# Internationalization of Banking:
## With Special Reference to the Case of Korea*

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The paper provides a general conceptual framework for the explanation of the internationalization of banking, using a market matrix approach, followed by the analysis of underlying microeconomic conditions for the internationalization. Such conditions are characterized by the dynamic changes in comparative advantage stemming from three different sources. A proper policy strategy for the internationalization is then evaluated in reference to the life cycle of balance of payments of the economy. The final part of the paper assesses the impact of the internationalization by comparing changes in foreign and domestic bank operations in terms of convergence of banking activities and relative stability of balance sheet compositions. The banking industry in Korea is chosen as a reference of analysis.

## I. Introduction

The crux of international banking is the process of cross-border financial intermediation, transferring financial resources from countries where they are relatively less costly to countries where they are relatively dearer. As each economy in the world has become more interdependent, the allocation of financial resources has gained an added significance. The financial resource allocation may well determine which country will have an access to real goods and services produced by other countries; whose economy grow faster; who will gain employment and who will lose it; and which economy will have less pain in the economic adjustment to external shocks.

The process of internationalization of banking has been an on-going phenomenon for many decades, as well documented, for example, by A.S.J. Baster (1935), Siegfried Stern (1951), Charles P. Kindleberger (1974) and R.M. Pecchioli (1983). However, the pace of the process has intensified since around the mid-1960s, imparting substantial impact on the Korean banking industry in recent years. Concerned with issues arising from internationalization of banking, Joong-Eung Kim and Ho-Joo Shin (1984) in their Korea Development Institute monograph detailed the nature and current status of international banking in Korea and suggested some future policy directions. Joong-Eung Kim (1985) further analyzed the role of foreign banks in Korea. Their analyses are country-specific, focusing on the institutional details.

The purpose of this paper is to provide a general conceptual framework for the explanation of the internationalization of banking and the evolutionary process of such internationalization in reference to the life cycle of balance of payments, and then to suggest quantitative measures of impact of the internationalization. Although Korea is chosen as a reference country, general taxonomic approaches taken in this paper are quite general, thus easily applicable to analyses of any other countries.

## II. Conceptual Framework for Analysis of International Banking

In order to examine the process of internationalization of the Korean banking industry, we first examine the concept of banking which may be viewed to encompass four elements:

$$\{O_i, B_j, C_k, P_m\}$$

where $O_i$ denotes the parent organization chartered by country $i$; $B_j$ banking facilities located in country $j$; $C_k$ customers residing in country $k$; and $P_m$ banking products denominated in currency $m$. Thus, if all the subscripts are the same, it is domestic banking.[1] If at least one subscript is different from the rest, it is then international banking.[2] Therefore, domestic banking is a subset of international banking. Accordingly, in notational terms internationalization of banking is the process of converting the banking businesses having all the same subscripts into those

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[1] For regulatory definition of banking, see Di Clemente (1983, pp. 20-31). For theoretical definition, see Santomero (1984, pp. 576-602).

[2] For more detailed discussion, see Kim (1984, pp. 87-99).

having some different subscripts.

Subgroupings of the four elements $\{O_j, B_j, C_k, P_m\}$ yield a useful conceptional framework to differentiate types of internationalization of banking. First, a combination of $\{O_j, B_j\}$ produces a bank location matrix; a combination of $\{B_j, C_k\}$ provides a banking market matrix; and a combination of $\{C_k, P_m\}$ yields a matrix representing segmented banking markets. We shall examine each subgrouping in reference to the Korean banking industry. For convenience, we shall assign Korea with subscript 1, the U.S. with 2, Japan with 3 and other countries with 4.

| Location of Facilities $(B_j)$ | Country of Origin $(O_j)$ | | | |
|---|---|---|---|---|
| | Country 1 | Country 2 | Country 3 | Others 4 |
| Country 1 | $L_{11}$ | $L_{12}$ | $L_{13}$ | $L_{14}$ |
| Country 2 | $L_{21}$ | $L_{22}$ | | |
| Country 3 | $L_{31}$ | | | |
| Others 4 | $L_{41}$ | | | $L_{44}$ |

Priot to 1967 the Korean banking industry was characterized by that of a closed economy with presence of domestic banks $L_{11}$ only. Its first-step in internationalization was to permit the establishment of branches of foreign banks, represented by $L_{12}$ and $L_{13}$,[3] followed by expansions of domestic banks abroad $L_{21}$, $L_{31}$ in the same year.[4] Furthermore, Korean banks became multinational beginning in 1974 when they began establishing subsidiaries in different countries $L_{22}$ and $L_{44}$.[5] Adding any element to $L_{11}$ in the above matrix is the process of internationalization in a spatial sense. As shown in Table 1, as of May 1988, there were 55 branches of 47 foreign banks in Korea from 12 countries, whereas Korean banks had 49 branches in 11 countries and 17 subsidiaries in seven countries.

On the other hand, a combination of $\{B_j, C_k\}$ yields the banking market matrix as follows:

[3] Three banks from the United States (Chase Manhattan Bank, Citibank, Bank of America) and two banks from Japan (Bank of Tokyo and Mitsubishi Bank) each established their branch in Seoul in 1967.

[4] In 1967, Korea Foreign Exchange Bank established its first branches in five foreign cities, Los Angeles, New York, Tokyo, Osaka and Hong Kong.

[5] In 1974, Korea Foreign Exchange Bank led the establishment of its first foreign subsidiary bank, California Korea Bank.

## Table 1

FOREIGN BANK IN KOREA AND KOREAN BANKS ABROAD
(May 1988)

| | Foreign Banks in Korea | | Korean Banks Abroad | | |
|---|---|---|---|---|---|
| | Branch | Rep Office | Branch | Rep Office | Subsidiary |
| Asia | | | | | |
| Japan | 10 (2) | 11 | 12 | 7 | — |
| Hong Kong | 2 (1) | — | 3 | 6 | 6 |
| Singspore | 3 | — | 2 | 4 | 1 |
| India | 1 | — | — | — | — |
| Malaysia | — | — | — | 1 | — |
| Pakistan | 1 | — | — | — | — |
| Philippines | — | — | 1 | — | — |
| Thailand | — | — | — | 1 | — |
| Indonesia | — | — | — | 2 | — |
| Australia | 2 | 1 | — | 2 | 1 |
| North America | | | | | |
| United States | 18 (4) | 4 | 19 | 9 | 5 |
| Canada | 3 | 1 | — | — | 2 |
| South America | | | | | |
| Panama | — | — | 1 | — | — |
| Mexico | — | — | — | 1 | — |
| Brazil | — | — | — | 1 | — |
| Chile | — | — | — | 1 | — |
| Venezuela | — | — | — | 1 | — |
| Western Europe | | | | | |
| United Kingdom | 6 (1) | 1 | 6 | 3 | — |
| France | 6 | 1 | 1 | 1 | — |
| West Germany | 2 (1) | — | 2 | 3 | — |
| Netherlands | 1 | — | 1 | — | — |
| Austria | — | — | — | 1 | — |
| Sweden | — | — | — | 1 | — |
| Switzerland | — | — | — | 2 | — |
| Belgium | — | — | — | 1 | — |
| Spain | — | — | — | 1 | — |

| Middle East | | | | | |
|---|---|---|---|---|---|
| Saudi Arabia | — | — | — | 1 | — |
| Bharain | — | — | 2 | 1 | — |
| Iran | — | — | — | 1 | — |
| Egypt | — | — | — | — | 1 |
| Yordan | — | 1 | — | — | — |
| Africa | | | | | |
| Kenya | — | — | — | 1 | — |
| Ivory Coast | — | — | — | 1 | — |
| Nigeria | — | — | — | — | 1 |
| TOTAL | 55 (8) | 22 | 49 | 53 | 17 |

Note: Figures in the parentheses are the number of branches in Pusan.
Source: The Ministry of Finance.

| Location of Facilities ($B_j$) | Country of Residence of Customers ($C_k$) | | | |
|---|---|---|---|---|
| | Country 1 | Country 2 | Country 3 | Others 4 |
| Country 1 | $M_{11}$ | $M_{12}$ | $M_{13}$ | $M_{14}$ |
| Country 2 | $M_{21}$ | $M_{22}$ | | |
| Country 3 | $M_{31}$ | | $M_{33}$ | |
| Others 4 | $M_{41}$ | | | $M_{44}$ |

The element $M_{11}$ in the first row represents the Korean domestic banking market in terms of residence of customers, whereas the remaining elements $M_{1k}$ represent foreign customers. The markets, $M_{11}$, $M_{12}$, $M_{13}$ and $M_{14}$ are the traditional international banking market served by the international department of a bank at home (Dufey and Giddy, 1978, p. 11). As was the case for Western countries' banks in their home countries (Pecchioli, 1983, p. 24), in Korea $M_{11}$ then consisted of Korean exporters and importers, Korea-based multinational corporations, and individuals (particularly recipients of remittance from abroad), whereas $M_{12}$, $M_{13}$ and $M_{14}$ represented mainly foreign correspondent banks. $M_{21}$ and $M_{31}$ were banking facilities outside the home country, serving customers at home including parent banks, Korea-based multinational companies, and temporary workers abroad. However, Korean overseas branches are mostly concentrated in capital exporting countries such as the United States (19 branches), Japan (12) and the United Kingdom (6).[6]

[6] For more specific activities of foreign branches of Korean banks, see Kim and Shin (1984, pp. 76-84).

For a more microscopic view, a combination of $\{C_k, P_m\}$, given $k$ and $m$, identifies the following subsets of banking markets. Suppose a market is given such as $M_{22}$. Then, by decomposing this market further on the bases of type of products and by type of customers, we may identify specific banking activities. The customers are usually classified according to the types of products they demand most likely. The banking products may be broadly classified into three categories: (1) liability-based products, (2) asset-based products, and (3) fee-based products.

| Type of Activities $(P_m)$ | Type of Customers $(C_k)$ | | | |
|---|---|---|---|---|
| | Governments (1) | Financial Institutions (2) | Corporations (3) | Individuals (4) |
| Liability-based(1) | $S_{11}$ | $S_{12}$ | $S_{13}$ | $S_{14}$ |
| Asset-based     (2) | $S_{21}$ | $S_{22}$ | $S_{23}$ | $S_{24}$ |
| Fee-based       (3) | $S_{31}$ | $S_{32}$ | $S_{33}$ | $S_{34}$ |

The liability-based products represent means to obtain funds. Bank take deposits in a variety of forms from a variety of sources $S_{1k}$ such as deposits of official exchange reserves from foreign governments $S_{11}$; corespondent banking balances from foreign banks $S_{12}$; transaction balances, time deposits, and repurchase agreements from corporations $S_{13}$; and transaction balances, time deposits, and savings deposits from household units $S_{14}$. However, for international banking, banks have heavily relied on interbank time deposits and floating rate notes issuance for their major sources of fundings. These are all interest-bearing liabilities, sensitive to interest rate fluctuations.

On the other hand, the asset-based items represent uses of funds. Here again, banks allocate their financial resources in a variety of forms to a variety of customers $S_{2k}$. For international banking, banks have particularly been active in syndicated loans to foreign governments $S_{21}$; interbank deposit placing, overdraft facilities for foreign correspondent banks $S_{22}$; short-term working capital loans, trade finance, and project-related loans to corporations $S_{23}$; and consumer loans $S_{24}$. Beasue of floating rate funding, banks tend to set their international loan rate on the basis of the cost of funds plus spread (a certain add-on percentage).

In recent years, banks increasingly become interested in fee-based international banking services, partly because of third country debt crisis and partly their need to improve their capital position (measured by the

ratio of bank capital to bank assets). In this area, banks are active in pro-
viding trust services (payment agent) and debt-equity swap arrangement
services to foreign governments $S_{31}$; international collection and funds
transfer for foreign banks $S_{32}$; standby letters of credit, cash management,
foreign exchange exposure management, portfolio management, and in-
terest rate swaps for corporations $S_{33}$; and international investment
management for individual investors $S_{34}$.

Indeed, one of the major policy objectives of internationalization in
Korea, consistent to the technologically mature stage, is the creation of a
competitive banking environment to facilitate product innovations, which
would in turn promote domestic saving.

## III. Balance of Payment Cycle and Timing of Internationalization of Banking

Internationalization of banking is not a new phenomenon. According
to Baster (1935), it began immediately following the Napoleonic War in
the early 19th century.[7] However, the recent internationalization of bank-
ing began at a singificant pace in the 1960s. There appears to have been
three waves of internationalization on a global basis. At first, relatively
large-sized U.S. banks began rapid expansion of their overseas operations
around the early 1960s as a natural course of extension of their domestic
banking in response to the rising demand for international financial in-
termediation. Then, a similar pattern of expansion was followed a few
years later by banks of other industrial countries, notably Canada, Japan,
and Germany.[8] Although banks from the United Kingdom and France
experienced a substantial reduction in overseas presence in their former
colonies in the 1950s and 1960s, they began expanding their presence in
other industrial countries, notably in the United States, in the 1970s
(Pecchioli, 1983, pp. 16-50). The third wave of internationalization came
from banks of developing countries in the late 1970s.

It is at this stage that Korea began internationalization of its banking,
whose pace has accelerated in the 1980s. Then, where was the Korean
economy in terms of the balance of payments cycle which prompted the

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[7] A specific incidence of international banking, according to Kindleberger (1974, p. 58),
took place way back in 1571 when usury laws were imposed in England limiting the interest
charged on domestic loans to a stipulated rate, thereby diverting financial resources from
domestic lending to foreign lending.

[8] For recent trends in international banking for U.S. banks and activities of foreign banks
in the United States, see Houpt (1988).

internationalization of banking? Since introduction of the national economic development plan in 1962, the Korean economy has realized a rapid expansion in the real sector. By and large, by the end of the First Five-Year Economic Development Plan (1962-66) Korea was regarded as entering the "take-off" stage and by 1980 the "technologically mature" stage,[9] as shown in Figure 1. It is at this latter stage that internationalization of banking becomes increasingly important, as part of liberalization of the financial sector.[10] However, the need for internationalization at this stage is somewhat different from the previous take-off stage.

During the former stage, importation of foreign capital is of major important, whereas at the latter stage widening and deepening of financial services compatible to the technologically mature real sector become essential.[11] Thus, the policy focus should be on the internationalization of domestic banking markets rather than on the expansion of domestic banks abroad. It is particularly so, as the financial sector has not achieved the same level of maturity as the real sector has done. The major commercial banks, which were largely owned or controlled by the government, had been slow in meeting the needs of financial services demanded at the real sector development stage. Thus, it was timely for the government to set its new policy measures; the internationalization of banking, privatization of bank ownership, and expansion of bank size as its major objectives for the banking industry in the 1980s.

## IV. Entry of Foreign Banks in Korean Banking Market

In light of the current stage of economic growth of Korea, we shall focus our analysis on the internationalization of the domestic banking market through the entry of foreign banks in that market. As shown in Figure 2, there have been essentially three waves of foreign banks' entry into the Korean market during the past two decades. Each wave appears to have had a different type of comparative advantage for particular foreign banks. In general, to produce particular banking services at a par-

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9 The determination of the exact benchmark years may be arguable. On the fuzziness in delimiting the take-off and other stages, see Rostow (1960) for general discussion and Kuznets (1963) for specific discussion.

10 The importance of liberalization of the financial sector to mobilize and allocate savings to displace the fiscal process, inflation and foreign capital has been well articulated in Shaw (1973, pp. 9-12); its welfare implications by Kahkonen (1987, pp. 531-547).

11 For discussion of difficulties for the real sector growth without accompanying growth in the financial sector, see a seminal work by McKinnon (1973, pp. 42-54).
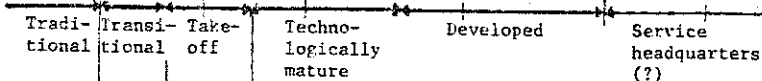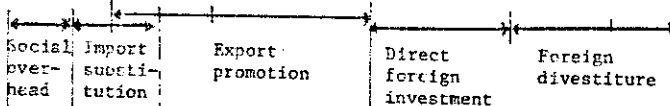
## Figure 1

## Balance of Payments Cycle of a Country
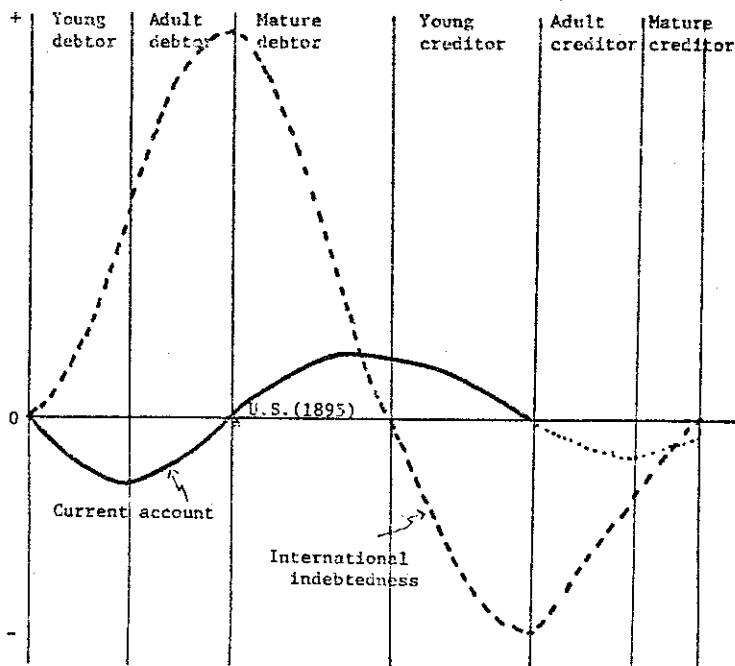


STAGES OF ECONOMIC DEVELOPMENT

|          |      |      |      |      |
|----------|------|------|------|------|
| (U.K.)1785 | 1800 | | 1850 | 1885 |
| (U.S.)1845 | 1860 | | 1910 | 1920 |
| (Korea)1965 | 1980 | | ? | ? |

Tradi-tional | Transi-tional | Take-off | Techno-logically mature | Developed | Service headquarters (?)

POLICY FOCUS

Social over-head | Import substi-tution | Export promotion | Direct foreign investment | Foreign divestiture

TYPE OF FOREIGN CAPITAL

Foreign government grants

Soft loans (AID, IDA, etc.)

Hard loans (IBRD, IMF, Eximbank, etc.)

Private capital

Internationaliza-tion of domestic banking market | Expansion of domestic banking abroad
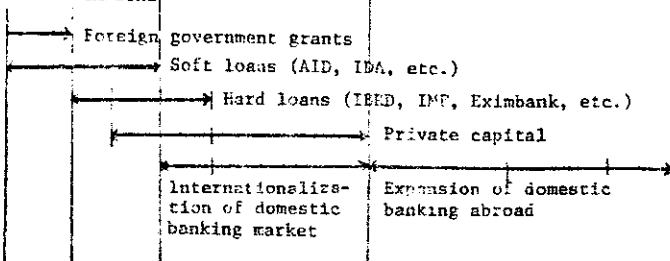
**Figure 2**

Entry of Foreign Banks in the Banking Market in Korea
(Establishment of Branches)

No. of Branches



[▨] U.S.        [▨] Japanese        [▨] Others
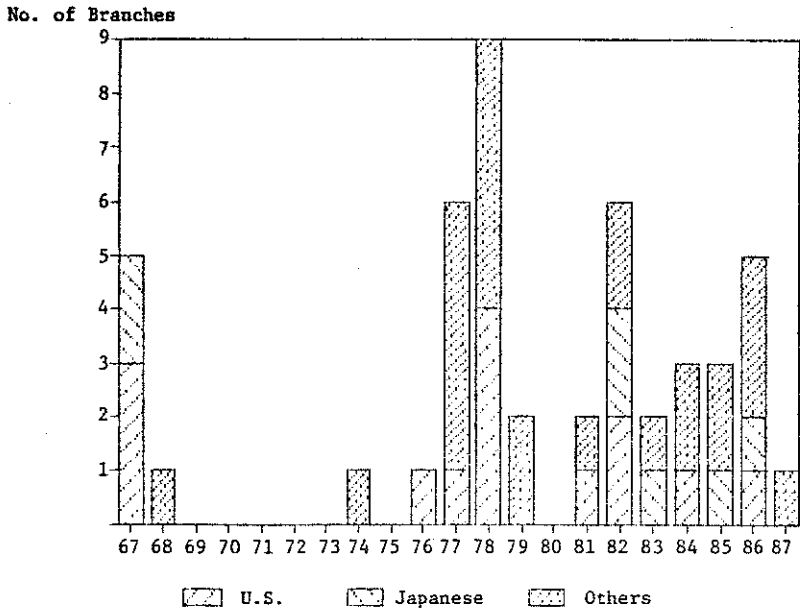
ticular location has to do with the particular competitive advantage associated with a particular location. However, a closer look immeidately reveals that the competitive advantage associated with a particular location is a combination of the advantages originating from three sources: individual-bank specific, country-of-origin specific, and country-of-destination specific.

The country-of-origin specific advantage stems from the fact that banks of a particular country has distinctive advantage associated with that country. The currency-dominance theory of Heller (1981) is the case in point. He points out that the amount of use of a particular country's currency is in principle proportional to its economy's size, although some deviation may result from variations in income velocity of the currency or variations in foreign demand for the currency. For over two decades afer WW II, the use of the U.S. currency was high. The large size of the U.S. economy, the stable value of the dollar linked to the fixed exchange rate system, and practices of invoicing a large proportion of world exports in the dollar all contributed to greater use of the dollar which in turn gave an intrinsic value advantage (Grubel, 1977, p. 355) to U.S. banks until

the early 1970s. Also a country where the banking industry is highly developed has a pool of skilled labor ready to be placed abroad. These amount to relative advantage in the factor endowment for the country of origin. A closer tie maintained by the Korean economy with the U.S. and Japanese economies gives U.S. and Japanese banks the country of origin advantage.

The country-of-destination or location specific advantage originates from a variety of advantageous banking environments. The basic assumption here is that the international banking market is segmented by national boundaries. Typically, there is an absence of bank regulations which usually means less cost for bank operations, or there exists a cluster of the banking community which reduces communications time and cost (Kindleberger, 1974, p. 10). Or, the banking system of the country is either underdeveloped or highly concentrated in the hand of a very few banks. In either case, this means some room for monopolistic profit.[12] Robert Aliber (1976, 1984) points out that such a situation is manifested by a wide interest rate spread (differential between the borrowing rate and the lending rate). Therefore, he argues that a bank of another country which can manage a narrower spread may just go into such a country and compete against local banks effectively.

In the case of Korea, the country-of-destination advantage has been partially created by regulatory subsidies. When the policy objective was to encourage importation of foreign capital, subsides included the swap arrangement with the Bank of Korean with a guaranteed profit margin, and tax exemption on interest income from foreign currency lending. However, domestic banking business was discouraged due to retrictions on branch expansion, denial of access to the discount window of the Bank of Korea, and the per-borrower lending limit based on the branch capitalization rather than the globally consolidated capital account of the parent bank.

The individual-bank specific advantage stems, for example, from the special bank-customer relationship, or specialization in a particular business. The existence of such advantage is again a sign of market im-

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[12] A study (1985, p. 62) by the Federation of Korean Banks cites four major sources of higher profitablity for foreign banks in Korea, namely (a) guaranteed 1 percent profit margin for currency swap arrangements with the Bank of Korea in which foreign banks swap their foreign currency for the local currency, (b) better loan application screening procedures, (c) imposition of compensating balances and other tied-in requirements, and (d) no policy mandated lending. However, note that only items (a) and (d) are regulatory subsidies.

perfection. The follow-the-customer hypothesis (Grubel, 1977) and the gravitational pull hypothesis (Metais, 1979) assert that a bank would follow its major customers going international. Then, such a bank has several advantages. First, since it knows whom it is going to serve, the marketing cost would be lower and the marketing uncertainty could be minimized. Besides, it already has credit information on the parent firm whose subsidiary the bank is going to serve.

The significance of individual-bank specific advantage depends on the market structure. Through the diffusion of banking technology and market information, the monopoly would be reduced to the oligopoly level of competition and to monopolistic competition. Then, the individual-bank specific advantage disappears, converging into either the country-of-destination specific advantage or the country-of-origin specific advantage, as dominant advantage. If banks of many different countries tend to concentrate in that market, we may infer it is due to the country-of-destination specific advantage. On the other hand, if banks of a particular country concentrate in that market, it may be due to the country-of-origin specific advantage.

Figure 3 shows the dynamic comparative advantage for home country banks. The curve aa' represents the average cost of home-based production for the representative bank of the home country, determined by the country-of-origin specific advantage. The ee' represents the average cost of foreign-based production for the same bank, reflecting the country-of-destination advantage. It is assumed that over the years the average cost is expected to decrease or stabilize at a certain level and that the time horizon is sufficiently long so that the investment decisions are made on the basis of average cost and average revenue. The curve hh' shows the average revenue in the foreign market, which is assumed to become more competitive over years, thereby showing a downward slope. If there is a downward deviation from the curve aa' or ee', it represents the individual-bank specific advantage. On the basis of relationship among three variables, namely average cost in country 1 (home) $AC_1$, avarage cost in country 2 (host) $AC_2$, and average revenue in country 2 $AR_2$, we can classify six distinctive periods from the point of view of a bank in the home country.

Also, we note that in reference to the banking market matrix its elements correspond to certain periods of market development such as $M_{11}$ to Period 1; $M_{12}$, $M_{13}$, and $M_{14}$ to Period 2 and 3; $M_{22}$, $M_{33}$, and $M_{44}$ to Period 4 and 5.

As pointed out earlier, there have been essentially three waves of foreign banks entering the Korean banking market. In 1967, for the first

## Figure 3

## Changes in Comparative Advantage

Average Cost,
Average Revenue
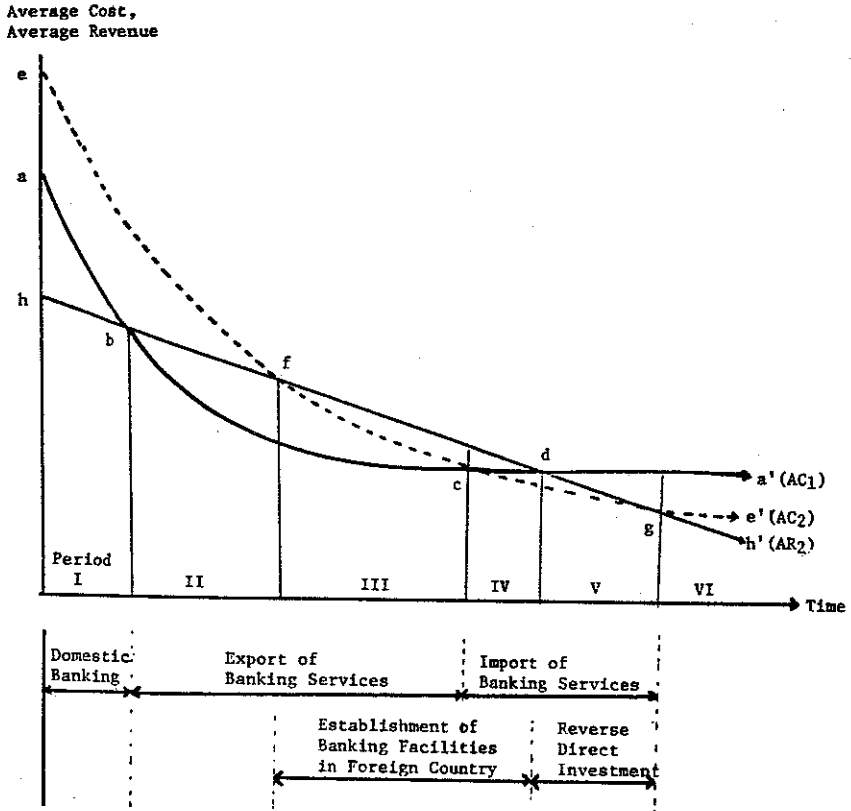


| Period 1 | $AR_2 < AC_1 < AC_2$ | • Domestic banking era |
| Period 2 | $AC_1 < AR_2 < AC_2$ | • Export of banking services |
| Period 3 | $AC_1 < AC_2 < AR_2$ | • Export of banking services<br>• Establishment of banking facilities in foreign country (country 2) |
| Period 4 | $AC_2 < AC_1 < AR_2$ | • Import of banking services<br>• Further establishment of banking facilities in foreign country |
| Period 5 | $AC_2 < AR_2 < AC_1$ | • Import of banking services<br>• Reverse direct investment |
| Period 6 | $AR_2 < AC_2 < AC_1$ | • Time for new innovation |

time, Korea opened its door to foreign banks. At that time, five major banks (three from the United States and two from Japan) were permitted to establish their branches — Chase Manhattan, Citibank, Bank of America, Bank of Tokyo and Mitsubishi. These banks had both "country-of-origin advantage" and "individual-bank specific advantage," the latter of which was manifested by their sheer size.

The second wave came in the post oil-crisis period (1977-79). The banks which established branches were mainly from the United Kingdom, Canada, and France. They were thought to provide new sources of funds to meet the balance of payments deficit, implying that they had the country-of-origin specific advantage.

The third wave started in 1981 with a number of new branches (about three a year) from more diversified countries, implying that the major source of advantage being the country of destination.

## V. Impact of Internationalization of Banking

As indicated earlier, the proclaimed objectives of internationalization of banking in the 1980s are somewhat different from those of the earlier period during which importation of foreign capital was the major objective. The new objectives are to modernize the banking sector by introducing competitive elements and establishing a closer linkage with the global financial markets (Kim and Shin, 1984, p. 103).[13] The impact of internationalization may be measured accordingly.

### A. Convergence of Banking Activities between Foreign Banks and Domestic Banks

Table 2 presents the ratios of values of asset and liability items held by foreign banks to those held by Korean domestic banks, which are in turn graphically shown in Figure 4. Among the ratios, two items stand out. First, foreign banks' acceptances and guarantees business has been increasing rapidly. Second, the foreign currency liabilities are also high for foreign banks. The latter distinction is by policy design to encourage foreign banks to play an active role in importing foreign capital into the country. Other categories remain relatively stable with a narrow band of

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[13] The Foreign Bankers Group in Korea in its study (1986, pp. 2-9) points out that in addition to intermediation of foreign credit inflows, foreign banks also serve as conduits for direct foreign investment, stabilizers of exchange rates, and agents of technology transfer among others.

## Table 2

### RATIOS OF BALANCE SHEET ITEMS
(Foreign to Korean Banks)

| | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | Avg |
|---|---|---|---|---|---|---|---|---|---|---|
| Domestic Assets | 0.14 | 0.22 | 0.20 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 | 0.18 | 0.20 |
| Foreign Assets | 0.03 | 0.05 | 0.05 | 0.12 | 0.11 | 0.10 | 0.13 | 0.18 | 0.17 | 0.10 |
| Acceptance & Guarantees | 0.07 | 0.09 | 0.11 | 0.12 | 0.20 | 0.26 | 0.32 | 0.36 | 0.47 | 0.22 |
| Total Assets | 0.10 | 0.16 | 0.15 | 0.16 | 0.19 | 0.21 | 0.23 | 0.25 | 0.24 | 0.19 |
| | | | | | | | | | | |
| Domestic Liabilities | 0.03 | 0.04 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 |
| Foreign Liabilities | 1.18 | 1.85 | 1.39 | 0.86 | 1.02 | 1.15 | 1.17 | 2.06 | 3.14 | 1.53 |
| Acceptance & Guarantees | 0.07 | 0.09 | 0.11 | 0.12 | 0.20 | 0.26 | 0.32 | 0.36 | 0.47 | 0.22 |
| Capital Account (NW) | 0.10 | 0.14 | 0.16 | 0.20 | 0.19 | 0.25 | 0.31 | 0.28 | 0.29 | 0.22 |
| Total Liabilities & NW | 0.10 | 0.16 | 0.15 | 0.16 | 0.19 | 0.21 | 0.23 | 0.25 | 0.24 | 0.19 |

*Source:* Various issues of The Bank of Korea *Monthly Statistical Bulletin.*

10 to 20 percent. Should all the ratios converge at a certain percentage level, foreign banks' activities may then be inferred as converging toward to Korean banks, or vice versa. If the principle of national treatment has fully been applied to foreign banks and foreign banking technology has completely been transferred, all the ratios are expected to converge at a certain level, the level being determined by the relative market share. Then, there may be no rationale for foreign banks to operate in that market.

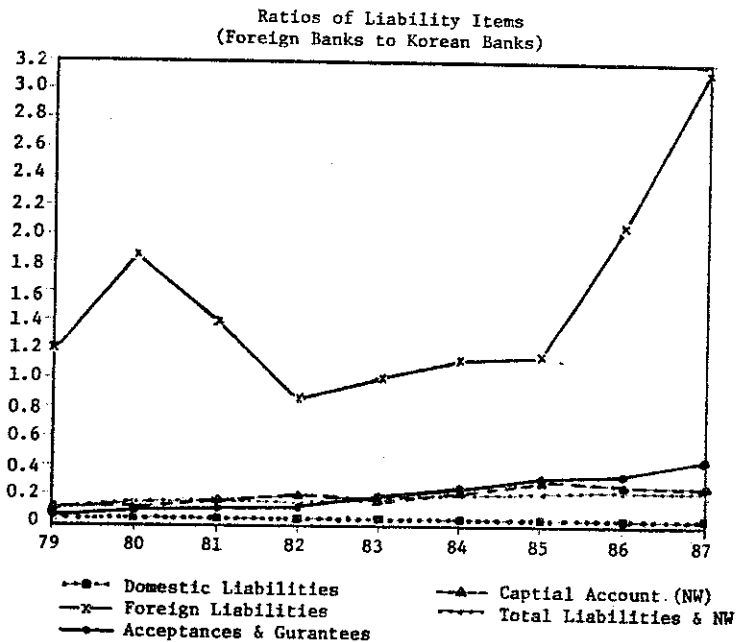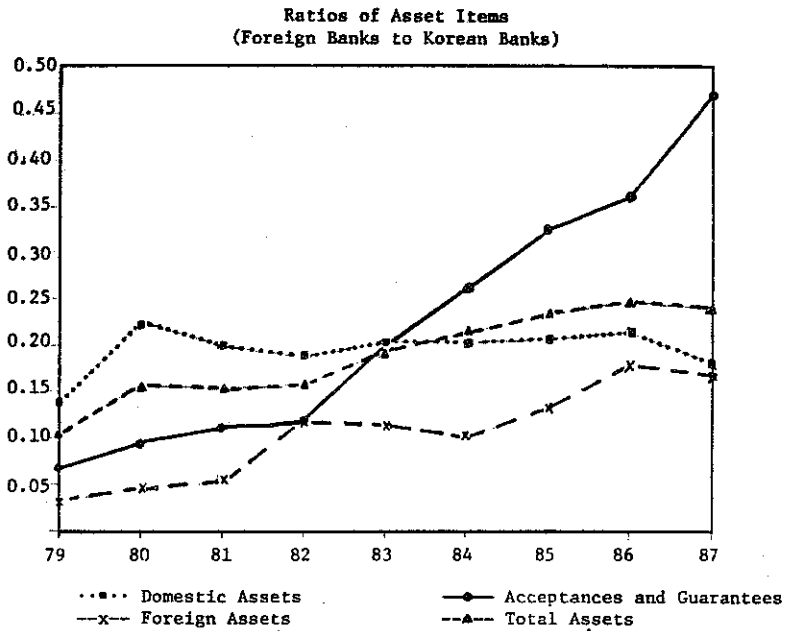## B. Stability Measure of Balance Sheet Structure

Table 3 shows the decomposition measures of the balance sheets of foreign bank branches and Korean domestic banks based on the same data-base used in (a) above.[14] The average decoposition measure covering

[14] Computation is based on the following:

$$nit = \Sigma \, Y_t \ln (Y_t/Y_{t-1})$$

where $Y_t$ is the proportion of a balance sheet component in year $t$ relative to twice the size of total assets (i.e., total assets + total liabilities + net worth). For other applications, see, for example, Lev (1974, pp. 47-60).

## Figure 4

### Trend in Ratios of Balance Sheet Compositions

**Ratios of Asset Items**
**(Foreign Banks to Korean Banks)**



- ··■·· Domestic Assets
- —x— Foreign Assets
- ——●—— Acceptances and Guarantees
- —▲— Total Assets

**Ratios of Liability Items**
**(Foreign Banks to Korean Banks)**



- ·—■·· Domestic Liabilities
- —x— Foreign Liabilities
- ——●—— Acceptances & Gurantees
- —▲— Captial Account.(NW)
- —▼— Total Liabilities & NW

eight periods is 0.004 nit in case of foreign banks, slightly lower than the domestic bank average due to two periods exhibiting value of 0s. However, period-to-period fluctuations are slightly higher, as indicated by the standard deviation ($\sigma$). Nonetheless, there appears to be no discernible instability in the operations of branches of foreign banks.

## Table 3

### COMPARISON OF DECOMPOSITION MEASURES

| Year-to-Year | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 | 84/85 | 85/86 | 86/87 | $\overline{X}$ | $\sigma$ |
|---|---|---|---|---|---|---|---|---|---|---|
| Foreign banks | 0.001 | 0.004 | 0.007 | 0.013 | 0.000 | 0.002 | 0.000 | 0.005 | 0.004 | 0.004 |
| Korean banks | 0.007 | 0.001 | 0.006 | 0.002 | 0.010 | 0.000 | 0.007 | 0.010 | 0.005 | 0.003 |

## C. Profitability Measure

The gap in profitability between foreign banks and Korean banks would be another indicator of the extent to which the banking market is becoming efficient. Regulatory differentials however have created two segmented markets, making a comparison difficult particularly with the lingering effects of the past "policy loan" quota imposed on Korean banks. The following table shows the rate of return on total assets of banks. As evidently shown, when the emphasis was placed on internatinalization of banking industry, the relative rate of return on foreign banks tended to be higher, reflecting some favorable treatment given to foreign banks at such periods.

## Table 4

### RATE OF RETURN ON TOTAL ASSETS

| | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Foreign banks (A) City | 0.84 | 1.66 | 0.73 | 0.71 | 0.55 | 0.88 | 1.38 | 1.49 | 1.18 | 0.96 | 0.83 |
| banks (B) | 0.43 | 0.95 | 0.85 | 0.84 | 1.20 | 0.87 | 0.78 | 0.75 | 0.64 | 0.25 | 0.13 |
| (A) ÷ (B) | 1.95 | 1.75 | 0.86 | 0.85 | 0.46 | 1.01 | 1.77 | 1.99 | 1.84 | 3.84 | 6.38 |

Source: Federation of Korean Banks, *Efficiency of Banking Industry: Analysis and Recommendations*, 1985, p. 62.

## D. *Efficiency Measure*

A test of the interest parity theory would give a measure of a degree of integration of the Korean banking market with the global financial market. However, again different regulatory environments such as differences in reserve requirements, interest payment on reserves, interest rate ceilings, and tax treatment among others tend to prevent the markets from reaching the interest parity line. The lack of a foreign exchange forward market precludes the test at this time.

## VI. Concluding Remarks

The paper has introduced a general conceptual framework for the explanation of internationalization of banking with special reference to the case of Korea. The framework is general enough to be applied easily to the analysis of cases of other countries.

As Korea enters the "technologically mature" stage in the real sector, the maturity of the banking sector corresponding to the real sector stage is essential. For this purpose, Korea should accelerate internatinalization of banking by permitting foreign banks to establish their subsidiary banks, in orderly fashion, instead of branches. Subsidiary banks chartered locally under the principle of national treatment would provide equity in competitive powers and serve as an active banking technology transfer agent. This is precisely the approach taken by the individual states within the United States for interstate banking. Also, in light of the current balance of payments cycle stage of Korea, its major polcy focus at this time should be on the internationalization of the domestic banking market rather than on the expansion of Korean banking facilities abroad.

## References

Aliber, R.Z., "Toward a Theory of International Banking," *Economic Review,* Federal Reserve Bank of San Francisco, Spring 1976, 5-8.

_____ , "International Banking: Survey," *Journal of Money, Credit and Banking,* 16, 4, Part 2, November 1984, 661-678.

Baster, A.S.J., *The International Banks,* P.S. King & Son, Ltd., London, 1935.

Di Clemente, J.J., "What is a Bank," *Economic Perspectives,* Fed. Res.

Bank of Chicago, January/February, 1983, 20-31.

Gunter D. and I.H. Giddy, *The International Money Market,* Englewood Cliffs, N.J., Prentice-Hall, 1978.

Federation of Korean Banks, *Efficiency of Korean Banking Industry: Analysis and Recommendations,* 1985 (in Korean).

Foreign Bankers Group in Korea, *Foreign Bank Contributions to the Korean Economy,* March 1986, Mimeographed.

Grubel, H.G., "A Theory of Multinational Banking," *Banca Naz. Lavoro Quarterly Review,* 123, December 1977, 340-363.

Heller, H.R., "International Banking in Multicurrency World," in Gary Clyde Hufbauer, ed., *The International Framework for Money and Banking in 1980s.* Washington, D.C.: Georgetown University, 1981, 483-509.

Houpt, J.V., *International Trends for U.S. Banks and Banking Markets,* Federal Reserve Board of Governors Staff Study, 156, 1988.

Kähkönen, J., "Liberalization Policies and Welfare in a Financial Repressed Economy," *IMF Staff Papers,* 34, 3, September 1987, 531-547.

Kim, J.E. and H.J. Shin, *Internationalization of Banking: Its Issues and Policy Direction,* Korea Development Institute, Seoul, 1984 (in Korean).

Kim, J.E. and S.W. Nam, *Banking Policy for the Korean Economy in Transition,* Korea Development Institute, Seoul, 1985 (in Korean).

Kim T., "A Taxonomy of International Banking," in *The Proceedings of the 1984 International Banking Conference,* Kim, T., ed., Glendale, AZ: American Graduate School of International Management, 1984, 87-99.

———, "Balance of Payments Cycle and Internationalization of Banking," a paper presented at the Academy of International Business annual meeting, Singapore, November 1989.

Kindleberger, C.P., *The Formulation of Financial Centers: A Study in Comparative Economic History,* Princeton Studies in International Finance, 36, Princeton University Press, 1974.

Kuznets, S., "Notes on the Take-Off," in *The Economics of Take-Off into Sustained Growth,* Rostow, W.W., ed., Macmillan Press, London, 1963, 22-43.

Lev, B., *Financial Statement Analysis: A New Approach,* Englewood Cliffs, N.J.: Prentice-Hall, 1974.

Metais, J., "Multinationalization of the Large Commercial Banks: an Industrial Economics Approach," *Revue Economique,* May 1979.

McKinnon, R.I., *Money and Capital in Economic Development,* The Brookings Institution, Washington, D.C., 1973.

Pecchioli, R.M., *The Internationali-zation of Banking: The Policy Issues,* OECD, Paris, 1983.

Rostow, W.W., *Stages of Economic Growth,* Cambridge University Press, Cambridge, 1960.

Santomero, A.M., "Modeling the Banking Firm," *Journal of Money,*

*Credit and Banking,* 16, 4, Part 2, November 1984, 576-602.

Shaw, E., *Financial Deepening in Economic Development,* Oxford University Press, New York, 1973.

Stern, S., *The United States in Inter-national Banking,* Columbia University Press, New York, 1951.