

**FOR  
AGENDA**

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INFORMATION

July 8, 2002

To: Members of the Executive Board

From: The Secretary

Subject: **Japan—Selected Issues**

This paper provides background information to the staff report on the 2002 Article IV consultation discussions with Japan (SM/02/199, 7/3/02), which is tentatively scheduled for discussion on **Wednesday, July 24, 2002**. At the time of circulation of this paper to the Board, the Secretary's Department has not received a communication from the authorities of Japan indicating whether or not they consent to the Fund's publication of this paper; such communication may be received after the authorities have had an opportunity to read the paper.

Questions may be referred to Mr. Callen (ext. 38873), Mr. Kang (ext. 38911), and Mr. Kalra (ext. 36142) in APD.

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the WTO Secretariat on Tuesday, July 16, 2002; and to the Asian Development Bank, the Food and Agriculture Organization, the Organisation for Economic Cooperation and Development, and the World Food Programme, following its consideration by the Executive Board.

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INTERNATIONAL MONETARY FUND

JAPAN

**Selected Issues**

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Approved by the Asia and Pacific Department

July 5, 2002

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## **I. DEVELOPMENTS IN THE BANKING AND LIFE INSURANCE SECTORS<sup>1</sup>**

1. **The Japanese financial system has remained a source of concern over the past year.** The sharp slowdown in the economy—which pushed bankruptcies to their highest level since 1984—and the steep drop in equity prices once again raised questions about the financial health of Japanese banks and life insurance companies. The authorities have responded to the long-term weaknesses in the banking sector by setting out a three-pronged strategy for restoring their financial health, based on: strengthening classification standards to ensure that loans are realistically valued; removing nonperforming loans (NPLs) from balance sheets within a 2–3 year timeframe; and reducing exposure to equity price risk. Together with the withdrawal of the deposit insurance guarantee for large time deposits from April 1, 2002, these measures represent important steps toward restoring confidence in the banking sector. Continued progress, however, will be required over the next year if the removal of the full guarantee on demand deposits in March 2003 is to proceed smoothly. In the life insurance sector, declining equity prices and negative yield spreads have adversely affected financial strength, but further bankruptcies have been avoided. Given their holdings of foreign securities and lending overseas—particularly in Asia—the continued stability of the Japanese banking and life insurance sectors are important not only for the domestic economy, but also for international markets.

### **A. Bank Balance Sheets and Financial Performance**

#### **Major Banks**

2. **Following two years of modest profits, major banks experienced aggregate losses of ¥3.5 trillion in FY2001,** similar in magnitude to those in FY1997 and FY1998 (Figure I.1). While operating profits increased by 20 percent to ¥4.1 trillion—largely due to increased earnings from treasury operations—this was overshadowed by a near doubling of credit costs and large losses on equity holdings:

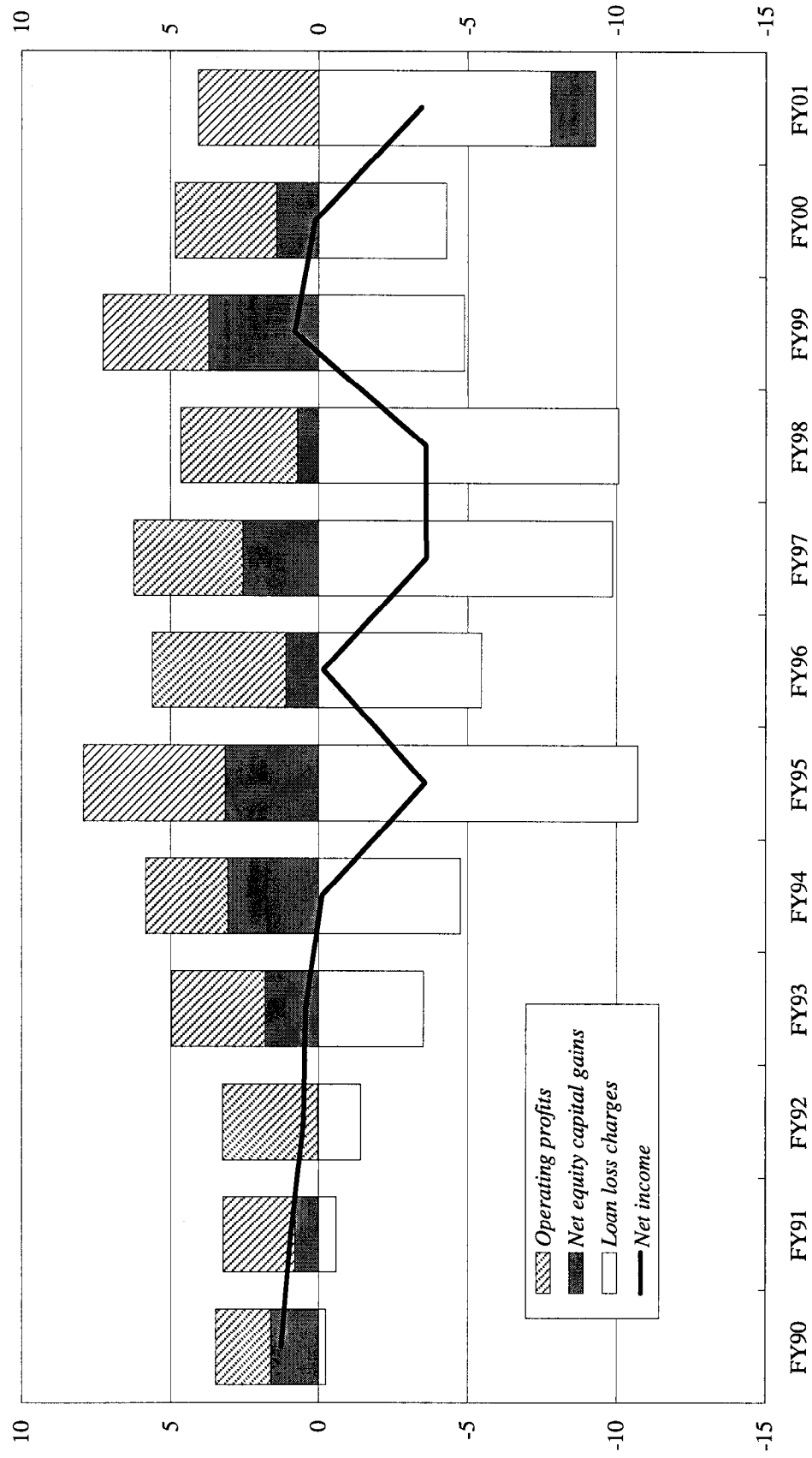
- **Banks incurred ¥7.7 trillion of credit costs,** nearly four times the level they had forecast at the start of the financial year. This was largely a consequence of the severe economic downturn and ongoing deflation during 2001, which led to a surge in bankruptcies and a further decline in collateral values, and the enforcement of stricter loan classification standards by the Financial Services Agency (FSA), including through the recently completed special inspections (see below). To some extent, the revision also reflects the overly optimistic estimates of credit costs that banks tend to make at the beginning of financial year. However, despite their loan write-offs in recent years, the major banks are still faced with a considerable stock of nonperforming loans (see below).<sup>2</sup>

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<sup>1</sup> Prepared by Tim Callen (ext. 38873) and Martin Mühleisen (ICM, ext. 38686). The chapter draws on the findings of both the Article IV consultation discussions and ICM's capital markets mission to Tokyo during April 11–18, 2002.

<sup>2</sup> Over the past decade, major and regional banks have incurred losses of around ¥80 trillion (16 percent of GDP) on their problems loans.

Figure I.1. Japan: Major Banks' Profits, FY1990-2001  
(In trillions of yen)



Source: FitchIBCA.

- **Equity price weakness also hurt bank performance.** Despite progress in unwinding cross-shareholdings, banks still hold large equity portfolios. These holdings were marked-to-market for the first time in FY2001, which—given the weakness in the equity market during most of the year—resulted in losses of about ¥1.6 trillion (¥3 trillion including losses taken directly on the balance sheet).<sup>3</sup>

3. **As a result of the losses, and reflecting their inability to raise significant additional private capital, regulatory capital ratios of the major banks declined over the past year.** At end-March 2002, the average (unconsolidated) capital adequacy ratio of the major banks was 10¾ percent, down from 11¾ percent a year earlier. The capital adequacy ratios ranged from 11½ percent to slightly above 10 percent for the internationally active banks—which have a minimum capital ratio requirement of 8 percent—and from around 10½ percent to slightly above 8 percent for those which are not internationally active (and have a minimum required capital ratio of 4 percent).

4. **The quality of major bank capital has deteriorated.** Government preference shares and deferred tax assets now account for almost all of Tier-1 capital (Table I.1), while other Tier-1 capital (common equity, market-based preferred securities, and retained earnings) has been virtually eliminated.<sup>4</sup>

5. **Most of the major banks could face higher costs of servicing capital as they may be required to roll over a significant amount of subordinated debt (included in Tier-II capital) in the next few years.** The total amount of subordinated debt callable or falling due over the next three years is estimated to be ¥2.1 trillion, of which ¥0.7 trillion matures this year. If the relatively high secondary market spreads recently seen on this debt persist, much of it is likely to be called, and would need to be refinanced at higher rates.

Table I.1. Major Bank Capital (March 2002)		
	¥ trillion	Percent <sup>1</sup>
Deferred tax assets	8.4	2.6
Minority interest	2.7	0.9
Public funds (pref. stocks)	6.0	1.8
Other Tier 1 capital	0.4	0.1
Total Tier 1 capital	17.5	5.4
Total capital	33.7	10.4
<i>Memorandum items:</i>		
Regional banks (Tier I) <sup>2</sup>	11.5	9.9
Regional banks (Tier II) <sup>2</sup>	2.9	8.0
Shinkin banks <sup>3</sup>	5.9	10.0
Credit cooperatives <sup>3</sup>	0.8	7.9
Source: FSA; Fitch IBCA		
<sup>1</sup> Of risk weighted assets. Consolidated basis.		
<sup>2</sup> As of September 2001.		
<sup>3</sup> As of March 2001.		

6. **Reflecting concerns about their financial health, bank stocks have been under downward pressure for much of the past year.** The TOPIX banking sub-index fell by 36 percent in the year to June 2002, compared to a 24 percent decline in the overall market

<sup>3</sup> The general rule for equity investments is to recognize valuation losses and post a write-down charge in the income statement when a stock's market value falls 50 percent below cost. The difference between the market price and cost that is not taken through the income statement is, after adjustment for deferred tax, debited or credited to equity.

<sup>4</sup> Banks can only carry deferred tax assets on their balance sheets up to the limit of their expected taxable income over the next five years.

over the same period (Figure I.2). Yields on bank CDs and spreads on bank bonds also increased during December 2001–March 2002, although they have declined since the start of the new financial year. The Japan premium (the spread between U.S. dollar borrowing costs of Japanese banks and U.S. LIBOR), however, has not resurfaced—it reached 100 basis points in 1998—as Japanese banks have not been very active in this market. Banks have also raised their prime lending rate from 1.5 percent in July 2001 to 2 percent in recent months.

## Regional Banks and Other Deposit-Taking Institutions

### 7. The financial performance of large regional banks deteriorated during FY2001, although it was quite variable among institutions.

The weak economy, ongoing deflation, and declining stock prices all adversely impacted the regional banks during FY2001 (Table I.2). However, with their financial performance closely tied to economic developments in the region in which they are based, there was considerable disparity in financial performance. Some two-thirds managed to report small profits, although others saw sharp increases in their loan-losses as a result of the deterioration in business conditions at large regional companies. Capital ratios (at end-September 2001) averaged 9.9 percent and 8 percent for Tier-1 and Tier-II regional banks, respectively. Two regional banks filed for bankruptcy during FY2001.<sup>5</sup> In light of the difficult position of the regional banks, the FSA has recently announced that it will consider measures to encourage these institutions to merge where appropriate.<sup>6</sup>

Table I.2. Regional Banks' Financial Performance<sup>1</sup>  
(In yen, billions)

	FY00	FY01
Operating revenue	1,263	1,265
<i>Of which:</i>		
Net interest income	1,083	1,070
Fees and commissions	141	150
Overhead costs	746	740
<b>Operating profit</b>	<b>517</b>	<b>525</b>
Credit costs	558	705
Net equity gains (losses)	102	-281
<b>Net income</b>	<b>36</b>	<b>-355</b>

Source: Fitch IBCA.

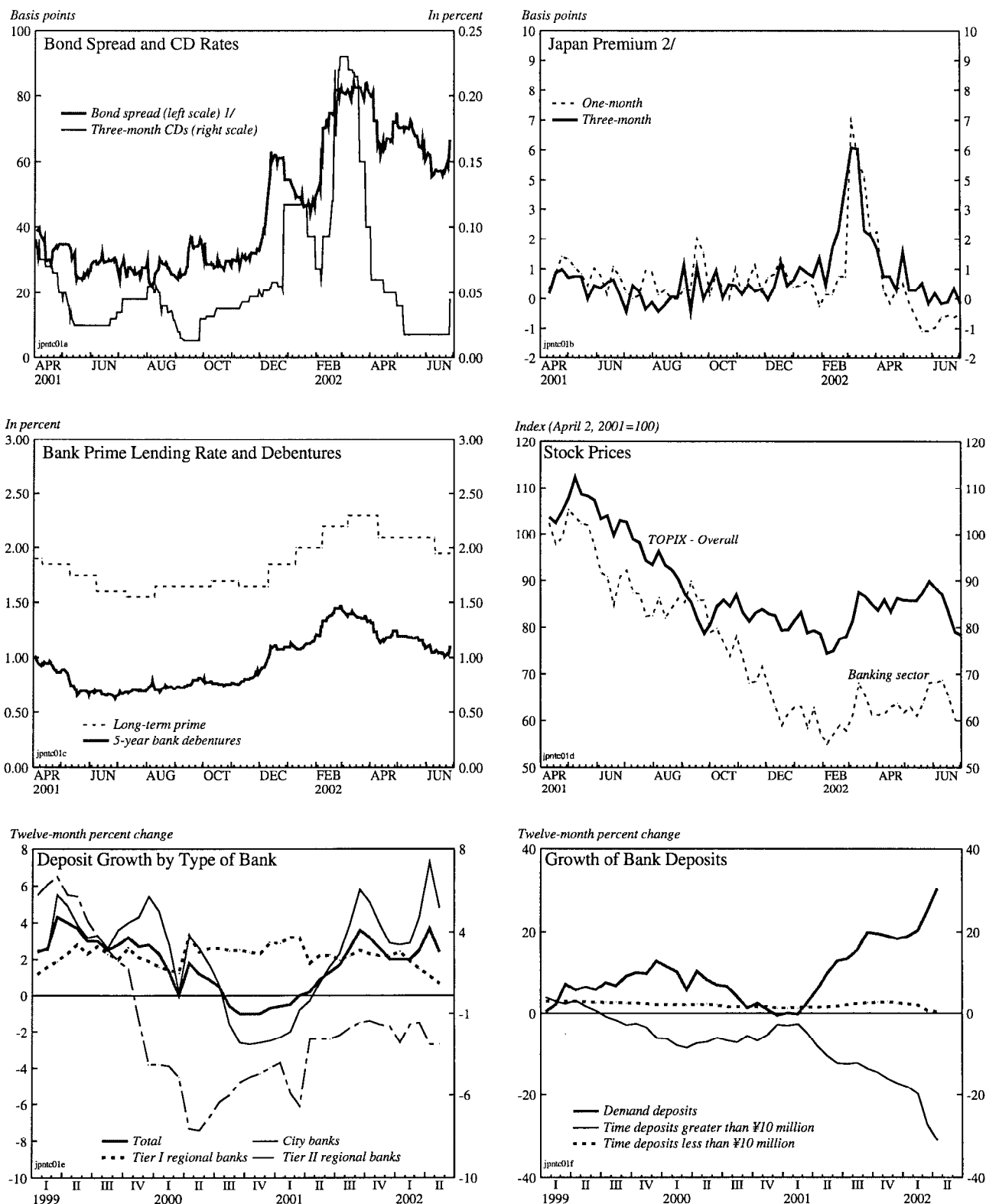
<sup>1</sup> Results reflect the performance of 10 large regional banks.

8. The FSA continued to address weaknesses among credit cooperatives and *Shinkin* banks during FY2001. Stepped-up inspections led to improved credit quality assessments and contributed to a further 55 of these institutions closing during the year—including those that have announced bankruptcy, 226, or 30 percent, of credit cooperatives and *Shinkin* banks have closed over the past five years. These institutions, however, still suffer from a relatively high incidence of nonperforming loans and a weak capital base.

<sup>5</sup> The Deposit Insurance Corporation (DIC) has established a bridge bank—the Bridge Bank of Japan (BBJ)—which has taken over the two failed regional banks, Ishikawa Bank and Chubu Bank. The operations of these banks were transferred to the BBJ on March 28, 2002, and buyers are currently being sought. The BBJ may exist for a maximum of three years, after which the failed banks will be liquidated if no buyer has been found.

<sup>6</sup> The recent announcement that Nishi-Nippon Bank and Fukuoka City Bank will form a holding company in April 2003 may be a sign of increasing merger activity.

Figure I.2. Japan: Recent Banking Sector Indicators



Sources: Bloomberg, LP; and WEFA, Nomura Database.

1/ Five-year Japanese bank bonds minus five-year government bond yields.

2/ Average U.S. dollar LIBOR of Fuji Bank, Bank of Tokyo, and Norinchukin bank minus the LIBOR fix.

## The Nonperforming Loan Problem

9. **The impact of the weak economy and the strengthening of loan classification standards by the FSA has resulted in a further increase in NPLs over the past year.** Gross NPLs of major banks increased to ¥26.8 trillion at end-March 2002 (8½ percent of outstanding loans), from ¥20 trillion a year earlier (5¾ percent of outstanding loans) (Table I.3).<sup>7</sup> During this period, loans to bankrupt and near-bankrupt borrowers increased

Table I.3. Japan: Nonperforming Loans <sup>1</sup>								
	March 2000	March 2001	September 2001	March 2002	March 2000	March 2001	September 2001	March 2002
	(Yen, trillions)				(Percent of loans) <sup>5</sup>			
<b>Nonperforming loans (FRL standard)</b>								
Deposit-taking institutions	42.2	43.0	...	...	6.6	6.8	...	...
Banks	31.8	33.6	36.8	...	5.9	6.3	7.0	...
Major banks	20.4	20.0	22.5	26.8	5.8	5.7	6.6	8.4
Regional banks	11.4	13.6	14.2	...	6.2	7.3	7.7	...
Cooperative-type financial institutions	10.4	9.4	...	...	9.9	9.7	...	...
<i>Memorandum items:</i>								
<b>Specific reserves</b>								
Deposit-taking institutions	11.5	10.0	...	...	27.8	23.1	...	...
Banks	8.4	7.2	7.1	...	27.7	22.3	19.9	...
Major banks	5.0	3.9	3.8	...	25.3	20.3	17.5	...
Regional banks	3.4	3.3	3.3	...	32.1	25.1	23.7	...
Cooperative-type financial institutions	3.1	2.8	...	...	28.2	25.6	...	...
<b>General reserves (major banks)</b>	2.7	3.0	3.1	...	13.6	15.7	14.3	..
Source: Financial Services Agency, FitchIBCA, and staff calculations.								
<sup>1</sup> Data are not necessarily comparable between years, owing to the exclusion of nonperforming loans of bankrupt institutions.								

from ¥11.7 trillion to ¥15.4 trillion—while ¥6 trillion of these loans were removed from balance sheets during the year, ¥10 trillion of loans were downgraded into these categories. For the major and regional banks combined, NPLs stood at ¥36.8 trillion (7 percent of outstanding loans) at end-September 2001 (latest data available), up from ¥33.6 trillion (6 percent of loans) at end-March 2001. NPLs of major and regional banks were 6.6 percent of loans and 7.7 percent of loans, respectively (the NPL ratio for Tier-1 regional banks was 7.4 percent and for Tier-II regional banks 8.4 percent). Against their NPLs, major and regional banks hold ¥7.1 trillion of specific reserves, as well as ¥10 trillion of “superior”

<sup>7</sup> These data reflect the definition of NPLs according to the Financial Reconstruction Law (FRL), which includes claims on borrowers in or near bankruptcy and claims on borrowers requiring “special attention” (mainly those with restructured loans and loans past due by more than three months). Data for March 2002 exclude Shinsei and Aozora banks.



collateral;<sup>8</sup> they also hold ¥4–5 trillion of general reserves. For deposit-taking institutions as a whole, NPLs stood at ¥43 trillion (6¾ percent of outstanding loans) in March 2001, compared to ¥42.2 trillion (6½ percent of loans) in March 2000.

**10. A much larger volume of loans, however, may be at risk of becoming nonperforming.** The total face value of classified loans of the major and regional banks—those to borrowers rated as “needing attention” and below—stood at ¥107.7 trillion (21 percent of outstanding loans) at end-September 2001. Around ¥40 trillion of these loans are covered by “superior” collateral or guarantees, with most of the remainder covered by ordinary collateral. In the current deflationary environment, loans classified as “needing attention,” or even some “normal” loans, could, however, quickly deteriorate to nonperforming status. Even with an economic recovery, companies in certain sectors of the economy will remain under pressure. For example, the sharp rise in import penetration into Japanese clothing and low-end consumer goods markets—particularly from China—is likely to continue to impact companies in these sectors, while the government’s objective of reducing public works spending will hurt firms in the construction sector which have come to rely on these projects.

**11. Many market analysts continue to raise questions about loan classification and provisioning practices.** These analysts use a variety of different approaches to estimate the potential amount of additional loan-loss charges needed for the major and regional banks to reach adequate provisioning levels. These approaches have generally suggested a broad magnitude of uncovered loan losses at major and regional banks of ¥20–30 trillion (5–6 percent of GDP). The basis for this assessment is that: (i) the average loan-loss rate on existing NPLs may be higher than the current rate of provisioning, including because the disposal of land collateral is likely to occur at depressed prices in the absence of a liquid real estate market; and (ii) a substantial amount of “gray-zone” loans—those to borrowers requiring attention but that are not classified as nonperforming—are likely to become nonperforming and incur losses (given the current low level of interest rates, many weak companies are able to continue paying interest on their loans until they are on the verge of bankruptcy). The estimate of uncovered loan losses has not changed significantly over the past year because analysts believe that the disposal of bad loans in the second half of FY2001 has been largely offset by the emergence of new NPLs. Such estimates of uncovered loan losses, however, remain sensitive to underlying assumptions, as illustrated in Table 1.4.

## **B. Reforms to Address Banking Sector Weaknesses**

**12. Over the past year, the government has laid out a strategy for dealing with the problems in the banking sector.** This strategy was first set out in the April 2001 “Emergency Economic Package,” with further details emerging in the Council on Economic and Fiscal Policy’s blueprint for economic reform released in June 2001. The October 2001

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<sup>8</sup> Superior collateral includes deposits and other financial instruments (such as government bonds) of high quality that are easily disposable. Ordinary collateral includes other types of collateral (such as real estate).

Table I.4. Japan: Sensitivity Analysis for Uncovered Loan Losses of Major and Regional Banks

(Based on September 2001 loan classification according to banks' self-assessment; in trillions of yen )

	Loan amount	Scenario I		Scenario II		Scenario III		Scenario IV	
		Loss ratio	Loss	Loss ratio	Loss	Loss ratio	Loss	Loss ratio	Loss
Normal loans	407.0	0.5%	2.0	1.0%	4.1	1.5%	6.1	2.0%	8.1
Loans to at-risk borrowers secured by superior collateral 1/	39.8	1.0%	0.4	2.0%	0.8	3.0%	1.2	4.0%	1.6
Loans secured by ordinary collateral									
Borrowers requiring attention	54.7	10.0%	5.5	17.5%	9.6	25.0%	13.7	35.0%	19.1
Bankrupt borrowers 2/	10.6	20.0%	2.1	30.0%	3.2	45.0%	4.8	60.0%	6.4
Loans to bankrupt borrowers with doubtful recovery value 2/	2.6	80.0%	2.1	85.0%	2.2	90.0%	2.3	100.0%	2.6
Unrecoverable loans to bankrupt borrowers 2/	0.0	100.0%	0.0	100.0%	0.0	100.0%	0.0	100.0%	0.0
Total	514.7	...	12.1	...	19.8	...	28.1	...	37.8
Uncovered loan losses 3/	...	...	0.0	...	7.7	...	16.0	...	25.7

Sources: Financial Services Agency; staff calculations.

1/ Collateral refers to both loan collateral and loan guarantees.

2/ Bankrupt borrowers include *de facto* bankrupt borrowers and borrowers in danger in bankruptcy.

3/ Banks are assumed to hold a combined ¥12.1 trillion in general and specific provisions.

“Advanced Reform Program” announced the introduction of the special bank inspections and reforms to the RCC, while the recent “anti-deflation” packages reiterated the government’s commitment to banking reform.<sup>9</sup> The government’s strategy consists of three key elements: stronger efforts at NPL disposal; strengthening loan classification and provisioning practices; and reducing exposure to equity price risks.

## **NPL Disposal**

13. **The government has called on major banks to remove loans to bankrupt and near-bankrupt borrowers from their balance sheets within two years—i.e., by end-March 2003—and new NPLs within three years from the date they were classified as such.** The FSA has recently requested banks to accelerate the disposal of loans newly classified as “in danger of bankruptcy” or below so as one-half are disposed of within one year and the majority (80 percent) within two years. Major bank loans to bankrupt and near-bankrupt borrowers amounted to ¥11.7 trillion at the end-March 2001, and during FY2001 around one-half of these were removed from banks’ balance sheets.

14. **The current disposal plan, however, covers only a subset of outstanding NPLs.** First, loans by major banks to borrowers requiring “special attention”—which are classified as NPLs under the FRL definition—are not included. Second, while the FSA has called on the regional banks and smaller deposit-taking institutions to follow the same disposal timetable as the major banks, the disposal requirement has not been formally extended to these institutions. These omissions mean that only about one-third of the NPLs of deposit-taking institutions are explicitly covered by the disposal program, potentially diminishing the effectiveness of the reforms.

15. **The infrastructure to accelerate the removal of NPLs from bank balance sheets is now largely in place.** Three main channels have been identified:

- **Court-led bankruptcy proceedings.** The Civil Rehabilitation Law (CRL), introduced in April 2000, eased procedures for debtor-in-possession reorganization—similar to Chapter 11 in the U.S.—and accelerated court procedures. It has become the preferred route for small and medium-sized enterprises (SMEs) filing for bankruptcy. Building on the CRL’s success, there are plans to introduce similar reforms to the Corporate Reorganization Law for large incorporated enterprises.
- **Informal out-of-court debt workouts.** To limit demands on the legal system, the government has encouraged the use of voluntary debt workouts that lead to viable debtor restructuring. To assist in this, guidelines were drawn up by a panel of financial, business, and academic representatives last year for multi-creditor out-of-court debt workouts. These guidelines, which have no legal enforceability, provide a framework for introducing an automatic stay, establishing a creditor committee, and

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<sup>9</sup> For an assessment of the impact of the reform packages on corporate restructuring, see the chapter by Nagaoka in this *Selected Issues* paper.

reaching collective debtor agreements. To use the guidelines, the debtor must convince its creditors that it will lose value if court-led proceedings are followed, and provide a proposed reorganization plan.

- **The sale of assets to the Resolution and Collection Corporation (RCC) or to private sector restructuring funds.** Legislation to amend the Financial Reconstruction Law to expand the activities of the RCC was passed in December 2001. Under the previous legislation, the RCC could not post losses when it disposed of loans it had acquired from banks. Consequently, the RCC has been very conservative in the price it pays for loans—an average of about 4 percent of book value since it first started buying bad debt from viable institutions in 1999—and this has provided limited incentives for banks to offload their NPLs to the RCC. The revision to the law gives the RCC greater leeway in handling loan purchases by allowing it to pay “fair value” and by enabling it to bid for bad loans in the private sector debt-liquidation market. In addition, it was granted a trust business license to securitize nonperforming loans, and its mandate expanded to include the rehabilitation of troubled companies.<sup>10</sup> A number of banks have also established joint ventures to help them offload their NPLs.

**16. Despite the substantial progress that has been made in establishing a framework for accelerating the disposal of NPLs, a number of issues remain unclear:**

- **The role of the RCC.** The amended legislation gives the RCC a more significant role in the NPL disposal process, although there remains some uncertainty about whether the RCC can offer banks sufficiently attractive prices to induce them to offload their NPLs on a large scale. Consequently, while the RCC has stepped-up its NPL purchases this year, they remain small compared to the size of the overall NPL problem and to the private market in distressed debt. To try and accelerate the process, the FSA has recently urged banks to more aggressively offload loans to the RCC. Political pressure has also increased on the RCC to play a more active role in the NPL disposal process—the LDP has suggested that the RCC purchase ¥2 trillion of problem loans from banks by the end of FY2002.
- **Use of the debt workout guidelines.** To date, only four companies have applied to use the guidelines. This partly reflects the nature of the restructuring that is required, including the removal of senior managers and a return to profitability within three years. Consequently, it appears that the guidelines may only play a very limited role in the restructuring and loan disposal process. Of course, informal workouts between companies and creditors are continuing outside of these guidelines.
- **Issues with debt-equity swaps and debt forgiveness.** It is not clear how equity will be valued when debt-equity swaps are used as part of a corporate restructuring.

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<sup>10</sup> See the chapter by Kang in this *Selected Issues* paper for further details.

Overvalued equity in a debt-equity swap would allow banks to hide losses and avoid taking necessary action in case companies faltered in their business plans. Unless a market for such equity exists, the converted equity value will need to be set conservatively. Further, banks are uncertain about whether they will be able to realize a loss and hence claim a tax credit when conducting debt-equity swaps or debt forgiveness. This may make them hesitant in agreeing on a restructuring program. The Accounting Standards Board of Japan (ASBJ) has recently begun discussing accounting issues related to debt-equity swaps.

### Strengthening Bank Loan Classification and Provisioning Practices

17. **Concerns about the adequacy of loan classification and provisioning practices were heightened by last September's collapse of Mycal—a large retailer—whose loans were overclassified (and underprovisioned) by banks before its bankruptcy.** In response to a request from the Prime Minister, the FSA began conducting special inspections in October 2001 to ensure that banks are appropriately classifying loans and making sufficient provisions against problem loans on an ongoing basis. The inspections were concluded in April 2002, and incorporated in the FY2001 financial reports of the major banks.

18. **The special bank inspections focused on the classification of loans to large, potentially problematic borrowers at thirteen major banks.** The criteria for selecting the companies was that they should be large borrowers (reportedly with bank lending in excess of ¥10 billion) which were classified as “in need of special attention” or above at end-September 2001, but whose stock prices, credit ratings, or other indicators of financial health had recently undergone significant change. The FSA found 149 companies which met the criteria, 98 of which were in the construction, real estate, nonbank financing, and retail sectors. The review was primarily carried out at the borrower's main bank, i.e., the bank which plays the leading role with the borrower, and directly covered ¥12.9 trillion of loans. But, as other banks have exposures to the same borrowers, the inspections are estimated by the FSA to have covered roughly double this amount of loans. The inspections resulted in 71 borrowers—with outstanding loans of ¥7.5 trillion—being downgraded at the main bank, with ¥4.7 trillion of these loans (around 30 percent of the total) being reclassified as nonperforming (¥3.7 trillion were reclassified as being in “danger of bankruptcy” or below) (Table I.5). The reclassifications resulted in additional loan-loss charges for the banks of ¥1.9 trillion in FY01.

Table I.5. Results of the FSA Special Inspections of Major Banks, April 2002

Borrower category	Before Inspection (end-September 2001)		After Inspection (end-March 2001)	
	No. of debtors	Amount	No. of debtors	Amount
	(in trillion yen)		(in trillion yen)	
Normal	50	3.2	35	2.4
Needs attention	99	9.6	80	6.8
Other	56	6.4	35	2.6
Special attention	43	3.2	45	4.2
In danger of bankruptcy and below	--	--	34	3.7
Totals	149	12.9	149	12.9
Source: FSA				

19. **The special inspections are an important step in strengthening loan classification practices and raising provisioning levels, but they directly covered only a small subset of outstanding bank loans, and questions remain about the quality of other loans on bank balance sheets.** The FSA appears to have taken a tough stance with the banks during the special inspections, as reflected in the significant proportion of borrowers covered which were downgraded. But, although the results of the inspections may have addressed concerns about the treatment of loans to the largest borrowers, questions still remain about banks' classification of loans to other borrowers. While the effective coverage of the inspections is higher than the 4 percent of outstanding bank loans that were actually inspected because of the flow-on to non-main bank lending to the same firms, it was still limited.<sup>11</sup> In particular, loans to SMEs, which account for a large proportion of bank lending, were not covered. While the FSA expects banks to apply the same standards used in the special inspections to all the loans on their books, it will be important that future inspections ensure that this is indeed the case. In this context, it is worth noting that the annual bank inspections conducted by the BoJ during FY01—which covered 97 banks—recommended that banks adjust their self assessments for 1,900 out of the 21,300 borrowers examined (Table I.6). While this was a lower percentage of borrowers than in the preceding two years—which indicates that banks are continuing to make improvements—it also suggests that there is considerable scope for further strengthening their loan assessments.

Table I.6. Adjustment to Banks' Self Assessment of Credit Risks After BoJ's Inspection				
	Banks Inspected	Borrowers assessed (a) (In 100s)	Borrowers whose assessment required adjustments (b) (In 100s)	Rate of adjustments required (b/a) (In percent)
FY99	39	213	29	13.6
FY00	87	335	33	9.9
FY01	97	213	19	8.9
Source: BoJ.				

20. **To improve onsite inspections, the FSA has recently announced two changes.** First, a system of “de facto” resident inspectors for each major bank group is to be established within the FSA's Inspection Bureau. This will enable each unit to concentrate on the financial institutions within that bank group, and is expected to improve the efficiency and effectiveness of the inspections. Second, to check the adequacy of bank operations in specific areas—e.g., internal audit functions—special teams of experts will be established to conduct inspections in these areas across banking groups.<sup>12</sup> In addition, a supplement to the inspection manual is to be prepared to cover the treatment of loans to SMEs.

<sup>11</sup> The FSA has not released information on the proportion of bank lending that is accounted for by borrowers with outstanding loans in excess of ¥10 billion.

<sup>12</sup> To improve transparency, banks will also be required to disclose financial information on a quarterly basis from the first quarter of FY2002. While the quarterly disclosure—which will occur at the end of June and December—will not be as full as in the interim and full year  
(continued)

## Reducing Exposure to Equity Market Risk

21. **Japanese banks have reduced their equity holdings in recent years, although their exposure to equity price risk remains high.** During FY2001, major banks sold a further ¥5 trillion of equity, although they also acquired some additional equity through debt-equity swaps as part of corporate restructuring plans. But, at around ¥26 trillion (150 percent of Tier-1 capital), the equity portfolios of the major banks remain large. These holdings—particularly since the introduction of mark-to-market accounting last April—mean that bank earnings and capital are exposed to significant equity price risk. For example, a 10 percent decline in the TOPIX is estimated to result in a valuation loss on bank equity holdings of ¥2½ trillion.<sup>13</sup> Allowing for a 40 percent tax carry-forward, this would result in a reduction in Tier-1 capital of the major banks of around ¥1.5 trillion (0.4 percentage points of the Tier-1 capital ratio). Life insurance companies—which also hold large equity portfolios—are exposed to significant equity price risk as well (see Section E). Going forward, the behavior of foreign investors is likely to be particularly important for Japanese equity markets as foreigners hold around one-half of actively traded stocks.

22. **Concerned that the equity price risk faced by banks is excessive, the government has introduced new regulations to limit the size of bank equity holdings.** Most banks will be required to reduce their shareholdings to 100 percent or less of Tier-1 capital by September 2004.<sup>14</sup> Banks, however, can request a one year grace period for meeting this limit if their equity portfolio currently exceeds 150 percent of Tier-1 capital (and up to a two year grace period if it exceeds 200 percent). If Tier-1 capital remains unchanged, this would require banks to sell an additional ¥7 trillion of equity over the next 30 months. To aid in the disposal process, a Bank Shareholding Purchase Corporation (BSPC)—established with capital contributions from private banks and which will also be financed by government-guaranteed loans—has been set up to purchase equity from banks at market prices, and some

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results (which are reported at the end of September and March, respectively), it represents an important step. The main items that banks will be required to report are: the amount of classified assets based on the FRL standard; capital adequacy ratio and Tier-1 capital; and information on investment securities (market value, book value, and unrealized gains or losses by major category) and derivatives.

<sup>13</sup> FSA estimate, based on the assumption of a 100 percent correlation between banks' equity portfolios and the TOPIX. The exact valuation loss depends on the specific portfolio held by banks. If the correlation of the portfolios is less than 100 percent, the valuation loss would also be lower. For example, a 60 percent correlation would lead to valuation losses of around ¥1.5 trillion for the same decline in the overall equity price index.

<sup>14</sup> Even at this reduced level, banks' equity holdings will remain significantly higher than in other OECD countries.

of the shares will be repackaged for sale as exchange traded funds (ETFs).<sup>15</sup> However, banks that sell equity to the BSPC are required to contribute 8 percent of their sales to the corporation to cover possible losses on the disposal of the holdings. As a result, the net effect on a bank's capital is neutral, depriving banks of any capital relief they would have realized if they had sold the shares directly to the market.

**23. In addition to equity market risk, banks also have significant exposure to Japanese Government Bonds (JGBs), and therefore also face considerable interest rate risk, although the government's reform plans do not address this issue.** Banks have been large purchasers of government bonds in recent years, although they turned sellers in FY01; they have also recently acted to shorten the average maturity of their bond holdings. On top of their direct bond holdings, banks are also reported to have significant exposure to interest rate risk through derivative instruments. Private analysts believe that the inclusion of swap positions effectively doubles banks' exposure to interest rate risk. While the volatility of JGB yields has remained low, the potential for a yield spike exists, particularly if households' willingness to continue to (passively) invest in JGBs diminishes or the issuance of new debt increases sharply, perhaps because of the need for the government to underwrite the liabilities of the financial sector.<sup>16</sup> An increase in yields would result in valuation losses on the banks' JGB holdings and impact bank capital. FSA estimates suggest that a 1 percentage point rise in interest rates reduces the value of major bank JGB holdings by ¥1¼ trillion (assuming an average maturity of 3 years), and, after tax effects, this reduces the Tier-1 capital ratio by 0.2 percentage points. A related issue is the potential impact of a further sovereign rating downgrade on banks' cost of capital and access to capital markets.

### **C. Deposit Insurance and the Public Safety Net**

**24. In an important step that demonstrated its commitment to financial sector reform, the government withdrew the blanket deposit guarantee as scheduled at end-March 2002.** The deposit guarantee was introduced in 1996 in response to a series of financial institution failures that undermined public confidence. It was originally due to be withdrawn in April 2000 but, in late-1999, the government decided to postpone the removal for two years because of concerns about the health of many financial institutions, particularly the regional banks and credit cooperatives, and the transfer of the supervision and inspection responsibilities for credit cooperatives from prefecture governments to the national government in April 2000. Under the current schedule, deposit insurance protection for all

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<sup>15</sup> The BSPC has two accounts; a general account and a special account. The government guaranteed loans are only available to fund the special account. Only shares purchased by the general account will be available for repackaging as ETFs.

<sup>16</sup> In contrast to the equity market, foreign investors are not large players in the domestic bond market, accounting for around 5 percent of outstanding bonds.



but demand deposits was limited to a maximum of ¥10 million from April 1, 2002, and the blanket guarantee on demand deposits will be removed from April 1, 2003.<sup>17</sup>

**25. While the removal of the full guarantee resulted in considerable deposit switching, there was no deposit flight out of the banking system as a whole.** The potential for deposit movement was significant, as around ¥100 trillion of deposits (18 percent of the total) were affected by the change. Indeed, balances on time deposits in excess of ¥10 million declined by 25 percent (y/y) in March 2002, although bank deposits as a whole continued to grow in the months leading up to the guarantee's removal as many of these time deposits were switched into demand deposits where the guarantee remains for another year. Further, at the aggregate level, there was little evidence of deposit switching away from the regional banks to the major banks, although a number of weaker regional banks are reported to have experienced significant outflows. However, the removal of the guarantee on demand deposits next year—which will affect a further ¥100 trillion of deposits—may be a bigger test of the public's confidence in the banking system as no deposits in excess of ¥10 million will then be insured. In such circumstances, contagion from weaker institutions could easily spread.

**26. As it has moved away from the blanket deposit guarantee, the government has sought to assure depositors that it has an adequate safety net in place in the event of systemic problems in the financial sector.** Since the 1998 crisis, the financial sector safety net has been strengthened considerably. First, the political mechanism for crisis management has been greatly simplified, enabling the Prime Minister to quickly authorize public capital injections—even against the will of the bank in question—after consulting with key policymakers.<sup>18</sup> In such case, the Deposit Insurance Corporation (DIC) has ¥15 trillion of funds in the Financial Crisis Account to draw on and intervene as necessary (Table I.7). These funds are available for capital injections, full coverage of deposits, and temporary nationalization in the event of systemic instability. Even if a crisis were limited to a particular region, the government would be entitled to use public funds to facilitate bank transfers under the purchase and assumption framework, to inject capital into key institutions, or if necessary, to temporarily reinstate blanket deposit guarantees.<sup>19</sup> Nevertheless, the need to invoke the deposit insurance law's systemic support provisions could be accompanied by

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<sup>17</sup> In April 2002, the DIC raised the deposit insurance premia on demand deposits by 12 percent to 0.094 percent and lowered it for time deposits by 5 percent to 0.08 percent.

<sup>18</sup> The deposit insurance law requires that the Prime Minister certify the presence of a financial crisis, following deliberations of the Conference for Financial Crisis (comprising the Ministers of Finance and Financial Affairs, the FSA Commissioner, the Cabinet Secretary, and the BOJ Governor), in order to tap the Crisis Management Account. The ¥15 trillion in this account is currently regarded as sufficient to deal with additional bank failures, but might need to be expanded in case of a more widespread crisis.

<sup>19</sup> Regional institutions, in particular, are vulnerable to deposit shifts by local authorities which themselves are facing financial difficulties.

considerable market volatility, and it would be essential to ensure that the framework is applied promptly and does not become subject of a protracted political debate.

Table I.7. Bank Support Framework						
Account	Purpose	Limits (in trillions of yen)				Used by March 2002 <sup>1</sup>
		FY99	FY00	FY01	FY02	
General Account	Depositor protection (partly premium-funded)	2	4	6	13	) 15½
Special Account <sup>2</sup>	Depositor protection (public loans and grants)	17 (10+7)	23 (10+13)	23 (10+13)	19½ (6½+13)	
Financial Reconstruction Account <sup>2</sup>	Lending to nationalized and bridge banks	18	18	10	12	5
Financial Functioning Early Strengthening Account <sup>2</sup>	Capital injections	25	25	16	10½	8
Crisis Management Account	Emergency measures for major and regional banks	--	--	15	15	--
<b>Total</b>		<b>62</b>	<b>70</b>	<b>70</b>	<b>70</b>	<b>29</b>
Source: Deposit Insurance Corporation; and FSA.						
<sup>1</sup> Most of the funds are expected to be recovered, except for ¥8½ trillion in government grants to cover depositor losses.						
<sup>2</sup> Established under the Financial Functioning Early Strengthening Law in 1998. These accounts have to be maintained until public capital is repaid to the government by the banks. Only the crisis management account will be used in the event of a systemic crisis.						

#### D. Increasing Bank Profitability

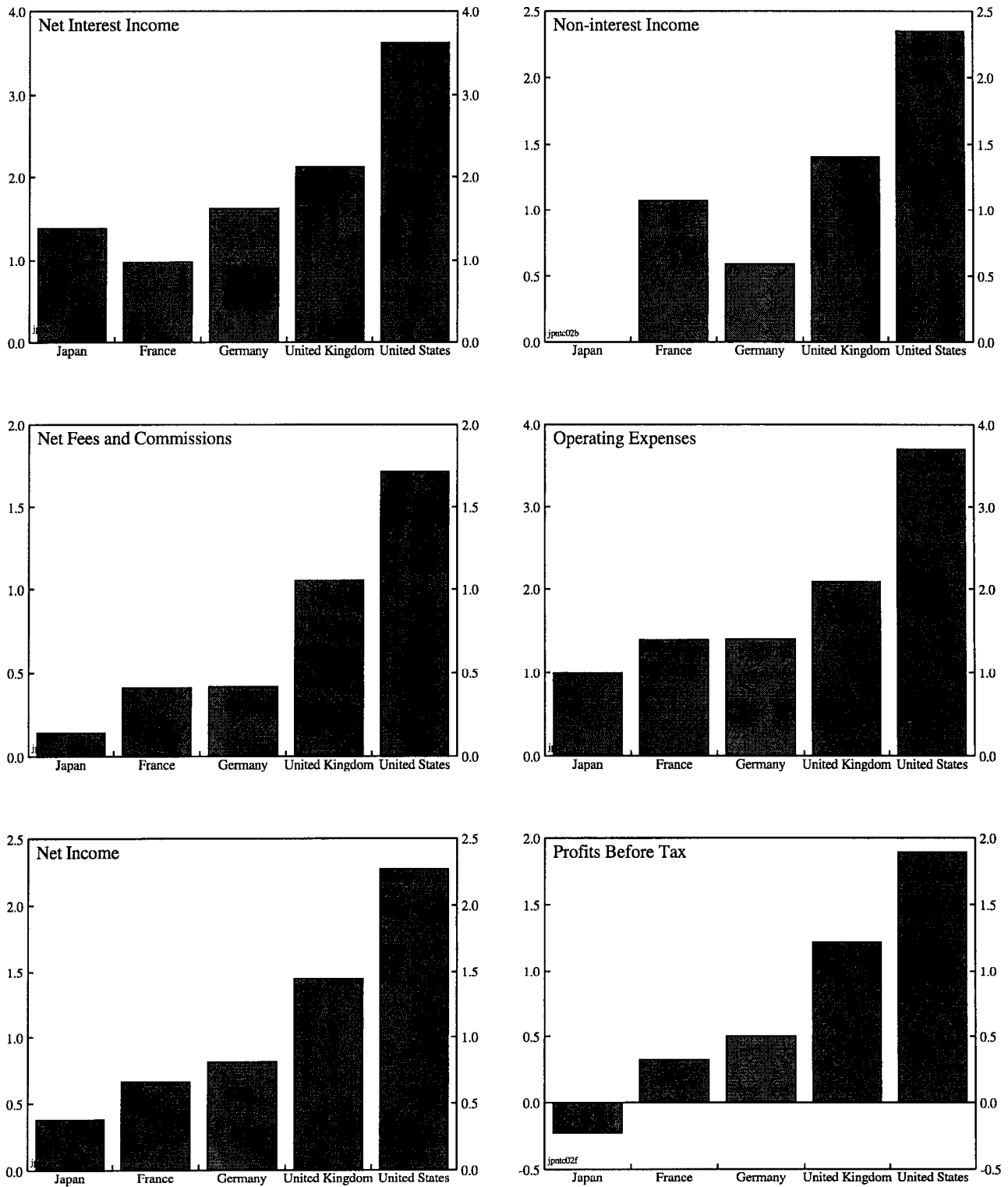
27. **While dealing with the existing NPL problem is essential, boosting profitability is the key to ensuring a healthy banking system in the medium-term.** By international standards, bank profitability in Japan is low (Figure I.3), and boosting it will likely need to involve a number of elements:

- **Raising interest margins.** Interest margins have been on a modest downward trend since the 1980s, reflecting the impact of financial deregulation and the decline in corporate demand for funds following the bursting of the asset price bubble. At around 1½ percent, the net interest margin of Japanese banks is considerably below that of their U.S. and U.K. counterparts, but broadly in line with that in Germany and above that in France. Bank of Japan (BoJ) analysis shows that the lower a firm's credit rating, the wider the spread between the yield on its corporate bonds and its bank lending rate (Bank of Japan, 2001). This may suggest that banks are not adequately pricing their loans, particularly to higher risk borrowers, although it could also be due to the fact that the bank loan has some collateral backing while the bond is unsecured. Banks, however, do appear to be trying to boost margins, as evidenced by the recent increase in the prime lending rate. A BoJ survey of senior bank loan officers also indicates that banks have sought to increase their spreads for borrowers of medium and low ratings over the past six months, and that they will continue to pursue this for all borrowers in the near future.<sup>20</sup>

<sup>20</sup> Bank of Japan, "Senior Loan Officer Opinion Survey on Bank Lending Practices at Large Japanese Banks," various issues.

Figure I.3. Japan: International Comparators of Bank Profitability

(In percent of assets; 1995-99 average)



Source: OECD, Bank Profitability 2000.

- **Improving the quality of the loan portfolio.** Banks will need to improve their credit assessment processes for new loans to raise the quality of their loan portfolios. The BoJ survey, however, suggests that, if anything, banks have eased their standards for approving loan applications from firms and households over the past six months. This is particularly true for households and small firms, the latter possibly to meet mandated credit targets to small businesses.
- **Increasing fee-based income.** With lending operations declining—due to the lack of demand for credit because of the current economic downturn and the longer-term deleveraging trend in the corporate sector—banks will need to look at new profit avenues. By international standards, Japanese banks earn little in the way of fee-based income. While there has been some trend toward greater fee-based income from investment banking services such as consultancy on mergers and acquisitions, this will need to be expanded much further.

28. **By contrast, Japanese banks appear to already have a low cost-structure relative to banks in other G-5 countries.** Since the mid-1990s, banks have intensified their administrative cost-cutting efforts, particularly in the personnel area, and costs are well below those of their U.S. and U.K. counterparts. While the recent mergers among the major banks could result in additional cost savings, results to date appear mixed.<sup>21</sup> Outright merger would appear more likely to result in improved efficiency than the holding company structure adopted in other cases. The mergers, however, will need to lead to business synergies in order to boost profitability, rather than focus on cost-cutting.

29. **In addition to the actions that banks themselves can take, reforms that improve the environment in which banks operate will also be important.** A key issue is the public sector's role in financial intermediation in Japan. During the course of the 1990s, the importance of public sector financial institutions has increased. Postal savings now account for around 33 percent of deposits, while the Postal Life Insurance Bureau accounts for 40 percent of personal insurance assets. Given the competitive advantages that postal savings and GFIs enjoy—including an implicit government guarantee on borrowing and exemptions from paying corporate tax and deposit insurance premiums—they act to squeeze private banks on both sides of their balance sheets.

30. **Recognizing the need to reduce the role of public entities in the financial sector, the government has outlined reforms of the postal savings system.** The Postal Services Agency will be transformed into a public corporation from FY2003, although it remains unclear to what extent its competitive advantages will be removed. With regard to GFIs, the Government Housing Loan Corporation (GHLIC) is to be abolished, although some of its

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<sup>21</sup> Restructuring among the major banks has continued. Effective April 1, 2002, the three main subsidiary banks in the Mizuho group (Daiichi Kangyo, Fuji, Industrial Bank of Japan) were reorganized to form Mizuho Bank and Mizuho Corporate Bank; Sanwa Bank and Tokai Bank merged in January 2002; and Asahi Bank joined the Daiwa Bank holding company on March 1, 2002.

operations will be transferred to an independent administrative agency, while the future of the other GFIs will be considered by the Council on Economic and Fiscal Policy (CEFP). The FSA is also to begin to inspect GFIs from April 1, 2003.

## E. Life Insurance

### 31. The financial position of life insurance companies weakened during FY2001.

Profitability continues to suffer from negative yield spreads—caused by the excess of guaranteed yields on existing life insurance policies over low returns on insurer-held assets—although insurers have so far been able to maintain reported solvency margins above the 200 percent minimum as they benefited from better-than-expected mortality trends. Interim results for FY2001 indicate that practically all major life insurers registered a drop in their solvency ratio (Table I.8). This has been accompanied by a shrinkage in new business underwriting and a pickup in policy cancellations at some weaker insurers. In response to the difficult financial conditions, life insurance companies have continued to restructure their operations. Progress is being made in closing overseas branches, with Asahi Life completely withdrawing from overseas operations. Some companies are also considering demutualizing; Daido Life went public in April 2002, and Taiyo Life is to follow next year. To try and maximize the value of their sales network and achieve operating cost reductions, several of the large life insurance companies have opted to merge (e.g., Yasuda Life and Meiji Life) or to enter comprehensive business relationships with other life insurers or in some cases nonlife insurance companies (e.g., Dai-ichi Life and Yasuda Fire & Marine).

32. **Life insurance companies face a number of risks in the period ahead.** First, while they conduct their financial operations on a relatively conservative basis—with foreign currency positions largely hedged and little exposure to derivatives markets—their large equity portfolios are subject to considerable market risk. Second, life insurers and banks have continued to augment their financial links by increasing equity and subordinated debt cross-holdings to maintain capital in excess of regulatory standards (Table I.9). In view of the relatively fragile position of some of the weaker institutions in both sectors, financial difficulties in one sector could affect the other, including through asset price contagion and possible losses on cross-debt holdings.

Table I.9. Japan: Cross-Holdings Among Japanese Life Insurers and Banks

(As of March 2001; billions of yen)

	Exposure to Banks				Borrowings from Banks		
	Bank stocks	Subordinate loans	Total	(In percent of assets)	Foundation fund	Subordinate loans	Total
Nippon	1,133.5	932.3	2,065.8	4.7	450	0	450
Dai-ichi	967.2	766.1	1,733.3	5.6	150	100	250
Sumitomo	343.0	555.4	898.4	3.8	169	395	564
Meiji	693.7	739.3	1,433.0	8.2	80	0	80
Asahi	357.7	577.8	935.5	8.4	50	273	323
Yasuda	434.6	476.4	911.0	8.8	130	100	230
Mitsui	93.5	402.0	495.5	5.1	69	245	314
Taiyo	194.0	356.3	550.3	7.5	27	85	112
Daido	81.9	176.7	258.6	4.4	30	0	30
Fukoku	37.8	154.6	192.4	4.0	0	0	0

Sources: Fukao and JCER (2002); and Nikko Salomon Smith Barney.

Table I.8. Japan: Financial Indicators of Life Insurance Companies

	Basic Indicators (end-March 2002)			Base Profit (first half of FY2001)		
	Total assets	Business in force	Premium income	Total	Negative spread	Mortality/expense gains
	(In trillions of yen)			(In billions of yen)		
Nippon	44.0	366.6	5.8	289	160	449
Dai-Ichi	31.2	268.0	3.7	164	130	294
Sumitomo	23.7	234.6	3.2	121	125	246
Meiji	17.5	165.7	2.3	104	45	149
Asahi	11.2	100.2	1.3	51	70	121
Yasuda	10.3	137.9	1.5	77	37	114
Mitsui	9.8	88.9	1.3	71	47	118
Taiyo	7.3	20.3	1.1	3	33	36
Daido	5.9	49.5	1.1	42	13	54
Fukoku	4.8	46.7	0.7	31	20	51

	Securities Portfolio (end-September 2001)			Solvency Ratio		
	Unrealized gains	of which: Equity	Topix break-even level	March 2000	March 2001	September 2001
	(In billions of yen)			(In percent)		
Nippon	2,425	1,443	822	1,096	778	637
Dai-Ichi	518	5	1,022	866	682	554
Sumitomo	-153	-356	1,171	676	551	452
Meiji	452	62	999	731	667	504
Asahi	-472	-502	1,427	733	543	445
Yasuda	27	-40	1,065	809	603	576
Mitsui	-93	-180	1,220	677	493	427
Taiyo	136	66	921	1,050	807	773
Daido	160	19	963	1,004	758	717
Fukoku	24	-30	1,090	907	779	665

Sources: Standard and Poor's; and JP Morgan.

33. **The risks nevertheless appear manageable.** First, the government has successfully handled recent life insurance failures, ensuring a smooth transition of ownership to largely foreign institutions without the need for public funds.<sup>22</sup> Second, although bank failures would have a disproportionately larger influence on the health of insurance companies than vice versa—given that insurance companies have much larger exposures to banks than banks do to insurance companies—market analysts generally expect the government to use the bank support framework to shield life insurers from critical losses. Third, the government retains regulatory means to shield life insurers from a possible rise in long-term interest rates. For example, government bond holdings could be exempted from the introduction of mark-to-market rules in April 2003, on the grounds that bonds held to maturity provide a legitimate hedge for insurers' long-term liabilities.

#### **F. Japanese Financial Institutions and International Markets**

34. **Risks of a significant withdrawal of Japanese investors from overseas asset markets and the repatriation of capital into Japan appear low at this juncture.** Japanese financial institutions are significant investors in overseas markets. In the U.S. Treasury securities markets, Japanese investors—particularly large life insurers—reportedly hold a share of up to one-fifth of actively traded bonds.<sup>23</sup> In the wider U.S. bond market, Japanese holdings accounted for about 2 percent of outstanding public and private issues at the end of 2000. Japanese investors also hold substantial bond market shares in Europe and in some Asian and Latin American emerging markets (Table I.10). Holdings of foreign equity, however, are generally much smaller. The recent difficulties in the bank and life insurance sectors have raised international concerns over a possible withdrawal of Japanese investors from overseas asset markets and the repatriation of capital into Japan. Market analysts generally consider that large-scale capital repatriation is unlikely in current circumstances. By offering attractive risk-adjusted returns, notwithstanding relatively high costs of currency hedging, foreign investments provide an important source of income for Japanese financial institutions. Consequently, a decision to repatriate large amounts of capital would likely be made only to rebalance portfolio risks following significant losses on other domestic or foreign assets, or in the unlikely situation of extreme liquidity shortages. Insurers with the largest presence in foreign markets are generally those with the most solid financial position, and they are also the most likely to enjoy systemic protection by the government.

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<sup>22</sup> The fund established by the life insurance industry—the Life Insurance Policyholders Protection Corporation—to protect policyholders of bankrupt companies is almost exhausted (¥538 billion of its ¥560 billion assets have been used). Two years ago, the government established a ¥400 billion fund to supplement the industry's own fund to maintain the confidence of policyholders, but this will expire at end-March 2003. Consideration is currently being given to whether this deadline should be extended.

<sup>23</sup> Combined foreign securities holdings of the life insurance sector amounted to about \$230 billion as of October 2001, or about a fifth of all privately held foreign assets.

Table I.10. Japanese Holdings of Foreign Securities

(In trillions of yen, unless otherwise noted)

	Bonds and Notes				Equity			
	1996	1999	2000		1996	1999	2000	
			Total	Market share (in percent)			Total	Market share (in percent)
Total Holdings	86.5	91.7	105.0	...	18.0	29.2	30.1	...
<i>By Holder</i>								
Public Sector	...	7.5	7.7	...	...	--	--	...
Banks	...	20.3	29.4	...	...	2.0	0.7	...
Others	...	63.9	67.9	...	...	27.1	29.4	...
<i>By Country</i>								
U.S.	27.0	27.0	32.7	2.1	6.8	14.6	15.4	0.6
Europe	34.9	41.7	44.7	...	5.6	11.2	11.6	...
<i>of which:</i>								
Germany	...	10.2	12.1	4.2	...	3.5	3.6	0.3
United Kingdom	...	7.4	6.4	4.1	...	1.9	1.8	0.8
France	...	4.1	5.0	2.2	...	1.5	1.2	0.2
Asia	2.8	2.0	1.9	1.8	2.5	1.4	1.0	0.4
Latin America	8.2	11.8	15.9	...	0.9	1.1	1.3	...
Others	13.6	9.2	9.8	...	2.2	0.9	0.8	...

Sources: Bank of Japan; Swiss Re; and IMF staff calculations.



35. **Risks of a further withdrawal of Japanese banks from international loan markets also appears manageable, although the impact in some Asian countries could be significant.** Japanese banks still account for a considerable share of international bank lending, with a consolidated foreign exposure of \$1.2 trillion (according to BIS statistics), the second largest global exposure behind German banks. While some of this exposure reflects the stock of loans committed earlier, Japanese banks have once again become more active in foreign markets in recent years, particularly in the syndicated loan market. Concerns have been raised that their financial difficulties could force Japanese banks to curtail their overseas lending. However, were this the case, it would not have as significant an impact on industrialized economies as it did in the early 1990s (Peek and Rosengreen, 1997, 2000), although in Asian emerging economies Japanese banks still account for a substantial share of foreign bank lending (Table I.11). A large share of these loans are linked to FDI-related projects, and a decline in lending could affect growth prospects in the region.

36. **In recent years, foreign financial institutions have reduced their exposure to Japanese banks.** The supply of capital to Japanese banks has been cut back, and Japanese bank credit risk has largely been limited to short-term collateralized lending (mostly repos) or short-dated swaps. Some foreign banks may recently have increased their exposure amid the large demand for dollar swaps by domestic institutions. However, these banks typically hold their yen assets at the Bank of Japan (accounting for a considerable part of the recent reserves increase) and thus only face the apparently small currency repayment risk in the forward leg of the transaction. Moreover, since Japanese financial institutions have not been very active in markets for complex financial instruments, market participants are not particularly concerned about exposures—e.g., in the credit derivative markets. According to their estimates, nominal amounts outstanding in Japan account only for about \$100 billion, or 10 percent of the global credit derivatives market.

37. **Foreign banks have pared down their dollar-denominated exposure to corporate borrowers located in Japan in recent years, but this has been more than offset by an increase in yen-denominated lending.** According to BIS *locational* statistics, banks' international claims against Japanese borrowers fell by about \$100 billion between late 1999 and the end of September 2001 (to \$513 billion), 90 percent of which was accounted for by a decline in lending to the nonbank sector. However, *consolidated* banking statistics, which include local exposure of subsidiaries in Japan, show a \$150 billion increase in claims on Japan over the past two years. This appears consistent with the increased presence of foreign institutions in the Japanese market—including through acquisitions of local institutions—led by German, Swiss, and U.S. banks (Table I.12). Although the quality of locally held assets could clearly be affected during a crisis, the bulk of this exposure is vis-à-vis foreign exporters and high-quality Japanese borrowers, and thus appears relatively secure.

Table I.12. Consolidated Foreign Claims of International Banks on Japan  
(by nationality of banks, in U.S. dollar billion)

	September 2001	June 1999
Total	588.8	440.9
<i>of which:</i>		
Germany	96.3	37.1
Switzerland	73.4	...
United States	63.2	18.8
France	53.1	27.5
United Kingdom	46.9	15.3
Netherlands	10.7	23.9

Source: Bank for International Settlements.

Table I.11. Stock of Consolidated Claims of Japanese Banks on Emerging Market Countries

	1985	1990	1995	1996	1997	1998	1999	2000	2001
(In millions of U.S. dollars)									
Africa and Middle East	8,263	9,072	6,523	6,288	6,167	5,807	6,238	6,028	5,641
Asia and Pacific	95,889	232,401	330,085	272,309	256,604	161,201	152,264	147,026	129,232
<i>of which:</i>									
Asia-9	94,028	225,835	324,664	267,090	250,646	156,053	147,785	143,001	125,123
China	3,127	12,122	17,653	17,800	19,672	15,278	12,208	11,314	11,731
Newly Industrialized Economies	74,050	181,452	237,182	175,551	161,071	89,979	97,060	98,458	82,392
Taiwan Province of China	1,051	3,591	4,287	3,548	4,836	3,424	3,534	3,974	3,362
Korea	10,324	10,272	22,820	25,732	21,314	18,304	13,548	11,001	11,452
Hong Kong SAR	35,153	88,278	133,146	87,462	76,272	38,742	54,647	52,459	44,511
Singapore	27,522	79,311	76,929	58,809	58,649	29,509	25,331	31,024	23,067
ASEAN-4	16,851	32,261	69,829	73,739	69,903	50,796	38,517	33,229	31,000
Thailand	3,542	8,889	38,998	39,475	35,081	24,008	15,541	12,772	11,787
Indonesia	5,375	15,772	22,467	23,453	22,834	16,973	13,102	10,936	9,643
Malaysia	5,218	4,648	7,323	9,172	9,276	7,364	6,829	6,388	6,334
Philippines	2,716	2,952	1,041	1,639	2,712	2,451	3,045	3,133	3,236
Europe	10,590	16,829	6,980	6,076	6,621	5,809	4,246	4,660	4,010
Latin America and Caribbean	38,888	31,701	15,363	16,345	15,688	15,426	12,444	11,280	11,896
<i>of which:</i>									
Argentina	5,431	6,105	1,752	1,821	1,671	2,045	1,730	1,858	1,732
Brazil	10,944	12,317	5,790	5,984	5,788	4,820	4,317	3,512	4,069
Mexico	12,927	6,191	4,472	5,428	4,725	4,830	2,829	2,685	3,073
Venezuela	4,424	2,347	593	468	307	438	551	532	457
(In percent of total bank lending to the country)									
Africa and Middle East	8.0	8.4	5.6	5.7	5.0	4.2	4.2	4.1	3.9
Asia and Pacific	37.7	48.0	36.0	28.0	23.6	18.9	18.9	18.3	16.4
<i>of which:</i>									
Asia-9	39.2	49.6	37.5	29.1	24.6	19.8	19.9	19.3	17.2
China	47.2	54.3	36.2	32.1	22.5	19.0	18.8	18.4	19.7
Newly Industrialized Economies	40.0	48.9	35.4	25.8	21.9	16.3	18.4	19.0	15.9
ASEAN-4	34.7	51.9	47.5	40.3	35.8	32.6	25.3	20.8	20.6
Europe	13.3	15.8	5.4	4.1	3.2	2.7	2.0	1.9	1.6
Latin America and Caribbean	15.7	15.9	6.0	5.3	3.8	3.6	2.9	2.2	2.1

Source: Bank for International Settlements.

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## II. THE RCC AND THE MARKET FOR DISTRESSED DEBT IN JAPAN<sup>1</sup>

### A. Introduction

1. **Over the past year, the government has outlined a strategy for addressing the NPL problem in the banking system.** The strategy calls for major banks to accelerate the disposal of nonperforming loans from their balance sheets within 2–3 years. Banks are expected to remove these loans either by selling them directly to the market, pursuing bankruptcy proceedings, or by rehabilitating borrowers through out-of-court workout procedures. Any remaining loans are to be sold to the Resolution and Collection Corporation (RCC) which under the amended Financial Reconstruction Law (FRL) has been given new powers to purchase distressed assets at “fair market value” and to restructure companies.
2. **This chapter examines how the RCC can help support bank and corporate restructuring.** It begins by describing the evolving role of the RCC and recent developments in the market for distressed debt in Japan. Drawing upon the experience of other countries using asset management companies (AMCs), it outlines recommendations on how the RCC can play a more effective role in transferring distressed assets from the banks to the private sector. The chapter also identifies weaknesses in the framework for managing distressed assets and examines ways in which the market could be strengthened.

### B. Background and Recent Developments

#### The Evolving Role of the RCC

3. **The Resolution and Collection Corporation (RCC) is a government-owned agency that was originally established to collect bad loans from failed housing loan companies, banks, and credit cooperatives.** It was created in April 1999 out of a merger between the Housing Loan and Administration Corporation (HLAC) and the Resolution and Collection Bank (RCB) and is financed by government bonds issued by the Deposit Insurance Corporation (DIC). The RCC can purchase assets under the Financial Reconstruction Account which has available a ¥12 trillion government guarantee in FY 2002. The RCC is 100 percent owned by the DIC with ¥212 billion in subscribed capital and with about 2,400 staff members. The core operations of the RCC include:
  - Recovery of loans transferred from former *Jusen* companies;
  - Purchase and collection of nonperforming loans (NPLs) from both failed and open institutions;
  - Pursuit of legal action to recover funds from former executives and debtors of failed institutions.

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<sup>1</sup> Prepared by Ken Kang (ext. 38911).

4. **The RCC's portfolio consists mainly of real estate used as collateral on defaulted loans and to lesser extent, ordinary loans from failed institutions.** During 1995 through March 2002, the RCC has acquired a total of ¥30½ trillion in face value loans from both failed and open institutions at a purchase price of ¥8.9 trillion (see Table II.1). Almost all of the purchased amount was from failed institutions, including banks and former *Jusen* housing loan companies.

5. **Under an amendment to the Financial Reconstruction Law adopted in December 2001, the RCC was given broader powers to purchase NPLs from open banks and**

**promote corporate restructuring.** Previously, because the RCC could not post losses when it disposed of its assets, it demanded steep discounts and thus was not an attractive option for banks. Under the new Law, the RCC was given more flexibility to purchase NPLs at “fair market” value and to participate directly in NPL auctions. In September 2001, the RCC was granted a trust business license to securitize nonperforming assets and issued its first asset-backed security of ¥40 billion in real estate assets. The new Law also expanded the RCC's mandate to include rehabilitating troubled companies and participating in debt-equity swaps.

6. **The RCC has come under pressure to increase its purchases of NPLs from open banks, but so far with limited success.** Since the RCC is entrusted with special investigative powers that allow it to tackle difficult cases, such as real estate tied to organized crime, it has primarily served as a “catch all” for banks which have been unable to collect or

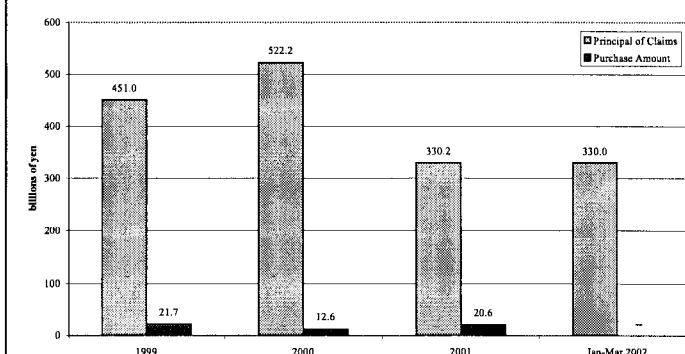
sell bad loans on their own. Since its inception in 1999 through March 2002, the RCC has purchased only ¥55 billion in loans from open banks with a face value ¥1.3 trillion (a discount of 96 percent). During January–March 2002, the RCC bought around ¥330 billion in face value loans and concluded contracts to buy an additional ¥141 billion (see Figure II.1).<sup>2</sup>

Table II.1. Japan: Assets Acquired by the RCC, by Type  
(1995-end-March 2002; in trillions of yen)

Assets acquired from:	Principal amount	Purchase price	Collected amount	Collection ratio
				(In percent)
1. "Jusen" Housing Loan Companies	10.05	4.66	2.55	55
2. Failed institutions based upon Deposit Insurance Law	19.15	4.17	2.67	64
3. Sound banks based upon Emergency Measures for Accelerated Recovery of Market Functions Act of 1998	1.30	0.06	...	...
<b>Total:</b>	<b>30.51</b>	<b>8.88</b>	<b>5.22</b>	<b>59</b>

Source: RCC.

Figure II.1. RCC's Record of NPL Purchases under the Financial Reconstruction Law, 1999-2002



<sup>2</sup> Under its new mandate, the RCC is also allowed to participate directly in NPL auctions. During January–March 2002, the RCC participated in 24 auctions conducted by financial institutions, winning five bids.

Although this is higher than last year, it is still small compared to the size of NPLs held by banks and well short of expectations.<sup>3</sup> Although under-provisioning by banks still remains the biggest obstacle for buying these loans, the RCC is also held back from purchasing distressed assets out of continuing concerns over incurring secondary losses.

7. **With its new mandate, the RCC has also taken its first steps to rehabilitate troubled borrowers and securitize distressed assets.** Since establishing a restructuring unit in November 2001, the RCC has initiated restructuring programs with 15 borrowers, including three that were later sold to large creditors. The RCC also announced that it will participate in the rehabilitation of about 110 companies whose loans were bought by the RCC from failed institutions. In February 2002, the RCC participated in its first securitization of defaulted real estate loans (principal value of ¥107 billion) with Goldman Sachs, Mitsubishi Trust & Banking, and Asahi Bank.

### **Market for Distressed Debt in Japan**

8. **A market for distressed debt already exists in Japan.** Although precise data are not available, market participants estimate that some ¥4–5 trillion in nonperforming assets were sold in the market last year. Initially, most of the debt sold to the market have been bilateral loans to small enterprises, collateral backed-loans, and some single-asset real estate. Much of these were already in bankruptcy court. However, the market for distressed debt has expanded in recent years to include securitized assets, going concerns, and direct equity purchases. Banks have reported little difficulties in setting up NPL auctions, attracting as many as 10–15 investors at any one sale including almost all of the major foreign distressed debt investors. Japanese investors have also shown interest in NPL purchases and have begun setting up their own restructuring funds.<sup>4</sup> The market is considered fairly efficient with pricing differences among competing bids having narrowed considerably. However, much of the activity remains in the primary market with very little secondary trading as most investors are end-users with a main interest in restructuring rather than trading.

9. **The market for securitized assets has expanded rapidly and now includes NPLs.** New issuance for all asset-backed securities (ABS) has increased from almost nothing in 1994 to over \$25 billion in 2001 and is projected to almost double in 2002 (Morgan Stanley). The largest share comes from both commercial and residential mortgage-backed securities (MBS) and consumer loans while NPLs remain very small, accounting for about 3 percent in 2001. Interestingly, many of the end investors in securitized NPLs are Japanese and include banks which are attracted to the floating rate exposure.<sup>5</sup>

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<sup>3</sup> For example, in February 2002, the LDP publicly called upon the RCC to purchase up to ¥2 trillion in face value loans by March 2003.

<sup>4</sup> See Fiorillo, James, “Evolution of the Distressed Debt market,” ING Barings, May 2001.

<sup>5</sup> For example, in November 1999, Morgan Stanley Dean Witter issued the International Credit Recovery—Japan One, a \$200 million fund representing the first NPL securitization in Japan. The securitized asset consisted of nonperforming commercial mortgage loans and  
(continued)

10. **However, the development of the distressed debt market is constrained by the lack of supply as banks remain reluctant to sell their NPLs.** Most of the assets sold so far to the market have been classified as “bankrupt” or “in danger of bankruptcy” where the required provisioning for the uncovered portion ranges from 70 percent to 100 percent. However, despite interest among investors, banks remain reluctant to part with loans classified above these categories (so-called “special attention” and above) where a company may be a going concern. At end-September 2001, loans classified as “special attention” amounted to ¥13.5 trillion for all banks. The biggest obstacle has been the underprovisioning of problem loans by banks which leads to large gaps in pricing. Other difficulties include: insufficient capital to absorb further losses, banks’ close relationship with their borrowers, and expectations that collateral values will rise with an economic recovery. Low interest rates have also reduced the carry costs of these loans.

11. **Investors also face other obstacles to purchasing NPLs from banks.** Insufficient disclosure on the debtor and difficulties in crystallizing claims on collateral have complicated sales and made pricing difficult. Investors have reported that banks have been reluctant to share information about their borrowers when looking to sell their claims, particularly for loans where the borrower is still a going concern and retains a close relationship with their main bank.<sup>6</sup> In addition, buyers have reported difficulties in transferring titles and receiving the borrower’s consent for collateral sales. Although these obstacles are surmountable, they create delays and lead to large pricing gaps. Investors have also noted “vacant possession problems” associated with collateral, particularly with those linked to organized crime, and high transaction taxes and registration fees that reduce turnover in the market. The lack of a secondary market for distressed debt has also turned away potential portfolio and other fund investors from the market.

12. **Banks also face some uncertainty on the balance sheet treatment of their NPL sales, particularly if they retain some residual exposure to the final sale.** The accounting guidelines are unclear on NPL sales involving profit sharing or debt-equity swap arrangements where the bank may retain some upside potential from the final sale. As a result, banks may not be able to complete a “clean sale” and realize the tax benefit from their loan losses. Other difficulties include the lack of clear rules governing the valuation of converted equity in a debt-equity swap and corporate governance difficulties in working with shareholders in an out-of-court workout framework.<sup>7</sup> Inter-creditor issues are also a problem

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real estate properties purchased from various Japanese financial institutions and real estate companies. The issue received a AAA rating on its senior tranche and offered a fixed spread over LIBOR (35 to 200 bps). 62 percent of the investors were from Japan and non-Japan Asia, including many banks.

<sup>6</sup> Information disclosure on NPLs is not formalized in a way that for example, syndicated lending is in other markets.

<sup>7</sup> For example, in some debt-equity swaps, banks have valued the converted equity at its nominal value (i.e., no write-down) while in other cases they have marked them to market. The issue became even more clouded in 2001, when the Tokyo District Court ruled in one

as minority creditors may be wary of the involvement of the main bank in negotiating a debt restructuring agreement or sales to outside investors. However, it should be noted that these difficulties are secondary to the larger problem of underprovisioning of problem loans.

### **C. The Role of the RCC in Bank and Corporate Restructuring**

13. **AMCs have been used in a number of countries to take over the nonperforming assets of failed financial institutions and to support corporate restructuring** (Ingves 1996; 2000). By transferring these assets off the banks' balance sheets and disposing of them quickly, these AMCs have helped to restore the liquidity and solvency of weak financial institutions and confidence in the system as a whole. AMCs have also been used to create a market for distressed debt by ensuring a steady supply, stabilizing prices, and setting standards for transactions. Also by securing a high rate of recovery, AMCs can help to reduce the burden on taxpayers from the use of public funds. In some cases, AMCs have participated directly in corporate restructuring, though often with the involvement of the private sector.

14. **Cross-country experience with centralized AMCs suggest that they are better suited for rapid asset disposal than for corporate restructuring.** Klingebiel (2000) examines the experiences of seven countries with AMCs following a banking crisis.<sup>8</sup> The evidence demonstrated that the most successful AMCs were those with narrowly defined mandates. AMCs set up for rapid asset disposal, such as in Spain and the U.S., performed better than those used for corporate restructuring. Restructuring agencies had a mixed record and were constrained by the difficulties in handling many different types of NPLs which complicated wholesale disposal and required the buildup of expertise in many areas. Sweden is the exception and was successful both as the lead agent in restructuring of real estate and construction loans as well as in the rapid disposal of nonperforming assets.

15. **The RCC could help promote corporate restructuring, but its portfolio of mainly real estate collateral and its limited resources and experience suggest it should focus on asset disposal and leave the lead role in corporate restructuring to the private sector.** As banks continue to make progress in disposing of their bankrupt loans, the growth area is likely to be the market for restructuring "need attention" borrowers where the debtor is still a going concern. The RCC could support the restructuring of viable but distressed firms through joint ventures with professional workout specialists where the RCC takes a minority position (e.g., with Development Bank of Japan (DBJ) funding). Equity partnerships would help improve recovery prospects by bringing in outside expertise and leveraging the interests

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case that a bank could value its converted equity at nominal value. In June 2002, the Accounting Standards Board of Japan (ASBJ) announced that it will introduce new guidelines for debt-equity swaps by the spring of 2003.

<sup>8</sup> They include AMCs used as rapid disposal vehicles in Mexico (1994), Philippines (1981–86), Spain (1977–85), and in the U.S. (1984–91); and AMCs used as restructuring agencies in Finland (1991–94), Ghana (1982–89), and Sweden (1991–94).



of private investors. However, having the RCC as the lead agent for restructuring runs the risk of distorting commercial decisions and inviting political interference, potentially leading to the warehousing of assets, slower restructuring, and further losses.<sup>9</sup>

**16. The RCC should look to expand the market for distressed debt by purchasing NPLs from banks and disposing of them quickly to the private sector.** The RCC is entrusted with special powers that are not available to the private sector, allowing it to play a useful role even if it only acts as a broker in the market. By transferring nonperforming assets to the private sector, the RCC could help expand the market for distressed debt, clean up banks' balance sheets, and accelerate the reallocation of resources in the economy. At the same time, the RCC should look to quickly dispose of assets already on its books from both failed and open banks using a strategy that takes into account the cost of its capital and depreciation of its assets.

Specifically, the RCC could do the following:

- **With its special investigative powers, the RCC could take on difficult assets that other investors are unwilling to touch, free them of their impediments, and sell them back to the market.** The RCC could also use its legal powers to recover liabilities from managers or owners who have engaged in illegal or fraudulent activity.
- **The RCC can help crystallize claims on collateral subject to multiple liens.** When a collateralized loan is transferred, its priority claims need to be established which can sometimes be a costly and difficult process. When the RCC purchases assets, it is exempt from seeking the approval of the borrower or other lien holders for transferring the title of the asset. By bypassing this difficult step, the RCC can “clean up” difficult assets with multiple claims by crystallizing its claim and ready it for quick sale back to the market—a power not available to the private sector.
- **The RCC can help resolve intra-creditor disputes and strengthen the leverage of creditors in negotiating with debtors.** By buying up multiple credits and selling them to a single party, the RCC could help promote restructuring by securing a main creditor position against a debtor. This would also facilitate debt restructuring and equity swaps by avoiding intra-creditor disputes over pricing and debt write-offs. As

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<sup>9</sup> Expectations for the RCC to play a similar role as other centralized AMC's in taking over and restructuring banks' NPLs may not be realistic. Unlike other countries where AMC's were introduced in the midst of a financial crisis to manage the assets of failed institutions, the RCC has been called upon to act as a receiver of assets from failed institutions and as a direct buyer of NPLs from open banks. Also, as noted earlier, an active market for distressed debt already exists in Japan.

a participating creditor, the RCC could also mediate disputes among creditors helping them to reach an out-of-court agreement on a debt restructuring plan.

- **The RCC can also help expand the market for securitized NPLs.** As done in other countries, the RCC can assist investors in purchasing various credits and repackaging them for sale as a securitized asset. With its trust license, the RCC can also set up special-purpose vehicles (SPVs) that can issue and service securitized assets. By establishing pricing benchmarks and standards for securitized transactions, the RCC can help develop the market for NPL securitized assets, similar to what the RTC did in the U.S. in the 1980s. In addition to direct sales, securitization could be another tool for banks to remove their NPLs and expand their investor base to include portfolio and other investors.
- **The RCC can improve the transparency of the NPL market by setting standards for disclosure and publishing information on various assets, including on its own portfolio.** Insufficient disclosure on debt conditions has led to large pricing gaps between buyers and sellers. By setting high standards for its own disclosure and encouraging others to follow suit, the RCC can improve the flow of information in the market and help reduce uncertainty over asset quality.
- **The RCC can help sever unhealthy ties between main banks and their distressed corporate borrowers.** In instances where the main bank may have a long-standing relationship with the borrower, it may be reluctant to sell its problem loans out of fear of damaging its trust relationship and reputation. By buying these loans and selling them to another party, the RCC can help sever those close ties that impede restructuring and improve the chances for loan recovery.

#### **D. Specific Recommendations for Strengthening the RCC**

##### **Mandate of the RCC**

17. **For the RCC to operate effectively, its public mandate should include not just collection but also maximizing recovery within a fixed period of time.** To help the RCC move away from its historical role as a collection agency and enhance its commercial orientation, the government should give the RCC the clear mandate to manage its assets with the objective of maximizing recovery within a fixed period of time (e.g., within two years upon purchase). This would also help expedite the disposal of assets already on its books. Attaching objectives outside the RCC's core mandate, such as recapitalizing banks through the transfer of overvalued assets or assisting in the revitalization of distressed firms, runs the risk of undermining its effectiveness at achieving its main purpose.

##### **Purchase Price and Asset Selection**

18. **The RCC's mandate to purchase NPLs at realistic and fair market prices is appropriate.** Market valuation promotes transparency and creates the right incentives for the RCC and banks to restructure loans or to seek out bankruptcy or liquidation procedures. Some have called for the RCC to purchase impaired assets at above market prices as a way of

encouraging banks to part with their nonperforming assets. Although purchases at a higher-than-market price, e.g., net book value, would make it more attractive for banks to sell to the RCC, it would send the wrong signal to banks, rewarding those that have made less progress in recognizing loan losses and encourage inadequate provisioning. “Backdoor” recapitalization also hides the true cost of public funds and may undermine the commercial goal of the RCC.

19. **To encourage banks to part with their impaired assets, the RCC could explore the use of profit-sharing arrangements.** This would allow banks to share in any upside potential and avoid potential criticism of selling assets at fire sale prices.<sup>10</sup> Given the difficulty in pricing nonperforming assets, profit-sharing arrangements may also help accelerate NPL sales and narrow the pricing gap by allowing banks to avoid lengthy haggling over pricing issues. Other ways to entice banks to sell would include allowing banks to retain a portion of the equity following a debt-equity swap or to hire banks as the servicing agent for the loan.

20. **The requirement of Prime Ministerial approval for the pricing of individual NPLs should be lifted.** Although this responsibility has been operationally delegated to the FSA and approval has so far been smooth, the requirement of PM approval limits the flexibility of the RCC to adjust its prices quickly during negotiations. The requirement of PM approval also runs the risk of outside interference, particularly over assets that may be considered politically sensitive. Granting the RCC more independence in its decision-making and allowing it to operate at “arms length” from other government ministries would help the RCC to be more effective at asset disposal and raise its credibility with the markets.

### **Asset Management and Disposal**

21. **To ensure against the warehousing of assets, the RCC should adopt a well-defined strategy for disposing of its assets that takes into account the cost of its capital.** Other AMC's have adopted clear and simple strategies to maximize recovery and protect against losses in disposing of their assets. They include:

- **Sweden's Securum** adopted a simple rule that real estate would be sold if the projected property price increase was less than the real cost of holding onto the assets. This method resulted in rapid pace of disposal (98 percent in 5 years) helping the agency to conclude its operations 5–10 years ahead of schedule (Ingves 1996; 2000).
- The main goal of the **U.S. Resolution Trust Corporation (RTC)** was to maximize the return and minimize the loss of the assets it had acquired from failed S&L institutions. It adopted a NPV approach that helped avoid the warehousing of assets and reinforced the important notion of the time value of money. The RTC was set up

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<sup>10</sup> For example, Danaharta in Malaysia incorporated profit-sharing in some of their contracts which allowed banks to retain 80 percent of any profit realized from the final sale.

in 1989 and finished operations in 1995, one year earlier than planned, and recorded an overall recovery rate of 87 percent (FDIC 1998).

- In Korea, the **Korea Asset Management Company (KAMCO)** was a centralized AMC organized in 1997 to manage the disposal of nonperforming assets acquired from both failed and open financial institutions. From 1997 to March 2002, it has purchased \$31 billion in nonperforming assets at a face value of \$81 billion. KAMCO has used a variety of methods to dispose of its assets including auctions, outright sales, equity partnerships and securitization. KAMCO announced that it will cease purchases in November and sell its remaining assets within two years.

22. **A simple rule whereby assets should be sold if the estimated return after restructuring falls below its carry cost using a real discount rate linked to the RCC's cost of capital (i.e., the interest-rate on DIC-issued bonds) could be applied to the RCC's entire portfolio.** Although in the current low-interest rate environment, the nominal carry cost may be low, the real cost is much higher after accounting for continued deflation and depreciation. Based upon this simple rule, real estate and other assets with high rates of depreciation should be sold first. To enhance its accountability, the RCC should adopt time-bound performance targets for disposing of its assets and conduct a review of its loan portfolio. These targets could include face value amounts to be sold and methods for disposal (e.g., by auction, securitization, etc.).

23. **To be more flexible, the RCC should focus on the return of its overall portfolio and not on returns on individual transactions.** This would encourage the RCC to cut its losses on assets where the recovery prospects are minimal and instead shift its resources to assets that have greater potential for recovery. To boost returns and strengthen its activities, the RCC should end its practice of passing on earned profits back to companies in the form of debt waivers and instead use these earnings to restructure or invest in assets. Separating the RCC's performance under its new mandate from its old collection responsibilities may free the RCC from the burden of previous losses on assets that may have been acquired from failed institutions at overvalued prices.<sup>11</sup>

### **Organizational Structure and Governance**

24. **To be effective, an AMC should have a governance structure that supports its stated mandate.** AMCs should be transparent and independently operated, and possess an incentive structure consistent with its goals. Outside interference in the operations of the AMC, such as in the selection and pricing of assets, runs the risk of undermining its credibility and commercial orientation. Cross-country experience has shown that AMCs with

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<sup>11</sup> However initially, the RCC may wish to accept lower returns and dispose of assets quickly in order to jumpstart the market for NPLs. This may mean at first accepting lower rates of return in order to demonstrate that money can be made by both banks and investors and expand the market.

clearly defined goals and supporting governance structures were more effective in carrying out their functions.

25. **The RCC would benefit from having greater operational independence.** In addition to removing the requirement for PM approval on pricing decisions, the government should consider other ways of enhancing the RCC's independence and protecting it from political pressures, particularly from vested interests. One way would be to appoint outside directors from the private sector to serve on the RCC's board; these outside directors could also bring valuable restructuring experience to strengthen the RCC's function. Another possibility would be to adopt a holding company structure as was done in Sweden with different units specializing in particular asset types and disposal activities or to make the RCC an independent entity separate from other government agencies with its own operating budget. The government would still be the sole owner and shareholder, but unlike other agencies, the RCC would have more independence and latitude in fulfilling its mandate.

26. **The RCC should improve its transparency and disclosure.** Greater transparency of the RCC's operations would help promote directorial and managerial accountability. In addition to its annual financial statements, the RCC should publish regular reports describing its progress in meeting its benchmark targets as well as general information on its portfolio.<sup>12</sup> Its financial statements should be published (including on the internet), and an internal audit procedure be put in place.

27. **The RCC should utilize the help of the private sector in restructuring nonperforming assets.** Given its history as a collection agency and experience mainly with real estate assets, the RCC could benefit from the experience of private sector restructuring experts in the pricing and disposition of nonperforming assets.<sup>13</sup> As banks look to sell different types of assets, including those as going concerns, and the market for distressed debt expands, the RCC will need to build up the necessary expertise to keep up with changes in the market.

28. **Finally in order to ensure against the warehousing of assets, the RCC should consider announcing a time limit for its operations.** If ultimately successful, the RCC should no longer need to exist in its present form. Other AMCs, such as in the U.S. and Sweden, announced at the outset deadlines for their eventual liquidation. A time-bound limit would also encourage banks to use the RCC as quickly as possible to dispose of their unwanted assets. Over time the activities of the RCC could be sold back to the private sector allowing the RCC to eventually return to its original function of managing the distressed assets of failed financial institutions.

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<sup>12</sup> For example, the RCC should publish information not only on collection, but also on the recovery rates on its resolved assets to emphasize its commercial orientation.

<sup>13</sup> The U.S. RTC also relied predominantly on private sector firms to evaluate and market its loan portfolio which boosted the credibility of its valuation methodology (FDIC 1998).

## E. Strengthening the Market for Distressed Debt

29. **Apart from the RCC, a number of other complementary reforms are needed to strengthen the market for distressed debt.** Looking ahead, it is likely that banks will begin to look more to the private market (and the RCC) for help in handling their nonperforming assets.<sup>14</sup> To ensure that these assets are handled properly, the government should look for ways to strengthen the framework for managing distressed assets and ensure that the right incentives are in place for meaningful restructuring. To address some of the weaknesses described earlier in the paper, the following steps could be taken to strengthen the market for distressed debt.

- **Any tax obstacles to the transfer of NPLs should be removed.** For example, the government should clarify the tax treatment on losses arising from debt-equity swaps or NPL sales and remove any tax impediments that may hinder banks from selling or transferring their NPLs.
- **Conditions for obtaining the borrower's consent for collateral sales should be eased.** Although this has not been a problem for investors purchasing loans to bankrupt borrowers, investors reportedly face difficulties in transferring title ownership on collateral when the owner is still a going concern and has maintained a close relationship with its bank. Easing the conditions for selling collateral and clarifying further the distribution of collateral rights would help raise turnover in the real estate market and facilitate the transfer of nonperforming assets from the banks.
- **The regulatory and accounting framework for conducting debt-equity swaps and setting up AMC subsidiaries should be strengthened.** In particular, the guidelines for valuing converted equity in a debt-equity swap should be clarified. To create the proper incentives for restructuring, converted equity should be valued conservatively and any debt transferred to an AMC subsidiary should be marked-to-market. Allowing banks or other financial institutions to transfer debt at nominal values or to convert equity at overvalued prices runs the risk of hiding losses, overstating capital, and reducing the incentives for restructuring.
- **Greater transparency and disclosure would help expand the market and improve pricing.** Insufficient disclosure by borrowers and by creditors, particularly on asset quality, to potential buyers has led to pricing difficulties adding to the premium in the market. Greater disclosure on debt conditions would reduce the need for lengthy due diligence, improve price discovery, and encourage more investors to come into the market.

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<sup>14</sup> For example, banks reportedly have expressed interest in establishing AMCs with private investors to manage their own distressed assets.

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### III. CORPORATE RESTRUCTURING AND STRUCTURAL REFORMS<sup>1</sup>

#### A. Reform Framework

1. **While following through with the reform agendas set forth by preceding administrations, the Koizumi government has drawn out broader plans to advance the structural reform process over the past year under the principle of “no gain without reform.”** Marking a departure from past administrations where prescriptions against slow growth centered on fiscal stimulus, the new government has tried to show its determination to address more deep-rooted structural issues to stimulate private sector activity and boost potential growth. To this end, the Prime Minister has launched through the Council on Economic and Fiscal Policy (CEFP) a wide-ranging structural reform agenda and a timetable binding the implementation of these measures.

2. **Against this background, this chapter describes the progress over the past year in corporate restructuring and structural reform.** The next section provides an overview of developments in corporate restructuring and the new framework to support such efforts. The following two sections describe the progress made in areas of IT promotion and labor market reforms, which are both critical to Japan’s economic growth going forward. The last two sections discuss initiatives taken to advance regulatory and administrative reforms.

#### B. Developments in the Corporate Sector

3. **Progress with corporate restructuring has been mixed, as firms continue to suffer from high levels of excess labor, fixed assets, and debt** (Figure III.1). The share of firms reporting excess labor and capacity increased during last year’s recession; firms, however, continued to reduce their reliance on debt during the year. The number of merger and acquisition (M&A) cases continued to increase in 2001 (Figure III.2), facilitated by recent reform measures including: the phased shift to consolidated accounting and mark-to-market standards (FY1999–2001); enactment of the Civil Rehabilitation Law (CRL) allowing prompt sale of debtors’ operations (2000); streamlining of merger processes (1998); and the introduction of equity swaps (2000). The value of M&As in 2001, however, fell by 47 percent, partly reflecting the increased participation of new and small firms, and the absence of cases involving large foreign firms observed in previous years.

4. **A framework is now in place to support corporate restructuring efforts.** The introduction of the CRL in April 2000 provides an effective avenue for court-led corporate reorganization allowing a debtor-in-possession (DIP) procedure, similar to Chapter 11 in the U.S. (see Box III.1).<sup>2</sup> The average time to finalize rehabilitation plans has been reduced to

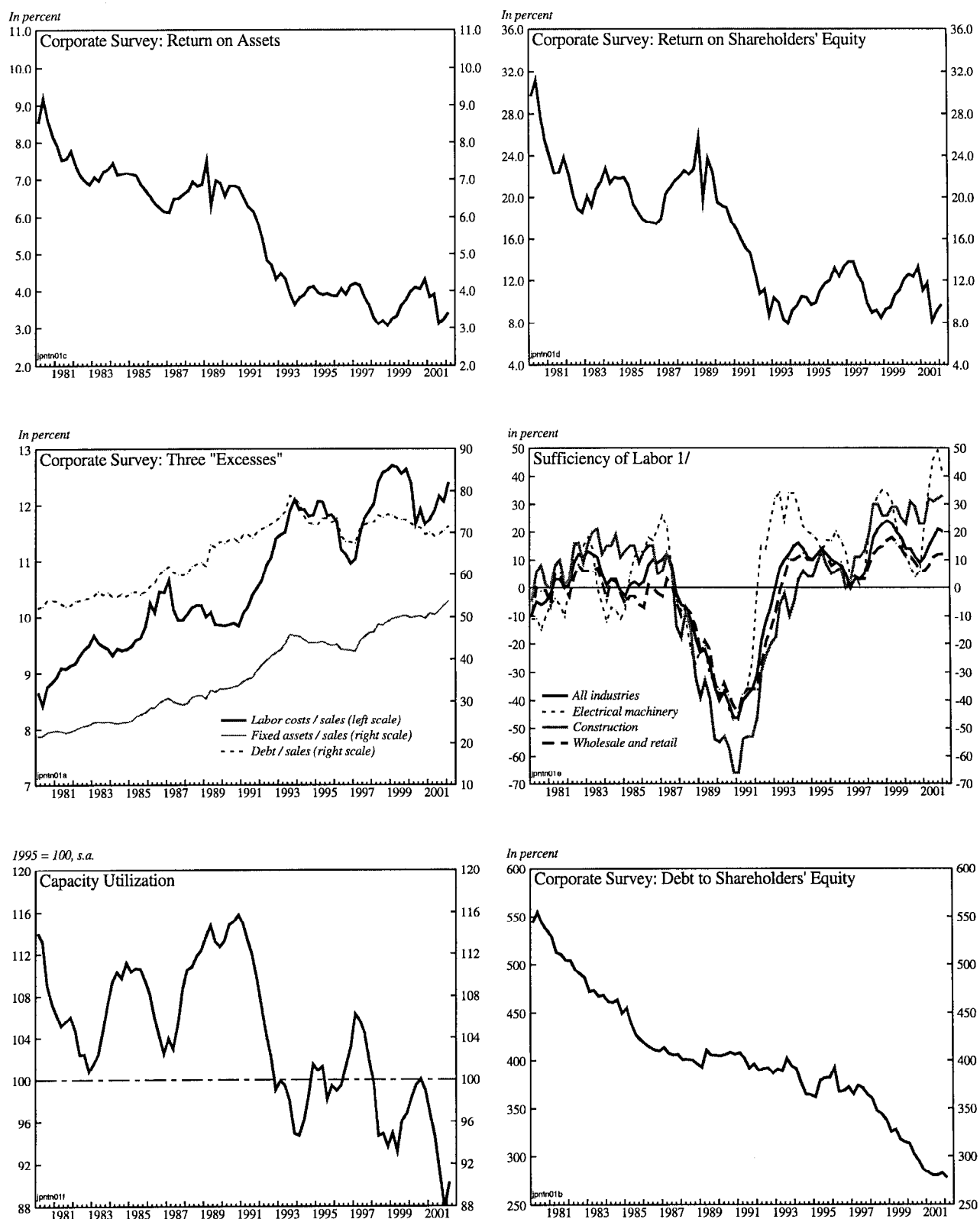
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<sup>1</sup> Prepared by Takashi Nagaoka (ext. 37613).

<sup>2</sup> For corporate workouts, those undertaken out-of-court declined substantially to 72 percent in FY01 from over 83 percent in FY99, while the share of court-led reorganization procedures increased to over 5 percent from below 1½ percent over the same period; the remainder went to liquidation (Teikoku Databank).



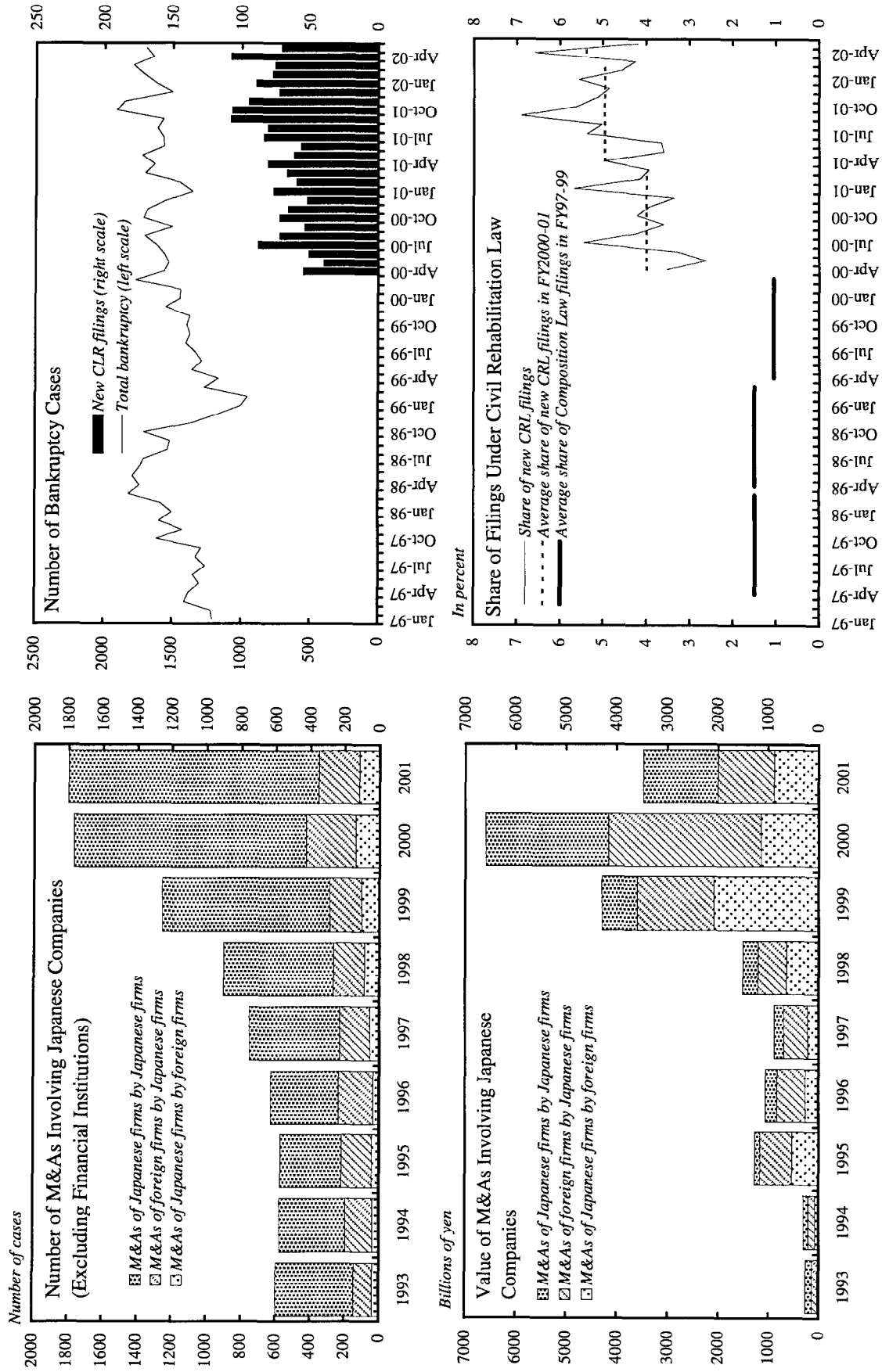
Figure III.1. Japan: Selected Indicators of Business Conditions, 1980-2002



Sources: Nikkei Telecom; Bank of Japan; Ministry of Finance; and staff calculations.

1/ Percent of excess minus percent of insufficiency.

Figure III.2. Japan: M&As and Bankruptcies



Sources: Teikoku Databank, Ltd.; Nomura Securities Co., Ltd.; and Merrill Lynch Japan, Inc.

### Box III.1. Insolvency Framework

The insolvency regime in Japan has been substantially strengthened over the past few years.<sup>1</sup> The introduction of the Civil Rehabilitation Law (CRL) in April 2000—similar to the U.S. Chapter 11—was significant as it brought in a DIP approach to the reorganization procedure, while substantially expediting the process. The Corporate Reorganization Law will be revised in a year's time to streamline the current strict and time-consuming procedures. It is hoped that improvements in the legal framework, along with changes in the business practice and corporate governance, will encourage earlier filings and thus increase the possibility of successful reorganization.<sup>2</sup>

#### Comparison of Legal Framework for Reorganization

	U.S. Bankruptcy Code: Chapter 11 (1978)	Civil Rehabilitation Law (1999)	Corporate Reorganization Law	
			Current version (1951; revised 1972)	Proposed revision (2002)
Primary target	• All corporations and individuals (excl. railroad, insurance and financial firms).	• All corporations and individuals (mainly SMEs).	• Equity corporations only (mostly large firms).	• Lower hurdles for smaller firms (via reduction in cost, etc.).
DIP provisions	• Debtor management may stay in position. • Creditors may change the management.	• Debtor management may stay in position. • A trustee may be appointed by the court, if necessary.	• Debtor management loses all mgmt. rights. • A trustee is appointed to hold mgmt. powers.	• Directors of the debtor management may be appointed trustees (quasi-DIP).
Petition	• Both debtor and creditors (under certain conditions) may file petition.	• Both debtor and any creditors (under certain conditions) may file petition.	• Both debtor and large creditors (under certain conditions) may file petition.	
Conditions for petition	• Firms need not be insolvent (certain conditions apply for involuntary petition).	• Firms/persons in danger of insolvency or with serious cash flow shortage.	• Firms in danger of insolvency or with serious cash flow shortage.	
Stay against claims and execution of secured credit	• Automatic stay at the time of petition.	• Secured claims can be executed at any time. • The court can grant temporary stay against secured claims once the procedure begins (the court's stay order prior to the procedure is a prerequisite). • The claim can be offset by paying court-designated value of the collateral.	• Automatic stay once the procedure begins (the court can order stay prior to the procedure).	
Filing of plans	• Debtor has exclusive right to present a plan (120 days after filing).	• Both debtor and creditors may present a plan.	• Both debtor and creditors may present a plan.	
Voting on plans	• Voting by class. • 1/2 by number and 2/3 by claim. • Court can "cram down" junior creditors.	• Voting by one class (only unsecured creditors). • 1/2 by number and by claim.	• Voting by class. • Qualified majority (secured: 4/5; other: 2/3; shareholders: 1/2 (by claim)). <sup>3</sup>	• Voting by class • Qualified majority (secured: 3/4; unsecured: 1/2 (by claim)). <sup>3</sup>
Shareholders	• Can attend the procedure if the firm is not insolvent. • Deviation from absolute priority rule in certain cases.	• Cannot attend the procedure. • Shareholders' consent not needed to make certain changes to capital structure (when debtor is insolvent).	• Can attend the procedure if the firm is not insolvent. • Absolute priority rule applied to shareholders in case of excess debt.	
Sales of operation	• Not allowed outside reorganization plans in principle.	• Possible even before the finalization of rehabilitation plans, with court's approval.	• Not allowed outside reorganization plans in principle.	• Possible before the finalization of reorg. plans, with court's approval (cf., CRL).
Priority of DIP financing	• Super priority.	• Ranked as an administrative expense, like compensation of trustees, etc.	• Ranked as an administrative expense, like compensation of trustees, etc.	
Time to finalize plans		• About 7 months.	• About 2–3 years.	• About 1 year (proj.).

Sources: Levy (2000); Matsushita (2001); Takagi (2001); World Bank (2001); Yamamoto (2000); Yamamoto and Ueno (2000).

<sup>1</sup> The court-led system has three procedures for reorganization—corporate rearrangement (Commercial Code), corporate reorganization (Corporate Reorganization Law), and civil rehabilitation (CRL)—and two for liquidation—straight bankruptcy (Bankruptcy Law) and special liquidation (Commercial Code). The need for the overhaul arose since the system has long been out of date (three of them even go back to pre-WWII period). Following the amendment of the corporate reorganization, corporate rearrangement is likely to be repealed in a couple of years, while special liquidation will be remodeled into a special track for straight bankruptcy.

<sup>2</sup> Traditionally, application for reorganization had been delayed by factors such as: the use of promissory notes; banks' overdependence on land mortgage and weakness in monitoring cash flows; the lack of DIP procedures (former Composition law provided for a DIP procedure, but it was considered ineffective); corporate governance favoring employees rather than shareholders; and the social stigma against declaring bankruptcy.

<sup>3</sup> For secured creditors, 3/4 (2/3 after revision) by claim to extend the maturity of debt, 4/5 (3/4 after revision) by claim to reduce the amount of debt, and unanimity (9/10 after revision) for liquidation of the debtor, are needed.

seven months, compared to 2–3 years for the more stringent procedures under the Corporate Reorganization Law. Over 1,000 firms filed petitions under the CRL in FY2001, while the success rate of rehabilitation plans was 12¾ percent; this compares to a success rate of around 10 percent under Chapter 11 in the U.S. Meanwhile, the guidelines for multi-creditor out-of-court workouts for debtors with multiple financial creditors and complex debt-claim relationships has attracted only four cases since its introduction in September 2001. Some firms utilized the Industrial Revitalization Law (IRL) to restructure their operations to concentrate on their core businesses.<sup>3</sup> Forty-five firms applied for the support available under the IRL in 2001; particularly for the tax benefits (e.g., the extended period of loss carry over and the reduction in registration and license taxes).

5. **A number of policies to support entrepreneurs have improved the environment for business startups.** To improve access to capital for startups, an “Angel Tax” system was expanded in 2000 to offer substantial tax incentives for investors in small startups, while the launch of two new stock exchanges has lowered the hurdles for IPOs.<sup>4</sup> However, earlier momentum in business startups appears to have subsided with the global IT slowdown.

6. **New legislation is expected to accelerate the corporate restructuring process and improve corporate governance.**

- A review of the **Corporate Reorganization Law** is underway in the context of a broader overhaul of the insolvency system. Reforms that are expected next year will streamline court procedures, shorten the time before reorganization plans can be finalized, and reduce the cost for filing an application. Restrictions on DIP reorganization will be eased, while the requirements for qualified majority of creditor votes in reorganization proceedings will be relaxed (for example, for unsecured creditors, the qualified majority will be reduced to more than a half instead of two-thirds). The revision is expected to provide an effective reorganization option for firms with complicated creditor relationships.
- A series of revisions to the **Commercial Code**—including the introduction of equity swaps (2000) and corporate splits (2001), the removal of restrictions on “treasury stocks” (2001), and the relaxation of the use of stock options (2002)—have reduced impediments to corporate restructuring and created a more conducive environment for good corporate governance. The most recent revision to allow firms to adopt a US-type structure with outside board members is expected to increase the voice of outside

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<sup>3</sup> The deadline for application under the IRL scheme is set at the end-March 2003.

<sup>4</sup> Mothers (Market of the High-growth and Emerging Stocks) was introduced in 1999 by the Tokyo Stock Exchange and Nasdaq Japan in 2000 by the Osaka Stock Exchange. JASDAQ has been in existence since 1963. The average time between establishment and IPO has been reduced significantly to 14¾ years in early 2002 compared to over 30 years in mid-1990s.

stakeholders, thus reorienting firms' business goals toward a greater focus on the interests of equityholders.

### C. IT Promotion

7. **IT penetration has continued to increase over the past year, while policy measures have continued to focus on improving competition in the IT sector.** Steps have been taken to improve the IT network and to promote greater IT usage following the government's e-Japan Priority Policy Program in March 2001. This program set the ambitious target of making Japan a leading IT country by 2005.<sup>5</sup> For example, IT-related legislation has been amended to foster greater competition, including by imposing restrictions on NTT's monopolistic power, and formulating guidelines to apply the Anti-Monopoly Act in IT-related cases. Also, NTT-owned lines have been unbundled to facilitate new entrants into the tele-

communications sector as part of efforts to reduce high costs. In addition, regulations on the use of power posts and public space for network construction were eased to enable the expansion of the network infrastructure. Subsequent competition has lowered telecommunication costs and boosted the number of Internet subscribers. The size of e-commerce has also grown

rapidly, although in absolute terms it remains small compared to other countries (Table III.1). The MPHPT (2002) estimates that the e-Japan Priority Policy Program will boost productivity, push up Japan's potential growth rate by 0.5 percentage points per annum, induce an additional ¥36½ trillion of production, and create 1.85 million new jobs.

8. **The government plans to strengthen its efforts to advance its basic strategy in the IT sector.** A draft was released for public comments to renew the e-Japan Priority Policy Program. It aims to expand the IT network to create easy access for the entire nation; strengthen the economy's structure and competitiveness through dynamism resulting from the use of IT; enable provision of remote services, including in the areas of education and healthcare; and increase Japan's ability to lead innovation in the field of IT, both by improving domestic education in the IT area and by accepting experts from abroad.

Table III.1. Improvement in IT Usage, 2001

	1999	2000	2001
Internet penetration (in percent) 1/	21.4	37.1	44
International ranking	13	14	16
Internet connection in public schools (in percent) 2/	57.4	81.1	100
Internet connection fee for ADSL (in yen) 2/ 3/		6,000	2,500
Market size of e-trade (in trillion yen) 1/			
B to B		22	34
B to C		0.8	1.5

Source: IT Strategy Headquarters.

1/ As of end-CY.

2/ As of end-FY.

3/ Excluding the one-off initiation fee; in yen.

<sup>5</sup> Callen and Nagaoka (2001) discuss the issue of IT usage in more detail.

#### D. Labor Market Reform

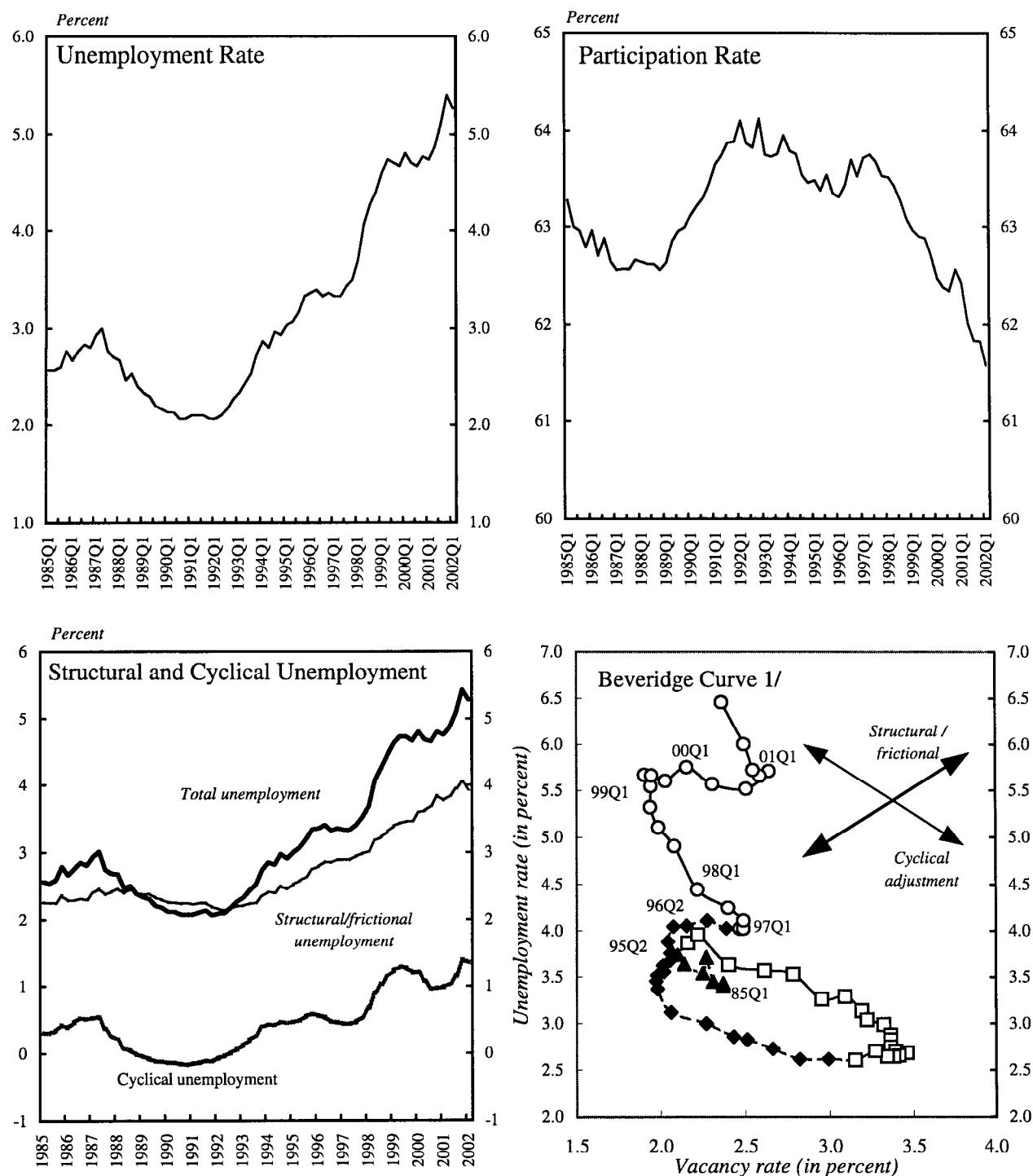
9. **Given the rise in unemployment over the past year, recent labor market policies have primarily focused on providing immediate support for employment, although the pursuit of reforms to increase labor mobility has continued.**

- The **unemployment rate** has increased over the past year, reaching a record-high of 5.6 percent in December 2001, although more recently it has declined to 5.2 percent (Figure III.3). In addition to the increase in cyclical unemployment, structural unemployment has remained high due to the mismatch in the labor market. While the traditional labor practices of lifetime employment and seniority-based wage and promotion systems in large companies hinder the re-employment of older workers, the gradual departure from this system in an increasing number of companies has been one factor pushing up unemployment in the short run.
- A number of **safety net measures** have been introduced since last fall. Contents of a September package “Comprehensive Employment Measures” became effective in January 2002. These temporary measures included: upgraded training support for unemployment benefit recipients; employment subsidies to SMEs contributing to job creation; and the extension of the job-dispatching period for older workers (up to 3 years, compared to up to 1 year for younger workers). The first FY01 supplementary budget—passed in November 2001—financed the bulk of these measures, including by providing ¥350 billion (over 3 years) for local governments to create temporary public jobs in areas of security, teaching assistance, and forestry. The FY02 budget contained budget allocations for improving training programs and providing subsidies to firms hiring certain groups of unemployed workers. The government has also mediated tri-party discussions on work sharing, but there has been little interest to date in actually using such arrangements.
- Steps have been taken to increase **labor mobility** to address the current jobs mismatch and to enhance the efficient reallocation of labor in the medium-term. These measures include an improved information sharing system on job offers and the relaxation of restrictions on private job placement and job-dispatching services. A broader review of current labor laws is also being proposed, including a focus on fixed term labor contracts (which at present have a maximum duration of 1 year in principle), restrictions on the type of industries job dispatching services can operate in, age-discrimination, and fee-based job-placement services. Reforms in pension and other social security systems are expected to make them less restrictive to female workers, while the portability of pensions is expected to be increased to improve labor mobility.<sup>6</sup>

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<sup>6</sup> 105 companies have adopted the 401-(k) style pension scheme over the 8 months since its introduction in October 2001. 60 percent of them are SMEs, and 40 percent had no pension scheme prior to the adoption of the new scheme.

Figure III.3. Japan: Employment Conditions, 1985-2002



Sources: Ministry of Public Management, Home Affairs, Posts and Telecommunications; Ministry of Health, Labour and Welfare; and staff estimates.

1/ Definition of the unemployment rate here excludes the self-employed from the workforce.

## E. Regulatory Reform

10. **A newly launched Council for Regulatory Reform (CRR) has taken a comprehensive and strategic approach to regulatory reform and expanded the coverage to social regulations which had lagged behind other areas.**<sup>7</sup> A far-reaching and time-bound agenda in the CRR's report in December 2001 covered 15 areas, with a primary focus on six—healthcare, social welfare, human resources, education, environment, and urban renaissance.<sup>8</sup> Specific recommendations included measures with potential to promote competition in new industries, such as introducing equity corporations in hospital management, allowing private sector involvement in the nursing care and daycare sectors, and creating “land revitalization special zones.”

11. **The actual implementation of the regulatory reform agenda has basically followed the three-year regulatory reform program (FY01–03) set out in 2001.** The revision to the program at end-FY01 increased the number of measures covered to 964 (an increase of 230 items), fully reflecting those recommended by the CRR in December 2001. New measures included the easing of regulations on shareholding by large companies; partly liberalizing legal services; promoting equity firms' entry in agriculture; further liberalizing the retail market in electricity; and relaxing regulations on truck transportation fees. Around 80 percent of the reform measures listed on the revised program have been started over the past year. However, they are likely to remain somewhat “piecemeal,” given strong resistance from vested interests.

## F. Administrative Reform

12. **Following the reorganization of the central government in January 2001, the government has taken further steps along the administrative reform outline of 2000.** These measures are aimed at reducing the public sector's role in the economy and improving the efficiency and quality of public services, including the following:

- Although it fell short of earlier expectations, a plan for **public enterprise reform** released in December called for either the closure or privatization by end-FY05 of over half of the public corporations reviewed.<sup>9</sup> A third-party committee will discuss

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<sup>7</sup> The Council succeeded the role of the Commission for Promoting Regulatory Reform in April 2001, and became the central force in discussing regulatory reform measures and strategy. It comprises 15 members from business and academic fields.

<sup>8</sup> The 9 other areas are: competition policy, judiciary system, financial system, distribution, agriculture, energy, transportation, standards and certification, and streamlining of administrative processes.

<sup>9</sup> There are 163 such corporations—77 *tokushu-houjin*, established through special incorporation processes by the government to serve special purposes in the law, and 86 *ninka-houjin*, established by the private sector to serve special purposes with government  
(continued)



details to privatize 4 road-related corporations by year-end.<sup>10</sup> The operation and organization of 8 government financial institutions (GFIs) will be reviewed by the CEFP.<sup>11</sup> Large reductions in budgetary support and FILP financing in FY02 will also pressure the public corporations to improve efficiency.

- In the context of administrative reorganization of January 2001, the **Postal Services Agency** will become a public corporation in FY03. The bill on the transformation requires the new corporation to pay the equivalent of deposit insurance premiums and corporate taxes so as to level the playing field with the private sector. Related legislation includes partial liberalization of the mailing service, although with stringent conditions.<sup>12</sup> The Prime Minister characterized the change as the first step toward privatization of the postal system, although there is strong opposition to this from within the LDP.
- The operations of **authorized non-profit organizations** (NPOs) that unjustifiably restrict private sector activity or fail to use public funds efficiently will be discontinued or downsized.<sup>13</sup> A reform proposal in December 2001 identified 117 such cases, and action plans were finalized at end-FY01.
- Legislation introduced in June 2001 mandated **performance reviews** of government policy measures in an effort to improve the efficiency of policies, while steps are being taken to enhance transparency of the public sector's financial information.
- The Cabinet's December 2001 reform outline on the system governing **public servants** proposes to introduce a performance-based system for promotion and wages by FY06, while strengthening the training system and easing requirements for hires

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authorization. 118 of these 163 were reviewed (45 Mutual Aid Associations, which do not implement the national government's policy, were excluded).

<sup>10</sup> The four corporations are: Japan Public Highway Corporation, Metropolitan Expressway Public Corporation, Hanshin Expressway Public Corporation, and Honshu-Shikoku Bridge Authority.

<sup>11</sup> Out of 9 GFIs, the Government Housing Loan Corporation will be abolished, although some of its operations will be succeeded by an independent administrative agency.

<sup>12</sup> These conditions include requiring new entrants to place about 100,000 mail posts across the country and acquire the MPHPT's approval on business plans for nationwide operation. A leading courier, Yamato, announced in late April 2002 that it would not enter the personal letter mailing service under such conditionality which it saw as re-regulation.

<sup>13</sup> About 26,000 non-profit organizations operate for public purposes as *koeki-houjin*, eligible for preferential tax treatments. About 1,000 of them, which are subject to review, operate as agents for the government based on relevant laws, with some receiving budgetary transfers.

from the private sector. Also, a large net reduction in the number of public servants is underway, with a 25 percent reduction targeted over the 10 years to FY2010.

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## IV. TRADE POLICY AND ECONOMIC ASSISTANCE<sup>1</sup>

1. **Japan's trade and economic assistance policies have remained broadly unchanged over the past year.** Japan has generally low tariff rates on industrial products, although protection remains high for agricultural products. Japan has continued its general stance of seeking to advance global trade liberalization under the WTO's multilateral framework, while also pursuing bilateral and regional arrangements that foster increased economic cooperation. Japan continues to make a large contribution to the international efforts to assist developing countries.

### A. Trade and Investment Policy

2. **Tariff rates are generally low in Japan, although barriers to trade remain in certain areas.**<sup>2</sup> At 6½ percent, Japan's average tariff rate is low by international standards, falling between those of the U.S. and E.U. (Table IV.1). Low duties on industrial products, together with some deregulation of domestic markets, have resulted in a steady increase in imports of industrial products over the past decade, in particular textiles and electric machinery (Figure IV.1).

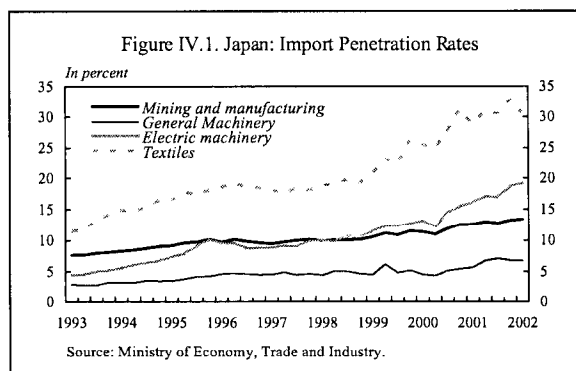
Table IV.1. Japan: Simple Average Applied Tariffs, 2000			
	Japan 1/	U.S. 2/	E.U. 2/
	(In percent)		
Total	6.5	5.7	6.9
WTO agriculture	18.2	11.0	17.3
WTO non-agriculture 3/	4.0	4.7	4.5
Petroleum	6.5	2.3	2.9

Source: WTO Annual Report, 2001.

1/ As of 2000.

2/ As of 1999.

3/ Excludes petroleum.



3. **However, the level of protection on agricultural products is relatively high.** Tariffs on agricultural products remain generally high, especially in the case of non-*ad valorem* duties. While non-*ad valorem* duties are only applicable to 6.9 percent of all lines, many of them are agricultural products (WTO, 2000). *Ad valorem* equivalents of such duties could reach over 980 percent (based on 1999 figures). Also, where tariff rate quotas are applied, out-of-quota duties could be very high. For example, the *ad valorem* equivalent of tariffs levied on rice imports over quota is about 400 percent (USTR, 2002). Overall agricultural protection is high by OECD standards (Table IV.2). Despite the intention to shift from price- to income support, protection has concentrated on production distorting forms such as market price supports and payments based on output. The major justification

<sup>1</sup> Prepared by Takashi Nagaoka (ext. 37613).

<sup>2</sup> The IMF's overall trade restrictiveness rating for Japan stands at 4 (1–4 out of 10-point scale is considered "open"), with the restrictiveness of tariff rates and non-tariff barriers categorized as "open" and "moderate," respectively. This is identical to the U.S.

provided for such protection is the concern about the low self-sufficiency rate for food products (at 40 percent, Japan's self-sufficiency rate is among the lowest in the OECD).

Table IV.2. Japan: Support on Agricultural Products					
	1986-88	1999-2001	1999	2000	2001
	(In percent)				
PSE 1/					
Japan	62	60	61	61	59
European Union	42	36	39	34	35
United States	25	23	25	22	21
OECD	38	33	35	32	31
CSE 2/					
Japan	-58	-54	-56	-54	-53
European Union	-39	-31	-38	-28	-27
United States	-7	0	-2	3	0
OECD	-33	-26	-30	-25	-24
TSE 3/					
Japan	2.4	1.5	1.5	1.4	1.4
European Union	3.1	1.8	1.9	1.7	1.7
United States	1.4	1	1.1	0.9	0.9
OECD	2.3	1.3	1.4	1.3	1.3

Source: OECD (2002).

1/ Producer support estimate i.e., gross transfers from consumers and taxpayers to agricultural producers arising from agricultural policy measures as a percentage of gross farm receipts.

2/ Consumer support estimate; i.e., gross transfers to (from) consumers, arising from agricultural policy measures, as a share of expenditure at the farm gate. If negative, it measures the implicit tax on consumers.

3/ Total support estimate i.e., gross transfers from taxpayers and consumers arising from agricultural policy measures, net of the associated budgetary receipts as a share of GDP.

4. **Japan has few non-tariff border measures, but a number of institutional features continue to present barriers to trade.** While noting that there are a limited number of non-tariff border measures, such as import prohibitions, import licensing, and quantitative import restrictions (e.g., for fish and silk), the WTO (2000) highlighted that, where applied, the import quota system can be complex. Despite some improvements, market regulations, time-consuming application processes, private sector distribution practices, and unique standards and certification requirements remain hindrances to trade.

5. **FDI in Japan has remained low.** While gross inflows have risen on the back of global industrial reorganization and substantial liberalization over the 1990s, annual inflows of FDI as a share of GDP remain very low (Table IV.3). In addition to the shortage of investment opportunities in current economic circumstances and high cost

Table IV.3. Japan: Inward Foreign Direct Investment, 1995-2001							
	1995	1996	1997	1998	1999	2000	2001
	(In percent of GDP)						
FDI flows							
Japan	0.0	0.0	0.1	0.1	0.3	0.2	0.1
United States	0.8	1.1	1.3	2.0	3.2	2.9	1.5
United Kingdom	1.9	2.3	2.8	5.2	6.0	8.4	3.8
Germany	0.5	0.3	0.6	1.1	2.7	10.1	...
FDI stock							
Japan	0.6	0.6	0.6	0.7	1.0	1.1	...
United States	13.6	15.7	19.7	24.8	30.3	27.7	...
United Kingdom	20.0	21.8	21.6	25.0	28.6	31.9	34.9
Germany	4.1	4.3	8.9	11.7	13.1	22.6	...

Sources: IFS; WEO; and staff calculations.

structures, the complexity and insufficient transparency of the administrative/regulatory process (including excessive use of administrative guidance) is a hindrance to inward FDI.<sup>3</sup>

## **B. Regional and Multilateral Initiatives**

6. **Japan continues to be actively involved in trade liberalization talks in the new WTO round launched in November.** Among the areas in the broad-based Doha Development Agenda, Japan has particular interest in strengthening anti-dumping rules to address potential abuse of these measures; establishing FDI rules that ensure greater transparency, stability, and predictability; and maintaining trade-related environmental protection rules. The liberalization of agriculture products, however, will remain a difficult issue.

7. **China's accession to the WTO will likely bring important benefits to Japan.** The accession of China and others to the WTO will help provide new markets for Japan's exports and outward FDI, although concerns have been raised domestically about the potential for a rapid shift in Japanese production abroad, especially to China, and a surge in imports. The World Bank (1997) estimated that the overall economic benefit to Japan would be \$61 billion, while the Economic Planning Agency (2000) estimated the benefit at \$13.5 billion (out of a worldwide benefit of \$36.6 billion).

8. **Japan has concluded its first bilateral free trade agreement (FTA) in the context of supplementing multilateral framework with bilateral and regional ones.** The Japan-Singapore Economic Partnership Agreement signed on January 13, 2002 covered areas beyond a free trade agreement, and included services, investment, and competition policy, and is expected to be a model for future bilateral agreements.<sup>4</sup> Preliminary talks for a bilateral agreement are now underway with Mexico, while preparatory studies are being undertaken with Korea. Other potential candidates for future FTAs are Chile, Australia, and New Zealand. The Japan-ASEAN Comprehensive Economic Partnership proposed by Mr. Koizumi in January 2002 would expand such bilateral agreements to broader regional cooperation in the longer term.

9. **Tensions regarding Japan's preliminary safeguard measures for agricultural products have subsided, but a new conflict has developed for steel products.** Preliminary safeguard measures imposed on imports of shiitake mushrooms, long onions, and *tatami*

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<sup>3</sup> Japan is ranked 20<sup>th</sup> out of 25 economies in FDI Confidence Index ranking by A. T. Kearney (2001); given 3.0 points out of 5.0 for freedom in FDI (moderate barriers) by the Heritage Foundation (2001); and 29<sup>th</sup> out of 31 countries for outward openness ranking by the JCER (2001) (although it includes many criteria other than those directly related to FDI).

<sup>4</sup> Despite the high share of duty-free items (94 percent and 100 percent for exports from Singapore and Japan, respectively), the impact on Japan's trade account is expected to be small reflecting stringent originating country rules (which restricts third country products to enter the Japanese market as imports from Singapore) and the small size of bilateral trade.

straws from China in late April 2001 expired in November. Transition to a definitive action was avoided in December, and Chinese retaliatory tariffs on Japanese industrial products were discontinued. However, in response to the imposition of safeguard measures on 14 steel products by the U.S. in March 2002, Japan has declared 100 percent tariffs on selected U.S. steel products, raising concerns about increased protectionism among major economies.<sup>5</sup>

### C. Aid and Other Initiatives to Support Developing Countries

10. **While Japan lost its position as the largest provider of ODA to developing countries in 2001, its contribution remains large.**<sup>6</sup> Following an 11¼ percent decline in 2000, net ODA from Japan fell by 28 percent (18 percent in real terms) to \$9.7 billion (0.23 percent of GNP) in 2001, mainly due to a 12¾ percent depreciation of the yen (Table IV.4).<sup>7</sup> The budget allocation for ODA has been cut a further 10 percent in FY02, and is likely to be a continued target for consolidation in the near future given the difficult fiscal situation in Japan.

Table IV.4. Net ODA Flows from the G7					
	2000		2001		Percent change 1/
	(In \$ million 2/)				
Japan	13,508	[ 0.28 ]	9,678	[ 0.23 ]	-18.1
US	9,955	[ 0.10 ]	10,884	[ 0.11 ]	7.0
Germany	5,030	[ 0.27 ]	4,879	[ 0.27 ]	-1.5
UK	4,501	[ 0.32 ]	4,659	[ 0.32 ]	6.2
France	4,105	[ 0.32 ]	4,293	[ 0.34 ]	5.9
Canada	1,744	[ 0.25 ]	1,572	[ 0.23 ]	-7.1
Italy	1,376	[ 0.13 ]	1,493	[ 0.14 ]	8.8
DAC total	53,737	[ 0.22 ]	51,354	[ 0.22 ]	-1.4

Source: OECD, DAC.

1/ In real terms, adjusting for inflation and exchange rate movements.

2/ Figures in brackets indicate net ODA flows in percent of GNP.

The government intends to offset the reduction in financing by improving the effectiveness of the aid, and by focusing more on the core needs of the recipient countries. Japan has pledged financial aid of \$500 million over 30 months (up to \$250 million in 2002) for the reconstruction of Afghanistan, and is keen to implement the Extended HIPC Initiative, both through bilateral debt forgiveness and contributions to international financial institutions.

<sup>5</sup> Negotiations are underway for further concessions from the U.S. to expand exemptions, during which the imposition of retaliatory tariffs will be suspended.

<sup>6</sup> The U.S. became the largest ODA provider in 2001 driven mainly by additional support for Pakistan after September 11.

<sup>7</sup> The large drop in 2000 reflected a one-off surge in 1999 due to a \$3 billion contribution to the AsDB's Asian Currency Crisis Support Facility.

**11. Duty- and quota-free access of LDC products to the Japanese market was expanded in April 2001 to cover 99 percent of industrial products and 46 LDCs.<sup>8</sup>**

Despite the government's general endorsement of the initiative, further expansion of access for agricultural products will likely depend on the outcome of negotiations in the new WTO round.

**12. Japan has continued to provide economic support to Asian countries to advance economic cooperation in the region.** After the expiration of the New Miyazawa Initiative in June 2001, swap arrangements to provide short-term assistance were rolled over for Malaysia (\$2.5 billion for 3 years) and Korea (\$5 billion for 3 years). A number of bilateral swap arrangements under the Chiang Mai Initiative have been concluded. So far, arrangements have been signed with Korea (\$2 billion dollar-won swap in addition to the above \$5 billion), Thailand (\$3 billion dollar-baht swap), Philippines (\$3 billion dollar-peso swap), Malaysia (\$1 billion dollar-ringgit swap in addition to the above \$2.5 billion), and China (\$3 billion yen-renminbi swap).

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<sup>8</sup> The "99 percent initiative on industrial tariffs" added 352 products to the list. The remaining one percent includes items such as petroleum products, leather products, fur products, and shoe parts.

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## V. FISCAL POLICY DEVELOPMENTS<sup>1</sup>

1. **Public finances in Japan are strained.** After a decade of economic stagnation, the revenue-to-GDP ratio has fallen significantly. At the same time rapid population ageing has added to budgetary pressures. These developments have been exacerbated by rigidities in expenditure management and spending carried out through a series of stimulus packages. These factors have contributed to high fiscal deficits relative to GDP and a level of government debt that, on some measures, is the highest among G-7 countries. As a result, the room for maneuver in the central and local government budgets has diminished considerably. This situation has generated concerns about the sustainability of fiscal policy.
2. **Against this background, the Koizumi government has made a beginning in setting the foundation for addressing the fiscal situation.** A key element of the government's budgetary strategy for FY2002 was to announce a ¥30 trillion cap on the issue of new JGBs this fiscal year (the fiscal year runs from April 1 to March 31). In addition, the focus of government spending was shifted from public works to providing support to ongoing structural change in the economy, including through a strengthening of the social safety net and the expansion of initiatives aimed at job creation. Given the weak economic situation, however, the government introduced two supplementary budgets in FY2001 to ensure that fiscal stimulus is not withdrawn too rapidly. Looking forward, the Council on Economic and Fiscal Policy (CEFP) has formulated medium-term fiscal consolidation plans which aim to generate a primary balance for the central and local government budgets by 2010. As regards the reform agenda, some progress has been made, including on pension and health care reforms, although much more remains to be accomplished.
3. **The remainder of this chapter is organized as follows.** Section A provides a discussion of the budget policies of the central and local governments, and their implications for general government balances. Section B is devoted to the Fiscal Investment and Loan Program (FILP). Section C focuses on recent fiscal reform measures and the remaining agenda. Section D discusses the implications of budget policies for public debt and the adjustment required to stabilize the level of debt over the medium-term.

### A. Budget Policies

4. **The complicated fiscal structure in Japan and lags in data availability make it difficult to assess the fiscal stance on a timely basis.** While the central government's general account budget is considered to be the key lever of control over the fiscal system, the fiscal stance also depends on the positions of the special accounts and the local governments. The central government's bond issuance is determined by the general account budget which— together with the budgets for 38 special accounts that are controlled by government ministries— is approved by the Diet. The Diet also approves the budgets for government financial institutions and the Fiscal Investment and Loan Program (FILP), and reviews the Local Government Finance Program which provides a framework for the financing of local governments. The various accounts, agencies, and programs are interlinked. The consolidation

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<sup>1</sup> Prepared by Sanjay Kalra (ext. 36142).

of general government operations from these accounts is undertaken as part of the preparation of the national income accounts by the Economic and Social Research Institute of the Cabinet Office. To assess the impact of fiscal operations on economic activity, the Fund staff uses the concept of general government (using national income accounts-based data) to obtain a comprehensive indicator of the fiscal position. A detailed sectoral breakdown of the annual national accounts data is, however, available only with a lag of about a year after the end of the fiscal year. As a result, FY2000 is the latest year for which complete data for the general government are available, and the general government's fiscal position for FY2001 is based only on partial quarterly data and assumptions about various components of the budget.

### Central government operations

5. **A key objective of the FY2001 general account budget was to increase financing for the government's priority programs.** Overall general account expenditure was reduced by nearly 2¾ percent relative to the FY2000 initial budget, reflecting substantially lower prospective debt service payments, including on account of declining average JGB yields. However, general spending—defined as total expenditure excluding debt service and local tax transfers—was budgeted to rise by about 1¼ percent, and was aimed at four priority areas: promotion of the IT revolution; response to the ageing society; upgrade of urban infrastructure; and environmental issues. The allocation for public works spending was unchanged (Table V.1). The tax relief offered by the budget was small (¥190 billion, less than 0.1 percent of GDP), and the main revenue measures related to mortgage interest relief, the gift tax, and treatment of corporate mergers and spin-offs. The general account deficit was to be financed by a net bond issue of ¥28.3 trillion, raising the outstanding central government bonds to about ¥396 trillion by the end of FY2001 (Table V.2).

Table V.2. Japan: Central Government Bond Issues, FY1990–2002 (In trillions of yen)						
	Net bond issue (General Account Budget)			Gross issue Settlement	Bonds Outstanding 1/	
	Initial	Revised	Settlement		Nominal	Percent of GDP
1990	5.6	7.3	7.3	26.0	166.3	36.9
1995	12.6	22.0	21.2	46.6	225.2	44.9
1996	21.0	22.4	21.7	48.3	244.7	49.5
1997	16.7	18.5	18.5	49.9	258.0	49.6
1998	15.6	34.0	34.0	76.4	295.2	57.5
1999	31.1	38.6	37.5	77.6	331.7	69.5
2000	32.6	34.6	33.0	86.3	367.6	71.6
2001	28.3	30.0	...	...	395.5	79.0
2002 2/	30.0	...	...	...	414.0	83.4

Source: Bank of Japan, Economic Statistics Monthly; and staff calculations.

1/ Including subsidy, subscription, and DIC bonds, and bonds converted from JNRSC bonds.

2/ Budget projection.

6. **At end-November 2001, the Diet passed a first supplementary budget focused on employment generation and an expansion of the social safety net.** This budget allocated an additional ¥1 trillion for measures incorporated in the government's Advanced Reform Program

Table V.1. Japan: Central Government General Account Budget, FY1997-2002

(In billions of yen)

	1997		1998		1999		2000		2001		2002	
	Settlement		Settlement		Initial		Revised		Initial		Revised	
Expenditures	78,470	84,392	89,037	84,987	89,770	89,321	82,652	86,353	81,230			
<i>Of which:</i>												
Social security	15,385	15,658	19,022	16,767	17,761	17,636	17,555	19,238	18,279			
Public works	11,067	13,034	12,972	9,434	11,494	11,910	9,435	9,905	8,424			
Defense	4,950	4,956	4,897	4,936	4,934	4,907	4,955	4,995	4,956			
Official aid	1,083	1,082	1,019	984	994	1,012	956	955	857			
National debt service 1/	15,926	17,699	20,292	21,965	21,446	21,446	17,170	16,284	16,671			
<i>Of which:</i>												
Interest payments	10,600	10,796	10,444	10,743	10,225	9,987	10,402	9,798	9,594			
Transfer of local allocation tax to local government	15,481	14,305	13,084	14,930	15,828	15,829	16,823	16,706	19,012			
Revenues	58,751	54,083	51,472	52,377	55,172	55,018	54,334	55,869	51,229			
Taxes and stamp duties	53,941	49,432	47,234	48,659	49,895	50,712	50,727	49,625	46,816			
Miscellaneous	4,810	4,651	4,237	3,718	5,277	4,306	3,607	6,244	4,413			
Deficit	19,719	30,309	37,566	32,610	34,598	33,004	28,318	30,000	30,000			
Financing	19,719	30,309	37,566	32,610	34,598	33,004	28,318	30,000	30,000			
Bond issues	18,458	34,000	37,514	32,610	34,598	33,004	28,318	30,000	30,000			
Deficit-financing bonds	8,518	17,000	...	23,460	23,460	21,866	19,558	20,924	23,210			
Construction bonds	9,940	17,000	...	9,150	11,138	11,138	8,760	9,096	6,990			
Others												
Carried over surplus	1,261	-3,691	52	--	--	1,299	--	--	--			
Carry in	2,961	1,700	5,391	--	--	5,339	--	--	--			
Carry out	1,700	-5,391	5,339	--	--	4,040	--	--	--			
<i>Memorandum items:</i>												
General expenditure 2/	47,064	52,389	55,681	48,092	52,496	52,046	48,659	53,363	47,547			

Source: Data provided by the Japanese authorities.

1/ Includes repayments of principal and running costs.

2/ Total expenditure excluding debt service and local allocation tax transfers.

(ARP) of October 2001. These measures included labor market-related initiatives (¥0.55 trillion), support for small and medium-sized enterprises (¥0.25 trillion), and steps to accelerate structural reforms in six “priority areas” (¥0.2 trillion). Of the labor market initiatives, ¥0.35 trillion was for a new fund to help finance new hires, including school teachers and forestry workers. Other allocations in the budget related to social security spending and disaster relief. Given the unexpectedly sharp deterioration in economic conditions, the supplementary budget also revised down the tax revenue projection for FY2001 (Table V.3). These new expenditures and the revenue shortfall were to be financed by carried over surplus from the FY2000 settlement, budgetary savings (about one-half of which was due to lower projected interest payments), and additional JGB issues of ¥1.3 trillion, which brought the total amount of new JGBs to be issued in FY2001 to ¥30 trillion.

7. **In late-January 2002, the Diet approved a second supplementary budget focused on the government’s priority areas.** The budget was intended to add ¥4 trillion to public spending by the central and local governments. The central government’s share of the spending package—about ¥2½ trillion—was devoted to seven priority areas, including public works projects for urban rejuvenation and for the elderly. This expenditure was to be financed from the receipts of prior sales of government shares in NTT, and allowed the Prime Minister to stick to his ¥30 trillion JGB issue cap for the fiscal year.<sup>2</sup> In addition to the central government spending, local governments were expected to contribute an additional ¥1½ trillion to jointly financed public works projects.

8. **In the FY2002 initial budget, the government took a first step toward fiscal consolidation.** The overall framework of the budget was set to help achieve Prime Minister Koizumi’s commitment to limit net JGB issuance to ¥30 trillion in FY2002. In the face of weak revenues, the budget included a ¥1½ trillion (0.3 percent of GDP) cut in general account expenditures relative to the FY2001 initial budget, with general spending set to fall for the first time in four years. Expenditure cuts were made in public works spending, grants to public enterprises, subsidies to local governments for joint public works, and ODA. These cuts helped create room for a substantial increase in social security expenditures. The budget also reflected a decline (by about ¥3 trillion) in tax revenues which had accrued in FY2000 and FY2001 from levies on interest income from a high volume of maturing postal savings deposits.

9. **However, the FY2002 budget achieved only modest progress toward the government’s fiscal reform targets.** Public works allocations to individual economic sectors were largely maintained, and the de-earmarking of road related revenues was only partly achieved. Although consolidated corporate taxation went into effect in April 2002, the government introduced a temporary 2 percent surcharge for firms that use the new framework, which may be limiting its wider adoption for restructuring purposes. Moreover, while tax

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<sup>2</sup> The total proceeds were left over from the sale in FY1986-88 of a portion of the government's holdings of NTT shares. The total proceeds amounted to ¥10.1 trillion, and were to be held in the National Debt Consolidation special account to redeem public debt. Of this, ¥7.6 trillion had already been on-lent for public works projects. The remaining ¥2½ trillion will be used to finance the FY2001 second supplementary budget.

Table V.3. Japan: Tax Receipts of the Central Government General Account, FY1997–2002

(In billions of yen)

	1997	1998	1999	2000		2001		2002
				Initial	Revised	Initial	Revised	Initial
		Settlement						
(In billions of yen, fiscal years)								
Individual income tax	19,183	16,996	15,447	18,680	19,047	18,572	18,116	15,831
Corporate income tax	13,475	11,423	10,795	9,947	10,816	11,839	11,193	11,174
Taxes on goods and services	14,210	15,617	15,294	14,694	14,694	14,954	14,954	14,542
<i>Of which:</i>								
Consumption tax	9,305	10,074	10,447	9,856	9,856	10,129	10,129	9,825
Liquor tax	1,982	1,898	1,872	1,860	1,860	1,823	1,823	1,735
Gasoline tax	1,926	1,998	2,071	2,078	2,078	2,121	2,121	2,134
Tobacco tax	1,018	1,046	905	900	900	881	881	848
Custom duties	953	869	810	730	730	814	814	860
Stamp revenue	1,681	1,608	1,561	1,511	1,511	1,505	1,505	1,444
Other	4,439	3,518	3,326	3,097	3,097	3,043	3,043	2,965
Total tax and stamp revenue	53,941	49,432	47,234	48,659	49,895	50,712	49,625	46,816
(Percentage change) 1/								
Individual income tax	1.1	-11.4	-9.1	20.9	23.3	-2.5	-3.6	-12.6
Corporate income tax	-7.0	-15.2	-5.5	-7.9	0.2	9.5	-4.7	-0.2
Taxes on goods and services	27.8	5.7	1.8	-3.9	-3.9	1.8	2.5	-2.8
Total tax and stamp revenue	3.6	-8.4	-4.4	3.0	5.6	1.7	-2.1	-5.7

Source: Data provided by the Japanese authorities.

1/ Compared to latest available data of the previous year.

transfers to local governments were reduced in line with falling tax revenues, a planned review of the allocation mechanism was not completed.

### **Local Government Operations**

10. **Local governments continue to face fiscal problems.** The overall deficit of the local governments has been falling. This has been due to rising transfers from the central government against the background of largely stagnant revenues and a cut in investment expenditures (Table V.4). Based on the latest available data, while the overall deficit of the local governments is estimated to have been 1½ percent of GDP in FY2000, the deficit excluding transfers from the central government was much higher, at 5½ percent of GDP. The reductions in local government investment run counter to the intent of the Local Government Finance Plan, which is reviewed by the Diet as part of the budgetary process in setting the overall fiscal position of the government. The difficult fiscal position of the local governments is also mirrored in the rising amortization payments on a rising stock of debt which is estimated to have more than doubled to over 34 percent of GDP at end-FY2000.

11. **To address their difficult fiscal position, local governments have undertaken some consolidation measures.** For FY2002, in line with the reduction in the general account budget allocation, local governments also reduced their allocation for locally financed public works projects by 10 percent. This reduction comes on the heels of efforts in earlier years, as noted above, to reduce locally financed investment projects as a result of which the share of public works projects financed and implemented by local governments has declined substantially from around 75 percent in 1991 to around 60 percent in 2000 (Table V.5). More generally, the consolidation measures have been the result of statutory limitations on local government borrowing, which include: (i) limitation on bond issues if the ceiling (20 percent) on the local authority's ratio of debt service to its tax revenues is breached; and (ii) the requirement to undertake fiscal restructuring under direct national/prefectural control if its fiscal deficit exceeds a stipulated percentage of a standardized expenditure measure.

12. **The local governments have also sought additional revenue sources.** The Tokyo and Osaka governments passed legislation in FY2001 to tax the gross profit (as opposed to net income) of major banks conducting business in their prefectures. These efforts suffered a setback in March 2002 with the Tokyo District Court ruling against the bank levy by the Tokyo Metropolitan government on procedural grounds. The Tokyo government intends to contest the ruling in the upper courts. For FY2002, taxes levied by local governments included those on hotel guests by the Tokyo Metropolitan Government, and on waste management in the Gifu and Mie prefectures. These measures make use of the April 2000 decentralization law which allowed for specific levies to be introduced by local governments in consultation with the Ministry of General Affairs and without formal approval by the central government. In other cases, prefectures have used provisions of existing tax legislation which allow local authorities to raise business taxes on a base other than profits if a business activity is unique to their jurisdiction.

### **General Government Balances**

13. **The overall fiscal stance is estimated to have been modestly expansionary in FY2001.** The general government structural deficit and the fiscal deficit are estimated to have risen by about ½ percent of GDP to about 5½ and 7 percent of GDP, respectively (Table V.6).

Table V.4. Japan: Local Government Operations

(In percent of GDP)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total revenue (excl. borrowing) 1/	15.8	15.5	15.3	15.3	15.5	15.5	15.5	16.0	15.8	...
Revenue and transfers	10.6	10.3	9.8	9.9	10.1	10.3	10.2	10.2	10.7	...
Local taxes	7.2	6.9	6.6	6.7	6.8	7.0	7.0	6.8	6.9	...
Transfers	3.5	3.4	3.2	3.2	3.3	3.3	3.2	3.4	3.8	...
Other	5.2	5.2	5.6	5.3	5.4	5.2	5.3	5.8	5.1	...
Total expenditure	17.7	18.3	18.2	18.8	18.2	17.6	18.2	18.3	17.4	...
Mandatory current spending	6.6	6.8	7.0	7.0	7.1	7.2	7.4	7.4	7.2	...
Of which: Personnel	5.0	5.1	5.1	5.2	5.1	5.2	5.3	5.3	5.2	...
Of which: Interest	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...
Discretionary current spending	5.1	5.0	5.1	5.4	5.2	5.0	5.2	5.7	5.4	...
Investment	6.0	6.4	6.1	6.4	6.0	5.4	5.6	5.2	4.8	...
Of which: Construction	5.9	6.3	6.0	6.2	5.8	5.3	5.5	5.1	4.7	...
Balance	-1.9	-2.7	-2.8	-3.6	-2.7	-2.2	-2.7	-2.3	-1.6	...
Financing	1.9	2.7	2.8	3.6	2.7	2.2	2.7	2.3	1.6	...
Borrowing (net)	2.1	3.0	2.9	3.6	2.8	2.4	2.9	1.9	1.4	...
Borrowing (gross)	2.9	3.9	3.8	4.5	3.8	3.6	4.1	3.3	3.0	...
Bonds	2.1	2.7	2.9	3.4	3.0	2.7	2.9	2.5	2.2	...
Other	0.8	1.1	0.9	1.1	0.8	0.9	1.2	0.8	0.8	...
Amortization	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	-1.6	...
Other 2/	-0.2	-0.3	-0.1	-0.1	-0.1	-0.3	-0.1	0.4	0.2	...
<i>Memorandum items:</i>										
Local government debt	16.3	18.7	21.6	24.9	27.0	28.8	31.7	33.8	33.9	...
Of which: Bonds	12.7	14.4	16.3	18.5	20.0	21.4	23.4	24.4	25.4	...
Debt service payments	1.5	1.5	1.6	1.7	1.8	2.0	2.1	2.3	2.4	...
<b>Local Government Finance Plan</b>										
Total revenue	14.3	14.4	14.3	14.2	14.0	14.4	14.8	15.0	15.2	15.3
Local tax	7.0	7.1	6.6	6.7	6.5	7.1	7.5	6.9	6.8	7.0
Local allocation tax	3.2	3.2	3.1	3.2	3.3	3.3	3.4	4.1	4.2	4.0
Local transferred tax	0.4	0.4	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.1
Treasury disbursement	2.5	2.5	2.9	2.6	2.5	2.5	2.5	2.6	2.5	2.6
Rents and fees	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.2
Total expenditure	15.4	15.7	16.4	16.5	16.5	16.7	17.0	17.2	17.3	17.9
Debt service	1.3	1.3	1.8	1.5	1.7	1.9	2.0	2.2	2.4	2.6
Wages and salaries	4.3	4.5	4.5	4.5	4.4	4.5	4.6	4.6	4.6	4.7
General administration	3.1	3.3	3.3	3.4	3.4	3.5	3.6	3.7	3.8	4.1
Investment	5.1	5.5	5.9	6.1	6.0	6.0	5.7	5.7	5.5	5.4
Special independent works	0.2	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4
Other	1.4	0.8	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6
Deficit (=Bond issue)	-1.1	-1.3	-2.1	-2.3	-2.5	-2.3	-2.1	-2.2	-2.2	-2.4

Source: Ministry of Home Affairs; Ministry of Finance; and staff calculations.

1/ Using data provided by the authorities, the staff has reclassified financing items which are treated as revenues in the official statistics.

2/ Including classification errors and omissions.

Table V.5. Japan: General Government Public Works Projects

(in trillions of yen)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Solo projects	21,491	25,651	24,505	23,488	22,953	20,845	21,544	19,908	18,394
Central government 1/	4,427	7,777	7,459	6,383	6,216	5,393	6,895	7,019	6,537
Local government	17,065	17,874	17,046	17,104	16,738	15,452	14,650	12,889	11,857
Joint projects 2/	10,244	11,493	11,184	12,547	11,915	11,061	11,945	11,650	10,514
Financed by:									
Central government	5,245	5,907	5,748	6,412	6,124	5,674	6,140	5,953	5,373
Local government	4,999	5,586	5,435	6,136	5,791	5,387	5,805	5,697	5,141
Financial contribution of local governments to central projects	1,260	1,340	1,088	1,462	1,254	1,236	1,693	1,573	1,531
<b>Total public works</b>	<b>32,995</b>	<b>38,483</b>	<b>36,776</b>	<b>37,496</b>	<b>36,123</b>	<b>33,142</b>	<b>35,182</b>	<b>33,131</b>	<b>30,439</b>
<i>Implemented by:</i>									
Central government	5,687	9,117	8,547	7,845	7,470	6,629	8,588	8,592	8,068
Local government	27,308	29,367	28,229	29,652	28,653	26,513	26,594	24,539	22,371
<i>Financed by:</i>									
Central government	9,671	13,684	13,208	12,795	12,340	11,067	13,034	12,972	11,910
Local government	23,324	24,799	23,569	24,701	23,782	22,075	22,148	20,159	18,529
<b>Memorandum items</b>									
Central share in joint projects	51.2	51.4	51.4	51.1	51.4	51.3	51.4	51.1	51.1
Public works financed by central government	29.3	35.6	35.9	34.1	34.2	33.4	37.0	39.2	39.1
Public works implemented by local government	82.8	76.3	76.8	79.1	79.3	80.0	75.6	74.1	73.5
Total public works (percent of GDP)	6.8	7.9	7.5	7.5	7.0	6.4	6.9	6.4	5.9

Source: Ministry of Finance; Local Government White Paper, various issues; and staff calculations.

1/ Calculated as total central government expenditure on public works minus central share of joint public works.

2/ Joint projects are implemented by local governments.



Table V.6. Japan: General Government Operations 1/

(In percent of GDP)

	FY1998	FY1999	FY2000	FY2001 Est.	FY2002 Proj.	CY1998	CY1999	CY2000	CY2001 Est.	CY2002 Proj.
General government balance	-6.1	-6.8	-6.6	-7.2	-7.0	-5.5	-7.0	-7.3	-7.1	-7.3
Social security balance	1.5	1.6	0.9	0.1	-0.2	1.6	1.5	1.1	0.2	-0.1
General government excluding social security	-7.6	-8.3	-7.5	-7.3	-6.8	-7.1	-8.5	-8.4	-7.4	-7.2
Of which:										
Taxes and fines	16.9	16.4	17.3	17.3	17.0	16.8	16.5	17.0	17.3	17.1
Consumption	11.2	11.4	11.5	12.1	11.8	11.0	11.4	11.4	11.9	11.9
Investment	5.7	5.5	5.1	4.8	4.4	5.5	5.8	5.0	4.9	4.7
Support for banks	0.2	0.7	0.7	0.0	0.0	0.2	0.1	1.2	0.1	0.0
Structural balance										
(Including social security, excluding support for banks)	-5.0	-5.4	-5.4	-6.0	-5.4	-4.7	-6.0	-5.6	-6.0	-5.7
Change in structural balance										
(Including social security, excluding support for banks)	-1.2	-0.4	0.0	-0.5	0.6	-0.6	-1.3	0.4	-0.3	0.3
Memorandum items:										
Gross debt 2/	...	...	...	...	...	108.4	120.9	135.7	145.7	155.7
Net debt (excluding social security system) 2/	...	...	...	...	...	80.2	90.0	102.4	111.9	121.2

Source: Staff estimates, based on the following assumptions:

*Growth*: Real GDP growth is projected to be -0.5 percent in CY2002. Each percentage point increase in growth raises the general government balance by about 0.3 percentage points of GDP.

*Stimulus Packages*: The projections take account of the FY2000 supplementary budget and the FY2001 budget. For FY2002, the projection incorporates the initial budget, the first supplementary budget of November 2001 with a headline figure of ¥3 trillion, and a second supplementary budget of ¥4 trillion. Of this ¥4 trillion, ¥2.5 trillion is central government spending and ¥1.5 trillion is local government spending. The latter is financed by local government borrowing which will be redeemed by central government transfers.

*Support for Banks*: Under Japanese fiscal accounting, the budgetary impact of capital made available to the DIC for dealing with bank closures occurs at the time the money is spent. 1/ Estimated from revised National Income Accounts data, consistent with the SNA93 prepared by the Economic and Social Research Institute, Cabinet Office, released starting October 2000.

2/ The step up in debt for CY2000 reflects a revision of the flow-of-fund accounts. Local public corporations are included in the general government starting only in CY2000.

This outturn reflects, in part, the impact of the November 2000 supplementary budget, some of which affected general government investment in the first quarter of FY2001. However, a part of the impact of this supplementary budget is offset by continued financing constraints at the local level which have been forced to cut back on locally financed public works projects due to financial difficulties.

**14. Fiscal policy appears set to be modestly contractionary in FY2002.** Based on the FY2002 budget and available information about local governments, the staff estimates that the structural deficit of the general government will decline by ½ percent of GDP in FY2002. The public works allocations in the initial budget, together with the spending allocations in the second supplementary budget of FY2001, are expected to sustain the pace of general government investment during the first half of FY2002. Beyond that, the pace of public investment is likely to slacken, leading the fiscal stance to turn contractionary during the second half of FY2002.

## **B. Fiscal Investment and Loan Program**

**15. The FILP is an important tool for fiscal management in Japan.** Historically, the program has played a key role in the development of Japan's infrastructure by extending loans through government financial institutions (GFIs) and financing the activities of public enterprises. While not formally a part of the general government sector, the FILP annual plan is formulated in coordination with the budget process, and is approved by the Diet together with the general account and special accounts budgets. Indeed, owing to its size, the FILP is often referred to as the "second budget".

**16. A comprehensive reform of the FILP was initiated in April 2001.** The aim of the reform program was to progressively align the activities of the program with market principles. The key elements of the reform were to increase the role of market financing, including by the issue of FILP-agency bonds, and to initiate subsidy cost analysis of FILP projects.<sup>3</sup> As part of these reforms, starting FY2001, the compulsory transfer of deposits from the postal savings and pension systems to the Trust Fund Bureau was abolished (see below for recent developments on the reform of the postal savings system) and, in its place, the Fiscal Loan Fund Special Account (FLFSA) was created which obtains financing by issuing bonds. Moreover, individual FILP agencies now issue their own bonds. However, for an interim time period of seven years (the maturity of the outstanding loans to the FILP), the postal savings and pension systems are to continue to underwrite FILP bonds, but at successively lower levels. To assess the prospective financial implications and to improve their efficiency, subsidy cost analyses of all FILP agencies have been undertaken and published.

**17. The FY2002 FILP cut allocations in a number of areas.** Compared to the initial budget of ¥32½ trillion for FY2001, the FY2002 FILP budget was reduced to ¥26¾ trillion. Spending allocations were cut, in particular, for financial institutions, with the bulk of the reduction falling on the Government Housing Loan Corporation. This cutback reflects a

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<sup>3</sup> The subsidy cost of a project is the estimated total amount of subsidies, budgetary financial assistance and grants-in-aid until its completion.

combination of factors, including the substantial underutilization of funds in previous years, the provisions of the FILP reform of FY2001, and the government's attempt to shrink the operations of public-sector corporations (Table V.7). A part of the fall in the size of the FILP program could, however, be offset by the FILP agencies' plans to double their own bond issues to ¥2.2 trillion in FY2002.

## C. Fiscal Reforms

### Tax Reform

**18. Tax reform is a key element of the structural reform agenda of the Koizumi government.** The Prime Minister has stated that a reform of the tax system will be included in the FY2003 budget, although the details are yet to be fleshed out. The goals of such reform of the tax system would be to address the prolonged economic stagnation, foster economic restructuring, and ensure medium-term fiscal consolidation. The latter would require raising revenues to place public finances on a sustainable footing while meeting the expenditure needs of an ageing population.

**19. To meet its various goals, tax reform in Japan would need to be comprehensive.** There is a need to close significant loopholes and eliminate non-neutralities in key elements of the tax system, even though the current system applies relatively low rates on most activities and the current overall distortion from it is relatively modest compared to most other OECD countries (Dalsgaard and Kawagoe, 2000). Cross-country data suggest that marginal income tax rates and the effective corporate tax rate in Japan are comparable to the U.S., but that the overall tax revenue-to-GDP ratio in Japan is low compared to other G-7 countries (Table V.8). However, amelioration of the current fiscal situation would require a broadening of the income tax base. Broadening the income tax base could be achieved by raising the income tax threshold, through reductions in the earned income, spousal, and public pension deductions. For example, the income tax threshold for an employee with a spouse with no income and two children is currently set at ¥3,842 thousand compared to US\$25,200 in the U.S. (¥3,024 thousand at an exchange rate of ¥120 per US\$). Base broadening could also be achieved by more effective taxation of the self-employed and inclusion of bonuses in the base for computation of social security contributions while introduction of taxpayer identification numbers could facilitate tax administration. There is also a need to possibly shift corporate taxation from profits to size-based indicators (such as value added) to increase the share of corporations paying taxes. For example, according to National Tax Authority estimates, only 30 percent of the 2½ million registered corporations declared profits and paid corporate taxes in FY1999. Over the medium term, the VAT rate would need to be raised to ensure fiscal sustainability (Faruquee and Mühleisen, 2001).

Table V.8. Japan: International Comparison of Tax Revenues (1999)  
(In percent of GDP)

	Canada	France	Germany	Italy	U.K.	U.S.	Japan
Tax revenue <sup>1</sup>	38.2	45.8	37.7	43.3	36.3	28.9	26.2
<i>Of which:</i>							
Personal income	14.6	8.1	9.4	11.4	10.5	11.8	4.8
Corporate Income	3.7	2.9	1.8	3.3	3.8	2.4	3.4
Social Security Contributions	5.2	16.6	14.8	12.3	6.2	6.9	9.7

Source: OECD, 2001.

<sup>1</sup> Including social security contributions.

Table V.7. Japan: Fiscal Investment and Loan Program (FILP), FY1998–2002  
(In billions of yen)

	FY1998	FY1999	FY2000	FY2001	FY2002
	Results	Estimates	Initial	Revised	Initial
Sources of funds					
Trust Fund Bureau Fund	65,620	45,804	38,657	32,920	26,792
Postal Savings	55,821	36,473	28,707	29,068	23,572
Employee/National Pension Fund	12,222	4,140	0	26,438	21,002
Collections, etc.	5,667	4,547	0	1,000	980
Industrial investment special account	37,932	27,785	28,707	1,630	1,590
Postal Life Insurance Fund	447	202	102	129	37
Government-guaranteed bonds and loans	6,753	6,411	5,919	129	37
	2,599	2,719	3,930	3,723	3,183
				2,961	2,490
				762	693
Uses of funds					
Purchase of government bonds	65,352	45,804	35,001	32,547	26,792
FILP	11,000	0	0		
Portfolio investments 1/	54,352	45,804	35,001		
General FILP	17,300	11,750	6,210		
Central government projects (special accounts)	37,052	34,054	28,791	32,547	26,792
Government Financial Institutions	625	365	352	291	241
Of which:	19,384	18,754	14,494	18,957	13,992
The Government Housing Loan Corp.	6,238	7,589	6,571	8,363	4,967
Other Semi-government Bodies	6,717	6,175	6,096	5,285	4,855
Local governments	10,025	8,504	7,612	7,820	7,600
Special Corporations	302	255	237	194	104
Memorandum items:					
Increase in General FILP (in percent)	7.1	-8.1	-15.5	-15.0	-17.7
General FILP as a percent of GDP	7.2	6.6	5.6	6.5	5.4
				-14.0	6.6

Source: Ministry of Finance.

1/ Reflects the funding of the "lend-back" system under which the postal savings system, public pension funds, and the postal life insurance fund receive funds for portfolio management on their own account. The "lend-back" system was abolished in FY2000.

2/ According to the reform of the Fiscal Investment and Loan Program (FILP) in FY2001, the Government-guaranteed foreign bonds is added to the Government Guarantee.

3/ Compared to the latest available data of the previous year.

20. **The government set the overall framework for tax reform in a recent economic and fiscal policy package.** The framework, proposed by the CEEP and endorsed by the Cabinet in late June, calls for tax reforms to start in FY2003 and to be completed by FY2006. The framework emphasizes the need to place the reforms in the context of medium-term fiscal consolidation broadly defined as the achievement of primary surplus for the central and local governments around 2010. While the details are to be fleshed out by the Tax Commission, the framework suggests the need to consider base broadening, including through the elimination of income tax exemptions and a change in the corporate tax base and rationalization of the structure of inheritance and gift taxes to promote the transfer of assets from the elderly to younger generations.<sup>4</sup> The Tax Commission is expected to present its recommendations to the Cabinet in September.

### **Health Care and Pension Reform**

21. **Japan's unfavorable demographic trends are adding to fiscal pressures.** Under current projections, Japan is likely to experience the most rapid increase among the G-7 countries in the share of the elderly in its total population, and, by 2020, the share of the population over 65 years of age is projected to be about 25 percent. These trends imply sharply increasing pressures on health care and pension costs (Faruquee and Mühleisen, 2001).

22. **In an attempt to begin addressing these pressures, a Medical Insurance Reform Bill was submitted to the Diet in early March 2002.** The main elements of the bill proposed by the Ministry of Health, Labor, and Welfare (MHLW) related to reform of the medical system for the elderly and the medical insurance system. The proposals in the bill included: (i) raising the eligibility age for participation from 70 years to 75 years, over a period of 5 years; (ii) an increase in the budgetary contribution ratio to the national health insurance scheme from the current rate of 30 percent to 34 percent by October 2002, and thereafter by 4 percent per year to 50 percent by 2006; (iii) standardization of the co-payment rate at 20 percent for participants aged 0–3 (effective October 2002), 30 percent for those aged 3–69 (effective April 2003), and 10 percent for those above 70 (effective October 2002, 20 percent for those with income above a threshold level); and (iv) inclusion of bonuses (besides the monthly salary) in the computation of insurance premia (effective April 2003) for government-managed health insurance schemes.

23. **However, further efforts would be required to place the health care system on a sustainable footing and generate budgetary savings.** While the reforms will increase co-payment by beneficiaries, they are expected to have only a marginal impact on the current budgetary contribution. In particular, the bill does not contain measures to address two key issues, *viz.*, steps to curb rising health care costs for the elderly and measures to introduce cost savings by healthcare providers. The MHLW's earlier proposals to set a ceiling on medical

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<sup>4</sup> Under the current system, the basic exemption for the inheritance tax (¥50 million) is much higher than for the gift tax (¥1.1 million) and the highest marginal rate for both taxes is 70 percent. This structure has led to a bias in favor of bequests. The Tax Commission has recently proposed a unification of the two taxes, and taxation at a lower unified rate. This is expected to allow gift recipients to take advantage of the larger exemption and make asset holders more neutral between transfer through bequest or gifts while expanding the tax base.

costs and to reduce payments to medical institutions for the amount that surpasses the target figure for medical costs were left out of the draft bill after they met with strong opposition from professional interest groups. Other issues that need to be addressed include implementation of stricter examination of cost breakdowns on medical bills and improved information disclosure and the quality of services offered at hospitals and clinics.

24. **With regard to the public pension system, a number of reforms were approved by the Diet in March 2000.** These included cuts in lifetime pension benefits for future retirees and an increase in the eligibility age for earnings-related pensions. These cuts were considered sufficient to limit future increases in pension contribution rates in both the (basic) National Pension and (earnings-related) Employee Pension Insurance (EPI) schemes by a substantial margin. The MHLW had then estimated that the reform would help limit the required increase in the social security contribution rate of the EPI to around 27½ percent of the monthly wage by 2025, compared to the current rate of 17.35 percent. In the absence of the reform, the required rate to maintain the solvency of the EPI was expected to be 34½ percent.

25. **Despite the reform measures, the finances of the pension system remain under strain.** The estimates noted above are based on the assumption that the amount of government transfers to the basic pension scheme would be raised, effective 2004 when a further round of pension reforms is scheduled to take effect, from one-third to one-half of the basic pension benefits. Moreover, the projections and estimates for the pension system are subject to a wide margin of error. Indeed, the latest round of demographic projections by the MHLW suggests that the population decline would likely come sooner, the fertility rate would recover later, and longevity would be greater than previously estimated. As a result, the projections may be overly optimistic, and future contribution rates may need to rise further than now expected to maintain the viability of the system.

### **Fiscal Transparency**

26. **The Fund staff's Report on the Observance of Standards and Codes identified areas for improving fiscal transparency in Japan.** The report (IMF Country Report 01/156) noted that the budget process meets a high standard of transparency, including a solid legal basis and clear administrative accountability, public availability of comprehensive budget documentation, and regular reporting on budget execution. The key areas identified for further progress were: (i) providing timely information on the overall stance of fiscal policy, which would require more comprehensive measures of the fiscal position with a focus on the finances of the general government and less reliance on supplementary budgets by formulating initial budgets to reflect the desired stance of fiscal policy; (ii) examination of fiscal policy in a longer-term context, which would require the development of a medium-term budget framework to allow the annual budget to be formulated in a forward-looking manner, and projections of social security and health spending to be integrated with budget projections as a basis for assessing long-term fiscal sustainability; and (iii) clarification of the role of public financial intermediation, which would require a review and restatement of the objectives of the FILP and provision of more information on its financial implications, and on public policy obligations that are retained by other government ministries and agencies.

#### **D. Medium-term Fiscal Sustainability**

27. **Japan's fiscal deficit and gross debt are now the highest among major industrial countries.** The fiscal position has worsened especially during the latter half of the 1990s. Even after adjusting for the weak cyclical position of the economy, the fiscal deficit has been higher than other G-7 countries, and is in marked contrast to the earlier decades when deficit and debt levels were maintained at low levels.

28. **By most measures, Japan's public debt has risen sharply since the early 1990s.**<sup>5</sup> By end-2000, general government *gross debt* is estimated to have reached 136 percent of GDP. However, the sizeable assets of the government have kept *net debt* (around 57½ percent of GDP at end-2000) at a relatively low level by international standards. The assets of the pension system (valued at 45 percent of GDP) and financial assets held by the central and local governments (32½ percent of GDP) account for the difference between gross and net debt. An alternative definition of net debt would treat the social security system as independent and exclude its assets—which for Japan are more than offset by the projected net future liabilities of the pension system—from public debt calculations. This concept of *net debt excluding the social security system* is used by the staff to assess Japan's fiscal position. At nearly 102½ percent of GDP at the end-2000, net debt excluding the social security system was higher than in most other industrialized countries.<sup>6</sup>

29. **The current and prospective public debt burden has raised market concerns.** Reflecting these concerns, international rating agencies have downgraded Japan's sovereign rating. On April 15, 2002, Standard & Poor's lowered Japan's long-term local and foreign currency sovereign credit ratings by one notch to AA- from AA, while Moody's downgraded by two notches to A2 at end-May, 2002. This put Japan at the bottom of the credit-rating league among the G-7 countries. The deterioration in public finances has also been cited as a risk factor for financial markets. Market observers in particular have noted the potential for a sharp increase in JGB risk premia in the future and the impact that sovereign ratings may have on the outlook for capital market access by Japanese banks and financial corporations.

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<sup>5</sup> For a detailed discussion of the various measures of debt, see IMF (2001).

<sup>6</sup> The general government's true net obligations, however, may be somewhat higher. This may be due to a number of factors: (i) it is difficult to estimate the true value of government assets, in part because some of them are illiquid; (ii) it is possible that the government may need to bear some contingent liabilities arising from its loan programs. While the default rate on loans by government financial institutions has so far been low, many large public infrastructure investments appear to generate significantly less than budgeted returns, which may imply an inability to meet debt service obligations, and thus significant liabilities for the government; and (iii) the government may be called on to cover losses related to guarantees extended by regional credit guarantee associations to cover bank loans to small and medium-sized enterprises.

## Stabilizing public debt

30. **Substantial fiscal adjustment will be required over the medium term to place public debt on a sustainable path.** The extent of consolidation that may have to be undertaken to stabilize public debt can be derived from the accounting relationship between debt and budget deficits:

$$b_t^p = (r_t - g_t) / (1 + g_t) d_t$$

where  $b^p$  is the target for the primary balance in percent of GDP,  $d$  is the debt-to-GDP ratio, and  $r$  and  $g$  are the values for the nominal interest rate paid on government debt and the nominal GDP growth rate, respectively. The amount of fiscal consolidation necessary to stabilize the debt-to-GDP ratio (the “required adjustment”) can then be calculated as the difference between the value of  $b^p$  and the current cyclically adjusted primary balance (estimated at around  $-3\frac{3}{4}$  percent of GDP in FY2002).

31. **Net debt and primary balance for the general government excluding social security are used as proxies for  $d$  and  $b^p$ , respectively.** As regards  $r$ , a measure of average interest costs derived from the interest paid on government debt, which reflects past debt contracted at different maturities and interest rates, is used. As interest rates on government bonds have generally been declining in recent years, the current value of  $r$  (roughly  $2\frac{1}{2}$  percent) is higher than the current yield on 10-year JGBs ( $1\frac{1}{2}$  percent). With an average debt maturity of about 4–5 years, the projected future changes in JGB yields affect the average interest rate gradually.

32. **The staff’s current baseline forecast corresponds to a scenario in which real growth converges to a medium-term potential of about 2 percent**, and real JGB yields stabilize at  $2\frac{1}{2}$  percent by 2007. In this case, fiscal adjustment of  $2\frac{1}{4}$  percent of GDP—sufficient to effectively eliminate the structural primary deficit by FY2007—would stabilize net debt (excluding social security assets) at 134 percent of GDP, compared to an estimated 122 percent of GDP in 2002 (Table V.9).<sup>7</sup> The required fiscal adjustment would be smaller, however, were the potential growth rate to increase, and correspondingly higher if the growth rate were to fall. Variations in JGB yields also change the required fiscal adjustment.

33. **Fiscal pressures from demographic changes will, however, persist beyond these stabilization horizons.** Over these longer horizons, central and local governments’ structural balance will deteriorate further on a current policies basis because of transfers needed to sustain social security payments. To take this into account, the revenues and expenditures of the social security system were projected under current policies. On the revenue side, the premium contributions reflect the decline in the working age population, while the rise in expenditures

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<sup>7</sup> Debt stabilizes at a higher level than indicated in the staff report for the 2001 Article IV consultation (Country Report No. 01/144) mainly because the starting debt level is higher. This, in turn, reflects the higher fiscal deficit in FY2001 and an upward revision of the debt stock due to a shift in the national income accounts to an SNA93 basis and the inclusion at end-2000 of local public corporations in the general government sector.



reflects the increase in the old age dependency ratio. The projections also reflect the prospective changes in contribution rates, benefits and retirement age due to pension reforms legislated in 2000. Budgetary transfers to the social security system are assumed to grow in line with expenditures, and the larger transfers from the central government—included in the reforms—help to maintain the assets of the social security system broadly unchanged as a share of GDP. The population projections used in this analysis are the official estimates by the MHLW. In the baseline scenario, the budgetary transfers rise by 1½ percent of GDP by the end of the 5-year stabilization horizon. Together with the needed adjustment in the structural primary balance, **the amount of fiscal measures needed to stabilize the debt ratio is, therefore, around 3¾ percent of GDP in the 5-year horizon.** Over the 10-year stabilization horizon, under continued demographic pressures, the transfers to the system rise by a little over 2½ percent of GDP, **bringing the total amount of fiscal measures required to around 5¼ percent of GDP over 10 years.** These estimates, however, do not include the potential costs of government intervention in the financial sector.

Table V.9. Japan: Baseline Scenario for Medium-Term Debt Consolidation						
General Government excluding social security	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007
	(In trillions of yen)					
Balance	-33.7	-34.2	-27.9	-25.6	-23.4	-21.2
Primary	-18.9	-19.7	-12.7	-9.5	-6.2	-2.8
Net interest payments	-14.8	-14.5	-15.2	-16.1	-17.1	-18.4
Debt	599.1	633.3	661.2	686.8	710.2	731.4
	(In percent of GDP)					
Balance	-6.8	-6.9	-5.5	-4.9	-4.4	-3.9
Primary	-3.8	-3.2	-2.5	-1.8	-1.2	-0.5
Net interest payments	-3.0	-2.9	-3.0	-3.1	-3.2	-3.4
Structural balance	-5.8	-5.4	-5.0	-4.7	-4.3	-3.9
Structural primary balance	-2.8	-2.5	-2.0	-1.6	-1.0	-0.5
Net debt (excluding social security)	121.6	126.9	130.3	132.5	133.6	133.5
	(In percent)					
<i>Memorandum items:</i>						
Implied interest rate	2.5	2.4	2.4	2.4	2.5	2.6
JGB yield	1.5	1.9	2.3	2.7	3.1	3.5
In real terms	2.9	0.9	1.3	1.7	2.1	2.5
Nominal GDP growth	-1.6	1.3	1.7	2.2	2.6	3.0
Real growth	-0.2	0.3	0.7	1.1	1.6	2.0
Deflator	-1.5	1.0	1.0	1.0	1.0	1.0
Nominal GDP (¥ trillion)	492.6	498.9	507.4	518.3	531.7	547.8
Source: Staff calculations.						

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## VI. FISCAL POLICY: AN EVALUATION OF ITS EFFECTIVENESS<sup>1</sup>

### A. Introduction

1. **The persistence of slow growth in the 1990s despite rising structural budget deficits has led to a debate on the effectiveness of fiscal policy in Japan.** A number of observers have questioned whether fiscal policy can provide even a short-term stimulus to economic activity. For example, a recent survey by Hemming, *et. al.* (2002) concludes that fiscal multipliers in industrial countries are small, while OECD (2000) suggests that fiscal multipliers in Japan declined significantly during the 1990s. In contrast, however, Kuttner and Posen (2001) obtained large tax and aggregate spending multipliers, and noted that the “real water” content of the stimulus packages of the 1990s was actually small, implying that a more aggressive fiscal policy could have moderated recessions.

2. **Against this background, this chapter examines empirically the impact of budgetary policies on real activity during the 1990s.** It uses a structural vector autoregression (SVAR) framework to estimate dynamic fiscal multipliers. Fiscal multipliers are estimated for general government revenue and expenditure, and separately for different components of government spending. Multipliers are also estimated for the period 1961–1980. These multipliers help to gauge the effectiveness of fiscal policy during the 1990s and the factors that impacted on it. The SVAR framework has been used to derive fiscal multipliers for the U.S. by Blanchard and Perotti (1999) and for Japan by Kuttner and Posen (2001). It has also been used to study the effects of the composition of government spending for the U.S. by Fatas and Mihov (2001) and for the U.K. by Escolano (2002).

3. **The key results of this chapter are as follows.** First, revenue declines and rising social security payments, rather than increases in government investment, played a key role in the deterioration in the fiscal position during the 1990s. Second, fiscal policy has a continued role in countercyclical aggregate demand management as short run fiscal multipliers do not appear to have changed much. Third, however, the results do suggest that fiscal multipliers at longer horizons are now significantly smaller due to a decline in spending multipliers for both government investment and consumption spending.

4. **The remainder of the chapter is organized as follows.** Section B provides an account of developments in the 1990s and highlights revenue declines and demographic changes as key sources of the deterioration in the fiscal position. Section C outlines the VAR framework used in this chapter to estimate fiscal multipliers and to characterize the fiscal transmission mechanism. Section D presents the empirical results and discusses the factors that led to a decline in the fiscal multipliers. Section E draws policy conclusions for enhancing the effectiveness of fiscal policy.

### B. Fiscal Policy in the 1990s

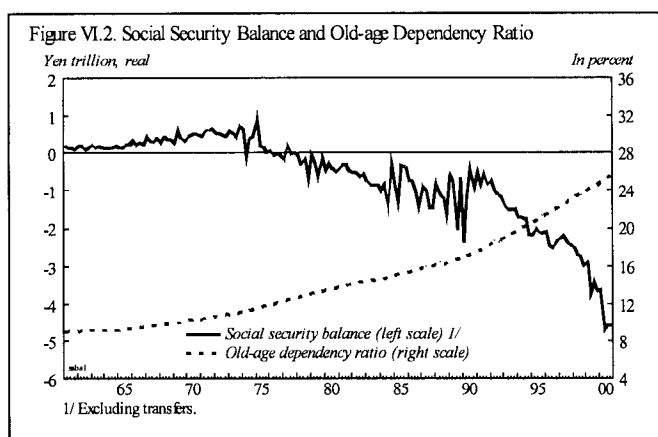
5. **Contrary to conventional wisdom, revenue declines and increases in current spending contributed more to the deterioration in the structural balance during the**

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<sup>1</sup> Prepared by Sanjay Kalra (ext. 36142).

**1990s than the investment spending in the stimulus packages.** Overall, with the exception of FY1997, when general government investment expenditures were reduced, the structural balance is estimated to have deteriorated steadily from a surplus of about 1½ percent of (potential) GDP in FY1990 to around 6 percent in FY2000 (Figure VI.1). Of this total change, 3 percentage points of GDP was due to a decline in structural revenues and the remaining 4½ percentage points of GDP was due to an increase in structural expenditures. The decline in structural revenues is attributable to a substantial reduction in the tax base, both on account of the tax cuts that were provided as part of the stimulus packages and the decline in the effective corporate tax rate from nearly 50 percent in 1990 to about 40 percent in the late 1990s (Mühleisen, 2000).

6. **The bulk of the increase in structural expenditures is accounted for by an increase in current expenditure.** Of the total increase in structural expenditures, 3½ percentage points of GDP was due to higher current expenditures, all of which was due to an increase in social security benefit payments. The remaining increase of 1 percentage point of GDP was due to capital expenditure. Of this, almost none of the increase in capital expenditure was due to general government fixed investment; all of the increase was due to government spending on land acquisition and capital transfers. Government investment spending rose only modestly from 5 percent of GDP in FY1990 to 6¼ percent of GDP in FY1996, before falling back to 5 percent of GDP in FY2000. Adverse debt dynamics also contributed significantly to an increase in deficits and the level of public debt (van den Noord, 2000). It is noteworthy that, on the back of a significant expansion of benefits in the mid-1970s, the social security balance, excluding budgetary transfers, had already swung into a deficit in the early 1980s (Figure VI.2). (This shift in the social security finances provides a rationale for splitting the sample at 1981 in the empirical work that follows.)



7. **The “real water” content of the stimulus packages in the 1990s was small.** While the stimulus packages—consisting predominantly of spending on public works projects, but also including tax cuts, land acquisition, and on-lending by government financial institutions—came with large headline figures (a total of ¥136 trillion between 1990 and 2000), the “real water” measures—tax cuts and public works—were less than 50 percent of the total (Figure IV.3). The bulk of the tax cuts,

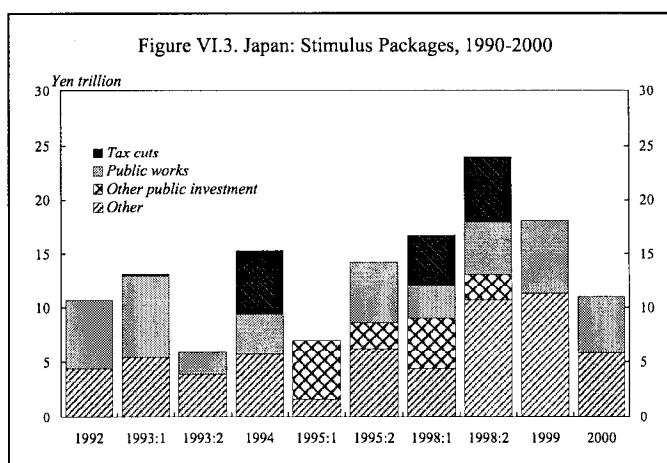
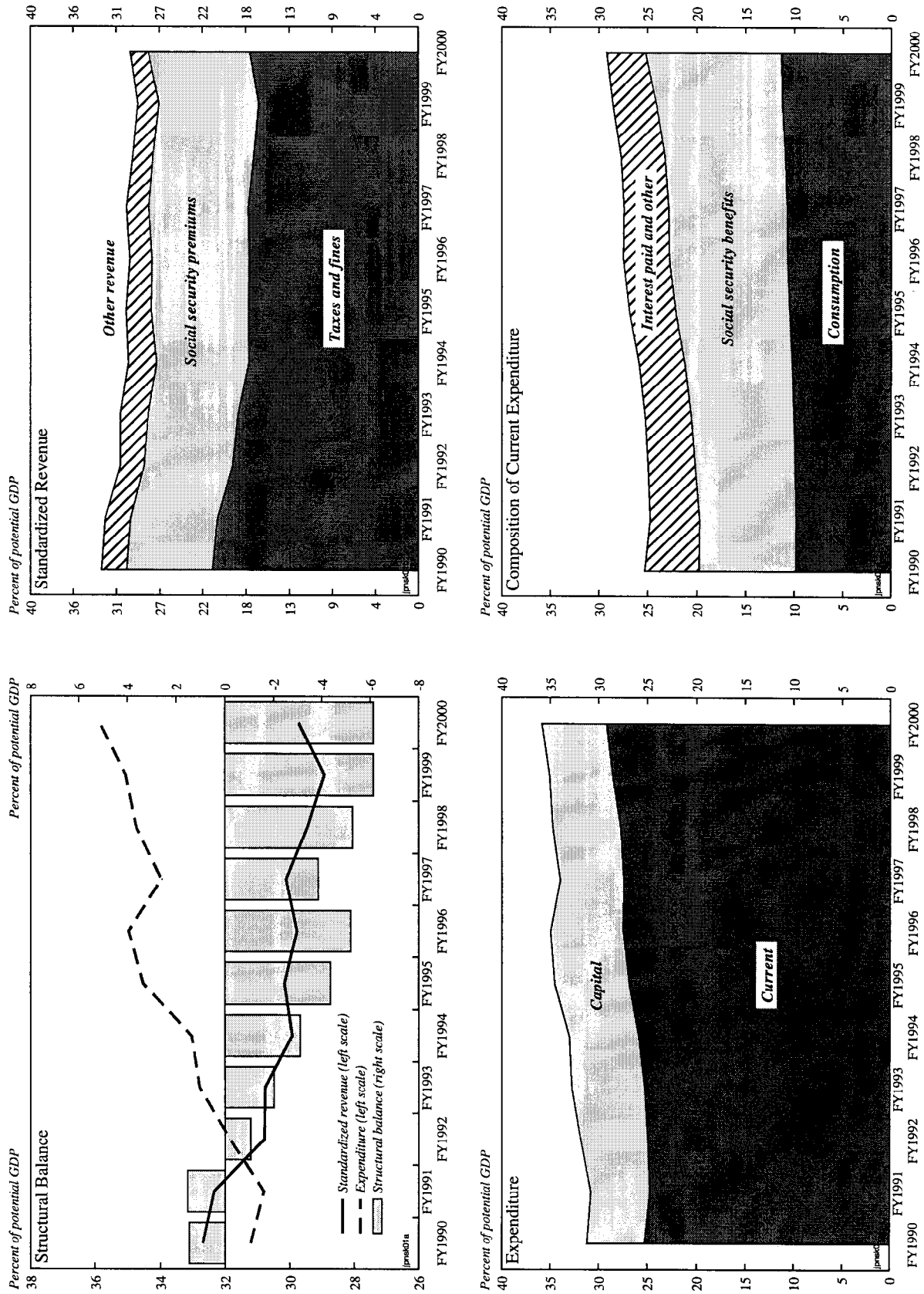


Figure VI.1. Japan: Changes in the Structural Balance, 1990-2000



primarily in the form of personal and corporate income tax cuts, were instituted in 1998, after the consumption tax hike of 1997. Moreover, the public investment allocations, estimated at about 1¼ percent of GDP per year, translated into a substantially smaller annual increase in general government investment of only ¾ percent of GDP, in part due to financing difficulties at the local government level. All in all, the effective tax cut and public works components of the stimulus packages—the “discretionary” element of fiscal policy in the 1990s—were substantially smaller than the headline figures and as a share of GDP.

8. **Macroeconomic conditions dampened the impact of fiscal policy.** Monetary conditions appear to have tightened since 1998. Real interest rates, which had been on a declining trend since the early 1990s, rose as the zero nominal interest rate bound was hit and deflationary conditions began to take hold. The real exchange rate also appreciated significantly starting in mid-1998.

### C. Structural VARs and Fiscal Multipliers

9. **A baseline SVAR was estimated to obtain aggregative fiscal multipliers.** This VAR was estimated using quarterly data for the sample period 1981–2000. The five variables included in the VAR were general government spending (the sum of consumption and investment spending), revenues (the sum of direct and indirect revenues), the real interest rate, the real effective exchange rate, and the output gap. To separately identify the impact of the social security system, social security contributions and benefit payments were excluded from the revenue and expenditure variables, and multipliers for social security payments were estimated separately. This separation also permits an examination of social security payments on multipliers for other government spending.

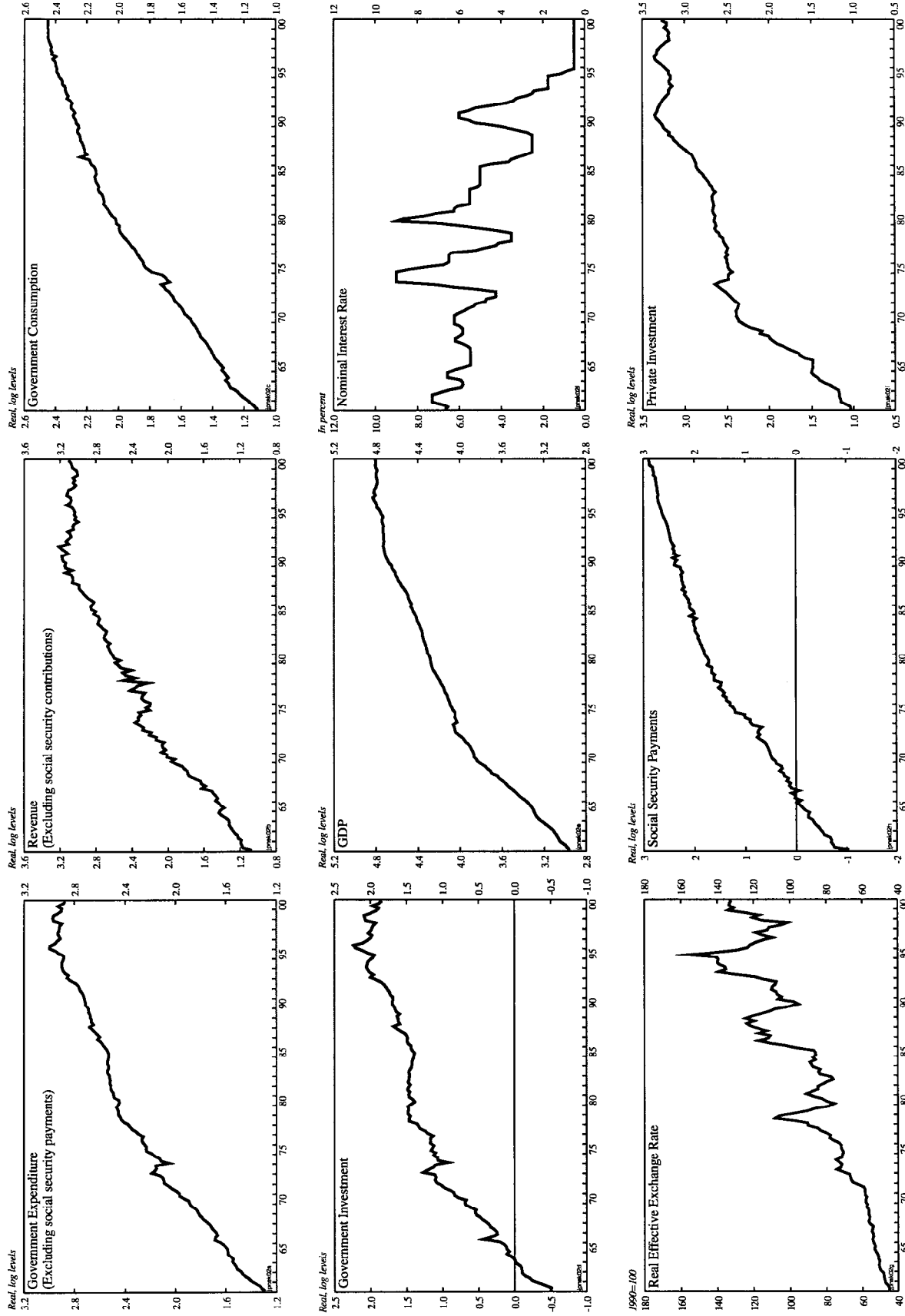
10. **The sources, transformations, and statistical properties of the data are as follows.** Real government spending and real activity data are from the national income accounts. The real interest rate is computed using the BOJ’s discount rate and the change in the GDP deflator. The real effective exchange rate is the IMF’s multilateral real exchange rate using relative CPI change between Japan and partner countries. The output gap was derived from real output using a Hodrick-Prescott filter. The revenue variable was converted into real terms using the GDP deflator. The data series are plotted in Figure VI.4. Based on the stationarity properties of the variables, all variables except the output gap and the real interest rate were used in first differences of log levels in the estimation. To obtain the dynamic fiscal multipliers, the elasticities generated by the cumulative impulse response functions of the baseline VAR were evaluated at the mean value of the ratio of the fiscal variable to output for the sample period.

11. **The baseline structural VAR takes the form:**

$$Ay_t = \sum_{i=1}^m M_i y_{t-i} + Nx_t + \varepsilon_t \quad (1)$$

where  $y_t$  is a vector of five variables,  $m$  is the maximum lag of the state variable,  $x_t$  is a vector of exogenous variables, and  $\varepsilon_t$  are the orthogonal, structural shocks. The matrix  $A$  is the identity matrix *minus* the matrix of contemporaneous effects of state variables ( $A_0$ ), and  $M$  and  $N$  are coefficient matrices. The reduced form VAR conforming to this structural VAR is:

Figure VI.4. Japan: Macroeconomic Developments, 1961-2000



Source: IMF staff calculations.

$$y_t = \sum_{i=1}^m D_i y_{t-i} + Fx_t + e_t \quad (2)$$

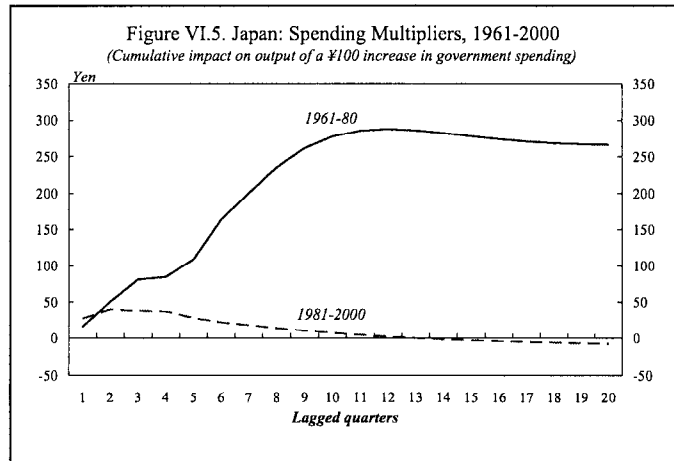
where  $e_t$  are reduced-form, non-orthogonal error terms.

12. **Identification restrictions were used to obtain structural parameters and shocks from the estimated reduced form VAR.** Along the lines of Blanchard and Perotti (1999), based on *a priori* information about the budget process and informational lags, the following short-run restrictions were imposed on the contemporaneous cross-effects of endogenous variables: (i) government spending is not affected by other variables. This is plausible on the grounds that as part of the budget implementation process, once the budget allocations have been set, government spending is unlikely to be affected by the real interest rate, the real effective exchange rate, and revenues, while lags in data compilation imply that government spending is unlikely to be affected by the output gap for the quarter; (ii) the interest rate is assumed to be unaffected by other variables; (iii) the real effective exchange rate is affected by government spending and the real interest rate; (iv) revenues are affected only by the output gap, and (v) the output gap is affected by government spending. Together with suitable supplementary restrictions on the contemporaneous impact of structural shocks on endogenous variables, the VAR is exactly identified.

#### D. The Effectiveness of Fiscal Policy

13. **Estimates from the baseline SVAR indicate that aggregative (dynamic) fiscal multipliers were broadly centered around ½ during 1981–2000.** Spending multipliers

(represented as the impact at lagged quarters of a ¥100 increase in government spending on the output gap, Figure VI.5) estimated from the baseline VAR peaked after two quarters at about ¥40, and were effectively zero after three years. Compared to the sample period 1961–80, these multipliers were similar over short horizons. However, over longer horizons, the multipliers appear to have declined substantially compared to large positive multipliers in the earlier period. As



regards tax multipliers, a tax cut of ¥100 is estimated to have led to an increase in output of about ¥40–50 in the short term, but the effect wears off to ¥30 after 20 quarters, and is similar to the output effect during the earlier sample period. These results are broadly comparable to other studies. For example, spending multipliers from macroeconomic models for Japan range between  $-\frac{1}{2}$  and 3 (similar to those for the US and Germany). Bayoumi (2000) obtains short-term spending and revenue multipliers of 0.65 and 0.2, respectively, for 1981–98 using a VAR framework.



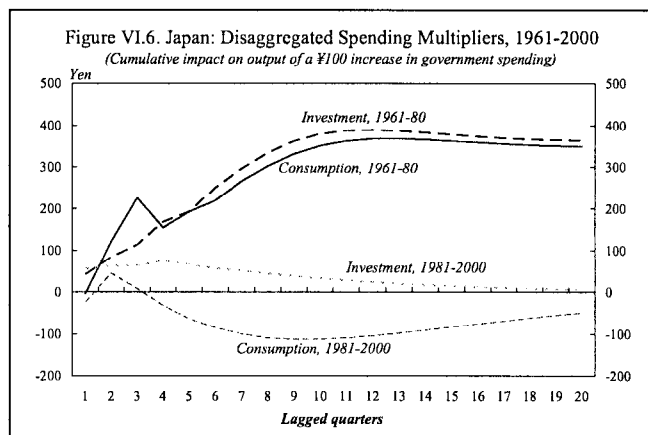
**14. Considerable attention has been devoted to inefficiencies in public works and the high level of public debt as factors behind the decline in long-run spending multipliers.**

As regards public investment, the argument from the supply side has been that it was cost ineffective and generated a low rate of return. From an aggregate demand perspective, the argument is that the public investment in the 1990s did not evoke enough of a complementary response from private investment, although this has not been verified directly. The role of public debt in dampening private consumption has also been cited. However, a recent study which estimates the marginal propensity to consume (*mpc*) out of household income directly as a time-varying function of fiscal variables does not find a clear relationship between *mpc* and the government debt-to-GDP ratio (Bhattacharya, 1999). Moreover, public debt has been on a rising trajectory since at least the 1970s, initially on account of an expansion of social benefit payments and since the early 1980s due to changing demographics, especially a rapid increase in the old-age dependency ratio.

**15. Much less attention has been paid to other factors.** As noted above, demographics had already led to deficits in the social security system starting in the early 1980s. These developments marked an important shift in the composition of government spending and, potentially, its impact on real activity. For one, different components of government spending, taxes, and transfers have different impacts on activity as their incidence differs across agents with different propensities to consume. Most existing studies estimate fiscal multipliers including social security payments either in government spending, or more commonly lump them together with revenues (as negative taxes). From an empirical standpoint this imposes a restriction that the multipliers for social security spending are the same (in absolute value) as for other components of government spending and taxes. This need not be the case. Escolano (2002) finds, for example, that multipliers for social transfers are larger than for taxes for the UK, thus rejecting the restriction that tax and transfer multipliers are equal. Along these lines, the role of the composition of government spending was examined by suitably augmenting the baseline SVAR, and multipliers for social security spending were estimated separately.

**16. Lower fiscal multipliers for both government consumption and investment spending contributed to the decline in long-run aggregative spending multipliers.** The baseline VAR specification was re-estimated with government spending broken down into consumption and investment spending,

and the expenditure multipliers were estimated separately for the two components. For the period 1981–2000, consumption and investment spending multipliers were about 0.45 and 0.65, respectively, after two quarters (Figure VI.6). Over longer horizons, however, the consumption multipliers were actually negative, while the investment multipliers were much smaller although still positive. While the decline in the investment multiplier has been widely noted in the



literature—see for example Yoshino and Sakakibara (2000)—there has been little discussion of consumption multipliers.

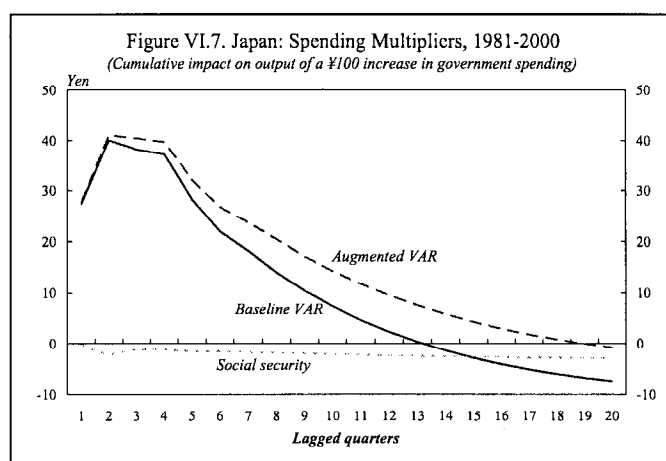
17. **The decline in the multipliers could be attributable to a change in the composition of government spending.** The shift in the composition of non-social security spending is reflected in the rise in the share of health expenditures which rose by over 10 percent from 26¼ percent during 1970–80 to 36½ percent during 1980–97 (Ishi, 2000). This change in the composition of non-social security government spending paralleled the increase in social security spending, with both spurred by population ageing. The impact of this shift can be estimated by augmenting the SVAR to include social security payments as a proxy for the composition of government spending and comparing the estimated fiscal multipliers on government spending with those from the baseline VAR.

Table VI.1. Functional Classification of Government Spending, 1970–97 <sup>1</sup>		
	1970–80	1981–97
Education	31.3	25.5
Health	26.2	36.5
Economic services	40.1	33.4
General public services	21.6	21.4
Housing and Community	14.2	18.0
Defense	6.0	6.0
Other	2.5	4.6
Total	100.0	100.0

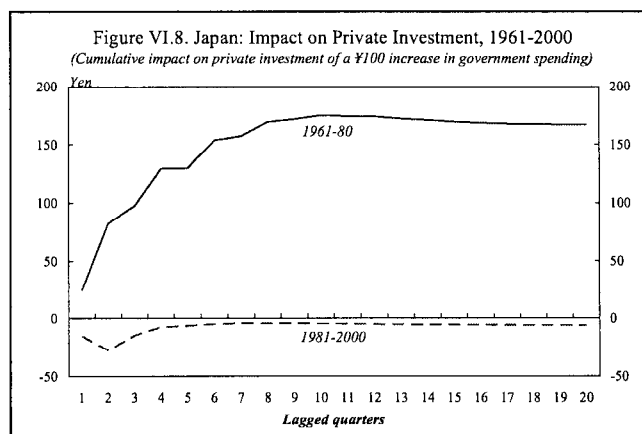
Source: Ishi (2000).

<sup>1</sup> Excluding social security and welfare payments.

18. **The augmented SVARs suggest that the shift in the composition of government spending and rising social security payments dampened the long-run output effects of fiscal policy.** The estimated government spending multipliers from the augmented VAR for 1981–2000 were higher compared to the baseline VAR (Figure VI.7). These results indicate that, for given budgetary expenditures, the shift in the composition of government spending towards social security-related expenditures had a negative output effect. It also highlights the role of ageing in dampening the effect of government spending through the transmission mechanism. This channel of transmission is reflected in the larger elasticities of non-social security government spending relative to social security spending: as budgetary pressures due to demographics became acute starting in the early 1980s, social security payments squeezed other government spending more than in the earlier period. Moreover, the estimated multipliers for social security spending were essentially zero over the short term and over longer horizons. These demand side explanations for the adverse effects of social security spending on output are complemented by supply side explanations. Cross-country comparisons suggest that there are a number of inefficiencies in the provision of health services in Japan (OECD, 2001). These inefficiencies are related to the cost ineffectiveness of the current health care system. For example, the fee-for-service system generates a high number of outpatient consultations per capita per year (more than twice the OECD average) and higher drug consumption.



19. **The decline in long-run multipliers is also attributable to weaker “crowding in” effects of government spending.** In this context, it is again useful to distinguish between the supply and demand side effects of public investment in particular. The public works projects of the 1990s expanded social infrastructure and capacity—mostly related to agriculture and rural road creation. The estimated return to public capital in these projects and sectors is low compared to those in tertiary sector industries and in large urban-based prefectures where complementarities between public and private investment are higher (Yoshino and Nakahigashi, 2000). However, their demand side impact was also limited. This is reflected in the weaker “crowding in” effects of government spending as shown by SVARs in which the output gap was replaced by private investment spending (Figure VI.8). The estimated multipliers from these SVARs suggest that government investment had a substantial positive effect and “crowded in” private investment during 1961–80. However, during 1981–2000, the standard “crowding out” effect was more prominent and the effect of government spending shocks on private investment was small and negative. This negative impact is attributable, in part, to the shift in the financial condition of the banking and the corporate sectors which impeded the fiscal transmission mechanism during the latter sample period as suggested by Bayoumi (2000) and Ogawa et. al. (1996). Controlling for the effect of these factors using bank lending as a proxy in augmented VARs, government spending multipliers were higher.



### E. Policy Implications

20. **The implications of this chapter’s analysis for the conduct of fiscal policy are:**

- **There remains a role for fiscal policy as an instrument of countercyclical demand management.** The analysis in the chapter shows that short run spending multipliers on non-social security spending and tax cuts during 1981–2000 were broadly the same as an earlier sample period, although the multipliers were lower at longer horizons. Although long-run multipliers appear to be smaller, government spending increases and tax cuts can still help support aggregate demand in the short-run. There also appears to be support for the view that the “real water” content of the stimulus packages of the 1990s was small. A large portion of the increase in the budget deficit and public debt was due to higher social security spending to meet rising demographic pressures. Such spending is estimated to have had lower impact on output than other government spending or tax cuts.
- **Fiscal policy can be made more effective in a number of ways:**
  - Setting the fiscal policy stance in initial budgets, and reduced dependence on stop-go supplementary budgets, could help smooth fiscal stimulus during downturns.

- An improvement in the composition of government expenditure would also make fiscal policy more effective. Government investment spending needs to be shifted to sectors and geographical locations where it has a higher rate of return and complementarities between government and private spending are higher. While pressures for higher social security spending are likely to persist over the foreseeable future, the impact on output could be enhanced through improved efficiency, especially in the health sector.

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## VII. MONETARY POLICY IN A DEFLATIONARY ENVIRONMENT<sup>1</sup>

### A. Introduction

1. **Japan's lengthy economic stagnation and persistent deflation continue to generate lively discussions in academia and policy circles.** To the extent that price developments are considered a monetary phenomenon, a significant portion of the literature deals with monetary policy related issues, especially how to combat deflation. What are the channels of transmission that would allow further easing to permeate through the economy even when short-term interest rates have reached their floor? The issue is further complicated by the existence of significant banking sector problems in Japan.

2. **With the Bank of Japan (BoJ) embarking on a quantitative easing framework since March 2001, discussions on the instruments and capacity to carry out monetary easing under zero short-term interest rates have taken center-stage.** Despite a series of easing measures, which have led to sizable increases in base money, deflation continues, leading to the question whether monetary policy has essentially run its course in Japan. However, the answer is not straight-forward. A careful examination of the various channels of transmission and the associated lag structure is needed to evaluate the ability of monetary policy to influence demand and prices in Japan. Also, a historical comparison with previous deflationary episodes can provide useful clues on the extent of easing necessary to restore positive price growth.

3. **The goal of this chapter is to explore monetary policy's role in combating deflation in Japan, both from a comparative and empirical perspective.** On the comparative side, the paper examines deflationary episodes from Sweden and the United States in the 1930s. On the empirical side, the paper uses reduced form vector autoregressions (VARs) to analyze Japan's monetary transmission mechanism. This approach allows one to impose minimal restrictions on how monetary shocks influence the economy, while recognizing the simultaneity between monetary impulses and macro variables. A simple monetary model is first estimated, and is then augmented by incorporating a banking sector indicator. Subsequently the exchange rate and asset price channels are examined to see if monetary easing can potentially have a positive impact on activity and prices through these channels.

4. **The analysis suggests that in the Swedish and the U.S. cases in the 1930s, the extent of monetary expansion that was necessary to restore positive price growth was larger than the magnitude of base money growth seen in Japan so far.** The empirical analysis indicates a potentially favorable impact of quantitative easing, through the asset price or portfolio rebalancing channel. The results show that banking sector weaknesses do not completely short-circuit the transmission between increases in base money and other macroeconomic variables, but they do indicate that addressing such problems would increase the effectiveness of monetary policy.

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<sup>1</sup> Prepared by Taimur Baig (ext. 38790).

5. **The chapter is organized as follows. Section B provides a brief overview of the Swedish and the U.S. cases, deriving salient lessons for the Japanese context.** Then some conceptual issues of monetary transmission are discussed in Section C. Section D examines the Japanese context. Section E contains descriptions on the methodology and data. A discussion of the results follows. Section F concludes by noting that notwithstanding banking sector problems, there is evidence of monetary policy efficacy in Japan, and further easing would likely provide positive impulse to output and prices.

## **B. Monetary Policy to Combat Deflation: Some Earlier Episodes**

6. **The worldwide economic collapse of the 1930s provides several case studies of monetary policy operation in a deflationary environment.** In this section, the Swedish and the U.S. experiences are examined.

### **Episode 1—Sweden in the 1930s**

7. **In the fall of 1931, the Swedish central bank (Riksbank) announced a price stability target.**<sup>2</sup> Owing to the experience from the country's previous deflationary episode, the Swedish authorities were keenly aware of the potential cost of failing to fight a sustained fall in prices. In the early 1920s, the Riksbank's refusal to lower interest rates at a time when prices were falling by 20 percent (year-on-year) led to an economic plunge, with Swedish GDP falling by 35 percent between 1920 and 1922.

8. **Thus, as the worldwide depression and deflationary pressures forced Sweden to search for an alternative to the Gold Standard, the Riksbank was mandated to combat deflation vigorously with full instrument independence.**<sup>3</sup> Although no specific target level was spelt out, the program clearly stated the desirability of having the price level recover. Indeed, in September 1931, the Swedish Minister of Finance instructed the Riksbank to take necessary actions to maintain the domestic purchasing power of the krona. The Riksbank focused on reviving expectations of *underlying* inflation, i.e., excluding temporary taxes, customs duties, and seasonal effects. A weekly consumer price index allowed policy makers to monitor the impact of monetary policy.

9. **In pursuing its mandate, the Riksbank reduced the discount rate by 350 basis points to 2.5 percent between 1932–34 and maintained it at this level until 1939;** it also carried out unsterilized interventions in the foreign exchange market. In addition, the krona exchange rate was effectively devalued and then pegged to the British pound from 1933 onward.

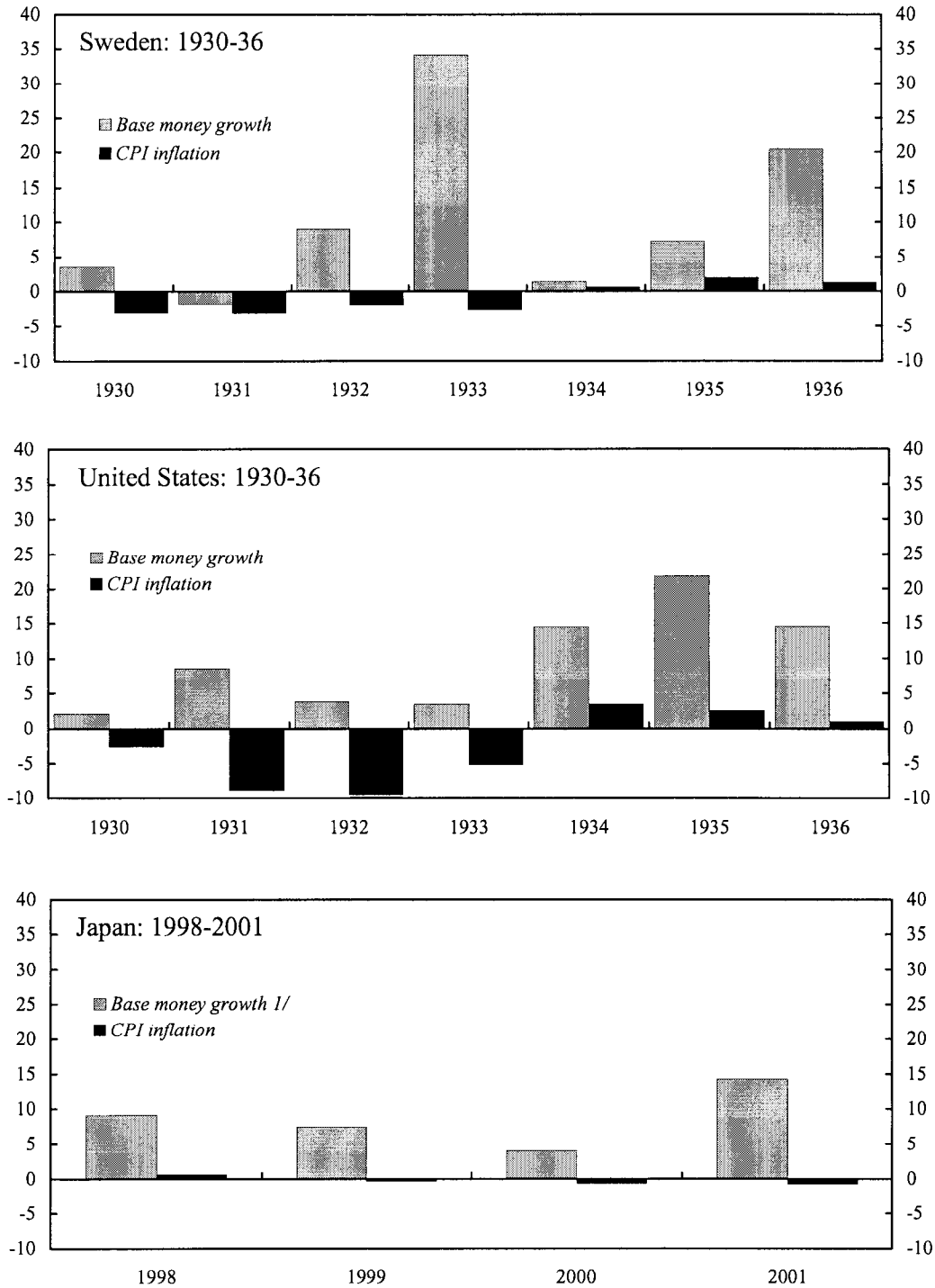
10. **Buoyed by these easing measures, base money expanded by 92 percent between 1931–36.** Prices did not react immediately to the monetary easing, with inflation turning positive only in 1934, nearly three years after the beginning of the program (Figure VII.1, top

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<sup>2</sup> The discussion on Sweden draws primarily on Berg and Jonung (1998).

<sup>3</sup> The instrument independence of the Riksbank was explicitly mandated in 1933.

Figure VII.1. Base Money Growth and Inflation  
(In percent)



Sources: Bank of Japan; Central Bank of Sweden; U.S. Bureau of Labor Statistics; and Bernanke (1995).  
1/ End-September data.



panel). However, with the monetary program combining with a series of measures to boost the real economy and address some problems in the financial sector, Sweden was able to come out of economic stagnation by the mid-1930s.

11. **The Swedish case provides two important lessons.** First, an explicit commitment to end deflation can be useful to raise inflation expectations when there are widespread fears of deflation in the economy. Second, the central bank has to be prepared to ease substantially, and do so for a long period of time, to achieve its goals.

## Episode 2—U.S. Recovery from the Great Depression

12. **The U.S. departed from the Gold Standard in 1933, which subsequently paved the way for a massive monetary expansion on a scale unprecedented in the country's economic history.** Although it is beyond the scope of this paper to discuss the extensive literature investigating the causes of the Great Depression, Friedman and Schwartz (1963) and Bernanke (1983 and 1995) suggest that monetary contraction was the principle underlying factor.

13. **What brought the U.S. back from a vicious deflationary spiral?** Beginning in 1933, very low interest rates (the discount rate was kept at or below 2 percent for the rest of the decade) and leaving gold inflows unsterilized boosted base money by 60 percent in three years (Figure VII.1, middle panel). With this, CPI inflation went from negative 5 percent in 1933 to averaging over 2 percent in the following three years. Romer (1992) argues that the monetary expansion was key to the dramatic recovery of U.S. output and prices in the 1930s. She shows that a substantial decline in *ex ante* real interest rates (driven by rising inflation expectations) coincided with the beginning of the monetary expansion, which supports the existence of a conventional interest rate mechanism in passing on the effects of monetary easing. Along similar lines, Bernanke (1995) stresses that reflation was a leading component of the U.S. economic revival, although he also points out that the New Deal's rehabilitation of the financial system was a prerequisite to the recovery.

14. **Some researchers have argued that it was not the U.S. Federal Reserve's stance, but rather the decision of the Roosevelt administration to leave surging gold inflows unsterilized, that was instrumental in the monetary expansion.** However, even without deciding on which actor was instrumental, there is general support in the literature that in the U.S., a deflationary regime was replaced by a very expansionary monetary policy from 1933 onward.<sup>4</sup>

## C. The Japanese Context

15. **Prices in Japan have fallen each year since 1999.** In its efforts to combat deflation, the BoJ introduced a quantitative easing framework in March 2001. Under this framework, the BoJ pushed the overnight call rate close to zero by targeting current account balances (bank and non-bank reserves) held at the central bank. The target was tripled during the

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<sup>4</sup> See Romer (1992) and Temin and Wigmore (1990).

course of 2001, and balances significantly exceeded the upper end of the ¥10–15 trillion target during March 2002. At the same time, the BoJ steadily increased its monthly outright purchase target of Japanese Government Bonds (JGBs), from ¥400 billion in March 2001 to ¥1 trillion in February 2002.<sup>5</sup> These actions have resulted in rapid base money growth—27 percent (year-on-year) in June 2002—but that too has fallen after peaking in March of this year. Meanwhile, bank lending has continued to decline, broad money growth remains stagnant at 3–4 percent, and deflationary pressures have shown little signs of abating.

**16. Recent increases in base money growth notwithstanding, monetary expansion has not reached the levels seen in the historical episodes discussed above** (Figure VII.1, bottom panel).<sup>6</sup> In fact, base money has grown by a cumulative 42 percent over three and a half years since 1999, clearly falling short of the magnitude of expansion seen in Sweden or the U.S. in the 1930s (Figure VII. 2).

**17. It is nevertheless hard to draw direct parallels between the historical episodes discussed above and the situation in Japan today.** Clearly, deflationary pressures were more severe in the Swedish and U.S. cases than in Japan today.<sup>7</sup> However, the two episodes suggest that combating deflation requires decisive, substantial, and sustained monetary policy efforts.<sup>8</sup> Moreover, when compared to the Swedish monetary program, which gave the central bank instrument independence to back up a strongly worded mandate to resist deflation, the BoJ's stance simply indicates its intent to maintain the present policy-framework until deflation ends.

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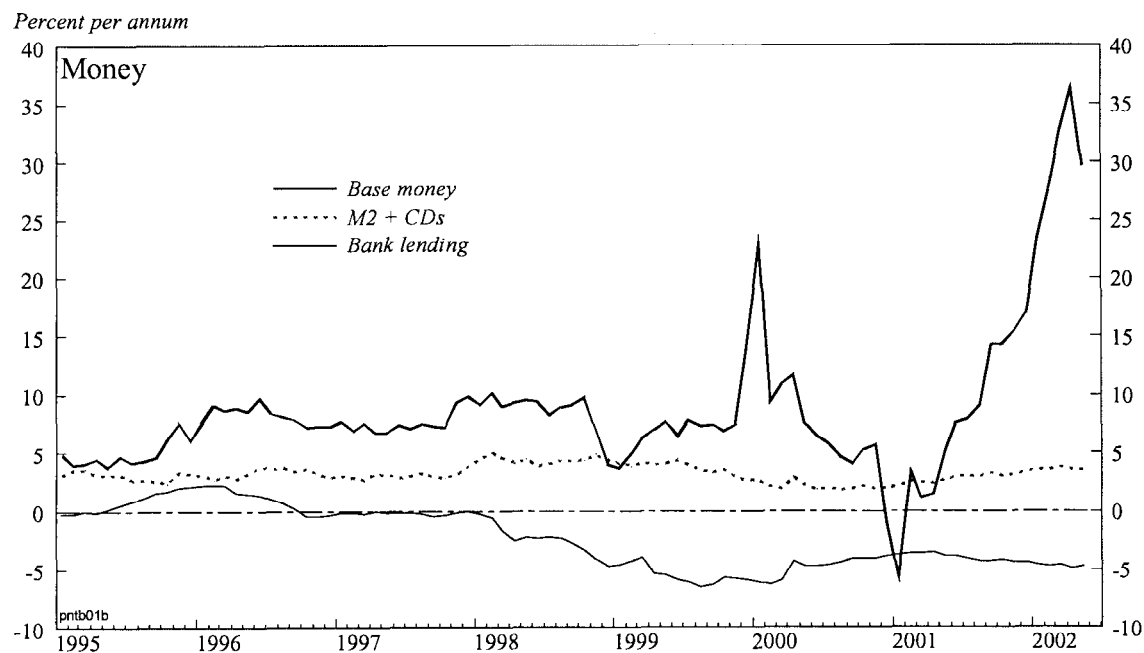
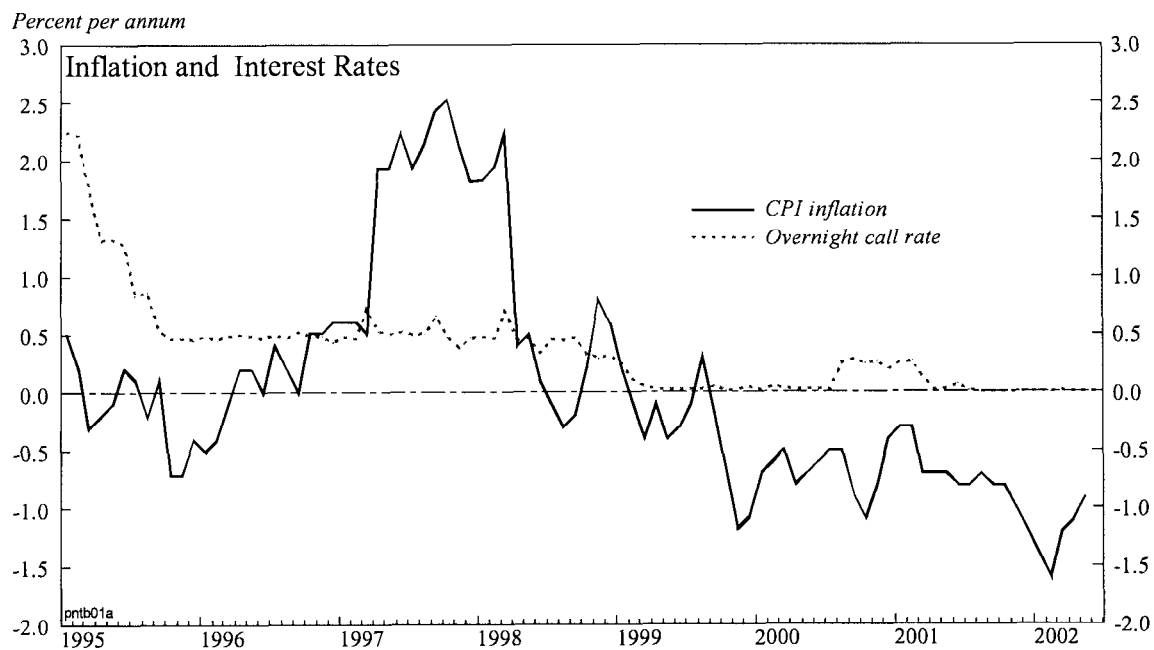
<sup>5</sup> Also, note that even prior to targeting the current account balances, the BoJ kept the policy interest rate at or near its floor throughout the late 1990s and early 2000s.

<sup>6</sup> See Fujiki *et al.* (2001 and 2002) for detailed expositions on the operational aspects of Japanese monetary policy in the late 1990s. Shirakawa (2002) examines the impact of base money growth in the last one year.

<sup>7</sup> However, studies dealing with the quality of Japan's price statistics have raised concerns that deflation may be substantially worse than reported in the official data. In a recent paper, Ariga and Matsui (2002) argue that CPI deflation could be worse by as much as 1 percent a year. The factors responsible for this include upward bias owing to infrequent re-basing, lack of coverage of discount stores, not properly incorporating the effects of products' quality changes, etc.

<sup>8</sup> Svensson (1999 and 2000) argues that transparent inflation or price level targeting, along with coordinated fiscal and monetary expansion, can contribute to escaping a liquidity trap.

Figure VII.2. Japan: Inflation, Interest Rates, and Money, 1995-2002



Source: DRI-WEFA, Nomura Database.

18. **Thus, in the Japanese context, has the BoJ exhausted its means already, or can it feasibly combat deflation more vigorously?** While base money growth rates in recent years fall short of the levels seen in the historical episodes, the issue warrants further examination, especially by taking into account the role of banks and asset markets. In the following sections, we address this issue empirically. First, we begin with an overview of the possible sources of monetary policy transmission under the zero rate bound.

#### **D. Transmission Channels at the Zero Rate Bound**

19. **The Japanese case departs from the historical episodes discussed above in one striking way—short-term nominal interest rates are already at their floor.**<sup>9</sup> This section focuses on possible channels of transmission when the policy rate has reached its floor. They are:

- **Expectations channel.** Easier monetary policy, if credible, increases inflationary expectations in the economy, which then leads to higher wage increases and upward price pressures. Rising inflationary expectations also lower real interest rates, providing further impulse to consumption and investment.
- **Credit channel.** Expansionary impulses of monetary policy are transmitted through increases in bank lending. Even when interest rates are zero, monetary expansion reduces the external finance premium as liquidity improves and asset prices rise. The cost of borrowing falls, leading to an increase in lending.
- **Exchange rate channel.** A monetary loosening depreciates the exchange rate which, given nominal rigidities, translates into a short-run depreciation of the real exchange rate, boosting net exports.
- **Asset price or portfolio rebalancing channel.** A monetary expansion, through say the purchase of bonds, reduces the yield on such assets (i.e., long-term bond yields) causing the public to rebalance its portfolio, and leads to changes in the prices of a wide range of assets, affecting wealth, consumption, and investment.

20. **A number of recent papers on Japan have suggested that monetary expansion, even under zero rates, can generate price expectations through the channels discussed above.** Statistical analysis by Meltzer (1999 and 2000) suggests that a failure to allow the

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<sup>9</sup> Under the conventional interest rate channel, lowering the rate reduces the cost of capital, which then increases the interest sensitive components of aggregate demand, as well as boosting price expectations. However, in an interesting exposition, Nelson (2001) shows that even after controlling for the short-term interest rate, base money growth is a significant determinant of total output (relative to potential) in both the U.S. and U.K. He explains this by arguing that money growth contains information about the term structure not captured by short or long-term market interest rates. Base money growth, therefore, is a useful predictor of aggregate demand above and beyond interest rates.

exchange rate to depreciate has been instrumental in the latest output decline and deflation episode, and a more expansive monetary policy is essential to revive demand and end deflation. Meltzer recommends that given the lower bound on interest rates, the BoJ should pursue an adaptive rule for growth of the monetary base (the rule would respond to lower output growth and accommodate any increases in money demand). He also recognizes that a possible consequence of the expansionary policy is a depreciation of the yen.

21. **Goodfriend (2000), stressing the importance of monetary policy over fiscal policy in deflationary episodes, argues in favor of quantitative monetary easing stimulating the economy through the portfolio rebalancing effect.** He also argues that aggressive open market operations can reduce external finance premiums even when short-term interest rates are at the zero bound.

22. **Bernanke (2000) argues that it is not low *nominal* interest rates, but rather the extent of monetary expansion, that adequately signals the monetary policy stance.** Monetary easing is bound to have an impact on the economy as the price level cannot be completely independent of money issuance.<sup>10</sup> Thus one should expect sustained monetary easing to revive price expectations. In the Japanese context, Bernanke argues that the credibility of the commitment to eliminate deflation could be made more concrete by adopting the guiding principles of an inflation target.

23. **Does the Japanese data support the existence of the channels discussed above?** In the next section, a monetary model of Japan is empirically tested, examining if base money expansion can have the desired effect on activity and prices after controlling for the fact that short-term interest rates are already at zero.

## **E. A VAR Exploration of Japan's Monetary Transmission Mechanism**

### **Methodology and Data**

24. **The first step is to estimate a basic monetary model, featuring output demand, prices, interest rates, and money, with quarterly, seasonally adjusted data from 1980 to 2001** (see Appendix for data sources). The methodology followed is along the lines of Morsink and Bayoumi (2000). Output demand is measured as real private demand (derived by subtracting total government spending from real GDP) relative to potential output. The uncollateralized overnight call rate is used for the interest rate variable. Prices are measured by the log of the CPI, and the monetary variables are expressed as a ratio of potential output. Thus when looking at the figures, a 0.01 change represents a 1 percent change in the relevant variable. The VAR is identified by using the standard Choleski decomposition, with the order being prices, private demand, interest rates, and money.<sup>11</sup> The choice of ordering was made on the basis of the speed with which the variables respond to shocks, i.e., prices are assumed

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<sup>10</sup> If that were the case, monetary authorities could create money to purchase indefinite quantities of goods and assets without affecting prices.

<sup>11</sup> The ordering determines the level of exogeneity of the variables.

to respond last, and the monetary variable the most responsive. The VARs include two lags of each variable.

25. **In addition to the endogenous variables listed above, the VAR also includes the following exogenous variables: a constant term, a time trend, and three dummy variables.** The first two dummies are aimed at capturing short term demand shifts owing to the introduction of the consumption tax in April 1989 and its increase in April 1997. The third dummy aims to control for a Y2K-related temporary surge in liquidity demand during the final quarter of 1999.

26. **The basic VAR is extended by incorporating the role of banks.** Bank loans are used to model shocks to bank assets (expressed also as a share of potential GDP). Loans are considered to adjust faster than output, but slower than the rest of the variables in the model. In order to examine the exchange rate and asset price channels, subsequent extensions of the model include the nominal effective exchange rate and a stock price index (TOPIX), both expressed in logs. These variables are assumed to adjust more quickly, immediately after a monetary shock.

### **The Basic Model**

27. **As a first step, a basic model is estimated to confirm that the data generate standard results found in the monetary policy transmission literature.** The results, illustrated through the impulse response functions summarized in Figure VII.3 (top panel), indicate that broad money shocks have a significant impact on output (with the shock dying out after about 12 quarters). The finding that a broad money shock has a significant impact on demand, even with the interest rate included in the VAR as a separate variable, implies that there are other channels beyond the interest rate channel through which the monetary transmission process takes place. The implied one-year elasticity of output with respect to broad money is 0.05, i.e., a 1 percent increase in broad money raises private demand by less than 0.1 percent.<sup>12</sup> Prices respond significantly to an output shock, with a one-year elasticity of 0.2. Prices also respond to innovations in broad money, but the response becomes significant 2½ years after the shock. The implied multiplier of prices with respect to broad money is 0.07. Thus monetary shocks impact prices and demand, while prices also get impacted by demand shocks.

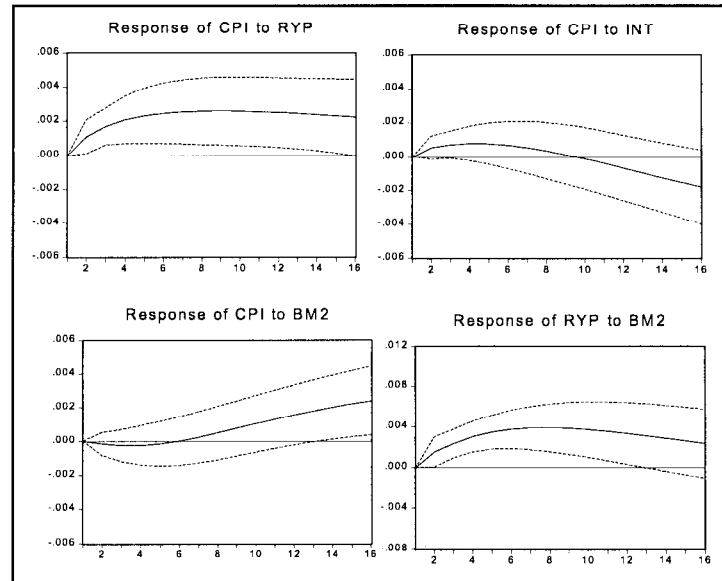
28. **Any explanation of the monetary transmission mechanism in Japan must take into consideration the fact that with short-term interest rates at their floor, base money has become the BoJ's primary monetary policy instrument.** Base money is therefore incorporated in the above model. Adding base money to the model (ordering it last) and re-running the VAR, it is found that in the one year subsequent to a base money shock, prices respond with an elasticity of around 0.04, implying that a 23 percent base money shock would raise the CPI by 1 percent. Also, after adding base money, output's response to a

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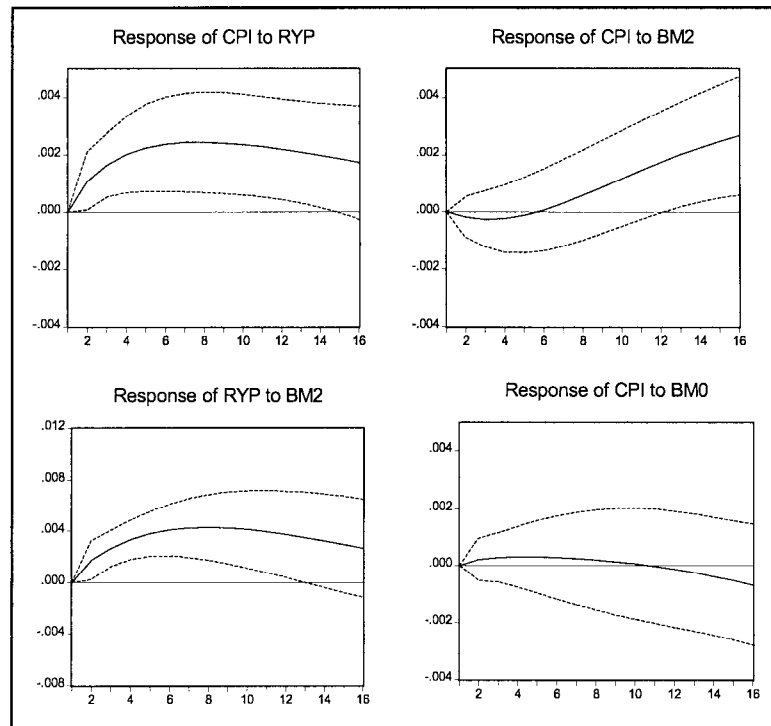
<sup>12</sup> In order to derive the elasticities, the statistically significant responses of the relevant variable over the specified period are first summed, and then divided by the standard deviation of the variable which is the source of the shock.

**Figure VII.3. Selected Impulse Responses from the Basic Model**  
Response to Cholesky 1 standard deviation innovations  $\pm 2$  standard error

With Broad Money



Adding Base Money



RYP: Real Private Demand    BM2: M2+CDs    INT: Interest Rates  
CPI: Consumer Price Index    BM0: Base Money

broad money shock, and the response of prices to broad money and output shocks, remain virtually unchanged and their respective statistical significance is undiminished (Figure VII.3, bottom panel). The small magnitude of the elasticity estimate suggests that substantial easing is required to generate an upward trend in prices, and the rather lengthy lag structure seen in the impact of prices to broad money suggests that the monetary authorities may have to wait for quite some time before seeing prices recover. Statistically, the impulse response from base money to prices is found to be insignificant. Given that the model estimated in this section does not take into account a number of pertinent factors relevant to Japan, e.g. bank loans and asset prices, this is not surprising. In the subsequent sections, the monetary model is augmented to incorporate a richer range of interactions in the transmission mechanism.

### **Incorporating the Banking Sector**

29. **Weaknesses in the banking sector are likely to impact the monetary transmission.** Morsink and Bayoumi (2000) show that bank loans are an important component in the monetary transmission process in Japan. Following their methodology, a bank loans variable is incorporated in the basic model and the VAR impulse response functions (Figure VII.4) are examined. It is found that the CPI responds positively to innovations in private demand, banks loans, and money shocks (both broad money and base money). With the exception of prices to demand, the results once again hint at a substantial lag structure, with the responses becoming statistically significant only in the 4<sup>th</sup> year subsequent to the shocks. Focusing on the CPI response to base money innovations, the one-year elasticity is about 0.05, i.e., a 20 percent base money shock would raise the CPI by 1 percent, comparable to the findings in the basic monetary model, although the standard error associated with the impulse estimate is substantially improved (it is significant around the 10 percent level).

30. **The role of bank loans in the transmission mechanism is further examined by exogenizing bank loans in the calculation of the impulse responses.**<sup>13</sup> Exogenizing bank loans substantially reduces the impulse response of private demand to broad money, which indicates that bank loans play an important role in the transmission of shocks from money to output (Figure VII.5). One way of looking at this result is that in order to fully leverage the effectiveness of monetary policy, the banking sector must be strengthened.

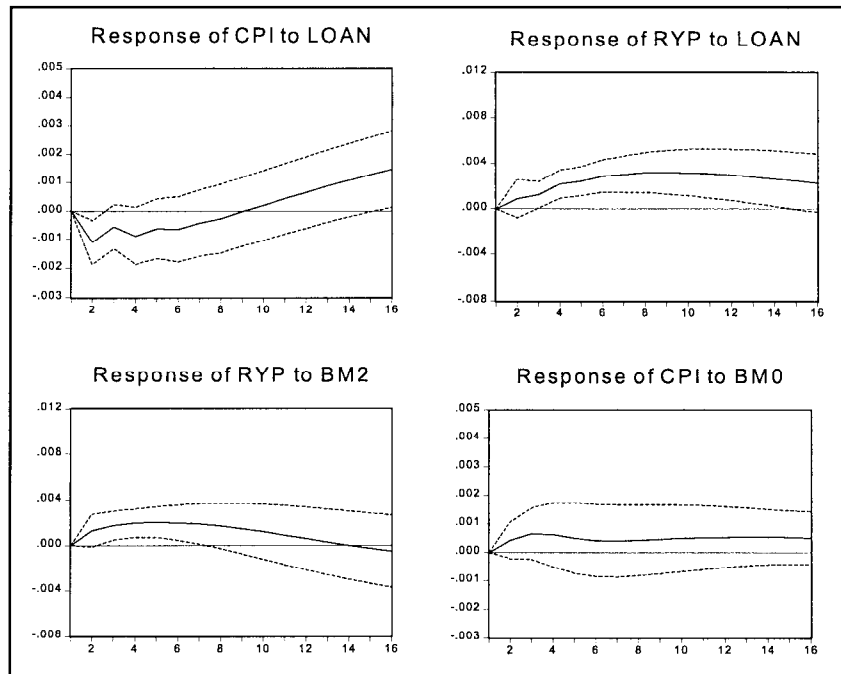
31. **The results from this section underscore two points.** First, they reinforce the conclusion of Morsink and Bayoumi with respect to the importance of the banking sector in the monetary transmission mechanism. Second, even when the banking sector activities are incorporated in the model, a statistically significant impulse of money to demand is found. This indicates that monetary transmission mechanism is not completely short-circuited by

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<sup>13</sup> This is done by re-running the VAR, with the lagged values of bank loans treated as exogenous variables in a smaller VAR involving private demand, prices, interest rate, and money. This procedure allows us to re-estimate the banking model, except that this time any responses within the VAR that pass through the bank loans variable are blocked off. Comparing the results of these two VARs provide a measure of the importance of bank loans in the monetary transmission mechanism.

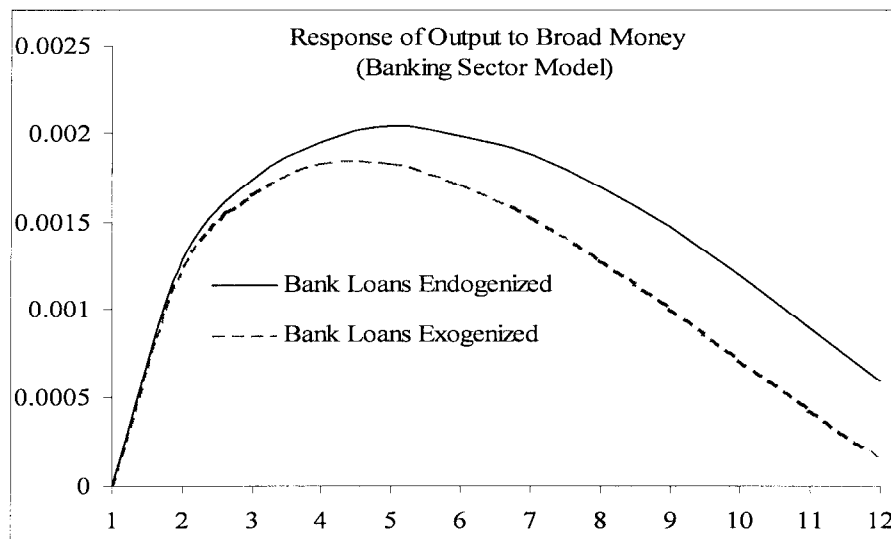


**Figure VII.4. The Monetary Model with the Banking Sector**  
Response to Cholesky 1 standard deviation innovations  $\pm 2$  standard error



RYP: Real Private Demand    BM2: M2+CDs    BM0: Base Money  
CPI: Consumer Price Index    LOAN: Bank Loans

**Figure VII.5. Role of Bank Loans**  
(Response to one standard deviation innovations)

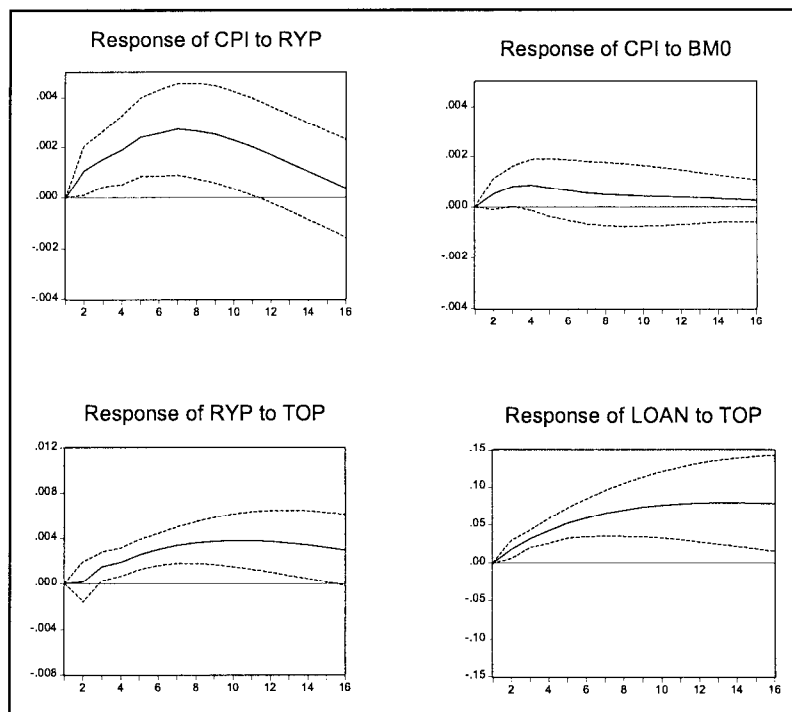


banking sector weaknesses. Also, the results show that prices can be influenced by base money injection after controlling for the above factors.

### Equity Price and Exchange Rate Channels

32. So far, the specifications have not taken into account the impact of monetary easing on asset prices. Consequently, equity prices (the broad Japanese stock market index, TOPIX) and the nominal effective exchange rate (NEER) are added to the model. The first result of interest in the model with equity prices is that consumer prices react positively and significantly to innovations in base money. Prices respond to private demand with a one-year elasticity of 0.2 and four-year elasticity of 0.9, comparable to the findings in the previous sections. The implied one-year elasticity of prices with respect to base money shock is 0.04, close to the results found in the previous sections (in order to push up the CPI by 1 percent in a four-quarter horizon, base money would have to be boosted in excess of 25 percent). The result is statistically significant. (Figure VII.6).

Figure VII.6. The Monetary Model with Stock Prices



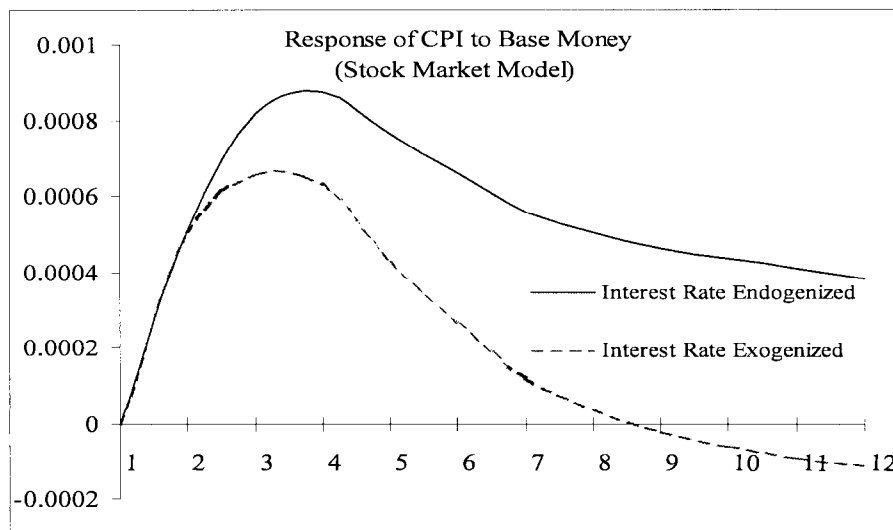
RYP: Real Private Demand.  
BM0: Base Money  
TOP: TOPIX Composite Index

CPI: Consumer Price Index.  
LOAN: Bank Loans

33. **The results thus indicate that base money expansion can positively influence consumer prices within a year.** Stock prices react positively to monetary shocks, which in turn stimulate demand and banking activities, and finally prices.<sup>14</sup> The price multiplier is rather small (but the impulse response is statistically significant at the 10 percent level), as seen also in the previous sections, indicating that a substantial base money injection is required to have a significant impact on the prices.

34. **Given that short-term rates have been at their floor recently, it is interesting to examine if the results break down when controlled for the interest rate channel.** This is done by re-running the above VAR with the interest rate exogenized. The impulse response of price to innovations in base money weakens somewhat as a result, but only in the long-run. During the first year following a shock, when the response is statistically significant, the magnitude of the impulse responses are found to be comparable between the two VARs (Figure VII.7). The finding once again supports the premise that policy efficacy is not entirely negated even at zero interest rates.

**Figure VII.7. Role of Interest Rates**  
(Response to one standard deviation innovations)



35. **Finally, stock price is replaced with NEER.**<sup>15</sup> The statistical relationship between base money and NEER is found to be insignificant, probably on account of relatively large

<sup>14</sup> Innovations in TOPIX positively impact loans, with a one-year elasticity of 0.2 and four-year elasticity of 2.0. Moreover, private demand reacts positively to innovations in loans and stock prices. The elasticity of demand with respect to stock prices is 0.1. The impulse response remains statistically significant throughout the 16 quarter window.

<sup>15</sup> With respect to the exchange rate, an increase in the variable's value implies an appreciation and vice versa. Note that the results obtained in this section remain virtually unchanged when the NEER variable is replaced with the yen-dollar exchange rate.

swings in the exchange rate during the sample period. Private demand reacts positively to a NEER depreciation, with an elasticity of  $-0.01$ , but the statistical significance of the reaction is diminished after only one quarter. Prices, on the other hand, react significantly to an exchange rate shock over the first four quarters, with the CPI rising by 0.05 percent in response to a 1 percent depreciation of the NEER. Following the approach in the bank loan scenario, when NEER is exogenized, the impulse from broad money to demand is weakened somewhat, suggesting that the exchange rate channel plays a role in the transmission process.

## F. Conclusion

36. **This chapter has explored the role of monetary policy in combating deflation in Japan.** A number of tentative conclusions can be drawn from the historical episodes discussed and the empirical analysis of Japan:

- In order to combat deflation in the 1930s, the authorities in Sweden and the U.S. allowed for substantial easing that lasted for several years. These episodes also illustrate the importance of pushing for reforms in the real and financial sectors, which in turn smoothes the channels of monetary policy transmission.
- The empirical analysis suggests that despite short-term interest rates being at their floor, additional base money injection could have a positive impact on prices and activity. Base money injection can be effective through the portfolio rebalancing channels. The strongest result from the VAR exercise is obtained when the respective roles of the stock market and bank loans are combined with the variables of a standard monetary model.
- The findings of the paper support the notion that when prices are falling, monetary easing has to be substantial and sustained for an extended period of time in order to stimulate demand and increase price expectations.
- Incorporating the banking sector in the monetary model shows the importance of banks in the monetary transmission process, underscoring the critical need to resolve banking weaknesses. However, while banking sector reform is of great importance, the results indicate that the existence of weaknesses in the sector does not completely shut out the channels of monetary transmission.

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## VIII. BANKS AND CREDIT IN JAPAN<sup>1</sup>

### A. Introduction

1. **This chapter investigates how the quality of bank portfolios and the degree of corporate indebtedness have affected the evolution of bank credit in Japan.** It uses panel data techniques to estimate empirically how bank credit growth relates to the nonperforming loans ratio and the loan-loss reserve ratio on the banking side, and to leverage and bank dependence on the corporate side. It employs a three-dimensional panel where Japan's bank credit is disaggregated by firm size, industrial sector of the borrowing firm, and by the specialization of the lending bank.

2. **The prolonged period of weak domestic growth accompanied by a consistent contraction in aggregate bank credit provides the motivation for this paper.** The issue of whether the contraction of bank credit stems from weaknesses in the banking system or from lack of demand in the corporate sector is important from a policy standpoint. Two main, not necessarily conflicting, views have emerged. The first view is that the weak balance sheets of Japanese banks caused by the bursting of the 1980s bubble, and by poor governance, has been the main factor behind the contraction in aggregate bank credit and, hence, behind Japan's weak economic performance in the past decade.<sup>2</sup> According to this view, a major clean-up of banks' balance sheets, possibly accompanied by major structural reforms to improve corporate governance and foster competition, is a prerequisite for restoring self-sustaining growth in Japan. The second, and less common, view also focuses on the burst of the 1980s bubble, but places the causes of slow growth in the corporate sector. Japan's situation is blamed on the high levels of corporate leverage that have caused a reduction in investment, leading to slow productivity growth and to a prolonged contraction in aggregate domestic demand. According to this view, the absence of bank credit growth is the consequence of the problem rather than its cause. Consequently, the focus should be on corporate sector reforms and on macro policies to sustain domestic demand rather than on the clean-up of the banking system.<sup>3</sup>

3. **The existing empirical literature has found mixed evidence on whether balance sheet problems have had an impact on bank credit growth in Japan.** Bayoumi (1999) compares four alternative explanations for Japan's weak growth performance in the 1990s, and indicates the disruption of financial intermediation caused by the collapse in asset prices as the main factor. Monotonishi and Yoshikawa (1999) use survey data to investigate whether real factors or financial factors were the main impediment to corporate investment in the 1990s. They find that overall real profitability was much more important than banks' willingness to lend. However, they find evidence of a credit crunch in 1997. Woo (1999)

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<sup>1</sup> Prepared by Giovanni Dell'Ariccia (ext. 38135).

<sup>2</sup> See for example, Atkinson (2001) and Lyons (2002).

<sup>3</sup> See Koo (2001) and (2002).

reaches similar conclusions using bank balance sheet data. Finally, a few studies have found that the effects of the introduction of risk-based capital requirements on banks' behavior were not uniform across banks (see Woo, 1999 for a review). The present paper draws on Woo's work and on other studies linking bank credit growth to bank portfolio quality,<sup>4</sup> but extends that methodology by including corporate sector variables in the regressions.

4. **The methodology in this chapter has two main advantages.** First, it allows one to exploit cross-sectoral heterogeneity to identify the individual contribution of banking variables and corporate variables, reducing the endogeneity problems that typically arise with time-series of aggregate data. The relationship between economic growth (and hence the demand for credit) and the bank portfolio quality is intrinsically bi-directional: slow growth weakens borrowers' ability to repay existing loans and reduces the availability of new profitable lending opportunities hindering bank profitability; a weakened banking system, burdened with nonperforming loans, may not allocate effectively liquidity to the real economy and hence reduce real growth. Thus, in time-series studies, it is difficult to establish the direction of causality and disentangle the two effects. The second advantage of using sectoral data is that it allows simple techniques to reduce omitted variable problems. Indeed, the inclusion of multiple sets of fixed-effects controls for any factor that does not vary simultaneously across at least two dimensions of the panel.

5. **The results in this chapter suggest that both corporate sector and banking sector weaknesses share the blame for negative credit growth in recent years.** On the corporate side, the paper finds that a high initial degree of bank dependence and, to a lesser extent, high levels of initial corporate leverage, were detrimental to bank credit growth in the period considered. On the banking side, the paper finds that credit growth was lower for banks with a higher initial proportion of nonperforming loans and a lower initial loan-loss reserve ratio. The policy implications of these results are not surprising. The resolution of balance sheet problems in both the banking sector and the corporate sector is a prerequisite for restoring self-sustaining growth.

6. **The remainder of this chapter is organized as follows.** Section II presents a few stylized facts on the evolution of the structure of Japan's financial system and credit allocation in the past decade. Section III describes the data and the methodology employed in the analysis. Section IV presents the results of the empirical estimation. Section V concludes.

## **B. A Few Stylized Facts**

### **The Central Role of Banking Institutions in Japan**

7. **The Japanese financial system continues to rely heavily on intermediated finance to channel liquidity to sectors with financial deficits.** Financial reforms initiated in the early 1990s gradually allowed financial institutions to expand the scope of their activities, offered households more options to diversify their financial investments, and opened the

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<sup>4</sup> See for example, Peek and Rosengren (1995) and Bernanke and Lown (1991).



alternative of direct financing to borrowers. However, over the course of the last decade, depository corporations have seen their market share in the financial system reduced only slightly. Their assets declined from about 58 percent of the financial sectors' total in 1990 to just below 52 percent in 2000. As a result, the weight of deposit-taking institutions has remained well above the level in the United States, and it is more or less in line with that in other bank-centered systems like Germany or Italy.

8. **Although depository corporations have essentially maintained their central role, the structure between different kinds of institution has changed.** Banks have remained dominant, but have progressively lost market share to the Postal Savings System. In terms of assets, banks' share within depository corporations declined from 83 percent in 1989 to 77 percent in 2000, and the Postal Saving System's share increased from 10 percent to 20 percent. A similar reallocation occurred on the deposit side, where the market share of banks declined from about 84 percent in 1989 to 75 percent in 2000. On the asset side, these compositional changes reflected, at least in part, the decreased demand for funds originating in the corporate sector and the increased demand for funds emanating from the government. On the deposit side, they were likely caused by the increased preference of Japanese households for safe assets.

9. **Japanese households continue to rely on holdings of currency and deposits as the main vehicle of financial investment.** The reluctance to invest in riskier assets can explain, at least in part, the limited increase in the role of nonintermediated finance. In the past, financial sector regulation and tax incentives favored intermediated funding through deposit-taking institutions over market financing. The reform process culminated with the so called "Big Bang," which fully liberalized Japanese financial markets and expanded households' investment options. However, there is little evidence of a substantial change in saving patterns towards riskier forms of investment like corporate bonds and shares. On the contrary, over the 1990s, partly because of the decrease in stock prices, the share of currency and deposits (including postal savings) and the share of insurance and pension reserves increased by about 5 percent and 7 percent, respectively. According to the most recent data (March 2001), about 54 percent of Japanese households' financial assets were held in currency or deposits (the share in the U.S. is below 10 percent).

10. **The absence of a significant shift in the allocation of households' financial savings may be just the reflection of a slow reaction to the recently implemented reforms.** However, data from the Flow of Funds Accounts suggest that over the 1990s new holdings of currency and deposits (including postal savings) represented an average of 60 percent of new financial investments by households.<sup>5</sup> It is then difficult to rule out that uncertain economic prospects and major failures involving securities companies played a role in increasing households' propensity for safe investments, and counteracted the effects of financial reforms. If that were the case, policies aimed at enhancing the transparency and improving the reputation of nonbank financial intermediaries may be needed to convince Japanese households to invest in riskier assets.

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<sup>5</sup> See Bank of Japan (2001).

### **C. The Evolution of Bank-Dependence in the Corporate Sector**

11. **In the 1970s and early 1980s Japanese firms relied heavily on banks for their external finance when compared with their American counterparts.** Hoshi and Kashyap (1999) report that in 1980 the bank debt-to-total assets ratio of large Japanese firms was about three times that of large American firms. The difference was much less pronounced for Japanese small firms whose ratio exceeded that of American firms by only fifty percent.

12. **The financial reform process, started in the mid-1970s, gradually opened the Japanese capital markets, especially expanding the fund-raising options available to large firms.** As a result, large firms, especially those in the manufacturing sector, progressively reduced their dependence on the banking system by increasingly relying on capital markets for their external financing needs. Table VIII.1 documents this trend using survey data from the Ministry of Finance's "Quarterly Report of Incorporated Enterprise Statistics." Between 1971 and 1991, the overall average leverage of large firms remained essentially stable. However, the shift from bank financing to capital market financing is evident, with the ratio of bank debt-to-total debt declining by almost 20 percent to about 69 percentage points. The trend is even more pronounced for large firms in the manufacturing sector, where the decrease in bank dependence was also coupled with a decrease in total leverage. The debt-to-assets ratio declined by about 13 percentage points to 29 percent, and the bank debt-to-total debt ratio declined by almost 35 percentage points to 54 percent. Things were different in the nonmanufacturing sector, where large firms increased their leverage by about 10 percentage points to 51 percent, and where bank dependence declined by only 11 percentage points.

13. **Small firms, and to a lesser extent, medium firms which did not have access to nonintermediated finance, followed an opposite path.** These firms benefited from the bank liquidity "freed" by large firms switching to bond markets, and increased their reliance on external capital and bank financing. Between 1971 and 1991, their leverage increased by more than 10 percentage points to about 50 percent. Lacking alternative sources of external finance also meant an increase in bank dependence, with their bank debt-to-assets ratio increasing in line with leverage and their bank debt-to-total debt ratio remaining stable and close to 90 percent. This trend was more pronounced for firms operating in the non-manufacturing sector. Indeed, the increase in leverage for small firms in the non-manufacturing sector was about twice as large as that in the manufacturing sector. The difference was even more striking for medium firms, whose leverage and bank dependence increased in line with those of small firms in the nonmanufacturing sector, but instead decreased slightly in the manufacturing sector. One possible explanation for such difference is the larger use of collateralizable capital goods in the manufacturing sector, since for a large part of the 1970s, regulation on bond issuance still imposed collateral backing for bonds.

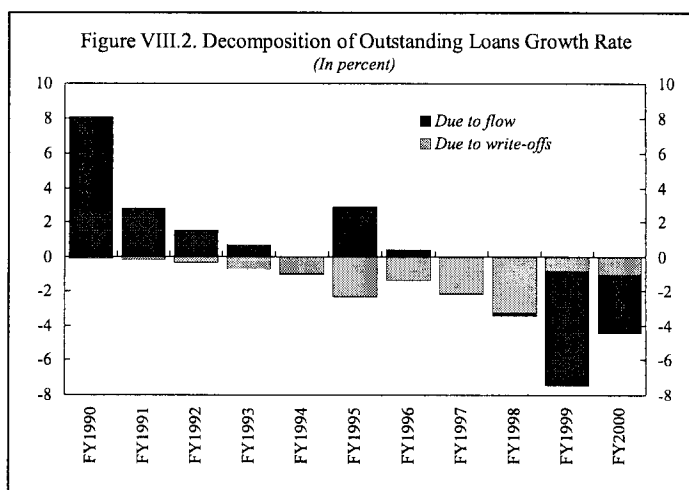
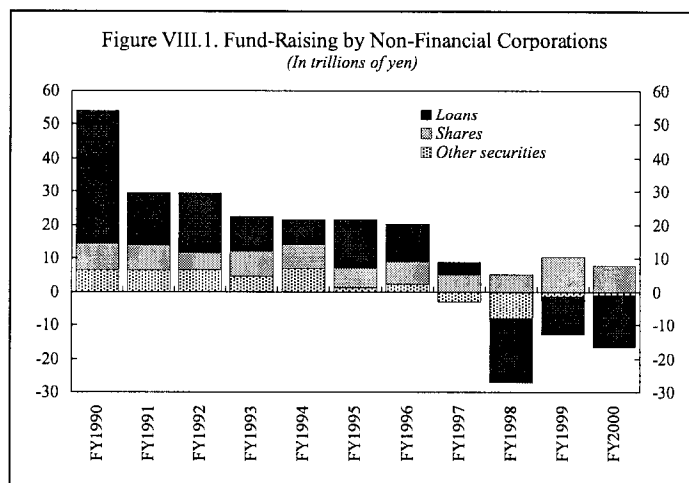
14. **The 1990s witnessed a trend towards deleveraging in the corporate sector.** Between 1991 and 2001, debt-to-asset ratios declined, although in some cases only moderately, for all sectors and firm categories, with the exception of small firms in the manufacturing sector which experienced a 3 percentage point increase to 43 percent. The

Table VIII.1: Leverage and Bank Dependence of Japanese Corporates 1961-2001

(Debt/assets, in percent)												
	All industries				Manufacturing				Non-manufacturing			
	A	B	C	D	A	B	C	D	A	B	C	D
1961 Q3	34.9	38.9	30.2	26.6	34.3	36.5	32.4	25.7	35.6	41.9	28.1	27.2
1971 Q3	39.5	41.8	38.4	34.8	40.2	42.5	36.7	33.7	38.9	40.8	39.7	35.3
1981 Q3	39.4	40.6	39.6	37.6	35.0	35.7	33.5	33.8	42.4	45.5	42.8	39.0
1991 Q3	45.6	41.8	47.3	49.9	32.6	29.0	34.2	40.9	51.7	51.0	51.9	52.4
2001 Q3	41.2	35.2	41.9	48.5	30.0	24.3	33.1	43.4	46.4	43.2	45.1	49.8
(Bank debt/total debt, in percent)												
	All industries				Manufacturing				Non-manufacturing			
	A	B	C	D	A	B	C	D	A	B	C	D
1961 Q3	88.1	82.8	99.2	99.6	88.9	84.6	99.3	100.0	87.2	80.8	99.0	99.3
1971 Q3	86.7	87.5	86.3	84.4	88.5	88.9	88.5	86.4	84.9	85.7	84.8	83.5
1981 Q3	86.3	84.9	87.6	87.7	88.3	88.8	88.8	86.5	85.2	81.8	87.1	88.1
1991 Q3	79.4	68.9	88.0	87.3	69.2	54.4	85.7	88.6	82.3	74.8	88.5	87.0
2001 Q3	76.2	66.0	82.6	83.5	71.7	60.5	79.9	84.8	77.5	68.3	83.3	83.2
(bank debt/assets, in percent)												
	All industries				Manufacturing				Non-manufacturing			
	A	B	C	D	A	B	C	D	A	B	C	D
1961 Q3	30.7	32.2	29.9	26.5	30.5	30.9	32.1	25.7	31.0	33.9	27.8	27.0
1971 Q3	34.2	36.6	33.2	29.3	35.5	37.8	32.5	29.1	33.0	35.0	33.7	29.4
1981 Q3	34.0	34.5	34.7	32.9	30.9	31.7	29.8	29.3	36.1	37.3	37.3	34.3
1991 Q3	36.2	28.8	41.7	43.6	22.5	15.8	29.3	36.2	42.6	38.2	46.0	45.6
2001 Q3	31.4	23.3	34.6	40.5	21.5	14.7	26.5	36.8	36.0	29.5	37.5	41.4

Source: Ministry of Finance, Quarterly Report of Incorporated Enterprise Statistics.  
Size of firms (capital): A is all sizes, B is 1 billion yen or over, C is 100 million yen to 1 billion yen, D is 10 to 100 million yen.

importance of corporate sector deleveraging in the second half of the 1990s is confirmed by data from the Flow of Funds Accounts. Since 1998, the corporate sector has turned from running a financial deficit to a financial surplus, mainly through a substantial reduction in outstanding loans (Figure VIII.1) not compensated by the issuance of other securities. The reduction in outstanding loans resulted from both the write-off and the repayment of existing loans. The examination of data on net flows and stock changes reveals, through the “stock reconciliation” figures, that loan write-offs played a major role in the mid-nineties, and that more recently, actual loan repayment was the major force behind the decline in outstanding loans (Figure VIII.2).



#### 15. Corporate deleveraging brought about a further decline in bank dependence.

Overall the ratio of bank debt-to-total assets has declined from 36.2 to 31.4 percent in the last ten years. However, bank debt still represents about 76 percent of total corporate debt, down only 3 percentage points, indicating that deleveraging rather than the recourse to alternative sources of external finance played the main role in the decline in bank dependence. Again, that decline was not uniform: large and medium firms reduced bank dependence more than small enterprises, and nonmanufacturing firms reduced it more than manufacturing firms. Differences in borrowing patterns across firms of different size can be explained by the differential access to alternative forms of credit, as confirmed by the sharper decrease in the percentage of bank debt over total debt for large and medium enterprises. Differences across sectors can instead be explained by the fact that during the previous twenty years, manufacturing firms had reduced significantly their reliance on bank lending (with bank debt-to-assets ratios declining from 32 percent to 16 percent), while bank dependence in the nonmanufacturing sector had either increased or remained stable.

### D. The Evolution of Bank Credit Allocation

16. From the late 1970s to the mid-1990s Japan experienced strong growth in bank credit. Overall, outstanding loans almost tripled between 1981 and 1996. At the same time, the composition of bank credit changed slowly, with the share of corporate lending in total

loans decreasing over the period by about 5 percentage points in favor of loans to individuals (Table VIII.2).<sup>6</sup>

Table VIII.2: Bank Credit Allocation (Index 1980=100)							
	Total	Local Governments		Individuals		Corporates	
	Index	Index	Share	Index	Share	Index	Share
1981.01	107.4	113.2	1.1	107.1	12.3	107.4	86.5
1986.01	170.1	160.3	1.0	146.2	10.6	173.6	88.3
1991.01	251.7	142.2	0.6	327.1	16.1	242.4	83.3
1996.01	310.0	401.0	1.4	430.3	17.2	291.7	81.4
2001.01	285.8	521.0	2.0	476.4	20.6	255.6	77.4
Source: Bank of Japan							

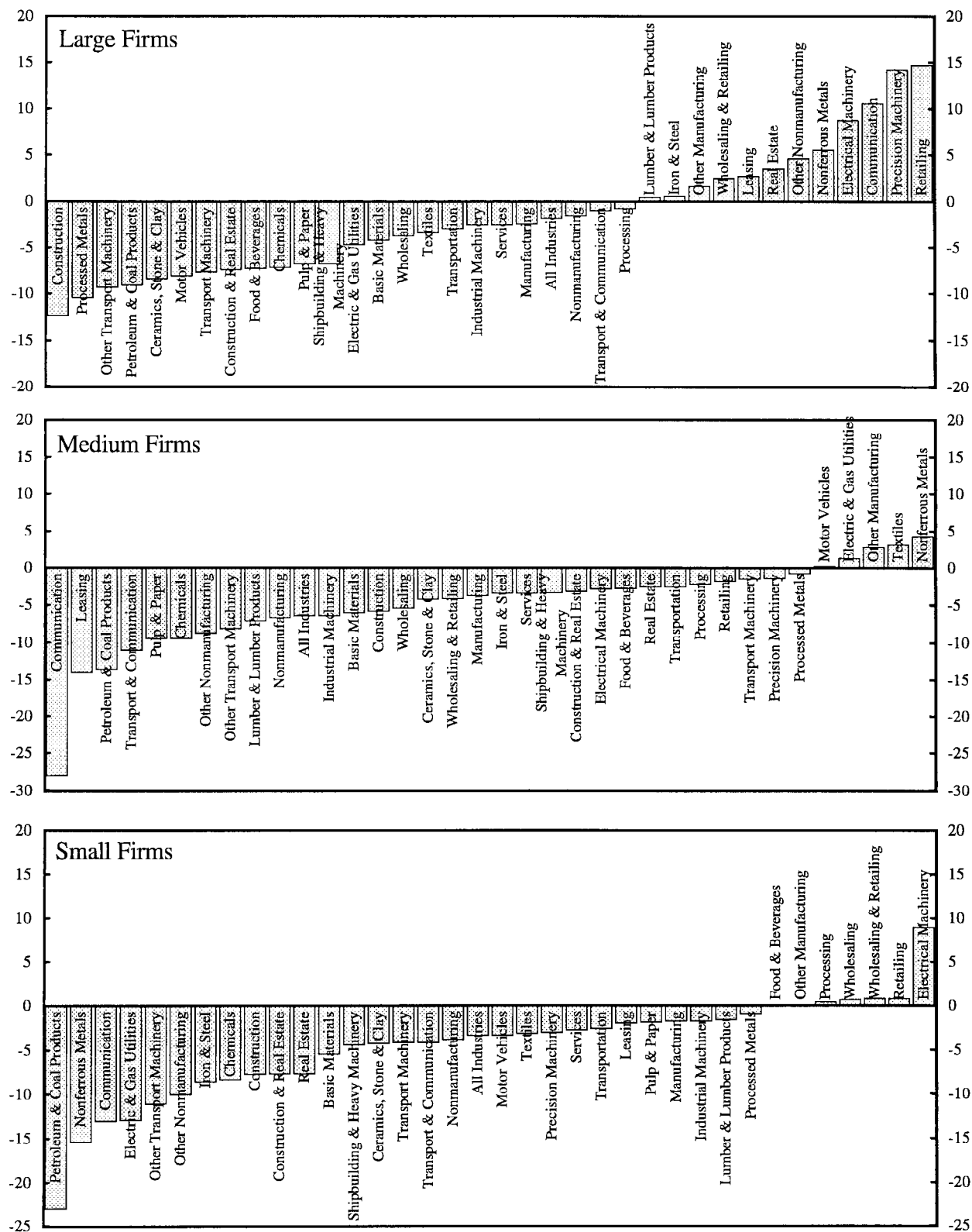
17. **Bank lending, however, has fallen since the mid-1990s, and the trend toward more focus on local governments and individuals, and less on corporates accelerated.** Loans to corporates declined by about 14 percent in nominal terms between 1996 and 2001, while loans to local governments and loans to individuals increased by 30 percent and by about 10 percent, respectively. These compositional changes reflected, at least in part, substantial write-offs of existing loans, and factors originating in the real economy like the decreased demand for funds in the corporate sector and the increased demand for funds from the government.<sup>7</sup>

18. **This is confirmed by the fact that there has been significant variability in bank lending across different industrial sectors.** Outstanding loans to firms operating in traditional sectors such as manufacturing, trading, and construction contracted considerably, while lending to firms in “new” industries such as transport and communications expanded significantly. In addition, even in sectors that witnessed an overall contraction in bank lending, the evolution of outstanding loans has not been uniform. For example, loans to utility companies increased in the first part of the 1990s, decreased sharply after 1995, and then increased again at the end of the decade. Disaggregated data (available for the period 2000–2001) provide further evidence of heterogeneity of bank credit growth at the industry level. The data confirm that a reallocation of bank portfolios toward local governments and individuals has been taking place. It also confirms that there has been some heterogeneity within the corporate sector (see Figure VIII.3 which describes bank credit growth rates by sector between 2000Q3 and 2001Q3). In the case of large firms, roughly a third of the industries considered experienced positive bank credit growth rates, with nonmanufacturing

<sup>6</sup> Data in Table VIII.2 include trust accounts of Domestically Licensed Banks.

<sup>7</sup> See “*Japan’s Financial Structure: In View of the Flow of Funds Accounts*”, Bank of Japan, Quarterly Bulletin, February 2001.

Figure VIII.3. Bank Credit Growth by Sector  
(2000Q3-2001Q3 average; in percent)



Source: Bank of Japan.

industries showing the strongest growth rates; while in the case of small and medium enterprises only a handful of industries registered an increase in bank credit over the period.

### **E. Bank Balance Sheets, Corporate Balance Sheets, and Credit Growth: A Panel Data Analysis**

19. In the previous sections, this chapter documented that the aggregate contraction of bank lending since the mid-1990s has been hiding a more complex picture at the sectoral level, where different industries and categories of firms were characterized by different rates of credit growth. In addition, corporate lending by different categories of banks also followed heterogeneous dynamics. In what follows, a simple econometric model to link bank credit growth to industry specific and firm-size specific variables on the borrower side and to bank-group specific variables on the lender side is constructed and estimated. This more formal examination of the data will hopefully shed some light on the factors behind the consistent and prolonged contraction in aggregate credit experienced by Japan in recent years.

#### **Empirical Methodology**

20. **The methodology in this chapter consists of regressing the growth rate of bank credit for the year ending in 2001Q3 on industry specific and firm-size specific dummies, lagged firm-size/industry variables, and lagged bank groups variables.** In the main specification, the growth rate of credit from bank group  $k$  to industry  $i$  and size group  $j$  is regressed on the two sets of fixed effects, on firm leverage and bank dependence in industry  $i$  and size group  $j$ , on the initial share of credit that bank group  $k$  allocated to industry  $i$  and size group  $j$ , and on bank nonperforming loan ratio and loan loss reserve ratio in bank group  $k$ . The resulting model is (time index omitted):

$$c_{kij} = \alpha + \varphi_1 LEVER_{ij} + \varphi_2 BANKDEP_{ij} + \varphi_3 NPL_k + \varphi_4 RESERVES_k \\ + \varphi_5 SHARE_{kij} + \Phi_6 INDUSTRY\_FE_i + \Phi_7 SIZE\_FE_j + \varepsilon_{kij}$$

In an alternative specification, the two banking variables are substituted with an index of the financial strength of the bank group based on an average of Moody's and Fitch rating measures. In that case the model becomes (time index omitted):

$$c_{kij} = \alpha + \varphi_1 LEVER_{ij} + \varphi_2 BANKDEP_{ij} + \varphi_3 RATING_k \\ + \varphi_4 SHARE_{kij} + \Phi_5 INDUSTRY\_FE_i + \Phi_6 SIZE\_FE_j + \varepsilon_{ij}$$

21. In both specifications, a negative coefficient for *LEVER* would support the view that the high corporate leverage has been a factor in the weak performance of bank lending. Similarly, *BANKDEP* is also expected to have a negative coefficient according to the observation that firms have been trying to diversify their sources of external finance and reduce their dependence on bank credit. A negative coefficient for *SHARE* would also indicate that firms have been trying to reduce their reliance on a specific bank; and at the same time, that banks have been trying to reduce their exposure to their main borrowers.

22. In the first specification, a negative coefficient for *NPL* would indicate that the poor quality of banks' portfolios has impaired their ability to extend new credit to corporates. A positive coefficient for *RESERVES* would suggest that banks which took bolder steps to address their balance sheet problems have been those relatively more active in extending new credit to corporates. In the second specification, *RATING* is suppose to summarize the effects of *NPL* and *RESERVES* and should have a negative coefficient since for this variable higher values correspond to lower ratings.

23 **The analysis of a three-dimensional panel of sectoral data has two main advantages relative to time-series econometrics on aggregate data.** First, it allows one to exploit cross-sectoral heterogeneity to identify the individual contribution of banking variables and corporate variables reducing the endogeneity problems that typically arise with time-series of aggregate data. Second, it reduces the concern about omitted variables, since the two sets of fixed effects control for any factor that does not vary simultaneously across at least two dimensions of the panel.

### **Data Sources and Variables**

24 **The Bank of Japan produces bank corporate lending series disaggregated along three dimensions:** the industry of operation of the borrowing firm, the size group of the borrowing firm, and the specialization of the lending bank (Japanese banks are classified according to their type of activity and geographic coverage).<sup>8</sup> In addition, the BoJ conducts a quarterly survey on the conditions of enterprises in Japan (*Tankan*), which also contains data disaggregated by industry and firm size. Additional data on the financial condition of the banking system is compiled by Bankscope, which reports the financial statements of more than 400 Japanese banks, and the FSA which reports aggregate NPL figures for each group of banks.

25 **The BoJ's bank lending data is available for more than 40 economic sectors, three firm sizes, and seven categories of banks** (City banks (CB), Tier-1 Regional banks (RBI), Tier-II Regional banks (RBII), *Shinkin* banks, trust accounts of domestically licensed banks (TB), and overseas branches of domestically licensed banks). Unfortunately, there are breaks in the classification of firms by size, so that consistent time series can be constructed only starting from 2000Q2.<sup>9</sup> Furthermore, data relative to *Shinkin* banks is not disaggregated by borrower size and hence cannot be included in the regressions. Finally, the *Tankan* data on enterprise conditions, available for only a subset of industrial sectors, puts a further limit on the size of the considered sample. In the end data availability limits the analysis to a three-dimensional panel with 23 industries, 3 firm sizes<sup>10</sup>, and 4 categories of banks, for a total of

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<sup>8</sup> See Hoshi and Kashyap (2001) for a detailed description of the various groups of banks.

<sup>9</sup> Beginning April 2000 the definition of "Small Enterprises" was revised. See Bank of Japan, *Financial and Economic Statistics Monthly*, for details.

<sup>10</sup> The *Tankan* survey classifies firms in three groups: large enterprises (1,000 employees or more); medium-sized enterprises (300 to 999 employees); and small enterprises (50 to 299 employees).  
(continued)



276 observations. The list of the sectors included in the sample is reported in Table VIII.3. Descriptive statistics for the main variables in the analysis are in Table VIII.4.

**26 One first important caveat concerns the matching of the *Tankan* data and the banking statistics data with regard to the size classification of firms.** The *Tankan* system classifies firms solely on the basis of the number of employees. The system in the banking statistics instead uses both the number of employees and the firms' capital value. However, since with respect to the number of employees, the two classification systems overlap, the error introduced is likely to be only a minor one. That assumption is reinforced by the fact that the total bank borrowing series in the two datasets are strongly correlated.

**27 A second important caveat concerns the coverage of the different datasets.** While the banking statistics (from which the bank credit growth data are obtained) cover the entire Japanese banking system, the *Tankan* survey (from which the corporate balance sheet ratio data are obtained) covers only a subset of Japanese firms. Hence, this chapter works under the assumption that the survey contains a representative sample of firms, at least with regard to the balance sheet ratios employed in the regressions.

Table VIII.3: Industrial Sectors

Ceramics, stone and clay  
Chemicals  
Communication  
Construction  
Electric and gas utilities  
Electrical machinery  
Food and beverages  
Industrial machinery  
Iron and steel  
Lumber and wood products  
Nonferrous metals  
Other manufacturing  
Petroleum and coal products  
Precision machinery  
Processed metals  
Pulp and paper  
Real estate  
Retailing  
Services  
Textiles  
Transportation  
Transportation machinery  
Wholesaling

Table VIII.4: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Corporate leverage	4.6	3.5	0.56	15.5
Firm Bank Dependence (percent)	85.1	17.8	39.2	99.8
NPL ratio—Bankscope (percent)	7.0	0.7	6.6	8.2
Loan loss reserve ratio—Bankscope (percent)	38.7	1.9	36.6	41.9
NPL ratio—FSA (percent)	6.4	1.4	5.0	8.7
Loan loss reserve ratio—FSA (percent)	39.3	5.5	29.7	44.3
Capital assets ratio (percent)	10.3	1.3	8.3	11.7
Credit rating (1–5)	4.25	0.25	4.25	4.5
Credit Growth (percent)	-9.8	14.6	-46.6	22.2

employees). Different thresholds apply in the wholesaling, retailing and services industries (see Bank of Japan, Financial and Economic Statistics Monthly for details).

28 **Indicators of bank financial health for each group of banks, and indicators of corporate financial condition for each industry and firm-size group, are constructed.** Starting from the individual bank data contained in Bankscope, banks are divided according to their specialization, the median values of the nonperforming to total loans ratio (*NPL*) and the ratio of loan loss reserves to nonperforming loans (*RESERVES*) for each category of banks are computed. For robustness, alternative versions of these two variables are constructed using data published by the FSA. Second, data from the *Tankan* survey is used to construct two indicators of corporate financial condition. For each industry and size group, the ratio of total debt-to-capital (*LEVER*), measuring the average degree of corporate leverage; and the ratio of bank debt-to-total debt (*BANKDEP*), measuring the average bank dependence are computed. Finally, data from the banking statistics of the BoJ are used to construct bank credit growth rates for each industry and size group and for each category of bank.

## F. Empirical Findings

29. **Evidence from the baseline regression suggests that factors in both the corporate sector and the banking system have contributed to the aggregate credit contraction.** Results are in Table VIII.5 column 1 (fixed effects not reported). All coefficients have the expected sign. On the corporate side, a higher level of initial leverage is associated with a slower growth of bank credit. However, the estimated coefficient is not statistically significant. The negative effect of a higher level of bank dependence on credit growth is instead significant at the 5 percent level. On the bank side, a higher initial proportion of nonperforming loans reduces bank credit growth with a significance of 1 percent; while a higher ratio of loan loss reserves to NPLs promotes credit growth with a significance of 10 percent.

Table VIII.5: Balance Sheet Ratio Regression (Bankscope)						
Industry fixed effects and firm size fixed effects are included. The coefficients for the constant and the fixed effects are not reported. Standard errors are in parentheses.						
Dep. Var: Bank Credit Growth	Base	5-95	No CB	No RB I	No RB II	No TB
Corporate leverage	-4.10 (6.8)	-5.39* (3.15)	-0.54 (8.72)	-9.41 (8.39)	-1.13 (5.70)	-5.32 (8.51)
Firm Bank Dependence	-0.55** (0.22)	-0.27** (0.10)	-0.64** (0.28)	-0.77*** (0.27)	-0.15 (0.18)	-0.64** (0.27)
NPL ratio	-0.19*** (0.02)	-0.15*** (0.01)	-0.18*** (0.03)	-0.20*** (0.02)	-0.19*** (0.01)	0.04 (0.56)
Loan loss reserve ratio	0.01* (0.007)	-0.004 (0.003)	0.018 (0.013)	0.013* (0.008)	0.01 (0.01)	0.015* (0.009)
Observations No.	276	246	207	207	207	207
Statistically significant at the ***1%, **5%, *10%.						

30. **The robustness of these results is tested by estimating the same model on a sample excluding the observations at the extremes of the credit growth distribution.** Specifically, observations falling below the 5<sup>th</sup> percentile and above the 95<sup>th</sup> percentile of the credit growth distribution are dropped. This reduces the size of the sample to 246 observations. The results for this regression are in Table VIII.5 column 2. The sign and significance of the bank dependence and the NPL coefficients are confirmed. Furthermore,



results for the base regression; columns 2–6 report the results for the same battery of robustness tests as for the main model. All coefficients have the expected signs. The bank dependence coefficient is significant in all cases, but one. The coefficient of the rating variable is significant in five out six cases, and almost significant in the estimation excluding Trust Banks.

33. **The estimated economic magnitude of the effects of bank financial health variables on bank credit growth is substantial.** For example, according to the estimates from the base regression (Table VIII.5 column 1), a one percent reduction in the NPL ratio is associated with an increase in bank credit growth of about 1.4 percent; while a one percent increase in the loan loss reserve ratio corresponds to an increase in bank credit growth of about 0.4 percent. The magnitude of the effect of a reduction in corporate leverage is more difficult to assess since the coefficient for this variable is unstable and most of the times insignificant. However, when the coefficient is significant (Table VIII.6 columns 2 and 4) its effect is very large, e.g., a 1 percent decrease in corporate leverage would be associated with a 5 percent increase in bank credit growth.

## G. Conclusions

34. **This chapter found evidence suggesting that factors in both the corporate sector and the banking system played an important role in limiting bank credit growth.** According to the evidence presented, higher levels of nonperforming loans and lower levels of loan loss reserves lead to lower bank credit growth, but higher corporate leverage and bank dependence of Japanese corporates also reduce credit growth. The policy implications of these results are straightforward and hardly surprising. The resolution of balance sheet problems in both the banking sector and the corporate sector are prerequisites for restoring self-sustaining growth.

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