

Foreign Banks in Japan

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I examine the role of foreign banks in Japan to begin to address the issue of whether the Japanese authorities are pursuing mercantilist policies in trade in financial services. The paper begins with an historical overview of foreign bank entry since the opening of Japan in 1859. Next, I examine which banks are in Japan, evidence on economies of scale, and the foreign banks' balance sheets. Then I discuss the nature of foreign direct investment (FDI) in banking and the issue of the degree of foreign bank penetration.

I. Introduction

Is Deshima an appropriate metaphor for the role of foreign banks in Japan today? When Tokugawa Iemitsu closed Japan off from the rest of the world in 1641, he left open a very small window in the form of a foreign settlement on Deshima Island in Nagasaki harbour. Tokugawa Iemitsu banished the foreign (Dutch) merchants from the rest of Japan, restricting them to the island. Although he permitted some Chinese merchants to continue to roam the country, Tokugawa Iemitsu forbade the Dutch merchants to enter any further into Japan ever again, except on the quadrennial and closely chaperoned journey of homage to Edo.

Today, many observers, including some of the foreign bankers themselves, see the restrictions, regulations and difficulties which the foreign banks face in Japan and wonder if the banks too have been relegated to Deshima. By all published figures the foreign banks have a very small market share in Japan and are apparently not very profitable. Does the government tolerate a small presence for the benefits the foreign banks may

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bring Japan such as reciprocal access for Japanese banks to the foreign banks' home markets, but keep the foreigners to the minimum necessary penetration of the local market? Is Japan Inc. conspiring once again to pursue mercantilist policies, this time in trade in financial services?

These are difficult questions to answer, and this paper makes only a small beginning. The paper cannot answer the question to everyone's satisfaction for several reasons. First, the amount of evidence which I adduce is limited. Second, the intangible and impressionistic concerns of many foreign observers do not lend themselves readily to quantification and testing. Third, the issue is a highly political one. Nevertheless, it is important to make a beginning.

Section II below provides an historical overview of foreign bank entry since the opening of Japan in 1859. Section III examines econometrically which banks are in Japan, the nature of competition in a financial center, and evidence on economies of scale. Section IV is an econometric investigation of the foreign banks' balance sheets for the light that these shed on some of the issues involved. Section V discusses the nature of foreign direct investment (FDI) in banking, especially in a financial center and addresses directly the issue of the degree of foreign bank penetration. Section VI is a summary and conclusion.

II. Historical Development

1. 1863 to 1945¹

In March 1863, the Central Bank of Western India established a branch in Yokohama. The Central Bank of Western India thus became the first foreign bank to open in Japan, at least as far as one can identify today. Earlier (1859), the *Nederlandsche Handelmaatschappij* had opened an office in Nagasaki. Then the firm was a trading company and only later became a banking concern and ancestor to the present day *Algemene Nederland Bank*. The Central Bank of Western India closed its office in 1866. The foreign bank with the longest history in Japan, broken only by World War II, is the *Hongkong and Shanghai Banking Corporation*. Founded by Hongkong merchants in 1865, the *Hongkong Bank* established a branch in Yokohama in 1866. In addition to its Yokohama branch, the *Hongkong Bank* proceeded at various times to have branches in Kobe (1870–1941), Osaka (1872–73), and Nagasaki (1892–1931). Through its acquisition of the *Mercantile Bank*, the *Hongkong Bank* can, in fact, trace its history in Japan to April of 1863 when the *Chartered Mercantile Bank of India, London and China* too established a branch in Yokohama.

1. I would like to thank Professor Tatewaki Kazuo for the helpful discussion on which I have based much of this section on the pre-World War II period. I would also like to thank him for making available to me some of his meticulously researched articles on this period.

Other banks came and went. By the end of the unequal treaties period (1899), four foreign banks were established in Japan. The four foreign banks were the Hongkong and Shanghai Bank, the Chartered Bank of India, Australia, and China (now Standard Chartered Bank), the National Bank of China Limited, and the Banque Russo-Chinoise.

In 1902, the International Banking Corporation, an ancestor of Citibank, opened offices in Kobe and Yokohama. A number of other banks also entered in subsequent years, with the Banque de l'Indochine (1941) being the last entrant before Japan's entry into World War II.

After the attack on Pearl Harbour and Hongkong and Singapore, the Japanese authorities closed down the offices of the British, Dutch, and U.S. banks. Apparently the offices of banks belonging to Axis powers (including Vichy France) remained open throughout the war. The banks involved included the Banque de l'Indochine and the Deutsche Asiatische Bank.

At the start of the Meiji Era (1868–1912), the foreign banks held 100 percent of all

Table 1. Market Share, Profitability and the Number of Offices of Foreign Banks (1906–1940)

	Loans	Deposits	Profit*	Offices
1906	1.00	1.26	1.91	9
08	0.73	0.53	0.73	8
10	1.20	1.27	0.05	11
12	1.25	1.11	0.71	10
14	0.81	0.79	1.16	6
16	0.54	1.06	2.05	11
18	0.41	1.31	1.80	11
20	0.37	0.86	1.07	20
22	0.25	0.59	0.32	20
24	n.a.	n.a.	n.a.	22
26	0.59	0.95	1.32	22
28	0.62	0.58	0.56	23
30	0.50	0.63	0.00	19
32	0.30	0.55	0.95	15
34	0.35	0.72	0.42	15
36	0.35	0.81	0.49	15
38	0.24	0.55	0.25	16
40	0.04	0.34	3.07	16

Source: Tatewaki (1978)

* Profit is Foreign Bank Profits as a Percent of Foreign Bank Assets.

foreign exchange business, including all trade financing. In fact all banking was in foreign hands because there were no Japanese banks of any kind. During this period the foreign banks contributed to Japan not only as trade financiers and suppliers of capital, but also as transferers of banking technology. Several foreign bankers were advisers to the Japanese government on the establishment of banking laws and regulation, the creation of the Bank of Japan, and the training of bankers.

With the founding of the Dai-Ichi Bank in 1873, and of the Yokohama Specie Bank in 1880, the foreign dominance of Japan's banking system began to erode. In January 1881, the Yokohama Specie Bank opened an office in London, the first overseas branch office by any Japanese bank. By 1900, the Yokohama Specie Bank had increased its share of all foreign trade bills business to 53 percent (Tatewaki 1982c).

The World War I period and the subsequent export boom saw Japanese banks such as Mitsui Bank and Fuji Bank opening their own branches abroad. For instance, Mitsui Bank opened its first branch abroad in Shanghai in 1917, and an agency in New York in 1922. It closed its London, Bombay, and New York offices in 1940-41, and did not reopen London and New York until 1952 and 1953. The development of indigenous trade financing expertise and foreign market knowledge helped erode the foreign banks' distinctive competence.

Table 1 presents the development of the foreign banks' market share of the Japanese loan and deposit markets from 1906 to 1940, as well as the ratio of foreign bank profits to assets for the same period. Clearly, by 1906 the foreign banks were already a very small part of the Japanese banking market. Simple statistical tests reveal no positive correlation between foreign bank market share and profitability.

2. The Post-World War II Period

The Allied Occupation invited several foreign banks to establish or reestablish offices in Japan in the immediate post-World War II period. The banks invited to enter appear to have included Citibank, Bank of America, Chase Manhattan Bank, and Hongkong and Shanghai Bank, and perhaps others as well. The following banks give January 1950 as their license dates, suggesting an earlier presence: the Hongkong Bank, Algemene Bank Nederland, the International Commercial Bank of China (Republic of China), The Chartered Bank, Bank of America, Citibank, and Chase Manhattan Bank. The Bank of India dates its post-war presence from May 1950. The next foreign bank to enter was American Express Banking Corporation in March 1954.

The number of foreign banks and branches stayed stable until 1970. Before then the authorities had been slow to authorize new entrants. After a deliberate policy switch in 1970, the number of new entrants began to grow rapidly. Although already an important world financial center in 1970, Tokyo's importance climbed, as evidenced by the number of foreign banks with an office there (Choi, Tschoegl, and Yu 1986).

Table 2 presents the evolution from 1971-1984, of the number of foreign banks

Table 2. Foreign Banks Represented in London, New York, and Tokyo
(1971-1984)

	London		New York	Tokyo
	Directly	Indirectly		
1971	176	25	81	
72	215	28	85	80
73	232	35	98	
74	264	72	144	106
75	263	72	127	
76	265	78	144	128
77	300	55	177	
78	313	69	208	
79	330	59	244	144
80	353	50	253	
81	353	65	255	153
82	379	70	285	
83	391	69	294	171
84	403	67	307	

Source: *The Banker*, various issues.

Banking System in Japan, Federation of Bankers Associations of Japan, various issues.

Note: For New York, the numbers do not include banks represented through securities or investment banking subsidiaries or subsidiaries engaged in other financial activities such as consumer finance and leasing. Nor do they include a number of foreign-owned U.S. banks which engage primarily in domestic banking activity. For London we have included the figures for the number of foreign banks indirectly represented through their ownership of consortium banks, but we have no such data for New York or Tokyo.

directly represented in London, New York, and Tokyo. Clearly, London is the most important center by this criterion. New York and Tokyo have started from a smaller base and as one might expect, have grown more rapidly.

The foreign banks that have entered Japan have tended to do so in a step-wise fashion. That is, entry as a representative office has generally preceded the establishment of a branch. Of the 140 foreign banks which entered Japan between 1970 and 1984, only 12 went within two years from not being in the market to having a branch operation. The rest entered via representative offices.

This step-wise entry may reflect the strictures of regulatory authorities in either the home or host countries that the parent bank expand its operations cautiously. However, the evidence from California where the authorities are quite liberal suggests that cautious entry is more a function of management behavior than regulatory requirement (Tschoegl 1982).

Theory suggests that increasing foreign market commitments will be linked to knowledge development. Johanson and Vahlne (1977) argue that,

“...additional commitments will be made in small steps unless the firm has very large resources and/or market conditions are stable and homogenous, or the firm has much experience from other markets with similar conditions. If not, market experience will lead to a step-wise increase in the scale of operations and of the integration with the market environment ...”

As further evidence of cautious entry, there were few withdrawals from the market. Only eleven banks during the period 1970 to 1984 closed their representative offices and withdrew from the market. Two banks closed branches, but both cases involved amalgamations following mergers. Since 1984 there have been several withdrawals, but to date only one or two have involved the closing of branch offices unrelated to post-merger consolidations of operations.

Table 3 presents the development from 1950 to 1986 of the foreign bank market

Table 3. Market Share, Profitability and the Number of Offices of Foreign Banks (1952–1986)

	Loans	Deposits	Profit*	Offices
1952	0.79	7.97	0.30	33
54	n.a.	n.a.	n.a.	34
56	0.98	3.91	n.a.	35
58	0.45	1.60	0.74	34
60	0.64	1.64	0.55	34
62	1.02	1.36	0.62	34
64	1.28	1.20	1.01	35
66	0.83	1.03	0.76	34
68	1.09	0.86	0.52	36
70	1.48	0.80	0.34	38
72	1.90	0.78	0.26	59
74	1.87	0.92	0.39	66
76	3.18	1.05	n.a.	75
78	2.84	0.79	n.a.	81
80	3.42	0.82	n.a.	85
82	3.90	0.83	n.a.	100
84	3.25	0.90	n.a.	107
86	2.21	0.61	n.a.	114

Source: Tatewaki (1978) and Bank of Japan

* Profit is Foreign Bank Profits as a Percent of Foreign Bank Assets.

Table 4. Market Share of Foreign Banks (FY1980–FY1985)

	Loans	Deposits	Assets
1980	3.44	0.93	4.10
81	3.36	0.83	4.19
82	3.50	0.93	5.29
83	3.50	0.82	5.12
84	3.56	0.78	5.04
85	3.10	0.86	4.79

Source: Kogin Data Services (1985)

Table 5. Net Income to Total Assets for Foreign Banks (FY1982–FY1987)

	Ratio
1982	0.079
83	0.080
84	0.069
85	0.039
86	0.080
87	0.077

share in the loan and deposit markets, and foreign bank profitability relative to assets until 1974. In terms of the loan market, the foreign banks' share peaked around 1982, and fell thereafter. Even at the peak, the foreign bank share of all bank loans in Japan was only about 3.9 percent. Deposit market share has apparently fallen steadily to the present 0.6 percent from the 8.0 percent level in 1952. For the period for which we have profitability figures, the rate appears to be of the same order as that in the pre-war period.

Table 4 presents data from an alternate source (Kogin Data Services 1985) for foreign banks market share of bank assets, loans and deposits plus Certificates of Deposit by fiscal year (March to March) for the period 1980 to 1985. Asset share peaked in 1982, loans in 1984, and deposits peaked in 1982 also. Table 5 presents the ratio of the foreign banks' net income to total assets for the period 1982 to 1987.

It is these low market shares and profit rates which contribute to the widespread impression that foreign banks are disadvantaged in the Japanese market. We will return to the issue of profitability in section IV below and market share in section V. My purpose at this point is merely to present the background data.

III. The Determinants of Foreign Bank Presence

In this section, I first address the question of the determinants of foreign bank presence in Japan. Second, I examine concentration in the market, and the presence or absence of economies of scale.

1. Foreign Bank Operating Presence in Japan

To investigate which foreign banks have a branch in Tokyo and which do not, I perform a discriminant analysis along the lines of that in Ball and Tschoegl (1982). Ball and Tschoegl (1982) investigated the question of what distinguished the banks which had a branch in Tokyo from those which did not, given that the bank in question had some presence in Tokyo, either in the form of a representative office or a branch.

Here, I investigate which of the 100 largest non-Japanese banks in the world have a branch in Tokyo in 1986, and which do not. I excluded from the sample banks from those countries which do not permit Japanese banks to open branches or subsidiaries. Under Japanese regulations mandating reciprocity, banks from countries closed to Japanese operating presence may not themselves operate branches in Japan. The sample therefore consists of the 100 largest banks in the world from countries which themselves permit Japanese banks to operate.

The statistical methodology I actually used was Ordinary Least Squares (OLS) with a (0,1) dependent variable. Although the assumptions underlying OLS and Discriminant Analysis differ, the two methods produce identical results, upto a transformation of the coefficients of the explanatory variables. One can also think of (0,1) OLS regression as a linear probability model, and the fitted values of the dependent variable as estimated probabilities that the bank in question has a branch in Japan. Because the model is linear, the fitted values of the dependent variable may fall outside of the [0,1] range over which we customarily define probability.

The dependent variable in the estimation was whether or not the foreign bank in question had a branch in Tokyo in 1986. I coded the variable with a one if yes, and 0 otherwise.

The model uses five explanatory variables, drawn essentially from Ball and Tschoegl (1982). One can think of the model as a reduced form of a profit function with profitability being mapped into a probability of the establishment of a branch in Tokyo. The variables I used I have labeled LS85, LCntry, SSame, UKNY, and SCMA.

LS85 is the natural logarithm of the size of the foreign parent bank as measured by total assets. The variable is a proxy for the expected revenue which would accrue to the foreign bank's prospective branch. That is, I am assuming that revenue from home country related business and international capital markets activities will be roughly proportional to the parent bank's size.

LCntry is a variable which takes on a value of zero if the foreign bank has no

branches outside its home country, and the natural logarithm of one plus the number of countries (not including Japan) in which the foreign bank has branches and zero otherwise. The variable is a proxy for the parent bank's international experience and for a strategy of operating branches worldwide. Experience reduces the costs banks face in operating at a distance and in unfamiliar environments. The strategy of worldwide presence may represent a service the parent bank can sell to customers and thus proxy for additional revenues. The use of the logarithmic transform gives a decreasing marginal effect of increasing presence worldwide.

SSame is the square root of the number of banks (other than itself) from a bank's home country with a presence in Japan. The variable incorporates two effects. One is the notion of oligopolistic reaction. That is, a foreign bank may feel compelled to have an operation in Tokyo if its main competitors at home have such operations. The second effect is that the variable may proxy for unspecified common home country factors which lead a number of banks from that country to establish themselves in Tokyo. The square root transformation gives a decreasing marginal impact to each additional bank.

UKNY is a dummy variable which takes on a value of one if the foreign bank has a branch or agency in both London and New York, and zero otherwise. The variable reflects the operation of a strategy of having a presence in the three major world financial centers.

Finally, SCMA is a dummy variable for the type of foreign bank. Foreign banks which are the central offices of savings, mutual credit, or agricultural credit associations I coded with a one. All other banks I coded with a zero. The logic is that such central offices are less likely than normal commercial banks to have the types of clients and activities which would warrant a presence in Tokyo.

I have omitted three variables which intuition or prior research might suggest one should include. First, I have not included any variable for the distance between the parent bank's head office and Tokyo. The evidence in Ball and Tschoegl (1982) and Choi, Yu, and Tschoegl (1986) suggests that distance is probably not a very important factor in the cost of operating in a foreign country.

Second, I have not included any variable for a foreign bank's experience in Japan. The evidence in Ball and Tschoegl (1982) and which I referred to above suggests that banks tend to enter markets incrementally, establishing representative offices before they open branches. I have not included any variable to proxy for such experience because it is difficult in this case to do so without creating a variable that makes the estimation a tautology.

Third, I have not included any variable for government ownership of the foreign banks. Such a variable has an ambiguous sign. On the one hand, government-owned banks may be more conservative and oriented to the home-market by virtue of their ownership than privately-owned banks would be. On the other hand, a government may designate one bank as a flagship bank to represent the home country in financial and

trade centers around the world. The Yokohama Specie Bank (the ancestor of the present Bank of Tokyo) had that role, as did the Bank of Tokyo itself for some years after World War II. Other possible examples include the Korea Exchange Bank and the State Bank of India (Tschoegl and Narasimha 1987). Tschoegl (1979), in a study of foreign direct investment in banking in California, found a positive but statistically insignificant coefficient for the coefficient of a variable for flagship status.

The inclusion of dummy variables by that fact alone means that the data violate the distributional assumptions underlying discriminant analysis. However, the evidence from Ball and Tschoegl (1982) suggests that the results below are robust with respect to the distributional assumptions. The results are (with t-statistics in parentheses):

$$Y = -2.20 + 0.22 \text{ LS85} + 0.18 \text{ LCntry} + 0.04 \text{ Ssame} + 0.10 \text{ UKNY} - 0.20 \text{ SCMA} + e$$

$$\begin{array}{cccccc} (-2.80) & (2.69) & (3.02) & (1.91) & (0.75) & (-1.57) \end{array}$$

$$R^2=0.51 \quad F=19.8$$

The R^2 is high for this sort of cross-sectional test. Furthermore, the R^2 understates the true value because the maximum value the statistic could attain is some unknown value less than one.

The model classifies the data well. If one uses a predicted value of .5 for Y as a cut-off for the model's classification, the model correctly classifies 84 percent of the observations. Of the 55 banks which had branches in Japan, the model correctly predicted 47. Of the 45 banks which did not have branches in Tokyo, the model correctly predicted 37. The model therefore made the same number (8 each) of Type I and Type II errors. There are no clear patterns to the errors, except that a number of Italian banks are not present when the model predicts that they should be present. The errors may well reflect idiosyncratic factors such as differences in aggressiveness and internationalization between bank managements.

As far as the independent variables are concerned, only the first three independent variables had statistically significant explanatory power at the 5 percent level on a one-tailed test. That is, the probability of a foreign bank having a branch in Japan was positively related to the bank's size, the size of its international network, and the number of other banks from its home country with a branch in Japan.

2. Concentration and Economies of Scale

The concept of overall concentration of a market has interested economists for some time because of the indication concentration gives of the development of power positions in the market. High industry concentration is conducive to cartelization or oligopolistic behavior, and a low level of concentration is not.

Below, I present measures for concentration among foreign banks in Japan in 1986 for total assets, loans, and deposits. I measure concentration using Theil's Entropy

Measure, recast into the familiar [0,1] range. Their's formula is:

$$E = \sum_i p_i \ln(1/p_i)$$

where p_i is the proportion of the total magnitude (assets, loans, or deposits) accounted for by the i^{th} bank. Monopoly results in $E=0$. The upper bound for E is given by $\ln N$, where N is the total number of banks in the market. When each bank has precisely the same share, then $E=\ln N$. I adjust for the fact that the upper bound grows with N and recast the relative entropy measure into the familiar [0,1] range where 1 represents monopoly and 0 complete dispersion. The formula for the recast measure is:

$$\text{CRE}=1-(E/\ln N)$$

Applying this formula gives CRE measures for assets, loans and deposits of 0.116, 0.111, and 0.213. These numbers are low. The market appears unconcentrated, though less concentrated overall and in loans than in deposits. The relative deposit market concentration may reflect the fact that many banks make no effort to garner any deposits at all.

Even though the CRE measures are low, the degree of concentration is greater than that which would appear if we were to apply the same technique to the assets of the world's top 100 banks. Tschoegl (1982) found a CRE of 0.033 for the assets of the top 100 banks in the world in 1979.

Of course, the key problem in all concentration studies is to define the relevant market. Our approach has implicitly assumed that all foreign banks are in the same markets, and that no Japanese banks are present. Both of these assumptions are incorrect. The loan and deposit markets are amalgams of many sub-markets such as lending to American or French subsidiaries in Japan, or providing retail banking to expatriates, Indian, or Korean residents. Clearly, concentration in the sub-markets might be quite high. We also have not accounted for Japanese bank presence, potential entry, and rivalrous behavior.

The presence of actual or potential alternative sources of banking services such as Japanese banks or other foreign banks not currently in the market acts as one limit on monopolistic behavior. Second, in many of the markets there are enough banks that no one bank has a dominant share which would enable it to act as a price leader. Thus my impression of the market is one of monopolistic competition among the foreign banks.

Concentration is a static concept. However, concentration in a market develops over time. To investigate the probable path over time I have estimated some stochastic growth model equations (Tschoegl 1983). The first model is:

$$\ln S85_i = a + b \ln S81_i + e_i$$

where $S85_i$ and $S81_i$ and the size of the i^{th} bank in 1985 and 1981 in terms of total assets, and e_i is the standard stochastic error term. Clearly concentration will increase as long as

$b > 1$. What is perhaps less widely appreciated and less immediately apparent is that even if $b < 1$, concentration will still increase so long as $b^2 \geq r^2$ where r^2 is the square of the correlation between $\ln S85$ and $\ln S81$. The results of the estimation are as follows:

$$\begin{aligned} \ln S85 = & 0.22 + 1.02 \ln S81 \\ & (0.03) \quad (0.31) \\ R^2 = & 0.83 \quad F = 278 \end{aligned}$$

The t-statistic for the b coefficient is for the test of the difference of b from 1. I cannot, therefore, reject the null hypothesis that $b=1$. The finding that $b=1$ has two implications. One implication is that concentration will tend to increase, absent new entry. The second implication is that there are no advantages to scale. That is, the banks which were larger in 1981 did not exhibit any statistically significant tendency to grow faster than the banks which were smaller in 1981.

I also estimated the following shorter run model:

$$\ln S87_i = a + b_1 \ln S86_i - b_2 \ln S85_i + e'_i$$

In this model $b_1 = b + r'$, and $b_2 = -br'$, where r' is the cross sectional estimate of the first order autocorrelation coefficient between first and second period growth rates, i.e., between growth in 1985 to 1986 and growth in 1986 to 1987. The results of the estimation are:

$$\begin{aligned} \ln S87 = & 0.91 + 1.24 \ln S86 - 0.31 \ln S85 \\ & (2.62) \quad (9.93) \quad (-2.53) \\ R^2 = & 0.94 \quad F = 503 \end{aligned}$$

Solving the two equations with b_1 and b_2 for the two unknowns b and r' , yields the following estimates: $b=0.90$ and $r'=0.35$. Again, there is no evidence that past size leads to future size. However, in the short run, growth leads to growth. There is some tendency to deconcentration in the short run as b^2 is less than R^2 , but this is counteracted by the positive serial correlation in growth rates.

IV. Balance Sheet Analysis

I use data from the March 1986 and 1987 balance sheets and income statements to estimate implicit before and after tax rates of return on bank assets and costs of bank liabilities. The methodology is one which Gendreau (1983) has used recently. The methodology of statistical cost accounting provides some interesting results which raise further questions.

The methodology of statistical cost accounting allocates income to balance sheet items. The statistical model treats bank income as a linear function of bank assets and liabilities. The model is:

$$Y_i = a + \sum_j b_j A_{ji} + \sum_k c_k L_{ki} + u_i$$

$$(i = 1, \dots, n; \quad j = 1, \dots, J; \quad k = 1, \dots, K)$$

where Y_i is the income of bank i , A_{ji} represents the j^{th} asset of bank i , L_{ki} represents the k^{th} liability of bank i , a , b , and c are parameters, and u is a stochastic error term.

When Y is income net of expenses, the b_j coefficients represent implicit rates of return to book assets and should be positive. The c_k coefficients represent implicit marginal costs and should be negative. I estimate the model using both net income before tax and after tax, and thus estimate both implicit before and after tax rates of return and marginal costs.

Clearly, if J and K represent all the asset and liability categories on the balance sheet, the data matrix is rank deficient because total assets must equal total liabilities, and furthermore both are linear combinations of the intercept. In order to estimate the model I must omit some asset and liability items.

Because the banks in question vary greatly in size, heteroskedasticity could be present and could reduce efficiency. I further modify the model by deflating the dependent and independent variables. The deflator variable is NETA, where NETA is total assets minus customers' contingent liabilities. Customers' contingent liabilities appears identically on both sides of the balance sheet. The model for estimation therefore is:

$$(Y/\text{NETA})_i = a_0 + a_1(1/\text{NETA}) + \sum_j b_j (A/\text{NETA})_{ji} + \sum_k c_k (L/\text{NETA})_{ki} + (u/\text{NETA})_i$$

The intercept term will be zero if the marginal returns and costs of the omitted items are zero, or equal and off-setting. The coefficient a_1 is a measure of returns to banking activities related to scale alone. The variable may reflect scale economies, or the presence of profit generating activities correlated with scale but relatively uncorrelated with balance sheet quantities. Including the scale term enables us to investigate the issue of economies of scale using a slightly different approach from that of the stochastic growth models I used earlier.

The balance sheet asset independent variables I use are: Cash, Call, BLSB, Secs, Loan, FXB, and DUEFRM. Cash stands for Cash and Due from Banks. Call is Call Loans. BLSB is Bills Bought and Money Instruments Purchased. Secs is Trading Securities and Securities. Loan is Loans. FXB is Foreign Exchange Bought. DUEFRM is Due From Head Office and Other Branches. The omitted items are Other Assets, Customers' Contingent Liabilities, and Movable and Immovable Property.

The balance sheet liability independent variables are: Deps, CD, MNY, BLSS, Funds, FXS, and Dueto. Deps is deposits. CD is Negotiable Certificates of Deposit. MNY is Call Money. BLSS is Bills Sold. Funds is Funds Borrowed. FXS is Foreign Exchange Sold. Dueto is Due to Head Office and Branches. The omitted items are Other Liabilities, Employees' Retirement Benefits, Contingent Liabilities, and all Reserves and Undivided Profit.

Table 6. Foreign Bank Balance Sheet Analysis (t-statistics in parentheses)

Variable	1986		1987	
	Model 1 EBT	Model 2 EAT	Model 1 EBT	Model 2 EAT
Constant	-1.4 (-0.45)	-2.2 (-1.17)	6.7 (1.84)	4.3 (1.35)
NETA	-7442 (-1.50)	-6619 (-2.23)	10372 (2.00)	3505 (0.77)
Cash	11.4 (2.06)	8.0 (2.42)	-1.8 (-0.62)	-0.6 (-0.22)
Call	12.2 (2.14)	8.2 (2.40)	-1.0 (-0.34)	0.1 (0.03)
BLSB	12.7 (2.25)	9.0 (2.68)	0.5 (0.16)	0.8 (0.27)
Secs	10.8 (1.81)	7.9 (2.21)	-3.1 (-0.94)	-1.8 (-0.62)
Loan	11.3 (2.03)	7.9 (2.37)	-1.2 (-0.41)	0.1 (0.03)
FXB	14.8 (2.42)	9.9 (2.71)	0.8 (0.22)	1.3 (0.40)
DUEFRM	10.4 (1.82)	7.5 (2.18)	-1.3 (-0.38)	0.5 (0.16)
Deps	-9.7 (-2.34)	-5.5 (-2.22)	-4.7 (-1.16)	-3.6 (-1.01)
CD	-5.1 (-1.22)	-2.5 (-1.00)	-3.8 (-0.78)	-3.6 (-0.92)
MNY	-10.6 (-2.59)	-6.2 (-2.52)	-5.2 (-1.31)	-3.9 (-1.12)
BLSS	-10.9 (-2.24)	-6.0 (-2.08)	-7.8 (-1.28)	-4.8 (-0.92)
Funds	-7.9 (-1.94)	-4.7 (-1.94)	-6.7 (-1.46)	-6.0 (-1.50)
FXS	22.3 (2.48)	13.9 (2.57)	-7.6 (-0.66)	-6.1 (-0.59)
Dueto	-10.4 (-2.50)	-6.1 (-2.44)	-5.9 (-1.43)	-4.7 (-1.29)
R ²	0.62	0.54	0.33	0.18
F	6.56	4.78	2.08	0.92
NOBS	76	76	79	79

The total number of banks in the 1986 estimation is 76. I dropped the smallest bank, Marine Midland, which was in the process of closing its operations subsequent to its acquisition by Hongkong and Shanghai Bank. On earlier estimations the usual outlier statistics suggested that the observation was both egregious and influential. In 1987 the number of foreign banks with branches was 79 and I included all the foreign banks in the estimations.

Table 6 presents the results for both years. The model works better in 1986 than it does in 1987. In 1987, the R^2 and F statistic are both quite low, and there is only one coefficient in either equation with a t-statistic significant at the 5 percent level on a two-tailed test.

The coefficient a_1 , the coefficient of the scale effect, behaves in a contradictory manner. In 1986, the coefficient is negative, indicating economies of scale. In 1987, the coefficient is positive, indicating diseconomies of scale. In 1986, it is the coefficient in the estimation with after tax income as the dependent variable which is significant at the 5 percent level. In 1987, it is the coefficient in the equation for before tax income which is statistically significant.

Citibank is the largest foreign bank in terms of its assets in Japan. In both years, the scale effect on Citibank's income was negligible. Absent scale effects, in 1986 Citibank's predicted income would have been one basis point higher, and in 1987 Citibank's predicted income would have been one basis point lower.

National Bank of Pakistan is the smallest foreign bank in terms of assets in Japan. In 1986, National Bank of Pakistan's returns would have been some 210–237 basis points higher, had it not suffered from the diseconomies of small scale. In 1987, its income would have been 128–378 basis points lower if it had not benefitted from the economies of small scale. Given the contradictory evidence from the balance sheet equations, and the indeterminate evidence from the stochastic growth equations, one clearly cannot make a strong case for either economies or diseconomies of scale.

In 1986, all the b (asset) coefficients are positive, as one would expect. In 1987, a number are negative, albeit not statistically significantly so.

In 1986, all but one of the c (liability) coefficients are negative. In 1987, all the liability coefficients are negative.

Generally, the implicit before tax marginal costs of liabilities appear higher than market interest rates for the same year. The rate on CDs in each year is quite close to the market rate. What is curious is that even though CDs appear to be the cheapest source of financing in 1986 and 1987, the foreign banks make relatively little use of the instrument. In March 1986, CDs represented only 2 percent of total liabilities. In March 1987, CDs represent 1.1 percent of total liabilities.

Deposits appear to be a relatively high cost source of funds, at least in 1986. The picture is more ambiguous in 1987. In 1986, deposits accounted for 11.5 percent of total liabilities. In 1987, deposits accounted for 12 percent. The lower relative implicit cost of

deposits in 1987 did not lead to much expansion in their relative importance.

In both years, the implicit cost of borrowing from the parent bank (Dueto) was higher than the implicit cost of deposits or CDs. Yet in 1986, borrowing from the parent or related branches represented some 46.6 percent of total liabilities. In 1987, Dueto funds represented 38.6 percent of total liabilities.

The evidence suggests two non-exclusive explanations for the foreign bank's neglect of the CD market as a source of funds and their heavy use of more expensive parent funds. One possible explanation lies in the regulations governing the CD market, and another explanation lies in transfer pricing.

The CD market is subject to a number of regulations which apply equally to all banks, foreign and domestic. The regulations, however, may have the unintentional side-effect of limiting the CD market's utility to foreign banks.

Although the regulations apply equally to foreign and domestic banks, I am reminded of a remark by Anatole France apropos French law, "The Law, in its majestic equality, forbids the rich as well as the poor to sleep under the bridges, to beg in the streets and to steal bread." Because foreign and domestic banks differ in the relative importance to them of the markets in which they function, the same regulation will have a differential impact.

In order to phase in deregulation, the Ministry of Finance has imposed a minimum denomination requirement on CDs, a requirement which it has loosened over time. The minimum denomination is large enough that only large investors, of which there are a limited number, will be able to buy the CDs. Furthermore, these investors typically have ties to existing domestic banks which they therefore favor with their custom.

The minimum maturity for CDs of one month is an even greater impediment to the CDs' further use as the foreign banks' loan portfolios often have a maturity of less than one month. Nor may the banks buy and sell CDs to each other. This inhibits the foreign banks from using the CD market to fund their trading portfolios in a flexible manner.

However, the foreign banks can use the uncollateralized call markets where the banks may raise money with usances of one to seven days and two and three weeks. In December 1987, the uncollateralized call market stood at 3.1 trillion yen. The collateralized call market amounted to 16.1 trillion yen. Foreign bank borrowing accounts for almost the entire uncollateralized market, and almost none of the collateralized market.

The second possible explanation for the limited use of the CD market has to do with the opportunity for transfer pricing inherent in the use of parent funds. Transfer pricing may cause the real marginal cost of funds from the parent to be substantially less than that reported on the income statement and reflected in the implicit marginal costs.

It is perhaps worth noting that the implicit pre-tax rate of return on loans to the parent and related branches (Duefrom) is equal to the implicit pre-tax marginal cost of borrowing from the parent (Dueto) in 1986. On a post-tax basis in 1986 the two coefficients are almost equal. In 1987, on both pre and post-tax bases, borrowing from the

parent costs more than the banks earn on loans to the parent. In general, lending to the parent appears to be one of the least profitable uses of funds, and borrowing from the parent one of the most costly sources of funds.

This evidence would suggest the possibility of the existence of transfer pricing behavior on the part of the foreign banks. The evidence also calls into question the entire issue of the apparent lack of profitability of foreign banks in Japan.

Whether any particular foreign bank has an incentive to engage in transfer pricing depends on its worldwide profitability, and its home tax code relative to the Japanese tax code. Given Japan's relatively high total corporate tax burden, one might reasonably suspect that many foreign banks would be tempted to transfer profits out of Japan.

The relevant economic measure of the profitability of operations in Japan is clearly not the apparent accounting profitability. Not only are the published numbers suspect, but the numbers do not capture the relevant criterion. The relevant question for any foreign bank is the contra-factual question, "What would our worldwide expected profits be if we were to quit Japan?"

This suggests that a better measure of the foreign banks' view of the potential of the market is the change in the number of personnel they employ. Unfortunately, employment figures do not appear to be available publically.

V. The Measurement of Foreign Bank Market Share

In this section, I will argue that the usual statistics regulatory authorities collect provide a very biased measure of foreign bank involvement in an economy. The biases are such that they understate the role of foreign banks in Japan.

The key insight of foreign direct investment theory is that the foreign entrant must have some comparative advantage vis-à-vis his local competitors to offset his disadvantage arising from operating at a distance and in an unfamiliar environment. Tschoegl (1987) provides a detailed assessment of retail banking across borders in the light of Foreign Direct Investment theory. What suffices for my purposes here is the focus on the foreign banks' comparative advantage.

As we have suggested earlier, banking consists of many sub-markets rather than being one large undifferentiated market. At the very simplest level we can distinguish between four markets given by whether the client is domestic or foreign, and by whether the locus where the service is provided is domestic or foreign. For emphasis, I further distinguish intermediary (asset-based) activities from fee-based activities, and will return to that point shortly. For the moment, I will concentrate on the competitiveness of foreign banks in intermediary activities in each of the four markets I have just delineated, and the implication for the measurement of foreign bank activity in Japan.

Figure 1 presents the four markets delineated above. The first market consists of the host country service requirements of host country clients. Here domestic banks have an

Figure 1. A Classification of Markets

		Client	
		Host	Home
Locus of Service	Host	1	2
	Home	4	3

unrivaled position. It is the domestic banks which have well established branch networks and long relationships with clients. It is very difficult in any country for foreign banks to penetrate this market. For the bulk of banking services, be they commercial lending or retail banking, foreign banks have no comparative advantage.

Furthermore, for emphasis, let me caricature traditional intermediary-type banking services as commodity businesses with low value added. Lending is simply the sale of money, which is a commodity. Retail banking, the provision of transaction services to individuals, too is a commodity business. In general, the returns to commodity businesses do not warrant the attention of foreign firms which face higher costs.

Some foreign banks may be more efficient than many of their domestic counterparts. This is often the case when the foreign bank comes from a competitive environment and the host country environment is one of a comfortable oligopoly. But there is no inherent *foreign* bank advantage.

In many countries, the presence of ethnic minorities provides a retail banking niche to banks from the immigrants' home country. In Japan, the scope for such activities is limited to a large Korean minority, and several small markets such as Indians or expatriates.

Japanese laws and regulations have blocked foreign banks from acquiring local banks or from opening extensive branch networks. This has hampered the development of foreign bank penetration of the host market, to the degree that the foreign banks have wished to expand and that therefore the regulations have been binding.

The restrictions on retail expansion have hampered foreign banks in providing yen loans. Much of Japan's savings deposits remains under interest rate control. Not having a retail deposit base stops foreign banks from funding corporate lending with cheap retail deposits.

Because foreign banks have limited access to retail deposits, those banks which wish to become major lenders in the host market must depend on the interbank market for their funds. Here the foreign banks must buy their funds at wholesale market rates.

The interbank market has proved a limited base in Japan. Japanese banks take 40% of the funds on the interbank markets in the London money markets but foreign banks take about 20% of the Japanese call and bill markets. These numbers are deceptive because they compare an offshore market with an onshore one, but the foreign bank

share of the sterling interbank market remains well above 20%. Thus the foreign banks do feel that their dependence on the interbank market puts them at a competitive disadvantage vis-à-vis their Japanese competitors.

The operation of the interbank market remains a point of controversy between the foreign banks and the Japanese authorities. The Bank of Japan's view is that the interbank markets are large, well-developed, and efficient in responding to supply and demand for funds. The abolition of the system by which the interbank brokers set formal quotes has enabled call and bill market rates to respond more sensitively to changes in underlying liquidity, and to correlate more closely with open market rates. However, the Bank of Japan at the same time "changed its controls to place more emphasis on interest rate controls, instead of relying on providing credit to meet a shortage of funds or absorbing surplus funds in the interbank market (Robbins 1987)."

Foreign banks argue that the brokers in the call and bill markets, though private firms, may act as an extension of the Bank of Japan (Robbins 1987, pp. 181-182). Because the interbank market is the BOJ's primary instrument for influencing interest rates, the Bank of Japan may influence the rates that the brokers quote. The foreign banks point out that the board members of the interbank brokerage companies are usually former Bank of Japan officials, ensuring close links between the BOJ and the brokers (Robbins 1987, pp. 181-182).

The bankers complain that the rates the brokers quote do not always respond to supply and demand. The bankers report that frequently the rate the brokers quote does not change during the day, but sometimes there is no one to take the other side of the trade when a bank comes to the market (*Euromoney*, Feb. 1988, p.38). A report from the Bank of Japan (Fukui 1986) shows that rates in the unconditional call market changed roughly 200 times per year during the period 1981-85, or less than once per working day.

There are also a number of other frictions in the operations of the call and bill markets. These include the stamp tax on certain transactions and fixed commissions for the interbank brokers.

The foreign banks' complaints about the functioning of the interbank do not necessarily contradict the Bank of Japan's view that the interbank markets are large, well-developed, and efficient in responding to supply and demand for funds. Modern banking frequently involves activities in which a few basis points (one basis point is one one-hundredth of a percent of yield) are economically meaningful magnitudes to the banks involved. The U.S. commercial paper market works on the basis of a six basis point difference in yields between bid and ask. The Euro-commercial paper market works on a three basis spread.

In such a context, frictions which are second order from the point of view of the macroeconomic functioning of the interbank system may be first-order with respect to the viability of certain activities. The foreign banks and their activities are a very small part of the total financial system. The system may work well for the bulk of the participants and

their activities and still be problematic for some participants in some activities.

In the past, foreign banks have assumed the role of marginal suppliers of funds. That is, often during periods of tight money the foreign banks have been able to bring in funds from their parents. The foreign banks then lent the imported funds to firms whose need for funds exceeded their ration from the firms' usual banks. Currently there are reports that foreign banks' yen lending has increased because of growing corporate demand for funds and the Japanese City Banks' voluntary restrictions on their lending. The Jiji Press reported (Feb. 15, 1988) that the Bank of Japan has discouraged Japanese City Banks from increasing their lending, prompting some Japanese companies to seek borrowings from foreign banks.

In the 1970s, the foreign banks were also the only banks permitted to make foreign currency loans. This proved a lucrative niche until 1980 when Japanese banks were also permitted to make foreign currency loans and Japanese firms reverted for these loans to their regular banks.

This reversion illustrates the point that in the commodity business of lending money, host country firms have no reason to prefer dealing with foreign banks, even absent the issue of long term relationships. In general, the long term relationship provides the traditional supplier with an information cost advantage. Furthermore, long term relationships with their element of the exchange of puts and calls are particularly important in markets subject to quantity clearing (credit rationing). Absent regulatory intervention creating a favored position for foreign banks, there is no reason to expect foreign banks to have any particular market share in the commodity type intermediary activities.

When we look at Cell 3 of Figure 1, the situation reverses. Now it is home country banks which have a preferred access in the third market, the home country activities of home country clients. Now it is host country banks which lack the client relationships, the networks of offices, and the funding base.

Japanese and other foreign banks have made substantial inroads in the U.S., both in commercial lending and in the acquisition of U.S. retail banks, especially in California. However, as far as commercial lending is concerned, many major U.S. banks have ceded the market because it is a commodity business, and one in which the margins will not support the capital demanded by capital adequacy regulations, or the salaries of highly paid professionals. The major U.S. banks have preferred to restrict their activities to the higher value added ones of creating the transaction, and have left the booking of the actual loan to foreign banks.

As far as retail banking is concerned, one difference between Japan and the U.S. is the role of the U.S. dollar in the world economy. Japanese banks have many home country clients who require dollar funding. The Japanese banks buy much of the funds they require on the international interbank market. To the degree that the Japanese banks fear credit rationing in the interbank market, they have an incentive to integrate vertically back to a source of dollar deposits (Tschoegl 1987). Thus the Japanese penetra-

tion of the U.S. commercial lending and retail deposit markets does not represent any major Japanese advantage in the U.S., but rather reflects their weaknesses.

In Cell 2 we have the host country activities of home country clients. This is the natural preserve of home country banks, at least for specialized services requiring knowledge of the client, long term relationships, and home country operations. Foreign banks are particularly useful in trade finance where the home country exporter is trading on the credit of the host country importer.

Foreign banks in Japan have been disadvantaged by the regulations of the past which limited home country firms from investing in Japan. These restrictions have been one source of a limited demand for foreign bank provision of traditional intermediary services. Furthermore, manufactured imports require more bank support than do commodity imports. However, Japan is a commodity importer and a manufactured goods exporter, precisely the opposite pattern to one which would generate a high foreign bank presence.

Finally, there is Cell 4, the Home country activities of Host country clients. Here too the foreign banks have a limited niche. The limitation on the foreign banks' activities derives from the substitutability of host country banks' services. When host country banks have branches in the home country, it is the host country banks which will provide the services, again because of the role of long-term relationships with the clients.

The implication of this argument is that in general one would not expect foreign banks to have a large market share in the conventional intermediary activities of loans and deposits, or in asset based activities in general. Yet it is these activities that regulators collect and publish statistics on.

Where we would expect foreign banks to have a greater importance is in non-traditional or fee-based activities such as foreign exchange trading, swaps, securities activities, and other investment banking activities. The foreign banks have advantages based on their experience and skills acquired in other markets, access to home country clients, specialized knowledge of their home markets, and so forth. However, statistics in this area are hard to find.

Reportedly, all the major participants in the Tokyo swaps market are foreign banks. *Euromoney*, the respected international finance journal, reported on the results of a survey of international corporate treasurers. The treasurers put two foreign banks in the top five banks in the Tokyo foreign exchange market in 1987. The treasurers did not put a single Japanese bank in the top 10 banks in the Yen/US dollar market.

There are a number of impediments to a larger foreign bank share in these fee-based activities in Tokyo. As Arthur Hodge, Chairman of the Institute of Foreign Bankers in Japan and head of the National Westminster Bank in Japan, has said, the problem with the short-term markets "is a relatively complex issue, but is undoubtedly the most important by far for foreign banks operating in Japan" (*International Herald Tribune*, Jan. 22, 1988, p.15).

Frictions in the short-term markets inhibit trading. In trading it is important to be able to fund short-term trading positions at a moment's notice, and to reverse positions equally quickly. Interbank markets which clear daily may be sufficient for the smooth functioning of the macroeconomy, but are not sufficiently responsive to support trading operations fully.

The frictions in the operation of the interbank market are a consequence of regulatory policies which are changing. The intent of the regulatory policies was to enable the Bank of Japan to control the money supply in a system where open market operations are still not fully feasible because of the lack of a Government Bill market, among other things. The intent of the regulations was not to disadvantage foreign banks precisely in those markets where they had particular advantages, but foreign banks report that is the effect.

The lack of adequate public statistics on the new markets means that debate on these issues is necessarily impressionistic and not founded on solid documentation. The lack of data unfortunately inhibits the testing of impressions and argument against fact.

What we can test in whether foreign bank market share in the conventional areas on which statistics are kept is explainable by economic variables and without recourse to measures of regulatory impedence. In particular, we can test the notions advanced earlier that foreign bank market share of banking system assets in a country will be positively related to imports to the country and negatively to exports from the country. Imports create a need for foreign bank services in the country. Exports give domestic banks an incentive to go abroad and thus to provide a substitute source of some banking services to domestic clients.

To test these notions at least partially, I have performed a regression. Below, I regress the foreign bank share of domestic banking system assets (FRNBKSHR) in eight countries on three variables. The first variable is MPRT which is the ratio of total imports to host-country GNP. The expected sign of the coefficient is positive. The second variable is XPRT, which is the ratio of total exports to host-country GNP. I expected a negative coefficient. The third variable is NEW, which is a (0,1) dummy variable if foreign banks had only first been allowed to enter the country in question within two years of the date of the data, and zero otherwise. The expected sign of the coefficient was negative.

The data for all eight countries comes from different years in the period 1984 to 1986. The countries involved are all developed countries: Australia, Canada, Finland, France, Japan, Norway, Sweden, and Switzerland. Obviously I would have liked to have had a larger sample, but comparable data is not readily available.

The results are strong for such a limited test. The R^2 is high for a cross-sectional test, and all the signs of the coefficients are in the expected direction. The coefficients of the trade variables are significant at the 10% level as well. The results are encouraging enough that they suggest that this avenue would be worth pursuing more formally and

more fully.

$$\text{FRNBKSHR} = 0.1 + 0.9 \text{MPRT} - 1.0 \text{XPRT} - 0.5 \text{NEW} + e$$

$$(2.1) \quad (1.6) \quad (-2.2) \quad (-0.1)$$

$$R^2=0.6 \quad F=2.1$$

The coefficients of the trade variables imply that the effect of host country imports and exports on foreign bank market share is roughly symmetrical. From the equation we would expect that a country with balanced trade and a long-standing foreign bank presence would have a foreign bank market share of about 10%. Given no differences in the age of the foreign banking communities, if the trade surplus in one country represented 1% of GNP and the trade surplus in another country represented 2% of GNP, the foreign bank market share would be 1% less in the second country than in the first.

Interestingly, the studentized residual for Japan was -1.0 . Thus, foreign bank market share in Japan in conventional terms is less than the model would predict, but not egregiously so. The most negative foreign bank share came in Canada, where the studentized residual was -1.1 . The most positive residual was that for France, with a value of 1.8 . An examination of the results suggests that a more refined measure of the effective duration of foreign bank presence in a country than the variable NEW would improve the model's performance.

Examination of the residuals suggests that no point is an outlier. Nor does multicollinearity appear to be a problem.

To demonstrate that multicollinearity is not a problem we impose the restriction that the coefficient of MPRT be equal in absolute magnitude but of opposite sign to the coefficient of XPRT. Although the theory is not couched in terms of the trade balance, imposing the restriction on the trade variables removes the issue of collinearity between MPRT and XPRT.

We also drop NEW from the regression. Imposing the symmetry restriction and dropping NEW increases our degrees of freedom by 50%, shrinking standard errors as well.

The results for the simpler regression are:

$$\text{FRNBKSHR} = 0.1 + 1.1 (\text{MPRT} - \text{XPRT})$$

$$(2.4) \quad (2.9)$$

$$R^2=0.6 \quad F=3.9$$

The coefficients have not changed materially. Furthermore, the coefficient of the trade balance variable is now significant at the 2.5% level.

VI. Conclusion

I have tried in this paper to investigate several aspects of the foreign bank presence in Japan, and particularly to start to address the question of whether Japan is pursuing either mercantilist or autarchic policies in this area of trade in services. The questions are important ones in an era in which trade in services is becoming an ever increasing part of international trade and becoming the subject of trade negotiations. Unfortunately, there is little data in general, and almost no systematic data collection in precisely some of the most sensitive areas.

The historical overview in section II demonstrated that foreign banks have never had a large market share in conventional banking in Japan except at the very inception of the Meiji Era when there were no Japanese banks. As the Japanese banking system developed and Japanese banks developed the necessary capabilities, foreign banks became relegated to an ever smaller role. This pattern repeated itself to a lesser degree after World War II.

Section III demonstrated that of the world's largest banks, the foreign banks which had branch operations in Japan tended to be the larger ones with networks of branches around the world, and to come from countries represented by several banks. Further examination suggested that the market in which foreign banks competed could be characterized as one of monopolistic competition; overall competition was low, above average performance eroded quickly, and there were no signs of material economies of scale. On the other hand, each foreign bank competed to some degree in niches which were more concentrated, and occasionally could have been monopolies.

In section IV, I examined the foreign banks' balance sheets and reported profit. The evidence suggests that restrictions in the CD market make the market of less use to foreign banks than alternative markets or than one might otherwise expect. The evidence also calls into question the foreign banks' stated profitability for their operations in Japan. The evidence is consistent with the use of transfer pricing to shift profits out from under Japanese taxes.

The last substantive section presented my argument that we would not expect foreign banks to have a large market share in conventional banking assets for economic reasons having nothing to do with the peculiarities of Japan or its regulations. The very limited evidence was that foreign bank assets were low as a percentage of banking system assets relative to the situation in other countries and after adjusting for some determinants. However, the situation in Japan was not egregiously negative.

I could not adduce hard evidence that in the fee-based markets where one could expect foreign banks to have a greater share that Japanese regulations discriminated against the foreigners, intentionally or unintentionally. Foreign banks reportedly do feel that frictions in the operation of the short-term money markets are a handicap to trading activities, but absent internationally comparable data I can do little but report opinions.

A key problem in assessing the inhibiting role of frictions in the markets is that factors which have first order effects on bank operations may be of only second order from the point of view of the markets' macroeconomic functioning. As a result, the effects may not be detectable statistically both because of the obscuring effect of first order factors, and because the necessary data is not available in fine enough detail.

My overall impression is that *Deshima* is not an appropriate metaphor. The regulations in place pre-date any concern with foreign bank competitiveness. That some regulations have differential effects is clear. However the intent is not to discriminate, or to exclude. On the other hand, the foreign banks and their concerns are not so politically salient that the political system rushes to respond. Deregulation which is progressing in response to domestic pressures will continue and will have the equally unintended consequence of generally improving the foreign banks' position. Again, *Deshima* is not the metaphor, but neither is the early days of the unequal treaties period.

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