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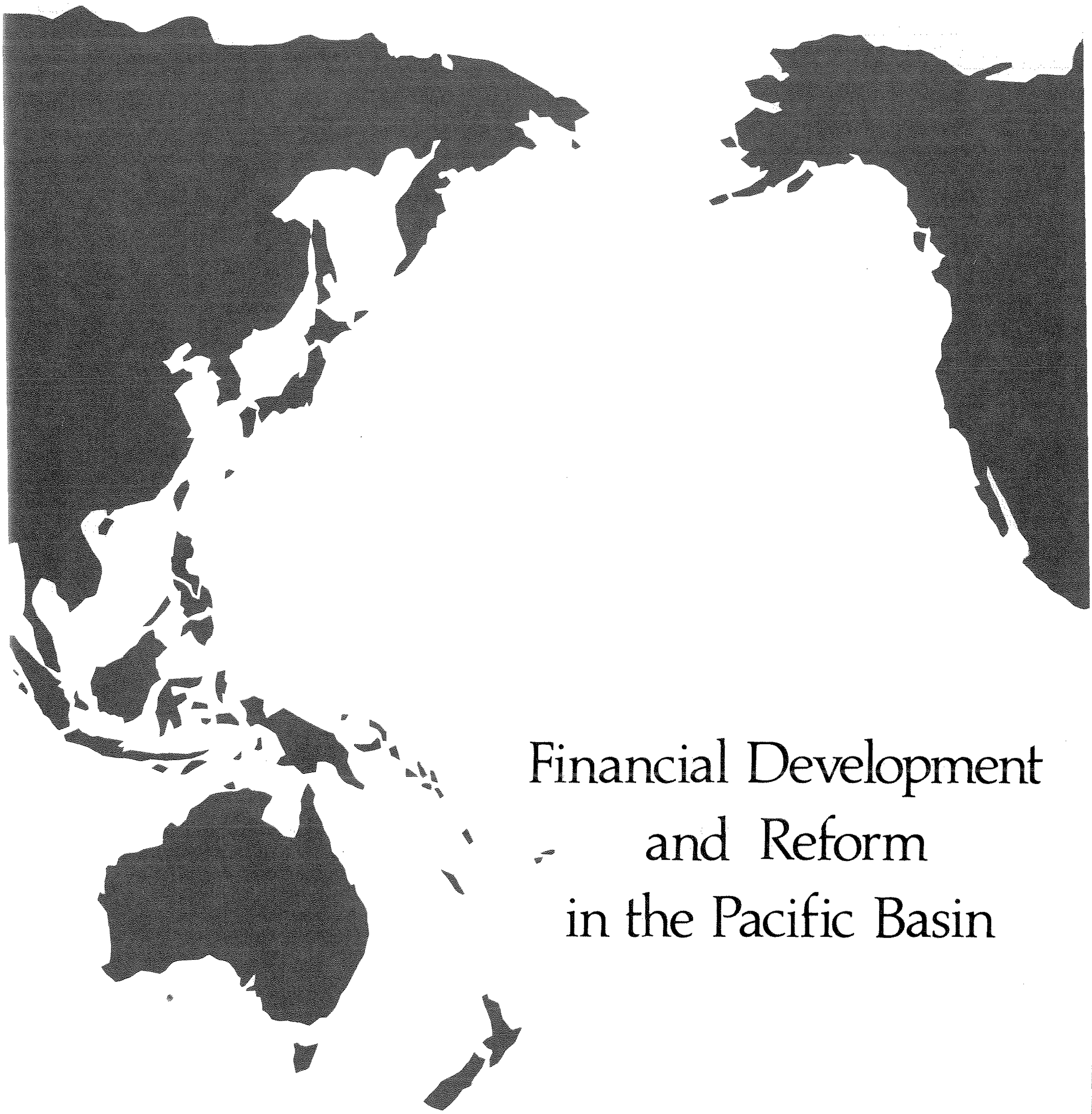

Financial Development and Reform in the Pacific Basin

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Financial Reform In Japan

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The last decade has seen a worldwide process of financial reform and innovation that has greatly altered the financial structures of many nations. These changes can be traced in large part to a common set of economic afflictions—inflation, higher oil prices, and sluggish real growth. By altering financial flows and upsetting the competitive relations among financial institutions, they have greatly strained the financial systems. In the process, policies regulating financial institutions and markets have been undercut and uncertainties attending the effects of traditional monetary and fiscal policies have increased.

No country has experienced more far-reaching financial change over the last decade than Japan. Japan began the 1970s with a highly regulated and fairly rigid financial system that contrasted sharply with its sophisticated and comparatively unregulated real economy. Although limited steps toward liberalization were taken during the 1960s, the inflation and oil shocks of 1973–1974 drastically accelerated the pace of change. By altering economic circumstances,the two forces created a need for a more flexible financial system, one in which market forces could play a greater role in allocating credit. In response to this need, Japanese authorities considerably relaxed controls on interest rates and financial flows in recent years. The process of reform and its ultimate effects, however, are far from complete.

This paper describes the progress of financial reform in Japan since the early 1970s. The following section traces the evolution of Japan's financial system during this period, comparing and contrasting the process there with that in the United States. The focus is on how the economic shocks experienced by Japan have greatly increased its economy's need for the functions served by a free financial system (one in which prices and financial flows are determined by market forces). Section II briefly reviews the major reforms that have occurred in response to these pressures and their main effects. As we will see, the flexibility of short-term interest rates and the mobility of capital between Japan and other countries has increased substantially while regulation in some other areas continues to be nearly as restrictive as before.

I. Economic Forces for Reform

At the beginning of the 1970s, both the U.S. and Japan possessed highly developed free market economies. Yet their financial systems were very different with that of the U.S. by far the more sophisticated of the two. The differences were less the product of contrasting historical experiences and real economic structures than of the much greater government intervention in the financial system in Japan than in the U.S. Still, the inflation, oil, and other major shocks of the seventies combined to serve as the "engine" for financial changes in both countries. These changes have generally weakened regulatory constraints in both countries, and nudged Japan's financial system closer to that of the U.S.

The Way We Were

The financial system of the United States has long been among the most highly developed in the world. Its sophistication is reflected in the wide variety of financial instruments available to borrowers and lenders, as well as the high degree of specialization and competition in the provision of financial services. Particularly notable are the ex-

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tensive and highly developed financial markets (markets for short-term securities such as Treasury bills and commercial paper and the long-term capital markets) all of which are accessible to a wide range of financial and non-financial entities. These markets allow funds to flow *directly* from lenders to borrowers, rather than indirectly through financial intermediaries, to a greater degree than in most other nations.

The sophistication of the U.S. financial system derives in large part from the relatively "laissez-faire" approach to financial regulation taken by U.S. authorities. Most interest rates, for example, have been left to vary with market forces. Authorities here have used controls or other administrative devices to influence the allocation of credit sparingly when compared to other countries. Most remarkably, since the 1950s, the U.S. has maintained very few legal impediments to financial flows between here and abroad, while allowing foreign institutions to compete in the domestic financial arena on a nearly equal footing with our own residents. The result, with some notable exceptions, has been a comparatively liberal regulatory environment in which market forces, rather than legal or administrative controls, usually determine the allocation of credit.

Still, regulations have substantially affected credit flows and competitive relations in certain areas. Legal ceilings on deposit interest rates, restrictions on the asset choices of thrifts, and the partially subsidized lending of several government-sponsored financial institutions have aimed at augmenting the supply of funds to housing. Other government agencies and programs have attempted to channel funds to agriculture and small business. Limitations on branching have so severely restricted geographic competition among banks and thrifts that the U.S. has thousands of depository institutions, compared to the dozens generally found abroad.

Restrictions on the financial activities of banks—most notably their exclusion from investment banking—have limited their ability to compete with non-bank financial institutions. In addition to these regulations are numerous restrictions on financial institutions' capital, exposure to individual borrowers, and choice of financial instruments and financial activities applied (at least originally) for prudential reasons. Again, though, U.S. regulation, taken as a whole, has been less restrictive than that usually found abroad.[1] Indeed, as we will see, many regulations that have been applied have become a major focus of financial change in large part because our financial system has been so free in most other respects.

In stark contrast, Japan's financial system has long been permeated by government regulation, formal and informal (see the thumbnail sketch of this system). To a certain extent, present-day regulatory policy reflects practices inherited from the development of Japan's modern financial system in the late 19th century. They include the separation of short- from longer-term finance, the segregation of financial institutions by function and sector served, and the "state-guidance" of financial activities.[2] But perhaps the major motivation of post-war government intervention in the financial system has been to influence the allocation and cost of credit to various sectors, with the most important aim to encourage business investment by channelling household savings to the corporate sector.[3]

Japan's authorities have sought to influence financial flows both directly and indirectly. Government financial intermediaries, which serve mainly small business, utilities, agriculture, and foreign trade, play a much greater role in the allocation of credit in Japan than in the U.S. (see Table 1). Policy has also affected credit flows more indirectly, although probably even more pervasively, by severely limiting the flexibility of interest rates, restricting access to financial markets, and limiting the asset and liability choices of financial and non-financial entities.

Until the late 1970s, essentially all key Japanese interest rates were constrained to varying degrees by some form of government action.[4] Deposit interest rates were set at artificially low levels in comparison with yields on other assets (in part to keep bank loan rates down by limiting the cost of their funds) and varied only sporadically. Policy seriously limited the flexibility of banks' and other financial institutions' lending rates by tying them to the central bank discount rate. Moreover, government controls over rate-setting even extended to the capital markets where rates on *newly-issued* bonds were generally kept below secondary market yields. Even in the short-term money markets (the call, bill, and bond-repurchase markets), usually spared *explicit* interest rate controls, government participation in the rate-setting process and outright market intervention often limited rate variations indirectly (more on this in Section II).[5]

Policy restrictions on the array of financial instruments available to individuals and institutions, and limitations on access to the financial markets, served to enforce the interest rate controls by limiting substitutions among assets and by channelling funds in desired directions. Banks, for example, have traditionally been unable to "purchase" funds from the non-bank public by issuing negotiable certificates of deposit, debentures, or analogous instruments (practices common in the U.S. since the 1960s). They have had to fund their lending through deposits (with their artificially low interest rates) and borrowings from the Bank of Japan. Other financial institutions have been allowed to raise funds by issuing debentures (at rates tied to the discount rate), but they have been prohibited from deposit-taking.

Limitations on the positions of financial institutions in the bond-repurchase (Gensaki) market, and the exclusion of non-financial corporations from the call and bill markets, have impeded arbitrage among the money markets. Non-financial business has had to rely mainly on bank loans and internal funds to finance investment because regulation has discouraged bond finance and effectively prohibited commercial paper issues.[6] Services provided by financial institutions have also been restricted by policy as, for example, banks have until recently been prohibited from acting as underwriters or dealers in securities markets.

Table 1
Financial 'Profile' of Japan and U.S.

	U.S. (%)		Japan (%)	
	1972	1980	1972	1980
1. Gross Savings as Fraction of GNP	15.7	15.3	38.3	31.6
2. Fraction of Funds Raised 'Directly' in Domestic Securities[1] Markets by Domestic Non-Financial Sectors	NA	31.8	4.7	11.5
3. Share of Total Funds Raised by Domestic Non-Financial Sectors:				
a. Business	45.1	39.8	59.4	47.4
b. Households	37.7	29.6	18.6	19.4
c. Government	17.1	30.5	21.9	32.8
4. Share of Total Assets of Financial Institutions held by:				
a. Commercial Banks	NA	32.3	NA	34.9
b. Other Private Financial Institutions	NA	56.3	NA	37.6
c. Government Financial Institutions	NA	7.6	NA	23.3
5. Share of Funds Raised by Corporate Business Via:[2]				
a. Loans from Banks	21.1	25.1	58.0	41.7
b. Loans from other Private Financial Institutions	35.5	21.6	32.7	44.2
c. Bond Issue[3]	22.9	33.0	1.9	5.0
d. Equity	20.3	20.3	7.3	9.2

Sources: (1) OECD *National Income Account Statistics*.
(2) Country sources on flow of funds statistics.
(3) OECD *Financial Statistics*.
(4) OECD *Financial Statistics*.
(5) "Flow of Funds of the Japanese Economy," various years for Japan; and OECD *Financial Statistics* for U.S.

Note: 1. Figures refer to the fraction of total funds raised by domestic non-financial sectors that were supplied directly in domestic financial markets (figures for U.S. also include funds supplied by foreign sector).
2. Funds raised (or 'financial sources') *exclude* all trade credit for the U.S., and foreign trade credits received by government for Japan.
3. For the U.S., figures include short-term securities issued by corporations.

Most restrictive of all were regulations governing financial relations between Japan and other countries. Virtually all financial flows into and out of the country were subject to ceilings, prior approval, or other limitations. The financial activities of Japan's banks abroad were closely supervised and occasionally curtailed by the authorities. Foreign institutions' access to Japan's financial system was very restricted, although not only by overt discrimination. In particular, the restrictions applied to all banks (although not equally) on branching and conversions of foreign currency into yen worked a particular hardship on foreign banks, who, because of their relatively late entry into Japan's market, have had more limited sources of yen funds than their Japanese competitors.[7] Foreigners were generally denied access to the bond and equity markets, whether as borrowers, lenders, or dealers.[8]

Not surprisingly, regulatory policy has given the Japanese system several distinctive characteristics. Policy has tended to assign each type of financial institution its own particular funding base and to circumscribe its lending sphere. As a result, the activities of different types of financial institutions generally overlap less than they do in the U.S. Regulation has also circumscribed the financial outlets available to non-financial sectors, particularly to the household sector where mortgage credit has been very scarce and consumer credit virtually unavailable.[9]

Interest rate controls, together with limitations on asset/liability choices, have severely stunted the development of Japan's money and capital markets. In fact, virtually all external funds raised by households and businesses in Japan have been obtained "indirectly" through financial intermediaries. Typically, less than ten percent of funds raised domestically in Japan flow directly between surplus and deficit sectors via the financial markets, compared to about thirty percent in the U.S. (Table 1). The variety of maturities, denominations, and other features of financial instruments in Japan is also much more limited than here. Furthemore, by often preventing interest rates from moving to their market-clearing levels, controls have led to widespread reliance by financial institutions on quotas and other "credit-rationing" devices. Partly as a result, relations between individual banks and their corporate clients tend to be stronger and more personalized in Japan than is generally the case in the United States.

Finally, these effects of regulation have influenced the transmission of monetary and fiscal policy-actions to the private economy. Until very recently, monetary actions to smooth fluctuations in economic activity relied on corporations' dependence on bank lending, and banks' dependence on Bank of Japan credit, for their effect. For example, to slow real activity, the central bank would reduce its credit to private banks to force them to curtail their lending to business. The resulting squeeze on corporate liquidity usually led to a prompt reduction in business investment.[10] Thus, the short-run timing, force, and incidence of monetary restraint depended more on *administrative* restrictions of the quantity of credit than on regulating its cost. As we will soon see, government debt management policy also has been profoundly affected by regulation-induced limitations on the financial markets.

Winds of Change

Financial change in Japan and the U.S. can hardly be said to have begun with the 1970s. Japan had taken steps to increase interest rate flexibility during the 1960s, for example. And in both countries there has been long-standing dissatisfaction with the distortions brought by regulation and considerable support for reform within as well as outside government. At the beginning of the 1970s, economic considerations and political forces opposing change were in rough balance with pressures for change.

During the next decade, several worldwide economic upheavals upset the equilibrium and dramatically accelerated financial reform and innovation in Japan, the U.S., and many other nations. Developments such as the surge in world inflation beginning in the early 1970s, the slowing of real growth and shifts in industrial structure resulting *in part* from the oil price increases, and the breakdown of fixed exchange rates over 1971–1973 fundamentally altered the costs and benefits of existing regulatory policy, rendering much of it obsolete. Still, the ultimate effects of these forces have been conditioned by institutional circumstances, so that the resulting processes of financial change have varied considerably among countries.

In the U.S. probably the most important factor shaping financial change over the last ten years has been our inflation. Inflation, by widening the gap between real returns on regulated deposits and market yields, helped spur the growth of money market funds, NOW accounts and other substitutes for traditional demand accounts, greatly increasing pressures for interest rate deregulation. Inflation contributed substantially to the thrift industry's woes by raising the cost of its funds above yields on the long-term mortgage assets to which regulation largely confined them. The burden of commercial banks' required reserves increased with inflation, spurring an exodus from Federal Reserve membership and prompting Congress, in 1980, to extend reserve requirements to all depository institutions. These developments, in turn, have altered competitive relations among financial institutions, generally to the detriment of banks and (especially) thrifts, causing them to seek opportunities outside their traditional spheres. One result has been intensified pressures to allow banks greater involvement in the securities business and to relax restrictions on interstate banking.

The pervasive impact of inflation, and the way in which it has fostered financial innovation, owe much to the comparative freedom of the U.S. financial system. Regulation has long rested on a somewhat precarious foundation, given the wide variety of unregulated substitutes for regulated instruments and activities. Once inflation made such substitutions worthwhile, the process of financial change became virtually irresistible. That these changes occurred spontaneously in the private sector, largely outside the control (and often despite the efforts) of authorities, is a further indication of the latitude enjoyed by the private financial system in the U.S. As we will now see, financial change in Japan's more controlled system proceeded along a very different path.

Japan's Path

In Japan, policies and institutions tailored to the conditions of the 1950s and 1960s did not work nearly as well in the very different economic environment of the last decade. This experience led to financial reforms aimed at liberalizing interest rates and financial flows. But, in contrast to the U.S., the resulting financial changes have largely been directed, indeed imposed, by the authorities mainly because regulatory policy has allowed very little scope for spontaneous innovation in the private sector.

Inflation's role in this process was important but not nearly as central as it was here. By dramatically lowering many *real* interest rates and greatly increasing their variability, the surge in inflation in the mid-1970s increased consumer dissatisfaction with regulated deposit rates and demonstrated to officials that controls on nominal interest rates were apt to add to the volatility of real rates. But because Japan's inflation was comparatively short-lived (lasting mainly from 1973 to 1976) and financial choices were so circumscribed, inflation did not disrupt financial flows and competitive relations to nearly the degree seen in the U.S.[11] Moreover, financial reform in Japan extended to areas not as obviously related to inflation, such as the liberalization of controls on international capital flows.

The more fundamental pressures for financial change in Japan have come from two basic economic changes over the last decade: (1) changes in the financing *needs* of various sectors of the economy resulting (mainly) from the slowing of real growth and shifts in industrial structure, and (2) the breakdown of fixed exchange rates over the period 1971–1973.[12]

The slowing of real growth in Japan has sharply altered traditional financing patterns both directly and indirectly. Slower growth greatly reduced the business investment rate, making corporations less dependent on bank loans. Japan's household savings (which have remained very high in relation to income) no longer flow to business to the same degree as before. Instead, a much larger fraction now goes to the government sector as fiscal measures to spur growth have increased the public sector budget deficit to 4–6 percent of GNP from the 1–2 percent average during the early 1970s. Japan's savings have also flowed abroad via the large current account surplus incurred over the period 1976–1978 and in 1981.

The pattern of financial flows among individual industries has also been altered as production has shifted away from heavy industries such as steel and ship-building toward autos, chemicals and the emerging high-technology semi-conductor and computer industries. Moreover, financing patterns have not only changed considerably, they have often become more variable (and probably less predictable) than before, as illustrated by the swings in the financial deficits of the corporate and foreign sectors depicted in Chart 1.

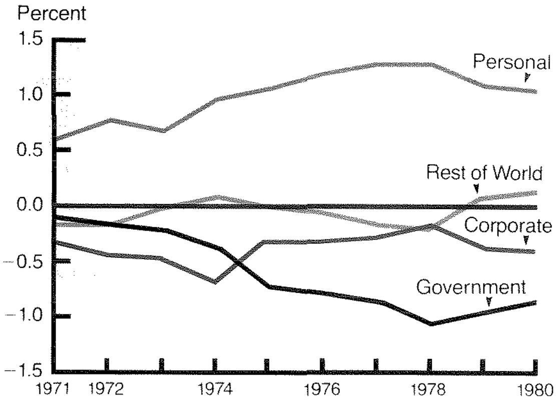
Financial liberalization in Japan has also received a powerful impetus from a momentous change in the *international* financial system: the switch from fixed to flexible exchange rates during the 1971–1973 period. This change reflects the much greater divergence in nations' macroeconomic policies (particularly toward inflation) over the last ten years compared to the preceding two decades. As a result, direct controls on certain financial prices critical to Japan's economy (exchange rates) were no longer practical. Consequently, Japanese authorities must now be concerned that actual exchange rates reflect their equilibrium levels and that exchange rate volatility from temporary factors be minimized.

By altering financial flows and incentives, both changes have made enforcement of traditional restrictions more problematic while, at the same time, rendering them less effective in accomplishing their original aims. For example, as corporate dependence on bank loans has fallen, the authorities can no longer be confident that *simply* restricting bank credit will have the prompt, predictable impact on economic activity it had in the past. More and more, the short-run transmission of monetary policy actions has to rely on affecting the *cost* of credit to the private sector, necessitating greater flexibility in (at least) shorter-term interest rates. Likewise, the increased diversity in policy under floating rates probably increased pressures for international capital flows. (In the previous fixed-rate regime, countries had to pursue compatible inflation policies, at least in the long-run.) For this reason, effective capital controls are apt to be more costly to maintain because the incentives to evade them, and the distortions arising from them, are probably greater.

More important, these changes have substantially increased Japan's need for certain abilities possessed by a free financial system, abilities sorely missing from the rigidly controlled system of the past. These include the abilities to pool information from disparate sources to achieve an efficient allocation of savings; to provide a wide variety of financial instruments with maturity, liquidity, and other characteristics suitable to the diverse (and variable) needs of borrowers and lenders; and to provide financing to ease the adjustment to changing financial surpluses and deficits of various sectors. Japan's

Chart 1

Financial Surpluses of Non-Financial Sectors: Percent of GNP



greatly increased need for these functions explains why financial reform has generally resulted in *liberalization*, rather than the substitution of one set of controls for another.

Pooling Information

In any economy as diverse as Japan's, information about financial needs and opportunities is apt to be widely dispersed among individuals. Any one particular entity can be knowledgeable about its own requirements, but it cannot be perfectly informed about the needs of others. This is one problem any financial system faces: how to "pool" dispersed information to allocate credit to its most productive uses.

The credit allocation process in Japan has been centralized by our standards. It has relied heavily on the decisions of government authorities and officials at the private lending institutions. The success with which these officials gathered the information required to determine the economy's needs determined the efficiency with which funds were allocated.

Indeed, the presumption underlying the traditional regulatory approach was that responsible officials were knowledgeable and skillful enough to direct funds to their most productive outlets. This presumption is not valid (if it ever was) under the changing economic conditions now facing Japan. Officials in government and private lending institutions can hardly be expected to have acquired the detailed knowledge now needed to allocate savings efficiently, nor can they plausibly know the "right" exchange rate, since its value is determined by a variety of factors often not directly observable even after their occurrence.

Pooling information for the efficient allocation of funds is a task to which free financial markets are particularly well-suited. In such a system, *prices* serve to inform all parties about financing needs and availability. The subsequent allocation of funds therefore depends upon the circumstances of and information available to both borrowers and lenders. Moreover, lenders do not have to possess detailed knowledge about where funds can be most effectively employed. The *price* that individual borrowers are willing to pay, based on their assessment of how productively they can use the funds, effectively communicates this information. In this way, free financial markets can effectively use considerably more information than is available to any single participant, or group of participants, and are therefore apt to be much more efficient in allocating funds in a changing economy.

Reaping the benefits of free financial markets, however, requires a shift in the emphasis of regulatory policy. As long as authorities relied on their own knowledge of financial prices and direct credit flows, they had an incentive to restrict access to the markets in order to minimize the resources and effort involved in regulation. But if the knowledge possessed by diverse households and businesses is to be used, those actors must be allowed to buy and sell freely, and prices must be allowed to vary to reflect their knowledge. Thus, liberalization of international and domestic financial flows, and of interest rates, has become more necessary.

Provision of Financial Instruments

Another task of a financial system is to provide financial instruments with the maturity, liquidity, risk and other characteristics needed by borrowers and lenders. The mix of instruments required depends greatly on the pattern of financial flows as, for example, the more funds flowing to housing, the greater the need for mortgage and similar securities. Japan's system has traditionally met such needs by providing a strictly limited array of instruments tailored to the needs arising from a *particular* financial-flow pattern. But, as shifts in financial flows have altered these requirements, they have also underscored the need for more flexible financial markets and institutions that can accommodate widely varying types of assets and liabilities.

The burgeoning government debt resulting from the large budget deficits incurred in recent years illustrates this process well (Table 2). Largely because Japan lacked a short-term market for government debt, it has financed the deficits with long-term government bonds of very limited (original) maturities.[13] Yet private entities have been reluctant to acquire large quantities of such debt, partly because the underdeveloped state of the bond and other financial markets severely limits its marketability and, hence, its liquidity. This dilemma has led the government to allocate its debt among the financial institutions at rates generally below those prevailing on the secondary markets. Until 1977, the institutions' ability to sell this debt (on the secondary market or "over-the-counter") was also quite limited. Not surprisingly, the liquidity, and the profits, of financial institutions, particularly banks, have suffered significantly from this policy.[14] Indeed, the absorption of the debt has become, perhaps, a greater problem for Japan's economy than the real demands on Japan's savings of financing the deficits.[15]

Almost certainly this burden would have been considerably less in a free financial system with well-developed secondary markets and other facilities capable of making even very long-term instruments relatively liquid. Japan's past (and, to a lesser extent, its current) policies have largely prevented such outlets from developing. For this reason, the large overhang of government debt is likely to goad further financial reform in coming years.[16]

And Adjustment

Finally, a financial system must also serve to ease the *cost of adjustment* to changes in financial deficits and surpluses. Any sector that develops such an imbalance must either finance it or make real adjustments in spending and/or income to eliminate it. Both adjustments are usually costly. Financial facil-

Thumbnail Sketch of Japan's Financial System*

Financial institutions in Japan are far less numerous, and more specialized, than those found in the U.S. There are seventy-six Japanese commercial banks, the thirteen largest of which are known as the "City banks" and the remainder as "Regional banks." These banks have extensive nationwide networks of branches developed prior to World War II (since the War, the authorities have virtually frozen the establishment of new branches). Assets of Japanese commercial banks, which consist primarily of loans to business and (more recently) government securities, are funded primarily through demand and time deposits (at rates fixed by the government) issued to the public *and* by extensive borrowing from the central bank (Bank of Japan) through its discount window. (In contrast, the Federal Reserve's discount window serves only the temporary needs of U.S. banks). In addition, about 60 foreign banks have opened branches in Japan since the War. Because these institutions do not have many branches, their access to yen funds has been very limited (coming mainly from conversions of foreign currency, subject to stringent government ceilings). Consequently, their main function has been to extend dollar (and other foreign currency) loans to Japanese institutions. As in the U.S., all commercial banks in Japan have traditionally been prohibited from engaging in the underwriting of securities. However, beginning in 1982, they were permitted to underwrite and deal in *government* securities. Many banks, (along with the long-term credit banks) also engage in the foreign exchange business under special license.

As Japanese commercial banks were originally "designed" to provide short-term funds to business, longer-term finance has mainly come from the 3 long-term credit banks and 7 trust banks (as well as insurance companies) that issue longer-term debentures and trust (analogous to time) accounts, respectively. In practice, however, commercial banks provide substantial medium-term funds for business investment, blurring the distinction between them and the designated long-term financial institutions. As with bank loan rates, rates on these institutions' liabilities and loans are linked by regulation to the Bank of Japan's discount rate. Japan also has numerous institutions serving small business (mainly mutual loan and savings banks, and credit associations and cooperatives), as well as agriculture. Unlike the U.S., however, there is no major group of *private* financial institutions specializing in mortgage finance, which is very scarce in Japan. Government financial institutions, which play an extensive role in credit allocation, provide financing to small-business, agriculture, foreign trade and housing. These institutions draw their funding from the government-run postal savings system, which competes with the banks for household savings. Indeed the postal savings system has been allowed to offer accounts with somewhat higher interest rates and other features more attractive to households than those afforded banks. As a result, the system's share of total household deposits has risen from about 20% in 1975 to 30% at present.

*For more detailed description, see especially Layman as well as *The Japanese Financial System*, and *The Banking System in Japan*.

The short-term financial markets in Japan include the Call market (for 1–7 day funds), the Bill market (for commercial bills of 1–3 months maturity), the bond-repurchase or 'Gensaki' (primarily 3-month) market, and (more recently) the market for bank certificates of deposit. (Japan does *not* have a genuine market for short-term government securities, mainly because very few have been avilable to the public). The first two of these are essentially interbank markets, providing temporary liquidity to individual banks and funnelling "excess" funds of the regional banks to the city banks. The "Gensaki" market *traditionally* has served non-financial corporations, as until recently financial institutions' positions in the market were limited by the authorities. Interest rates in these markets have typically been free of *direct* controls although not always free of indirect government influence.

Despite active and generally unregulated secondary markets, Japan's longer-term financial markets, particularly the bond markets, are very limited. Private corporate bond issues must be individually approved by the authorities, who have generally set the issue-rates below secondary market yields. As a result, bonds and equities play a comparatively minor role in private corporate finance in Japan (debt-equity ratios are far above those U.S. corporations would tolerate), the bulk of longer-term funds coming from financial intermediaries. In effect, the long-term bond markets have largely been reserved to the government, which issues nearly all its debt there, and to public corporations.

The primary responsibility for regulating private financial institutions, including banks, resides with the Ministry of Finance (MOF—Japan's Treasury). The Ministry sets regulated interest rates and ceilings or quotas on controlled (domestic and international) financial transactions, where applicable (e.g. ceilings on bank issues of certificates of deposits; ceilings on banks' conversion of foreign currency into yen). The MOF also reviews numerous applications for approval of various financial activities, such as new bond issues (where it regulates the issue terms) or additional bank branches. Thus it is the MOF that has direct control of the pace and direction of financial reform in Japan.

The Bank of Japan is primarily responsible for monetary and exchange rate policies. In principle, the Bank possesses all the conventional tools of monetary policy: reserve requirements (which, at 2.5% on checking deposits, are much lower than in other industrial countries), the discount rate, and open market operations. In practice, the Bank has augmented bank reserves primarily through direct lendings at its discount window, although this source has been supplemented since the early 1970s by purchases and sales of commercial bills in the market. In seeking to moderate fluctuations in economic activity (and contain inflation shocks in more recent years), the Bank often has also relied on direct, but general, credit controls, in particular, ceilings on private banks' borrowings from the discount window and on "window guidance" quotas on individual banks' lending to the private sector. However, whether window guidance has actually been necessary for the implementation of monetary policy, or merely served to allocate the burden of monetary restraint among institutions, has been fiercely debated in Japan.

ities can reduct this cost, either by stretching out the adjustment or by making it unnecessary when the imbalance is temporary. Again Japan's regulated system could meet traditional needs, but it has proved less capable in promoting smooth adjustment to the shifts in deficits and surpluses seen in recent years.[17]

This limitation probably was a major factor spurring the liberalization of controls on international capital flows in 1978. As indicated earlier, the balance between domestic savings and investment (and government) demand has fluctuated considerably in recent years, producing large swings in the current account balance. To the extent that capital controls have impeded the financing of these imbalances, adjustments have been forced onto exports, imports, and exchange rates. For example, if Japan were to be unable to fully finance its current account deficit, it would have to increase exports, reduce imports, or allow the exchange rate to depreciate (or, more likely, some combination of all three). Besides adding to exchange rate volatility, such adjustments could have very disruptive impacts on wages and prices, aggregate demand, and resource allocation in Japan (not to mention her trading partners).[18]

Reprise

Financial changes in the U.S. and Japan over the last ten years largely reflect tensions created by their traditional regulatory approaches. Similar economic events have sharply heightened these tensions, but as the two countries' policies have differed greatly, so have their processes of financial reform. In the U.S., stringent regulation of the sort common in Japan has been more the exception than the rule. Consequently, financial change has largely originated in spontaneous innovations in the private sector that subsequently spurred, often belated, regulatory reforms. Japan applied regulation throughout the financial system to "custom-fit" its capabilities to the economic circumstances of the 1950s and 1960s. In the process it severely limited its adaptability. This is the main reason that financial change there appears to be more far-reaching, and more under the control of authorities, than that in the U.S. Indeed, as we will now see, as far as financial reform in Japan has already gone, many of its most important implications have yet to be realized.

Table 2
Placement of Japanese Government Debt[1]
(Amount Outstanding)

	1972	1976	1980
Total as Fraction of GNP (%)	10.8	16.9	35.7
Maturity:[2]			
Medium and Long Term (%)	65.0	81.8	85.8
Short Term (%)	35.0	18.2	14.2
Share Held By: (%)			
Central Bank	21.6	30.1	18.4
Financial Institutions	28.9	33.9	53.4
Private Banks	19.6	27.2	19.5
Other Private Financial Institutions } Public Financial Institutions	9.3	6.7	14.3
Public Financial Institutions			19.4
Fraction of Total Assets of: (%)			
Central Bank	21.0	52.5	70.6
Private Banks	2.4	5.9	8.6
Other Private Financial Institutions	1.3	1.5	6.1

Notes: 1. Figures refer to the debt of the central government only, and exclude debt issues of public corporations, public financial institutions, and local authorities. Data refer to *fiscal* year (ending March).

2. Most debt held by the Bank of Japan is short-term; most debt held by banks and other private financial institutions, as well as the public, is medium or longer term. Maximum maturity on government debt is 10 years.

Source: Bank of Japan, *Economic Statistics Annual*.

III. Japan's Reforms and their Effects

Financial changes in Japan, as in the U.S., over the last decade have concentrated in areas of greatest tension between changing economic conditions and regulatory structures. During this period, reforms have significantly increased the flexibility of interest rates and improved access to and variety in financial markets in *certain areas*.

The main changes and their most apparent effects on financial prices and flows, as well as those areas that reform has yet to touch, are described below. It should be noted though that both regulation and reform in Japan are generally more implicit and informal than here. As is often observed, the U.S. is a much more legalistic society than Japan. Changes in regulatory policy here come as the result of legislation, or explicitly announced changes in administrative rules. Futhermore, actions not explicitly forbidden by regulation are nearly always presumed to be allowed. In Japan, regulation is less formal, and less codified. Until recently, many actions of private entities were presumed to be forbidden unless explicitly authorized. As a result, significant changes in regulatory policy have at times come from shifts in the *application* of existing rules rather than their explicit changes. Explicit changes in policy have often served, in part, to ratify changes that have already occurred informally. For this reason, it is not always easy to determine precisely when a given change in Japanese regulatory policy occurred.

Interest Rate Liberalization

Regulation, traditionally, has had three characteristic effects on Japanese interest rates. First, *some* rates have been kept considerably below those that would have prevailed in free markets. Second, the variability of *real* interest rates has probably been increased by constraints on the flexibility of nominal interest rates, because those constraints could have prevented nominal yields from adjusting to shifts in expected inflation. Finally, regulation has tended to segment financial markets; as a result, yields on very similar instruments have often diverged sharply during periods of tight money. Changes in these three patterns over time provide indirect indications of the progress of reform.

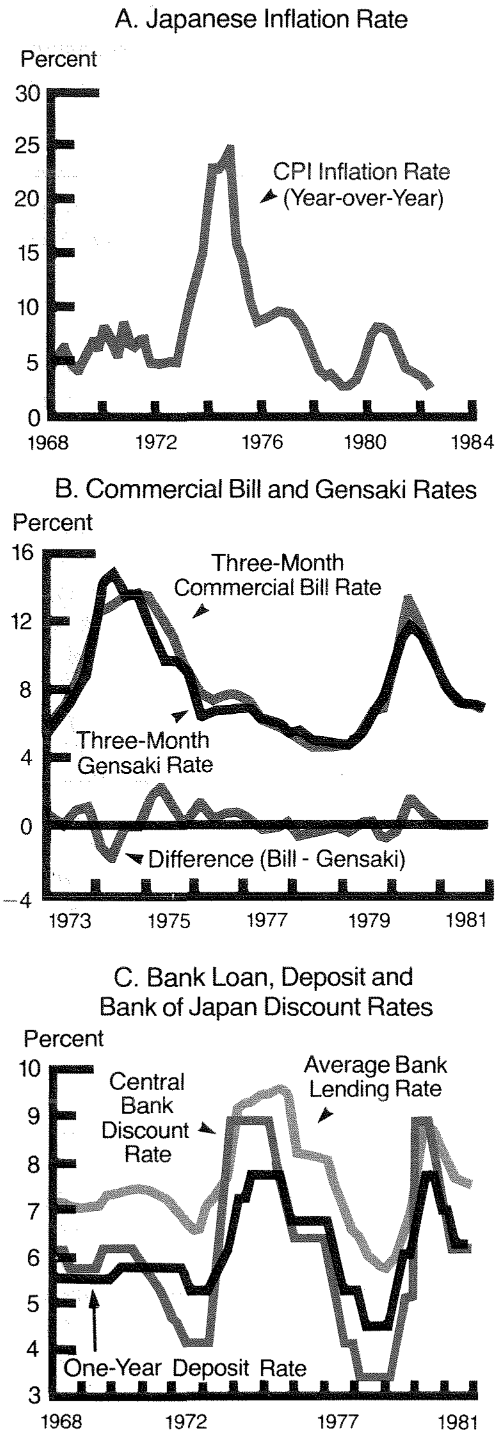
Two sets of reforms adopted during the 1970s have noticeably modified these patterns. First, in 1970 the authorities began to link most explicitly regulated interest rates (except the money market rates) to the central bank discount rate, although to varying degrees.[19] Prior to 1970, those rates varied little. Since then, bank lending rates, as well as long-term lending rates and yields on newly issued bonds and debentures, have moved *roughly* in proportion to variations in the discount rate (except during the 1973-74 and 1979-80 "tight" money periods). Deposit rates have also varied more than before this change, although by considerably less than lending rates (see Chart 2-C). Because the discount rate has fluctuated more over the last decade than during the 1960s, the effect has been to increase the variability of nominal regulated rates linked to it.

Second, in 1978 and 1979, interest rates in the traditional money markets were, in effect, completely deregulated. Japan largely ended official participation in the setting of call rates, restrictions on the resale of commercial bills and limitations on financial institutions' access to the Gensaki market.[20] The last two moves linked the money markets more closely, and sharply reduced the large spreads among money market yields that used to emerge during periods of tight money. For example, during the money slowdown of 1973-1974, the Gensaki rate rose considerably above the call and bill yields (see Chart 2-B). This suggests that the restrictions on call/bill rate flexibility were especially binding during tight-money periods and that substitution between these markets and the Gensaki market was effectively limited. Since 1978, money market yields have remained much closer together, even through the slowing of money growth in 1979-1980[21], providing tangible evidence of the liberalization of these markets.

How far have these reforms gone in giving Japanese interest rates the flexibility they would have in a completely free market? While the variability of nominal rates has been substantially greater over the last decade than before, the variability of several fundamental determinants of interest rates—inflation and real income—has also risen (see Table 3). Whether actual interest rates now reflect their *equilibrium* values to a substantially greater degree than before is thus not immediately obvious.

Chart 2

Interest Rates and Inflation in Japan (Quarterly)



Two other comparisons are more suggestive. First, in a free market, nominal interest rates are apt to be *more* variable than their *real* counterparts because nominal rates tend to adjust to offset changes in expected inflation (at least partially); where nominal rates are controlled, real rates will be more variable.[22] Thus the variability of real versus nominal rates in Japan provides a rough gauge of interest rate flexibility. Second, it is useful to compare the variability of Japanese rates with that of their counterparts in the U.S., which (except for deposit rates) are essentially market-determined.[23] Such comparisons are given in Table 3 for three periods: 1968-1972, 1973-1977, and 1978-1981.[24]

The figures in the table suggest that some constraints on the flexibility of the Japanese call rate existed prior to 1978 (by moral suasion and/or government intervention in the bill market), but that the reforms of 1978-1979 have effectively relaxed them. The real call rate varied more than the nominal rate over the first two periods, from 1968-1977, the opposite of the pattern consistently observed for U.S. short rates (and also for Japan's Gensaki rate, which traditionally has been closest to being market-determined). However since 1978, the variability of the "real" call rate has fallen markedly, both absolutely as well as in relation to the nominal rate, suggesting that it is now essentially a "free-market" yield.

Similar comparisons point to more substantial increase in the flexibility of bank lending rates. Over the earliest period, the (average) nominal lending rate in Japan was much less variable than its real element (and less variable than the U.S. prime rate). The variability of nominal lending rates in Japan increased sharply during 1973-1977, but the variance of the real rate increased by even more as inflation surged dramatically during the first two years, and then fell back nearly as precipitously. However, since 1978, bank lending rates have followed the pattern more nearly characteristic of a free market, with real rates varying less than their nominal counterparts. This suggests that these rates in Japan are now at least *nearly* as flexible as those a

Notes: 1. Inflation rate is calculated as the percentage change over the same quarter of the previous year.
2. The Gensaki (bond-repurchase) rate for 1973–74 is estimated from the graph in the September 1981 *Asian Monetary Monitor*.
3. All data are quarterly averages.

free-market would determine.[25]

Finally, these reforms have had much less impact on the setting of deposit rates and in the bond markets. Deposit rates have varied more during the last decade than during the 1960s, but they remain below rates available to financial and non-financial institutions in the open markets, and almost certainly below the level a free-market would set. Indeed, real deposit rates fell to double-digit *negative* levels during the 1973-1974 inflation surge, and their average level in the last several years has not differed greatly from that of the 1960s (compare Charts 2-A and 2-C). Reform has also not significantly altered the practice of keeping yields on newly-issued bonds (generally) below those on the secondary markets. As indicated in Chart 3, the average level and variability of the primary-secondary market yield gap has not differed greatly since 1978 from that observed previously.

Liberalization in Domestic Financial Markets

As explained in the last section, Japanese regulation has severely limited access to financial markets as well as the types of instruments available to them. Authorities used these limitations as a complement to interest rate controls in their efforts to influence the cost and allocation of credit. For this reason, reform in this area has also been most extensive in the short-term financial markets.

Measures taken during the 1970s have resulted in the creation of two new short-term financial markets. When financial institutions were authorized to trade in certain commercial, industrial, and trade bills (generally with 1-3 months maturity) in 1972, the "Commercial Bills" (or "bill-discount") market was established.[26] One result has been to give banks the important secondary-reserve asset they largely lacked prior to 1972. Not surprisingly the market grew rapidly, becoming the largest of Japan's money markets until very recently (Table 4).

In 1979, authorities again responded to banks' needs. This time the need was for additional funding sources to absorb government debt. The banks were authorized to issue negotiable certificates of

Table 3
Variability of Japanese and U.S. Interest Rates

Nominal Interest Rates:	**1968–72**	**1973–77**	**1978–81**
Japan: Call Rate	1.43	2.94	2.69
Repurchase ('Gensaki') Rate[1]	NA	2.12	2.59
Average Bank Lending Rate[2]	.27	.90	1.08
Long-Term Government Bonds[3]	.24	1.00	1.30
Industrial Bonds	.79	1.14	.77
U.S. Fed Funds Rate	1.69	2.38	3.89
3-Month T-Bill Rate	1.22	1.32	3.21
Prime Lending Rate	1.24	1.74	2.78
Long-Term Government Bonds[3]	.68	.51	2.34
Real Interest Rates[4]			
Japan: Call Rate	1.56	3.71	1.12
Repurchasing Rate	NA	1.55	1.15
Average Bank Lending Rate	1.37	5.44	.98
U.S. Fed Funds Rate	1.44	1.87	3.37
3-Month T-Bill Rate	.99	1.56	2.78
Prime Lending Rate	.97	1.09	3.69
Memoranda:			
Variability of (CPI) Inflation: U.S.	.45	2.02	1.35
Japan	1.48	6.34	1.97
Variability of Industrial Production (% Change): U.S.	4.57	7.81	4.75
Japan	6.26	10.56	3.10

Notes: All data are end-of-month:

(1) Three-month rate, available from 1975–1981 only.
(2) Average of short-term and longer-term lending by banks.
(3) Seven-year maturities
(4) "Real" rates are the nominal rates minus average consumer price inflation over the previous year.

deposit. The growth of this outlet has since been somewhat constrained by a very high minimum denomination (about $2 million) for CD's (set to attract corporate rather than household funds) and by official ceilings on the amount that individual banks can issue.[27] Still, this market has also grown rapidly, although it remains smaller than the other short-term markets. Indeed its development probably has been an important factor in the recent decline in importance of the bill market.

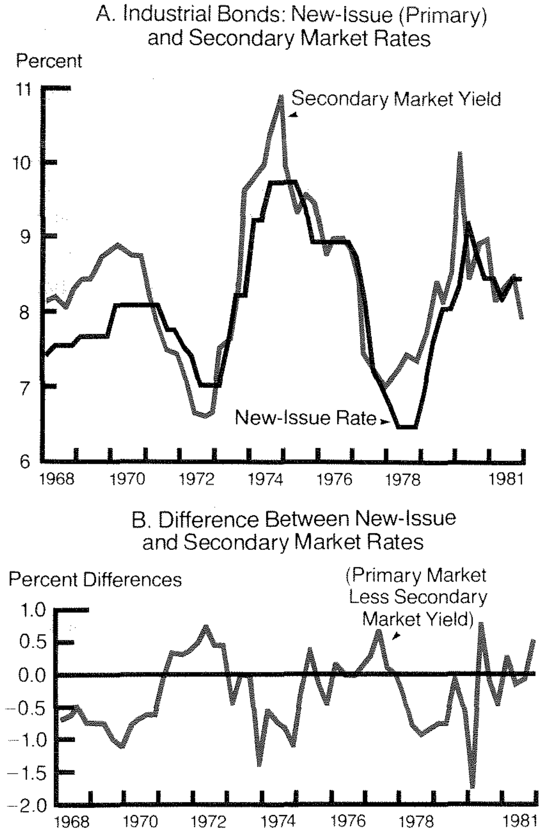
The banks' difficulties in absorbing government debt also prompted a major reform of Japan's banking law that took effect in April 1982 (the first such reform since 1927). In addition to codifying bank regulations, the new law explicitly authorizes banks to purchase, sell, and underwrite government securities under administrative guidance. This step, at least potentially, constitutes the first significant change in the division of powers among financial institutions in Japan since World War II.[28]

Changes in other markets have been more limited and more subtle. Asset choices available to households have improved somewhat, particularly with the introduction in the early 1970s of a combined demand-savings facility at banks similar to the Automatic-Transfer from Savings' (ATS) accounts now available in the U.S.[29] More recently, the government has attempted to improve consumer finance facilities. It has, for example, encouraged U.S. finance companies to enter the Japanese market. Still, household financial choices in Japan remain very restrictive compared to those long available here.

Reform also has not greatly altered the *formal* restrictions facing private corporations in the bond markets. While the increase in public-sector debt greatly expanded the market for government bonds, maturities on this debt were broadened to make it more attractive to the public. As a result, a genuine market for short-term government securities is now developing.[30] This growth has greatly stimulated the secondary market for government bonds, and, indirectly and more modestly, that for private bonds as well. Furthermore, the authorities have accommodated corporations' increased demand for bond finance (due in large part to fluctuations in short-term interest rates) to a substantial degree as evidenced by the significant rise since the early 1970s in the share of their external funds raised from bond

Chart 3

Industrial Bond Yields:
Primary and Secondary Market Rates
(Quarterly Averages)



issues.[31] Still, perhaps because the government now has to rely heavily on the bond-market facilities to market its own debt, it continues to require approval of each individual issue by private corporations, and (more important) to set primary market yields below those on the secondary market.[32]

Japan's Financial Relations With Abroad

The most recent phase of Japan's financial reform—liberalization of its financial relations with other countries—has also had dramatic effects. Most restrictions on Japanese entities' borrowing from and lending to other countries have been lifted, as have most limitations on their ability to buy and sell foreign exchange. Furthermore, Japan has significantly eased the access of foreign institutions, particularly banks, to Japan's financial markets.

As explained in the last section, these reforms were intended mainly to facilitate the financing of Japan's current account imbalances and to improve the efficiency of foreign exchange markets. Their effect has been to force the integration of important segments of Japan's financial system with those abroad. Ultimately, such integration may prove to be the most powerful force for further liberalization in domestic markets.

The development is all the more remarkable in that reform of capital controls was hardly an issue during the 1960s. Over most of that period, Japan's current account imbalances were relatively small, and nearly all financial transactions with abroad were closely controlled by the authorities. However, the growing overvaluation of the yen during the late 1960s and early 1970s led to large current account surpluses that effectively forced the gradual liberalization of capital controls, particularly those limiting outflows. To this end, a market for yen-denominated bonds issued by foreign entities, called the 'Samurai' market, was opened in 1970. Still, the effect was more symbolic of changes to come, since until very recently the market was restricted to international agencies.

The magnitude of financial flows between Japan and abroad increased sharply in the 1970s compared to the 1960s (Chart 5). The activities of Japanese banks in the U.S. and other industrial countries, particularly in the Eurocurrency markets, were allowed to expand dramatically. However, until the late 1970s, the basic policy of regulating virtually all capital flows was retained. The policy during this period might be characterized as the "faucet approach." During periods of current account surplus and/or upward pressure on the yen, outflows were actively encouraged while controls on capital inflows were tightened; large current account deficits and a declining yen often led to the reverse of this policy. In addition, foreign banks operating in Japan continued to find their activities severely curtailed by various restrictions, some plainly discriminatory.[33]

Several factors converged during the late 1970s to produce more explicit and radical changes in these policies. First, fluctuations in the current account between large surpluses and large deficits, as well as wide variations in the yen, underscored the need for stable financial links with other countries. Such links would accommodate the changing financial flows needed to finance the current account (and hence prevent gyrations in exchange rates), but a regulatory policy that alternately tightens and loosens controls on these flows is apt to discourage such flexibility.

Second, the major reforms of Japan's internation-

Table 4
Outstanding Balances in the Call, Bill, Gensaki, and CD Markets
(Year-End)
(Trillion Yen)

	Call	Bill	Gensaki	CD Issues
71	1.5	N/A	N/A	—
72	1.0	1.8	N/A	—
73	1.2	4.1	N/A	—
74	2.2	5.2	1.7	—
75	2.3	4.4	1.8	—
76	2.6	5.1	2.1	—
77	2.6	6.1	3.1	—
78	2.3	6.6	4.2	—
79	3.5	6.3	4.0	1.3
80	4.1	5.7	4.5	7.0
81	4.7	4.0	4.5	2.8

Source: Bank of Japan, *Economic Statistics Annual*.

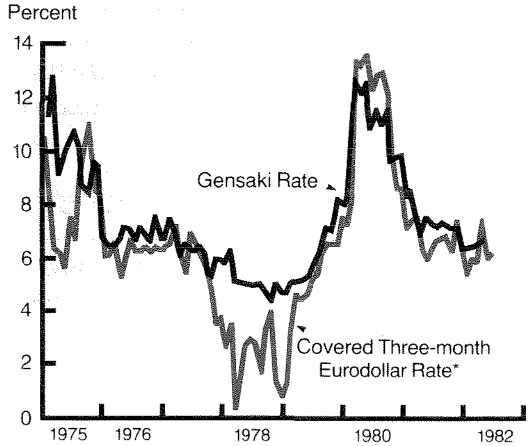
al financial relations have been directly related to the culmination of the current phase of domestic reform. Unrestricted arbitrage between international and domestic financial markets could easily lead to highly volatile and disruptive capital flows as long as interest rates in the domestic markets (particularly those to which foreigners are given access) are prevented from adjusting to market forces. Beyond this, authorities have sometimes seen integration of Japan's financial system with that abroad as a means to promote the development of the domestic financial system. Finally, pressures from abroad to open Japan's domestic product markets to foreigners have been accompanied by demands that discrimination against foreign financial institutions also cease.

Whatever the reasons, regulatory policy in Japan's international financial relations has virtually been reversed since 1978. In 1979, foreigners were granted access to the Gensaki market as part of the domestic reforms discussed earlier. In one stroke, this action effectively linked Japan's money-markets with those abroad. This is graphically demonstrated by the gap between the Gensaki rate and the covered (in the forward market) yield on 3-month Eurodollar deposits (Chart 4). Since these instruments have very similar characteristics (other than the currency they are denominated in), their yields in dollars should be very close in a free market. Indeed, this has been the case since mid-1979. Prior to that time, the gap between the two rates was often very wide as capital controls effectively prevented the arbitrage between the Gensaki and foreign markets that would have closed the gap.[34]

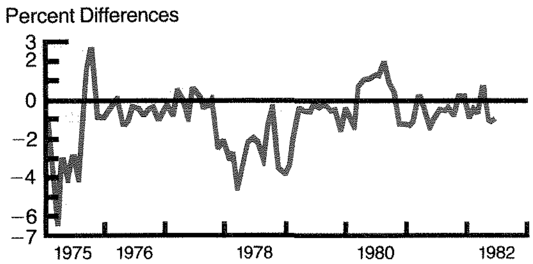
Controls of all types of capital flows were greatly liberalized, and in many cases abolished, by a new foreign exchange law that took effect in December 1980. This law reversed the old principle whereby transactions were prohibited unless specifically authorized by the authorities. Now, as in the U.S., nearly all financial transactions with abroad are presumed permitted unless expressly prohibited or otherwise explicitly regulated. The importance of such a change is considerably more than technical, given the considerable delay and cost Japanese institutions often encounter in obtaining official sanction for their actions. Still, authorities have not irrevocably relinquished control over these flows,

Chart 4

A. Gensaki Rate Versus the Covered Three-Month Eurodollar Rate



B. Difference of Covered Eurodollar and Gensaki Interest Rates



*The covered Eurodollar rate is the 3-month Eurodollar interest rate "adjusted" (i.e. plus) the 3-month forward premium on the dollar vis-a-vis the yen.

as the law also allows them to reimpose restrictions if (in their judgment) conditions require them. Indeed, this "escape clause" has been used during 1982 to relieve pressure on the yen by restricting capital outflows.

That controls on capital flows have been relaxed substantially can be seen from Chart 5. Note in particular that the volume of banking inflows and outflows, as well as purchases and sales of foreign securities, increased dramatically after 1979 in both absolute terms and in relation to exports.[35] (This pattern also suggests that the 1980 foreign exchange laws in part ratified earlier liberalizations in the application of capital controls.)

Finally, this period has also seen a virtual end to overt discrimination against the operation of foreign banks in Japan. These banks' access to yen funds was substantially improved by the opening of the CD market in 1979, as well as by subsequent increases in their quotas on foreign currency/yen conversions. In addition, foreign banks have been given access to the Bank of Japan's discount window, and authorized (at least in principle) to participate in loans subsidized by Japan's export-import bank and the Japan Development Agency. These steps have effectively extended to foreign banks treatment equal to that of their Japanese counterparts.

However, equal treatment has not greatly alleviated the main problems faced by foreign banks in Japan for two reasons. First, the government has extended "equal treatment" to domestic banks as well, allowing them to extend foreign currency loans to domestic corporations, an area that was previously the preserve of foreign banks. Second, Japanese regulations have traditionally treated large and small banks (defined by their share of the *domestic* market) differently, in part to maintain their relative market positions. Although the foreign banks in Japan are among the *world's* largest, they are treated as small or medium-sized banks by Japanese authorities since (because of past limitations on their activities) their share of the *Japanese* market is fairly small.

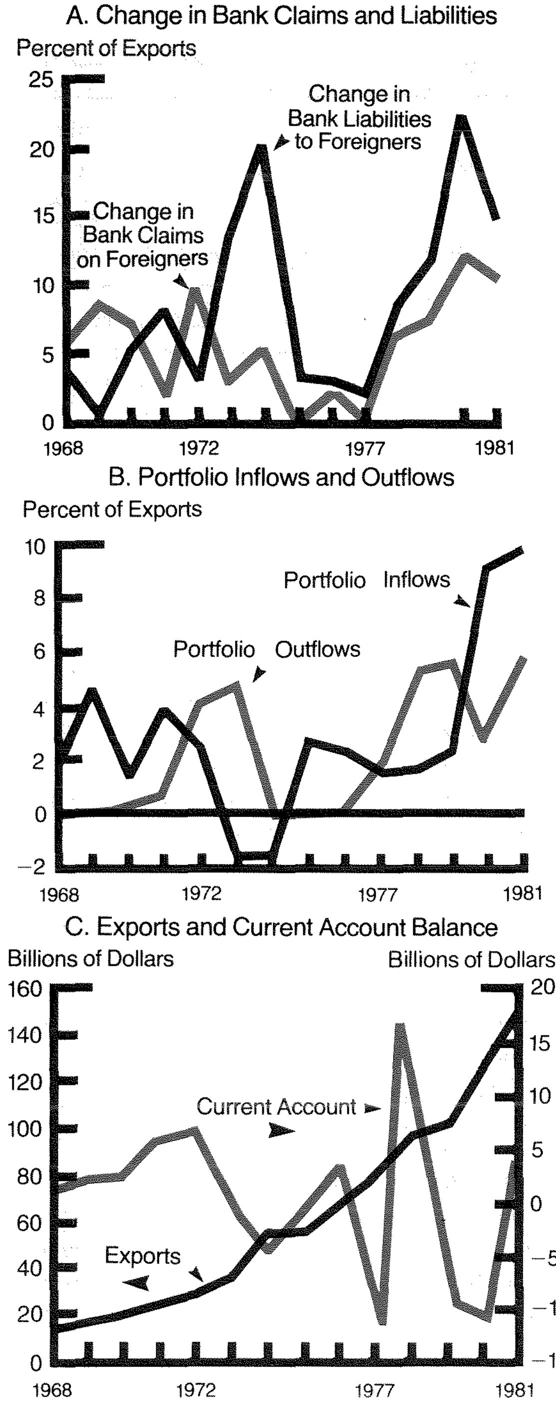
What Next?

While progress toward financial liberalization has been considerable, albeit uneven and incomplete, the reform process in Japan is far from over. Almost every month brings an announcement of new liberalizations. Judging from official pronouncements, further reforms in consumer and mortgage finance, banking, and in Japan's international financial relations are planned. For example, there has been widespread discussion, and much official interest in "internationalizing" the yen, that is, in promoting its use in international trade and finance.

Internationalization is seen (by the authorities) as desirable, perhaps even necessary, as Japan's financial system becomes more open to foreign influences, and as Japanese institutions play an increasingly important role in international financial markets.[35] Still, few concrete steps have been taken toward this goal. The authorities have so far resisted pressures to establish an international banking zone in Tokyo, one that would be free of deposit rate and other regulations applying to the domestic activities

Chart 5

Selected International Capital Flows for Japan
(Percent of Exports)



of banks. One reason for this reluctance is that officials apparently fear such a center could interfere with the conduct of monetary and other financial policies.

This last example illustrates that further reforms in Japan may well prove more difficult than those already adopted. The changes described earlier were spurred by prevailing economic conditions; those remaining, while important for the long-term efficiency of Japan's financial system, are less pressing. Further reforms are also likely to alter substantially the competitive positions of various financial institutions, and thereby raise economic and political barriers to their achievement.[37] Still, the experiences of the U.S. and Japan have demonstrated that financial reform develops its own momentum since, by changing the financial environment, it generates pressures for further change.

IV. Conclusion

Despite the similarity in timing, the process of financial change in Japan and the U.S. displays as many contrasts as similarities. Both countries have witnessed substantial transformations in their financial systems over the last decade, mainly because that period has brought especially great economic changes. The contrasts lie in the nature of the changes that have resulted and reflect the very great differences between the traditional financial structures of the two countries.

On the whole, financial change in the U.S. has been more narrowly focused than in Japan. Change here has been spurred primarily by inflation, and it has centered on deposit rate ceilings and limitations on the competitive powers of depository institutions. Reform in Japan has largely been a response to fundamental changes in the requirements of business, households, and government for a more flexible and adaptable financial system. Reform in Japan has thus been substantially more extensive than that here even though its progress has been uneven. Interest rate flexibility and the mobility of international capital have increased substantially, but household asset choices and conditions facing private corporations in the capital markets have changed much less.

Japan's financial system has changed more than that of the U.S. largely because it was so much more heavily regulated to begin with. Because of its flexibility, the U.S. system was able to accommodate economic changes without substantial changes in *financial structure*. Japan's more extensive regulation also largely explains why its authorities have been much more successful in controlling the pace and direction of change than their counterparts here.

The U.S. and Japanese experiences with financial change suggest several lessons for policymakers in both countries. Their experiences demonstrate that the greatest costs of financial regulation are not necessarily those distortions it imposes in a *static* economic environment, but rather those it leads to when economic conditions are changing rapidly. In the U.S., for example, financial innovations in response to economic changes have considerably complicated the task of controlling, indeed of interpreting, fluctuations in money growth. These problems have come when money-control is particularly critical for the economic well-being of the nation. Japan's difficulties in adjusting to increases in government debt, floating exchange rates, and other economic changes have been greatly compounded by limitations on its financial system resulting from past regulation. Thus, both nations' experiences illustrate that delaying reform until pressures for it becomes irresistible can often entail considerable cost.

Japan and the U.S. have also shown that financial regulations and financial reforms are often highly interrelated. Japanese authorities utilized capital controls partly because of limitations of the domestic financial system. As liberalization of those capital controls has become necessary, reform of the domestic system has become more urgent. Their interdependence illustrates that financial reform can lead to the unravelling of regulation. For this reason, further liberalization in Japan's financial system, and further change in our own, is very likely.

FOOTNOTES

1. Only in its limitations on branching by banks and thrifts has the U.S. been markedly more restrictive than other major industrial nations. Most other countries have constrained deposit interest rates to some degree, although some have allowed these rates to vary more with market yields than here. Many other countries follow our practice of separating commercial and investment banking (Switzerland a major exception). However, generally the U.S. has limited lending rates less extensively than most other developed nations (except in consumer, and to a lesser extent in mortgage finance). No country has limited international capital flows, or the access of foreigners to the domestic financial system, less.

2. See Prindl, pp. 3–8. Other excellent descriptions and analyses of Japan's financial system include: Suzuki; Layman; Wallich and Wallich; and the Bank of Japan's *The Japanese Financial System* (1978). E. Sakakibara, R. Feldman and Y. Harada ("The Japanese Financial System in Comparative Perspective") provide a highly provocative comparison of the U.S. and Japanese financial systems. They point out that competition among financial institutions is fierce despite apparently stringent regulation. They also argue that the high degree of financial intermediation fostered by Japanese regulation had some significant social benefits.

3. See Hayden, pp. 3–5 and Ackly and Ishi, pp. 159–160. Another consideration now a major obstacle to interest rate liberalization in the bond markets is the government's desire to keep the cost of servicing its debt down. Of course, whether controls have actually succeeded in promoting business investment, much less increasing real growth, can hardly be taken for granted, since generally any subsidy to a sector must be paid for with a tax, implicit or explicit, whose effects must be accounted for in judging the total effect of the subsidy.

4. An excellent discussion of the evolution, and motivation, of government controls on interest rates, is given in "Steps Toward Flexible Interest Rates..." See also the discussion in Layman and *The Japanese Economic System*. Suzuki (Chapter Three) gives an illuminating explanation, and critique, of the 'logic' of interest rate controls in Japan.

5. The authorities have influenced rates in the bill market through their purchases and sales; in addition call rates were, until recently, set by a consultation process among the dealers and government, which *may* have subjected these rates to some 'moral suasion.' See the *Banking System in Japan* (1981), pp. 97–98.

6. Corporate bond issues in Japan must be individually approved by authorities (often a tedious process). Along with limitations on issue yields and maturities, this practice has, to say the least, discouraged this financial outlet. Indeed, private corporate bonds (industrial bonds) have tended to be purchased by the principle bank lenders to the issuer, making them effectively a loan in another guise. Moreover, equity finance has been discouraged by the Japanese practice (*not* apparently government imposed) of issuing new stock at par (primarily to existing holders); Wallich and Wallich (pp. 301–302) provide a plausible interpretation of this practice. A description of the mechanics of the bond markets can be found in *The Japanese Financial System*, pp. 126–137.

7. Indeed, lending by Japanese banks in the euromarkets was virtually halted by the authorities in 1976–1977, following the Herstadt and Franklin-National debacles. See Q. Lim, "The Year of the Samurai," *Euromoney*, February 1978.

8. In 1970, Japan opened a 'Samurai' market for yen bonds issued by foreigners. Access has largely been confined to international agencies, however.

9. Of course, the limitation of household financial outlets *may* have helped channel savings to business. Note, however, that the ratio of residential investment to GNP in Japan (6–7 percent) has generally been higher than that for the U.S. (4–5 percent). Still, the share of total savings going to this outlet is considerably lower in Japan than here.

10. For a more detailed discussion, see Pigott, 1978.

11. This is not to say that inflation has had no influence on financial reform in Japan. Households appear to have become more sensitive to yield differences on bank deposits and postal-savings accounts as a result of the increase in inflation, and market yields, during 1973–1974. This has led to an acceleration of a longer trend under which the share of total household deposits held with the postal savings system has increased. However, the 'disintermediation' problems of Japanese banks have not been nearly as severe as those experienced by U.S. depository institutions, particularly our thrifts. For a discussion, see "Trends in Personal Savings...," Bank of Japan Research Department Special Paper No. 98, April 1981.

12. The reasons cited here for Japan's financial reforms are very similar to those discussed in an excellent article on "Financial Innovation and Monetary Indicators in Japan" by Dorothy Christelow, in the *Quarterly Review* of the Federal Reserve Bank of New York, Spring 1981. See also, "Steps Toward Flexible Interest Rates...," p. 3.

13. Generally, maturities have been limited to seven and ten years, although beginning in 1977 the government began to issue shorter maturities in limited quantities. Of course, the average maturity of *outstanding* debt has been declining over time, with a considerable portion coming due beginning in 1985; this situation is of considerable concern to the authorities.

14. For a description of this process, and its effects on the private financial institutions, see the *Mitsui Bank Monthly Review*, September 1982, and the *Fuji Bank Bulletin*, October 1980. A more general discussion of the burden of the deficit and the debt is given in the *Economic Survey of Japan 1980/1981* by Japan's Economic Planning Agency. For several years, until 1977, banks were forbidden to sell off the government debt allocated to them, although in practice the Bank of Japan stood ready to purchase bonds one year *after* their issue. Since 1977, banks have had much greater freedom to sell their government debt to the public, and in fact have generally sold over half the amount of their subscription.

15. This point is made, eloquently, in the *London Economist* ("But Mr. Suzuki, Your Big Budget Deficit is Far Too Small"), October 23, 1982.

16. Of course government debt, is not the only factor altering financial preferences in Japan. As financing patterns

have changed, competitive relations and the desired characteristics of assets and liabilities have been transformed virtually everywhere. The impact on corporate finance is discussed in "The Financing of Japanese Industry," Bank of England *Quarterly Review*, Vol. 21, No. 4 (December 1981), pp. 510–518. In particular, as short-term interest rates have come to vary more, corporations naturally have an incentive to increase longer-term financing to reduce cash-flow variability from short-term interest rate fluctuations. Their greater internal funds (relative to investment needs) probably has increased their need for liquid assets as outlets for excess cash. Relaxation of capital controls, by giving corporations and banks greater access to the financial facilities available abroad, has had analogous effects. For a general discussion of these shifts, see the *Fuji Bank Bulletin*, January 1981, as well as Dorothy Christelow's article.

17. The need to liberalize financial markets to facilitate private 'adjustment' is further discussed in Martin Gilman, "Japan's Financial Coming of Age..." and in "A Time for Radical Change" in *World Business Review*, February 1981. See also the discussions in Hayden and in Christelow.

18. Indeed, liberalized capital flows potentially contribute to exchange rate stability by insulating the market from temporary fluctuations in demand and supply. For example, a temporary trade deficit that led to exchange rate depreciation would spur an offsetting capital inflow, to take advantage of the exchange appreciation likely when the imbalance ends. This mechanism helps to insulate exchange markets from factors perceived as transient, by linking the actual exchange rate to its long-run value. However, if liberalized capital flows are actually to reduce exchange rate instability, two conditions must be met. First, the long-run value of the exchange rate must be perceived as reasonably stable; this means that government policies determining this rate must be credible and stable. Japan has met this condition more than many countries, as it has been comparatively successful in controlling a major determinant of the yen's ultimate value—its own inflation. At the same time, though, domestic financial markets must be reasonably efficient. Otherwise, 'excessive' variations in interest rates in 'thin' or otherwise limited domestic markets will be transmitted to the exchange markets, possibly adding to exchange rate volatility. This is one illustration of a more general principle—that a need for financial liberalization in one area spawns a need for liberalization in other markets. That is, to have a properly functioning foreign exchange market, Japan will ultimately have to have more efficient domestic markets. For this reason, the shift to floating exchange rates should be a major spur to domestic financial reform.

19. For a description of this system, see "Steps Toward Flexible Interest Rates...," pp. 7–10.

20. A very illuminating discussion of the impact of interest rate liberalization in Japan is in "Japan: The Impact of Interest Rate Liberalization," *Asian Monetary Monitor*, November–December 1980. This discusses effects on interest rate variability, relations among yields on similar instruments, and on bank earnings.

21. This development is analyzed in more detail in the *Asian Monetary Monitor* piece: see Chart I.

22. In the U.S. for example, there is considerable evidence suggesting that, *prior to 1979*, most variations in nominal interest rates reflected changes in expected inflation.

23. Comparisons of the variability of nominal interest rates in Japan with that of other nations are given in "Steps Toward Flexible Interest Rates..." as well as in Suzuki, Chapter Three.

24. These intervals divide the period into (roughly) thirds, to indicate interest rate behavior before the effects of the reforms discussed in the text were apt to be evident (i.e. 1968–1972), behavior after the early 1970s reforms but prior to the changes later in the decade (1973–1977, the period when Japan's inflation waxed and waned), and behavior resulting from the 1978–1979 reforms (which should be reflected in the figures for 1978–1981).

25. Except, perhaps, when monetary restraint has been severe. The fact that real and nominal short-term rates in Japan have been less variable than those in the U.S. over 1978–1981 is probably most a reflection of 'peculiar' conditions here, that is the dramatic increase in interest rate volatility after the October 1979 change in Federal Reserve operating procedures.

26. Prior to 1972, the call market provided limited facilities for one and two-month financing. However, this function was assumed by the bill market, and since 1972, the call market mainly services very short-term needs (maturities are generally 1–2 day, and a maximum of one-week).

27. These ceilings, which are stated as fractions of bank capital, have been raised substantially since 1979, allowing the market to grow rapidly.

28. For a detailed discussion of the new law, and the events leading to it, see M. Shimojo, "The New Banking Law of Japan: Securities Business by Banks," pp. 83–116; see also Leon Hollerman, "Japan's New Banking Law" in the January 1982 issue of *The Banker*. Both articles reveal the ambiguities in this law, illustrating that administrative 'interpretation' in Japan generally can affect critically the way law is applied. The ultimate extent of banks powers in the securities markets remains somewhat unclear.

29. For a more detailed description of this innovation, and the factors leading to it, see Dorothy Christelow's article.

30. See Shimojo, "The New Banking Law of Japan...," p. 101.

31. See "Features of Recent Corporate Financing," Bank of Japan Economic Research Department, Special Paper No. 100, especially pp. 14–15. Admittedly, the authorities' willingness to accommodate corporations increased need for bond finance (at least to some degree) is 'liberalization,' at least in the application of regulation. However, the large government debt in the face of a limited market for long-term bonds almost certainly has been an impediment to corporate efforts to reduce their dependence upon loans from banks and other financial institutions.

32. Of course, new-issue yields on government debt are set below those on the secondary market in large part to reduce the cost of servicing this debt. Given this policy, it would be difficult for the government to liberalize issue terms of corporate bonds without seriously undercutting the market for its own securities.

33. Among the discriminatory steps were the exclusion of foreign banks from the Bank of Japan's discount window, as

well as from participation in loan subsidies from the Japan Development Bank and its Export-Import Bank. However, foreign banks have also enjoyed certain advantages over their domestic counterparts: in particular, they have *not* been forced to take up government debt as have their Japanese competitors.

34. For a more detailed analysis of arbitrage between Japan's money markets and those abroad, see Otani and Tiware, "Capital Controls and Interest Rate Parity: The Japanese Experience, 1979–1981," IMF *Staff Papers*, 1981.

35. The increase in these capital flows is much more dramatic in absolute (dollar) terms. Admittedly, the size of these flows relative to exports, as shown in Chart 5, was nearly as high in 1974–1975. However, then the authorities administratively permitted such flows to aid in current account finance; the scale of these transactions subsequently fell sharply. The present situation is fundamentally different (unless the authorities reverse course by applying the 'escape clause' extensively).

36. An excellent discussion of the forces spurring, and those retarding, internationalization, can be found in Hayden.

37. For example, lifting restriction on bank deposit rates now could further erode earnings, which already have been depressed by their purchases of government debt (note the similarity to the dilemma facing the Depository Institutions Deregulation Committee here in the U.S.). Of course, reforms already in place create further pressures for change as well. For example, debt-service of corporations in Japan is becoming more variable and less predictable as the flexibility of short-term interest rates increases; as indicated earlier, this gives them an incentive to exploit the long-term capital markets to a greater degree than before.

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