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INTERNATIONAL BANKING FACILITIES

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ABSTRACT

The Federal Reserve Board permitted banking offices located in the Unites States to establish International Banking Facilities (IBFs) beginning in December 1981. The purpose was to allow these banking offices to conduct a deposit and loan business with foreign residents, including foreign banks, without being subject to reserve requirements or to the interest rate ceilings then in effect. IBFs are also exempt from the insurance coverage and assessments imposed by the Federal Deposit Insurance Corporation. In addition, a number of states have encouraged banking institutions to establish IBFs by granting favorable tax treatment under state or local law for IBF operations.

This paper summarizes the history of the IBF proposal and discusses Federal Reserve Board regulations for IBFs and the treatment of IBFs under state and local tax law. The paper analyzes IBF activities and the use of IBFs in comparison with domestic offices and with foreign branches. The growth of IBFs is evaluated in relation to activities in other international banking centers. The paper concludes that IBFs have not turned out to be the dramatic innovation that some had predicted and that IBFs simply provide another center for booking transactions with foreign residents in a regulatory environment broadly similar to that of the Euromarket. In particular, IBFs appear to to be used for a large proportion of transactions with foreign residents that were, or would otherwise have been, booked at Caribbean branches of U.S. banks. To date, the operation of IBFs has not presented a problem either for the conduct of domestic monetary policy or for bank supervision.

INTERNATIONAL BANKING FACILITIES

Sydney J. Key and Henry S. Terrell*

I. Introduction

The Federal Reserve Board permitted banking offices located in the United States to establish International Banking Facilities (IBFs) beginning in December 1981. The purpose was to allow these banking offices to conduct a deposit and loan business with foreign residents, including foreign banks, without being subject to reserve requirements or to the interest rate ceilings then in effect.[1] IBFs are also exempt from the insurance coverage and assessments imposed by the Federal Deposit Insurance Corporation. In addition, a number of states have encouraged banking institutions to establish IBFs by granting favorable tax treatment under state or local law for IBF operations. As a result, banking offices located in the United States can, through their IBFs, conduct transactions with foreign residents in a regulatory

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*Division of International Finance, Board of Governors of the Federal Reserve System. The authors wish to thank their colleagues at the Federal Reserve Board for their comments and suggestions. The views expressed in this paper are those of the authors and should not be interpreted as representing the view of the Board of Governors of the Federal Reserve System or anyone else on its staff. This paper will be published as a chapter in Yoon S. Park and Musa Essayyad, eds., International Banking and Financial Centers (Kluwer, 1988).

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1 Except for the prohibition against payment of interest on demand deposits, interest rate ceilings on deposits at banking offices in the United States were eliminated by the Monetary Control Act of 1980 with a phase-out period that ended in 1986.

environment broadly similar to that of the Eurocurrency market without having to use an offshore facility.

As of December 1987, more than 540 banking institutions--including U.S.-chartered banks, U.S. agencies and branches of foreign banks, and U.S. offices of Edge corporations--had established IBFs. (See table 1.) Although IBFs have been established by banking offices in 24 states and the District of Columbia, more than three-quarters of total IBF assets are accounted for by institutions located in New York. As is also common in other international banking centers, a large portion of IBF activity consists of interbank transactions, that is, transactions with other IBFs and with banks in foreign countries. U.S. agencies and branches of foreign banks (especially Japanese banks) play a major role in IBF activity, accounting for more than two-thirds of IBF assets.

With total external assets of more than $275 billion, IBF's accounted for nearly 7 percent of worldwide external banking activity as of December 1987; another 5-1/2 percent of this activity is recorded on the domestic (non-IBF) books of institutions located in the United States.[2] In comparison, London accounts for 21 percent of total external banking activity, and the Japanese offshore market, which is similar to IBFs and was introduced in December 1986, accounts for about 4-1/2 percent. Although IBFs have continued to grow since their introduction in 1981, this growth does not appear to be associated with

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2 "External" assets comprise claims on nonresidents (including related foreign offices) denominated in both domestic and foreign currencies. Figures for IBF external assets, which are reported on the Treasury International Capital Reports, are used in Section VI below for purposes of international comparisons. However, the analysis of the structure of IBF activities in Section V uses data from reports submitted to the Federal Reserve for "large" IBFs only; these reports differ in content and coverage from the Treasury reports.

Table 1

Number of IBFs, by State and Type of Establishing Entity, December 31, 1987

State	U.S.-chartered banks	Agencies and branches	Offices of Edge corporations	Total
New York	47	190	17	254
California	20	69	11	100
Florida	26	29	24	79
Illinois	7	19	2	28
Texas	10	0	4	14
District of Columbia	7	3	1	11
Pennsylvania	5	2	1	8
Washington	3	4	0	7
Georgia	4	2	0	6
Ohio	6	0	0	6
Massachusetts	3	1	2	6
New Jersey	5	0	0	5
Others1/	17	0	2	19
TOTAL	**160**	**319**	**64**	**543**

1/Arkansas, Colorado, Connecticut, Delaware, Hawaii, Kentucky, Louisiana, Michigan, North Carolina, Rhode Island, South Carolina, Virginia, and Wisconsin.

Source: Federal Reserve Board.

any major shift of business away from London. For U.S.-chartered banks, the main effect seems to have been a shift of business that would otherwise have been booked at their Caribbean branches to their IBFs.

The history of the IBF proposal is reviewed in the second section of this paper. Federal Reserve Board regulations for IBFs are summarized in the third section, and the fourth section discusses state tax treatment of IBFs. IBF activities and the use of IBFs in comparison with domestic offices and with foreign branches are analyzed in the fifth section. The sixth section evaluates the growth of IBFs in relation to activities in other international banking centers. The final section presents the conclusions.

II. History of the IBF Proposal

During the 1960s, the Eurocurrency market grew rapidly, as did participation in that market by foreign branches of U.S.-chartered banks. The development of the Eurocurrency market resulted in part from U.S. regulatory requirements such as interest rate ceilings, maturity limitations, and reserve requirements on deposits at banks in the United States. In addition, at least initially, some large depositors had a preference for holding dollar-denominated deposits at banking offices beyond the jurisdiction of U.S. law.[3] U.S. measures to reduce net

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[3] One of the first depositors in the Eurodollar market was the Russian government, which wanted to hold its dollar-denominated deposits outside the United States because of fear that the deposits might be confiscated. The term Eurodollars is said to have been derived from the telex code (Eurobank) of a Russian-controlled bank in Paris, Banque Commerciale pour l'Europe du Nord.

capital outflows from the United States that were in effect from the mid-1960s until January 1974 also contributed to the growth of the offshore banking market.[4]

Although dollar-denominated assets and liabilities predominate, Euromarket activity now includes transactions in all major currencies and is conducted in international financial centers around the world. However, the "Eurocurrency" market is a rather narrow concept in that it includes only deposits and loans booked outside the country in whose currency they are denominated; transactions conducted with foreign residents that are denominated in domestic currencies, an important part of international banking, are not included. Thus, strictly speaking, IBF transactions with foreign residents denominated in U.S. dollars are not part of the Eurocurrency market because IBFs are located in the United States. However, the traditional concept of the Eurocurrency market has been supplanted by a broader concept of "international" banking transactions that is now widely used.[5] This concept includes <u>all</u> "external" transactions (that is, transactions with foreign residents denominated in domestic or foreign currencies) as well as transactions with domestic residents in foreign currencies.

Proposals for banking facilities similar to IBFs were first put forward in the early 1970s to allow U.S. banks more flexibility under the

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[4] These measures included the Interest Equalization Tax, which was enacted in 1963, and the Voluntary Foreign Credit Restraint Program, which began in 1965. A third measure was the Foreign Direct Investment Program, which was introduced on a voluntary basis in 1965 and became mandatory in 1968.

[5] See, for example, Ralph C. Bryant, <u>International Financial Intermediation</u> (The Brookings Institution, 1987), pp. 23-30; Bank for International Settlements, <u>International Banking and Financial Market Developments</u>, Fourth quarter 1987, p. 2; and Morgan Guaranty Trust Company, <u>World Financial Markets</u>, July 1988, p. 15.

Voluntary Foreign Credit Restraint (VFCR) program, which set ceilings on claims on foreigners held by U.S. banking offices. The proposals would have enabled domestic banking offices to lend funds raised abroad to foreign residents without being subject to these ceilings. After the removal of the VFCR and other U.S. capital controls in January 1974, IBF-type proposals reemerged as a possible method of reducing the burden of domestic reserve requirements and interest rate limitations. Proposals for a "foreign window" or a "free-trade banking zone" were studied within the government as a way of granting regulatory relief. The Federal Reserve Board was, however, concerned about the effect that the adoption of such proposals might have on the conduct of monetary policy and on competition among groups of U.S. banks.

The proposal that culminated in the final IBF regulations was submitted to the Board by the New York Clearing House Association in July 1978. The month before, the New York state legislature had enacted a statute granting favorable tax treatment to IBFs under New York state and city law, subject to the condition that the Federal Reserve Board take action to exempt IBF activities from reserve requirements and interest rate limitations.

The Board considered the IBF proposal in December 1978, and decided to request comment on a number of its features and to analyze further the issues involved. After passage of the Monetary Control Act of 1980, which broadened the Federal Reserve Board's authority to impose reserve requirements and explicitly confirmed the Board's authority to exempt IBFs from such requirements, the Board again considered IBFs. In June 1981 the Board adopted final regulations, which became effective December 3, 1981.

III. Federal Reserve Board Regulations

Although IBFs are often regarded as engaging in loan and deposit transactions, in reality an IBF is not an institution but rather a set of asset and liability accounts segregated on the books of its establishing entity. Under Federal Reserve Board regulations, IBFs may be established by a U.S.-chartered depository institution, a U.S. branch or agency of a foreign bank, or a U.S. office of an Edge or Agreement corporation.[6] No formal application is required to establish an IBF. However, before doing so, the establishing entity must notify its Federal Reserve Bank and agree to comply with the Federal Reserve Board's regulations, including recordkeeping, accounting, and reporting requirements.

Transactions that may be booked at an IBF are specified in the Federal Reserve Board's Regulation D (Reserve Requirements of Depository Institutions). In exempting IBFs from reserve requirements and from the interest rate ceilings then in effect, the Board intended to facilitate the provision of international banking services to foreign customers at banking offices in the United States. However, to avoid complicating the conduct of domestic monetary policy, the Board wanted to insulate U.S. economic activity from IBF transactions. Among the Board's principal concerns was the possibility that IBF accounts might be substituted for transaction accounts included in the monetary aggregates or be used to circumvent reserve requirements or interest rate ceilings. Consequently,

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[6] Edge corporations are chartered by the Federal Reserve Board to engage in international banking and financial operations and may be established in locations outside the state in which their owner operates. Agreement corporations are state-chartered corporations that have entered into an agreement with the Federal Reserve Board to limit their activities to those of an Edge corporation.

the Board's regulations impose a number of limitations on IBF activities that do not apply to foreign branches of U.S.-chartered banks.

First, IBF loan and deposit customers are restricted to foreign residents (including banks), other IBFs, and the entity establishing the IBF. Lending to or accepting deposits from any other U.S. resident is prohibited. Net funds obtained by a U.S. banking office from its own IBF are subject to Eurocurrency reserve requirements in the same manner as net funds obtained from its foreign offices because such funds are used to finance the bank's domestic activities in the United States.

Second, limitations are placed on the maturity of "IBF time deposits," which may be in the form of deposits, borrowings, placements, or similar instruments. An IBF may offer such deposits with an overnight maturity to banks in foreign countries, to other IBFs, and to domestic and foreign offices of its establishing entity. However, in order to ensure that they are not close substitutes for reservable transaction accounts at domestic banking offices, IBF time deposits of nonbank foreign residents are required to have a minimum maturity of two days.[7]

Third, transactions of nonbank customers at IBFs are subject to a minimum amount of $100,000; a withdrawal of less than this amount is permitted only to close out an account or to withdraw accumulated interest. The Board believed that this limit would be sufficient to preserve the wholesale nature of IBF business but would not be so high as to prevent smaller banking institutions that engage in international

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[7] IBF transactions with foreign governments and official institutions are treated in the same manner as IBF transactions with foreign banks. Deposits of foreign governments and official institutions, like those of foreign banks, are not included in the U.S. monetary aggregates.

transactions from making use of an IBF. Deposits and withdrawals of banks at IBFs are not subject to any minimum amount.

Fourth, IBFs are prohibited from issuing negotiable instruments because such instruments might be purchased from the original holders in secondary market transactions by U.S. residents who are not eligible deposit customers of IBFs.

Fifth, an IBF may extend credit to a foreign nonbank customer only if the proceeds are used to finance operations of the borrower (or its affiliates) outside the United States. Similarly, under the Board's regulations, an IBF may accept a deposit from a foreign nonbank customer only if the funds are used to support operations of the depositor (or its affiliates) outside the United States.[8]

Sixth, IBFs may engage in secondary market transactions only to the extent that such transactions are consistent with the Board's overall restrictions on IBF activities. IBFs may purchase (or sell) assets such as loans, loan participations, securities, certificates of deposit, and bankers acceptances from (or to) any domestic or foreign customer (except domestic affiliates of the establishing entity), provided that the assets are IBF-eligible and that the transactions are at arm's length and without recourse.[9] A negotiable instrument issued by a third party and acquired by an IBF on the secondary market may be sold by the IBF only if

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[8] This policy must be communicated in writing to IBF nonbank customers when a credit or deposit relationship is first established; foreign affiliates of U.S. entities must supply a written acknowledgement that such notice has been received.

[9] In order for an asset to be eligible to be held by an IBF, the obligor (or in the case of bankers acceptances, both the customer and any endorser) must be IBF-eligible.

the instrument is not guaranteed by the establishing entity or its affiliates. The purpose of this limitation is to prohibit transactions that would be functionally equivalent to the issuance of negotiable instruments by an IBF.

The Federal Reserve Board's limitations on IBF activities are more restrictive than those it imposes on the activities of foreign branches of U.S.-chartered banks.[10] In contrast to IBFs, such branches are not prohibited from accepting deposits from and making loans to U.S. residents. There are no limitations on the maturities of deposits at such branches provided that they are payable only outside the United States. In addition, unlike IBFs, foreign branches of U.S. banks may issue negotiable instruments, such as certificates of deposits and bankers acceptances, and they may purchase or sell assets in secondary market transactions without restriction.

For purposes of U.S. reserve requirements, foreign branches and IBFs are treated in a similar manner. Deposits at foreign branches of U.S. banks that are payable only outside the United States are not subject to U.S. reserve requirements. Net advances by a foreign branch to its U.S. parent bank, purchases of assets from its parent bank, and branch loans to U.S. residents are included in the calculation of the parent bank's required Eurocurrency reserves because such transactions provide sources of funding for the bank's domestic activities.

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[10] Foreign branches of U.S.-chartered banks are, of course, also subject to regulations imposed by the host-country authorities.

IV. Tax Laws and Regulations

Favorable tax treatment under state and local statutes has been an important factor for banks in assessing the attractiveness of establishing an IBF. Where favorable state or local tax treatment for IBFs has been granted, there are usually tax advantages in booking loans at an IBF rather than at a domestic office. For some U.S.-chartered banks, particularly under New York state and city law prior to 1985 and also under an optional method of taxation under present New York law, there have also been tax advantages to booking loans at an IBF rather than at a shell branch. The reason is that, in some instances, the tax authorities have attempted to apply state and local tax laws so that certain income from shell branches would, in effect, be treated as income of the domestic office and thus subject to state and local taxation. In such a situation, a bank might prefer to use an IBF instead of a shell branch in order to rely on specific statutory provisions granting tax relief to IBFs.

At least ten states, including New York, have enacted special tax legislation for IBFs.[11] The provisions for tax relief differ among the states, reflecting differences in both the underlying state tax structures and the extent of the tax relief provided for IBF operations. There have been no modifications to federal tax statutes for IBFs; as a result, income arising from IBF activities is subject to U.S. federal income taxation in the same manner as other income of the establishing entity.

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11 Others include California, Connecticut, Delaware, Florida, Georgia, Illinois, Maryland, North Carolina, and Washington; the District of Columbia has also enacted IBF tax legislation.

Because the bulk of IBF activity is located there, the tax treatment of IBFs under New York law will be summarized briefly. Although New York was the first state to grant favorable tax treatment to IBFs, it initially limited that relief in a number of ways. The 1978 New York statute established a complex formula for determining the amount of IBF income that could be deducted from New York taxable income in computing New York state and city income taxes. This procedure reflected the provisions of New York tax law then in effect for determining the portion of a bank's overall income subject to New York taxation.[12]

In 1985, in order to tax banks in a manner similar to other corporations, to treat banks and thrifts similarly, and to make tax calculations more predictable and less likely to require adjustment upon audit, New York changed its overall approach to taxation of banks with the introduction of a three-factor apportionment formula, and the treatment of IBFs also changed.[13] Under the 1985 statute, the portion of a bank's adjusted federal taxable income that is subject to New York taxation is determined by an apportionment formula that takes into account the ratio of New York to total receipts, deposits, and payroll. In accordance with this approach, banks now have the option of treating IBF receipts, deposits, and payroll as if they were located outside New York for purposes of the formula, that is, treating IBFs in the same manner as branches located outside New York State.

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[12] Prior to the 1985 taxable year, almost all New York banks computed taxable income on a separate accounting basis under which each item of income and expense was identified as attributable to business conducted either inside or outside New York.

[13] See Marilyn M. Kaltenborn, "Is New York's Bank Tax Ready for the 1990s?," <u>Journal of State Taxation</u>, vol.4 (Fall 1985), pp. 225-34.

Under the new law, the state also allowed banks the option of continuing to use the pre-1985 separate accounting approach for IBFs. Under this option, adjusted federal taxable income may be reduced by the amount of the IBF's "adjusted eligible net income," which as noted above, is computed according to a rather complex formula.[14] Most of the major domestic banks have chosen to continue to use the separate accounting option for their IBFs. By contrast, the vast majority of U.S. agencies and branches of foreign banks use the formula apportionment option.

V. IBF Activities

IBFs have continued to grow since their inception in December 1981. Their activities consist primarily of transactions with banks, a pattern similar to that in other Euromarket centers. As of December 1987, claims on unrelated parties (that is, total assets excluding claims on the establishing entity and its foreign offices) at large IBFs amounted to about $180 billion.[15] (See table 2.)

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[14] In order to compute an IBF's "adjusted eligible net income," certain expenses are deducted from "eligible gross income" (as defined in the statute), and the "ineligible funding amount" is also deducted. The latter adjustment reflects a decision to give an IBF a tax benefit only to the extent that the IBF is funded by foreign persons, including other IBFs. (An additional adjustment for the "floor amount" was designed to avoid an abrupt decrease in tax revenues by reducing the tax benefit granted to an IBF in proportion to any decline in foreign lending activity on the domestic books of its establishing entity. However, because the base period for the calculation is 1975-77 and the floor amount is phased out over a ten-year period, in general the practical effect of this adjustment is now negligible.)

If the separate accounting option is chosen, the IBF must be excluded from the allocation formula, that is, the IBF must be excluded not only from New York receipts, deposits, and payroll (the numerators of the apportionment factors) but also from total receipts, deposits, and payroll (the denominators of the apportionment factors).

[15] Large IBFs are defined as those with total assets or total liabilities of at least $2 billion. As of December 1987, 13 U.S. banks and 38 U.S. agencies and branches of foreign banks operated large IBFs.

Table 2

Assets and Liabilities of Large International Banking Facilities, December 31, 1987[1]
(billions of dollars)

Balance sheet item	U.S.-chartered banks	Agencies and Branches	Total all entities
ASSETS			
1. **Claims on unrelated parties[2]**	**56.1**	**124.5**	**180.6**
2. **Loans and balances due from other IBFs**	2.8	41.6	44.5
Balances due from:			
3. Banks in foreign countries	4.3	26.3	30.7
4. Foreign governments and official institutions	1.1	.1	1.2
5. **Securities of foreign residents**	.2	4.7	4.9
Loans to foreign residents:			
6. Commercial and industrial loans	15.1	10.1	25.2
7. Banks in foreign countries	11.0	19.0	30.0
8. Foreign governments and official institutions	17.3	7.2	24.5
9. Other loans	.6	.1	.7
10. **Other assets in IBF accounts**	1.5	2.8	4.2
11. **Gross claims on foreign offices of establishing entity[2]**	**22.7**	**54.1**	**76.7**
12. **Total assets other than claims on U.S. offices of establishing entity (item 1 plus item 11)[2]**	**78.7**	**178.6**	**257.3**
LIABILITIES			
13. **Liabilities due to unrelated parties[2]**	**30.9**	**130.2**	**161.1**
14. **Liabilities due to other IBFs**	5.6	40.4	46.0
15. Overnight maturity or notice	.8	2.0	2.8
16. **Liabilities due to banks in foreign countries**	10.0	62.2	72.2
17. Overnight maturity or notice	2.4	3.8	6.2
18. 2-6 days maturity or notice	1.5	2.5	4.0
19. 7 days or over maturity or notice	6.1	55.9	62.0
20. **Liabilities due to foreign governments and official institutions**	5.6	6.3	12.0
21. Overnight maturity or notice	2.0	3.0	4.9
22. 2-6 days maturity or notice	.7	.6	1.2
23. 7 days or over maturity or notice	3.0	2.8	5.8
24. **Liabilities due to other foreign residents**	5.2	2.7	7.9
25. 2-6 days maturity or notice	.4	.2	.6
26. 7 days or over maturity or notice	4.8	2.5	7.3
27. **Other liabilities in IBF accounts**	2.0	2.3	4.2
28. **Gross liabilities due to foreign offices of establishing entity[2]**	**47.1**	**67.8**	**115.0**
29. **Total liabilities other than those due to U.S. offices of establishing entity (item 13 plus item 28)[2]**	**78.1**	**198.0**	**276.1**
RESIDUAL			
30. Net due from or net due to(-) U.S. offices of establishing entity (item 29 minus item 12)[2]	-.7	19.4	18.8
MEMO: Net due from or net due to(-) foreign offices of establishing entity (item 11 minus item 28)[2]	-24.5	-13.7	-38.2
Number of reporters	13	38	51

1/ Includes data only for entities whose IBFs had assets or liabilities of at least $2 billion on December 31, 1987 or any previous report date during the preceding year. (Details may not add to totals because of rounding.)

2/ Includes amounts denominated in both U.S. dollars and foreign currencies; unless noted, figures on all other lines include only amounts denominated in U.S. dollars. As a result, the figures shown for claims on (liabilities due to) unrelated parties exceed the sum of their components (for which foreign-currency denominated items are not reported) by the amount of claims (or liabilities) denominated in foreign currencies.

Source: Federal Reserve Statistical Release G-14.

Claims on unrelated banks, including both foreign banks and other IBFs, were the largest component of IBF assets, accounting for nearly 60 percent of the claims of large IBFs on unrelated parties. However, this overall figure masks differences between U.S. banks and agencies and branches of foreign banks in their use of IBFs. In the aggregate, claims on banks accounted for more than two-thirds of claims on unrelated parties at large IBFs of agencies and branches; the comparable figure for large IBFs of U.S. banks was less than one-third.

This difference in the importance of interbank activity is accounted for by the more extensive use of the inter-IBF market by the agencies and branches of foreign banks. The less extensive use of the inter-IBF market by U.S. banks reflects the fact that domestic banks are relatively more active in the federal funds market and other U.S. money markets than are the agencies and branches. In comparison with the agencies and branches, claims at large IBFs of U.S. banks are more heavily concentrated in commercial and industrial lending and loans to foreign governments and official institutions.

On the liability side, IBF business also consists primarily of interbank and intrabank transactions. The agencies and branches are the major borrowers in the inter-IBF market, where they accounted for about 90 percent of liabilities due to other IBFs as of December 1987. Large IBFs of both U.S. banks and agencies and branches were, in the aggregate, net borrowers from related foreign offices; such borrowings serve as one source of funding for the U.S. current account deficit. However, in comparison with IBFs of agencies and branches, IBFs of U.S. banks relied much more heavily on these borrowings to fund IBF activities. As of December 1987, large IBFs of U.S. banks were funding almost 45 percent of their claims on unrelated parties with net advances from related foreign offices; the comparable figure for large IBFs of U.S. agencies and branches of foreign banks was 11 percent.

The bulk of deposits at IBFs of both U.S. banks and agencies and branches have maturities of seven days or more. Deposits of private nonbank customers remain relatively small, totaling only about $8 billion, and although deposits with maturities as short as two days are available to these customers, more than 90 percent of their deposits have maturities of seven days or more. Thus there is no evidence that private nonbank customers have tried to use IBF deposits as a substitute for transaction accounts at U.S. banking offices, which was one of the Board's initial concerns. By contrast, IBF deposits with an overnight maturity are permitted for foreign governments and official institutions and account for about 40 percent of the deposits of these customers at large IBFs. The rates paid on IBF deposits have been virtually the same as rates on Eurodollar deposits of comparable size and maturity.

IBF deposits and loans may be denominated in either U.S. dollars or foreign currencies. Although U.S. banks had sought this ability, to date the volume of their IBF business denominated in foreign currencies has been moderate. As of December 1987, business denominated in foreign currencies accounted for about 5 percent of total assets and total liabilities at large IBFs of U.S. banks. These figures compare with a share of business denominated in nondollar currencies of about 5 percent of total assets and total liabilities at Caribbean branches of U.S. banks and more than 35 percent at London branches of U.S. banks. Business denominated in foreign currencies accounts for nearly 20 percent of total assets and total liabilities at large IBFs of agencies and branches, although almost all of this business is concentrated at IBFs of Japanese agencies and branches.

With regard to IBF activities in general, the consensus in the banking community is that IBFs have not created a substantial amount of new business. Rather, the business now on the IBF books was either shifted there from establishing entities or their foreign offices or would, in the absence of IBFs, have been booked at the establishing entities or their foreign offices.[16]

In the case of large U.S.-chartered banks, most of the assets and liabilities shifted to IBFs were originally on the books of their foreign branches, primarily those in the Caribbean; without IBFs, most of the other assets and liabilities now at IBFs of U.S. banks would probably also be on the books of the Caribbean branches. Because many of the transactions booked at Caribbean branches of U.S. banks were actually conducted in New York or other financial centers in the United States, IBFs simply permitted a more rational and operationally efficient pattern of booking for such transactions. As a result, there do not appear to have been substantial income or employment gains in the United States associated with the introduction of IBFs.

With regard to state and local taxes, some U.S.-chartered banks may find it advantageous (in particular, under the optional separate accounting method of IBF taxation in New York) to book loans at an IBF rather than at a shell branch in the Caribbean. (See Section IV above.) By contrast, in general there is no incentive under federal tax law to

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[16] See Sydney J. Key, "International Banking Facilities," <u>Federal Reserve Bulletin</u>, vol. 68 (October 1982), pp. 572-575, for an account of initial shifting of assets and liabilities to IBFs.

book transactions at an IBF rather than a foreign branch. The reason is that for purposes of federal income taxation, U.S. banks are taxed on their worldwide income, which includes income of both their IBFs and their foreign offices.

In contrast to the pattern at U.S. banks, most of the assets and liabilities shifted to IBFs by U.S. agencies and branches of foreign banks were originally on the books of the U.S. offices. Had IBFs not been introduced, it is not clear whether these assets and liabilities would have remained on the U.S. books or would have been shifted to offshore locations in order to receive more favorable treatment with respect to reserve requirements or taxes.

Prior to the implementation of the International Banking Act of 1978 (IBA), agencies and branches were not subject to federal reserve requirements.[17] When IBFs were introduced in 1981, federal reserve requirements for U.S. agencies and branches of foreign banks were still in the process of being phased in under the IBA and the Monetary Control Act of 1980. As a result, foreign banks had not fully adjusted their U.S. activities to the costs imposed by such requirements. If IBFs had not been introduced, it is not clear how the activities of the agencies and branches would have changed after federal reserve requirements had been fully phased in. It seems likely, however, that at least some portion of the business that would otherwise have been booked at the U.S. agencies and branches would have been moved offshore.

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17 See Sydney J. Key and Gary M. Welsh, "Foreign Banks in the United States," in William H. Baughn and others, eds., <u>The Bankers' Handbook</u> (Dow-Jones Irwin, 1988), chap. 5, pp. 58-71, regarding the activities and regulation of U.S. offices of foreign banks.

Taxes are also an important consideration for the agencies and branches. It is difficult, however, to generalize about tax incentives that apply to the operations of U.S. agencies and branches of foreign banks because such incentives depend on a variety of factors such as home- and host-country tax laws and provisions of bilateral tax treaties, as well as on the circumstances of each individual bank. Income arising from the activities of an IBF at a U.S. agency or branch of a foreign bank is, like that of an IBF of a U.S. bank, subject to U.S. federal income taxation in the same manner as income arising from the activities of the agency or branch itself. By contrast, income associated with activities at non-U.S. offices of foreign banks is not subject to U.S. federal taxation, provided that the income is not "effectively connected" with the activities of a U.S. agency or branch.

As a result, a foreign bank would, in general, increase its U.S. federal income tax liability by shifting assets from a foreign office to an IBF. However, such an increase in U.S. federal tax liability would not necessarily increase the worldwide taxes paid by the foreign bank. The outcome would depend on the tax laws of the bank's home country and provisions of tax treaties between the home country and the United States and between the home country and third countries.

Use of IBFs as opposed to U.S. books. Despite the introduction of IBFs, a number of banking institutions still have some claims on foreign residents and liabilities due to foreign residents on their U.S. books. These include loans to foreign banks and foreign governments, business loans to foreign residents, and time deposits and borrowings from unrelated foreign banks and foreign governments.[18] At least on the surface, there would appear to be tax advantages under state or local law to booking the loans at an IBF, reserve requirement advantages to booking the deposits and borrowings at an IBF, and for the deposits, FDIC insurance-assessment benefits as well. However, as discussed below, other considerations may explain the observed pattern of booking.

One explanation is that the foreign assets and liabilities still on the U.S. books are not eligible for transfer to IBFs under the limitations imposed by the Federal Reserve Board on IBF activities. With regard to assets, it is possible that some portion of business loans to foreign residents, especially those to foreign affiliates of U.S. corporations, may not meet the IBF use-of-proceeds requirement. Loans to foreign banks are not required to meet this test. However, a considerable portion of the amounts reported as loans to unaffiliated foreign banks on the U.S. books may result from overnight overdrafts that arise in the normal process of clearing and funds transfer activities.

With regard to liabilities, it seems likely that most of the time deposits of foreign residents still on the U.S. books are negotiable certificates of deposit, which are not eligible for booking at an IBF. By contrast, borrowings from foreign banks and foreign governments (which are also subject to a three percent reserve requirement) could be shifted from U.S. books to IBFs. However, if a banking institution in the United States is already a net borrower of funds from its foreign offices and

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18 The data used in Section VI below for external banking activity conducted in the United States but not booked at IBFs do not give an indication of these amounts. The reason is that the data in Section VI include gross claims on related foreign offices as well as external assets of nondepository institutions that are not eligible to establish IBFs.

its IBF and wants to use the funds borrowed from unaffiliated foreign banks at its domestic office, there would be no reserve requirement advantage to booking the borrowings at an IBF because funds advanced to the domestic office from an IBF are subject to Eurocurrency reserve requirements.

It is also possible that the character and extent of the tax relief granted to IBFs may be affecting the incentive for banks to shift IBF loans and deposits that are IBF-eligible from their U.S. books to their IBFs. In New York, but only under the separate accounting option for IBF taxation, two aspects of the tax treatment of IBFs may contribute to the booking of IBF-eligible loans on the domestic books.

First, there is no New York state or city tax advantage resulting from the shifting of additional assets to IBF books if such assets are funded by advances from the U.S. office, which would constitute "ineligible funding" for purposes of calculating an IBF's adjusted eligible net income. (See note 14 above.) A bank could try to arrange for the funding to be "eligible" by routing it through a foreign branch. However, in the case of a shell branch some or all of such funds might be treated by the state and local tax authorities as "ineligible funding."

Second, but also only under the separate accounting option of New York state and city law, tax benefits associated with an IBF would not be fully realized if a loan on the IBF books were written off. Because the resulting increase in the amount of the bad-debt deduction would be attributable to the IBF, it would have to be subtracted from the IBF's eligible gross income. Moreover, if the amount of such loans were sufficiently large, a bank could actually increase its state and city tax liability by having shifted the loans to its IBF.[19] It is possible that some U.S. banks that use the separate accounting option for their IBFs may be keeping certain foreign loans on their domestic books for this reason.

By contrast, under the New York option of treating an IBF as if it were outside New York for purposes of the apportionment formula, it is advantageous to be able to allocate receipts, deposits, and payroll to the IBF as opposed to the domestic office. Under this option, whether an increase in the amount of the bad-debt deduction resulted from the charge-off of a loan recorded on the books of the domestic office or the IBF generally would not have a substantial effect on the portion of adjusted federal taxable income that is subject to New York taxation.

Use of IBFs compared with foreign branches. It is impossible to determine conclusively what changes in activities at foreign branches of U.S.-chartered banks would have occurred in the absence of IBFs. Both the structure and growth of international banking since 1980 have been affected by a variety of factors such as the international debt problem, the financing requirements associated with the large U.S. current account deficits, market innovations that have resulted in securitization of international assets for nonbank investors, and pressure by U.S. and other regulatory authorities for banks to increase their capital ratios. However, certain changes in the structure of activities at foreign branches of U.S.-chartered banks do appear to be related to the introduction of IBFs. In particular, U.S. banks appear to have shifted

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19 Under the separate accounting option, if an IBF's adjusted eligible net income is negative, the amount of the loss must be added to the bank's New York taxable income in computing state and city income taxes.

loan and deposit transactions with foreign customers from their Caribbean branches to their IBFs in the United States.

From December 1980 to December 1987, the share of claims on unrelated parties attributable to foreign residents at Caribbean branches of U.S.-chartered banks declined from 90 percent to 62 percent. Over the same period the share of liabilities to unrelated parties attributable to foreign residents declined from 56 percent to 28 percent. (See table 3.) Discussions with bankers support the view that this decline in business with foreign customers at Caribbean branches of U.S. banks is related to the introduction of IBFs. Because the management and recordkeeping activities associated with accounts at Caribbean branches had been conducted primarily in the United States and because Caribbean branch customers had usually dealt with bank officials in the United States, the transfer of this business to IBFs was relatively easy to implement.

However, as of December 1987 nearly $50 billion in claims on unrelated foreign residents and about $25 billion in liabilities due to unrelated foreign residents remained on the books of Caribbean branches of U.S. banks. Four reasons have been suggested for the existence of this business; three are relevant only for nonbank customers, which account for about one-sixth of the claims and one-half of the liabilities. First, the activities of some nonbank customers might not meet the use-of-proceeds or use-of-funds tests for IBF transactions, particularly if the customers are foreign affiliates of U.S. corporations. Second, some nonbank customers may want to keep their accounts outside the United States for reasons of secrecy because they view such accounts as subject to less scrutiny by U.S. and other authorities than an account at an IBF. Third, some nonbank depositors

Table 3

Selected Assets and Liabilities of Caribbean and London Branches of U.S. Banks, 1980-87[1]
(billions of dollars)

	Caribbean branches			London branches		
	December 1980	December 1983	December 1987	December 1980	December 1983	December 1987
Total assets/liabilities	123.8	151.5	160.3	144.7	158.7	159.2
Claims on unrelated parties	97.9	86.4	79.0	104.7	93.1	91.9
U.S. residents	5.1	27.0	25.3	2.2	5.3	5.2
Banks	5.1	27.0	14.3	2.2	5.3	1.3
Nonbanks			11.0			3.9
Foreign residents	88.6	55.4	48.9	96.4	82.8	75.8
Banks	54.9	36.8	33.8	58.7	43.4	36.7
Public/official	12.6	6.1	7.4	6.7	5.9	4.8
Nonbanks	21.1	12.6	7.7	31.0	33.5	34.3
Other assets	4.2	3.9	4.8	6.1	5.0	11.0
Liabilities to unrelated parties	78.6	87.9	87.8	125.1	125.7	112.9
U.S. residents	31.5	60.6	60.6	17.6	41.8	10.2
Banks	7.4	15.7	17.2	5.7	11.3	1.7
Nonbanks	24.1	44.9	43.4	11.8	30.5	8.5
Foreign residents	44.2	25.0	24.6	102.1	76.8	65.6
Banks	29.9	11.9	10.8	56.3	41.6	34.3
Public/official	4.4	1.9	1.5	21.4	10.2	11.0
Nonbanks	9.9	11.2	12.4	24.4	25.0	20.3
Negotiable CDs	-	-	.9	-	-	27.0
Other liabilities	3.0	2.3	1.7	5.5	7.1	10.0
Memorandum: Net claims on parent bank and its other foreign offices	-19.2	1.5	8.8	20.4	32.6	20.9

[1] Includes all foreign branches with total assets of at least $150 million on the end of month report date or on any previous report date in the same calendar year. Prior to June 1984, shell branches with total assets between $50 million and $150 million are also included. The assets and liability categories shown in the table include amounts denominated in both U.S. dollars and foreign currencies. (Details may not add to totals because of rounding.)

Source: Board of Governors of the Federal Reserve System, Annual Statistical Digest.

may not want to be subject to the two-day minimum maturity requirement of an IBF.[20] Fourth, some banks may adhere to an internal "matched funding" rule under which if funds are raised through an offshore branch the associated loan must be booked there as well. The last reason does not, however, seem sufficient to explain why about $34 billion in claims on unrelated foreign banks and about $11 billion in liabilities due to unrelated foreign banks remain on the books of Caribbean branches of U.S. banks.

The introduction of IBFs did not affect transactions with U.S. residents at Caribbean branches of U.S. banks because, as noted above, IBFs are not permitted to lend to or accept deposits from U.S. residents other than the establishing entity or another IBF. Thus U.S. residents wishing to hold deposits at a bank's domestic office have continued to bear the burden of part or all of the bank's costs of reserve requirements and FDIC insurance assessments. As a result, interest rates on domestic office deposits have been relatively unattractive to large corporate customers who are typically willing to accept the small country risk of having a deposit account domiciled at a Caribbean branch of a U.S. bank.

In order to attract funds from these corporate customers, various types of accounts have been developed for U.S. residents at Caribbean branches of U.S. banks. Because these accounts are managed by the U.S. office of the bank, customers have the advantage of being able

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20 The prohibition on issuance of negotiable certificates of deposit by IBFs does not explain the liabilities due to unrelated foreign residents still on the Caribbean branch books because U.S. banks typically issue Eurodollar certificates of deposit through branches in London rather than through branches in the Caribbean.

to communicate with the bank's U.S. office rather than with its Caribbean branch. One of the most widely used types of accounts being offered to U.S. residents is a "sweep account," in which collected funds in various domestic office accounts are automatically deposited at Caribbean branches at Eurodollar rates at a certain time in the business day. The funds in a sweep account can be transferred back to a deposit in a U.S. office for use on the next business day. The availability of sweep and other accounts led to a near doubling of deposits of nonbank U.S. residents at Caribbean branches of U.S. banks between 1980 and 1983.

London branches of U.S. banks experienced slow growth in activity from 1980 to 1987. This experience reflects the generally slow growth of international activities of U.S. banks both in absolute terms and in relation to banks from other countries, particularly Japanese banks. In general, the activities of the London branches of U.S. banks have remained oriented towards non-U.S. customers who wish to have loan and deposit accounts in London. This focus does not appear to have been affected by the introduction of IBFs. However, specific comparisons of the structure of the activities of the London branches over time are difficult because of the importance of negotiable certificates of deposit, which were not reported as a separate category until 1985.[21]

The growth of negotiable certificates of deposit issued by London branches of U.S. banks reflects in large part the issuance of Eurodollar certificates of deposit to money market mutual funds, particularly those domiciled in the United States, and to other large

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[21] Prior to 1985, negotiable certificates of deposit issued by foreign branches of U.S. banks were classified for reporting purposes according to the holder of record, which was normally the custodial bank holding the certificate and not the ultimate beneficial owner.

investors. Because IBFs are prohibited from issuing negotiable certificates of deposit, there is no possibility of this business being transferred to IBFs. In addition, London is a desirable location for banks to issue their negotiable certificates of deposit because the infrastructure for sales, custody, and transfers is very well-developed.

VI. IBFs and other International Banking Centers

In providing special treatment for IBF operations, federal and state authorities hoped that the introduction of IBFs might enhance the competitiveness of the United States as a location for conducting international banking transactions. As table 4 shows, external assets on the books of banks in the United States more than doubled between December 1980 and December 1983.[22] By contrast, external assets in other banking centers grew much more slowly. As a result, the share of external banking activity conducted in the United States increased substantially during this period. (See table 5.)

The data in table 4 indicate that almost all of the increase in the volume of external banking activity conducted in the United States from 1980 to 1983 is statistically associated with activity at IBFs.

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[22] As discussed in Section II above, "external" banking activity includes transactions with foreign residents (including related foreign offices) in both domestic and foreign currencies. "International" banking activity includes external banking activity and also transactions with domestic residents in foreign currencies. The figures in tables 4 and 5 include only external activity because data for foreign currency claims on domestic residents were not published for individual centers prior to 1983.

As of December 1983, the coverage of the data series used in tables 4 and 5 was expanded to include additional banking offices in offshore centers. The tables therefore contain two sets of numbers (on both the old and new basis) for December 1983 in order to permit comparison of consistent data for two separate periods, 1980-83 and 1983-87.

Table 4

External Assets of Banks in Selected Centers, 1980-87 1/
(billions of dollars)

	United Kingdom	United States Total	United States IBFs	United States Other	Japan Total	Japan JOM	Japan Other	France	Luxembourg	Offshore Centers 2/	Grand Total 3/
December 1980	336.3	176.8	--	176.8	65.7	--	65.7	143.2	88.6	141.0	1,321.9
December 1981	401.2	256.3	63.4	192.9	84.6	--	84.6	143.0	88.4	172.0	1,549.5
December 1982	431.4	361.4	143.6	217.8	90.9	--	90.9	148.1	90.5	172.9	1,686.7
December 1983(1)	485.2	398.3	174.2	224.1	109.1	--	109.1	141.3	85.4	179.8	1,754.5
December 1983(2)	488.9	398.3	174.2	224.1	109.1	--	109.1	139.7	85.4	498.8	2,093.0
December 1984	489.7	411.4	189.7	221.7	126.9	--	126.9	141.5	85.6	518.9	2,163.6
December 1985	587.2	417.8	202.8	215.0	194.6	--	194.6	163.5	108.6	555.2	2,568.7
December 1986	714.5	468.7	234.3	234.4	345.3	88.7	256.6	188.0	141.1	677.3	3,221.1
December 1987	875.6	508.9	277.3	231.6	576.9	191.9	385.0	266.4	182.3	878.5	4,157.2

1/ "External" assets include claims on foreign residents denominated in both domestic and foreign currencies. Foreign currency claims on domestic residents are not included because data for such claims were not published for individual centers prior to 1983. In the aggregate, as of December 1987, foreign currency claims on domestic residents amounted to about $980 billion.

2/ Prior to December 1983, data for offshore centers include only branches of U.S. banks. Beginning in December 1983, coverage was expanded to include all banks operating in the Bahamas, Bahrain, the Cayman Islands, Hong Kong, the Netherlands Antilles, and Singapore, as well as branches of U.S. banks in Panama. (At the same time, minor reporting changes were introduced that affected the figures for some of the other centers.) The table shows data for December 1983 on both the old and new basis.

3/ Includes data for Canada and for European countries that are not shown separately.

Source: Bank for International Settlements, International Banking and Financial Market Developments.

Table 5

Shares of Selected Centers in Total External Bank Assets, 1980-87[1/]
(percent of total)

	United Kingdom	United States			Japan			France	Luxembourg	Offshore Centers
		Total	IBFs	Other	Total	JOM	Other			
December 1980	25.4	13.4	-	-	5.0	-	-	10.8	6.7	10.7
December 1981	25.9	16.5	4.1	12.4	5.5	-	-	9.2	5.7	11.1
December 1982	25.6	21.4	8.5	12.9	5.4	-	-	8.8	5.4	10.3
December 1983(1)	27.7	22.7	9.9	12.8	6.2	-	-	8.1	4.9	10.2
December 1983(2)	23.4	19.0	8.3	10.7	5.2	-	-	6.7	4.1	23.8
December 1984	22.6	19.0	8.8	10.2	5.9	-	-	6.5	4.0	24.0
December 1985	22.9	16.3	7.9	8.4	7.6	-	-	6.4	4.2	21.6
December 1986	22.2	14.6	7.3	7.3	10.7	2.8	8.0	5.8	4.4	21.0
December 1987	21.1	12.2	6.7	5.6	13.9	4.6	9.3	6.4	4.4	21.1

[1/] The figures in this table are derived from the figures for external assets shown in table 4. (Details may not add to totals because of rounding.)

However, this statistical association overstates the likely impact of IBFs because some of the assets booked at IBFs, particularly at IBFs of U.S. agencies and branches of foreign banks, may represent assets that were, prior to the introduction of IBFs, booked at U.S. offices. A previous study estimated that during the year following the introduction of IBFs about two-thirds of the external assets of IBFs were associated with a net increase in international banking business conducted in the United States while the remaining one-third represented assets shifted from domestic office books.[23]

Thus even after taking into account assets shifted from domestic office books to IBFs, it still appears that, at least initially, IBFs enhanced the relative importance of the United States as an international banking center. It seems likely the net effect of IBFs has continued to be positive in subsequent years. However, because most of the actual shifting of assets and liabilities from domestic offices to IBFs occurred before the middle of 1982, IBF activity in subsequent years would need to be adjusted to take into account assets that would, in the absence of IBFs, have been booked at U.S. offices, a figure which as discussed in Section IV above, is impossible to determine.

The preeminence of London as an international banking center does not appear to have been significantly affected by IBFs. As table 5 shows, the share of external banking in the United Kingdom increased between December 1980 and 1983, although it is, of course, possible that the increase would have been greater in the absence of IBFs. The

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[23] See Henry S. Terrell and Rodney H. Mills, International Banking Facilities and the Eurodollar Market, Staff Studies, no. 124 (Board of Governors of the Federal Reserve System, 1983).

reported share of external banking conducted in the offshore centers remained about constant during this period, although coverage is limited in that the reported figures include only U.S.-chartered banks. The major observed loss of share between 1981 and 1983 appears to have occurred in Luxembourg, France, and other European centers. Although external banking activity was stagnant between 1980 and 1983 in these locations, there is no reason to believe that that this change was directly related to the introduction of IBFs in the United States.

In contrast to the 1980-83 period, the growth of external assets at banking offices in the United States was relatively slow from December 1983 to December 1987. The share of external banking activity conducted at offices located in the United States (both at IBFs and on the banks' domestic books) declined sharply. By contrast, the volume of external banking activity conducted in the United Kingdom and in the offshore centers increased rapidly during this period; nevertheless the share of total external banking activity conducted in these locations declined slightly. The reason was an extraordinarily rapid increase in the volume of external assets at banking offices located in Japan. As a result, the share of external banking conducted in Japan rose rapidly, increasing from about 5 percent at the end of 1983 to nearly 14 percent at the end of 1987. In terms of total external assets, Japan eclipsed the United States as an international banking center.

The rapid rise in the share of external banking activity conducted in Japan reflects a variety of factors. First, the appreciation of the Japanese yen since 1985 has increased the dollar value of yen assets. Second, the liberalization of Japanese financial markets, including the development of the yen certificate of deposit and the yen bankers acceptance market, has been an important factor in enhancing Japan's role as a banking and financial center. Third, the introduction of the Japan Offshore Market (JOM) in December 1986, which is similar to IBFs in the United States, has also contributed to the growth of Japan as an international banking center. Finally, the excess of domestic saving over investment in Japan, as reflected in the large cumulative current account surplus of Japan, has been associated with the acquisition of external assets by both domestic and foreign banking institutions located in Japan and also with the rapid growth of worldwide total assets of Japanese banks in relation to large banks headquartered in other countries.[24]

An important component of this rapid growth of worldwide total assets of Japanese banks has been the increase in business conducted at offices of Japanese banks in centers outside Japan. In London, for example, where activity at branches of U.S. banks has been relatively stagnant (as shown in table 3), Japanese banks have played an important role in the growth of international banking activity. The London branches of Japanese banks accounted for about one-half of the growth of total international assets at all banking offices in the United Kingdom from December 1984 through December 1987.[25]

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[24] See Robert S. Dohner and Henry S. Terrell, <u>The Determinants of the Growth of Multinational Banking Organizations: 1972-86</u>, International Finance Discussion Papers, no. 326 (Board of Governors of the Federal Reserve System, 1988).

[25] In the United States, by contrast, the growth of activities of agencies and branches of Japanese banks during this period was relatively more concentrated in domestic rather than foreign activity. This growth in domestic U.S. activities of the Japanese agencies and branches is not reflected in the figures for external assets at offices in the United States shown in table 4.

VII. Conclusion

IBFs have not turned out to be the dramatic innovation that some had predicted, and London remains the major center of Euromarket activity. Moreover, the view that depositors would perceive clear advantages in the sovereign risk associated with deposits subject to U.S. law does not seem justified. Sophisticated international depositors do not appear to perceive a significant difference in sovereign risk between deposits at branches of a U.S. bank located in other major international financial centers and deposits at that bank's IBF in the United States; in both cases the deposits are backed by the U.S. bank, which is supervised on a worldwide consolidated basis by U.S. bank regulatory authorities.

IBFs appear to be used for a large proportion of transactions with foreign residents that were, or would otherwise have been, booked at Caribbean branches of U.S. banks. As a result, the introduction of IBFs appears to have resulted in a substantial decline in the volume of business with foreign residents conducted at these branches. However, the same management and communication considerations that facilitated the transfer of transactions with foreign customers from Caribbean branches to IBFs have also facilitated the reverse shifting of some business with U.S. customers from domestic offices to Caribbean branches. Paradoxically, U.S. banking regulations are now structured so that non-U.S. residents have certain incentives to conduct banking transactions in the United States while U.S. residents are offered incentives to conduct banking transactions at branches of U.S. banks in the Caribbean.

IBFs appear to have had a negligible impact on the structure of activities at London branches of U.S. banks. In particular, the prohibition against issuance of negotiable certificates of deposits by IBFs has prevented them from sharing in the growth of activity in such instruments that has occurred at London branches of U.S. banks.

The creation of IBFs does appear to have enhanced the overall competitive environment for international banking in the United States from the time of their inception in December 1981 through December 1983. Since 1984, however, the share of total external banking activity conducted in the United States has declined sharply, in large part because of a dramatic increase in the volume of external banking activity conducted in Japan. Throughout the entire period, however, London has remained the world's largest international banking center.

In sum, IBFs simply provide another center for booking transactions with foreign residents in a regulatory environment broadly similar to that of the Euromarket. To date, the operation of IBFs has not presented a problem either for the conduct of domestic monetary policy or for bank supervision. As noted above, since the early 1980s, international banking activity, including that conducted at IBFs, has been affected by a variety of factors such as the international debt problem, the financing requirements associated with the large U.S. current account deficits, market innovations that have resulted in securitization of international assets for nonbank investors, and pressure by U.S. and other regulatory authorities for banks to increase their capital ratios. Activities at IBFs have also been affected by the specific regulatory constraints on IBF operations, by the type of state or local tax relief offered to IBFs, and by the fact that establishment of IBFs has occurred in an environment of deregulation and structural change in the U.S. banking system as a whole.

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