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Japanese Banks and the Asset Price "Bubble"

Prepared by Steven M. Fries 1/

Authorized for Distribution by David Folkerts-Landau

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Abstract

With the recent collapse of the asset price "bubble," Japanese banks encountered significant pressure from both a sharp decline in the value of equity holdings and a marked increase in bad loans. In August 1992, the Government initiated measures that stabilized equity prices and assisted banks in managing their nonperforming loans. While the major banks disclosed that 4.6 percent of their total loans were nonperforming at the end of FY 1992, a mechanical estimate of all banks' nonperforming and restructured loans is 6-7 percent of their total loans--a serious yet manageable problem. The main policy implications are to ensure the reasonably prompt resolution of the bad loan problem and to enhance market discipline to prevent its recurrence.

JEL Classification Numbers:

G21, G28

1/ The author thanks Ulrich Baumgartner, Jaha Kahkonen, Guy Meredith, Chikahisa Sumi, and Steven Weisbrod for useful comments and discussions. The views expressed are those of the author and do not necessarily represent those of the Fund.

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Summary

With the collapse of the asset price "bubble," following a tightening of monetary policy in 1989-90, Japanese banks encountered pressure from both a sharp decline in the value of equity holdings and a marked increase in nonperforming loans. Concern about the banks reached a peak in August 1992. This, along with the evident weakening of the economy, prompted the Government to introduce a comprehensive economic stimulus package. The Government also took several measures that helped to stabilize equity prices and that aimed to assist banks in managing their loan problems. In January 1993, the banks launched the Cooperative Credit Purchasing Company (CCPC) to accelerate the writing down of bad loans.

The major banks disclosed that nonperforming loans--defined as those on which interest has not been paid for at least six months or those to bankrupt companies--amounted to 4.6 percent of their total loans at the end of fiscal year 1992. A mechanical extension of the disclosed nonperforming loan figure to include those of the regional banks, as well as restructured loans of all banks, produces an estimate of total bad loans in the range of 6-7 percent of all banks' total loans. In comparison, the hidden reserves of all banks amounted to 4.2 percent of total loans, whereas their core business profits have ranged from 0.4 percent to 0.8 percent of total loans. Thus, from an aggregate perspective, the bad loan problem is serious yet manageable.

The distribution of the bad loans is not uniform relative to the ability of the various segments of the banking industry to bear the associated losses. The problem appears to be more acute for the trust banks. Whereas the incidence of nonperforming loans of the trust banks is on par with that of the city banks, the core business profits of the trust banks deteriorated significantly in recent years. The trust banks have also fared less well than other types of banks in the more liberalized, competitive, and efficient financial system in Japan.

In view of the uneven distribution of the bad loan problem relative to profits, the most immediate policy concern has been the emergence of a liquidity strain. No Japanese bank has posted a net loss in the postwar period. To encourage the writing down of bad loans, the Governor of the Bank of Japan has stated publicly that the central bank would provide liquidity support to any bank that experiences temporary funding difficulties after posting a net loss because of heavy loan loss provisions. With this safeguard in place, every effort should be made to resolve reasonably promptly the bad loan problem.

Measures to enhance market discipline may lessen the likelihood that such a marked deterioration in banks' asset quality will recur. Foremost among such measures is the placing of adequate private capital in the banking system. The fuller disclosure of banks' asset quality may also enhance market discipline.

I. Introduction

The collapse of the asset price "bubble," in both the Japanese equity and real estate markets, following a tightening of monetary policy in 1989-90, raised concerns about a significant retrenchment in the Japanese financial sector. Income and capital of Japanese banks came under pressure from both a sharp decline in the value of their equity holdings and a marked increase in bad loans, many of which stemmed from the rapid expansion of banks' real estate-related lending in the second half of the 1980s. As businesses and households began to unwind their excessive accumulation of investment goods, inventories, and consumer durables from the economic boom of 1987-90, the economy dipped into recession in 1992, adding to an already difficult environment for the banks. Moreover, the banks moved to tighten what appear to have been, at least with the benefit of hindsight, overly lax lending terms; and investment by small- and medium-sized firms (borrowers that lacked ready access to alternative sources of finance) underwent an unusually steep and prolonged contraction. 1/

To spur economic activity and to strengthen the financial system, the Japanese Government announced in mid-August 1992 a package of comprehensive measures that amounted to 2 1/4 percent of GNP. In addition, the authorities took several steps aimed at avoiding the need for banks to sell those equities that still carried latent profits into a weak stock market, at helping banks to manage their nonperforming loan problem, and at providing alternative sources of finance for small- and medium-sized firms. A number of financial institutions also launched in January 1993 the Cooperative Credit Purchasing Company (CCPC) to accelerate the writing-down of troubled loans.

The financial condition of Japanese banks continues to cloud the economic outlook, however, in part because a clear picture of their bad loan problem has yet to be portrayed. While the heightened concerns about the banks that prevailed in August 1992 have receded, largely because of a recovery in equity prices and in banks' hidden reserves and a slowdown in the rise in nonperforming loans disclosed by banks, the full extent of their bad loan problem and their financial capacity to absorb the associated losses is the subject of much debate. The main aims of this paper are to examine the factors that contributed to the deterioration in banks' asset quality, to gauge the amount of bad loans and their distribution among different types of banks using available information, and to identify the financial resources of banks that can be used to resolve the problem.

1/ See Economic Planning Agency (1992), pp. 25-30. The link between financial strains and macroeconomic performance in Japan, as well as other industrial countries, is also examined in Schinasi and Hargraves (1992).

II. The Asset Price "Bubble"

1. Asset price inflation and deflation

In the second half of the 1980s, Japanese stock prices rose sharply, with the Nikkei 225 stock average reaching a closing peak of ¥ 38,915 on the last trading day of 1989 (Chart 1). 1/ The closing value of the index at the end of 1985 was ¥ 13,113; therefore, in four years, share prices virtually tripled. At the same time, the total market value of all Japanese shares traded on organized exchanges increased to 1.5 times GNP (¥ 588.4 trillion) at the end of 1989 from 0.6 times GNP (¥ 196.0 trillion) at the end of 1985. The only significant break in this surge of share prices occurred in October 1987, when markets around the globe faltered.

To a large extent, the gains in Japanese share prices in the second half of the 1980s were reversed in the early 1990s. From its peak at the end of 1989, the Nikkei 225 stock average fell by nearly two-thirds to ¥ 14,309 in mid-August 1992, a period marked by several sharp market declines. Events that triggered these setbacks included the expectation of higher Japanese interest rates in early 1990, the outbreak of hostilities in the Middle East in August 1990, and the evident softening of the domestic economy and the emergence of concerns about the financial condition of Japanese banks in the first half of 1992. Following the announcement in August 1992 of an economic stimulus package, the market began to recover and the Nikkei index closed the year at ¥ 16,925. At that time, the total value of all Japanese shares amounted to 0.6 times GNP (¥ 290.8 trillion). The recovery in share prices gathered momentum in early 1993, as prospects for a second economic stimulus package became more certain. Following the announcement of these measures in April 1993, the Nikkei 225 stock average continued to climb and closed the month at ¥ 20,919; but by the end of June, the index had drifted back down to ¥ 19,590.

Unlike the broadly based gains in share prices in the second half of the 1980s, those in land prices tended to be more localized, with the largest movements occurring in the markets for commercial land in the major metropolitan areas. Commercial land prices in the Tokyo area surged by 139 percent in 1986-87 and then began to taper off, peaking in 1990 at 168 percent above their 1985 level (Table 1). The upturn in commercial land prices in the Osaka and Nagoya areas exhibited a similar pattern, albeit commencing with a lag of one to two years. Residential land prices in the major metropolitan areas also increased sharply in the second half of the 1980s and peaked in 1990. However, in smaller cities and rural areas, the

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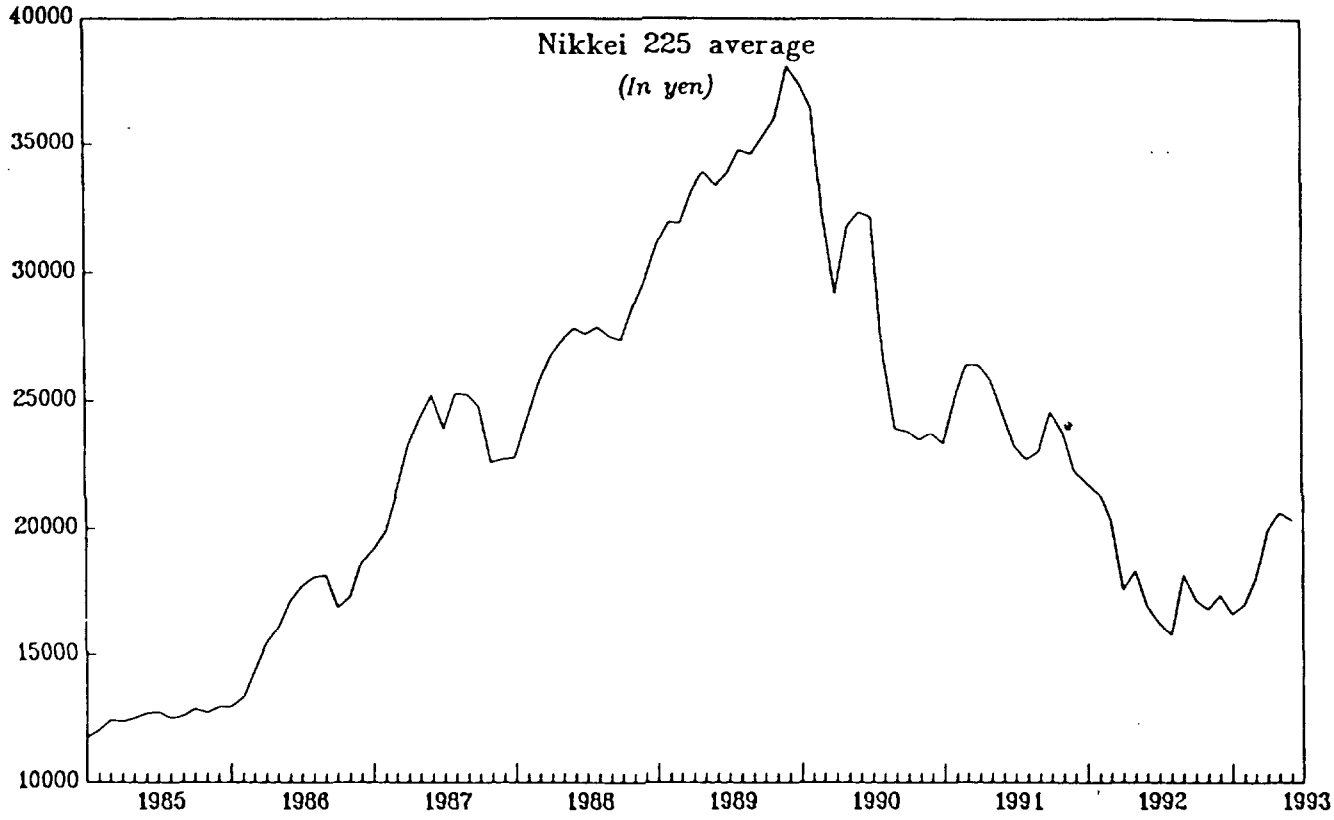
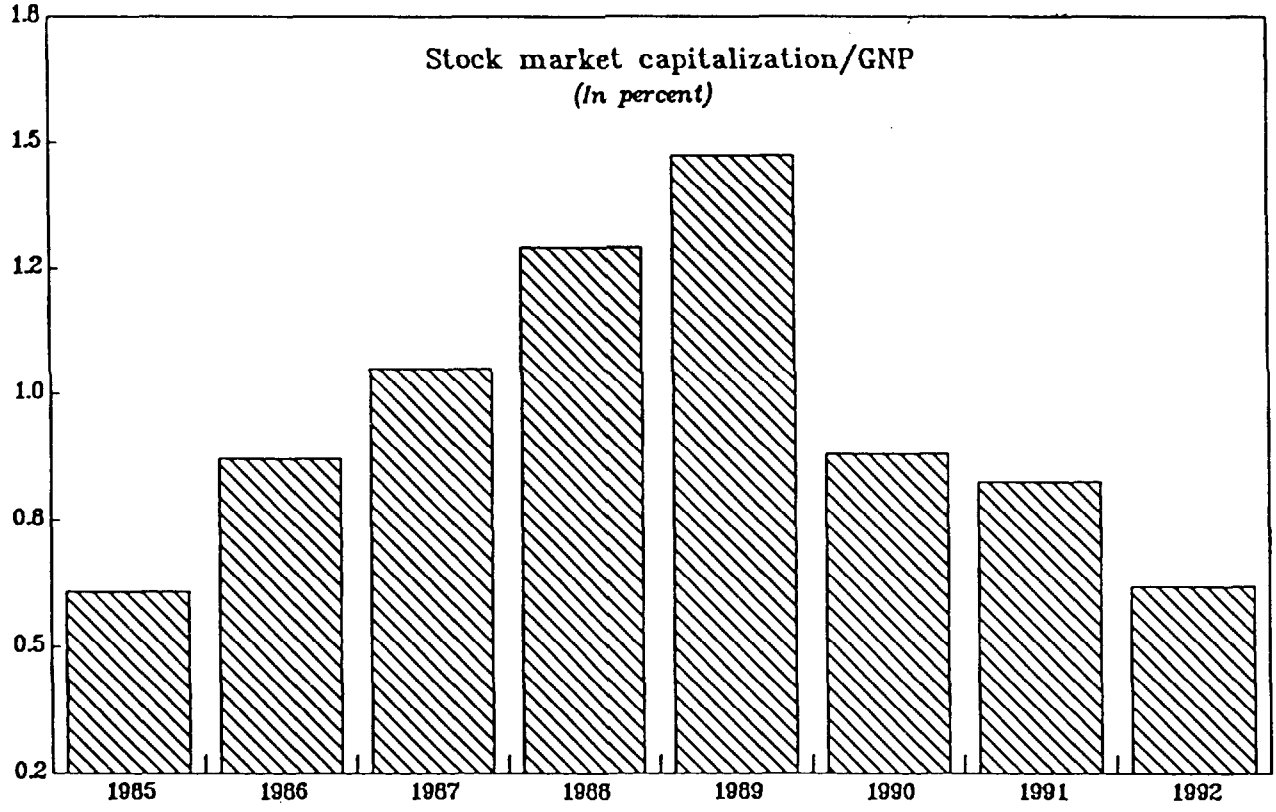
1/ For empirical analyses of recent asset price developments in Japan, see Hoshi and Kashyap (1990), Ueda (1990), French and Poterba (1991), Economic Planning Agency (1992), Bank of Japan (1993), Kähkönen (1993), and Research Committee on the Mechanism and Economic Effects of Asset Price Fluctuations (1993).

Chart 1. Japan: Stock Prices and Stock Market Capitalization, 1985-93





Sources: International Monetary Fund, *International Financial Statistics* and World Economic Outlook; and Morgan Stanley, *Morgan Stanley Capital International Perspectives*, various issues.

Table 1. Japan: Annual Rates of Change in Land Prices, 1985-92 1/

(In percent)

Calendar Years 1/	1985	1986	1987	1988	1989	1990	1991	1992
Commercial land								
National average	5.1	13.4	21.9	10.3	16.7	12.9	-4.0	-11.4
Three major metropolitan areas	9.2	30.1	46.6	14.1	18.6	8.1	-10.3	-19.2
Tokyo	12.5	48.2	61.1	3.0	4.8	4.1	-6.9	-19.0
Osaka	7.0	13.2	37.2	35.6	46.3	8.1	-19.5	-24.2
Nagoya	3.3	6.4	16.8	21.0	22.4	19.1	-7.6	-13.7
Other areas	2.5	2.9	5.4	7.6	15.4	16.3	0.4	-5.6
Residential land								
National average	2.2	7.6	25.0	7.9	17.0	10.7	-5.6	-8.7
Three major metropolitan areas	2.7	13.7	46.6	11.0	22.0	8.0	-12.5	-14.5
Tokyo	3.0	21.5	68.6	0.4	6.6	6.6	-9.1	-14.6
Osaka	2.6	3.4	18.6	32.7	56.1	6.5	-22.9	-17.1
Nagoya	1.4	1.6	7.3	16.4	20.2	18.8	-5.2	-8.6
Other areas	1.7	1.2	1.9	4.4	11.4	13.6	2.3	-1.7
Memorandum item								
Ratio of total market value of Japanese land owned by the private sector to GNP	286.4	345.1	442.4	456.7	500.7	516.9	445.0	...

Sources: National Land Agency, Land Price Publication, and Economic Planning Agency, Annual Report on National Accounts, various issues.

1/ Annual rates of change are to January of the following year.

increases in commercial and residential land prices, which took place mostly in 1989-90, were less extreme than those in the major metropolitan areas.

Owing to public concern over the surge in land prices, particularly those for residential lands that placed the goal of home ownership beyond the reach of many urban households, the Government adopted a number of measures aimed specifically at dampening the real estate market. In April 1990, the Government placed restrictions on the total volume of lending to the real estate sector and, in May 1991, strengthened restraints on nonbank lending for land-related purposes. The Government also created a new land tax, the Land Value Tax, which came into effect in FY 1992.

The real estate market began to weaken in 1991 and prices of commercial and residential land declined in the major metropolitan areas. In 1992, the downward pressure on land prices intensified and spread to the smaller cities and rural areas. The cumulative decline in commercial land prices in 1991-92 was 25 percent in Tokyo, 39 percent in Osaka, and 20 percent in Nagoya. In contrast, commercial land prices in other areas declined by 5 percent. Residential land prices in the major metropolitan and other areas exhibited similar patterns of decline.

2. Financial liberalization and innovation

Important factors underpinning the surge in asset prices in the second half of the 1980s were the increased lending by banks and nonbanks to the real estate sector and the financial investment activities of nonfinancial corporations and households. Financial liberalization and innovation, while serving to strengthen competition and enhance the efficiency of the Japanese financial system, played important roles in these developments by contributing to an apparent increase in risk taking by banks, opening financial arbitrage opportunities for large, nonfinancial corporations, and increasing the access of households to bank credit.

a. Real estate lending of banks and nonbanks

The lending by banks and nonbanks to the real estate sector increased significantly in the second half of the 1980s. At the end of FY 1989, the outstanding loans of all banks to the real estate sector totaled ¥ 48.8 trillion (12.3 percent of all banks' total loans), up from ¥ 25.3 trillion at the end of FY 1985 (9.1 percent of all banks' total loans) (Table 2). This ¥ 23.5 trillion increase in loans outstanding translates into average annual growth of 17.9 percent, well above the 9.3 percent rate of growth for all bank loans combined. At the same time, the nonbanks, numerous finance and leasing companies, and the eight housing loan companies (jusen), rapidly expanded their lending. At the end of FY 1989, the outstanding loans of all nonbanks totaled ¥ 79.9 trillion, compared with ¥ 22.4 trillion at the end of FY 1985 (Table 3). Thus, the nonbanks boosted their lending by ¥ 57.5 trillion in four years, the equivalent of an average annual growth rate of 37.4 percent. According to a Ministry of Finance survey of the 300 largest

Table 2. Japan: Total Loans and Real-Estate-Related Loans Outstanding of All Banks, 1985-92 1/

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992
				(In trillions of yen)				
Total loans outstanding of all banks	279.2	303.7	330.9	358.9	397.8	413.3	422.0	428.0
Total real estate-related	45.7	59.2	69.0	77.9	91.1	91.1	94.1	96.5
Real estate	25.3	33.6	37.4	42.3	48.8	48.9	51.1	54.1
Nonbanks	20.4	25.6	31.6	35.6	42.3	42.1	43.0	42.3
Banking accounts of all banks								
Total loans outstanding	255.9	279.4	305.3	331.8	367.6	379.1	386.1	392.4
Total real estate-related	39.3	51.3	59.6	67.5	78.5	76.9	79.9	83.4
Real estate	21.6	28.8	32.1	36.8	42.8	42.8	45.1	48.4
Nonbanks	17.7	22.5	27.6	30.7	35.7	34.1	34.8	35.0
Trust accounts of all banks								
Total loans outstanding	23.3	24.3	25.7	27.1	30.1	34.2	35.9	35.5
Total real estate-related	6.4	7.8	9.3	10.4	12.6	14.2	14.1	13.1
Real estate	3.7	4.7	5.3	5.5	6.0	6.1	5.9	5.8
Nonbanks	2.7	3.1	4.0	4.9	6.5	8.1	8.2	7.3
				(In percent of total loans)				
Banking accounts and trust accounts of all banks								
Total real estate-related loans	16.4	19.5	20.8	21.7	22.9	22.0	22.3	22.5
Real estate	9.1	11.1	11.3	11.8	12.3	11.8	12.1	12.7
Nonbanks	7.3	8.4	9.6	9.9	10.6	10.2	10.2	9.9
Banking accounts of all banks								
Total real estate-related loans	15.4	18.4	19.5	20.4	21.4	20.3	20.7	21.3
Real estate	8.4	10.3	10.5	11.1	11.6	11.3	11.7	12.3
Nonbanks	6.9	8.1	9.0	9.3	9.7	9.0	9.0	8.9
Trust accounts of all banks								
Total real estate-related	27.6	32.2	36.3	38.4	41.6	41.5	39.3	36.8
Real estate	15.9	19.4	20.7	20.4	19.9	17.9	16.5	16.2
Nonbanks	11.8	12.8	15.6	18.0	21.7	23.6	22.8	20.6

Source: Bank of Japan, Economic Statistics Monthly, various issues.

1/ Excludes overdrafts.

Table 3. Japan: Total Loans Outstanding of Nonbanks

(In trillions of yen)

Fiscal Years	1985	1989
Total loans outstanding of nonbanks	22.4	79.9
Of which:		
Housing loan companies	5.3	10.5
Memorandum item		
Total bank loans outstanding	279.2	397.8

Source: Ministry of Finance and Table 2.

nonbanks, 63 percent of their lending was secured by real estate at the end of September 1991, while loans to the real estate sector amounted to 38 percent of their total loans. 1/

The outstanding loans of all banks to nonbanks increased to ¥ 42.3 trillion at the end of FY 1989 from ¥ 20.4 trillion at the end of FY 1985, which represents an average annual rate of increase of 20 percent. Moreover, this ¥ 21.9 trillion rise in bank lending to nonbanks amounted to 38.1 percent of the increase in nonbanks' total lending from the end of FY 1985 to the end of FY 1989. 2/ Thus, a significant share of the funding for the rapid expansion of lending by nonbanks, much of which was to the real estate sector, was supplied by banks. 3/

In the early 1990s, bank lending to the real estate and nonbank sectors slowed following the imposition of curbs on the amount of loans to the real estate sector by the Ministry of Finance in April 1990 and the subsequent weakening of this sector in 1991. At the end of FY 1991, the outstanding loans of all banks to the real estate sector totaled ¥ 51.1 trillion, while bank lending to nonbanks stood at ¥ 43.0 trillion. Thus, in this two year period the annual rate of increase in bank loans to these two sectors dropped to 2.3 percent and 0.8 percent, respectively. In FY 1992, bank lending to the real estate sector picked up, increasing by 6.1 percent. This rise was related to, inter alia, increases in lending to local governments' land developing entities for purchases of land needed for stepped-up public works and to cash-strapped private real estate developers for operating funds.

b. Increased competition and bank risk taking

The plunge by banks into real estate lending, either directly or through nonbanks, can be viewed against the background of financial liberalization and innovation in Japan. Up to the early 1970s, the financial system in Japan was highly regulated and protected, as was the case in many other industrial countries. Exchange controls were maintained on both outward and inward movements of capital, securities markets were

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1/ Ministry of Finance (1992).

2/ According to Ministry of Finance (1992), approximately 60 percent of their total funding at the end of September 1991, was in the form of bank loans.

3/ Japanese banks were not the first to channel funds through lightly regulated financial institutions. This type of endeavor, for example, played a significant role in the U.K. secondary banking crisis from 1973-75. See, for example, Bank of England (1978) and Reid (1982).

underdeveloped, financial institutions were rigidly segmented, and interest rates were extensively controlled. 1/

During the 1970s and 1980s, developments on both the domestic and international fronts made many regulations of the domestic financial markets more difficult to sustain. 2/ The surge in supply of high-quality government bonds following the first oil price shock in 1973 helped to spur development of the domestic securities market, such as government bond repurchase (Gensaki) agreements and medium-term government bond (chukoku) funds. At the same time, large corporations began to fund a greater share of their investments with internal funds. The emergence of sizable current account surpluses in the 1970s and 1980s also contributed to an easing of controls on outward investment. In 1980, the Foreign Trade Control Act largely dismantled the system of capital controls, while resident purchases of foreign-currency denominated certificates of deposit and commercial paper were allowed in April 1984. Limits on banks' open short positions in foreign currencies were lifted shortly thereafter in June 1984.

The development of a domestic securities market and the liberalization of capital flows created arbitrage opportunities that circumvented regulations of the domestic financial market, especially interest rate regulations. 3/ The liberalization of deposit rates began with the introduction by banks in 1979 of short-term, negotiable certificates of deposit (CDs) and the Amendment to the Foreign Exchange Law in 1980 which permitted the expansion of foreign currency deposits. This process accelerated in 1985 with the introduction of market-linked, large-denomination time deposits and money market certificates (MMCs). Subsequent liberalization measures have reduced the minimum denomination of these instruments; as a result, interest rates on CDs and time deposits have been completely deregulated. At the end of FY 1992, interest rates on

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1/ As codified in the 1948 Securities and Exchange Law, banking and securities activities were separated. Moreover, under administrative guidance concerning the separation of banking and trust businesses and the Long-term Credit Bank Law of 1952, the banking industry was divided into specialized subgroups. Operating at the short-term end of the banking market were the city banks and regional banks that engaged in the traditional banking activities of deposit taking and lending. The trust banks and long-term credit banks were confined largely to the long-dated instruments. The trust banks issued loan trusts, money trusts, and pension trusts, deposit-like instruments maturing in up to five years; a significant fraction of their trust investments was related to the real estate sector. Trust banks also engaged in traditional banking activities. The long-term credit banks mainly issued seven-year debentures and specialized in long-term finance.

2/ See, for example, Cargill and Royama (1988) and Takeda and Turner (1992).

3/ Sumi (1992) discusses in detail the measures taken in the past decade to liberalize the Japanese financial system.

65.3 percent of deposits in all banks were market determined, up from 14.4 percent at the end of FY 1985 (Chart 2).

The development of a domestic securities market, greater self-funding of corporations, and increased access to international capital markets, in addition, led to a significant shift in the pattern of bank lending away from the large manufacturing corporations. At the beginning of the 1980s, loans outstanding to the manufacturing industry accounted for 29.8 percent of total bank lending. In contrast, 10.0 percent went to the real estate and nonbank sectors combined (Chart 3). By the end of the decade, this pattern had changed significantly. Lending to manufacturing industries dropped to 15.3 percent of total lending at the end of FY 1989, while that to the real estate and nonbank sectors increased to 22.9 percent. This change in the composition of bank lending was more pronounced for the trust banks and, to a lesser extent, the long-term credit banks than for the other types of banks.

With the shift in lending away from manufacturing industries, small-sized enterprises and individuals became primary customers of banks for their lending services. 1/ At the end of FY 1989, loans to customers in these categories accounted for 66.1 percent of banks' total outstanding loans, up from 48.8 percent at the end of FY 1980 (Chart 4). At the same time, banks appeared to lengthen the maturity of their loans. The share of loans on deeds (collateralized by real estate) increased to 55.3 percent at the end of FY 1989, compared with 46.7 percent at the end of FY 1980, while discounts, loans on bills, and overdrafts (working capital) decreased to 44.7 percent from 53.3 percent. The city banks and regional banks more than accounted for the increased lending on deeds.

The increased lending to small-sized firms and individuals and at longer terms enabled banks to mitigate initially the impact of liberalization of deposit rates on their net interest margins. However, these lending rates appear to have been insufficiently high to compensate for the greater risks involved. 2/ One reason for this increased risk taking, without an apparently commensurate increase in banks' margins, is the impact of financial innovation and liberalization on competition in banking and related services. 3/ The erosion of profits from traditional banking activities that had been sheltered from competition, in effect,

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1/ Corporations with capital of ¥ 100 million or less or with regular employees of 300 persons or less (wholesalers capitalized at ¥ 30 million or less or with regular employees of 100 or less, and retailers and service companies capitalized at ¥ 10 million or less or with regular employees of 50 persons or less), and unincorporated enterprises.

2/ Bank of Japan (1991).

3/ For a more extensive discussion of this proposition in the context of Japan, see Tsutsui (1990). The role of financial liberalization in the banking troubles in Japan, as well as other industrial countries, is also examined in Goldstein et al. (1993).

worked to reduce the amount of private capital at stake in the banking system. This loss of capital, that is the discounted value of the rents that banks would have earned in the absence of increased competition, could have altered the incentive for risk taking by banks, unless it was offset by the raising of alternative forms of capital. 1/

One way to gauge the impact of financial liberalization and innovation on risk taking by Japanese banks is to derive proximate measures of these two variables and to examine their correlation. A measure of banks' market power is used as a stand-in for liberalization, while the market value of banks' capital relative to that of their assets serves as a proxy for risk. A common measure of market power is the ratio of the market value of banks' assets to the book value of their assets (Tobin's q ratio). 2/ The basic premise behind this measure is that the capitalized value of any excess profits or rents is reflected in the market value, but not the book value, of its assets. 3/ Thus, a ratio above one provides an indication that a bank possesses some market power. Regarding the proxy for risk, there are two reasons why a decreasing ratio of capital to total assets, when expressed in terms of market values, points to greater risk taking. 4/ First, lower capital relative to total assets, holding the risk of assets constant, leads to less protection against failure. Second, a lower capital ratio increases the incentive for banks to assume greater risks, since there is less private capital in jeopardy of being lost.

Chart 5 plots the relationship between measured market power and the proxy for risk of 31 Japanese banks for which balance sheet and stock market capitalization data were available. 5/ The sample period for this panel of banks is March 1987 to March 1992. These data point to a clear-cut relationship between banks' market power, as measured by Tobin's q ratio, and their capital ratio expressed in terms of market values. Significant market power tends to go hand-in-hand with high capital ratios, while the

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1/ The shift in lending to small- and medium-sized firms combined with the practice of using land as collateral also appears to have fueled the asset price inflation. See Ogawa (1993).

2/ The market value of a bank's assets is calculated as the sum of the market value of its common equity and the book value of its liabilities. Since, owing to their relative short duration, the market value of a bank's liabilities is not very sensitive to interest rate fluctuations, the book value of liabilities is used as a stand-in for their market value. The book value of total assets is adjusted for a bank's hidden reserves (plus) and loan loss reserves (minus).

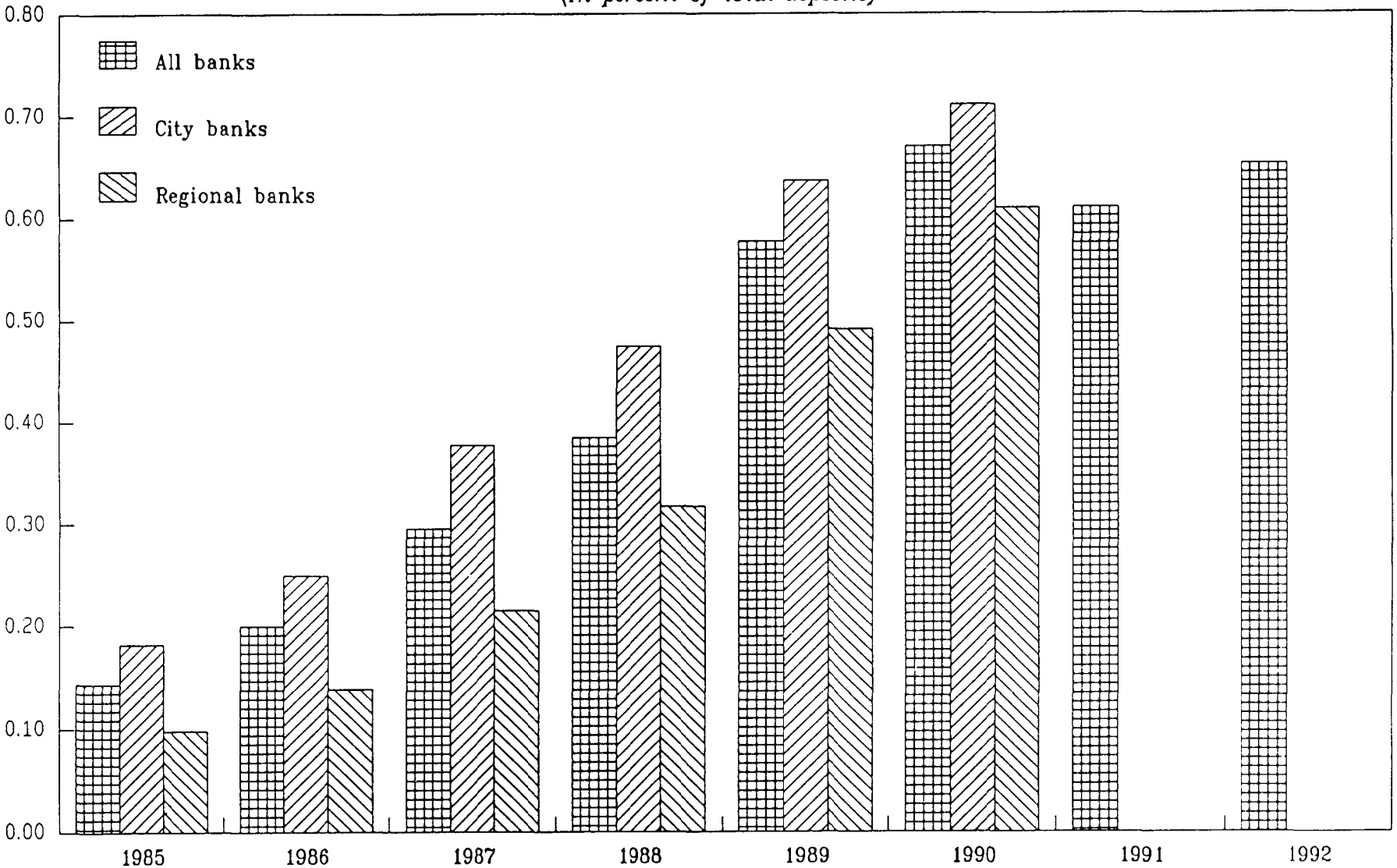
3/ Lindenberg and Ross (1981) pioneered the use of Tobin's q ratio as a measure of market power. See Keeley (1989) for an application to the banking industry.

4/ See, for example, Merton (1977), Furlong and Keeley (1989), and Fries and Perraudin (1993).

5/ The balance sheet and stock market capitalization data were obtained from IBCA Limited and Datastream International, respectively.

Chart 2. Japan: Dependence on Deposits with Deregulated Interest Rates by Type of Bank, Fiscal Years 1985-92

(In percent of total deposits)

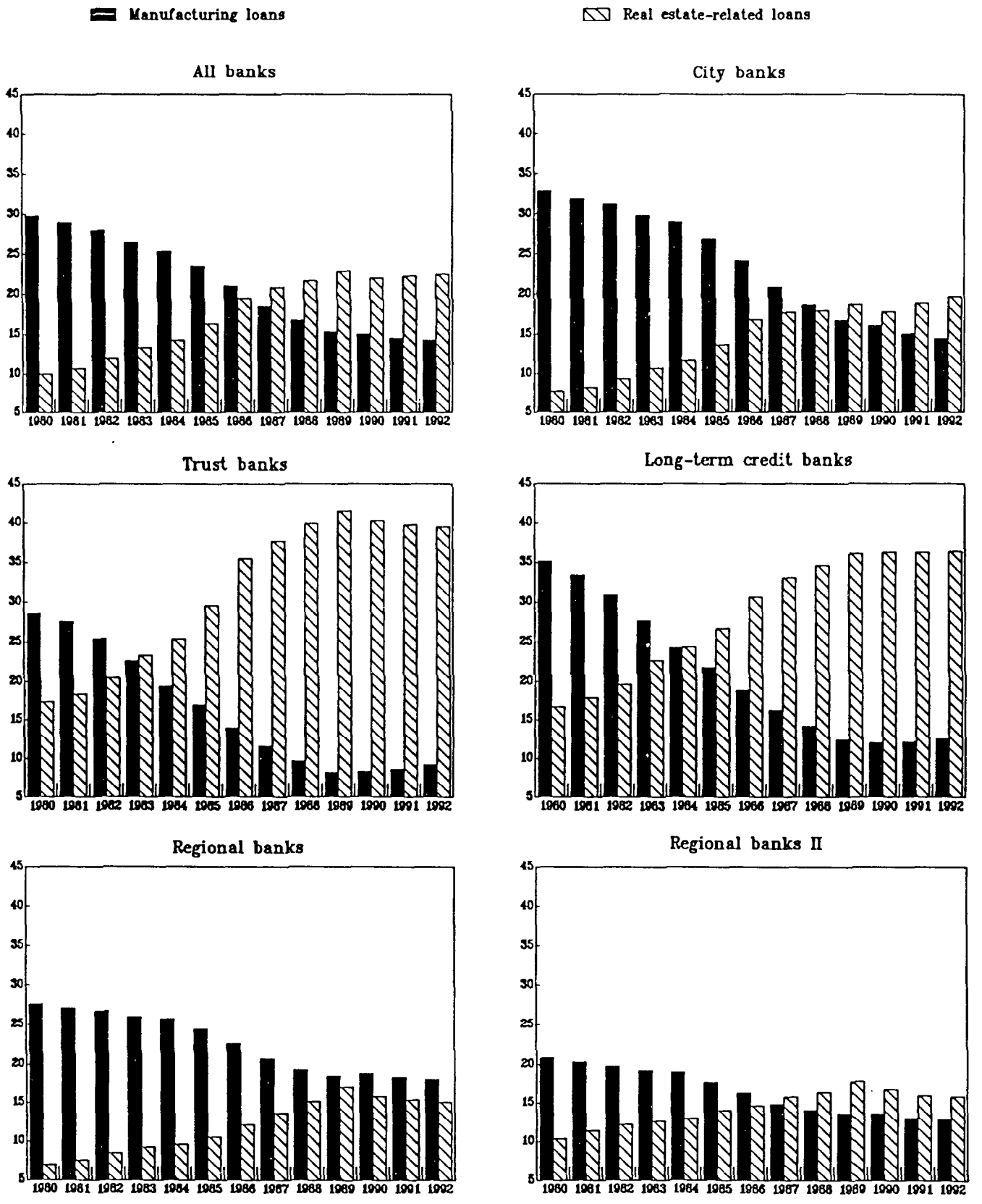


Sources: Bank of Japan, *Economic Statistics Annual* and *Economic Statistics Monthly*, various issues.

Note: Deposits with deregulated interest rates are time deposits with unregulated interest rates, certificate of deposits, foreign-currency deposits, nonresident yen deposits, and money market certificates.

Chart 3. Japan: Manufacturing Loans and Real Estate-Related Loans Outstanding, Fiscal Years 1980-92

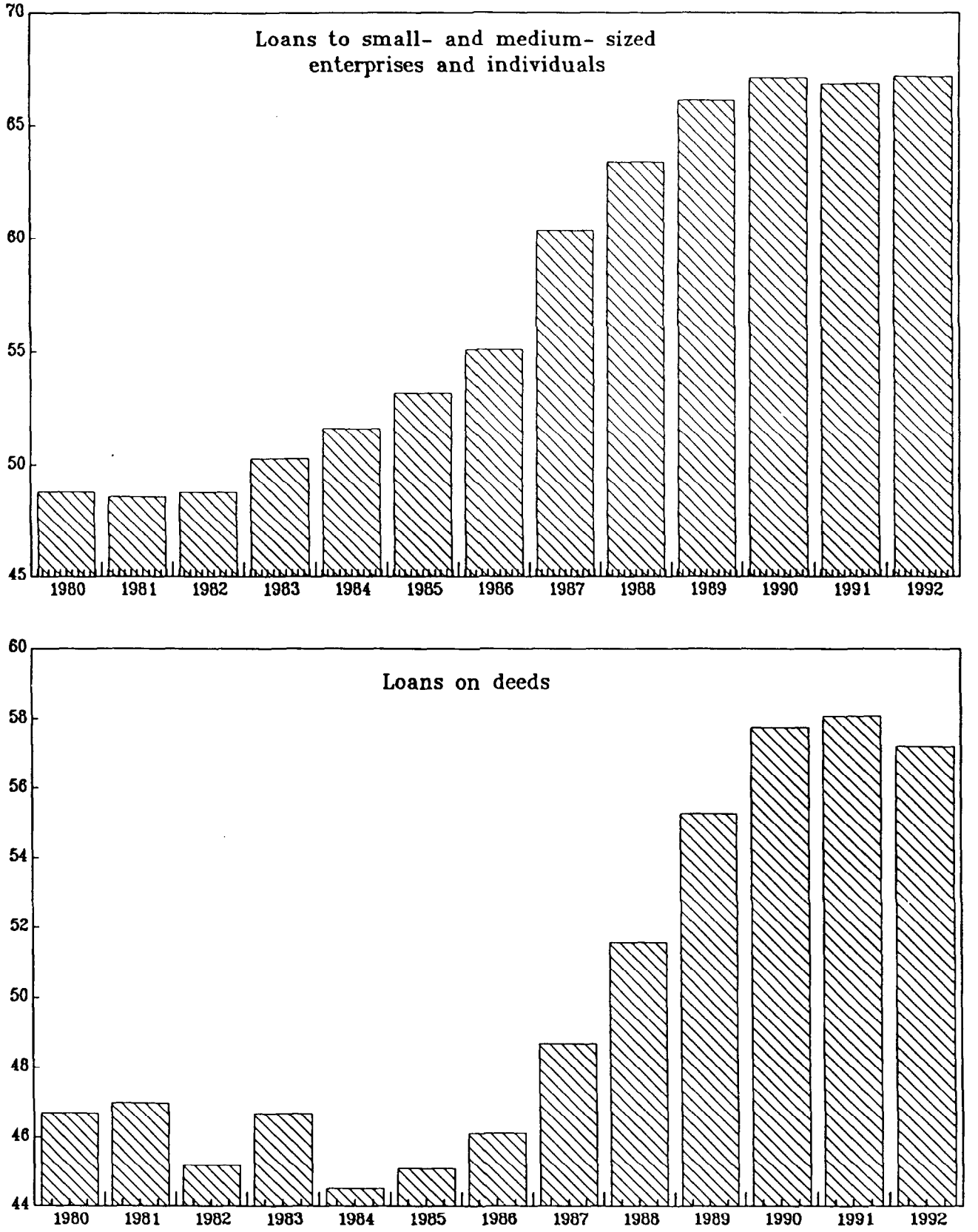
(In percent of total loans outstanding)



Source: Bank of Japan, *Economic Statistics Monthly*, various issues.

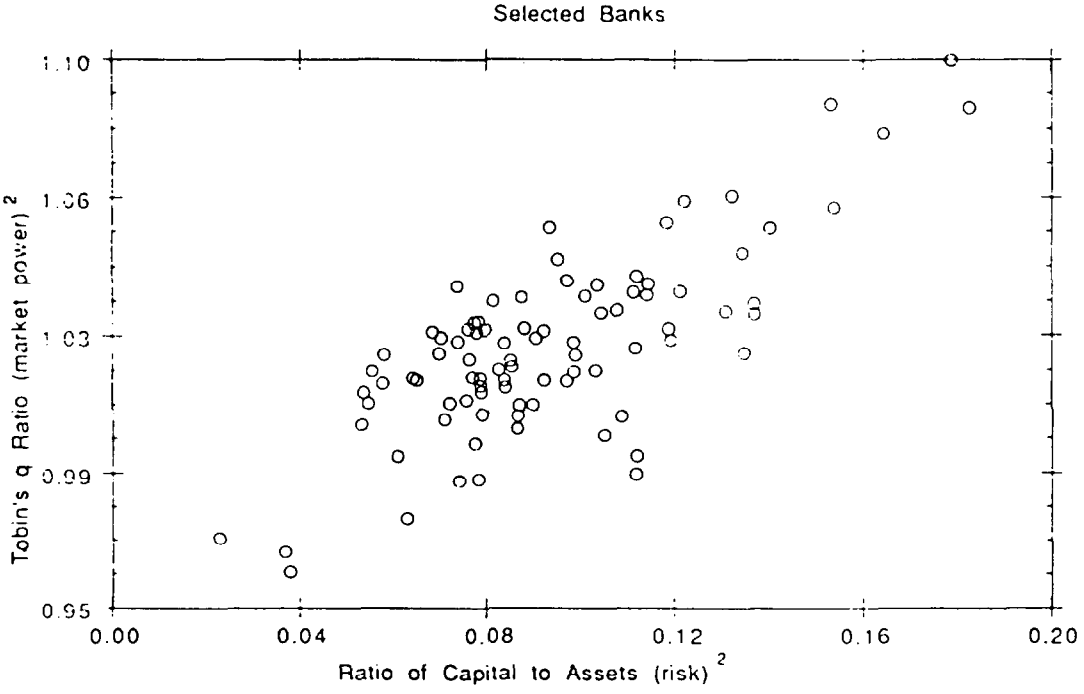
Chart 4. Japan: Loans Outstanding to Small- and Medium-Sized Enterprises and Individuals and on Deeds of All Banks, 1980-92

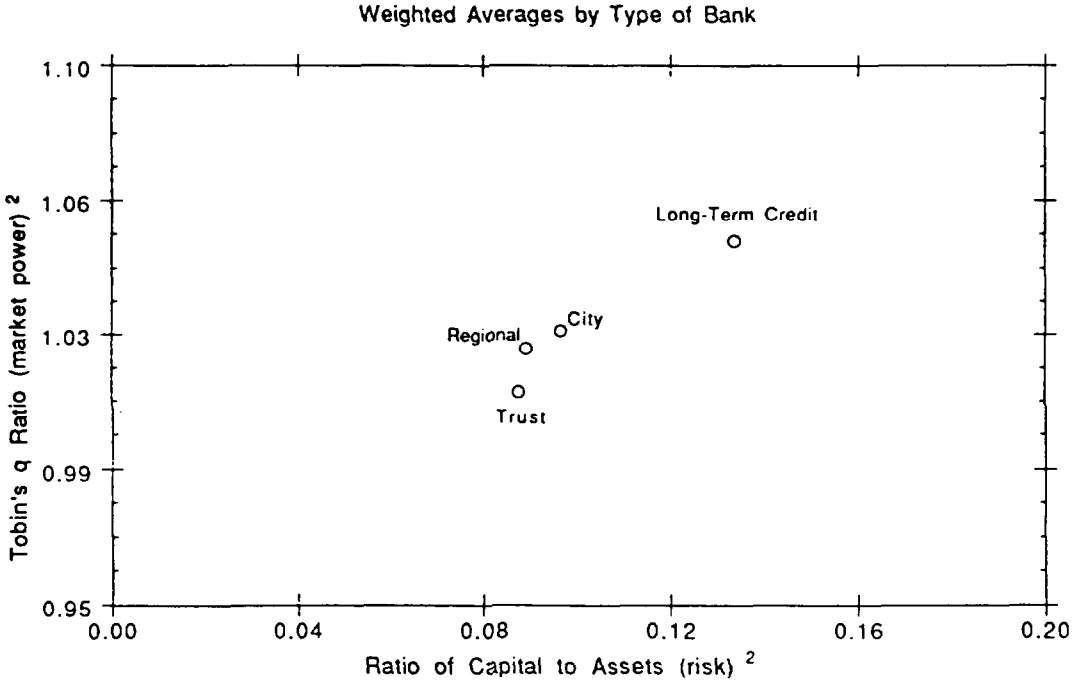
(In percent of total loans outstanding)



Sources: Bank of Japan, *Economic Statistics Annual* and *Economic Statistics Monthly*, various issues.

Chart 5
Japan: Measures of Banks' Market Power and Risk, Fiscal Years, 1987-91 [1]





Sources: IBCA Limited and Datastream International.

1/ End of period.

2/ Defined in text.

absence of market power (Tobin's q ratios of 1 or below) are associated with low levels of bank capital (market-value capital-to-asset ratios in the range of 4-6 percent). Thus, financial liberalization and innovation, leading to reduced market power, appears to have been associated with greater risk taking by banks. The institutions with the least measured market power are the trust banks, while those with the most are the long-term credit banks. The average ratio for the long-term credit banks, however, is heavily weighted by the observations for one bank.

c. Financial activities of nonfinancial corporations and households

In the second half of the 1980s, nonfinancial firms substantially increased their holdings of financial assets through combined fund raising and investment activities. These investments were undertaken either directly or through various types of trusts, including special-purpose trusts (tokkin trusts) and fund trusts managed by trust banks. 1/ In part, these activities were driven by arbitrage opportunities created by the process of interest rate deregulation and by the low cost of equity financing for Japanese corporations in the second half of the 1980s.

Japanese nonfinancial corporations substantially increased their fund raising and financial investment activities in the second half of the 1980s. In 1989, these corporations raised in domestic and foreign markets ¥ 75.6 trillion, more than double the ¥ 33.7 trillion obtained in 1985 (Table 4). The net acquisition of financial assets by nonfinancial corporations rose along with their fund raising activities. The financial investments of nonfinancial corporations increased to ¥ 39.6 trillion in 1989 from ¥ 21.3 trillion in 1985.

The stepped-up fund raising activities of Japanese nonfinancial corporations in the second half of the 1980s largely involved the acquisition of loans and the issuance of equities, equity-related bonds, and commercial paper. The amount of new lending by the private sector increased to ¥ 46.1 trillion in 1989 from ¥ 22.4 trillion in 1985. At the same time, equity issues by nonfinancial corporations surged fivefold to ¥ 10.3 trillion in 1989 from ¥ 2.1 trillion in 1985, while issues of bonds (mostly those with warrants) in overseas markets increased to ¥ 8.7 trillion from ¥ 2.1 trillion. The domestic issuance of commercial paper commenced in 1987; and, at that time, it was possible to issue commercial paper, to invest the proceeds in large-denomination time deposits, and to turn a profit on the interest rate spread. 2/ Before this spread began to narrow sharply at the end of 1988, corporations issued ¥ 9.0 trillion in commercial paper.

1/ Suzuki (1987) describes the various types of trust accounts offered by trust banks.

2/ See Research Committee on the Mechanism and Economic Effects of Asset Price Fluctuations (1993).

Table 4. Japan: Financial Transactions of Nonfinancial Corporations, 1985-91

(In trillions of yen)

Calendar Years	1985	1986	1987	1988	1989	1990	1991
Net increase in financial assets	21.3	24.4	31.5	39.9	39.6	20.2	-3.7
Currency and transferable deposits	0.1	2.4	0.4	2.0	-1.8	3.4	3.6
Other deposits	11.3	18.6	25.2	16.6	19.5	-3.2	-13.3
Time deposits	8.6	10.2	18.9	16.4	11.4	-2.1	-8.4
Nonresident yen deposits and foreign currency deposits	--	--	-0.7	-1.3	3.2	2.7	-0.3
Trust	2.3	6.7	6.2	1.1	3.8	-2.7	-2.3
Certificates of deposit	0.4	1.6	0.7	0.3	1.2	-1.2	-2.4
Short-term government securities	0.2	0.9	-0.3	-0.9	-0.4	0.9	-0.8
Long-term bonds	1.1	-1.1	-1.6	2.6	0.8	2.2	1.0
Corporate shares	0.2	0.3	3.9	3.3	4.7	1.3	-1.5
Loans	--	--	0.2	2.3	1.1	0.2	0.4
Net trade credit and other advances	2.3	0.3	1.2	6.1	5.2	7.1	2.8
Other financial assets	6.2	3.2	2.6	8.0	10.4	8.4	4.2
Net increase in liabilities	33.7	38.4	52.0	65.3	75.6	63.5	38.9
Short-term government securities	0.2	0.1	-0.3	-0.4	-0.2	-0.1	-0.2
Long-term bonds	5.0	7.2	7.3	8.3	13.6	7.5	13.8
Local government bonds	0.1	-0.2	--	-0.3	0.1	-0.3	1.4
Public corporation bonds	2.4	2.5	1.7	1.2	2.1	1.9	2.2
Industrial bonds	0.3	2.1	1.8	1.8	2.7	1.8	4.5
Bonds in foreign currency	2.1	2.8	3.8	5.5	8.7	4.2	5.8
Corporate shares	2.1	2.1	4.9	6.6	10.3	2.3	1.1
Loans	23.7	27.8	29.2	41.1	53.4	34.3	20.1
Commercial paper sold	--	--	2.6	6.4	4.3	-2.1	-1.5
Loans by private sector	22.4	26.2	26.2	30.8	46.1	33.9	16.4
Loans by public sector	1.3	1.5	0.4	3.9	3.0	2.5	5.2
General government's net additions to the accumulation of public corporations	--	0.1	--	--	--	--	--
Other liabilities	2.7	1.1	11.0	9.7	-1.4	19.5	4.1

Source: Economic Planning Agency, Annual Report on National Accounts, various issues.

The financial investments of Japanese corporations in the second half of the 1980s largely flowed into deposits with unregulated interest rate and into trust accounts managed largely by the trust banks. The placing of funds in deposits with unregulated interest rates (a significant proportion of time deposits, nonresident yen deposits, foreign currency deposits, and certificates of deposit) totaled ¥ 15.8 trillion in 1989, up from ¥ 9.0 trillion in 1985. Similarly, there was a surge in trust investments in 1986-87 when ¥ 13.0 trillion was placed in these accounts. Corporations' direct investments in equities also rose significantly during this period, increasing to ¥ 4.7 trillion in 1989 from ¥ 0.2 trillion in 1985.

Like nonfinancial corporations, households substantially increased their fund raising and investment activities in the second half of the 1980s. Much of the additional funding for households was provided by private lenders, new lending by which amounted to ¥ 29.0 trillion in 1989, up from ¥ 4.9 trillion in 1985 (Table 5). The increased financial investments of households were concentrated in time deposits, a growing proportion of which carried market-related interest rates, and in life insurance contracts. Household investments in time deposits rose to ¥ 38.4 trillion in 1989 from ¥ 21.2 trillion in 1985, while those in life insurance increased to ¥ 22.4 trillion from ¥ 11.0 trillion. Households tended to avoid investing directly in corporate shares in the second half of the 1980s.

3. Monetary conditions

While the inflating of the asset price "bubble" was significantly influenced by the process of financial liberalization and innovation, monetary conditions also played a significant role. 1/ Following the Plaza Agreement in September 1985, the Japanese yen appreciated sharply, rising to about ¥ 153/US$1 in August 1986 from ¥ 244/US$1 at the time of the agreement. Thus, the yen appreciated vis-à-vis the U.S. dollar by about 60 percent in less than one year. This run up, moreover, occurred as the economy was weakening and contributed to the ensuing downturn. The Bank of Japan lowered the official discount rate five times in 1986 and early 1987 to 2.5 percent from 5.0 percent.

The official discount remained unchanged until May 1989, owing largely to the aim of stabilizing the exchange rate. Following the Louvre Accord in February 1987, exchange rates tended to stabilize around then prevailing levels. In addition to international efforts to cooperate on exchange rates, the Japanese authorities were concerned about the dampening effect of a continued appreciation of the yen on the domestic economy. During this period of low interest rates, the ratio of broad money (M2 plus CDs) to GNP increased significantly as the opportunity cost of holding these balances

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1/ Hargraves and Schinasi (1993) examines the role of monetary policy in the asset price inflation of the second half of the 1980s in Japan, as well as other industrial countries.

Table 5. Japan: Financial Transactions of Households, 1985-91

(In trillions of yen)

Calendar Years	1985	1986	1987	1988	1989	1990	1991
Net increase in financial assets	38.7	46.4	55.0	58.3	80.1	57.4	47.6
Currency and transferable deposits	1.3	7.0	8.4	8.9	7.2	-0.6	1.3
Other deposits	23.4	17.5	19.0	26.6	40.5	39.6	37.4
Time deposits	21.2	15.6	18.0	21.7	38.4	34.6	33.9
Nonresident yen deposits and foreign currency deposits	--	--	--	--	-0.3	-0.1	-0.1
Trust	2.2	1.9	1.0	4.9	2.3	5.1	3.5
Certificates of deposit	--	--	-0.1	--	--	--	--
Long-term bonds	1.9	4.0	4.2	2.0	6.9	0.2	-4.1
Corporate shares	-0.9	0.2	3.5	-1.3	0.8	0.1	-3.0
Life insurance	11.0	15.4	17.8	22.0	22.4	16.7	15.6
Other financial assets	2.1	2.3	2.0	0.1	2.3	1.5	0.4
Net increase in liabilities	10.3	14.2	25.8	29.1	38.5	24.3	13.4
Loans	8.2	14.0	24.6	23.3	33.4	17.2	10.8
Loans by private sector	4.9	11.9	21.0	21.3	29.0	12.6	6.6
Loans by public sector	3.3	2.1	3.7	2.0	4.4	4.6	4.2
Trade credit and advances	2.1	0.2	1.2	5.8	5.1	7.1	2.6

Source: Economic Planning Agency, Annual Report on National Accounts, various issues.

declined; meanwhile, the ratio of bank loans to GNP rose by a somewhat larger amount. The ratios of broad money and bank loans to GNP peaked at the end of 1989 at 113.9 percent and 127.9 percent, respectively, up from 93.1 percent and 102.2 percent in at the end of 1984 (Chart 6). 1/

The Bank of Japan moved to tighten monetary policy in May 1989, raising the official discount rate to 3.25 percent, as concern over runaway asset prices mounted and consumer price inflation picked up. The Japanese economy was then operating at a very high level of capacity utilization, after several years of expansion. By August 1990, the discount rate had been raised four more times to 6 percent. The economy began to slacken in 1991 and dipped into recession in 1992.

III. Impact of the Asset Price "Bubble" on Banks

1. Hidden reserves

Japanese banks have long enjoyed substantial hidden reserves in the form of unrealized profits on their long-term equity investments. Near the peak of the stock market boom at the end of FY 1989, hidden reserves of the 21 major Japanese banks totaled ¥ 46.0 trillion, more than enough to satisfy fully their tier 2 capital requirements under the Basle accord (Table 6). 2/ However, as discussed above, the stock market experienced a series of setbacks in 1990-92 that, by mid-August 1992, left the Nikkei 225 stock average 63 percent below its peak at the end of 1989. However, in the six weeks following the announcement of the August 1992 economic stimulus package, the stock index was able to recover much of the ground it lost in that year. In early 1993, the stock market recovery gained further momentum, and at the end of FY 1993, the hidden reserves of 21 major Japanese banks stood at ¥ 17.8 trillion (3.9 percent of risk-adjusted assets), up from ¥ 17.3 trillion at the end of FY 1992, but well below the ¥ 46.0 trillion level at the end of FY 1989.

Banks responded to the pressure on their tier 2 capital by issuing subordinated debt and by reducing their risk-adjusted assets. By the end of FY 1993, the subordinated debt of the major Japanese banks had increased to ¥ 10.5 trillion (2.3 percent of risk-adjusted assets) from ¥ 7.1 trillion at the end of FY 1992 and ¥ 4.7 trillion at the end of FY 1991. At the same time, the risk-adjusted assets of the major banks declined to ¥ 460.0 trillion at the end of FY 1992, from ¥ 479.5 trillion at the end of FY 1991 and

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1/ Broadly in line with the definition of the monetary aggregate, bank loans include those in the banking accounts of all banks (including the Regional Banks II), the trust accounts of all banks, and the accounts of the Shinkin Banks, Norinchukin Bank, and Shoko Chukin Bank.

2/ Under the Basle capital accord, banks are permitted to count 45 percent of unrealized capital gains on securities (but not real estate) as tier 2 capital.

Table 6. Japan: Capital and Risk-Adjusted Assets of Major Banks, 1989-92

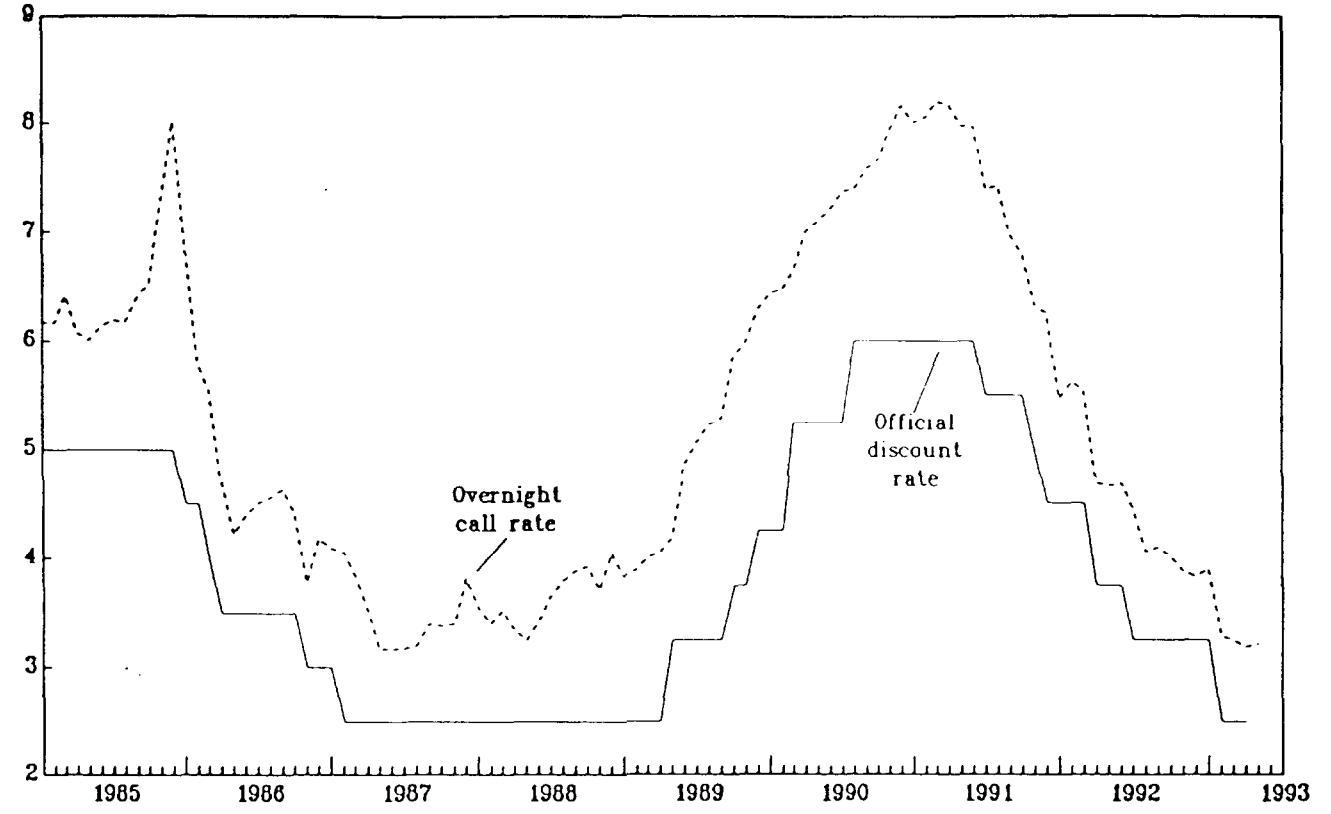
(In trillions of yen)

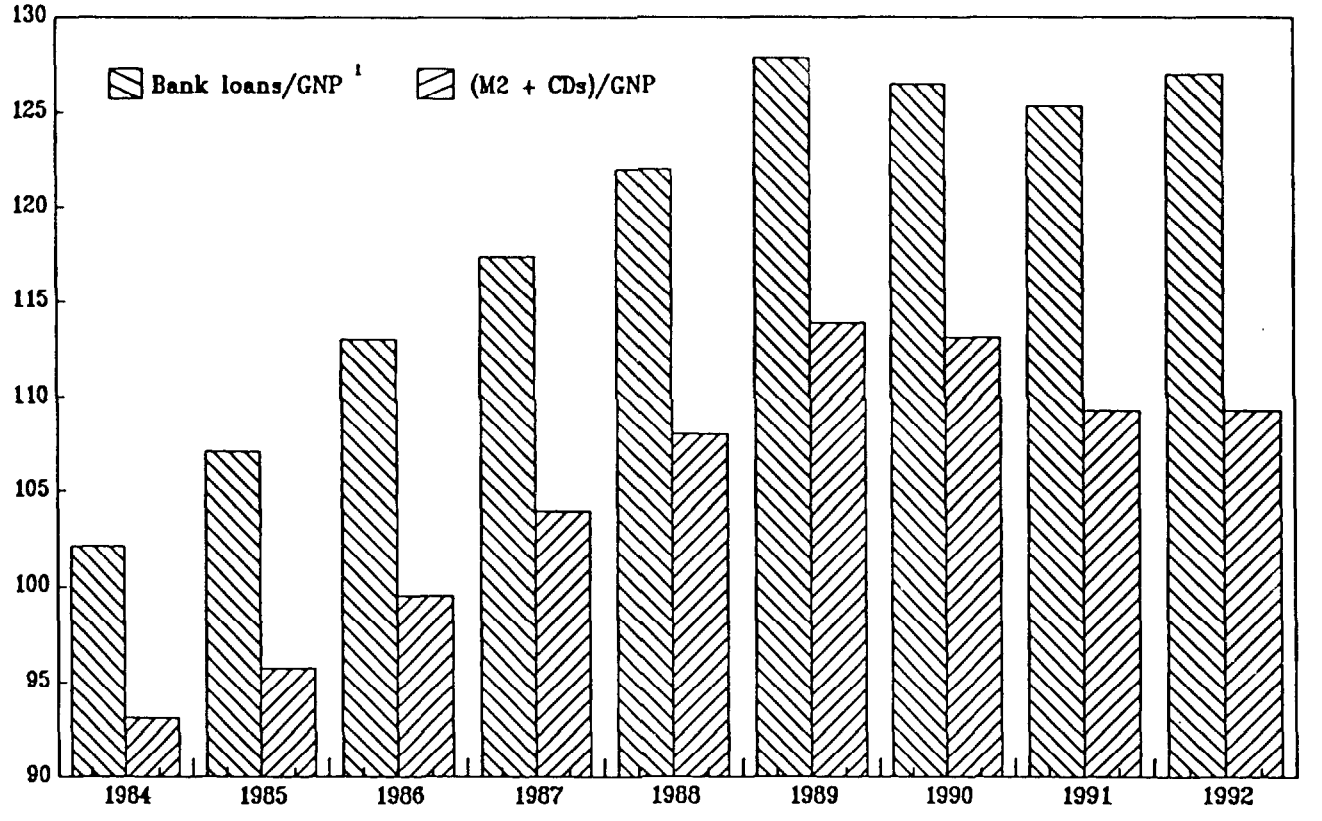
Fiscal Years	1989	1990	1991	1992
Total tier 1 capital	21.0	21.7	22.5	22.9
City banks	14.4	15.2	15.8	16.0
Trust banks	3.8	3.6	3.7	3.7
Long-term credit banks	2.8	2.9	3.0	3.1
Total tier 2 capital	19.8	20.2	17.1	20.0
City banks	13.2	14.2	12.6	14.6
Trust banks	3.8	3.0	1.7	2.3
Long-term credit banks	2.8	2.9	2.8	3.1
Total risk-adjusted assets	458.0	478.4	479.5	460.0
City banks	317.3	342.8	346.3	331.7
Trust banks	69.3	64.1	62.7	60.0
Long-term credit banks	71.4	71.5	70.5	68.3
Memorandum items:				
Hidden reserves 1/	46.0	35.0	17.3	17.8
City banks	28.3	22.2	10.8	10.9
Trust banks	9.5	6.4	3.1	3.2
Long-term credit banks	8.2	6.4	3.4	3.7
Subordinated debt	--	4.7	7.1	10.5
City banks	--	3.9	6.0	8.3
Trust banks	--	--	0.1	0.6
Long-term credit banks	--	0.8	1.0	1.6

Sources: IBCA Limited and Fund staff estimates.

1/ 45 percent of hidden reserves are scored as tier 2 capital.

Chart 6. Japan: Selected Monetary and Credit Indicators, 1984-93
(In percent)





Sources: Bank of Japan, *Economic Statistics Annual* and *Economic Statistics Monthly;* various issues; and International Monetary Fund, *International Financial Statistics.*

[1]Defined in text.

¥ 478.4 trillion at the end of FY 1990. The decline in risk-adjusted assets of the major banks in FY 1992 was due primarily to a decline in the value of their foreign assets due to the yen's appreciation, a scaling back of interbank deposits in international markets, a change to same day settlement in the domestic interbank clearing system, and weak loan demand. Owing to the decline in risk-adjusted assets, to the issuance of subordinated debt, and to the recovery in stock prices, the average ratio of total capital to risk-adjusted assets of the major banks increased to 9.3 percent at the end of FY 1992 from 8.3 percent at the end of FY 1991; while their average tier 1 ratio stood at 5.0 percent, up from 4.7 percent. Moreover, no major bank fell below the target ratios set by the Basle accord for total and tier 1 capital of 8 percent and 4 percent, respectively.

2. Nonperforming and restructured loans

Like equity prices, real estate values in Japan dropped significantly in the early 1990s, contributing to a marked increase in banks' nonperforming loans. The nonperforming loans of the 21 major Japanese banks at the end of FY 1992 were ¥ 12.8 trillion (4.6 percent of their total loans), up from ¥ 12.3 trillion at the end of September 1992, and ¥ 7.9 trillion at the end of FY 1991. 1/ Of the nonperforming loans at the end of FY 1992, ¥ 8.5 trillion were held by the city banks (4.8 percent of total loans), while ¥ 2.5 trillion (4.5 percent of total loans) and ¥ 1.9 trillion were on the books of the trust banks and long-term credit banks (4.2 percent of total loans), respectively. Nonperforming loans are defined as those on which interest payments are overdue by at least six months or loans to bankrupt entities. Excluded from the disclosed nonperforming loans, however, are those of regional banks and in trust accounts that do not benefit from an explicit bank guarantee and the restructured loans of all banks.

The nonperforming loans of the 21 major banks stem largely from the rapid increase in their lending to the real estate and nonbank sectors in the second half of the 1980s. 2/ Such loans increased by ¥ 33.2 trillion from the end of FY 1985 to the end of FY 1989 (Table 7). Thus, if all of the ¥ 12.8 trillion in nonperforming loans of these banks at the end of FY 1992 can be attributed to this past surge in real estate-related lending, 38.6 percent of these loans would have become nonperforming.

1/ In December 1992, a subcommittee working under the Financial System Research Council called for the fuller disclosure of bad loans by individual banks starting at the end of FY 1992. Prior to that time, the Ministry of Finance disclosed aggregate figures on the nonperforming loans of the 21 major banks on two occasions: at the end of FY 1991, and at the end of September 1992.

2/ See Research Committee on the Mechanism and Economic Effects of Asset Price Fluctuations (1993).

Table 7. Japan: Total Loans and Real-Estate-Related Loans Outstanding by Type of Bank, 1985-92 1/

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992
				(In trillions of yen)				
Banking accounts of city banks								
Total loans outstanding	116.6	129.3	142.0	153.7	169.2	175.4	176.8	177.7
Total real estate-related	15.9	21.7	25.1	27.6	31.7	31.2	33.4	35.0
Real estate	9.0	13.4	14.9	17.2	20.1	20.2	21.2	22.9
Nonbanks	6.9	8.3	10.3	10.4	11.6	11.0	12.2	12.2
Banking accounts of trust banks and trust accounts of all banks								
Total loans outstanding	37.2	42.0	44.3	46.7	50.5	52.5	54.2	55.9
Total real estate-related	11.0	14.9	16.7	18.7	20.9	21.2	21.5	22.1
Real estate	5.7	7.5	7.7	7.8	8.3	8.2	8.5	9.0
Nonbanks	5.3	7.4	9.0	10.8	12.6	12.9	13.0	13.1
Banking accounts of long-term credit banks								
Total loans outstanding	28.1	30.7	34.1	36.9	41.3	43.9	45.5	45.3
Total real estate-related	7.5	9.4	11.3	12.8	14.9	15.9	16.5	16.5
Real estate	3.2	4.1	4.6	5.2	5.8	6.0	6.2	6.4
Nonbanks	4.3	5.3	6.6	7.6	9.1	9.9	10.2	10.0
Banking accounts of regional banks								
Total loans outstanding	67.8	71.3	77.3	85.2	96.0	98.6	101.2	104.2
Total real estate-related	7.2	8.7	10.6	12.9	16.3	15.6	15.6	15.7
Real estate	4.4	5.2	6.3	7.6	9.1	9.2	9.8	10.4
Nonbanks	2.8	3.5	4.3	5.3	7.2	6.4	5.8	5.3
Banking accounts of regional banks II								
Total loans outstanding	29.6	30.4	33.3	36.5	40.9	42.9	44.4	44.9
Total real estate-related	4.2	4.4	5.3	6.0	7.3	7.2	7.1	7.1
Real estate	3.1	3.3	3.9	4.6	5.5	5.3	5.3	5.4
Nonbanks	1.1	1.2	1.4	1.4	1.8	1.9	1.8	1.7
				(In percent of total loans)				
Banking accounts of city banks								
Total real estate-related loans	13.6	16.8	17.7	18.0	18.7	17.8	18.9	19.7
Real estate	7.7	10.4	10.5	11.2	11.9	11.5	12.0	12.9
Nonbanks	6.0	6.4	7.3	6.8	6.9	6.3	6.9	6.9
Banking accounts of trust banks and trust accounts of all banks								
Total real estate-related loans	29.6	35.5	37.8	39.9	41.5	40.3	39.7	39.5
Real estate	15.3	17.9	17.5	16.8	16.5	15.7	15.7	16.1
Nonbanks	14.3	17.6	20.3	23.2	25.0	24.6	24.0	23.4
Banking accounts of long-term credit banks								
Total real estate-related loans	26.7	30.7	33.1	34.6	36.0	36.2	36.2	36.4
Real estate	11.4	13.5	13.6	14.0	14.1	13.7	13.7	14.2
Nonbanks	15.3	17.2	19.5	20.7	22.0	22.5	22.5	22.1
Banking accounts of regional banks								
Total real estate-related loans	10.6	12.2	13.7	15.1	17.0	15.8	15.4	15.1
Real estate	6.5	7.3	8.1	8.9	9.5	9.3	9.7	10.0
Nonbanks	4.1	4.9	5.5	6.3	7.5	6.5	5.7	5.1
Banking accounts of regional banks II								
Total real estate-related loans	14.0	14.6	15.8	16.4	17.8	16.8	16.0	15.9
Real estate	10.3	10.7	11.6	12.5	13.3	12.4	12.0	12.0
Nonbanks	3.7	3.9	4.2	3.9	4.5	4.4	3.9	3.9

Source: Bank of Japan, Economic Statistics Monthly, various issues.

1/ Excludes overdrafts.

The incidence of nonperforming loans among the major banks conforms broadly with the increases in their real estate-related loans in the second half of the 1980s. Such loans of the city banks, trust banks, and long-term credit banks increased in this period by ¥ 15.8 trillion, ¥ 10.0 trillion, and ¥ 7.4 trillion, respectively. Again, if the nonperforming loans of the major banks at the end of FY 1992 can be attributed to their increased exposures to the real estate and nonbanks sectors, 53.8 percent, 25.0 percent, and 25.7 percent of these loans, respectively, would have become nonperforming.

The disclosed figures on nonperforming loans of the 21 major banks, along with available information on the outstanding loans of banks, can be used to gauge the amount of nonperforming loans of the regional banks. From the end of FY 1985 to the end of FY 1989, the first- and second-tier regional banks increased their loans outstanding to the real estate and nonbank sectors by ¥ 12.3 trillion. If the same fraction of these loans are nonperforming as that of the 21 major banks, such loans of the regional banks would total ¥ 4.7 trillion. 1/ However, this calculation may overstate the amount of nonperforming loans of the regional banks, because provincial areas in which they conduct a significant share of their lending operations were spared the extreme fluctuation in land prices that occurred in the major urban areas (see above).

The trust accounts that benefit from bank guarantees of their principal are ordinary money trusts and loan trusts, which accounted for 51.1 percent of the funding of all banks' trust accounts at the end of FY 1992. Ordinary money trusts invest in loans, discounted bills, securities, and other deposits, while loan trusts are dedicated primarily to investments in long-term loans. The principal amounts of other types of trust accounts, such as pension trusts, securities investment trusts, and special-purpose trusts, are not backed explicitly by the banks. At the end of FY 1992, 46.7 percent of trust account assets were held in the form of securities, with call loans and bank deposits (23.4 percent of total assets) and loans and discounts (18.2 percent of total assets) accounting for much of the remainder. According to the Ministry of Finance, most trust account loans are in trust accounts that benefit from an explicit bank guarantee of their principal. The disclosed figures on nonperforming loans thus include most but not all

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1/ The regional banks disclosed that at the end of FY 1992 they held ¥ 569 billion in loans to bankrupt companies (0.4 percent of their total loans). In comparison, such loans of the major banks amounted to ¥ 2.0 trillion (0.7 percent of their total loans). According to the recommendations of the Working Group for the Adequate Disclosure of Banks' Assets, these banks did not reveal the amount of loans on which interest has not been paid for at least six months.

such loans in the trust accounts of the seven trust banks and one city bank. 1/

While banks do not disclose the amount of loans that have been restructured at reduced interest rates to support troubled borrowers, the amount of loans outstanding with relatively low interest rates has increased significantly in FY 1991-92. At the end of FY 1992, loans outstanding in the banking accounts of all banks with interest rates below 3.25 percent totaled ¥ 5.2 trillion, up from ¥ 0.8 trillion at the end of FY 1990. 2/ Similarly, loans outstanding with interest rates between 3.25 percent and 3.5 percent increased to ¥ 2.3 trillion from ¥ 0.2 trillion. At the same time, the short-term prime lending rate of banks declined to 4.0 percent in March 1993, down from 5.9 percent in March 1992 and 8.3 percent in March 1991. However, not all loans with interest rates below the short-term prime rate at the end of FY 1992 are necessarily restructured loans, because in the course of normal banking practices the most credit-worthy borrowers may receive loans with interest rates below the short-term prime rate as part of their overall banking relationships. In view of this practice, only those loans with an interest rate at least 0.5 percent below the short-term prime rate at the end of FY 1992 are included in the estimate of ¥ 7.5 trillion in restructured loans in the banking accounts of all banks.

Although loans outstanding by interest rate are not reported for the trust accounts of all banks, the estimate of restructured loans in the banking accounts of all banks and the lending to nonbanks by banks can be used to gauge the amount of restructured loans in the trust accounts of all banks. According to the Ministry of Finance, the bulk of restructured loans are to nonbanks. Thus, if the estimated ¥ 7.5 trillion in restructured loans in the banking accounts of all banks can be attributed to the ¥ 18.0 trillion increase in lending to nonbanks from these accounts in the second half of the 1980s, 41.7 percent of these loans would have been restructured. If the same proportion of the ¥ 3.8 trillion increase in lending to nonbanks from the trust accounts has been restructured, the restructured loans in the trust accounts would amount to ¥ 1.6 trillion.

In summary, the amount of nonperforming and restructured loans in the banking accounts and trust accounts of all Japanese banks is gauged to be in the range ¥ 25-30 trillion--¥ 17.5 trillion in nonperforming loans in the banking accounts of all banks and trust accounts of the 21 major banks that benefit from an explicit bank guarantee, ¥ 9.1 trillion in restructured

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1/ In addition to troubled loans to the real estate and nonbank sectors, some trust accounts appear to have a significant exposure to equities. For example, the outstanding principal of the unbacked pension trusts exceeded their accounting value by ¥ 1.1 trillion at the end of FY 1992; while this relationship was reversed near the peak of the stock market boom at the end of FY 1989. At that time, the accounting value of the pension trusts exceeded their outstanding principal by ¥ 0.9 trillion.

2/ Aoki (1988) and Hoshi, Kashyap, and Scharfstein (1990) discuss the role of banks in resolving financial distress in Japan.

loans, plus a small but unspecified amount of nonperforming loans in unbacked trust accounts of the major banks. The estimates rely on the assumption that the proportion of nonperforming loans to the increase in real estate-related lending in the second half of the 1980s is the same for the regional banks as that of the major banks. Moreover, loans with interest rates below the short-term prime rate are used to estimate the amount of restructured loans in the banking accounts of all banks. The estimate of restructured loans in the trust accounts relies on the estimate of such loans in the banking accounts of all banks and the increased lending of banks to nonbanks in the second half of the 1980s. However, using these broad assumptions may somewhat overstate the actual size of the bad loan problem because the large swings in real estate prices were confined mostly to the main urban areas and because not all loans with interest rates below the short-term prime rate are restructured loans.

3. Initial policy response

In August 1992, the Japanese Government announced several measures that helped to stabilize equity prices (and, in turn, banks' hidden reserves) and aimed to assist banks in managing their bad loan problem. First, the Ministry of Finance reaffirmed that banks could omit reporting in their interim accounts at the end of September 1992, the valuation losses on those equities for which market values had fallen below book values. 1/ In the past, some banks would have tried to cover such losses by selling other equities that still carried latent profits. Second, the Ministry of Finance relaxed its limit on the ratio of dividend payments to net profits for banks. Some banks in the past have avoided cutting dividends by realizing capital gains on part of their equity holdings with unrealized gains to raise net profits.

With respect to the bad loan problem, the Ministry of Finance called upon the tax authorities to demonstrate greater flexibility in allowing banks to make tax-deductible loan loss provisions. For a provision against a specific domestic loan, the requirements for a tax deduction are that either the borrower has initiated bankruptcy proceedings or has had excess liabilities for some time. In September 1992, the National Tax Administration issued a ruling that shortened the definition of this period to more than one year from more than two years.

The Government also proposed various outlays for land purchases, for equity investments by public financial institutions, and for increased lending by government-affiliated financial institutions that provide loans to small- and medium-sized enterprises. Such measures in the Government's August 1992 stimulus package totaled ¥ 5.5 trillion (1.1 percent of GNP), including ¥ 1.6 trillion (0.3 percent of GNP) for government purchases of land and ¥ 0.8 trillion (0.2 percent of GNP) for new loans by the Housing Loan Corporation. With respect to the equity investments, these measures

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1/ The option was exercised by the seven trust banks and one city bank.

provided for an additional ¥ 1.1 trillion (0.2 percent of GNP) in stock purchases by the Postal Savings Corporation, Postal Life Insurance Welfare Corporation, and public pension funds and lifted ceilings on the proportion of their assets that can be invested in equities. 1/ The provisions for increased lending by government-affiliated financial institutions amounted to ¥ 2.1 trillion (0.4 percent of GNP). The April 1993 stimulus package contained a similar set of measures for land purchases and increased lending that totaled ¥ 5.4 trillion (1.1 percent of GNP).

In January 1993, 162 financial institutions (129 banks, 32 insurance companies, and Norinchukin) launched the Cooperative Credit Purchasing Company (CCPC). The new company's total paid-in capital is ¥ 7.9 billion, of which, the 21 major banks provided ¥ 4.8 billion. CCPC will buy from its members and their nonbank affiliates problem loans collateralized by real estate. 2/ The loan purchases will be at a discount to the face value of the assets, with the precise level of the discount to be determined by the executive committee of the company. The institutions that sell their loans to the CCPC will, in turn, provide the company with the funding for the loan acquisitions at the discounted values. The selling institutions will then record the discounts as losses on their own books, which will be tax deductible; if banks were to make the provisions in their own books against problem loans, full tax deductibility would take longer to achieve. Thus, the main benefit created by this new company is to enable those institutions with problem loans to make faster write-offs.

IV. Resolving the Bad Loan Problem

1. Bank profitability, hidden reserves, and loan loss reserves

The measures taken so far by the Government and banks to resolve the bad loan problem involve largely an easing of the tax treatment of banks. The success of this strategy thus rests primarily on sustained bank profits so that the industry can earn its way out of the bad loan problem. Banks can also chargeoff loans against their accumulated loan loss reserves.

A number of cyclical and structural developments influenced bank profitability in the second half of the 1980s and early 1990s, and may continue to do so over the medium term. The net interest income of all Japanese banks, when scaled by their total assets, varied substantially with cyclical movements in interest rates and the liberalization of deposit

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1/ The ceilings were 30 percent, 80 percent, and 30 percent, respectively.

2/ In principle, real estate-collateralized credits of the housing loan companies and other nonbanks will be eligible only if the financial institutions involved have reached agreement on the allocation of losses related to the loans.

rates. 1/ The net interest margins of all banks began to narrow in FY 1987-88 to around 1.0 percent, despite the low level of interest rates, as funds shifted into those deposits with market-related interest rates following the liberalization of interest rates on some time deposits (Table 8). Net interest margins were compressed significantly in FY 1989-90 to around 0.8 percent by the increase in interest rates and then recovered somewhat as interest rates fell in FY 1991. Aided by further declines in interest rates, the net interest margin of all banks in the first half of FY 1992 was 1.1 percent, slightly above that in FY 1986. 2/

With the narrowing of net interest margins and the run up in equity prices in the second half of the 1980s, all banks increased their reliance on gains from the sale of securities as a source of operating profits. Near the peak of the stock market boom in FY 1989, the net gain on securities accounted for 67 percent of all banks' operating profits. 3/ However, the significance of these gains for all banks receded in FY 1990-91, as share prices declined and net interest margins recovered.

Among the different types of banks, the profitability of the city banks and the first and second tier regional banks exhibited largely the same cyclical and structural developments as that of all banks. However, the net gain on securities contributed relatively less to the operating profits of the regional banks than to that of the city banks (Appendix Table 1). These three types of banks account for about 80 percent of all banks' total assets. The profitability of the trust banks and long-term credit banks, however, fell short of that of the other types of banks. The net interest margins of these banks have not recovered to the levels that prevailed in the mid 1980s. For the trust banks, net fees and commissions, which are an important source of operating earnings, have also declined steadily, when scaled by the trust banks' total assets. With the weakening financial performance of their core business activities, the trust banks and long-term credit banks have significantly increased their reliance on net gains from securities to bolster their operating profits. This dependence, moreover, has continued into the early 1990s, despite the decline in equity prices.

For all banks, the core business profits, from which loan loss provisions and write-offs can be made, ranged from ¥ 1.6-3.3 trillion in the

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1/ The net interest income of banks in Japan and elsewhere tends to mirror interest rate developments, since deposits typically have a shorter maturity than bank loans. Thus, as interest rates fall, the average cost of funds to banks declines more rapidly than does the average rate of return on their assets, leading to an upturn in operating profits.

2/ The figures for all banks include the Regional Banks II after 1988.

3/ The net gain or loss on securities is the realized net capital gain or loss on the sale of securities minus the devaluation of those securities on the banks' books for which market values have declined below book values.

Table 8. Japan: Summary Financial Statement of All Banks, 1985-92 1/

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992 2/
				(In trillions of yen)				
Net interest income	5.1	6.0	6.5	7.2	7.5	7.1	8.9	10.0
Net fees and commissions	1.1	1.4	1.6	1.8	1.8	1.7	1.5	...
Net operating expenses	-4.3	-4.5	-5.0	-5.6	-7.5	-7.2	-7.5	...
Core business profits	1.9	2.9	3.2	3.3	1.8	1.6	2.9	...
Net gain/loss on securities	0.5	0.5	1.0	1.8	2.8	2.0	0.7	...
Loan loss provisions and write-offs	-0.1	-0.2	-0.2	-0.4	-0.5	-0.3	-0.7	...
Operating profits	2.3	3.2	3.9	4.7	4.2	3.4	2.9	...
Total assets	491.9	561.9	630.3	731.4	943.6	927.6	914.4	885.7
Total loans	267.5	304.5	344.1	388.3	496.2	521.7	537.3	536.9
Reserves for possible loans losses	2.2	2.5	2.7	3.0	3.5	3.5	3.9	4.2
				(In percent of total assets)				
Net interest income	1.0	1.1	1.0	1.0	0.9	0.8	1.0	1.1
Net fees and commissions	0.2	0.3	0.3	0.2	0.2	0.2	0.2	...
Net operating expenses	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	...
Core business profits	0.4	0.5	0.5	0.5	0.2	0.2	0.3	...
Net gain/loss on securities	0.1	0.1	0.2	0.2	0.3	0.2	0.1	...
Loan loss provisions and write-offs	--	--	--	--	--	--	-0.1	...
Operating profits	0.5	0.6	0.6	0.6	0.4	0.4	0.3	0.3
				(In percent of total loans)				
Reserves for possible loans losses	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8

Source: Federation of Bankers' Associations of Japan, Analysis of Financial Statements of All Banks, various issues.

1/ After 1988, data for all banks includes the Regional Banks II.
2/ Interim accounts at the end of September 1992.

second half of the 1980s and early 1990s. 1/ At the same time, the core business profits of the city banks varied between ¥ 0.6-1.6 trillion, while that for the first and second tier regional banks ranged from ¥ 0.5-0.8 trillion and from ¥ 0.2-0.3 trillion, respectively. Owing to the cyclical decline in interest rates in 1992, the core business profits of these three types of banks in FY 1992 are likely to be near the upper end of their respective ranges. However, the core business profits of the trust banks and long-term credit banks, which ranged from ¥ 0.1-0.7 trillion and from less than ¥ 0.1-0.3 trillion, respectively, are unlikely to reach to the upper end of these ranges in FY 1992.

An alternative source of income from which loan loss provisions and chargeoffs can be made is the net gain from the sale of securities. The hidden reserves of banks represents the potential amount of such gains. For the 21 major banks, these latent profits totaled ¥ 17.8 trillion at the end of FY 1992 (139.1 percent of nonperforming loans). The distribution of these hidden reserves among the city banks, trust banks, and long-term credit banks was ¥ 10.9 trillion (128.2 percent of nonperforming loans), ¥ 3.2 trillion (128.0 percent of nonperforming loans), and ¥ 3.6 trillion (189.5 percent of nonperforming loans), respectively. However, the extent to which banks can realize these latent profits to offset loan losses depends, given their dividend policy, on the profitability of their core banking activities, the valuation losses on securities holdings, their dividend policy, and the liquidity of the stock market.

The loan loss reserves of Japanese banks are comprised of general (tax-free) reserves, reserves for special overseas loans, and special account for (domestic) loan write-offs. 2/ The tax code allows banks to deduct 0.3 percent of their total loans as an expense and set this amount aside in a reserve for possible loan losses, which in the next accounting period is scored as taxable revenue. Thus, in effect, the tax code allows banks to deduct 0.3 percent of the change in loans outstanding as a tax deductible expense. As a result, banks are unlikely to use general loan loss reserves to counter write-offs provided that their before-tax profits remain above 0.3 percent of total loans.

Apart from general reserves, banks can make two types of provisions into special reserves. Banks can set aside about 30 percent of loans to certain developing countries designated by the Ministry of Finance in a reserve for special overseas loans (Tok-kai-sai). 3/ However, banks cannot deduct these provisions from taxable income until they actually incur

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1/ Core business profits are defined as operating profits before loan loss provisions and net gain on securities.

2/ Sumi (1993) provides a detailed discussion of the various types of loan loss reserves.

3/ This level of reserves is sufficient to cover losses as long as the average sales discount is up to 60 percent, given the ordinary effective corporate tax rate of 50 percent.

losses through the sale of such loans at discounts. Like the Tok-kai-sai for overseas loans, there is also a special reserve for domestic loans. When Ministry of Finance bank inspectors classify a loan as irrecoverable, one-half of the estimated loss is set aside in this special reserve. However, requirements for the tax deduction of these losses are more stringent, requiring that either the borrower had already initiated bankruptcy procedures or had been insolvent for a considerable period of time. 1/

The reserves for possible loan losses of all banks at the end of September 1992, amounted to ¥ 4.2 trillion (0.8 percent of total loans). Of this amount, ¥ 1.6 trillion is estimated to be in the form of general reserves, while the Tok-kai-sai of the 21 major banks amounted to ¥ 0.8 trillion at the end of FY 1991. Thus, the special reserves for domestic loans of all banks are estimated to have totaled ¥ 1.8 trillion (0.3 percent of total loans) at the end of September 1992. The reserves for possible loan losses are distributed among the banks roughly in proportion to their total loans; however, the regional banks hold a somewhat lower level of reserves relative to their total loans than do the 21 major banks.

2. Loan loss provisions and write-offs

In recent years, all banks have stepped up significantly, albeit from relatively low levels, their loan loss provisions and charge-offs. In aggregate, these expenses rose to ¥ 0.7 trillion (0.1 percent of total assets) in FY 1991 from ¥ 0.3 trillion in 1FY 1991. Among the different types of banks, the city banks appear to have been the most aggressive in stepping up their loan loss provisions and charge-offs in the early 1990s. Preliminary figures indicate that banks more than doubled their provisions and charge-offs in FY 1992, owing in part to the writing down of loans sold to the CCPC. In February and March 1993, the CCPC purchased loans with a book value of ¥ 681 billion for ¥ 452 billion, representing an average discount of 33.6 percent. Of the ¥ 229 billion in loan losses, the city banks accounted for ¥ 154 billion and the long-term credit banks for ¥ 53 billion.

3. Loan restructurings

The relatively low level of loan loss provisions and write-offs by Japanese banks reflects in part the practice of restructuring loans to some troubled borrowers. In such cases, banks and other financial institutions support borrowers that are experiencing financial difficulties by easing the terms of their loan and injecting new equity capital. A priority in resolving the banks' current bad loan problem has been to craft restructuring plans for seven troubled housing loan companies.

1/ This period of time was set at more than year in September 1992 (see above).

The restructuring plan recently devised by the Japan Housing Loan Company (JHL), the largest of the housing loan companies, and its creditors could in some ways set a precedent for the overhaul of the others. In early 1993, JHL reached agreements with its nine founding bank shareholders and other creditors on a plan that calls for the founding banks to suspend all interest due, the agricultural-related institutions to reduce their interest charges to 4.5 percent, and other creditors to lower their interest charges to 2.5 percent. These relief conditions are to be in effect for 10 years. Moreover, two long-term credit banks and three major securities firms, each of which owns a 5 percent stake in JHL, agreed in May 1993 to buy a ¥ 15 billion private placement of new JHL shares. The two long-term credit banks, which had already agreed to reduce their interest charges to 2.5 percent, will also suspend all interest due, while the securities firms will buy from JHL ¥ 21 billion worth of property that serves as collateral for nonperforming loans.

If the above formula of interest rate concessions were applied to the seven troubled housing loan corporations, IBCA Limited estimates that their lenders would give up about ¥ 0.5 trillion in interest income annually. 1/ Approximately one-half of the foregone income would be at the expense of the 21 major banks, which is equivalent to about 8 percent of their core business profits in FY 1992. The burden, however, would not affect all banks equally. IBCA estimates that the foregone interest as a proportion of the city banks' core business profits would amount to 3 percent, while that of the long-term credit banks and trust banks would reach 17 percent and 50 percent, respectively.

4. Desegmentation of financial services and deposit rate liberalization

In addition to the restructuring of loans to troubled borrowers, the ongoing process of financial liberalization may affect the core business profits of Japanese banks in the period ahead. In December 1992, the Ministry of Finance announced details of the measures under the Financial System Reform Law passed by the Diet in June 1992 to ease the segmentation of the financial system. Their major effect is to allow banks to engage in securities and trust activities through majority-owned subsidiaries, while securities firms will be permitted to establish such subsidiaries engaging in banking and trust businesses. Regional banks will be able to carry out certain trust activities within the parent bank.

The new subsidiaries, however, will not be allowed to engage in the most important activities of the existing institutions, such as equity-related activities of securities firms and loan trusts, special-purpose trusts, and pension trusts for trust banks. The creation of new securities subsidiaries will also be restricted at first to the long-term credit banks, trust banks, and centralized credit institutions (such as Norinchukin),

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1/ See IBCA Limited (1993).

while securities firms, long-term credit banks, and the Bank of Tokyo may establish trust banking subsidiaries. 1/ The city banks will be able to establish subsidiaries after an interval of at least one year. The Ministry of Finance will review the scope of activities permitted of the new subsidiaries in two to three years.

To prevent certain conflicts of interest, the Financial System Reform Law created a number of walls between a bank and its new subsidiary. These include a restriction on the dual employment of officers in a bank and its new subsidiary, a requirement that transactions between a bank and its new subsidiary be on a arms-length basis, and a prohibition on transactions by a new subsidiary with a bank customer that are tied to an extension of credit by the bank.

In addition to the desegmentation of financial institutions, the liberalization of deposit rates is scheduled to be completed in 1994. In June 1993, the liberalization of interest rates on time deposits was completed with the abolition of the minimum balance requirement on Super Time Deposits, which had been set at ¥ 3 million. Also, under a new plan, the Ministry of Posts and Telecommunications will set the interest rate on postal savings accounts according to the following formula: if long-term interest rates are above short-term rates, the postal savings deposit rates will be determined in line with the rates on three-year fixed-rate time deposits; if the reverse is true, the rates will be based on the coupon on ten-year government bonds. The liberalization of liquid deposits is scheduled to be completed in 1994.

V. Conclusions and Policy Implications

Japanese banks came under pressure in the early 1990s from both a sharp decline in the value of their equity holdings and a marked increase in bad loans. Concern about the financial sector reached a peak in August 1992 which, along with the evident weakening of the economy, prompted the Government to introduce a comprehensive stimulus package at that time. The Government also took several measures that helped to stabilize equity prices and that aimed to assist banks in managing their bad loan problem. In January 1993, 162 financial institutions launched the CCPC that was designed to accelerate the writing down of bad loans.

The 21 major banks disclosed that their nonperforming loans totaled ¥ 12.8 trillion at the end of FY 1992. A mechanical extension of this figure to include the nonperforming loans of the regional banks, as well as additional information to gauge the amount of restructure loans of all banks, produces an estimate of total bad loans in the range ¥ 26-30 trillion

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1/ The creation of new subsidiaries by banks and securities firms will be subject to licensing requirements that may impact on the pace at which these new affiliates are created, as well.

(6 percent to 7 percent of total loans). A gauge of the possible losses on these loans is the average discount on the initial sale of loans to the CCPC of 33.6 percent. In comparison, the annual core business profits of all banks in the second half of the 1980s and early 1990s ranged between ¥ 1.6-3.3 trillion, while the hidden reserves of the 21 major banks at the end of FY 1992 amounted to ¥ 17.8 trillion. Thus, from an aggregate perspective, the bad loan problem is serious yet manageable.

The distribution of the bad loans is not uniform, however, when scaled by the ability of the various segments of the banking industry to bear the associated losses. The problem appears to be more acute for the trust banks than for the other types of banks. While the incidence of nonperforming loans of the trust banks is on par with that of the city banks, the core business profits of trust banks deteriorated significantly in the second half of the 1980s and early 1990s. Measures of banks' market power and their risk taking indicate that the trust banks have fared less well than other types of banks in the more liberalized, competitive, and efficient financial system in Japan. 1/ At least in aggregate, though, the hidden reserves of the trust banks exceeded their disclosed nonperforming loans at the end of FY 1992. Moreover, while the restructuring of bad loans, phased desegmentation of financial services, and deregulation of interest rates on liquid deposits may pose greater challenges to some types of institutions than to others, the Ministry of Finance has reiterated its commitment to the announced schedule for liberalization measures.

In view of the uneven distribution of the bad loan problem, the most immediate policy concern has been the emergence of a liquidity strain at an institution that is perceived to be financially vulnerable. No Japanese bank has posted a loss in the post-war period, and the prospect is view with some trepidation by bankers. To encourage the writing down of problem loans, the Governor of the Bank of Japan has stated publicly that the central bank would provide liquidity support to any institution that experienced temporary funding difficulties after posting a net loss because of heavy loan loss provisions. With this safeguard in place, every effort should be made to resolve the banks' asset quality problem as quickly as practical. To allow troubled institutions to earn their way back to viability over a very lengthy period poses the danger that those with limited capital (after allowing for their unrealized loan losses) would take excessive risks during the transition. A quick resolution to the bad loan problem would also allow banks to devote their managerial resources to the provision of new, high quality loans.

Looking ahead, measures to enhance market discipline in the Japanese financial system may lessen the likelihood that such a marked deterioration in banks' asset quality will recur. Foremost among such measures is the placing of adequate private capital at risk in the banking system. To the extent that increased competition in the financial system and loan losses have eroded the market value of banks' capital, they should raise new

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1/ Estimates of the value of deposit guarantees to Japanese banks indicate that they are of more value to the trust banks than to the other types of banks. See Fries, Mason, and Perraudin (1993).

capital. In this regard, the Ministry of Finance has noted that banks will have to turn to the issuance of preference shares and that banks should secure their tier 2 capital without relying on hidden reserves. Moreover, to ensure that the private capital is truly at risk, the shareholder equity of those banks that benefit supervisory arranged mergers should be written down substantially.

The fuller disclosure of banks' asset quality may also allow the markets to differentiate better among institutions and to reward in terms of share prices and borrowing costs in international markets those banks that strengthen significantly their balance sheets. The recently implemented recommendations of the Working Group on the Adequate Disclosure of Banks' Assets represent an important first step in this direction.

Table 1. Japan: Summary Financial Statements by Type of Bank, 1985-92

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992 1/
				(In trillions of yen)				
City banks								
Net interest income	2.5	3.0	3.3	3.7	3.2	3.0	4.1	4.7
Net fees and commissions	0.4	0.4	0.5	0.7	0.6	0.6	0.6	...
Net operating expenses	-2.0	-2.0	-2.2	-2.7	-3.2	-2.8	-3.1	...
Core business profits	0.9	1.4	1.5	1.6	0.6	0.8	1.5	...
Net gain/loss on securities	0.2	0.3	0.7	1.3	1.8	1.0	0.4	...
Loan loss on provisions and write-offs	--	-0.1	-0.1	-0.2	-0.3	-0.2	-0.5	...
Operating profits	1.1	1.6	2.2	2.7	2.2	1.7	1.4	...
Total assets	275.6	318.4	360.8	421.2	508.3	491.7	475.0	453.4
Total loans	145.4	167.3	190.9	215.9	252.0	266.0	273.7	273.0
Reserves for possible loan losses	1.2	1.2	1.6	1.8	1.9	1.9	2.3	2.5
				(In percent of total assets)				
Net interest income	0.9	1.0	0.9	0.9	0.6	0.6	0.9	1.0
Net fees and commissions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	...
Net operating expenses	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	...
Core business profits	0.3	0.4	0.4	0.4	0.1	0.2	0.3	...
Net gain/loss on securities	0.1	0.1	0.2	0.3	0.4	0.2	0.1	...
Loan loss provisions and write-offs	--	--	--	-0.1	-0.1	--	-0.1	...
Operating profits	0.4	0.5	0.6	0.6	0.4	0.3	0.3	0.2
				(In percent of total loans)				
Reserves for possible loan losses	0.8	0.7	0.8	0.8	0.8	0.7	0.8	0.9
				(In trillions of yen)				
Trust banks								
Net interest income	0.2	0.3	0.3	0.3	0.1	--	0.1	0.2
Net fees and commissions	0.6	0.8	1.0	1.0	1.0	0.8	0.7	...
Net operating expenses	-0.3	-0.5	-0.6	-0.7	-0.8	-0.8	-0.7	...
Core business profits	0.3	0.7	0.7	0.6	0.3	0.1	0.1	...
Net gain/loss on securities	--	-0.1	--	0.2	0.4	0.3	0.2	...
Loan loss on provisions and write-offs	--	--	-0.1	--	--	--	-0.1	...
Operating profits	0.3	0.6	0.7	0.7	0.6	0.4	0.2	...
Total assets	45.6	55.8	59.5	70.9	87.7	81.7	77.2	73.7
Total loans	17.7	23.0	25.6	28.8	34.1	33.8	33.5	33.6
Reserves for possible loan losses	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3
				(In percent of total assets)				
Net interest income	0.4	0.5	0.6	0.4	0.2	--	0.1	0.2
Net fees and commissions	1.2	1.5	1.6	1.4	1.1	1.0	0.9	...
Net operating expenses	-0.6	-0.9	-1.0	-1.0	-0.9	-1.0	-0.9	...
Core business profits	0.7	1.3	1.2	0.8	0.3	0.1	0.1	...
Net gain/loss on securities	0.1	-0.2	--	0.3	0.4	0.4	0.3	...
Loan loss provisions and write-offs	--	-0.1	-0.1	-0.1	-0.1	--	-0.1	...
Operating profits	0.7	1.1	1.1	1.0	0.7	0.5	0.3	0.3

Table 1 (cont'd.). Japan: Summary Financial Statements by Type of Bank, 1985-92

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992 1/
				(In percent of total loans)				
Reserves for possible loans losses	0.8	0.7	0.8	0.8	0.8	0.8	0.9	0.9
				(In trillions of yen)				
Long-term credit banks								
Net interest income	0.3	0.5	0.5	0.6	0.4	0.3	0.5	0.6
Net fees and commissions	--	--	--	--	--	0.1	--	...
Net operating expenses	-0.2	-0.2	-0.3	-0.3	-0.4	-0.3	-0.4	...
Core business profits	0.2	0.3	0.3	0.3	--	--	0.1	...
Net gain/loss on securities	0.1	0.1	0.1	0.1	0.4	0.3	0.2	...
Loan loss on provisions and write-offs	--	--	--	-0.1	-0.1	--	--	...
Operating profits	0.2	0.3	0.3	0.4	0.3	0.3	0.3	...
Total assets	55.9	62.5	69.8	78.7	92.5	92.7	92.5	90.1
Total loans	32.1	35.8	40.1	45.0	52.2	54.8	55.4	54.0
Reserves for possible loan losses	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
				(In percent of total assets)				
Net interest income	0.6	0.7	0.8	0.8	0.4	0.3	0.5	0.7
Net fees and commissions	--	--	--	--	--	0.1	--	...
Net operating expenses	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	...
Core business profits	0.3	0.4	0.4	0.4	0.1	--	0.1	...
Net gain/loss on securities	0.1	0.1	0.1	0.2	0.4	0.3	0.2	...
Loan loss provisions and write-offs	--	--	--	-0.1	-0.1	--	--	...
Operating profits	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.2
				(In percent of total loans)				
Reserves for possible loan losses	1.0	0.9	1.0	1.0	0.8	0.7	0.7	0.7
				(In trillions of yen)				
Regional banks								
Net interest income	2.1	2.3	2.3	2.6	2.6	2.6	2.9	3.2
Net fees and commissions	0.2	0.2	0.2	0.2	0.2	0.2	0.2	...
Net operating expenses	-1.7	-1.8	-1.9	-2.0	-2.2	-2.2	-2.3	...
Core business profits	0.5	0.7	0.6	0.8	0.7	0.6	0.8	...
Net gain/loss on securities	0.1	0.1	0.1	0.1	0.2	0.3	--	...
Loan loss on provisions and write-offs	--	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	...
Operating profits	0.6	0.7	0.7	0.9	0.8	0.8	0.7	...
Total assets	114.6	125.3	140.2	160.5	190.0	192.7	198.4	197.7
Total loans	72.2	78.4	87.4	98.5	113.2	119.1	124.5	126.7
Reserves for possible loan losses	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7

Table 1 (concluded). Japan: Summary Financial Statements by Type of Bank, 1985-92

Fiscal Years	1985	1986	1987	1988	1989	1990	1991	1992 1/
				(In percent of total assets)				
Net interest income	1.8	1.8	1.7	1.6	1.4	1.4	1.5	1.6
Net fees and commissions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	...
Net operating expenses	-1.5	-1.4	-1.3	-1.2	-1.1	-1.2	-1.2	...
Core business profits	0.5	0.5	0.5	0.5	0.4	0.3	0.4	...
Net gain/loss on securities	0.1	0.1	0.1	0.1	0.1	0.1	--	...
Loan loss provisions and write-offs	--	0.1	--	--	--	--	-0.1	...
Operating profits	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.3
				(In percent of total loans)				
Reserves for possible loan losses	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.6
				(In trillions of yen)				
Regional banks II								
Net interest income	...	...	...	...	1.2	1.2	1.3	1.4
Net fees and commissions	...	...	...	...	--	--	--	...
Net operating expenses	...	...	...	...	-1.0	-1.0	-1.0	...
Core business profits	...	...	...	...	0.2	0.2	0.3	...
Net gain/loss on securities	...	...	...	...	0.1	0.1	-0.1	...
Loan loss on provisions and write-offs	...	...	...	...	--	--	--	...
Operating profits	...	...	...	...	0.3	0.3	0.2	...
Total assets	...	...	...	...	66.1	68.9	71.3	70.7
Total loans	...	...	...	...	44.7	47.9	50.3	50.5
Reserves for possible loan losses	...	...	...	...	0.3	0.3	0.3	0.3
				(In percent of total assets)				
Net interest income	...	...	...	...	1.8	1.7	1.8	2.0
Net fees and commissions	...	...	...	...	--	--	--	...
Net operating expenses	...	...	...	...	-1.5	-1.4	-1.4	...
Core business profits	...	...	...	...	0.3	0.2	0.4	...
Net gain/loss on securities	...	...	...	...	0.2	0.2	-0.1	...
Loan loss provisions and write-offs	...	...	...	...	-0.1	--	-0.1	...
Operating profits	...	...	...	...	0.4	0.4	0.3	0.3
				(In percent of total loans)				
Reserves for possible loan losses	...	...	...	...	0.8	0.6	0.6	0.6

Source: Federation of Bankers' Associations of Japan, Analysis of Financial Statements of All Banks, various issues.

1/ Interim accounts at the end of September 1992.

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