Board of Governors of the Federal Reserve System

International Finance Discussion Papers

Number 361

September 1989

THE U.S. AND U.K. ACTIVITIES OF JAPANESE BANKS: 1980-1988

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ABSTRACT

In addition to dominating the list of the world's largest banks, Japanese banks currently account for about two-fifths of measured international banking assets of all banks. Between year-end 1984 and year-end 1988 Japanese banks accounted for slightly over one-half of the measured growth of total international banking activity. A large proportion of their international assets are at their branches in the United Kingdom and their agency and branch offices in the United States.

This paper analyzes the U.S. and U.K. activities of Japanese banks. The paper integrates the activities of the Japanese banks in these two markets with the regulatory environment for banks in Japan, with Japan's overall external financial position, as well as with business opportunities in the two host country markets. The paper concludes that the domestic regulatory environment in Japan, including restraints on interest rates, and possible quantitative restraints, has had an important impact on the activities of Japanese banks in these two foreign markets.

Japanese banks appear to have adjusted to their domestic regulatory environment by using their London branches as a flexible funding source, and their branches and agencies in the United States as substitutes for their head offices in extending commercial and industrial loans to Japan-based companies as well as a substitute location for large interbank trading activities. In both markets Japanese banking offices are large net borrowers from unrelated banks because of the constraints on raising funds in their home market.

The U.S. and U.K. Activities of Japanese Banks: 1980-1988

Henry S. Terrell*, Robert S. Dohner**, Barbara R. Lowrey***

I. Introduction

In recent years banks headquartered in Japan have grown extremely rapidly relative to banks headquartered in other countries. According to the most recent survey, published in The Banker, the world's seven largest banks, and 16 of the world's 25 largest banks, are headquartered in Japan. Measured by total market capitalization the figures are even more striking. The equity market value of shares of the largest Japanese banks are on the order of $50-80 billion per bank, while the stock market valuation of the equity of the largest U.S. banks is on the order of $10 billion.[1]

The general factors influencing the asset growth of Japanese banks have been analyzed elsewhere.[2] A large proportion of their total asset growth in the 1970s and 1980s has resulted from their activities in

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We are indebted to Catherine Mann and other members of the Board' staff for helpful comments.
The views expressed in this paper are those of the authors and should not be interpreted as representing the views of the Board of Governors of the Federal Reserve System or its staff.

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1. See Salomon Brothers, "International Bank Biweekly, August 2, 1989.

2. See Dohner and Terrell (1988).

Japan. Factors that influenced their rapid domestic asset growth, measured in U.S. dollars, were a fast growing home economy, translation of the impact of an appreciating currency on domestic yen-denominated assets, and the ability of large Japanese banks to maintain their share of the domestic banking market.

The distinction between domestic and international banking activity, however, is not always precise. This is particularly true in a world without capital controls, where large multinational banks are managed on a worldwide consolidated basis with the ability to shift both assets and funding sources to markets that offer greater economic advantages or are less regulated. To the extent any national banking group shifts its domestic assets, including interbank trading, to offshore markets because of regulations in its domestic market, its measured participation in "international" banking assets will be increased even though the transactions have a definite domestic orientation.

The absolute size of Japanese banks has made them major players in overseas markets as well as important in their own domestic market. This paper will analyze two important aspects of the growth of Japanese banks in international markets, namely: (1) their activities at branches in the United Kingdom; and (2) their activities at branches in the United States. In both markets Japanese banks have grown very rapidly and are by far the largest non-indigenous banks.[3] This paper will focus on how

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3. As of December 1988 Japanese banks accounted for about 40 percent of the assets of all foreign bank offices in the United Kingdom and about 50 percent of the assets of all foreign banks in the United States.

the regulatory environment in Japan has affected their activities in these two centers.

As shown in table 1, assets of all foreign branches of Japanese banks, of which branches in these two countries account for nearly three-fourths, increased about 381 percent between December 1981 and year-end 1988, while aggregate domestic office assets of the banks in Japan increased by about 285 percent. Foreign branch assets grew relatively more rapidly than domestic office assets between December 1981 and December 1984 (81 percent vs. 17 percent), in large part because of the translation of the decline in the value of the Japanese yen relative to the U.S. dollar on the dollar value of the yen assets of the banks' domestic offices. By contrast, between year-end 1984 and year-end 1988, the dollar value of assets of foreign branches of Japanese banks increased 166 percent while the dollar value of domestic office assets of Japanese banks increased 229 percent, in large part because of the valuation effects of an appreciation of the Japanese yen. Even though less rapid than domestic office growth, growth of offshore branches in this period was extremely rapid relative to the growth of international assets of other countries' banks.

This relatively faster growth of offshore activities of Japanese banks compared to other banks is shown in table 2 which presents data on the share of total international assets by nationality of bank. Between year-end 1984 and year-end 1988 international assets at Japanese banks more than tripled, and the share of Japanese banks in total international banking assets increased from less than one-fourth in 1984

Table 1

Location of Assets of Japanese Banks
(billions of dollars)

Date	Offices in Japan[1]	Foreign branches		
		All foreign branches	Branches in the United Kingdom	Branches in the United States[2]
December 1981	791	233	134	74
December 1982	811	310	161	97
December 1983	908	350	178	108
December 1984	926	421	194	131
December 1985	1,339	600	257	151
December 1986	1,927	837	359	208
December 1987	2,854	1,090	426	252
December 1988	3,044	1,120	445	307

1. Includes assets of City, Trust, and Long-Term Credit Banks in Japan.

2. Includes agencies as well as branches of Japanese banks.

Sources: Bank of Japan Economic Statistics Monthly, Call Report Data for U.S. Agencies and Branches, and Bank of England Quarterly.

Table 2

International Bank Assets by Nationality of Bank[1]
(billions of dollars)

Parent country of bank	December 1984 Amount	December 1984 Share of total assets	December 1986 Amount	December 1986 Share of total assets	December 1988 Amount	December 1988 Share of total assets
France	200.7	8.9	276.1	8.1	384.1	8.4
Germany	143.2	6.4	270.0	7.9	353.8	7.7
Italy	90.6	4.0	145.1	4.3	201.2	4.4
Japan	517.9	23.0	1,117.7	32.8	1,756.4	38.2
Switzerland	82.9	3.7	152.0	4.5	238.6	5.2
United Kingdom	168.9	7.5	211.7	6.2	238.7	5.2
United States	594.5	26.4	598.3	17.6	675.3	14.6
Other	450.7	20.1	635.4	18.6	749.8	16.3
Total	2,249.4	100.0	3,406.3	100.0	4,597.8	100.0

1. Includes claims of banking offices on nonlocal customers in foreign and domestic currencies and claims on local residents in foreign currencies.

Source: Bank for International Settlements, Annual Reports, various issues.

to almost four-tenths by year-end 1988. International assets of Japanese banks were estimated to be more than two and one half times as large as international assets of U.S. banks, the second largest national group. Over this four-year period Japanese banks are estimated to have accounted for approximately one-half of the growth of total international banking activity.[4]

In summary, in recent years Japanese banks have become the world's largest banks in absolute size. Although most of their absolute growth has occurred at their offices in Japan, Japanese banks did account for about one-half of the growth of total international banking assets in the 1984-88 period, and a large proportion of their international assets are concentrated at their branch offices in the United States and United Kingdom.

This paper will attempt to determine the extent to which the assets of U.S. and U.K. branches of Japanese banks are related to local market conditions, the growth of Japanese international trade and investment, or in fact appear to be substitutes for banking activities that might otherwise would have taken place in Japan if the domestic Japanese market had been less regulated.

II. Activities of Japanese Banks in The Two Centers: An Overview

A. Activities in the United Kingdom

Table 3 presents summary data on the assets of the U.K. branches of Japanese banks. Several facts stand out. About nine-tenths

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4. The data for international assets for Japanese banks in table 2 are larger than the totals reported in table 1 for assets at foreign branches because the data in table 2 include international assets at domestic (Japanese) offices and foreign subsidiaries in addition to assets at foreign branches of Japanese banks.

Table 3

Assets of U.K. Branches of Japanese Banks
(billions of dollars)

Date	Assets		Nonsterling claims on:					
			Overseas residents				U.K. residents	
	Total	Denominated in currencies other than sterling[1]	Total	Unrelated banks	Related offices	Non-banks	U.K. monetary sector	U.K. private sector
December 1980	97.6	94.8	70.4	24.8	32.7	12.9	22.4	3.1
December 1981	134.1	129.7	91.8	35.4	39.2	17.3	33.9	4.2
December 1982	160.8	155.1	106.6	47.7	37.6	21.3	44.1	4.8
December 1983	178.4	171.1	117.8	51.9	42.5	23.4	39.8	5.7
December 1984	194.1	182.9	137.0	63.0	51.3	22.7	34.6	6.6
December 1985	257.3	241.1	167.8	71.6	72.6	23.6	41.5	10.5
December 1986	358.6	336.3	247.4	93.8	125.0	28.6	44.5	15.5
December 1987	426.0	389.1	298.8	113.7	149.4	35.7	38.4	21.3
December 1988	444.6	393.8	307.2	127.0	143.2	37.0	35.8	21.5

1. Difference between total and non-sterling assets does not equal nonsterling assets because of small amount of unallocated items.

Source: Bank of England Quarterly, and special tabulations provided by the Bank of England.

of their total assets are denominated in currencies other than sterling. Of that total, over three-fourths are either claims on overseas residents or eurocurrency claims on banks domiciled in the United Kingdom. Almost one-half of Japanese banks' total claims on overseas residents represents claims on affiliated offices in other countries. Relatively little of their business orientation is either in local currency or with local nonbank residents. Since year-end 1984 their nonsterling claims on private U.K. firms have increased (in dollar terms) three-fold, but a large proportion of these claims are on U.K. based financial affiliates of foreign companies, such as life insurance companies that conduct a multinational business in London, and therefore are not closely linked to the local economy.

The data in Table 4 indicate a roughly similar pattern on the liabilities side. Virtually the entire sourcing of funds for the U.K. branches of Japanese banks is nonsterling transactions with overseas residents or eurocurrency liabilities to local banks. Liabilities to related offices abroad constitute only about one-third of total liabilities to all overseas residents. In recent years there has been a virtual explosion in the issuance of CDs (mainly dollar-denominated) by the London branches of Japanese banks which at year-end 1988 had issued over $65 billion in Euro-CDs, about one and one-half times the value of Euro-CDs issued by branches of U.S. banks in London. Branches of Japanese banks currently account for about two-fifths of the total issuance of Euro-CDs in London.[5]

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5. Not shown separately in table 3 and 4 is the fact that during these years Japanese banks in London were also large recipients of deposits from foreign official institutions, which amounted to about $27 billion at year-end 1988.

Table 4

Liabilities of U.K. Branches of Japanese Banks
(billions of dollars)

Date	Liabilities		Nonsterling liabilities to:					
			Overseas residents				U.K. residents	
	Total	Denominated in currencies other than sterling[1]	Total	Unrelated banks	Related offices	Non-banks	U.K. monetary sector	CDs
December 1980	97.6	94.8	57.8	NA	16.5	NA	27.3	9.0
December 1981	134.1	129.7	77.1	NA	23.0	NA	39.4	12.1
December 1982	160.8	155.2	91.1	60.0	24.9	6.2	48.3	19.0
December 1983	178.4	171.4	98.8	63.4	27.3	8.1	42.5	29.9
December 1984	194.1	183.7	118.2	82.6	25.8	9.8	37.6	32.5
December 1985	257.3	240.6	157.6	108.6	37.3	11.7	52.7	29.1
December 1986	358.6	335.8	225.5	141.2	67.9	16.4	59.3	45.4
December 1987	426.0	388.0	260.7	160.5	82.4	17.8	60.1	59.0
December 1988	444.6	391.6	259.3	146.4	91.4	21.5	56.0	67.4

1. Difference between total and non-sterling assets does not equal sterling assets because of small amount of unallocated items.

Source: Bank of England Quarterly, and special tabulations provided by the Bank of England.

In summary, U.K. branches of Japanese banks deal mainly in foreign currencies with non-U.K. residents. These branches are very large net borrowers in the interbank eurocurrency market, and are by far the largest issuers of Euro-CDs. A comparison of the data in tables 3 and 4 shows the large role the London branches play in funding their related offices in other countries, including their head offices in Japan. As of December 1988, these offices held over $50 billion net in claims on related offices.

B. Activities in the United States

Table 5 summarizes the activities of agencies and branches of Japanese banks in the United States which grew by a factor of five over the eight-year period 1980-88. As shown in table 6, loans are by far the largest component of their activities which, with customers' liabilities on acceptances, account for about one-half of their activities. Cash and due from banks, largely reflecting clearing and interbank transactions, account for about one-third of their total assets, while holdings of securities increased from a negligible amount to over $20 billion by year-end 1988.

Table 6 provides more detail on the large loan portfolios of the Japanese banks in the United States. Commercial and industrial loans, particularly to borrowers with an identified U.S. residence, constitute the largest and most rapidly growing component of their loan portfolio. By year-end 1988 commercial and industrial loans to these U.S. borrowers amounted to about $60 billion.[6] Loans to foreign

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6. By comparison, similar lending to domestic customers by all large domestically-chartered weekly reporting U.S. banks amounted to about $300 billion at year-end 1988.

Table 5

Assets of U.S. Branches and Agencies of Japanese Banks
(billions of dollars)

Date	Total assets	Securities	Loans	Customers' liability on acceptances	Cash and due from banks
December 1980	60.8	1.4	36.5	5.4	5.1
December 1981	73.7	1.6	44.2	7.2	5.9
December 1982	96.9	2.6	53.4	8.2	19.4
December 1983	108.2	3.7	54.7	10.2	26.2
December 1984	130.8	6.4	57.8	15.3	41.2
December 1985	151.2	13.1	65.1	16.6	46.3
December 1986	208.3	19.3	83.0	19.1	70.2
December 1987	252.3	23.4	103.8	24.1	83.1
December 1988	306.7	23.2	131.6	24.5	95.8

Source: Call Report Data.

Table 6

Lending Portfolios of U.S. Agencies
and Branches of Japanese Banks
(billions of dollars)

Date	Total loans	Commercial & industrial loans			Loans to foreign governments	Loans to financial institutions	Loans for purchasing and carrying securities	Real estate
		Total	U.S.	Foreign				
December 1980	36.5	18.8	9.3	9.5	4.8	11.5	.2	*
December 1981	44.2	21.8	10.0	11.8	4.9	15.9	.3	.2
December 1982	53.4	24.1	11.5	12.7	7.0	21.4	.2	*
December 1983	54.7	25.0	12.2	12.8	8.3	20.0	.5	*
December 1984	57.8	28.2	16.3	12.0	8.1	20.6	.7	*
December 1985	65.1	32.5	20.1	12.4	7.7	22.3	2.0	.2
December 1986	83.0	43.0	30.2	12.8	7.8	26.5	3.2	1.6
December 1987	103.8	59.0	45.9	13.0	10.1	26.5	1.3	5.9
December 1988	131.6	74.8	61.4	13.4	10.8	32.1	2.5	13.8

* Means less than $50 million.

Source: Call Report Data.

commercial borrowers and foreign governments at Japanese agencies and branches were relatively stagnant over this period. Since December 1985 loans secured by real estate have grown very rapidly at the Japanese agencies and branches, and exceed their loans to either foreign commercial borrowers or foreign governments.[7] Japanese banks have also been heavily involved in financing large corporate restructurings in the United States.

Table 7 restructures the data by type of customer, rather than by type of instrument, to analyze the major sources of funding for U.S. offices of Japanese banks. Similar to their activities in the United Kingdom, U.S. offices of Japanese banks are extremely large net borrowers in domestic interbank markets, and smaller (but still significant) net borrowers from banks outside the United States. Deposits from nonbank U.S. residents and nonbank foreign residents constitute a relatively small proportion of their total funding. Unlike the offices of Japanese banks in London, which were net providers of funds to their related offices in other countries, U.S. offices of Japanese banks (at least since 1984) have relied heavily on net advances from related institutions abroad.

A large proportion of Japanese bank activity is with customers identified as U.S. residents. This geographic identification by residence of customer does not properly account for the fact that many customers of Japanese banks identified as U.S. residents are affiliates of Japanese entities. As of December 1988, $106 billion of all

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7. It is not possible to determine the extent to which these real estate loans are related to the boom in property lending in Japan or are related to Japanese investment in U.S. real estate.

Table 7

Major Sources of Funding to U.S. Agencies
and Branches of Japanese Banks
(billions of dollars)

Date	Net Liabilities to banks in United States[1]	Net Liabilities to banks in Foreign countries[1]	Deposits from U.S. Residents	Deposits from foreign residents	Net Liabilities to related banks abroad
December 1980	11.1	2.7	10.0	.1	3.6
December 1981	15.8	4.8	10.5	.1	2.7
December 1982	20.3	12.8	10.6	.8	-1.6
December 1983	19.7	19.1	8.2	1.2	- .8
December 1984	18.0	20.1	7.2	1.8	6.9
December 1985	37.2	16.6	8.3	1.1	7.9
December 1986	39.0	23.5	15.2	2.3	12.5
December 1987	54.0	30.9	17.4	2.1	9.1
December 1988	63.4	29.2	22.8	2.4	18.4

1. Includes sum of net federal funds transactions, net interbank deposits, gross borrowings from minus gross loans to other banks.

Source: Call Report Data.

categories ofassets of $307 billion of the agencies and branches were direct claims on Japanese residents. On a risk-adjusted basis, however, where claims are reallocated to the country of the ultimate parent obligor, the total Japanese risk of the U.S. agencies and branches amounted to $208 billion, indicating clearly that U.S. offices of Japanese banks are very closely associated with Japan-based customers.[8]

In summary, the U.S. offices of Japanese banks show some similarities and as well as certain important differences from their U.K. counterparts. The main similarity is that both are very large net borrowers in local banking markets. In London, Japanese banks tend to be large net recipients of deposits from foreign official institutions, while their offices in the United States are large net lenders to foreign official institutions. Offices of Japanese banks in London serve as a very important net funding source for their related offices in other countries, while offices in the United States tend to be net takers of funds from related offices in other countries. In the United States, Japanese banks are very heavily concentrated in lending to locally-based companies, including U.S. affiliates of Japanese companies, while in the United Kingdom, Japanese banks lend largely to non-local borrowers in non-local currencies.

III. The Banking and External Economic Environment in Japan

A. The Banking Environment

Large multinational banks are managed and operated on a worldwide consolidated basis. Therefore, branches of nonlocal banks operating in foreign markets will be influenced by factors specific to

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8. Derived from aggregate data on the Country Exposure Report for U.S. Agencies and Branches of Foreign Banks.

their home country as well as to the local environment in which the foreign branches are operating. In some cases a foreign branch operating in a less regulated environment might be used to substitute for activities that otherwise would have been undertaken had the banks' home country offices been less regulated, particularly in cases of limitations on interest rates or quantitative restraints on particular activities. In fact, eurocurrency banking largely owes its existence to restraints in domestic banking systems of banks operating in that market.

Describing the complexity of the de jure and de facto regulatory environment for banking in Japan over these eight years is beyond the scope of this paper, but the general situation is well summarized by Suzuki:

> Financial innovation and deregulation of interest rates has proceeded only gradually in Japan, so that interest rates on deposits, which make up the bulk of liabilities of financial institutions, remain largely regulated; the exceptions are interest rates on foreign currency deposits and CDs, the latter of which are subject to quantity regulations.[8]

Therefore, according to Suzuki, both price and quantity restraints tended to operate on domestic activities of Japanese banks. Viner estimated that at year-end 1986 roughly 80 percent of deposits at Japanese banks "fell under fixed interest rate regulations."[9] He further notes that in interbank transactions "call-money and bill discount rates are set by the Tanshi companies in consultation with the Bank of Japan 'the final arbiter of market funds.'"[10]

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8. Suzuki (1986), p. 55.

9. Viner (1988), p. 307.

10. Viner (1988), p. 307.

Tables 8-11 provide data describing the development of the balance sheets of the Japanese City Banks' offices in Japan over a period of slow interest rate deregulation. On the asset side, loans and discounts constitute the largest component and accounted for the largest absolute growth of the domestic office assets of Japanese banks. As shown in Table 9, loans and discounts actually increased slightly as a percent of total assets, while acceptance financing, largely trade related, and perhaps more easily transferred abroad, decreased as a fraction of total assets.

Tables 10 and 11 indicate the changing liability structure of Japanese City Banks operating in a gradually deregulated environment. Over the entire period total deposits actually grew less rapidly than total assets, and deposits' share of total funding declined by nearly 10 percentage points, despite the rapid increase in deposits with unregulated interest rates since 1986. In fact, all deposit growth since year-end 1986 at domestic offices of Japanese City Banks has come from deposits with liberalized interest rates. Negotiable CDs, with free-interest rates, have remained a relatively small percent of domestic office funding because of limits on size, maturity, and until recently, total CD issuance relative to net worth. The one source of funding that has been extremely elastic for Japanese City Banks has been net interoffice liabilities, which in a closed system represent borrowings from Japanese branches in overseas markets which in part can be used to finance foreign currency loans to local Japanese companies.

The basic picture that emerges is that Japanese City Banks have been operating in an environment with low and regulated domestic interest rates, on both deposits and interbank borrowings, and therefore have been

Table 8

Assets of Japanese City Banks
(100 billion Yen)

Date	Cash & deposits with others	Call loans	Securities	Loans and discounts	Customer liability for acceptance	Total
December 1980	109	21	167	713	115	1,228
December 1981	107	36	174	788	109	1,312
December 1982	113	49	177	871	114	1,419
December 1983	132	62	192	964	112	1,557
December 1984	148	50	201	1,081	114	1,702
December 1985	155	73	221	1,235	132	1,940
December 1986	172	94	262	1,412	139	2,205
December 1987	214	87	310	1,606	158	2,510
December 1988	261	88	371	1,771	166	2,818

Table 9

Structure of Assets of Japanese City Banks
(Percent)

Date	Cash & deposits with others	Call loans	Securities	Loans and discounts	Customer liability for acceptance	Total
December 1980	8.9	1.7	13.6	58.1	9.4	100.0
December 1981	8.2	2.7	13.3	60.1	8.3	100.0
December 1982	8.0	3.5	12.5	61.4	8.0	100.0
December 1983	8.5	4.0	12.3	61.9	7.2	100.0
December 1984	8.7	2.9	11.8	63.5	6.7	100.0
December 1985	8.0	3.8	11.4	63.7	6.8	100.0
December 1986	7.8	4.3	11.9	64.0	6.3	100.0
December 1987	8.5	3.5	12.4	64.0	6.3	100.0
December 1988	9.3	3.1	13.2	62.8	5.9	100.0

Source: Economic Statistics Monthly, Bank of Japan.

Table 10

Liabilities of Japanese City Banks
(100 Billion Yen)

Date	Total deposits	Of which: Time deposits with liberalized rates	Foreign currency deposits	CDs	Call money	Borrowed from Bank of Japan	Inter-office
December 1980	854		59	11	45	18	16
December 1981	940		68	19	59	11	12
December 1982	990		71	21	68	17	15
December 1983	1,079		82	28	71	32	25
December 1984	1,148		86	46	80	24	47
December 1985	1,256		99	49	68	31	91
December 1986	1,375	110	90	61	110	51	142
December 1987	1,587	289	114	64	124	52	182
December 1988	1,728	485	87	95	124	55	237

Table 11

Structure of Liabilities of Japanese City Banks
(Percent)

Date	Total deposits	Of which: Time deposits with liberalized rates	Foreign currency deposits	CDs	Call money	Borrowed from Bank of Japan	Inter-office
December 1980	69.5	0.0	4.8	0.9	3.7	1.5	1.3
December 1981	71.6	0.0	5.2	1.4	4.5	0.8	0.9
December 1982	69.8	0.0	5.0	1.5	4.8	1.2	1.1
December 1983	69.3	0.0	5.3	1.8	4.6	2.1	1.6
December 1984	67.5	0.0	5.1	2.7	4.7	1.4	2.8
December 1985	64.7	0.0	5.1	2.5	3.5	1.6	4.7
December 1986	62.4	5.0	4.1	2.8	5.0	2.3	6.4
December 1987	63.2	11.5	4.5	2.5	4.9	2.1	7.3
December 1988	61.3	17.2	3.1	3.4	4.4	2.0	8.4

Source: Economic Statistics Monthly, Bank of Japan.

faced with an excess demand for funds above what they can raise through deposits. That excess demand has grown over time; for example at year-end 1980 the loan/deposit ratio at Japanese City Banks was .83; by year end 1988 that ratio had increased to 1.02. As shown in chart 1 restraints on interest rates in the domestic call loan market, as measured by the difference between that rate and either: (1) the euro-yen rate or; (2) the free domestic CD rate, restrained the Japanese City Banks from acquiring funds in the domestic interbank call market. The only fully unconstrained source of funds, in terms of both price and quantity, to meet this excess demand for loans above the ability to acquire domestic funding was through net borrowings from branches in offshore markets.[11]

The regulation of interest rates in Japan has also impeded the growth of domestic offices of Japanese banks relative to other financial intermediaries whose liabilities and assets have been less constrained. While other factors such as rising income and an aging population mix certainly affected the choice of financial instruments, the decline in the banks' share in total financial assets since 1981, as shown in table 12, has been much more rapid than could be reasonably explained by growing wealth or demographic changes. The World Economic Outlook published by the International Monetary Fund interprets these data by noting:

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11. As of November 1, 1988, the Bank of Japan instructed the Tanshi companies to introduce a free offer-bid system for uncollateralized call loans and bills instead of trying to influence interest rates in that market.

Chart 1

DIFFERENTIAL BETWEEN YEN CALL RATE AND FREELY DETERMINED RATES

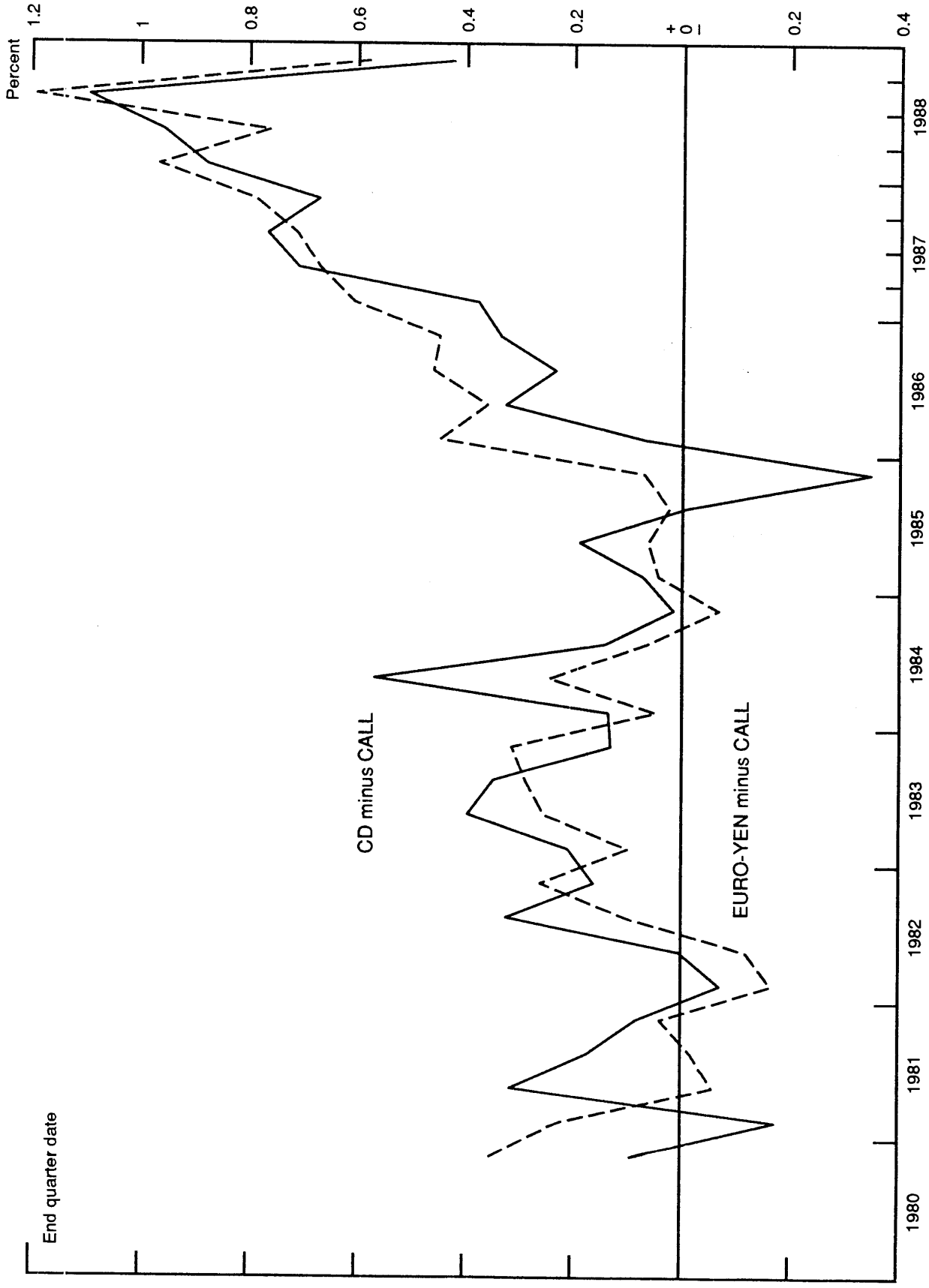

Table 12

Assets Shares of Private Japanese Financial Institutions
(Percent)

Date	Depository institutions	Insurance companies	Trust banks
December 1981	82.7	8.1	9.3
December 1982	81.6	8.4	10.0
December 1983	80.5	8.6	10.9
December 1984	79.4	8.8	11.7
December 1985	78.7	9.2	12.1
December 1986	75.9	9.7	14.4
December 1987	73.9	10.2	15.9
December 1988	71.9	11.3	16.8

Source: Bank of Japan, Economic Statistics Annual, as reported in IMF, World Economic Outlook, April 1989, updated by authors.

> In Japan, the shift of asset composition toward nonbank institutional investors is also related to the relatively high interest rates they offer to savers under the current regulated interest rate structure. With interest rate deregulation proceeding rapidly, however, that factor will be less important in the future.[12]

Banks in Japan, therefore, because of their relatively tightly regulated status, have been losing ground to other financial institutions as well as facing an excess demand for loans.

B. The Japanese External Economic Environment

As shown in table 13, since the beginning of the 1980s, Japan has run a current account surplus. From 1983 through 1987, the current account surplus rose steadily and between 1986 and 1988 averaged about $85 billion per year. During this period the net long-term capital outflows exceeded the current account surplus in every year from 1981 through 1988 (except for 1983), and in the past three years the net long-term capital outflow was approximately $150 billion greater than the cumulative current account surplus. A large proportion of this excess funding of the current account surplus has reflected the acquisition of foreign securities by nonbank investors such as insurance companies and pension funds.

The large portfolio investment by Japanese nonbank financial firms in foreign securities results from regulatory changes within Japan, beginning in the late 1970s, that allowed nonbank institutions to diversify and seek higher rates of return abroad as restrictions on holding foreign-currency denominated assets were gradually lifted. In 1979, pension trust accounts at Trust Banks were permitted to hold foreign-currency assets up to 10 percent of total assets. In 1986 this

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12. International Monetary Fund (1989), p. 89.

Table 13

Japanese External Accounts
(billions of dollars)

Date	Current account	Net change in: Long-term assets Total	Portfolio	Lending	Short term assets Non-banks	Banks
December 1980	10.7	2.3	9.4	-2.8	0.0	3.1
December 1981	4.8	-9.7	4.4	-5.3	2.8	6.4
December 1982	6.9	-15.0	2.1	-7.3	3.1	0.0
December 1983	20.8	-17.7	-1.9	-8.5	2.1	-3.6
December 1984	35.0	-49.7	-23.6	-12.0	-0.6	17.6
December 1985	49.2	-64.5	-43.0	-10.5	3.1	10.8
December 1986	85.8	-131.5	-101.4	- 9.3	0.8	58.8
December 1987	87.0	-136.5	- 93.8	-16.3	20.0	71.8
December 1988	79.5	-130.3	- 66.8	-15.0	21.9	44.5

Source: IMF World Econoimic Outlook, April 1989, p. 86.

ratio was raised to 25 percent, then 30 percent. This liberalization permitted a substantial increase in foreign security holdings by pension trusts in 1986 and 1987. The ratio of permitted foreign currency-denominated assets for many types of insurance companies was raised from 10 percent of total assets to 25 percent and then 30 percent of assets in 1986. Finally, in 1987, similar limits on the Postal Life Insurance Fund were raised from 10 percent to 20 percent. The net effect of these, and other liberalizations, on the holding of foreign currency denominated assets by Japanese institutional investors, was a substantial increase in the demand for long-term foreign securities.

With long-term capital outflows exceeding the current account surplus, short term capital inflows have balanced the Japanese balance of payments. As data in table 13 show, short-term inflows through the banking system became noticeable in 1984 and 1985, and grew to a substantial amount in 1986 and 1987 when other financial intermediaries were actively investing abroad. As noted earlier, these short-term inflows were largely net borrowings by Japanese banks from their overseas branches, particularly their branches in London.[13]

In summary, it appears that the activities of the Japanese banks abroad are closely linked to the financial regulatory climate in Japan. The rapid deregulation of nonbank intermediaries, combined with a relatively slow de facto deregulation of deposits at banks, has rendered Japanese banks relatively less competitive in competing for domestic

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13. The borrowings, largely dollar denominated, have been helpful in funding dollar loans which allow nonbank investors to hedge the currency risk on their foreign currency (mainly dollar) denominated) assets.

source funds and relatively more dependent on their overseas branches to fund their domestic lending.[14]

IV. The Empirical Model

The previous sections have described the U.S. and U.K. activities of Japanese banks and the financial and regulatory environment in which they operate in their home country. This section will estimate some simple econometric relationships to explain the factors determining the assets of the branches of the Japanese banks in these two overseas markets.

The explanatory variables include factors specific to the Japanese domestic economy as well as factors in the overseas markets which may be influencing the branches' growth, including measures of existing regulatory restraints on bank expansion. The principal measures of the degree of restraint on banks in Japan were: (1) the difference between the free domestic CD rate and the restrained call rate in the interbank market (IGAP),[15] and (2) the difference between loans and deposits at City Banks in Japan (loans minus deposits).

These two variables are attempts to measure the impact of both price and quantity restraints on the ability of Japanese banks in Japan to fund their loan demand directly from local sources, or to trade in interbank markets at market clearing prices. The observed levels of IGAP and loans minus deposits are in fact ex post measures of remaining

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14. Because of its position as a short-term borrower and long-term net lender, Japan is playing a role of international financial intermediary as well as serving as a net source of world savings.

15. IGAP is the monthly average interest rate gap for the last month of the quarter.

restraints that the banks have been unable or unwilling to avoid by further shifting their activities overseas. The equations contained a broad measure of the gross size of the host country market which might explain opportunities for foreign banks to expand.

In addition to the local market size variable, cyclical measures for the home country (Japan) and host country were used to determine whether cyclical factors, everything else equal, were influencing Japanese bank activities in these foreign markets. The measure of the cyclical effect was the ratio of capacity utilization in manufacturing, and it was expected that a high rate in Japan would encourage Japanese banks to concentrate more on their home market. Total Japanese trade, merchandise exports plus merchandise imports, was also used as an independent variable because of the importance of the branches, particularly in the United States, in financing Japanese trade.

All variables were in levels, were not seasonally adjusted, and (except for percentages and ratios) were in billions of current dollars, converted where necessary to dollar-equivalents by concurrent exchange rates. Since all variables were in dollars or dollar-equivalents, the equations did not utilize any exchange rate variables.

A. Japanese Banks in the United Kingdom

Table 14 presents results of regressions for the total nonsterling assets of branches of Japanese banks in the United Kingdom. Nonsterling assets was used as the dependent variable to avoid the need to model the relatively minor component of sterling transactions of the Japanese banks. Equations were estimated only for total nonsterling

Table 14

Regression Equations for
Nonsterling Assets of U.K. Branches
of Japanese Banks

Independent variable	Nonsterling assets (1)	Nonsterling assets (2)
Constant	40.05	- 92.55
	(.72)	(1.42)
Nonsterling assets of other banks in U.K.	.647	.790
	(12.07)	(18.07)
Japan trade	.989	--
	(3.65)	
Capacity utilization in Japan	-2.092	-.580
	(3.37)	(1.05)
IGAP	-2.286	.994
	(.58)	(.21)
Loans minus deposits in Japan	1.059	.977
	(9.32)	(7.31)
Q1	31.69	18.51
	(5.49)	(3.43)
Q2	7.78	4.64
	(1.96)	(1.00)
Q3	24.13	19.79
	(5.88)	(4.20)
R^2	.996	.993
F	754.81	598.21
DW	2.05	1.23

Estimation period: 1980(Q1) to 1988 (Q4). t statistic in parentheses.

assets because London branches are primarily funding centers for their head offices, and other assets accounted for a relatively small proportion of their total business. No equations were estimated for individual liability items because funding decisions generally reflect immediate market opportunities rather than basic business decisions. Moreover, the large component of CDs in their liability mix, which cannot be allocated to particular types of customers, further complicates analyzing the liability structure of Japanese branches.

The first equation in table 14 shows that the size of the local market was an extremely important factor influencing the asset size of Japanese banks in London, and that Japanese total trade, measured as the sum of merchandise imports and exports, appeared highly correlated with the activities of the London branches. The ratio of capacity utilization in Japan had a negative impact on their London branches' assets. Because the equations were only estimated for nonsterling assets, no cyclical variable was included for the U.K. economy.

The equations in table 14 also estimated the impact of the financial restraint variables in Japan on the U.K. branches. The regressions showed an insignificant relationship between U.K. branch assets and the interest rate gap, but a very strong positive relationship between total nonsterling assets at U.K. branches and the measure of loans minus deposits in Japan. This finding underscores the importance that the London branches played in financing the excess demand for funds of their head offices during this period.

The close statistical relationship that was found between assets at the London branches and Japanese trade is difficult to interpret because these branches tend not to be as heavily involved in

financing Japanese trade as the branches in the United States. To test the importance of the trade variable an alternative regression was estimated which excluded that variable. The result of that alternative, shown in Column 2 of table 14, indicates that the exclusion of the variable for total Japanese trade did not affect the significance of the relationship of the London branches to the size of the host market or to financing their head offices. The relatively high degree of serial correlation in the alternative equation suggests that the trade variable might be collinear with other important variables that vary over time.

The equations for the U.K. branches displayed a very strong and statistically significant seasonal pattern with large increases in assets reported in the first and third quarters. These seasonal patterns were quite large, compared to smaller but broadly similar seasonal patterns observed for interbank assets at the U.S. offices. These two quarter-ends are dates for which Japanese banks report asset totals, and the seasonal relationship is consistent with the use of these branches as flexible marginal funding centers for Japanese banks for window dressing purposes.

The activities of the London branches of Japanese banks appear to be driven by four factors: (1) growth of the international eurocurrency market in London; (2) a demand for funds by related domestic (Japan) offices to help alleviate local funding constraints; (3) a demand for funding seasonal window dressing activities, and (4) some relationship to total Japanese trade which is difficult to interpret.

B. Japanese Banks in the United States

Similar equations were estimated for the U.S. assets of Japanese banks. U.S. activities of Japanese banks were assumed to be

"pulled" by U.S. GNP and the total amount of Japanese trade, which is largely financed by Japanese banking offices in the United States. In addition to the cyclical variable for capacity utilization in Japan, a variable was included for capacity utilization in manufacturing in the United States to test if host country cyclical factors were influencing Japanese bank assets.

Table 15 reports the regression results for total assets and two subcategories of assets for agencies and branches of Japanese banks in the United States. The equations for the two subcategories, Commercial and Industrial (C and I) loans and interbank claims, are estimated because these assets reflect very different kinds of business decisions by banks which might respond to different economic factors. The regression results suggest total assets of Japanese banks in the United States are "pulled" in by increases in U.S. GNP and by Japanese total trade. In addition to these variables, total assets of Japanese banks in the United States were significantly correlated with <u>both</u> measures of financial restraint in Japan, were not significantly related to the ratio of capacity utilization in Japan and were negatively and significantly related to the ratio of capacity utilization in the United States.

Table 15 reports the separate regressions for C and I loans and for gross claims on banks. The equations for these two subcategories of assets differed significantly. A strong positive correlation was found between the agencies and branches' C and I lending and total Japanese trade, a significant positive relationship was found between C and I lending and both IGAP in Japan and loans minus deposits in Japan, and a

Table 15

Regression Equations for
Assets of U.S. Agencies and Branches
of Japanese Banks

Independent variable	Dependent variable: Total assets	C and I loans (1)	C and I loans (2)	Claims on banks
Constant	13.90	6.00	7.56	-5.88
	(.29)	(.40)	(.48)	(.21)
US GNP	.118	.001	.006[1]	.113
	(3.51)	(.09)	(.18)	(5.60)
Japan trade	1.801	.823	.819	.054
	(8.31)	(11.94)	(11.29)	(.42)
Capacity utilization in Japan	.658	.259	.278	.138
	(.97)	(1.19)	(1.24)	(.34)
Capacity utilization in the U.S.	-2.274	-.806	-.813	-.604
	(4.15)	(4.63)	(4.52)	(1.84)
IGAP	22.600	4.653	4.970	12.81
	(3.90)	(2.53)	(2.44)	(3.70)
Loans minus deposits in Japan	.905	.159	.171	.472
	(5.89)	(3.25)	(3.31)	(5.13)
Q1	19.71	4.50	4.44	10.25
	(3.96)	(3.25)	(2.96)	(3.44)
Q2	5.15	.54	.47	3.02
	(1.35)	(.44)	(.39)	(1.33)
Q3	17.67	3.99	3.98	8.79
	(4.82)	(3.42)	(3.42)	(4.01)
R^2	.993	.986	.986	.991
F	398.16	192.41	192.58	275.82
DW	1.80	1.83	1.91	1.62

1/ C and I lending by large U.S. banks.

Estimation period: 1980(Q2) to 1988(Q4). t statistic in parentheses.

positive but insignificant relationship was observed between C and I lending and U.S. GNP. The equation for C and I lending by U.S. offices of Japanese banks in the United States underscores the importance of these offices in financing Japanese trade. The lack of a stronger relationship between C and I lending and U.S. GNP was surprising. An alternative regression was computed using C and I lending by large U.S. banks, instead of domestic U.S. GNP, as a measure of the size of the domestic market. The results, shown as the second C and I equation in table 15, differed little from the alternative using U.S. GNP.

It is important not to overinterpret the insignificant finding between Japanese bank C and I lending in the United States and domestic U.S. economic variables. Japanese and other foreign banks actively compete for domestic U.S. business lending opportunities.[16] A number of the independent variables in the regressions are collinear, and the regression equation in table 14 suggests that the variable for total Japanese trade was one of the strongest variables in explaining Japanese bank activity in the United States.

A third regression was computed for gross interbank claims of Japanese banks in the United States. This variable measured gross interbank trading activity by agencies and branches with other banks located both in the United States and abroad. Total interbank activity was not correlated with Japanese trade, either measure of capacity utilization in manufacturing, but was highly correlated over time with both measures of financial restraints in Japan as well as U.S. GNP. The

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16. U.S. branches of Japanese banks are also active in various off-balance sheet fee-based business in the United States which are not picked up in the regressions in table 15.

strong correlation with the financial restraint variables in Japan suggests that Japanese banks did in fact shift interbank trading to their U.S. offices in response to restraints on their activities in Japan. Interbank assets at the U.S. agencies and branches showed a tendency towards a seasonal increase in the first and third quarters of the year, but not nearly as large as the similar seasonal variations in activity that were observed for London branches.

In summary, U.S. activities of Japanese banks during this period appeared strongly related to Japanese domestic financial variables as well as conditions in the U.S. market. Commercial and industrial loans at these offices responded to expansions in Japanese trade and restraints on domestic Japanese interest rates, while interbank trading at U.S. offices of Japanese banks responded to both price and quantity restraints on domestic Japanese banking activity.

V. Summary and Conclusions

A number of articles have been written recently about the expansion of Japanese banks into foreign markets. While Japanese bank expansion in U.K. and U.S. markets does appear in part to be driven by local market opportunities, and by straightforward economic variables, a large proportion of Japanese activities in the United States and United Kingdom appears to be related to avoiding financial restrictions at home. In response to these domestic restrictions on prices and quantities of their activities, Japanese banks have shifted some of their commercial lending activities as well as some of their interbank trading activities to the United States. The U.K. branches appear to have been used as a major net source of funding for loans by the banks' home (Japan) offices.

The implications of these findings are twofold. First, to the extent that Japanese bank activities in these two centers are being driven by attempts to avoid domestic Japanese restraints, the concern about local market penetration based on percentages of loans or assets in these two markets is probably overstated. Second, the continued deregulation of banking in Japan, such as the removal of the restraints on interest rates in the call interbank market in late 1988, should lead to some repatriation of what is currently counted as international banking business back to the domestic banking market in Japan, and if so, a possible reversal of the trend toward an increase in the share of Japanese banks in measured international banking aggregates.

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