A PRIMER ON THE JAPANESE BANKING SYSTEM

Allen B. Frankel and Paul B. Morgan
ABSTRACT

This paper examines the effects of the liberalization of the Japanese financial system in the past twenty years. The changes are viewed in terms of their current and potential future impact on the Japanese banking industry. The purpose of this paper is to provide a discussion of the situation facing the banking system during the present transition period between the highly segmented and regulated financial system of the post-war high growth period, and the liberalized, financially deregulated environment toward which the Japanese regulatory authorities aspire.
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Section I. Introduction

In the past fifteen years, the Japanese financial system has undergone significant liberalization measures which have aimed at modernizing the financial intermediation process and improving the efficiency of Japanese corporate financing. The developments have stemmed largely from pressures external to the domestic banking sector itself, such as the Japanese government deficits of the 1970s, competition from international financial markets, and the new emphasis on capital management. These factors have led increasingly to fundamental changes in the system of finance in Japan, the objectives on which Japanese bankers place primary importance, and the competitive position of the banking system vis-a-vis the international sector and the domestic non-bank financial sector.

The purpose of this paper is to provide a discussion of the situation facing the banking system during the present transition period between the highly segmented and regulated financial system of the post-war high growth period, and the liberalized, financially deregulated environment toward which Japanese authorities aspire. Chart 1 outlines the primary factors that will be presented in our attempt to describe the process of change in the Japanese banking system. Each of the factors in the chart has fundamentally influenced the liberalization effort in Japan, and a discussion of the linkages among the various influences and the results of the events to date will help us to ascertain a picture of the current state of the banking industry in Japan.

1. The authors are staff members of the Division of International Finance. This paper represents the views of the authors and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or other members of its staff. This is a revised version of a paper presented at a Federal Reserve System conference on international economic analysis in Philadelphia in October 1991. We would like to thank Larry Promisel, Hesna Genay, and conference participants for useful comments and suggestions.
Section II provides a discussion of the evolution of Japan's financial system in the 1970s and early 1980s, with particular emphasis on the effects of the substantial increase in government debt during the decade as a result of changes in the flow of funds in Japan following the OPEC oil shocks. In addition, we briefly discuss the importance of the foreign exchange reforms of the early 1980s.

In Section III, we begin with a description of the gradual deregulation of interest rates in Japan throughout the 1980s. Within this discussion, our focus is on the degree to which these reforms have affected the Japanese banking industry and have caused a rationalization of its modes of operation. Also reviewed in Section III are some of the various innovations and liberalizations in Japanese corporate financing practices during the 1980s, and the degree to which these factors have led to increased competition and shifts in customer base in the banking industry.

Section IV discusses the impact on Japanese banks of the adoption of the 1987 Basle Accord on Capital Adequacy. The section addresses the significant changes which the banks were forced to undergo in order to reach compliance with the capital standards. The impact of the extreme fluctuations in Japanese stock prices 1989 and 1990 on the capital positions of the banks is assessed as well.

Finally, Section V provides an outlook for further financial reform in Japan, given the current, weakened, state of the Japanese banks. While additional reform in the areas of interest rates, direct corporate financing, and financial market restructuring is guaranteed, the nature of the financial authorities' view toward maintaining consensus and stability throughout the deregulation process will be incorporated in a less ambitious timetable for further liberalization.
Section II. Evolution of Japan's financial System

Domestic

Throughout most of the post-war period, the private Japanese financial system remained largely isolated from the rest of the world. The system was highly regulated. First, all interest rates were administratively set by the monetary authorities. This included bank deposit and lending rates, as well as coupon rates for government bonds and the debentures issued by long-term credit banks. Second, various types of banking firms and other financial service firms were legally and administratively confined to a specified range of activities assigned to each (see Chart 2 for an overview of the current structure). Third, securities markets were repressed, for example, through strict collateral requirements for the issuance of debt. Consequently, there were no real alternatives to bank financing for even the largest firms.

The access of Japanese financial firms to international financial markets has been restricted through exchange controls and limits on foreign activities. Until the 1970s, only a few financial firms, including foreign banks granted special concessions, were licensed to engage in foreign exchange transactions. The system of foreign exchange controls and licenses effectively separated Japanese domestic markets from financial markets abroad.

The OPEC oil shock in 1973 signalled a turning point in the operation of the Japanese financial system. In particular, the oil price shock ushered in a period of sizable government deficits. In turn, the persistent deficits were reflected in a buildup of Japanese government bonds to well over 40 percent of GNP by the mid-1980s compared with slightly more than 5 percent of GNP at the start of the buildup (see Chart 3).
The buildup of Japanese government debt forced changes in the relationship between the Bank of Japan (BoJ) and members of the government bond underwriting syndicate. Traditionally, syndicate members had an understanding that the debt which they held in their portfolios would be repurchased by the BoJ at a purchase price set at such a level so as to avoid any losses on the original bond purchase.\textsuperscript{2} This arrangement for ex post compensation of losses by the BoJ can be described as similar to a look-back put option;\textsuperscript{3} it was similar in structure to stock compensation agreements employed by the major Japanese securities houses prior to 1991, in which corporate investors received a guaranteed minimum return on their investment, regardless of the actual stock market performance.

In the face of the mid-1970s surge in government debt issuance, Japanese monetary authorities concluded that the BoJ could no longer offer its generous rediscount facility for government debt without jeopardizing its ability to exert monetary control.\textsuperscript{4} The withdrawal of the Bank of Japan from the writing of put options to purchasers of Japanese government debt is evocative of the 1951 accord between the Federal Reserve and U.S.

\textsuperscript{2} Suzuki's commentaries on the implications for syndicate members of pre-1975 participation in government debt underwriting are particularly interesting. He concludes that underwriting of government debt, during the period of low administered rates, was not a source of adverse pressure from the viewpoint of either liquidity or profitability for syndicate members. See Suzuki, Yoshio. \textit{Money, Finance, and Macroeconomic Performance in Japan}, Yale University Press, 1986, (pp. 19-20).

\textsuperscript{3} A look-back option captures the highest or lowest cash price during its term.

\textsuperscript{4} Shigehara describes the Bank of Japan's policy before 1975 as one in which the outright purchase of Japanese government bonds was generally kept in line with the trend increase in the monetary base. It should be noted that Japanese Law prohibits the Bank of Japan's direct subscription to new government bond issues. Shigehara, Kumiharu. "Japan's Experience with Use of Monetary Policy and the Process of Liberalization," paper presented to the Pacific Region Central Banks' Conference on Domestic Monetary Policy sponsored by the Reserve Bank of Australia, October 12-13, 1990.
Treasury from which the Federal Reserve received discretionary authority for monetary policy. Facing financial strains in the absence of the BoJ rediscoun facility, the bond purchasing syndicate successfully lobbied in 1977 for permission to develop a secondary market. The syndicate members viewed the secondary market as a mechanism for the off loading of their holdings of seasoned bonds when called upon to purchase new debt. However, the syndicate process did not function smoothly over the period of large net issuance of government debt. In fact, over two periods in 1981 and 1982, syndicate participants publicly boycotted their underwriting responsibilities.  

The introduction of secondary market trading ended the extended postwar era of absolute administrative control of the structure of Japanese interest rates. In a related development, Japanese banks and securities companies were given formal authorization for the market-based funding mechanism for their bond purchases through short-term repurchase agreements, the gensaki market. The main investors in the gensaki market have been Japanese non-financial companies, some of whom have been, at times, undoubtedly exploiting the arbitrage opportunity to borrow at regulated rates in order to profit from the opportunity to invest at higher market-rates. Japanese securities companies utilized the gensaki market to finance their inventories of bonds, and, in the process, greatly expanded the overall shares of Japanese government bonds that they collectively underwrote. Overall, in terms


7. In 1980, the securities companies were first permitted to offer money market mutual funds (chokuku), that were limited to holding medium-term Japanese government bonds.
of adapting their financial structures to accommodate large government debt issues, the
Japanese made choices of the same character as those made in other countries, namely, to
permit limited disintermediation in order to support the underwriting of government debt. 8

However, available evidence supports the view that in the 1970s the Japanese
authorities were reluctant reformers of their highly segmented financial system. Supporting
this view is the fact that, until 1979, the banks were not permitted to issue yen-
denominated certificates of deposit (CDs), a source of non-earmarked market-rate financing.
Chart 4 shows the outstanding amounts of various instruments in the Japanese domestic money
markets from 1974 onward. It is not merely coincidental that the post-1984 surge in the
growth of the Japanese domestic money market paralleled changes in the regulation of access
of Japanese banks and companies to international markets. We will turn to a discussion of
the interaction between domestic market reform and liberalized international access below.

Through most of the postwar period, the Bank of Japan relied heavily on
administration of its credit facilities for bank borrowers as a mechanism that enabled it to
fulfill its monetary policy responsibilities. Japanese commercial banks were persistent
borrowers from the Bank of Japan for the purpose of funding credit expansion, a so-called
overborrowed position. In turn, the Bank made such funding conditional on a commercial
bank's adherence to specific guidelines that governed their lending behaviors. The BoJ
practice of window guidance of commercial banks' domestic credit activities persisted

8. For discussions of the role of government debt financing needs in a number of the industrial
countries see Bank for International Settlements, Changes in the Organisation and Regulation of
Capital Markets, Monetary and Economics Department of the Bank for International Settlements,
until mid-1991, although in later years the practice is believed to have become more consultative.

In addition to the administrative guidance they received regarding their credit policies, the city banks’ own capital raising efforts were limited by regulatory authorities. In 1983, the Japanese authorities first began to encourage city banks to differentiate themselves from one another with respect to stock market investors by permitting banks to take advantage of market-determined share prices. Chart 5 displays the share price behavior of Sumitomo Bank over the 1977-1986 period. Prior to the end of 1983, all city bank shares traded in the same narrow range of around 500 yen, shown for Sumitomo Bank. The post-1983 rise in the share price of Sumitomo Bank was also experienced by other city banks, although their share prices stopped moving in lock-step. The surge in bank share prices was followed by large primary stock offerings by the city banks at the higher market prices. Viner (1988) reports that the proceeds of the share offerings were earmarked to finance computer facilities and overseas acquisitions. 9

International

The Foreign Exchange Law of 1980 marked a watershed in Japanese financial policy; it reversed the presumption that all international financial transactions by Japanese residents were subject to control unless explicitly recognized. In particular, it ushered in a period in which the overseas operations of Japanese commercial banks became no longer overwhelmingly dedicated to implementing trade finance strategies to support the growing share of world trade accounted for by Japan’s exports of finished goods and imports of raw

materials. That is, through the passage of the 1980 law, Japanese authorities recognized the need for flexibility in the overseas activities of Japanese banks, which then enabled the banks to begin to respond to the increasingly sophisticated financing requirements of their internationally active corporate customers. In this light, two measures contained in the Foreign Exchange Law proved to be of particular importance in integrating Japanese domestic money markets with international markets. They were the authorizations for Japanese banks to borrow and lend foreign currencies freely (both at home and abroad), subject only to prudential guidelines, and for Japanese companies to finance themselves abroad through foreign currency-denominated borrowing.

Throughout the early 1980s, the Japanese authorities further reformed their regulation of Japanese residents' participation in international markets. The cumulative effect of these reforms was the opening up of important channels of intermediation through which Japanese interest rate conventions could be readily circumvented by transactions routed via offshore financial markets. Chart 6 shows the substantially tightened linkage of domestic and Euroyen interest rates from 1980 onward. The standard deviation of the differential between Euroyen rates and domestic gensaki rates was reduced by 88 percent between the 1975-1980 period and the 1981-1985 period. It was also true that reforms such as the 1984 abolition of "swap limits" for spot transactions had the effect of repatriating yen money markets from abroad as evidenced by the post-1984 surge in the volume of transactions booked in those markets that we discussed above.  

Throughout the late 1980s, the Euroyen market expanded sharply. In particular, there was a strong surge in cross-border yen lending to the Japanese nonbank sector primarily by the offshore offices of Japanese banks, a form of bank lending that was not covered by the Bank of Japan’s window guidance of individual banks’ loan growth. Japanese commentary suggests that accommodation of such borrowing was a component of a strategy for domestic financial reform in which foreign experience was to be used to inform the implementation of domestic financial reform. This interpretation is bolstered by Osugi’s commentary on the role of cross-border lending in reducing the importance of window guidance by the Bank of Japan for restraining competition among Japanese banks. 11

Section III. Elements of Japanese Financial Liberalization

Interest Rate Reform

The gensaki market, along with the chokuku (the government bond mutual fund) market, 12 engendered a disintermediation of funds from the banking sector, as corporations rapidly sought to capture the significantly higher yields in markets offering unregulated interest rates. The consequent funding pressure on the Japanese banks caused by disintermediation led to the introduction of negotiable certificates of deposit offered by commercial banks at liberalized interest rates. At the outset, the restrictions set for CD issuance narrowly limited the maturity, minimum denomination, and amount of the CDs authorized by the Japanese government. These restrictions have gradually been eased as the

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11. Osugi (1990), op. cit., p. 68.

12. The chokuku market was developed by the securities companies in 1980; a chokuku fund is essentially a money market mutual fund that invests its assets in medium-term Japanese government bonds.
process of interest rate liberalization has continued. A chronology of the liberalization of Japanese deposit interest rates is shown in chart 7.

The succession of regulatory reforms that followed the introduction of unregulated rate CDs in 1979 has caused the interest costs of banks to become increasingly sensitive to movements in market interest rates. Of special importance to this change was the 1985 introduction of money market certificates (MMCs), which yield interest rates based on the CD rate, with specific formulas according to denomination. Chart 8 depicts the steady increase in the percentage of Japanese bank deposits that offer liberalized rates; the steady increases have been accounted for by relaxations of minimum denomination and maturity restrictions.

In addition, Chart 8 displays the negative effects on profitability of the heightened reliance of Japanese banks on market-rate based sources funds in the late 1980s—a time of rising short-term interest rates. In response to their increased interest sensitivity, the banks altered their method of prime rate determination for both short and long-term loans (in 1989 and 1991, respectively), so that the new rates are formulated based on the banks' actual cost of funds. While this innovation has the potential to help stabilize bank interest margins in a market-rate based funding environment, the banks encountered strong resistance from customers with alternative financing sources during the period of rising interest rates in 1989 and 1990 (see Chart 9). Overall, as discussed below, the attempt by the banks to raise the profitability of their corporate lending activities has produced important changes in the compositions of banks' corporate loan customers.
A method by which Japanese banks have historically raised effective yields above nominal loan rates involves the use of compensating balance requirements. Chart 10 shows the percentage of loan contracts under which small corporate borrowers are required to hold interest-free (or low interest) deposits either as part of the official loan contract, or in order to maintain a "healthy, stable relationship" with the lender. The reliance on compensating balances declined steadily throughout the 1980s from 45 percent of surveyed loan contracts in 1980 to 26 percent in 1990. However, in view of the rising share of banks' small corporate loan customers, the overall reduction in lending under such arrangements as a percentage of banks' corporate loans may be considerably smaller.

Chart 11 presents the distribution of loan contracts in 1990 that required compensating balances, broken down by the size of the required balances as a percent of the respective loans. The average compensating balance rate in 1990 was around 20 percent (although recall that less than 30 percent of surveyed loan contracts require any compensating balances at all). Chart 12 shows the differential between average short-term loan rates and CD rates, and adjusts for the impact of compensating balance requirements in order to determine the effective lending spreads throughout the period. The chart displays the higher profitability to banks of lending to corporate customers with the use of compensating balance arrangements.

One problem now facing the banks is that compensating balance arrangements inflate the asset base by increasing the book value of the loan portfolio to a level above that of

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13. The data on compensating balances were taken from an annual survey by the Japan Fair Trade Commission. The survey only includes companies with less than 100 million yen in capital. Companies of this size now encompass approximately 70 percent of total city bank lending. Only a small share of loan contracts with compensating balances involves legally binding (contractual) arrangements between the borrower and the lender.
the funds actually extended. This asset inflation has led to the dilemma now faced by
Japanese banks over whether to induce further shifts by loan customers away from the now
profitable balance arrangements, or to maintain the arrangements at the cost of an overly
intensive use of bank capital during a period in which capital allocation has by necessity
become a primary factor in Japanese bank operations management. In addition, the need for
the banks to meet international bank capital adequacy standards (discussed in section IV)
exacerbates the problems caused by the continuing use of balance requirements.

In addition to the effects of the overall rise in Japanese interest rates, the
banks recently have been faced with a downward sloping yield curve. Downward sloping yield
curves have negative consequences for ordinary banks in Japan (which include the city and
regional banks), since these banks are constrained under Japanese regulations from issuing
most forms of long-term liabilities, yet have increasingly extended long-term loans.
Restrictions on the maturity of assets and liabilities were put into place as part of the
separation between short-term and long-term providers of credit in the 1940s and 1950s.
Despite the short-term nature of their liabilities, the city banks have been steadily
extending the maturity of their total loan portfolio: the percentage of loans with terms of
greater than 1 year original maturity has grown from 33 percent in 1980 to 53 percent in
1990. The lengthening of original maturity of Japanese bank lending, over time, has been
significantly influenced by the strong increase in corporate liquidity in Japan (see chart
13) and the development and growth of short-term financing vehicles, such as commercial
paper. Thus, the maturity lengthening reflects a shift away from working capital financing
to project-based lending (including real estate lending). Furthermore, it follows that some
of the recent deterioration in corporate liquidity ratios among the large surveyed firms
might be associated with their resistance to the introduction of new loan pricing standards, particularly the long-term prime lending rate.

The process of interest rate deregulation in Japan has forced a rationalization of the banking business in terms of raising and lending funds. As the importance of the administratively-determined interest rate structure fades, banks will face an increasingly competitive environment for the first time in the post-war era. It is important to note that the fallout from the increase in bank competition will be staggered throughout the period of gradual elimination of interest rate restrictions. As displayed earlier in Chart 5, the Japanese city banks have remained ahead of the smaller regional and cooperative bank sectors in terms of their share of deposits paying liberalized interest rates. Yet, as the minimum denomination of money market-related deposit instruments continues to decline while deregulation proceeds, the impact upon the smaller institutions (whose predominantly small business clients will then be able to access the instruments) will be further realized. Only at this point will the full implications of complete interest rate liberalization become evident.

**Corporate Financing Developments**

Historically, Japanese city banks had close relationships with the largest Japanese companies. Over time, the largest companies have become less dependent on banks for their financing needs, a byproduct of various developments including the introduction of alternative sources of corporate finance. In response, the city banks have placed much greater emphasis in recent years on developing relationships with small and medium-sized businesses, which previously had been heavily financed by interfirm trade credit extensions from the largest Japanese companies. In fact, over the period 1986-1990, the share of bank
loans to large Japanese corporations declined by nearly 20 percentage points to 30 percent (see Chart 14).

Chart 15 compares the overall sources of finance for Japanese corporations over two periods, 1981-1985 and 1986-1990. In the earlier period, trade credit accounted for 18 percent of corporate finance as compared with only 5 percent in the second period. The shift in bank relationships, referred to above, reconciles the seemingly small decline in overall bank financing of 7 percentage points with the reduced share of trade credit as a percent of corporate finance. The increased importance of domestic and international securities markets as sources of funds for large Japanese companies is reflected in the nearly 30 percent share of corporate funds raised in 1986-1990 period through the issuance of domestic securities (including commercial paper) and borrowings in international markets. Borrowings in international markets included large amounts of equity-related bonds by Japanese banks and companies, in the forms of both convertible bonds and straight bonds with detachable warrants.14

Chart 16 depicts the substantial increase in funds raised through the issuance of bonds by Japanese private non-bank corporations in the international market through 1990. Japanese corporations have favored this form of direct financing over domestic bank

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14. Japanese corporations (inclusive of banks) issued more than $30 billion of Swiss franc convertible bonds from 1987 on. According to market observers, few issuers hedged the currency exposure of those issues in view their strongly held view that the securities would inevitably be converted to stock. Japanese corporations believed that convertible issues offered lower costs of equity issuance than direct issuance of equity, perhaps reflecting the Japanese practice of offering new issues at a discount from market price to existing share holders. The choice of denominating a convertible issue in a foreign currency, such as the Swiss franc, was strongly influenced by the fact that the lower nominal cost of such issue would result in higher reported current earnings than if the issue was denominated in yen. There is little evidence that the "speculative" nature of such financing choices by various Japanese firms, prior to sharp 1990 drop in the Japanese stock market, was factored into market assessments.
financing due to the significant cost advantages found through the issuance of debt. One of
the reasons for the cost differential between debt and bank loans has stemmed from the
Japanese regulation that prohibits city banks from accessing nearly all forms of long-term
funding (see city bank limitations in Chart 2). This restriction has induced the banks to
alter their method of long-term prime rate determination from one based on long-term market
rates to one based on pre-set spreads above the short-term prime rates in order to have
lending rates float at fixed spreads over cost of funds.\(^\text{15}\)

However, the new loan pricing scheme generates high bank lending rates relative to
market interest rates during periods in which the Japanese yen yield curve is inverted.
Chart 17 exhibits one recent manifestation of this situation by comparing the Japanese bank
prime rate structure to the Euroyen yield curve as of April 1991.\(^\text{16}\) The gap between the
rates charged for prime loans by the city banks and those available in the Euromarket
provided an incentive for internationally-recognized high quality borrowers to search
actively for less costly alternatives to bank funding.\(^\text{17}\) The inverted yield curve placed
the banks in a dilemma between lending competitively at rates which would generate little

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15. The Japanese banks are rapidly increasing their use of swap transactions as a means of hedging
against this type of interest rate risk. Swap trading on the Tokyo market is estimated to have
increased by 360 percent in the year to September 1991 (to $24.1 billion).

16. Note that the two interest rate structures are not entirely comparable since interest costs on
loans based on the prime rate can include one or more rate reset options, while Euroyen rates
are of a fixed interest rate for the indicated maturity. In fact, it is our understanding that
an increasing proportion of city banks' long-term loans have been at variable interest rates.

The two articles identify the dichotomy between corporate lending rates and the Japanese long-
term prime rate and describe how this led recently to the first floating-rate bond issued in
Japan.
return on assets, and forgoing the financing of corporations in which they continue to
maintain equity interests through cross-shareholdings.

Section IV. Implications of the Basle Capital Accord

Background

In the early 1980s, central banks and regulatory authorities became increasingly
sensitive to the absence of mutually agreed-upon rules for conduct in the international
banking business. The international debt crisis raised additional concerns regarding the
fragility of the international banking system, in view of the potential consequences of
debtor country actions on the financial situations of a large number of internationally
active banks. This led national authorities in the United States and other industrial
countries to begin to press banks to bolster their capital adequacy positions.

In the second half of the 1980s, the international assets of Japanese banks surged
dramatically. The Japanese bank share of international bank assets rose by more than 10
percentage points to 38 percent from 1984 to 1988.\footnote{The reported share is based on data on international banking assets reported to the Bank for
International Settlements. The data are reported to the BIS by the G-10 and other reporting
countries. The data include claims of banking offices on non-local customers in foreign and
domestic currencies and claims on local residents in foreign currencies.} This surge raised questions as to
whether national banking regulators could successfully induce banks to improve their capital
ratios in the absence of barriers being raised against further market penetration by
Japanese banks. In turn, the possibility of such protectionist responses intensified
efforts to move to a level playing field for internationally active banks through the
adoption of international capital standards.
The task was assigned to the Basle Committee on Banking Supervision, a grouping of G-10 member countries' central banks and bank regulators. By the end of 1987, the Committee had agreed on a framework which called for a common capital definition and a risk-asset weighting scheme rather than a leverage ratio. The simplicity of the negotiated framework facilitates comparisons among banking systems. In particular, unlike pre-existing national capital definitions with multiple tiers of capital, the new framework has only two (Tier I and Tier II capital). Tier I capital consists of only the core constituents of the capital base, namely, equity and disclosed reserves. Tier II capital includes supplementary elements, such as subordinated debt and revaluation reserves. While the specific composition of Tier II was left to national discretion, the Committee specified several binding limitations on the inclusion of instruments in Tier II, including a 45 percent limit on unrealized gains on securities holdings and a limit on includeable subordinated debt at a level of 50 percent of Tier 1 capital.

The Basle Committee also agreed on a timetable which established transitional target capital ratios during the implementation period. Internationally active banks are required to meet an 8 percent minimum standard by the end of 1992, of which at least half must constitute Tier I capital. It was widely appreciated that the Basle framework was far from perfect in the sense of establishing truly equivalent minimum capital standards for internationally active banks. In particular, the framework did not allow for the effects of various national accounting standards and tax policies.

The Basle framework is a negotiated document in which the situations of individual banking systems are mirrored. For example, the inclusion of subordinated debt in Tier II

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19. The secretariat of the Basle Committee is furnished by the BIS.
capital had (at the time of negotiation in the 1980s) no operational significance for
Japanese city banks. The banks were not permitted to issue subordinated debt at the time
the agreement was negotiated. 20 This was not the case for U.S. money center banks which had
relatively large amounts of such debt outstanding as a result of previous efforts to improve
their U.S. regulatory capital ratios (in which credit is given for subordinated debt). On
the other hand, Japanese city banks possessed substantial revaluation reserves, reflecting
unrealized gains on their cross-shareholdings in other Japanese companies. This was not the
case for U.S. banks.

It was widely expected that the requirements in the capital agreement would induce
Japanese banks to slow the growth of their balance sheets. One perspective on the agreement
suggests that Japanese banking authorities viewed their situation as equivalent to that of
Japanese trade negotiators who were pressured to accept orderly marketing agreements as a
cost of maintaining continued access for Japanese goods to specific foreign markets. In
this view, the Basle agreement was a means of negotiating restrictions on the growth of
Japanese banks' shares of various national banking markets. A separate line of reasoning
argues that Japanese authorities actually sought the agreement as a means of leveraging
their own efforts to encourage the financial reform process in Japan. While the two
explanations are not mutually exclusive, we find the latter explanation more supportable
when viewed from an historical perspective, in the sense that important structural reforms
in Japan have historically been portrayed publicly to be the undertaking of a sacrifice that

20. However, as discussed later in the paper, in 1990 Japanese banking regulators authorized to
issue subordinated debt as Tier II capital.
had be undertaken in order to placate hostile foreigners. 21

The expectations of the framers of the Basle agreements were not fulfilled in the sense that the asset growth of Japanese banks was not immediately restrained. In particular, the severe fluctuations in the Japanese stock market in the late 1980s had important consequences for the financial situations of Japanese banks.

The Capital Raising Activities of Japanese Banks

The purpose of this section is to analyze the response of Japanese banks to the Basle Capital Accord. The capital raising efforts of the Japanese banks following the adoption of the new capital framework was phenomenal; from 1986 to 1990, the Tier I capital of the Japanese city banks has increased at an average annual rate of 21 percent. Chart 18 shows the strong positive correlation of the Tier I capital positions of the city banks with the upward movement of the Japanese stock prices in the late 1980s. The correlation is largely accounted for by Japanese banks capitalizing on opportunities presented by the favorable terms available for the issuance of new equity and equity-based securities (convertible bonds denominated in yen and other currencies) as well as the realization of gains on their stock holdings. 22 Chart 18 also shows the sharp fall in the Japanese stock market in 1990 and 1991; this decline not only made it more difficult for Japanese banks to

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21 Students of the Japanese system continue to debate the role of Admiral Perry’s "black ships" in prompting the structural reforms undertaken by the Meiji state.

22 In the late 1980s, Japanese authorities effectively discouraged Japanese banks from reducing their exposures to heavily indebted middle income countries through secondary market sales at a discount. However, the banks were permitted to reduce their exposures in connection with their participation in restructuring agreements for Argentina, Brazil and Mexico; and, subsequently, in connection with their involvement in so-called Brady-debt reduction agreement for Mexico. The resulting tax losses from such transactions were offset were by the capital gains from stock sales that were routinely reversed so as to permit the bank to meet its obligations to be a reliable shareholder of client firms.
issue new equity securities (including through conversions of outstanding convertible bonds by investors), but also adversely affected the attractiveness of boosting Tier I capital through the realizations of latent gains on stock holdings. This point is discussed in detail below.

The top panel of Chart 19 relates the growth of a proxy of Japanese city banks’ aggregate Tier I capital to their growth of assets. The bottom panel of Chart 19 shows that the resulting capital-asset ratio declined slowly in the period 1981-1986, and increased sharply from 1987 onward. 23 The strong capital growth since 1987 has enabled nearly all Japanese banks to reach the 8 percent risk-adjusted capital/asset ratio stipulated in the Basle agreement.

While the banks have been successful in bolstering their capital positions since 1987, the fall in Japanese stock prices weakened sharply the capacity of the banks to support further asset growth at the banks’ historical rates. Chart 20 documents the capital positions of the city banks before and after the 1990 stock market decline. Prior to 1990 (the left side of the chart) the banks were constrained by the Basle Accord limits on the amount of allowable Tier II capital (represented by the distance AB). 24 While in this constrained position, any additions to Tier I capital through retained earnings or equity issues also raised the ceiling on Tier II capital by an equal amount (segment BC);

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23. Japanese accounting practices require banks to value securities at the lower of cost or market. This accounting convention meant that the stock market decline had little direct impact on banks’ reported Tier I positions since most stocks continued to be reported on the basis of cost of acquisition.

24. Under the final Basle Accord guidelines, Tier II capital may only be included in total bank capital up to the level of existing Tier I capital (i.e., Tier II must constitute 50 percent or less of the total).
therefore, every additional unit of retained earnings (including realization of gains on sales of equity) pulled in another unit of surplus unrealized gains (for a total of two new units of capital) to fund asset expansion.

As a result of the stock market decline in 1990 (the right side of the chart), however, the drop in unrealized capital gains has caused Tier II capital to fall below the BIS ceiling of 100 percent of Tier I capital. Under this regime, increases in capital through retained earnings or equity financing (from AB to AC) now fund only half as much asset expansion (since there is no longer any surplus Tier II capital). Additions to banks' risk-based asset totals now face much higher effective capital charges compared with the situation that prevailed prior to the drop in the stock market.\(^\text{25}\)

The two panels of Chart 21 depict the capital gains that the banks realized from the sale of equity securities, and the level of equity financing over the period 1985-1990.

From the charts, it is clear that the banks were sharply affected by the weakness in the Japanese stock market in 1990; for example, the city banks issued approximately ¥18 trillion in common stock in 1989, but refrained from new stock issuance in 1990. In response to the erosion of the banks' capital bases caused by the stock market decline, Japanese authorities

\(^{25}\) The capital ratios of the city banks are also sensitive to exchange rate movements. It is our estimated rule of thumb that a 10 yen change in the yen-dollar exchange rate will result in a .1 percentage point change in the aggregate Basle risk-weighted ratio of the Japanese city banks. This reflects Japanese supervisory rules that operate to immunize a bank's total capital and not its capital ratio from exchange rate movements. Nevertheless, the limited movement of the yen-dollar exchange rate in recent years have meant that exchange rate changes has not been an important influence on city banks' capital ratios.
permitted the banks to issue subordinated debt (to be counted as Tier II capital). While this innovation alleviated some of the negative impact of the stock market on the capital positions of the banks, the financial consequences of the replacement in bank capital of "costless" unrealized gains on shareholdings by costly subordinated debt were reflected by reductions in the returns on city banks' assets by 5 basis points to 17 basis points and in returns on their equity by 168 basis points to 6.65 percent in fiscal year 1990. City bank profits were also negatively affected by the mounting expenses associated with the ongoing support of affiliated nonbank financial institutions that are among the major creditors of so-called bubble companies.

Capital Adequacy and Bank Asset Growth

The aggregate worldwide assets of the Japanese city banks declined by 3.3 percent in fiscal 1990 (measured in yen) - the first asset decline since prior to World War II. This decline in assets was more than accounted for by a reduction in interbank placements and deposits. Overall loan growth remained positive. At the U.S. banking offices of Japanese city banks, business loan growth was significantly stronger than for U.S. banks in fiscal 1990. This outcome was, in part, attributable to the earlier efforts of city banks to increase their market share of U.S. business lending through the provision of various

---

26. More than 3.7 trillion yen (approximately $27 billion, or about 30 percent of the city banks' aggregate Tier 2 capital at the start of fiscal 1990) of subordinated debt was issued in fiscal 1990.

27. The bubble companies are those firms which have been heavily involved in speculative investments, mainly in real estate. The ongoing financial difficulties of these firms have not been reflected by the city banks through increased provisions for loan losses. This reflects Japanese accounting rules that do not provide for the disclosure of probable loan losses. Thus, over the next few years, the earnings of the city banks will continue to be adversely affected by losses on loans to bubble firms in financial distress.
committed backup facilities, including those provided to firms that normally financed themselves in the U.S. commercial paper market. In fiscal 1991, Japanese banks have not had strong loan growth, a retrenchment consistent with their efforts to adjust to less-favorable financial circumstances.

Overall, available data and anecdotal evidence suggest that the following has been the typical response of the Japanese city banks to binding capital requirements. First, the city banks cut back on the allocation of capital to support money-market activities. Second, the banks raised pricing objectives for domestic and international credits in order to guarantee sufficient returns of equity and assets. Third, the banks have begun to sell off their stock holdings in Japanese firms with whom they do not expect to have sufficiently profitable long-term relationships (as measured by profitability indicators such as return on assets or return on equity).

Chart 22 shows the relationship between city banks' asset growth and capital needs for different levels of the Nikkei stock index. The difference between the two lines is accounted for by the fact that at a Nikkei index value of 39,000 there would be a Tier II surplus, whereas, at a Nikkei index value of 26,000 there is a Tier II shortfall. Thus, for example, we estimate that the city banks would have to add $30 billion in capital at the current value of the Nikkei of about 24,000 to support a 10 percent annual increase in their assets (rather than only $15 billion if the Nikkei were at its peak level of 39,000). The difference between the necessary additions to the capital base is indicative of the heightened financial costs which would have faced the city banks if they had not chosen to restrain the growth of their assets.
Section V. The Outlook for Further Financial Reform in Japan

The segmentation currently present in the Japanese financial system is much greater than that in the United States or any other industrialized economy. The Japanese system of specialized banking and credit intermediaries has remained largely unchanged since its original configuration following World War II. Traditional Japanese decision-making has operated to create a reform process in which the impact of various liberalization measures must be deftly balanced between all constituencies, thereby demanding that every attempt be made to minimize the costs inflicted upon any one sector of the financial system. Such insurance or loss-sharing arrangements have operated to preserve a segmented system by necessitating a gradualized approach to deregulation in which adequate time must be given in order to accurately assess the impact of each new liberalization measure before undergoing additional measures (recall the 15-year process of interest rate deregulation shown in Chart 7).

Within this framework, regulatory barriers to entry have been claimed as the property rights of the protected firms. The negotiation of compensation for the removal of various restrictions on intersectoral competition has added significantly to the difficulties of reforming the Japanese financial structure. For example, it is now probable that Japanese government financial reform proposals will not call for the provision

28. Horne has examined how Japanese financial regulatory policy is formulated and implemented. Through case studies, he illustrates a set of relevant idiosyncrasies which stem from the Japanese institutional and political framework. Nevertheless, he admonishes the reader to be prepared to recognize "...that there is much in the process of regulatory policy-making in Japan's financial markets which policymakers and participants in other countries will recognize." [Horne, James. Japan's Financial Markets: Conflict and Consensus in Policymaking, George Allen & Unwin, Sydney, 1985].
of stock brokerage services by Japanese banks. It is our understanding that this decision has been strongly influenced by concerns about the adverse consequences of bank entry on the competitive positions of the smaller securities firms. We have listed in Chart 23 a number of the specific elements that are contained in the Japanese government's financial reform proposals. It is important to note that Japanese financial companies presently operating in various sectors would be allowed to enter into new financial activities only through separate special-purpose subsidiaries. In the Japanese proposals, the emphasis is on the maintenance of separability among all of the various financial service activities. By constrast, the focus of the U.S. Treasury's 1990 proposal from financial system reform was on assuring the separability of banking activities from other activities of a financial services firm, a separation motivated by the view that the coverage of the various elements of the U.S. federal government safety net should be restrained.

In the past, Japanese banks have been encouraged to compete for regulatory privileges. In the 1980s, such competition among Japanese financial institutions appears to have been channeled to international markets by regulatory actions designed to accommodate and encourage the internationalization of Japanese finance. In the late 1980s, the character of such competition appears to have been influenced by the strong increase in financial wealth controlled by the banks in the forms of unrealized capital gains on the stock holdings. In our view there have been important spillover effects from such competition among Japanese banks that have been observed in the outcomes in various

29. This is not an issue in the present U.S. discussion of financial reform. Under the current U.S. regulatory regime, U.S. banks are permitted to control firms that provide stock brokerage services.
financial markets, for example, encouragement of the specialization by U.S. banks in the processes of credit origination and financial engineering.  

In summary, the change-over to capital-based regulation of Japanese banks should, in itself, encourage important changes in the structure of domestic and international banking markets. If the Japanese stock market proves to be less buoyant over the next few years, the capacity of the Japanese banks to implement change in a deliberate and considered fashion will be reduced. It is likely that there will be important spillover effects from this process, including those associated with changes in the role of Japanese banks as financial monitors of Japanese nonfinancial firms.


Chart 1

An Overview of the Process of Change in the Japanese Banking System

1973 OPEC oil shock

- Slower growth, public sector deficits increased government debt
- Elimination of BoJ compensation system

- Incentive for development of government debt secondary market (gensaki)
  - Process of interest rate liberalization
    - Increased interest rate sensitivity for banks
      - Increased bank competition

Internationalization of financial markets

- Basle Accord on capital convergence
- Capital market liberalization
  - Capital adequacy problems caused by stock market fall
  - Breakdown of bank client base increased bank competition

Weakened state of banking system

Caution in implementation of further banking reform
<table>
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<th>Type of Firm</th>
<th>Regulatory restrictions</th>
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<tr>
<td>Domestic-owned</td>
<td></td>
</tr>
<tr>
<td>Ordinary Banks</td>
<td>- prohibited from engaging in trust-related businesses (e.g., pension fund management, and investment trust management)</td>
</tr>
<tr>
<td></td>
<td>- prohibited from issuing long-term bank debt, except convertible bonds (since 1987) and regulated amounts of subordinated debt for the purpose of improving capital adequacy levels (since June 1990)</td>
</tr>
<tr>
<td></td>
<td>- prohibited from accepting deposits with maturities over 3 years</td>
</tr>
<tr>
<td></td>
<td>- two city banks differ in their range of activities from other ordinary banks, one is authorized to issue long term debt but is restricted by its number of branches, the other is authorized to engage in trust-related activities despite the prohibition for other ordinary banks</td>
</tr>
<tr>
<td>Long-Term Credit Banks</td>
<td>- authorized to issue long-term bank debt (with up to a five year maturity)</td>
</tr>
<tr>
<td></td>
<td>- may only accept deposits from its borrowers and governments</td>
</tr>
<tr>
<td></td>
<td>- may open only a very limited number of branches</td>
</tr>
<tr>
<td>Trust Banks</td>
<td>- authorized to engage in trust-related businesses (e.g., pension fund management and investment trust management)</td>
</tr>
<tr>
<td></td>
<td>- authorized to raise funds for long-term financing through loan trusts and money trusts (i.e., term deposits consolidated for the purpose of extending long-term credits)</td>
</tr>
<tr>
<td>Financial institutions for small</td>
<td>- clients are restricted by number of employees and capitalization levels (e.g., shinkin banks' business clients are limited in size to 300 employees and 400 million yen in capital)</td>
</tr>
<tr>
<td>businesses</td>
<td>- clients are limited mainly to members of the cooperatives or credit unions</td>
</tr>
<tr>
<td>Securities firms</td>
<td>- prohibited from engaging in banking activities</td>
</tr>
<tr>
<td>Foreign-owned</td>
<td></td>
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<tr>
<td>Banks</td>
<td>- authorized to engage in securities activities through partially-owned securities affiliates (unlike domestic banks, which are prohibited from securities activities)</td>
</tr>
<tr>
<td></td>
<td>- authorized to engage in trust-related activities through the establishment of trust bank affiliates</td>
</tr>
<tr>
<td>Securities firms</td>
<td>- authorized to engage in banking activities through subsidiaries (since 1990)</td>
</tr>
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</table>

Source: Federation of Bankers Associations of Japan, Euromoney magazine, Bank of Japan.
Chart 3

Growth of Japanese Government Borrowing

Chart 4

Japanese Money Markets

Source: Bank of Japan, Economic Statistics Annual (various years).
Chart 5

Stock Price of Sumitomo Bank

Chart 6
Arbitrage in Short-term Money Market
Euroyen rate vs. Gensaki rate

Standard deviation of differential:
1975-1980 = 1.90 percentage points
1981-1985 = 0.23 percentage points

Chart 7

History of Deregulation of Deposit Interest Rates

1979 May - Issuance of Negotiable Certificates of Deposit authorized (minimum amount = ¥500 million, term = 3 to 6 months)

1984 Jan - Minimum denomination of CD lowered to ¥300 million

1985 Apr - Minimum denomination of CD lowered to ¥100 million, minimum term shortened to 1 month
 - Issuance of Money Market Certificates authorized (minimum amount = ¥50 million, term = 1 to 6 months)

Oct - Deregulation of interest payable on large time deposits (minimum amount = ¥1 billion, term = 3 months to 2 years)

1986 Apr - Maximum term of CD extended to 1 year
 - Minimum denomination of large time deposits lowered to ¥500 million
 - Maximum term of MMC extended to 1 year

Sep - Minimum denomination of large time deposits lowered to ¥300 million
 - Minimum denomination of MMCs lowered to ¥30 million

1987 Apr - Minimum denomination of large time deposits lowered to ¥100 million
 - Minimum denomination of MMCs lowered to ¥20 million
 - Maximum term of MMC extended to 2 years

Oct - Minimum term of large time deposit shortened to 1 month
 - Minimum denomination of MMCs lowered to ¥10 million

1988 Apr - Minimum denomination of CD lowered to ¥50 million, term broadened to 2 weeks to 2 years
 - Minimum denomination of large time deposits lowered to ¥50 million

Nov - Minimum denomination of large time deposits lowered to ¥30 million

1989 Apr - Minimum denomination of large time deposits lowered to ¥20 million

Jun - Small denomination MMCs introduced (minimum amount = ¥3 million, term = 6 months to 1 year)

Oct - Minimum denomination of large time deposits lowered to ¥10 million
 - Term of small MMCs broadened to 3 months to 3 years

1990 Apr - Minimum denomination of small MMCs lowered to ¥1 million

1991 Apr - Minimum denomination of small MMCs lowered to ¥500 thousand

Timetable for future interest rate deregulation

1991 Nov - Minimum denomination of large time deposits lowered to ¥3 million

1992 Jun - Minimum denomination of small MMCs eliminated
 - Introduction of "non-time" deposit instruments bearing market-related interests rates (minimum denomination = ¥200 thousand)

1993 - All remaining controls on time deposit rates to be fully removed

1994 - Remaining restrictions on all "non-time" deposit rates will be removed (except "current" deposits)

Note: For reference, as of October 10, 1991, the yen/dollar exchange rate was 130¥/$ (e.g., ¥1 million = $7,690).

Sources: Federation of Bankers Associations of Japan and unpublished reports by the U.S. Treasury Financial Attache in Tokyo.
Chart 8
Deposits with Liberalized Rates
as a percent of total bank deposits

Note: Deposits with liberalized rates include CDs, MMCs, large denomination time deposits, non-resident yen deposits, and foreign currency deposits.
Chart 9

Japanese Interest Rates
1986-1991

Chart 10

Percent of Loan Contracts with Compensating Balances

Chart 11

Distribution of Loan Contracts with Compensating Balances
amount of balance as a percent of loan

Note: Percentages shown are of effective loan (i.e., bank extends effective loan + a given percent balance which is to be held at the bank, where interest is actually paid on the entire amount).

Effective Lending Spreads over Cost of Funds

- avg. short term loan rate less 90-180 day CD rate
- effective lending spreads for all loans
- effective lending spread for only those loans with compensating balances

Note: Effective lending rates incorporate adjustments for the cost to borrowers of maintaining compensating balances.
Chart 13

Corporate Liquidity Ratios in Japan
1985 Q1 to 1991 Q3*

(Cash + Deposits) / Avg. Monthly Sales

Note: Liquidity figures for Q2 and Q3 1991 are Bank of Japan estimates. Sample includes all listed companies with capital greater than 1 billion yen.

Chart 14

Loans to Large Corporations as a Percent of Total Loans

Japanese City Banks

Note: Large corporations are defined as those with capital of greater than one billion yen.
Chart 15

Sources for Japanese Corporate Financing

1981-1985

- Bank loans (73.1%)
- Trade credit (18.0%)
- Domestic bonds (2.5%)
- Stocks (6.4%)

Total = 139 trillion yen

1986-1990

- Bank loans (66.2%)
- Trade credit (5.0%)
- Commercial paper (4.3%)
- External bonds (8.0%)
- Domestic bonds (3.9%)
- Foreign debts (4.3%)
- Stocks (8.3%)

Total = 318 trillion yen

Chart 16

Outstanding Bonds Issued in International Markets
by Private Japanese Corporations

Note: The current prime rate structure places a 30 bp spread over the short-term prime for 1-3 years, and a 50 bp spread for greater than 3 years.
Chart 18

Total Bank Capital
Japanese City Banks

Note: Bank capital is defined here as equity, reserves, and capital surplus, which are roughly equivalent to BIS Tier I capital.
The data are on a calendar year basis.
Chart 19
Japanese Bank Capital

(a) Growth of Capital and Assets
Japanese City Banks

(b) Capital/Asset Ratio
Japanese City Banks

Note: Capital/asset ratio is defined here as simply total capital (i.e., equity, reserves, and capital surplus) divided by total assets.

The ratio is not equivalent to any BIS capital adequacy ratio.

Chart 20

Effect of Stock Market Decline on Availability of Japanese Bank Capital

PRIOR TO 1990 STOCK MARKET DECLINE
Nikkei Stock Index=39,000
[Tier II constrained]

SINCE 1990 STOCK MARKET DECLINE
Nikkei Stock Index=25,000
[Tier II unconstrained]

Note: Ratios shown are only approximate.
Chart 21
Effects of the Japanese Stock Market

(a)
Capital Gains on the Sale of Securities
City Banks

Note: The Japanese distinction between investment account and trading account securities is similar in nature to that in the United States.

(b)
Equity Financing
City Banks

Note: Equity is raised through convertible bond issues upon conversion of the bond into common stock.
Chart 22

Amount of Additional Capital Required by March 1993
In Order To Maintain 8 Percent Capital Ratio
All Japanese City Banks

Note: Chart depicts the amount of capital that must be raised by all 11 Japanese city banks between March 1991 and March 1993, given different levels of asset growth. The required amount would allow the banks to meet the 8 percent BIS capital guidelines.
Source: S.G. Wargurg Securities, Salomon Brothers.
Proposed Financial Liberalization Specifications

Chart 23

1. City Banks -- authorized to establish trust bank and securities subsidiaries

- trust bank subsidiaries prohibited from engaging in pension fund management,
- real estate brokerage, and loan trust activities
- securities subsidiaries prohibited from engaging in equity brokering

2. LongTerm Credit Banks -- authorized to establish securities subsidiaries (which would be prohibited from engaging in equity brokering)

3. Trust Banks -- authorized to engage in full range of banking business through banking subsidiaries

4. Securities Companies -- authorized to engage in full range of banking business through banking subsidiaries

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