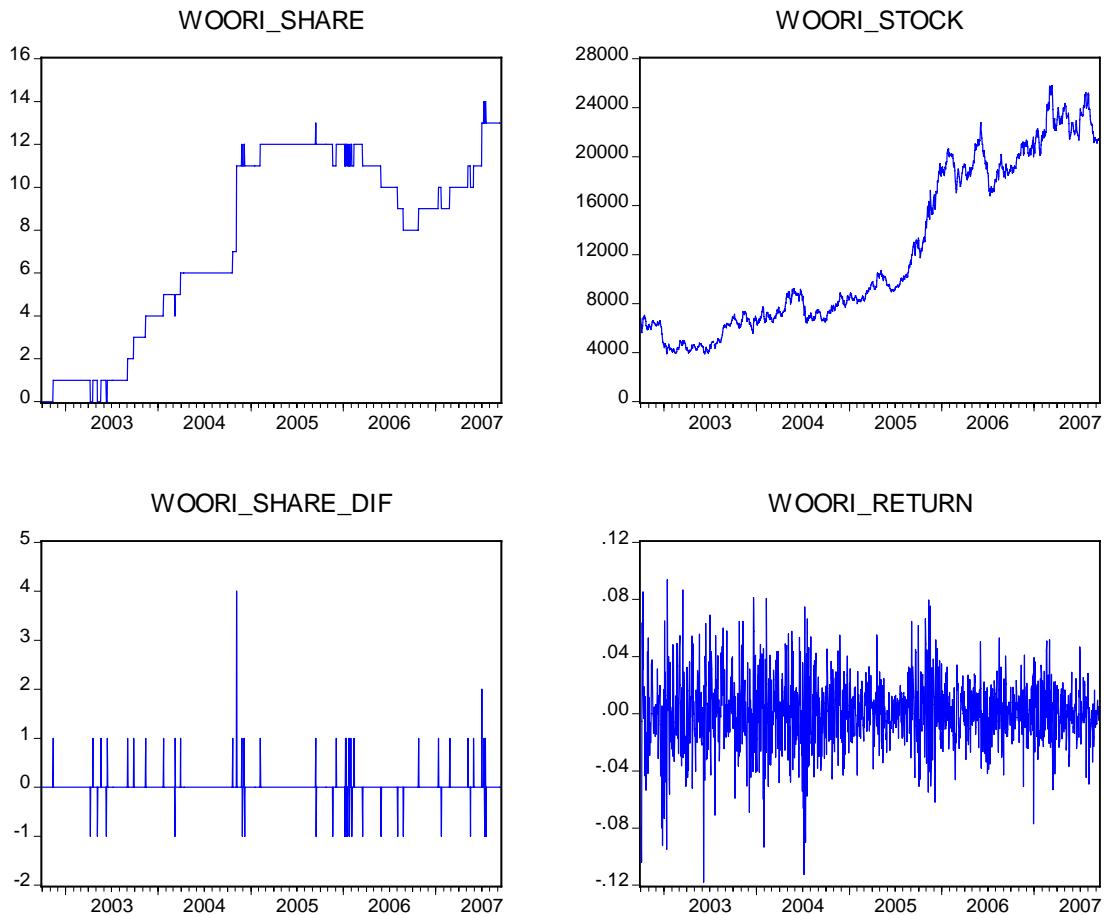


Table 12: Unit-Root Tests for Woori Bank

Table: Unit root tests for Woori bank

Null Hypothesis: WOORI_SHARE has a unit root

Exogenous: Constant, Linear Trend

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -1.643931 | 0.7751 |
| Phillips-Perron test statistic | -1.512897 | 0.8251 |
| Test critical values: | | |
| 1% level | -3.965175 | |
| 5% level | -3.413298 | |
| 10% level | -3.128676 | |

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: WOORI_STOCK has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=22)

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -2.858262 | 0.1767 |
| Phillips-Perron test statistic | -2.825960 | 0.1881 |
| Test critical values: | | |
| 1% level | -3.965186 | |
| 5% level | -3.413304 | |
| 10% level | -3.128679 | |

*MacKinnon (1996) one-sided p-values.

Once again, no long-term relationship exists between the two variables, since we do not find cointegration under any lag structures.

Table 13: Cointegration Tests for Woori Bank

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None | 0.002836 | 4.426980 | 15.49471 | 0.8662 |

| | | | | |
|-----------|----------|----------|----------|--------|
| At most 1 | 0.000603 | 0.775239 | 3.841466 | 0.3786 |
|-----------|----------|----------|----------|--------|

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None | 0.002488 | 4.070627 | 15.49471 | 0.8977 |
| At most 1 | 0.000679 | 0.871970 | 3.841466 | 0.3504 |

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None | 0.002449 | 4.023791 | 15.49471 | 0.9016 |
| At most 1 | 0.000687 | 0.880885 | 3.841466 | 0.3480 |

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Now, we consider the short-run causality. We reject the non-Granger causality only for one direction. Woori Bank's stock price leads the Woori Bank's foreign holding share, only in the short term (one to two days). The causality test proves statistically significant within models having one lag at the 5-percent level and with two lags at the 10-percent level.

Table 14: Granger-Causality Tests for Woori Bank

| Null Hypothesis: | Obs | F-Statistic (p-value) | | | | |
|---|------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| | | with lag 1 | lag 2 | lag 3 | lag 4 | lag5 |
| WOORI_RETURN does not Granger Cause WOORI_SHARE_DIF | 1286 | 4.61907 0.03180 | 2.40594 0.09059 | 1.72503 0.15999 | 1.90549 0.10716 | 1.53490 0.17597 |
| WOORI_SHARE_DIF does not Granger Cause WOORI_RETURN | | 0.03744 0.84660 | 0.08496 0.91856 | 0.07422 0.97384 | 0.28659 0.88679 | 0.24177 0.94394 |

The stock price for the Hana BHC does not show any trend, so we perform the unit-root test with a constant term. This observation differs from three previous banks' experiences. Interestingly, both the augmented Dickey-Fuller test, with the optimal lag selected by the Bayesian information criteria, and the Phillips-Perron test statistically rejects the null hypothesis of nonstationarity. But, we cannot reject the null hypothesis for the foreign ownership share in the Hana bank. That is, the long-term relation proves impossible in theory. Thus, we consider, instead, short term Granger noncausality. With any lag structures, we find no causality in each direction at the 5-percent significance level.

Figure 5. Foreign Ownership and Stock Price for Hana Bank

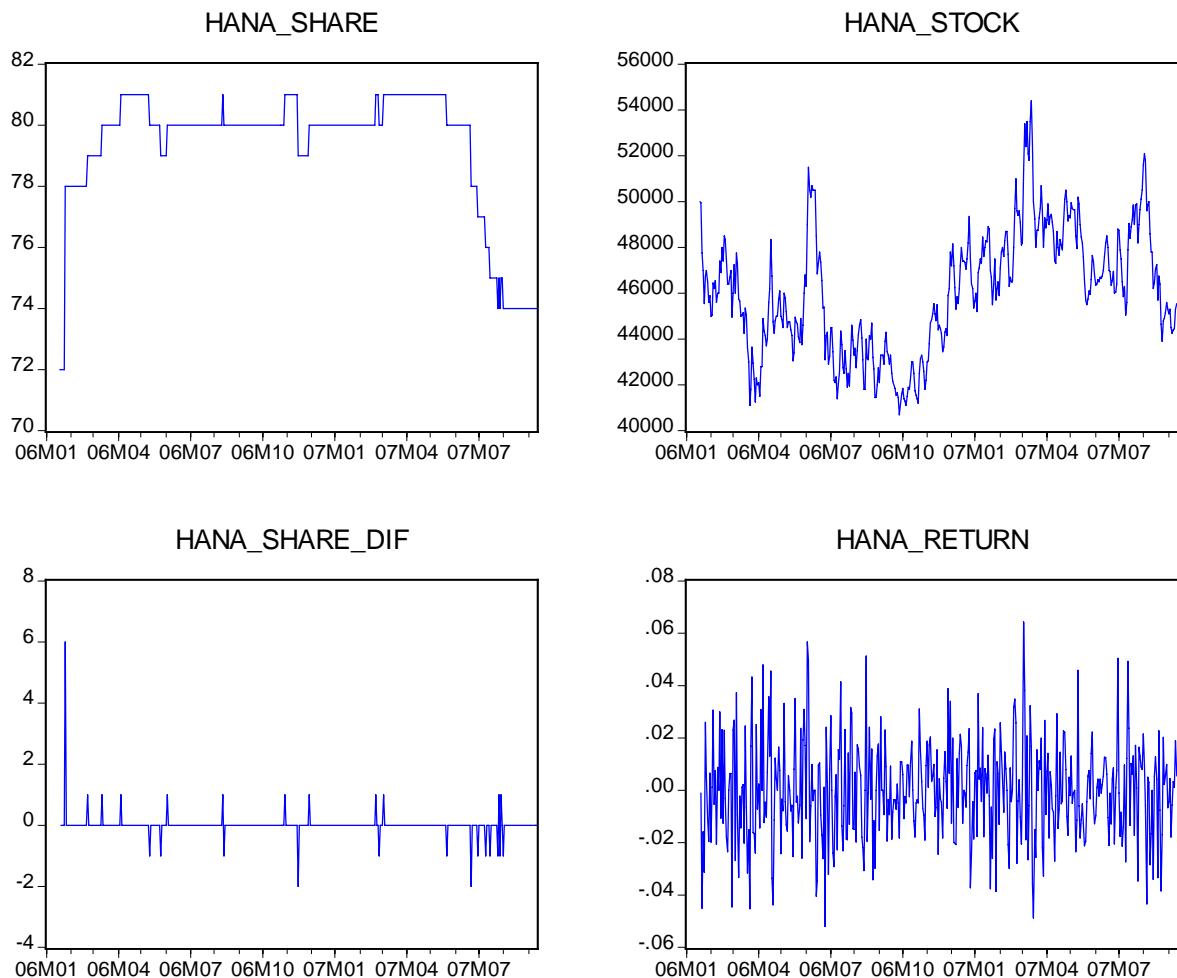


Table 15: Unit-Root Tests for Hana Bank

Null Hypothesis: HANA_STOCK has a unit root
Exogenous: Constant

| | Adj. t-Stat | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -3.615559 | 0.0058 |
| Phillips-Perron test statistic | -3.492156 | 0.0086 |
| Test critical values: | | |
| 1% level | -3.445338 | |
| 5% level | -2.868042 | |
| 10% level | -2.570298 | |

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: HANA_SHARE has a unit root
 Exogenous: Constant

| | t-Statistic | Prob.* |
|---|------------------|---------------|
| Augmented Dickey-Fuller test statistic | -2.678128 | 0.0787 |
| Phillips-Perron test statistic | -2.671755 | 0.0798 |
| Test critical values: | | |
| 1% level | -3.445373 | |
| 5% level | -2.868058 | |
| 10% level | -2.570306 | |

*MacKinnon (1996) one-sided p-values.

Table 16: Granger-Causality Tests for Hana Bank

| Null Hypothesis: | Obs | F-Statistic (p-value) | | | | |
|--|-----|-----------------------|--------------------|--------------------|--------------------|--------------------|
| | | with lag 1 | lag 2 | lag 3 | lag 4 | lag5 |
| HANA_STOCK does not Granger Cause HANA_SHARE_DIF | 429 | 0.33989 0.56020 | 1.31320 0.27005 | 0.95589 0.41350 | 1.26609 0.28262 | 0.70115 0.62284 |
| HANA_SHARE_DIF does not Granger Cause HANA_STOCK | | 0.47230 0.49230 | 0.57477 0.56327 | 0.27676 0.84217 | 0.32974 0.85797 | 1.37210 0.23368 |

In summary, no long-run trend relationship exists between the stock price and the foreign ownership share for the four banks considered in this section. That is, the stock markets for the shares of these four banks prove efficient with respect to the foreign holding share, implying that no one, foreigners or Koreans, possesses superior information about the market value of these banks. Further, limited evidence exists for two of the banks – Kookmin and Woori Banks – whereby stock price movements lead changes in the foreign ownership share. In other words, limited evidence exists that foreign investors respond to stock price movements, and not the reverse. The exception occurs for Kookmin bank at the short one-to-two-day window where two-way causality exists between the stock price and the foreign holding share.⁷

5. Conclusion and policy suggestions

⁷ The time series analysis using dynamic structure indicates some possible causalities between the foreign ownership and profitability under limited cases, while the panel data analysis focusing with contemporaneous relationship provides a negative relation between ownership and ROE. These are not necessary conflicted in the policy implications.

One of the most striking structural changes in Korean banking sector is a remarkable increase in foreign ownership after 1997 financial crisis. The mode of foreign participation changed from branch opening for its own country's corporate financing to Greenfield, M&A, and portfolio investment. As the Korean government eased the long standing legal restrictions on the foreign ownership of domestic banks, it served as a momentum to enlarge the foreign ownership. The Korean government wanted to attract foreign capital into the Korean financial sector to facilitate restructuring in the financial sector right after the financial crisis. The entry of foreign equity, however, has been expected to strengthen the financial and domestic banking systems, since then. As a result, the increase in foreign entry into the financial sector through green field investment and M&A after the Asian financial crisis created a high degree of foreign ownership and foreign management control of domestic banks. Six out of seven major domestic banks are foreign owned, where the foreigner share ratios are around 80 percent currently.

In this paper we analyze the economic effect of foreign ownership on Korean banking industry and stock exchange. The effects of foreign ownership on banking industry are resolved into four parts, such as loan market behavior, profitability, management efficiency, transmission of advanced financial techniques. We use annual banking panel data from 2001 to 2006 to analyze whether loans to corporate increase. Increases in foreign bank ownership are not directly related to increase in large sized firms. There is a positive empirical results that loan and reduction of small and medium sized firms' loans. Consumer loans increases as the level of foreign ownership increases.

It is not statistically significant that increase in foreign ownership affect the ROA positively. There is, however, statistically significant negative relation between increasing foreign ownership and ROE. The increase in foreign ownership does not show statistically significant cost saving results, like layoff and shutdown of branches. Non interest profits are expected to increase as the foreign ownership increase. We can not find any statistically significant relationship. We do find that the higher the foreign holding share is, the higher are the foreign-related activities, and the lower are the derivative-related activities. The foreign investors prefer a more stable and safer bank management particularly with foreign exchange control, rather than more aggressive management practices such as derivatives. Thus, our expectation on adopting the advanced banking activities has been fully achieved.

The four major Korean banks who are active in portfolio investment are considered to examine the entry effect of foreign capital, including Shinhan, Woori, Hana BHC and Kookmin bank. Their stock shares is efficient with respect to the foreign holding share, implying that no one, foreigners or Koreans, possesses superior information about the market value of these banks. It is true particularly for Shinhan and Hana BHC since there is no single dominant group holding their stocks. Further, limited evidence exists for Woori Bank where foreign investors respond to stock price movements, and not the reverse. The exception occurs for Kookmin bank at the short one-to-two-day window, indicating contemporaneous causalities between the stock return and the foreign holding share.

Higher foreign participation in the Korean banking sector induces some cost efficiency gains and service improvements for domestic banks, presumably by intensifying competitive pressures. This higher foreign participation, however, also evoked criticism about the public good characteristic of the banking industry and the extension of loans to the corporate sector, especially reductions in lending to medium and small businesses. Questions also emerge on whether foreign ownership of domestic banks may contribute to greater soundness of the Korean banking system. In general, the optimal level of foreign ownership of domestic banks depends on the profitability of the bank industry. Absent entry and exit barriers, then participation of foreign capital will continue to increase, as long as the Korean banking industry continues to exhibit sustainable growth.

References:

- 강종구, 김현의 (2006), “외국 금융기관의 진입이 국내 은행산업에 미친 영향” 한국은행 금융경제연구원 working paper.
- 김우진 (2005) : 외국자본 진출증가에 따른 이슈 및 과제, 한국금융연구원 주간 금융 브리프, Vol.14, No.35, pp.3~7
- 김우진, 이건범 (2002) : 금융지주회사의 설립과 운영, 한국금융연구원 금융조사보고서, Vol.2002, No.6, pp.1~105
- 김상환 (2001) : 은행위기 이론과 시사점, 한국금융연구원 KIF 은행경영 브리프:은행경영 일반, 기타보고서, Vol.2002, No.0, pp.3~7

- 김희경 (2006) : The Effect of Foreign Capital Entry on the Business Performance of Korean Banks, 국제통상학회 한국국제통상연구, Vol.11, No.2, pp.169~190
- 민상기, 강신애, 설원식 (2007) : Foreign Bank Entry and the Change of Performance after Asian Financial Crisis, 국제 지역학회 국제지역연구, Vol.11, No.1, pp.308~328
- 박경서, 이은정 (2006) : The Role of Foreign Investors on the Management and Corporate Governance of Korean Companies, 한국금융연구원 금융연구, Vol.20, No.2, pp.73~113, “외국인투자자가 한국기업의 경영 및 지배구조에 미치는 영향,” (in Korea)
- 손상호 (2005) : Characteristics of Financial Businesses and the Prospects for Universal Banking in Korea, 한국금융연구원 금융조사보고서 No.11, pp. 1~174
- 윤창현 (2005) : 외국자본 유입에 따른 문제점과 과제, 한국경제학회 한국경제학회소식, 81, 9~10.
- 이건범 (2005) : 금융지주회사제도 개선 방안, 한국금융연구원, 주간 금융 브리프, 14 (39), 3~9.
- 이건범, 김우진 (2005), “금융지주회사의 효율적 운용을 위한 제도개선 방안의 연구,” 한국금융연구원 정책보고서, “Issues on Financial Holding Company Regulation”.
- 이병윤 (2004) : 외국자본의 국내 은행산업 진출 현황 및 과제, 한국금융연구원 주간금융동향, Vol.13, No.2, pp.2~7
- 이병윤 (2005) : Effects of the Increased Presence of Foreign Capital in Korea, and Related Policies – Effects on the Dividends and Investments, and Hostile Takeover, 한국금융연구원 금융조사보고서, Vol.2005, No.14, pp.1~81
- 이태규(2006), “은행 민영화와 소유규제 개선,” 금융연구 20, 41-74. “Bank Privatization and Improving Bank Ownership Regulation”.
- 임성학 (2005) : Foreign Capital Entry in the Domestic Banking Market of Korea: Bitter Medicine or Poison, 한국정치학회 한국정치학회보, Vol.39, No.4, pp.189~ 210
- 정형찬, 이명철 (2006) : Foreign Acquisitions of Korean Commercial Banks and Restructuring of Korean Banking Industry: The Case of Korea First Bank, 한국금융학회, 금융학회지, Vol.11, No.1, pp.81~128 “외국자본의 국내은행 인수와 은행산업의 구조 변화: 뉴브리지캐피털의 제일은행 인수 사례,” (in Korea)
- 최재현, 김원경 (2002) : The Change of Financial Space According to the Investment of the Foreign Financial Capital in Korea, 한국도시지리학회지 제 5 권 1 호, pp.49~63
- 한상일 (2001) : 은행지주회사 설립의 경제적 유인에 대한 고찰, 한국금융연구원 주간금융동향, Vol.10, No.45, pp.2~5

- Amel, D. F., & Liang, J.N. (1997). Determinants of entry and profits in local banking markets. *Review of Industrial Organization* 12, 59-78.
- Bank of Korea. (1998). *Bank Restructuring in Korea*. Seoul: The Bank of Korea.
- Bank of Korea. (1994). *Financial Liberalization and Internationalization in Korea*. Seoul: The Bank of Korea.
- Barth, J. R., Caprio Jr., G., & Levine, R. (2002). Bank regulation and supervision: what works best. *National Bureau of Economic Research Working Paper*, No. 9323.
- Berger, A. N., DeYoung, R., Genay, H., & Udell, G. F. (2001). Globalization of financial institutions: evidence from cross-border banking performance. In R. E. Litan & A. Santomero (Eds.), *Brookings-Wharton Papers of Financial Services*, 3.
- Caliński, T., & Harabasz, J. (1974). A dendrite method for cluster analysis. *Communications in Statistics* 3, 1-27.
- Cho, D., & Hong, K. (2001). Currency crisis of Korea: internal weakness or external interdependence? In T. Ito & A. O. Krueger (Eds.) *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*, East Asia Seminar on Economics, Volume 10. Chicago: University of Chicago Press.
- Claessens, S., Demirguc-Kunt, A., & Huizinga, H. (2001). How does foreign entry affect the domestic banking market? *Journal of Banking and Finance* 25, 891-911.
- Crystal, Jennifer S., Dages, B. Gerard, & Goldberg, Linda S. (2002). Has foreign bank entry led to sounder banks in Latin America? *Current Issues in Economics and Finance*. 8(1) Federal Reserve Bank of New York, 1-6.
- Dages, Gerard, Goldberg, Linda, & Kinney, Daniel. (2000). Foreign and domestic bank participation in emerging markets: lessons from Mexico and Argentina. *Economic Policy Review*. Federal Reserve Bank of New York. 6 (September), 17-36.
- Demirguc-Kunt, Asli, Levine, Ross, & Min, Hong-Ghi. (1998). Opening to foreign banks: issues of stability, efficiency, and growth. In Seongtae Lee (Ed.), *The Implications of Globalization of World Financial Markets*. Seoul: Bank of Korea.
- DeYoung, R., & Nolle, D. E. (1996). Foreign-owned banks in the United States: earning market share or buying it. *Journal of Money, Credit and Banking*, 28, 622-636.
- Duda, R. O., & Hart, P. E. (1973). *Pattern Classification and Scene Analysis*. New York: John Wiley & Sons.
- Gilbert, R.A., & Wilson, P.W. (1998). Effects of deregulation on the productivity of Korean banks. *Journal of Economics and Business*. 50, 133-155.

- Goldberg, Linda S. (2001). When is U.S. bank lending to emerging markets volatile? Federal Reserve Bank of New York, Staff Report 119. (March).
- Hahm, J.H., & Mishkin, F.S. (2000). Causes of the Korean financial crisis: lessons for policy. National Bureau of Economic Research Working Paper #7483.
- Ito, T., & Krueger, A. O. (2001). *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*, East Asia Seminar on Economics, Volume 10.
- Kaminsky, G. L., & Reinhart, C. M. (2001). Bank lending and contagion: evidence from the Asian crisis. In T. Ito & A. O. Krueger (Eds.), *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*, East Asia Seminar on Economics, Volume 10. Chicago: University of Chicago Press.
- Koo, Jahyeong, & Kiser, Sherry (2001). Recovery from a financial crisis: The case of South Korea. *Economic and Financial Review*, Federal Reserve Bank of Dallas. Fourth quarter, 24-36.
- Levine, Ross. (1996). Foreign banks, financial development and economic growth. In Claude E Barfield, (Ed.), *International Financial Markets: Harmonization versus Competition*. Washington, D.C.: AEI Press.
- Noland, M. (2000). *Avoiding the Apocalypse: The Future of the Two Koreas*. Washington, D.C.: Institute for International Economics.
- Nolle, D. E., & Seth, R. (1996). Do banks follow their customers abroad? Research Paper #9620, Federal Reserve Bank of New York.
- Pesenti, Paolo, & Tille, Cedric. (2000). The economics of currency crises and contagion: an introduction. *Economic Policy Review*. Federal Reserve Bank of New York. 6 (September), 3 - 16.
- Radelet, S., & Sachs, J. (1998). The onset of the East Asian financial crisis. National Bureau of Economic Research, Working Paper #6680.
- Stiglitz, J. E. (2002). *Globalization and Its Discontents*. New York: Norton & Company.
- Terrell, H. S. (1986). The role of foreign banks in domestic banking markets. In H. Cheng (Ed.), *Financial Policy and Reform in Pacific-Rim Countries*. Lexington, MA.: Lexington Books.
- Tornell, A. (2001). Lending booms and currency crises: empirical link. In T. Ito and A. O Krueger (Eds.), *Regional and Global Capital Flows: Macroeconomic Causes and Consequences*. East Asia Seminar on Economics, Volume 10. Chicago: University of Chicago Press.

Ursacki, T., & Vertinsky, I. (1991). Market positioning and performance of foreign banks in Korea. *The International Journal of Bank Marketing*. 9, 14-22.