Summer

1986

Federal Reserve Bank of San Francisco

Economic Review

Number

3

The Federal Reserve Bank of San Francisco's Economic Review is published quarterly by the Bank's Research and Public Information Department under the supervision of John L. Scadding, Senior Vice President and Director of Research. The publication is edited by Gregory J. Tong, with the assistance of Karen Rusk (editorial) and William Rosenthal (graphics).

For free copies of this and other Federal Reserve publications, write or phone the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, California 94120. Phone (415) 974-3234.

Japanese Monetary Policy, Flow of Funds, and Domestic Financial Liberalization

Thomas F. Cargill*

While financial liberalization has fundamentally altered Japan's financial institutions and markets, in particular, the flow of funds, it has not yet had a dramatic effect on the instruments and strategy of monetary policy. The framework in which the Bank of Japan conducts its policy is, nevertheless, on the verge of a major change as Japan considers establishing a short-term market for government securities.

The liberalization of Japan's domestic financial system has been ongoing since the mid-1970s. Prior to that time, the financial system was highly constrained by regulation and administrative guidance by the Ministry of Finance (MOF) and the Bank of Japan (BOJ). It was characterized by interest rate ceilings on deposits and loans, limited portfolio opportunities for market participants, undeveloped securities markets, and restrictions on international capital movements. This highly structured, segmented, and regulated system was designed to support export-led economic growth, industrialization, and high personal savings, and to provide a simple conduit for transferring the large surplus of the personal sector to finance the large deficits of the corporate sector.

The oil-price shock of 1973-74 and the associated end of the "high growth period" were the primary catalysts for financial liberalization. In particular, the impact of reduced economic growth on the established flow of funds patterns set the liberalization process in motion[1].

Since then, specific reforms have been designed to increase the role of market forces by relaxing interest rate constraints, broadening portfolio opportunities for market participants, expanding existing securities markets and developing new ones especially for government debt. To increase Japan's role in the international financial system, other reforms aimed at increasing capital flows in and out of Japan, widening access by foreign financial institutions to the domestic flow of funds, and "internationalizing" the yen.

The changes in the flow of funds after 1973-74 and in the structure of the financial system as a result of liberalization have fundamentally altered the financial environment for Japanese monetary policy. As a result, the BOJ has had to consider alternative policy instruments, short-run tactics, and even longer run strategies of monetary policy.

This paper focuses on the changing financial environment for monetary policy in Japan and its impact on the conduct and impact of monetary policy. The subject is developed in four steps. First, we outline the major features of the flow of funds prior to liberalization and describe how the monetary policy of the BOJ relied on these flow of fund patterns and the highly regulated nature of the financial system. Second, we indicate the major changes in the flow of funds that followed the first oil-price shock of 1973-74 and that resulted from liberalization. Third, we indicate how these

* Professor of Economics, University of Nevada, Reno, and Visiting Scholar, Federal Reserve Bank of San Francisco. He appreciates comments from Hang-Sheng Cheng, Michael M. Hutchison, the review committee of the Federal Reserve Bank of San Francisco, and Toshihiko Fukui, Susumu Katagi, and Masatake Kotani of the Bank of Japan, but takes responsibility for this paper.

changes have altered the domestic financial environment facing the BOJ and review the response of BOJ policy to these changes. The paper concludes with some comments on a new policy instrument for the BOJ.

Since the focus of the paper is on the changing financial environment for monetary policy, we need to date the emergence of the new environment. As mentioned, the major catalyst for liberalization was the downward shift in economic growth induced by the oil-price shock of 1973 and the impact of slower growth on the flow of funds. Nevertheless, 1976 often is regarded as the official start of liberalization because that was the year the MOF officially recognized a competitive money market for repurchase agreements in government securities, known as the *gensaki* market. Thus, the years from 1973 through 1976 may be regarded as the period over which the new environment for BOJ policy emerged.

Financial liberalization in Japan, however, has been a more continuous and less crisis-oriented process than liberalization in the U.S. Hence, we do not observe sharp and discrete changes in the conduct of monetary policy in response to changes in Japan's financial environment (Cargill, 1985a and 1985b). Rather, the transition of BOJ policy is reflected in new and slowly evolving tactics and strategies of monetary policy.

I. The Financial Environment Prior to Liberalization

Two characteristics of the financial environment prior to liberalization provided a foundation for BOJ policy. First, there were well-established flow of funds patterns between major nonfinancial and financial sectors of the economy and, second, there were extensive interest rate and portfolio constraints on all major market participants. These characteristics ensured a close relationship between the BOJ's policy instruments and final policy targets.

Table 1 reports the surplus and deficit position of four major nonfinancial sectors in Japan as a percentage of GNP for the period 1965-84[2].

Prior to 1973, the flow of funds was characterized by large personal sector surpluses, large corporate sector deficits, and comparatively small public sector deficits. The personal sector surplus averaged 9.2 percent of GNP over the period 1965-72, whereas the corporate and public sector deficits averaged 6.5 percent and 2.6 percent of GNP, respectively.

The public sector deficits were concentrated in public corporations and local government entities rather than in the central government. In fact, the central government ran small surpluses during most of the 1965-72 period. Net financial flows between Japan and the rest of the world were small, reflecting Japan's tendency toward current account balance. In addition, a variety of restrictions on capital flows ensured Japan's international financial isolation.

The personal sector surpluses were held primarily in the form of currency and of liabilities issued by private and public financial institutions (see Box). Such deposits and currency holdings accounted for 67 percent of the personal sector's uses of funds over the 1965-72 period.

The corporate sector deficits were financed primarily by financial institutions as opposed to open money and capital markets. Over the period 1965-72, loans from private and public financial institutions accounted for 86.6 percent of the corporate sector's sources of funds. Financial institutions were designed to serve the borrowing needs of the business sector in general, and the corporate sector in particular[3].

Corporations relied on indirect rather than direct financing for several reasons. Equities were not an attractive funding source because of the tax advantages of debt over equity, because of the practice of issuing stock at par value rather than market value, and because of the existence of extensive regulations regarding new stock issues. Domestic money and capital markets were undeveloped prior to liberalization and extensive regulation of capital flows prevented Japan's corporations from using foreign capital markets as a source of funding.

Private financial institutions acted as the primary conduit for funds between the personal and corporate sectors, but were themselves linked through a relatively free interbank market. This interbank market is similar in function and structure to the federal funds market in the U.S. and was one of only two markets not subject to extensive regulation and

administrative guidance. The other market was an unofficial *gensaki* market or repurchase market in government securities that emerged in the late 1960s[4].

Table 2 reports the net interbank position of the city banks, other banks, other private financial institutions, and the Bank of Japan in terms of their interbank financial assets less interbank liabilities over the period 1969-84. The city banks were continual net demanders of funds from the interbank market, while other private financial institutions were continual net suppliers of funds. After 1971, the BOJ initiated a form of open market operations in the bill component of the market consisting mainly of purchases of bills, and thus became a net supplier of funds.

The net demand position of the city banks resulted from their central role in serving the borrowing needs of the largest and fastest growing corporations in Japan. Corporations depended on city banks for a major part of their external funding because the city banks were the largest and most convenient of the private financial intermediaries with offices throughout the country and the world. City banks also had access to BOJ direct credit on a continual basis, while corporations did not have

TABLE 1

Surplus or Deficit (−) Position of Major Nonfinancial Sectors in Japan, 1965-84

(As a percent of GNP)

			Public Sector			
Year	Personal	Corporate Business	Central Government	Public Corporations & Local Authorities	Total	Rest of World
1965	7.9	−4.5	0.0	−3.2	−3.2	−1.1
1966	9.1	−4.8	−0.8	−3.3	−4.1	−1.2
1967	9.4	−7.3	−0.7	−2.4	−3.1	0.2
1968	9.1	−6.7	0.0	−2.8	−2.8	−0.7
1969	8.7	−6.9	0.6	−2.2	−2.8	−1.3
1970	8.2	−7.2	1.3	−2.3	−1.0	−1.0
1971	9.6	−6.3	0.9	−2.8	−1.9	−2.5
1972	11.5	−7.9	0.6	−3.3	−2.7	−2.2
1973	8.8	−7.6	1.1	−3.9	−2.8	0.0
1974	10.3	−8.5	0.7	−4.4	−3.7	1.0
1975	10.5	−4.1	−2.7	−4.6	−7.3	0.1
1976	11.4	−3.9	−3.5	−4.1	−7.6	0.6
1977	11.2	−2.6	−4.0	−3.3	−7.3	−1.5
1978	11.1	−1.0	−5.4	−3.7	−9.1	−1.7
1979	9.2	−3.1	−4.5	−3.5	−8.0	0.9
1980	8.3	−3.5	−3.2	−3.6	−6.8	1.1
1981	11.2	−3.1	−3.8	−3.6	−7.4	−0.5
1982	10.6	−3.7	−3.8	−3.1	−6.9	−0.9
1983	10.5	−3.6	−4.0	−2.8	−6.8	−2.1
1984	9.6	−2.2	−3.0	−2.6	−5.6	−3.0
1965-72 Average	9.2	−6.5	0.2	−2.8	−2.6	−1.2
1976-84 Average	10.3	−3.0	−3.9	−3.4	−7.3	−0.8

Note: Flow of funds positions are on a calendar year basis for the period 1965-81 and fiscal year basis for 1982-84. The personal sector includes households and unincorporated businesses.

Source: Bank of Japan, Flow of Funds Accounts

Japan's Intermediation Market

Six classes of financial institutions constitute Japan's intermediation market. First, there are 13 large city banks with head offices located in the major population centers, such as Tokyo and Osaka, and branches throughout the country. The city banks are a major source of funds to the corporate sector and hold the major part of corporate deposits. Business loans made by city banks must be short-term. City banks are not prohibited from making consumer or mortgage loans, but they concentrate almost exclusively on providing financial services to the corporate sector, especially the larger corporations.

Second, there are 63 regional banks that are smaller than the city banks but structured along similar lines in that they serve the short-term borrowing needs of small- to medium-sized corporations.

Third, three credit banks provide for the longer term funding needs of the corporate sector and obtain funds by issuing bank debentures.

Fourth, seven trust banks specialize in long-term lending and financial management; they obtain funds from trust accounts.

Fifth, a number of public financial institutions, among which the Postal Savings System is of major importance, play an important role in transferring funds from the personal sector to public enterprises. Postal savings deposits represent a large part of the personal sector's financial assets because of their favorable tax treatment compared to bank deposits. There is, in addition, an extensive network of postal savings offices in Japan. Postal savings funds are transferred via the Trust Fund Bureau of the Ministry of Finance to a variety of private and public entities to support specific government policies.

Sixth, a large number of small and specialized financial institutions are designed to meet the funding needs of small and specialized business activities as well as to provide funds to the personal sector. Compared to the first five types, these institutions play a minor role in the flow of funds.

access to open money and capital markets. Most importantly, city banks played a leadership role in the large groupings of firms that continue to dominate the industrial structure of Japan[5].

The corporate sector's greater dependence on city banks rather than other financial institutions for external financing accounted for the continued net demand position of the city banks in the interbank market. Other banks and private financial institutions (see Box) were net suppliers of funds to the interbank market. Thus, funds from these other institutions flowed to the corporate sector both directly and indirectly via the interbank market and the city banks.

Prior to liberalization, almost 90 percent of the BOJ's loans and discounts to financial institutions were made to the city banks. The BOJ encouraged city bank dependence on the discount window both by restricting all financial institutions, including city banks, to a small set of sources of funds subject to interest rate controls and by keeping the discount rate at a level significantly lower than the interbank loan rate.

Prior to liberalization, virtually all interest rates in Japan were regulated in one form or another with the only significant exceptions being the interbank[6] rate and the *gensaki* rate. Thus, interest rates were not sensitive to market forces and were not used by the BOJ in a systematic manner to influence spending during periods of tight or easy monetary policy. The overall objective of interest rate control was to achieve a "low interest rate" environment to stimulate corporate investment spending.

Within Japan's financial environment, a variety of portfolio constraints sharply segmented financial institutions and limited sources and uses of funds for all market participants. Banks were not authorized to issue market-sensitive large CDs, and were limited in the variety of deposit accounts they could use to obtain funds. Corporations faced a variety of regulations and administrative guidance that provided strong disincentives to substitute direct for indirect finance. Since banks were segmented according to loan maturity, corporations were restricted to obtaining short-term and long-term funding from specific types of institutions. Both banks and corporations were severely restricted from obtaining funds in the foreign market.

Monetary Policy Prior to Liberalization

The financial environment that existed in Japan prior to liberalization supported a close relationship between the BOJ's policy instruments and final policy targets and also defined a specific transmission process for BOJ policy. During this earlier period, the major policy instruments of the BOJ were credit rationing at the discount window, variations in the discount rate, purchases and sales of commercial bills in the interbank market, and loan limits on individual banks referred to as "window guidance". These instruments were used to control the volume of loans to the corporate sector by financial institutions in general, and the banking system in particular. Since the corporate sector had limited access to securities markets to satisfy external funding requirements, the BOJ could thereby influence corporate investment spending and, hence, the overall level of economic activity.

By determining the amount of reserves available to the banking system the BOJ was able to set the ultimate constraint on credit creation. Reserves were supplied through the discount window and a type of open market operation in the interbank market. To achieve the targeted path of bank reserves, the BOJ varied the amount of direct credit to the city banks and conducted operations in the bill component of the interbank market. The BOJ used the discount window not only as a means for determining the total reserve base but, just as importantly, to ration credit to the city banks.

Unlike other institutions, city banks had continuous access to BOJ credit and were always willing to take as much credit as the BOJ was willing to provide because the discount rate was maintained at a level below the interbank rate. As a result, the BOJ did not employ changes in the discount rate to affect the costs and thereby the willingness of city banks to

TABLE 2

Net Position of Interbank Assets and Liabilities of Private Financial Institutions and the Bank of Japan, 1969-84
(¥100 millions)

Year	City Banks	Other Banks	Other Private Institutions	Bank of Japan
1969	−14,781	5,000	9,781	–
1970	−20,560	7,516	13,044	–
1971	−18,322	7,810	10,512	–
1972	−27,098	7,313	12,625	7,160
1973	−52,547	4,347	7,875	40,325
1974	−72,371	5,533	25,008	41,831
1975	−62,113	11,849	27,027	23,237
1976	−70,272	10,891	34,381	25,000
1977	−76,320	9,058	37,262	30,000
1978	−76,979	6,121	42,358	28,500
1979	−83,682	11,498	36,684	35,500
1980	−70,848	6,857	31,991	32,000
1981	−50,677	10,338	31,339	9,000
1982	−52,424	22,011	12,413	18,000
1983	−50,187	19,445	12,745	17,997
1984	−84,758	17,319	33,301	15,982

Note: End-of-year basis for 1969-81 and end-of March 1982-84

Source: Bank of Japan, Flow of Funds Accounts

borrow and lend, but rather to achieve an "announcement effect," that is, to signal its intentions with respect to credit expansion.

The BOJ imposed "window guidance" lending limits on individual banks, including city banks, regional banks, and other types of financial institutions. City banks were the primary focal point of window guidance and their dependence on BOJ direct credit increased the probability that the loan limits would be respected. Also, the BOJ took into account existing market shares among different segments of the market in setting the limits and thus ensured that institutions not dependent on BOJ direct credit also would adhere to the limits. The BOJ fostered the attitude that adherence to the limits by all institutions would be in their best interest because it would allow them to maintain their market shares[7].

The interbank rate played an important role in the transmission of BOJ policy and as a policy indicator.

In terms of the transmission process, the interbank rate influenced the cost of funds to city banks, and this cost was passed on to the corporate borrowers in the form of higher deposit/loan ratios[8]. Thus, even in the absence of a change in the corporate loan rate, increased interbank rates raised the effective cost of borrowing. Increases in the official discount rate would amplify this effect since loan rates were tied to the discount rate. While this aspect of the transmission process relied on an interest rate-expenditure effect, it was secondary to the credit availability effect achieved by varying the reserve base, administrative guidance imposed on city banks at the discount window, and window-guidance on loan limits.

The interbank market ensured that BOJ policy spread beyond the city banks to institutions other than the city banks[9]. For example, regional banks and other financial institutions were induced by changes in the interbank rate to substitute interbank assets for business loans. Regulated loan and deposit rates ensured the existence of significant substitution effects between interbank assets and business loans in response to changes in the interbank rate.

As a policy indicator, the interbank rate reflected the pressure placed on the city banks. Portfolio restrictions on the sources of bank funds and interest rate ceilings forced the city banks to use the interbank market as a source of funds whenever the BOJ restricted funds at the discount window or through slower purchases of bills.

Thus, the BOJ's policy instruments influenced the ability of financial institutions to extend credit to the corporate sector. And since corporations depended heavily on intermediation finance, business investment also was sensitive to the BOJ's policy instruments. The well-defined flow of funds patterns ensured that BOJ influence over the city banks would translate into influence over all major financial institutions. The portfolio and interest rate restrictions on the sources of funds limited the ability of financial institutions to attract funds in an effort to offset BOJ intentions. The limited sources of funding available to the corporate sector ensured that influence over private intermediation credit would translate into influence over corporate spending.

II. Initiation of Financial Liberalization

The financial system that existed prior to the start of liberalization (1973-76) served well the industrial objectives of Japan. It supported a high rate of real economic growth through the early 1970s and provided a framework for BOJ policy that enabled the Bank of Japan to support the rapid growth while maintaining reasonable price stability[10]. However, because this financial structure was incompatible with the economic environment that emerged after the oil-price shock of 1973, the process of liberalization began.

Reduced economic growth as a result of the oil price shock in 1973 dramatically affected the flow of funds patterns in Japan. Growth declined from a 10 percent level to a 3-5 percent level that continues to the present. While the personal sector surplus

remained at about 10 percent of GNP after 1973, the relative positions of the corporate and central government deficits changed. The corporate sector deficit declined by almost 50 percent as a result of the reduced need for external funding in a slower growth environment, while the total public sector deficit roughly doubled.

The changes in flow of funds created pressures that could only be relieved by a less constrained financial system. The detailed causes of this liberalization are beyond the scope of this paper[11]. Instead, we focus on the role of the increased government sector deficit on the liberalization process[12].

Government debt was not sold in an open market but placed with a "captive" syndicate of banks and security companies at below-market rates. Syndicate members did not object to this practice prior to 1973 because the amount of debt was small. In addition, the BOJ was willing to purchase the debt from the banks at prices that guaranteed no capital loss and security companies were permitted to operate an unofficial *gensaki* market based on government debt.

After 1975, the increased government deficits made the amount of debt placed annually large. This influenced the liberalization process in two ways. First, in 1978, the BOJ no longer guaranteed that the debt would be purchased at favorable prices. Increasing market resistance forced the MOF to make a number of concessions, the most important of which were the decisions to offer medium-term debt at market prices and to reduce the holding period for syndicate members.

Second, the rising volume of government debt led to the emergence of a growing secondary market. This market was not regulated and provided a market-determined rate of interest that made it difficult to enforce deposit rate ceilings, especially for large corporate depositors who were becoming less dependent on the banking system and who wanted to shift deposits to higher yielding assets. A number of observers have judged the growth of the secondary bond market in government securities to be a major force for liberalization by the time of the late 1970s (Bank of Japan, December 1982b).

The impact of government debt and other forces therefore initiated financial liberalization in Japan. Liberalization has been ongoing for more than a decade now, and, combined with the changes in the flow of funds, has fundamentally altered the financial environment for BOJ policy. While the Japanese financial system remains highly regulated, market forces now play a more important role in allocating funds. Both money and capital markets have expanded, and controls over international capital flows have been relaxed.

Regulators have permitted financial institutions to offer a wider range of deposits (including deposits not subject to ceilings, such as large CDs), and have adjusted deposit rate ceilings more frequently. They also have relaxed controls over loan rates.

The volume of large CDs has expanded since their authorization in 1979, as has the volume of *gensaki* trade after official recognition in 1976. A yen-dominated bankers' acceptance market has recently been established, and regulators are considering establishing a short-term or T-bill market for government debt. The long-term securities market has expanded greatly from the increase in outstanding government debt.

In 1980, Japan accepted as a general principle the idea that international capital flows should not be restricted. Since that date, there has been a significant increase in funds flowing into and out of Japan. In addition, Japan has increased access by foreign financial institutions, and taken other steps to make the yen more acceptable as an international investment and reserve asset.

III. Changing Domestic Environment for Monetary Policy

The pre-liberalization transmission of monetary policy in Japan can be summarized by Figure 1. This transmission process was based on a well-defined flow of funds pattern between financial and nonfinancial sectors and an extensive set of interest rate and portfolio constraints on market participants.

Monetary policy focused on *credit* as the intermediate target and employed credit allocation controls to achieve the desired targets for credit. Although the BOJ used the interbank rate as an operating variable and policy indicator, it did not emphasize the interest rate-expenditure channel of monetary policy. Variations in the interbank rate were designed to influence the portfolio decisions of noncity banks with the overall objective of controlling the quantity rather than the price of intermediation credit.

Change in the flow of funds patterns after 1973 along with the liberalization process reduced the role of private intermediation credit as a determinant of spending and weakened the ability of the BOJ to control intermediation credit in general.

The most significant change for BOJ policy was a gradual decline in the role of indirect finance (Table 3). The corporate sector, now a smaller deficit unit, gained increased flexibility to obtain funds in open markets. Money markets themselves expanded, as did long-term security markets for government debt. While Japan does not yet possess a set of open money and capital markets matching the depth and breadth of those in the U.S., direct financial transactions have steadily increased in importance.

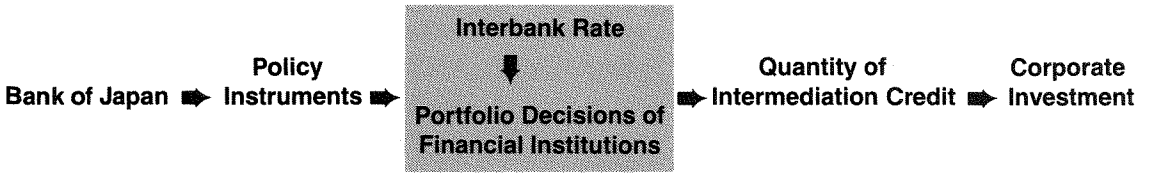
A discrete shift in the deficit position of the corporate and public sectors was associated with the decline in intermediation finance. The reduced need for external funding by the corporate sector and changes in the financial system as a result of liberalization lessened the dependence of the corporate sector, especially large corporations, on the banking system. Accompanying the absolute decline in the corporate sector's funding requirements has been a shift, made possible by liberalization, in its sources of funding. While the major increase in securities market activities is associated with the mounting size of outstanding government debt, corporations have taken advantage of the growing market as a source of external funding. Issues of securities accounted for 14.2 percent of the funds raised by the corporate sector over the 1973-83 period, compared to 10.8 percent over the 1965-72 period.

The declining dependence of the corporate sector on bank credit has, in turn, been responsible for a decline in the market share of city banks. In almost every year since 1962, city banks have lost market share to other private financial institutions. The actual percentage of city bank assets to total assets of private financial institutions dropped from 32.1 percent in 1969 to 26.1 percent in 1983.

In addition to the decline in city banks' market share of private intermediation, a shift in flows away from private to public intermediaries also may impede BOJ policy. Government financial institutions accounted for 16.1 percent of the total flow of funds to final borrowers (Table 3) in 1972, but by 1982, their contribution had increased to 29.2 percent. Funds transferred through public intermediaries are believed to be less sensitive to BOJ policy than those transferred through private intermediaries.

Figure 1

Monetary Policy Transmission — Before Liberalization



Liberalization also has reduced the relative size of the interbank market in the flow of funds, and allowed city banks to reduce their dependence on BOJ direct credit. Although the interbank loan market remains central to the transmission of BOJ policy, the rapid growth of new money market instruments — in both yen and foreign currencies — has reduced its relative importance. Prior to liberalization, the interbank market represented approximately 70 percent of total money market transactions; by June 1985 (Toshihiko Fukui, 1986), it represented only 27.4 percent.

The Bank of Japan's pre-liberalization monetary policy tactics were based on the strong incentive of city banks to borrow from the BOJ. As city banks now have the ability to offer financial assets that are more market-sensitive, especially large CDs, they have become less dependent on BOJ credit. The Bank of Japan's loans and discounts to city banks have consequently declined as a percentage of city banks' liabilities during the past ten years. In addition, while city banks are still the major recipients of BOJ credit, other institutions have become more dependent on BOJ credit than in the past.

In sum, corporations now have sources of funding other than bank credit. Banks and other financial institutions also have use of expanded sources of funding that have made them less dependent on both the BOJ for direct credit and the interbank market. Liberalization has also increased both the role of interest rates in portfolio management and the interest-sensitivity of private spending [13].

Implications for Monetary Policy

Together, these developments have forced the BOJ to consider new operating tactics and even new strategies for monetary policy. The BOJ has responded in several ways, although the changes have evolved slowly. One does not observe in Japan the discrete changes in either tactics or strategies of the kind exemplified by the Federal Reserve's announced shift in policy in October 1979.

First, as liberalization has rendered interest rates more responsive to market forces, the BOJ has increasingly emphasized the interest rate-expenditure paradigm in the transmission of monetary policy to influence spending decisions. It has increasingly used policy instruments that are cap-

TABLE 3

Flow of Funds Channels from Lenders to Final Borrowers, 1965-82

(As a percent of total)

Year	Financial Intermediaries			Securities Market
	Private	Public	Total	
1965	78.6	15.5	94.1	5.9
1966	78.4	19.3	97.7	2.3
1967	77.4	16.2	93.7	6.4
1968	72.5	18.4	90.9	9.1
1969	73.3	16.9	90.2	9.8
1970	71.0	16.7	87.7	12.3
1971	70.2	16.2	86.4	13.6
1972	77.5	16.1	93.6	6.4
1973	74.6	18.6	93.2	6.8
1974	69.0	21.1	90.1	9.9
1975	69.8	23.3	93.1	6.9
1976	67.4	23.7	91.1	8.9
1977	60.5	29.2	89.7	10.3
1978	62.4	25.4	87.8	12.2
1979	59.3	28.6	87.9	12.1
1980	54.9	31.2	86.1	13.9
1981	61.4	25.5	86.9	13.1
1982	56.1	29.2	85.3	14.7

Source: Yoshio Suzuki (1984)

able of influencing interest rates within a market environment.

Second, the BOJ has come to regard open market operations as a more flexible instrument for influencing interest rates than either the discount window or window guidance. At this time, however, the BOJ does not have a flexible open market operation policy instrument because there is no competitive short-term government securities market. Instead, it has confined its open market operations to the interbank market and, recently, conducted operations in large CDs.

The increasing emphasis on open market operations also has been a response to the declining role of credit as an intermediate target. In 1972, loans made by private financial institutions represented 27.2 percent of the financial assets of all sectors; by 1984, they had declined to 21.8 percent of all assets. Claims on the rest of the world and the central government increased in relative importance.

The de-emphasis on credit control received official sanction in 1978 when the BOJ began to publish projections of the money supply for each quarter. The BOJ, at least officially, now regards the money supply as the primary measure of liquidity in the economy. This has led some observers such as Milton Friedman (1983) to suggest that the BOJ is now following a monetarist strategy of stable monetary growth. Despite the frequent reference in BOJ publications to the role of money, there is reason to believe that the BOJ's conversion to monetarism is less than complete (see Michael M. Hutchison in this *Economic Review*).

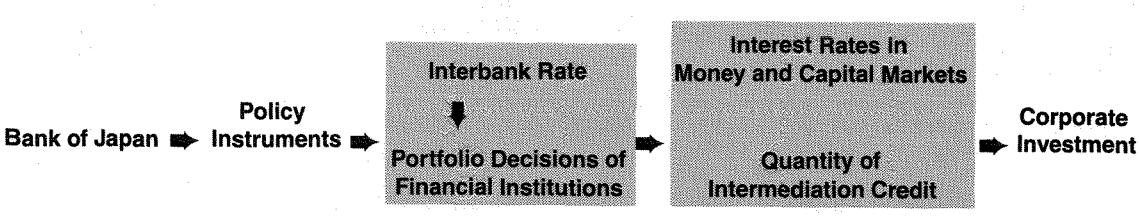
Third, the BOJ has reduced the role of direct credit allocation instruments such as window guidance. Although window guidance limits are still imposed, they are now part of a so-called voluntary system in which individual banks take a leading role in setting the limits[14].

The BOJ's shift from a credit-control paradigm toward an interest rate-expenditure paradigm is, in essence, a modification of its earlier policy framework. The BOJ has added another channel and another policy instrument that emphasizes the relationship between the interbank rate and interest rates in general. It continues to focus on the interbank rate, bank credit in general and city bank credit in particular, and it still relies on various types of administrative guidance to influence the portfolio behavior of financial institutions.

The pre-liberalization transmission process has not been replaced, but augmented. The BOJ's policy instruments are still directed toward influencing the flow of intermediation credit, but are now also concerned with influencing the *cost* of credit and interest rates in general, that is, with influencing fund flows through primary or direct markets as well as through intermediation markets. The new transmission process is sketched in Figure 2.

Figure 2

Monetary Policy Transmission — After Liberalization



IV. Conclusion

The effective monetary and credit policies of the Bank of Japan are in transition as the Bank re-evaluates and adjusts them in response to the new financial environment of the 1980s. The BOJ has increasingly expressed concern that familiar instruments such as the discount window and window guidance cannot continue to provide the basis for an effective policy in the new environment. In this regard, BOJ has strongly advocated the establishment of an open and competitive market in short-term government securities. Such a market would yield a flexible policy instrument for affecting interest rates directly as well as via the intermediaries' access to reserves.

Japan's Ministry of Finance has not been receptive to establishing such a market in short-term government securities. At present, the BOJ is required to purchase and hold most of the short-term government debt since the MOF prices the debt at such low rates that syndicate members refuse to purchase it. This state of affairs cannot continue.

At the time of this writing, the outcome of the short-term government securities market issue has not been decided. But if the past is any indication, the MOF will be required to make short-term government debt more responsive to market forces. When this occurs, the BOJ will obtain a new and major policy instrument that will further emphasize interest rate effects.

FOOTNOTES

1. This is not to ignore a variety of other factors such as binding interest rate ceilings, advances in computer technology, and financial innovations introduced by the private market that have played a role in the liberalization process but have not been dominant.

Authoritative discussions of the financial system in Japan and the recent changes are provided by Yoshio Suzuki (1980 and 1986). Other references include Thomas F. Cargill (1985a, 1985b), Charles Pigott (1983), and Shoichi Royama (1983-84). Raymond W. Goldsmith (1983) provides an overview of the development of Japan's financial system from 1868 through 1977.

2. The flow of funds accounts in Japan are published by the BOJ and are similar in construction to those for the U.S. They reflect the financial aspects of the real saving and investment decisions of the major nonfinancial sectors of the economy: public or government, corporate business, personal, and rest of the world sectors.

In the Japanese accounts, the business sector refers only to incorporated businesses; the personal sector includes both households and unincorporated businesses. The practice of highlighting the corporate sector and de-emphasizing unincorporated firms reflects the importance of the corporate sector in the Japanese economy.

3. The flow of funds accounts do not provide detailed information on consumer and mortgage credit. However, consumer and mortgage credit comprised a relatively small part of the lending activities of financial institutions.

4. The repurchase market for government securities, or *gensaki* market, emerged in the late 1960s and was not officially recognized until 1976. It was Japan's only competitive short-term money market. The interbank market differed from the *gensaki* market in that transactions and interest rates in the interbank market were subject to administrative influence; participation in the market was limited to financial institutions.

5. The firm groupings are often referred to as the "main bank system." They form a unique Japanese structure of financial and nonfinancial firms interrelated by service, production,and financial relationships, and supported by extensive reciprocal holdings of equities. The phrase "main bank system" is derived from the fact that a city bank stands at the center of the structure and provides financial resources and financial services, and acts as a general spokesperson for the firms in the grouping.

The main bank system is discussed in more detail by C. D. Elston (1981). Iwao Nakatani (1984) presents empirical research on the behavioral characteristics of group and nongroup firms.

6. BOJ administrative influence over the interbank rate rendered it less sensitive to market forces than the *gensaki* rate. See also footnote 4.

7. An interesting insight into the interaction between the BOJ and the banks that form the basis of window guidance is provided by Tadashi Yasuda (1981).

8. Japanese banks typically imposed large deposit/loan ratios on their borrowers and adjusted these ratios according to the availability of funds. Based on survey information (Masahiko Takeda, 1985, p. 77), the deposit/loan ratio averaged about 45 percent prior to liberalization.

9. Suzuki (1980) has developed a detailed theoretical and empirical model of how the BOJ influenced the lending decisions of financial institutions.

10. In fact, several researchers (Hamada and Hayashi, 1985 and Pigott, 1978) investigating the natural-rate hypothesis in Japan have found that countercyclical monetary policy appears to have been effective at least through the late 1970s. Their findings reject the natural-rate hypothesis and are inconsistent with some of the empirical research for the U.S. Pigott suggests that the explanation for the Japanese results may reside in the

regulated and narrow flow-of-funds channels that dominated the Japanese financial system for much of the postwar period.

11. References to this subject can be found in footnote 1.

12. The role of government deficits as a catalyst for financial reform in Japan and a number of countries in the Pacific Basin regions is discussed by Michael M. Hutchison (1985).

13. M. A. Akhtar (1983) estimated aggregate demand functions for Japan over the period from 1962 through 1982, and found that the interest rate effect had become an important determinant of total spending by the mid-1970s.

14. Robert A. Feldman (1983, p. 198), however, suggests that it is difficult to determine empirically the extent to which window guidance is still effective.

REFERENCES

Akhtar, M. A. *Financial Innovation and Their Implications for Monetary Policy: An International Perspective.* Bank for International Settlements, Basle, Switzerland, December 1983.

Bank of Japan, Research and Statistics Department. *Flow of Funds Accounts in Japan, 1975-1981,* September 1982a.

Bank of Japan, Research and Statistics Department. Recent Developments in the Secondary Market for Bonds." Special Paper No. 103, December 1982b.

Bank of Japan, Research and Statistics Department. *Flow of Funds Accounts in Japan, 1965-1974,* December 1982b.

Bank of Japan, Research and Statistics Department. *Economic Statistics Monthly,* issued on a monthly basis.

Bank of Japan, Research and Statistics Department. *Economic Statistics Annual,* issued on an annual basis.

Cargill, Thomas F. "A U.S. Perspective on Japanese Financial Liberalization," *Monetary and Economic Studies.* The Bank of Japan, May 1985a.

Cargill, Thomas F. "Financial Reform in the U.S. and Japan: A Comparative Overview," in Hang-Sheng Cheng, ed., *Financial Policy and Reform in Pacific Basin Countries.* Lexington: D. C. Heath and Company, 1985b.

Elston, C.D. "The Financing of Japanese Industry," *Quarterly Bulletin.* Bank of England, December 1981.

Feldman, Robert A., *Japanese Financial Markets: Innovation and Evolution.* Unpublished Ph.D. Dissertation, Massachusetts Institute of Technology, September 1983.

Friedman, Milton. "Monetarism in Rhetoric and in Practice," *Monetary and Economic Studies.* The Bank of Japan, October 1983.

Fukui, Toshihiko. Recent Developments of the Short-term Money Market in Japan and Changes in Monetary Control Techniques and Procedures by the Bank of Japan." Special Paper No. 130. Bank of Japan, Research and Statistics Department, January 1986.

Goldsmith, Raymond W. *The Financial Development of Japan, 1868-1977.* New Haven: Yale University Press, 1983.

Hamada, Koichi and Fumio Hayashi. "Monetary Policy in Postwar Japan," in *Monetary Policy in Our Times,* Albert Ando, Hidekazu Eguchi, Roger Farmer, and Yoshio Suzuki, eds., Cambridge, MA: The MIT Press, 1985.

Nakatani, Iwao, "The Economic Role of Financial Corporate Grouping," in *The Economic Analysis of the Japanese Firm,* Masahiko Aoki, ed., Amsterdam: Elsevir Science Publishers B.V., 1984.

Hutchson, Michael M. "Financial Effects of Budget Deficits in the Pacific Basin," in *Financial Policy and Reform in Pacific Basin Countries,* Hang-Sheng Cheng, ed. Lexington: D. C. Heath and Company, 1985.

Pigott, Charles. "Rational Expectations and Counter-Cyclical Monetary Policy: The Japanese Experience," Federal Reserve Bank of San Francisco, *Economic Review,* Summer 1978.

Pigott, Charles. "Financial Reform in Japan," Federal Reserve Bank of San Francisco, *Economic Review,* Winter 1983.

Royama, Shoichi. "The Japanese Financial System; Past, Present, and Future," *Japanese Economic Studies,* Winter 1983-84.

Suzuki, Yoshio. *Money and Banking in Contemporary Japan.* New Haven: Yale University Press, 1980.

----------. "Financial Innovation and Monetary Policy in Japan," *Monetary and Economic Studies.* Bank of Japan, June 1984.

----------. *Money Finance, and Macroeconomics Performance in Japan.* New Haven: Yale University Press, 1986.

Takeda, Masahiko. "A Theory of Loan Rate Determination in Japan," *Monetary and Economic Studies.* Bank of Japan, May 1985.

Yasuda, Tadashi. "A theoretical Interpretation of the Window Guidance: A Game-Theoretic Interpretation," The Bank of Japan, Special Economic Studies Department, February 1981.