October 1998

IMF Staff Country Report No. 98/113

Japan: Selected Issues

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International Monetary Fund
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INTERNATIONAL MONETARY FUND

JAPAN

Selected Issues

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Approved by the Asia and Pacific Department

October 1, 1998

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Japan: Selected Economic Indicators, 1992-97

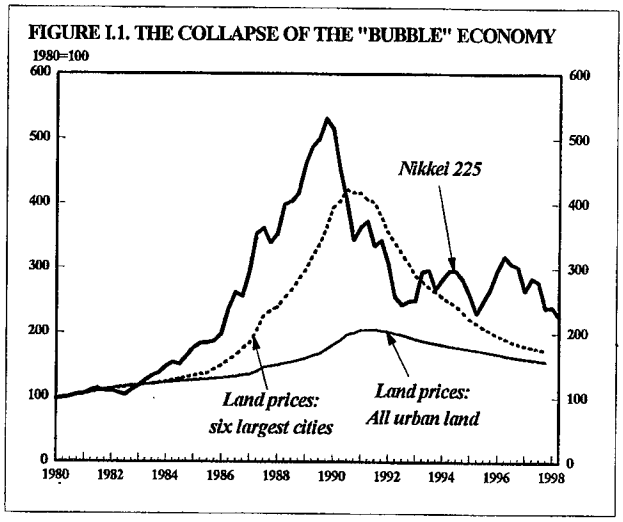
Nominal GDP: US$4190 billion (1997)
Population: 126.0 million (1997)
GDP per capita: US$33,250 (1997)
Quota: SDR 8,241.5 million

	1992	1993	1994	1995	1996	1997
Growth (percent change)						
Real GDP	1.0	0.3	0.6	1.5	3.9	0.8
Domestic demand	0.4	0.1	1.0	2.3	4.8	-0.5
Private consumption	2.1	1.2	1.9	2.1	2.9	1.1
Residential investment	-6.5	2.4	8.5	-6.5	13.9	-15.7
Business investment	-5.6	-10.2	-5.3	5.2	9.5	4.3
Government consumption	2.0	2.4	2.4	3.3	1.5	-0.1
Government investment	14.5	15.7	2.8	0.6	7.2	-11.1
Stockbuilding[1]	-0.5	-0.1	-0.2	0.2	0.1	0.0
Net exports[1]	0.6	0.2	-0.3	-0.8	-0.8	1.3
Saving-Investment (percent of GDP)						
Gross national saving	33.8	32.8	31.4	30.7	31.3	30.8
Gross domestic investment	30.8	29.7	28.7	28.6	29.9	28.5
Inflation (percent change)						
CPI	1.7	1.2	0.7	-0.1	0.1	1.7
GDP deflator	1.7	0.6	0.2	-0.6	-0.5	0.6
Unemployment rate (percent)	2.2	2.5	2.9	3.1	3.3	3.4
Government (percent of GDP)[2]						
Central government balance	-1.7	-2.7	-3.5	-4.1	-3.8	-3.3
General government						
Revenue (percent change)	0.9	-2.5	0.8	0.7	2.3	4.3
Expenditure (percent change)	5.4	7.0	2.9	4.6	4.2	1.2
Balance	1.5	-1.6	-2.3	-3.6	-4.3	-3.3
Balance excluding social security	-2.0	-4.8	-5.1	-6.5	-6.8	-5.4
Structural balance excluding social security	-2.4	-4.6	-4.6	-5.8	-6.5	-4.7
Social security balance	3.4	3.2	2.8	2.8	2.6	2.2
Money and credit (average percent change)						
M2 plus CDs	0.6	1.1	2.1	3.2	3.3	3.1
M3	3.4	3.9	4.0	3.6	3.3	3.3
Domestic credit	2.9	0.8	-0.4	1.8	1.4	1.3
Bank lending	2.5	1.2	0.5	1.3	0.4	1.0
Interest rate						
Three-month CD rate (annual average)	4.3	2.8	2.1	1.1	0.5	0.5
Official discount rate (end-period)	3.3	1.8	1.8	0.5	0.5	0.5
Balance of payments (in billions of US$)						
Exports, f.o.b.	332.5	352.9	386.0	429.4	400.2	409.2
Imports, f.o.b.	207.8	213.3	241.5	297.2	316.7	307.8
Current account balance	112.3	132.0	130.6	111.4	65.8	94.1
Percent of GDP	3.0	3.1	2.8	2.2	1.4	2.2
Terms of trade (percent change)	7.4	8.9	7.4	-0.3	-8.1	-1.0
Change in reserves	0.7	27.7	25.4	58.7	36.8	6.9
Merchandise trade (percent change)						
Export volume	1.6	-1.9	1.7	3.2	0.6	9.5
Export unit value (US$)	6.3	8.3	7.6	8.6	-7.6	-6.6
Import volume	-0.7	3.8	13.7	12.4	3.4	2.7
Import unit value (US$)	-1.0	-0.5	0.2	9.0	0.6	-5.6
Total reserves minus gold (in billions of US$)	71.6	98.5	125.9	183.2	216.6	219.6
Exchange rates (annual average)						
Yen/dollar rate	126.7	111.2	102.2	94.1	108.8	121.0 [3]
Real effective exchange rate[4]	111.0	134.6	142.7	147.8	123.6	114.3

Sources: Nikkei Telecom; and staff estimates.
[1]Contribution to GDP growth.
[2]Includes provision for a FY 1998 Supplementary Budget.
[3]Staff assumptions (annual average).
[4]Based on normalized unit labor costs; 1990=100.

I. Macroeconomic Developments and Prospects[1]

1. **Following the collapse of the asset price bubble in 1990, Japan has experienced a protracted period of weak growth performance (Figure I.1, and Chart I.1).** GDP growth has averaged only 1½ percent during the last eight years, only a third of the rate registered during the previous decade. The initial slowdown resulted from a stalling of domestic demand, as the excesses of the bubble period began to be unwound. Business investment declined as firms sought to reverse the over-accumulation of capital during the 1980s, and consumption was dampened by falling stock and real estate prices. Weak domestic demand was compounded by the yen's sharp appreciation during 1994–95, which resulted in a substantial withdrawal of external demand.



2. **Following a surge in activity during 1996 and early 1997, the economy fell into recession in the second quarter of 1997 (Table I.1).** Real GDP fell by 3¾ percent during the four quarters ended March 1998, the unemployment rate has reached historical highs, and deflationary pressures have re-emerged. The downturn was largely unexpected, and most forecasters had projected growth of around 2 percent in 1997.[2] The recent downturn suggests that the strength in late 1996 and early 1997 mainly reflected the temporary effects of fiscal stimulus, the earlier interest rate cuts and exchange rate correction, and anticipatory demand ahead of the April 1997 consumption tax hike. Thus, in the absence of a resolution of the underlying balance sheet problems that had constrained recovery since the collapse of the asset price bubble, the economy was unable to withstand the effects of the withdrawal of fiscal stimulus, banking sector fragilities, and the Asia crisis.

3. **Fiscal policy helped tip the economy back into recession.** The general government balance had deteriorated markedly during the first half of the 1990s, owing to efforts to stimulate recovery.[3] However, with signs in 1996 that the economy was recovering, the policy emphasis shifted toward consolidation and achieving a sustainable fiscal position

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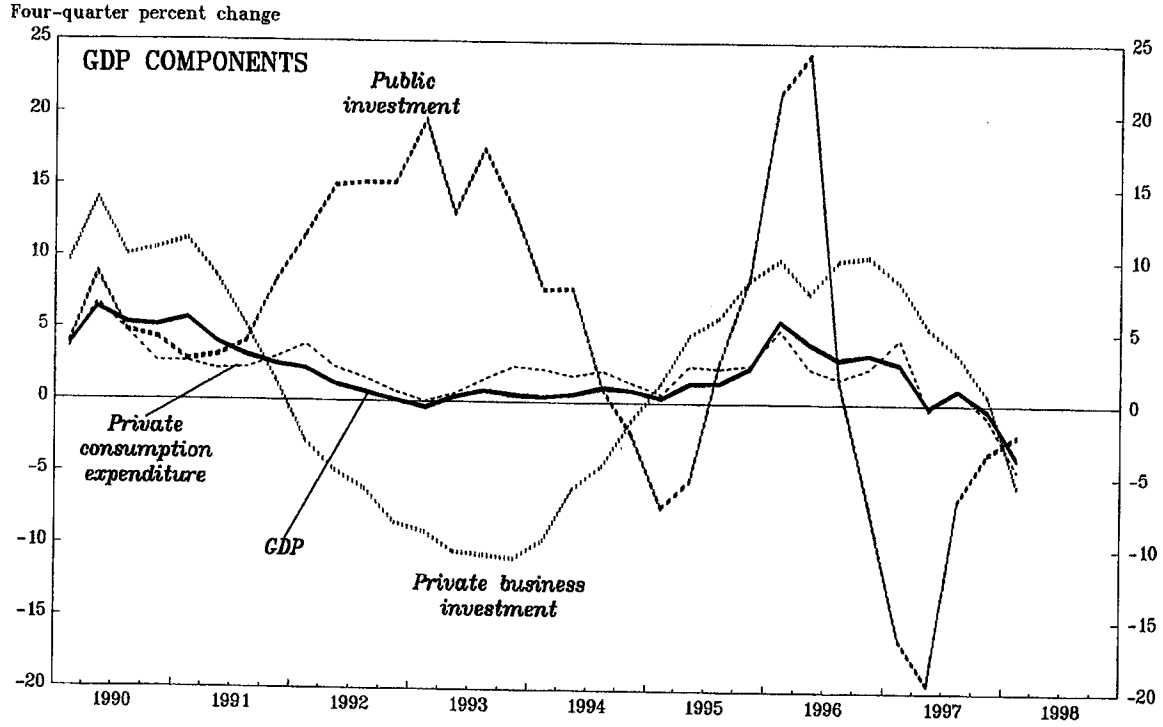
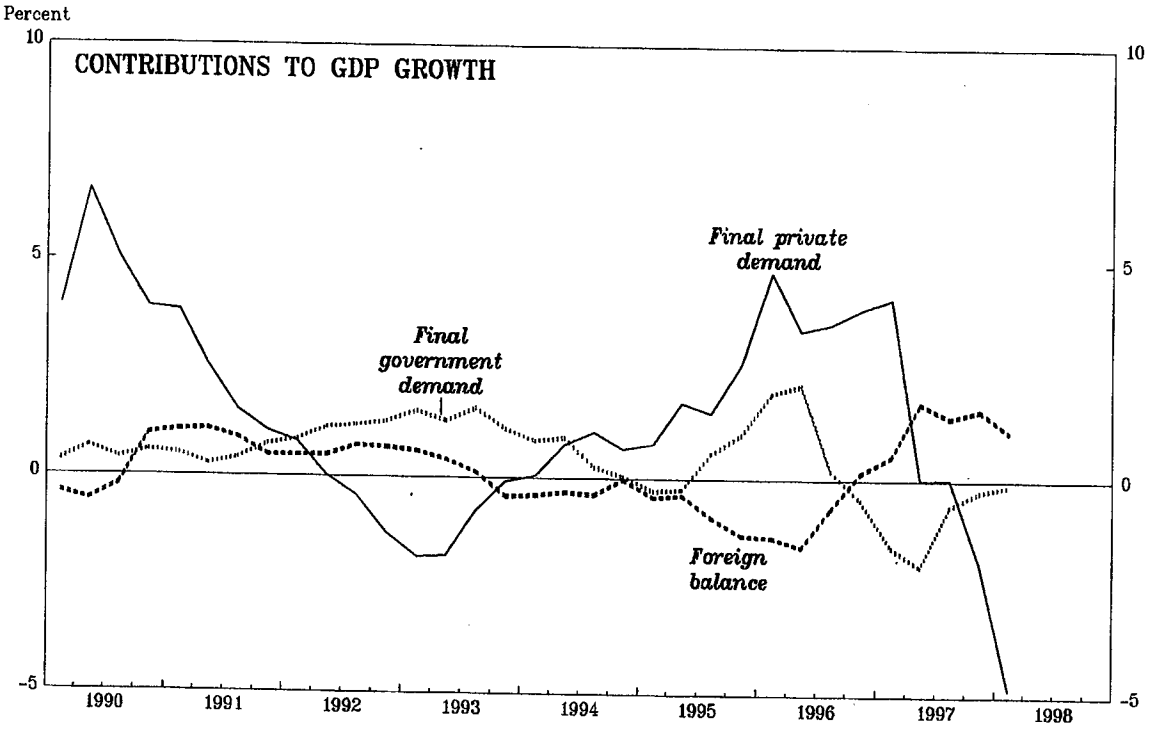
[1]Prepared by Tamim Bayoumi and Christopher Towe.

[2]The May 1997 WEO projected 1997 growth of 2¼ percent, and the private sector Consensus Forecast in August 1997 was for growth of 2 percent.

[3]See Chapter II for a more detailed discussion of fiscal developments.

CHART I.1
JAPAN
GROSS DOMESTIC PRODUCT AT 1990 PRICES, 1990-98





Sources: Nikkei Telecom, WEFA, and staff estimates.

Table I.1. Japan: Growth of Real GDP and Demand Components, 1993-98 1/

(Percent change from the previous period)

	1993	1994	1995	1996	1997	1997				1998
						I	II	III	IV	I
Private consumption	1.2	1.9	2.1	2.9	1.1	4.0	-5.3	1.7	-1.0	0.1
Private gross fixed investment	-7.6	-2.2	2.2	10.5	-0.5	-0.3	-3.7	-1.4	-0.8	-3.8
Residential	2.4	8.5	-6.5	13.9	-15.7	-5.1	-10.6	-10.9	-4.2	1.7
Business	-10.2	-5.3	5.2	9.5	4.3	1.2	-1.7	1.1	0.0	-5.1
Final private domestic demand 2/	-1.4	0.8	2.1	4.9	0.6	2.8	-4.8	0.8	-1.0	-1.0
Government consumption	2.4	2.4	3.3	1.5	-0.1	-0.9	-0.9	0.7	1.4	-0.6
Public fixed investment	15.7	2.8	0.6	7.2	-11.1	-3.2	0.5	1.2	-1.8	-1.9
Final domestic demand 2/	0.3	1.1	2.1	4.8	-0.5	1.9	-4.1	0.9	-0.8	-1.0
Stockbuilding 3/	-0.1	-0.2	0.2	0.1	0.0	0.0	0.3	0.0	-0.1	0.0
Private	-0.1	-0.3	0.2	0.0	0.0	0.0	0.3	0.0	-0.1	0.0
Public	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total domestic demand	0.1	1.0	2.3	4.8	-0.5	1.9	-3.8	0.9	-0.9	-1.0
Foreign balance 3/	0.2	-0.3	-0.8	-0.8	1.3	0.1	1.0	-0.1	0.6	-0.4
Exports	1.3	4.6	5.4	3.5	10.8	1.4	5.8	-1.5	2.7	-3.8
Imports	-0.3	8.9	14.2	11.5	-0.2	0.4	-2.3	-1.1	-1.7	-1.4
Real GDP	0.3	0.6	1.5	3.9	0.8	2.0	-2.8	0.8	-0.4	-1.3
Memorandum items:										
Public expenditure 4/	8.5	2.6	2.0	4.2	-5.6	-2.0	-0.3	0.9	-0.1	-1.2
Nominal GDP	0.9	0.8	0.8	3.4	1.4	2.3	-2.1	1.1	-0.7	-0.3
GDP deflator (1990=100)	0.6	0.2	-0.6	-0.5	0.6	0.3	0.7	0.3	-0.4	1.1
Output gap (percent of potential GDP)	-0.6	-2.1	-2.5	-1.0	-2.8	0.0	-3.4	-3.3	-4.2	-6.0

Sources: Nikkei Telecom; and WEFA.

1/ At 1990 prices. Quarterly data are seasonally adjusted.
2/ Final private domestic demand is the sum of private consumption, residential investment, and business fixed investment. Final domestic demand is final private domestic demand plus government consumption and investment.
3/ Contribution to real GDP growth.
4/ Government consumption and public investment.

ahead of impending demographic pressures associated with population aging. Accordingly, the FY1997 (fiscal year beginning April 1997) budget was sharply contractionary, reducing the structural deficit by 1¼ percentage points of GDP to 2½ percent of GDP. Tax measures included (i) the withdrawal of temporary income tax cuts that had been introduced in 1995; (ii) a 2 percentage point hike in the consumption tax rate on April 1, 1997; and (iii) an increase in medical insurance copayments effective in September 1997. Public investment was also brought down quickly following the spending surge related to the September 1995 stimulus package.

4. **Banking sector instability was a critical factor behind the slowdown.** Confidence in the Japanese banking sector has declined markedly since early 1997, as deregulation and a tightening of supervisory requirements brought more attention to the fragility of balance sheets in the banking sector. Concerns were reinforced by the sharp fall in share prices from mid-1997, which eroded bank capital, and the crisis in Asia, since Japanese banks are heavily exposed to the rest of the region.

5. **Banking sector problems affected both corporate and household demand, particularly in late 1997.** In November 1997, a major bank and two top-tier securities firms had to be closed. As a result, funding costs for Japanese banks both domestically and abroad rose sharply, and domestic credit conditions tightened markedly—particularly for small- and medium-sized enterprises—which further dampened capital expenditures. Concern regarding the effect of financial sector consolidation on employment and wages further undermined consumer confidence and led a steep decline in consumption and residential investment.

6. **Besides its effect on domestic financial markets, the Asia crisis has begun to contribute to the Japanese recession through its effect on external demand.** Initially, the drop in export volumes to the region that began in mid-1997 was partially offset by stronger exports to other partner countries, as well as a decline in import volumes. However, by the first quarter of 1998, total export volumes began to fall and net exports exerted a substantial negative contribution to growth.

A. Macroeconomic Developments

Output developments

7. **Following a temporary surge in activity, the Japanese economy fell into recession in the second quarter of 1997.**[4] GDP expanded by 4 percent in 1996, and rose a further 2 percent in first quarter of 1997, reflecting the lagged effects of interest rates cuts and the

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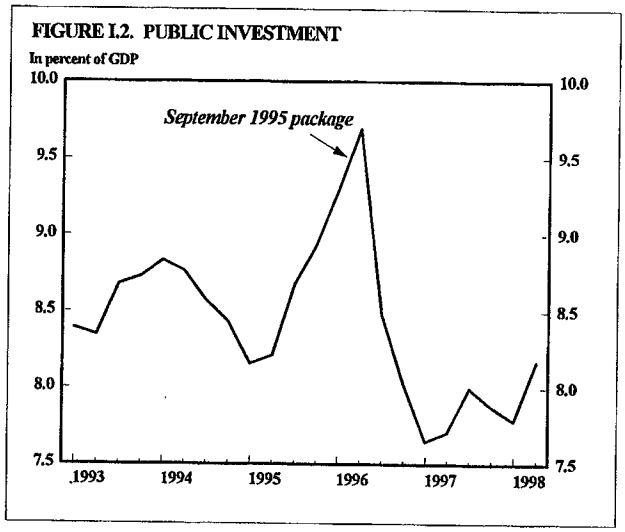
[4]In June 1998, the Economic Planning Agency officially declared that the economy peaked in March 1997. Business cycle dating in Japan is performed by the Economic Planning Agency on the basis of its diffusion index of coincident indicators, and downturns are usually declared only with a significant lag.

yen's depreciation, as well as household expenditures ahead of the consumption tax hike (Table 1.1). However, aggregate demand fell by 2¾ percent in the second quarter, marking the end of the recovery. Real GDP was little changed in the latter half of 1997, but fell by further 1¼ percent in the first quarter of 1998. The cumulative fall in real GDP from the first quarter of 1997 to the first quarter of 1998 was 3¾ percent.

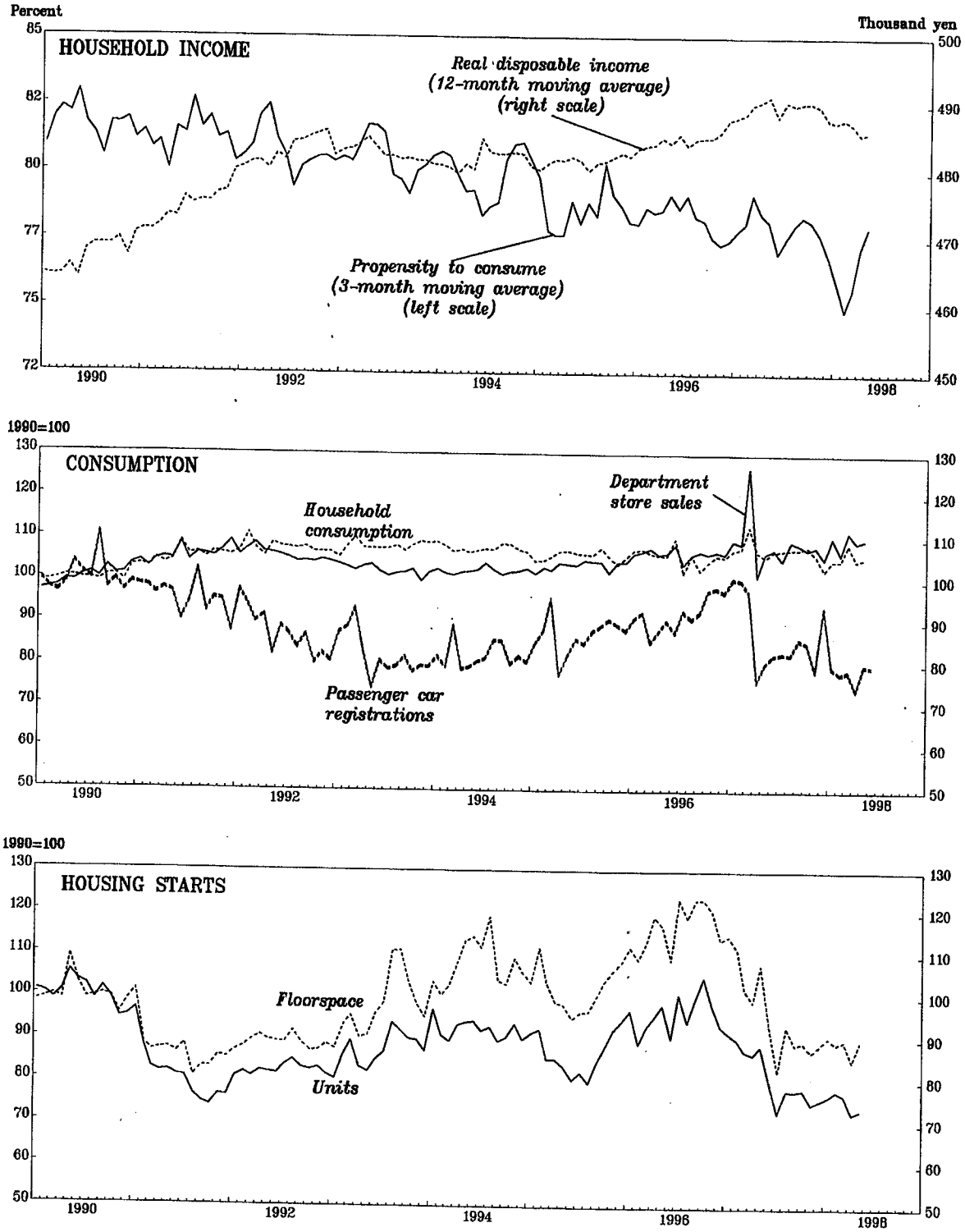
8. **A substantial proportion of the slowdown reflected sharp cuts in public investment (Figure I.2).** Public investment had risen sharply during the 1990–95 period, owing to a series of fiscal stimulus packages and to reconstruction efforts following the Hanshin earthquake of January 1995, and reached a peak of almost 10 percent of GDP in the second quarter of 1996. However, reflecting the increasing emphasis on fiscal consolidation, the December 1996 supplementary budget contained relatively modest spending commitments and the FY1997 budget set strict spending limits. As a result, public investment fell by nearly 20 percent (around 2 percent of GDP) between the second quarter of 1996 and the first quarter of 1997, and by a further 2 percent during the subsequent four quarters.



9. **Household consumption was dampened by the effect of tax increases and weaker labor market conditions on disposable incomes, as well as the effect of financial market strains on consumer sentiment (Chart I.2).** Consumption surged in the second half of 1996 and the first quarter of 1997, rising by 5¼ percent over three quarters. With hindsight, the pickup in demand was largely due to anticipatory purchases of durables ahead of the consumption tax hike in April 1997, and during the subsequent four quarters consumption fell by 4½ percent, as the earlier surge was unwound. Consumer demand was also constrained by the effects on real disposable incomes of the income tax hikes (which began to affect pay checks in late June), as well as by the increase in health-care copayments and charges in September 1997. Labor incomes have been further dampened by the rise in unemployment and a decline in real monthly earnings. However, the decline in consumption has been considerably larger than can be explained by income and tax developments alone, and the household saving rate rose to historical highs in early 1998 (Section B contains a further discussion of recent household behavior).

10. **Residential investment plunged in 1997.** Housing demand had begun to recover in late 1995 in response to interest rate cuts and pent up demand, and expanded further in 1996

CHART I.2
JAPAN
CONSUMPTION AND RESIDENTIAL INVESTMENT INDICATORS, 1990-98 1/



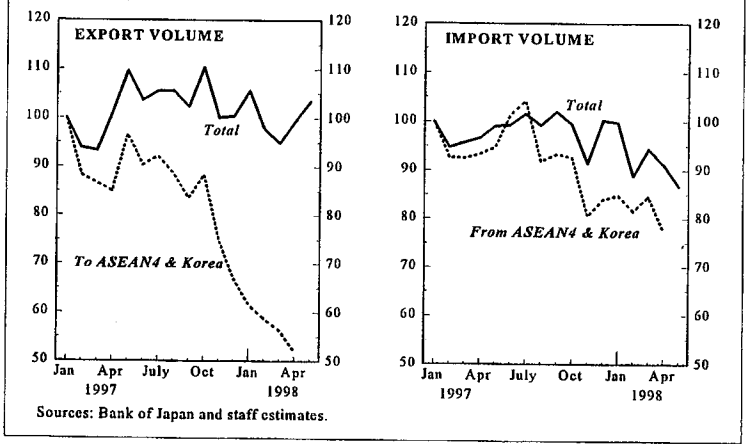
Source: Nikkei Telecom and WEFA.
1/ Seasonally adjusted data.

ahead of the consumption tax hike (Chart I.2).[5] However, residential investment fell by 27½ percent during 1997, and its ratio to GDP fell to a level not seen since the 1960s. Although residential investment rebounded in the first quarter, rising by 1¾ percent, the decline in housing starts since January 1998 suggests that the pick up will not be sustained in the second quarter.

11. **Business investment has slowed markedly since early 1997, reflecting the effects of tighter credit conditions and slumping profits (Chart I.3).** Investment growth accelerated sharply in 1996, largely owing to improved corporate profitability and the effects of deregulation in the cellular telecommunications and retail sectors. Nonetheless, the recovery of capital expenditures, particularly by SMEs, was significantly weaker than typical in previous cycles, in large part reflecting balance sheet fragilities in the business sector. Although investment continued to rise strongly in the first quarter of 1997, it fell sharply in the second quarter.[6] As domestic sales declined and credit conditions began to tighten, corporate profitability was eroded in the second half of 1997 and early 1998. At the same time, the number of bankruptcies, which had stabilized in 1992–96, rose sharply and the liabilities of bankrupt firms reached new historical peaks by mid-1998. Inventories also rose sharply, most recently reflecting a build-up of production goods related to the slowdown of exports of capital goods to Asia. These factors caused investment growth to slow and turn sharply negative at the end of 1997 and early 1998.

12. **Net exports rose strongly in 1997, but the Asia crisis severely eroded the support from external demand in early 1998 (Figure I.3 and Chart 1.4).** Following three years of decline, net exports contributed 1¼ percentage point to growth in 1997. The turnaround reflected the lagged response of export and import volumes to the massive correction in the real effective exchange rate of the yen that occurred in 1995—in real effective terms the yen depreciated by

FIGURE I.3. JAPAN'S TRADE AND THE REGIONAL SLOWDOWN
(January 1997=100)

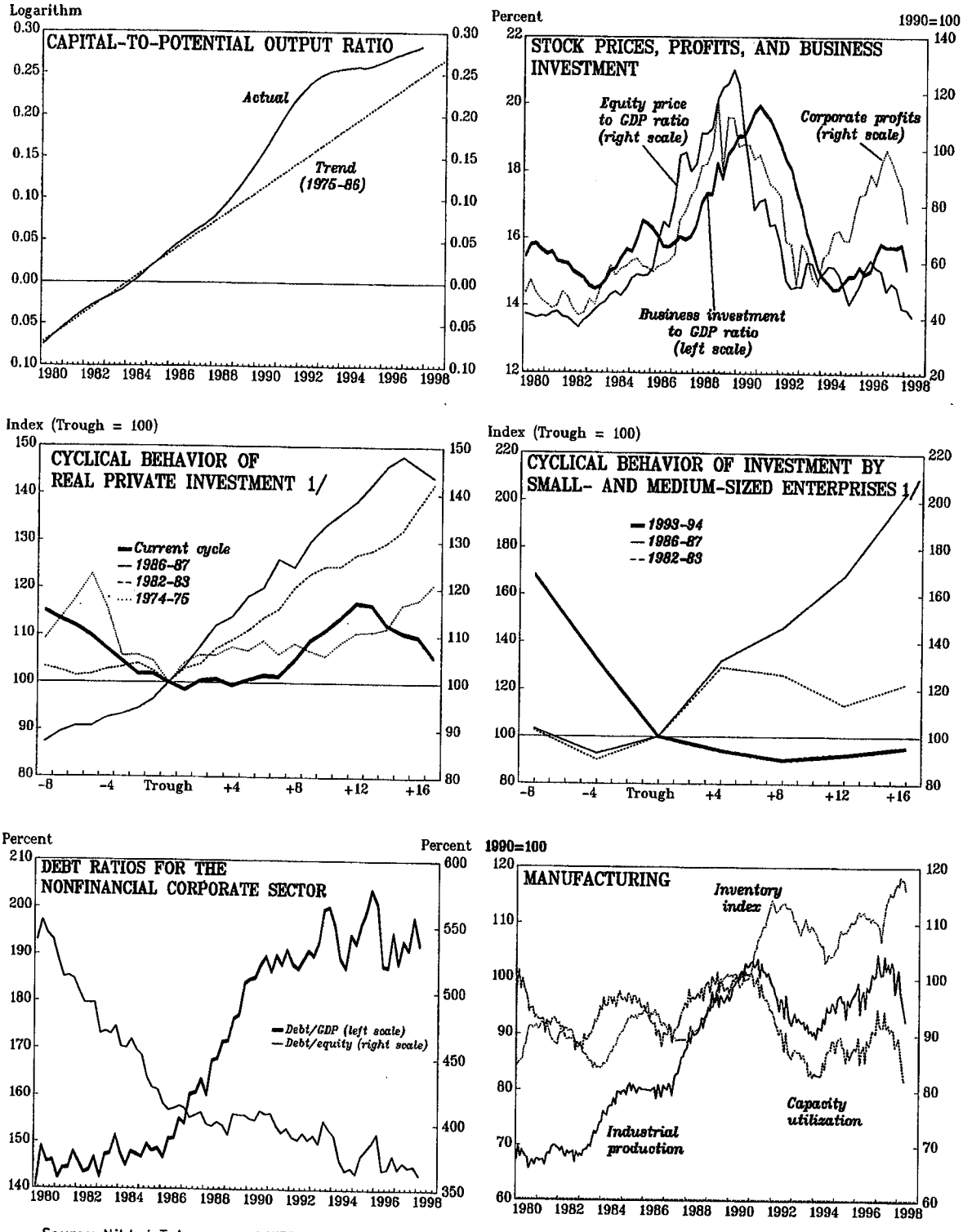


Sources: Bank of Japan and staff estimates.

[5]The additional tax was not levied on homes for which contracts were signed before October 1996, regardless of completion date.

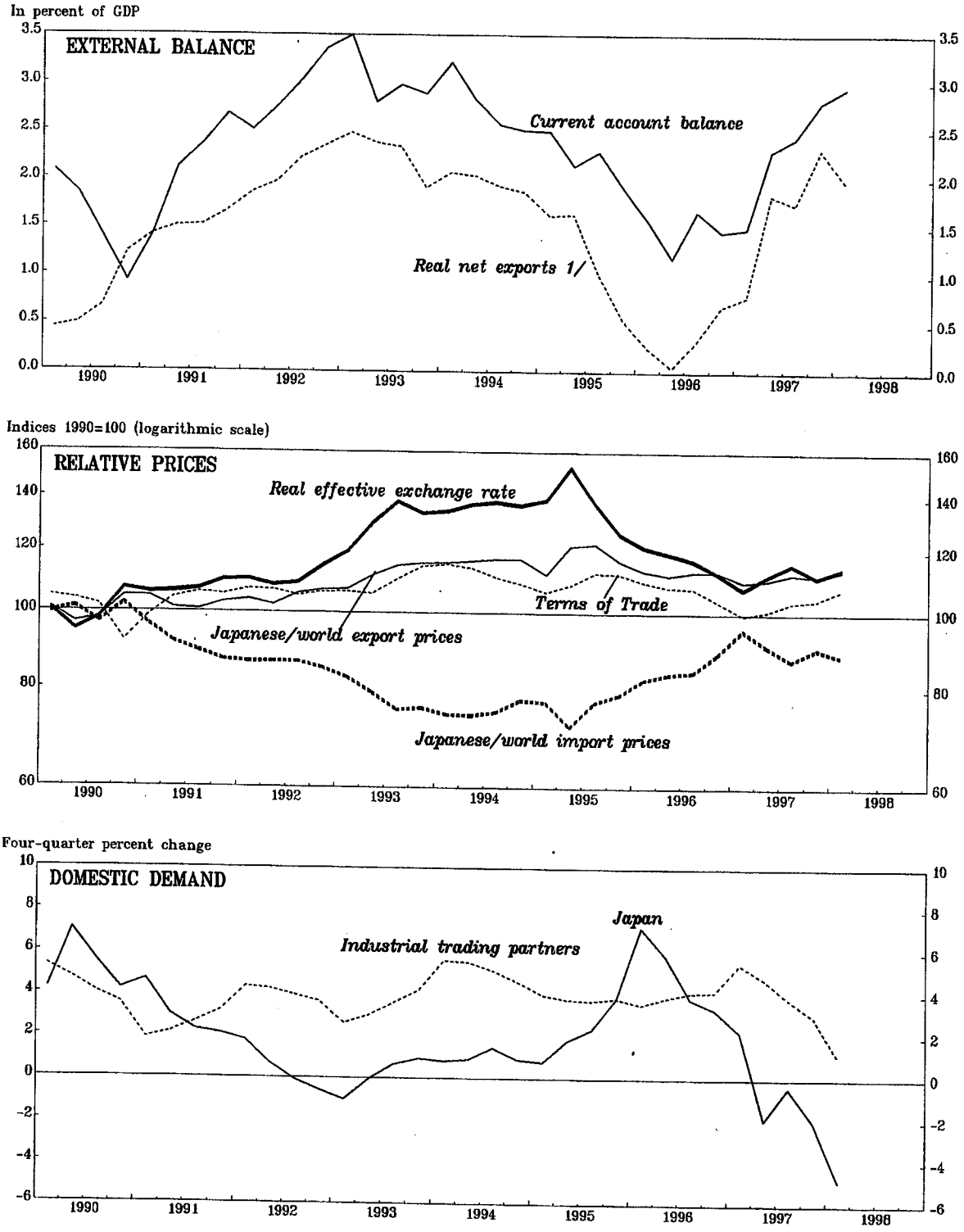
[6]The second-quarter decline in investment was anomalous, as it exceeded the drop in most of the monthly indicators including capital goods shipments, something that also occurred in 1989, when the tax was first introduced. This suggests the possibility that the second-quarter decline partly reflected statistical problems in accounting for the consumption tax.

CHART I.3
JAPAN
INDICATORS OF BUSINESS ACTIVITY AND INVESTMENT, 1980-98



Source: Nikkei Telecom and WEFA.
1/ Troughs defined as: FY 1993 for current cycle; FY 1987 for 1986-87 cycle; and FY 1983 for 1982-83 cycle.

CHART I.4
JAPAN
EXTERNAL BALANCE AND ITS DETERMINANTS, 1990-98



Sources: Nikkei Telecom, WEFA, and staff estimates.

1/ Real net exports of goods and services on a national accounts basis.

30 percent from the second quarter of 1995 to the fourth quarter of 1996. However, much of the strength of net exports during the latter half of 1997 reflected the effects of weakening domestic demand, as import volumes fell sharply. Export volume growth slowed in the latter half of 1997, as the impact of the Asia crisis began to be felt, and turned negative in the first quarter of 1998. As a result, net exports withdrew ½ percentage point from GDP growth in the first quarter.

13. **Industrial production has been severely affected by the decline in domestic and external demand**. Industrial production fell by ¾ percent in 1997 (fourth-quarter to fourth-quarter basis), following growth of 3¼ percent during 1996. Initially, declines were concentrated in the consumer durables sector (especially automobiles), which was most affected by the consumption tax hike, but the downturn subsequently spread owing to the effects of declining domestic and regional demand for intermediate and capital goods. Particularly hard hit were the chemicals and electric machinery sectors. The downturn intensified in 1998 after inventories reached historical highs in early 1998. Substantial production cutbacks were announced, particularly in the auto sector, and industrial production fell by a cumulative 9½ percent during February–May 1998.

External developments

14. **The current account strengthened significantly in 1997 (Chart I.4 and Table I.2).** The surplus rose from ¥7.2 trillion (1½ percent of GDP) in 1996 to ¥11.4 trillion (2¼ percent of GDP) in 1997, reflecting both an increase in the trade surplus and a decline in the invisibles deficit. The trade balance was bolstered by the effect on export volumes of strong partner-country demand, principally from the United States and Europe, and the lagged effects of the yen's depreciation from its peak in mid-1995 (Figure I.4). These factors more than offset the sharp decline in export volumes to the ASEAN-4 and Korea in the latter half of 1997. The trade balance also was bolstered by a slowing of import volume growth in response to the yen's depreciation and the decline in domestic demand. Imports from the Asian region were particularly hard hit, partly reflecting the effects of the slowdown of housing activity and cuts in public investment on the demand for construction materials. Imports from regional partners may also have been affected by a decline in "reverse imports," as Japanese firms reduced their purchases of

FIGURE I.4. TRADE DEVELOPMENTS, 1990-98
(Four-quarter percent changes)

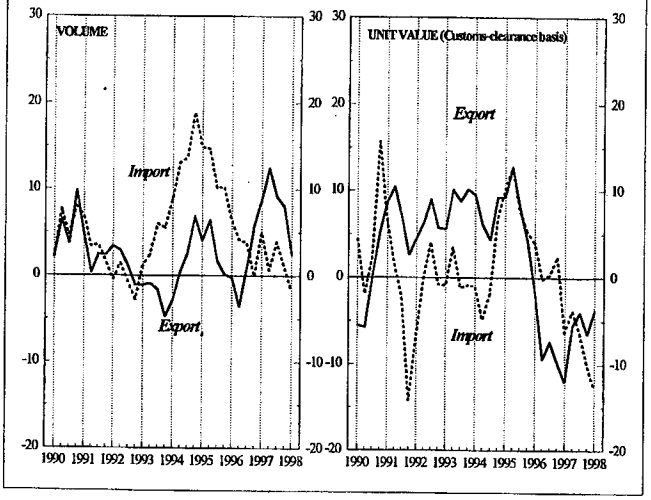


Table I.2. Japan: Current Account Summary, 1993-98

(In billions of yen)

	1993	1994	1995	1996	1997	1997 1/				1998 1/
						I	II	III	IV	I
Current account balance	14,669	13,343	10,386	7,158	11,436	2,120	3,101	2,834	3,273	3,991
Trade balance	15,482	14,732	12,345	9,097	12,310	2,217	3,212	3,235	3,537	3,792
Exports	39,164	39,349	40,260	43,566	49,519	11,925	12,492	12,435	12,653	12,411
Imports	23,682	24,617	27,915	34,469	37,209	9,708	9,279	9,200	9,116	8,619
Services	-4,780	-4,898	-5,390	-6,779	-6,542	-1,616	-1,637	-1,747	-1,542	-1,347
Travel	-2,582	-2,776	-3,160	-3,588	-3,465	-884	-824	-942	-815	-760
Receipts	394	355	305	445	524	126	126	130	142	116
Payments	2,976	3,132	3,464	4,033	3,989	1,010	950	1,073	957	876
Transportation	-1,103	-1,159	-1,256	-1,307	-1,120	-302	-248	-338	-234	-194
Receipts	2,103	2,074	2,123	2,350	2,640	623	662	668	687	642
Payments	3,205	3,233	3,379	3,656	3,760	925	909	1,005	921	835
Other	-1,095	-962	-973	-1,884	-1,957	-431	-566	-468	-493	-394
Receipts	3,420	3,529	3,730	4,571	5,225	1,434	1,227	1,191	1,373	1,534
Payments	4,515	4,491	4,703	6,456	7,181	1,865	1,792	1,659	1,866	1,927
Income	4,533	4,131	4,157	5,818	6,740	1,905	1,767	1,521	1,547	1,890
Investment	4,622	4,202	4,220	5,818	6,738	1,904	1,766	1,520	1,548	1,890
Labor	-89	-72	-63	0	1	1	1	1	-1	0
Net transfers	-565	-623	-725	-978	-1,071	-386	-241	-175	-270	-344
Public	-266	-288	-314	-214	-283	-151	-33	-19	-81	-153
Private	-300	-334	-411	-763	-789	-235	-208	-157	-189	-191
Memorandum items:										
Current account 2/	14,440	13,306	10,653	7,340	11,400	1,909	2,873	3,087	3,531	3,782
Current account 3/	14,669	13,343	10,386	7,158	11,436	2,037	2,917	2,822	3,660	3,637
In percent of GDP	3.1	2.8	2.1	1.4	2.3	1.5	2.3	2.4	2.8	3.0
Average exchange rate (Y/$)	111.2	102.2	94.1	108.8	121.0	121.2	119.6	117.9	125.2	128.0

Sources: Nikkei Telecom; WEFA; and staff estimates.

1/ Sum of the seasonally adjusted trade balance and the seasonally unadjusted invisibles balances.
2/ Seasonally adjusted.
3/ Seasonally unadjusted.

components from Asian factories in the face of declining domestic demand.[7]

15. **The external surplus rose further in early 1998, reaching ¥16 trillion on an annualized basis (3 percent of GDP) in the first quarter, notwithstanding a contraction of net exports on a volume basis.** The further improvement in the surplus reflected lower import values, largely due to the decline in oil and commodity prices at the beginning of the year, as well as the weakness in domestic demand. Export values fell sharply in the first quarter, owing to a substantial decline in export volumes in February-March, particularly to Asia, as well as lower export unit values. The invisibles balance continued its upward trend in the first quarter, and reached a surplus for the first time in many years. This reflected the effect of the growing net foreign asset position and yield differentials on investment income, the impact of the yen's depreciation and weak domestic demand on tourism, and spillover of the slowdown in Asia on shipping and other service receipts.

16. **Capital outflows have increased in line with the widening of the current account surplus (Table I.3).** Bank lending abroad rose strongly, particularly in the fourth quarter, as banks responded to the substantial increase in the Japan premium that followed the failure of Yamaichi Securities and Hokkaido Takushoku Bank in November by supporting their overseas subsidiaries. These outflows more than offset substantial net portfolio inflows in 1997, which reflected the repatriation of proceeds from securities sales by Japanese banks to bolster their capital positions, as well as large purchases by nonresidents of Japanese bonds on the expectation of continued bond yield declines. In the first quarter of 1998, the bank-related outflows were largely reversed, as funding pressures eased, balanced by portfolio outflows as nonresidents' positions in Japanese bonds were unwound.

17. **Deregulation has eased restrictions on capital outflows during the past year.** Restrictions on pension fund investment in foreign assets were lifted beginning in 1998,[8] and the Foreign Exchange Law—which required pre-notification of all major foreign exchange transactions—was relaxed as of April 1998. These measures, and the relatively low yield on Japanese investments, have facilitated a shift in investor preference toward foreign assets. For example, although portfolio outflows fell in March 1998, owing to the need to bolster domestic liquidity at the fiscal-year end, portfolio outflows rose sharply in May, mainly reflecting equity investments abroad. Moreover, there has been a rapid growth of Japanese residents' holdings of investment trusts (mutual funds) denominated in foreign currencies. The value of foreign assets held by domestic funds rose by 32 percent in April 1998 from the

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[7]The relationship between developments in Japan and Asia are discussed in more detail in Chapter VII.

[8]Pension funds' holdings of foreign securities were limited to no more than 30 percent of total assets. However, while Japanese portfolio diversification has risen over time, this restriction was not generally a binding constraint.

Table I.3. Japan: Capital and Financial Account Summary, 1993-98

(In billions of yen, not seasonally adjusted)

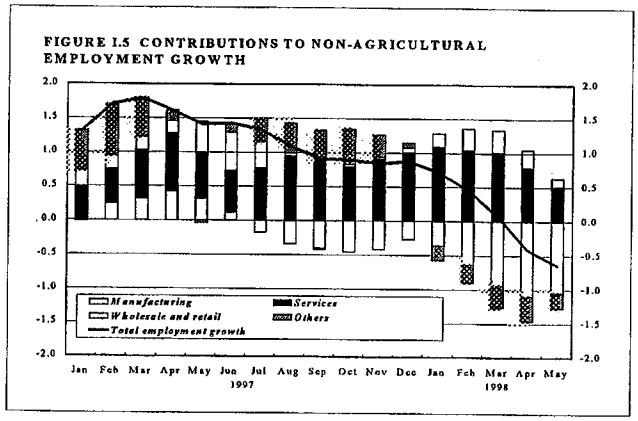
	1993	1994	1995	1996	1997	1997				1998
						I	II	III	IV	I
Current account balance	14,669	13,343	10,386	7,158	11,436	2,037	2,917	2,822	3,660	3,637
Capital and financial account	-11,704	-8,992	-6,275	-3,347	-14,835	-3,551	-2,368	-3,663	-5,253	-4,068
Capital account	-165	-192	-214	-354	-488	-229	-78	-129	-52	-504
Total credit	0	0	1	134	184	49	52	34	50	37
Total debit	165	192	215	487	535	178	130	125	102	541
Financial account	-11,539	-8,800	-6,061	-2,994	-14,347	-3,322	-2,290	-3,534	-5,201	-3,563
Direct investment	-1,523	-1,761	-2,125	-2,524	-2,755	-557	-869	-781	-549	-917
Direct investment abroad	-1,547	-1,852	-2,129	-2,548	-3,145	-660	-949	-836	-701	-1,056
Equity capital	-1,671	-1,688	-2,209	-2,029	-2,608	-690	-663	-764	-492	-697
Other capital	124	-164	81	-270	96	208	-109	79	-82	-228
Direct investment in Japan	23	91	4	25	390	103	80	55	152	139
Equity capital	8	70	30	-77	240	27	39	85	88	70
Other capital	15	21	-26	24	108	43	12	-23	77	82
Portfolio investment	-7,762	-2,366	-3,077	-4,514	3,721	-4,105	469	-138	7,496	-3,574
Assets	-6,955	-9,204	-8,004	-12,523	-8,403	-1,848	-7,006	-1,993	2,444	-30
Equity securities	-1,642	-1,415	7	-905	-1,645	332	-1,571	-178	-227	914
Debt securities	-5,313	-7,789	-8,010	-11,618	-6,759	-2,180	-5,435	-1,815	2,671	-944
Bond and notes	-4,004	-7,004	-8,479	-8,798	-2,827	-1,125	-4,341	-614	3,252	1,181
Money market instrument	-1,255	-828	582	-1,303	-1,002	-438	-299	-586	321	-1,494
Financial derivatives	-54	44	-113	-1,517	-2,930	-618	-796	-614	-902	-630
Liabilities	-807	6,838	4,926	8,009	12,125	-2,257	7,475	1,855	5,052	-3,544
Equity securities	2,191	5,199	4,805	5,298	3,197	659	2,396	797	-654	1,533
Debt securities	-2,997	1,639	121	2,711	8,928	-2,915	5,080	1,058	5,706	-5,077
Bond and notes	-3,460	-1,373	-920	1,931	3,747	-1,223	317	2,495	2,158	-2,593
Money market instruments	522	3,036	1,893	68	2,670	-2,155	3,923	-2,005	2,907	-2,984
Financial derivatives	-59	-24	-852	712	2,511	463	840	568	640	500
Other investment	-2,253	-4,674	-859	4,044	-15,313	1,340	-1,890	-2,615	-12,148	927
Assets	1,834	-3,620	-9,789	466	-23,953	-2,409	-3,231	-2,909	-15,405	9,529
Trade and credits	576	268	232	110	186	40	134	-118	131	167
Loans	3,315	-1,051	-15,634	-906	-19,994	-1,460	-2,267	-1,579	-14,688	8,531
Currency and deposits	-1,656	-2,691	3,755	5,079	-1,015	138	-732	424	-845	1,055
Other assets	-402	-146	1,858	-3,818	-3,129	-1,127	-365	-1,635	-3	-223
Liabilities	-4,087	-1,054	8,931	3,579	7,410	3,205	1,249	-193	3,149	-8,602
Trade credits	-99	-157	-28	52	-86	-2	6	-107	17	-86
Loans	-1,147	-504	9,758	2,157	9,167	3,447	338	1,427	3,956	-5,228
Currency and deposits	-3,444	-195	-26	807	-3,526	-19	265	-2,009	-1,763	-3,014
Other assets	603	-198	-774	564	1,854	-222	640	497	939	-275
Net errors and omissions	32	-1,765	1,313	132	4,165	1,968	-101	1,274	1,024	880
Reserve assets	-2,997	-2,585	-5,424	-3,942	-766	-454	-448	-434	569	-450

Source: Nikkei Telecom and WEFA.

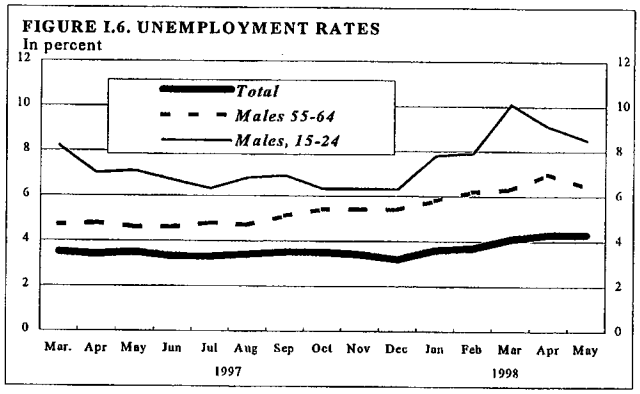
previous year, and holdings by domestic residents of overseas funds rose by nearly 80 percent.[9]

Labor market developments

18. **Employment conditions have deteriorated considerably during the past year (Chart I.5).** After accelerating to 2 percent in February 1997, 12-month employment growth slowed during the rest of 1997 and turned negative in 1998, falling to minus ½ percent in May 1998 (Figure I.5). The construction sector was the first affected, reflecting the impact of the decline in public works spending that began in mid-1996, as well as the decline in residential construction. In early 1997, the drop in household consumption began to adversely affect manufacturing employment. During the latter half of 1997 and the first half of 1998, employment declines spread more generally to include the services sectors.



19. **As a result, the unemployment rate, which had hovered around 3½ percent since late 1995, rose sharply in 1998, reaching a historical high of 4.1 percent in April and May.** Unemployment among the youth and middle aged is especially severe—the unemployment rate for males aged 15–24 reached 9.1 percent in May, and the rate for males aged 55–64 percent was 7.0 percent (Figure I.6).



20. **Earnings also have been adversely affected by the slowdown.** Average monthly compensation growth fell from nearly 3 percent in the first quarter of 1997 (four-quarter rate) to just less than zero in the second quarter of 1998. The slowdown in compensation growth and the rise in prices due to the consumption tax hike has left real earnings roughly 1¾ percent lower in the first five months of 1998 than in the same period in 1997. Last year's *shunto* yielded an increase of close to 3 percent, but compensation growth was dampened by

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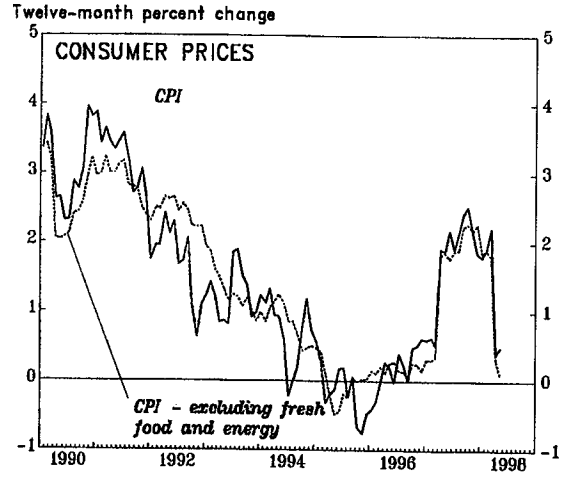
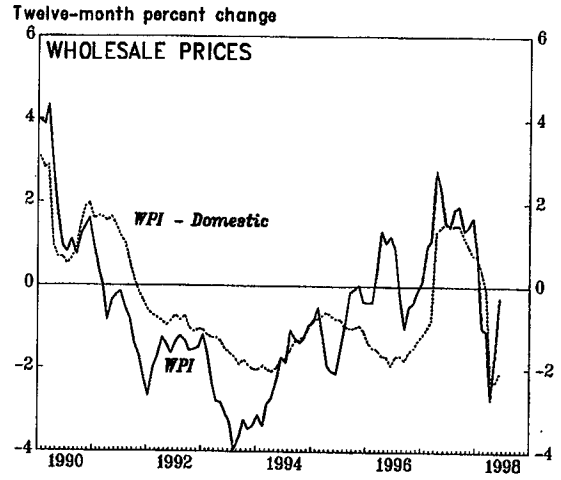
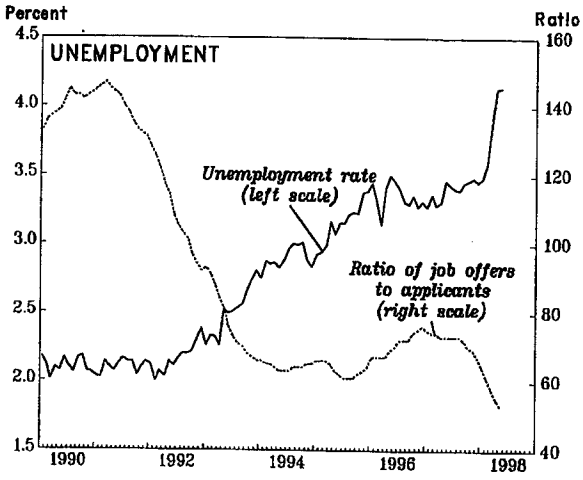
[9]Tomoko Fujii, "Private Capital Outflows Continue," in *Japan: Issues and Prospects*, Salomon Smith Barney—Economic & Market Analysis (June 4, 1998).

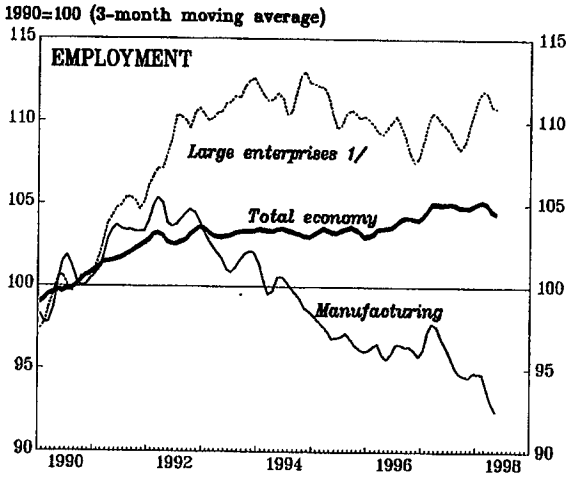
CHART I.5
JAPAN

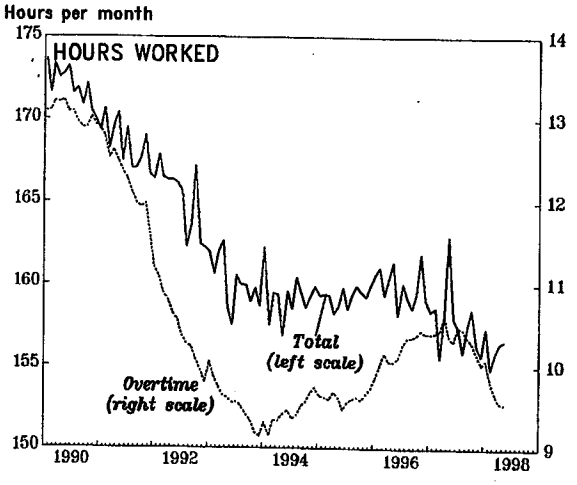
INDICATORS OF PRICES AND LABOR MARKET CONDITIONS, 1990-98 1/

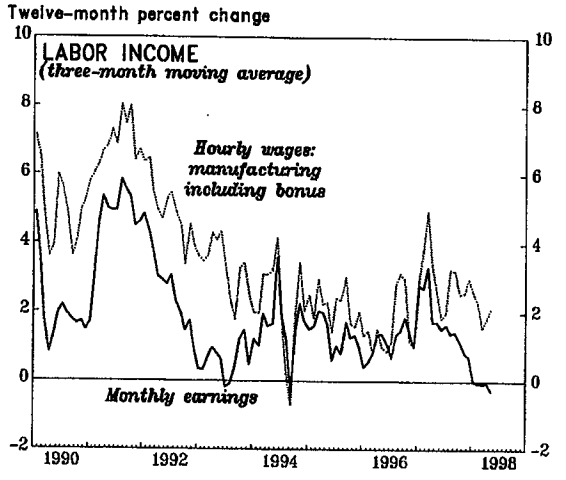










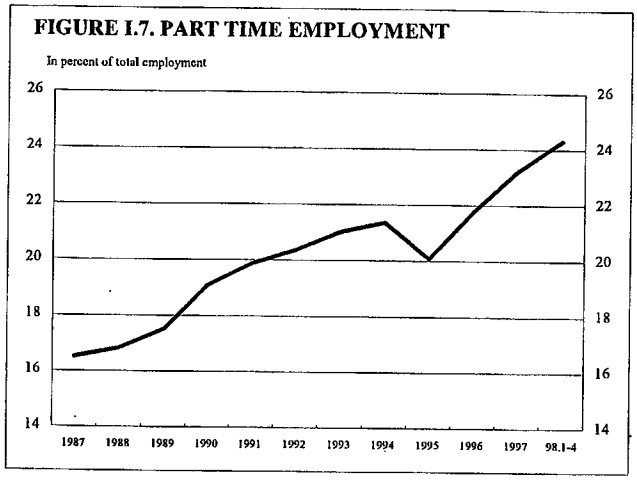


Source: Nikkei Telecom and WEFA.

1/ Seasonally adjusted data.

declining overtime hours and bonus payments in the face of cyclical pressures. This year's spring *shunto* is expected to result in wage increases of about 2½ percent, but bonuses, which typically are the equivalent of five months' salary, are expected to be roughly unchanged in 1998.[10]

21. **A number of important structural changes have occurred in the labor market.** Most notably, employment costs have risen as a result of the increased prevalence of the five-day, 40-hour work week (the 40-hour requirement was introduced with a 1987 amendment to Labor Standards Law, but was only applied to small- and medium-sized enterprises in April 1997).[11] At the same time, social security contribution rates, which only apply to full-time employees, have risen sharply from 10.6 percent in the early 1980s to 17.35 percent in October 1997. The increased cost of full-time labor, and the increased supply of part timers (particularly among females, whose participation rate has been on a secular increase and also tends to rise during cyclical downturns) has encouraged a substantial increase in the proportion of part-time employees, particularly at the lower end of the wage scale (Figure I.7). The increase in part-time employment has also been facilitated by deregulation that has increased firms' access to temporary placement firms (see Chapter VI for further discussion).



22. **These labor market changes have complicated assessment of the "natural" rate of unemployment and of deflationary pressures.** Recent trends in the unemployment rate suggest that the natural rate has increased from around 2½ percent in the late 1980s to around 3 percent in early 1998, and the rapid rise in unemployment among the relatively aged supports the view that structural unemployment has increased significantly.[12] Moreover, the

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[10]A recent survey suggested that the average employee summer bonus will be only ½ percent higher than last year, while average bonuses fell in 22 out of 40 industries surveyed (Nihon Keizai Shimbun, June 18, 1998).

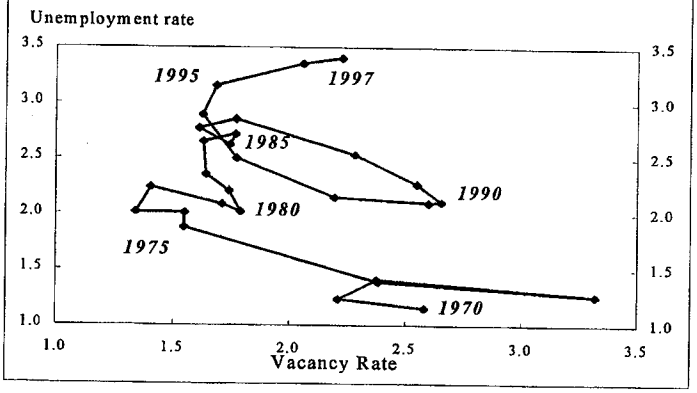
[11]The number of firms providing a five-day work week at least once a month rose from 78 percent in 1987 to 96 percent in 1995, and the number of firms providing a five-day work week each week rose from 7 percent to 26 percent over the same period.

[12]The staff's estimate of the natural rate is based on a Hodrick-Prescott filter of the actual

(continued...)

fact that the vacancy rate has risen with the unemployment rate provides evidence of a structural increase in frictional unemployment (Figure I.8). At the same time, however, the greater use of part-time employees, and evidence that the lifetime employment system is eroding in favor of merit-based wage system, may mean that firms have begun to be less averse to layoffs in response to changes in demand conditions. Thus, both the natural rate and the responsiveness of the unemployment rate to the cycle may have increased in recent years.

FIGURE I.8. UNEMPLOYMENT AND VACANCY RATES, 1970-97



Price developments

23. **Deflationary pressures mounted during the first half of 1998 (Chart I.5).** The twelve-month rate of CPI inflation rose sharply in 1997, reaching a high of 2½ percent in October, largely reflecting the 2 percentage point increase in the consumption tax in April 1997 and the September rise in health care fees.[13] Since then, the inflation rate has fallen steadily to around ½ percent in May 1998. The twelve-month core inflation rate (excluding fresh food and energy) has fallen more rapidly, dropping from a recent high of 2¼ percent in October 1997 to zero in May 1998; indeed, during the first five months of 1998, the seasonally-adjusted core CPI fell by just over ½ percent.

24. **Besides the effect of economic slack, deflationary pressures have been exacerbated by declining commodity prices.** Import unit values fell by 2¼ percent in the first quarter of 1998, compared with the previous year, reflecting the decline in commodity prices and effects of the depreciation of Asian partner-country currencies. Wholesale prices fell by 1¾ percent in May 1998 from the previous year, while the domestic component of wholesale prices fell by 2¼ percent during the same twelve-month period, as the early 1997 decline in commodity prices fed through to domestic producer prices.

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[12](...continued)
unemployment rate. Historically, the unemployment gap has responded relatively modestly to the output gap, and estimates of the Okun coefficient (i.e., the percent change in the output gap that would be associated with a percent change in the unemployment rate) are around 5.

[13]The consumption tax hike and the rise in medical costs are estimated to have increased the CPI by about 1½ percent and ¼ percent, respectively.

B. What Explains the Recent Weakness of Household Spending?

25. **The downturn in consumption and residential investment after April 1997 was much larger and more persistent than expected.** Although a degree of "demand shifting" was anticipated around the time of the increase in the consumption tax, most forecasters projected a much milder dip in spending than actually occurred. The sharp increase in inventories immediately after April indicates that most businesses were similarly surprised. The downturn in spending was also considerably larger than observed at the time the consumption tax was introduced in 1989 at a rate of 3 percent, when the tax hike was one-and-a-half times as large.

26. **The effect of the consumption tax increase was larger for durable goods than nondurable goods, as would be expected given their larger cost and the fact that their benefits are more evenly spread over time (Chart I.6).**[14] The spike and subsequent fall in sales before April 1 was larger for durable goods (measured using automobile registrations) than for overall consumption.[15] By contrast, spending on non-durable goods and services showed very little impact from the tax hike. Most consumption indicators also pointed to a recovery within a few months of the tax hike (retail sales being an exception).

27. **Residential investment showed an even larger demand shift in response to the consumption tax hike (Chart I.7).** The introduction of the consumption tax in 1989 had a relatively limited impact on residential investment, perhaps because the increases in the price of land associated with the asset price bubble dwarfed the impact of the tax. By contrast, in 1997 residential investment rose sharply in the year preceding the tax hike, but declined very sharply afterwards.

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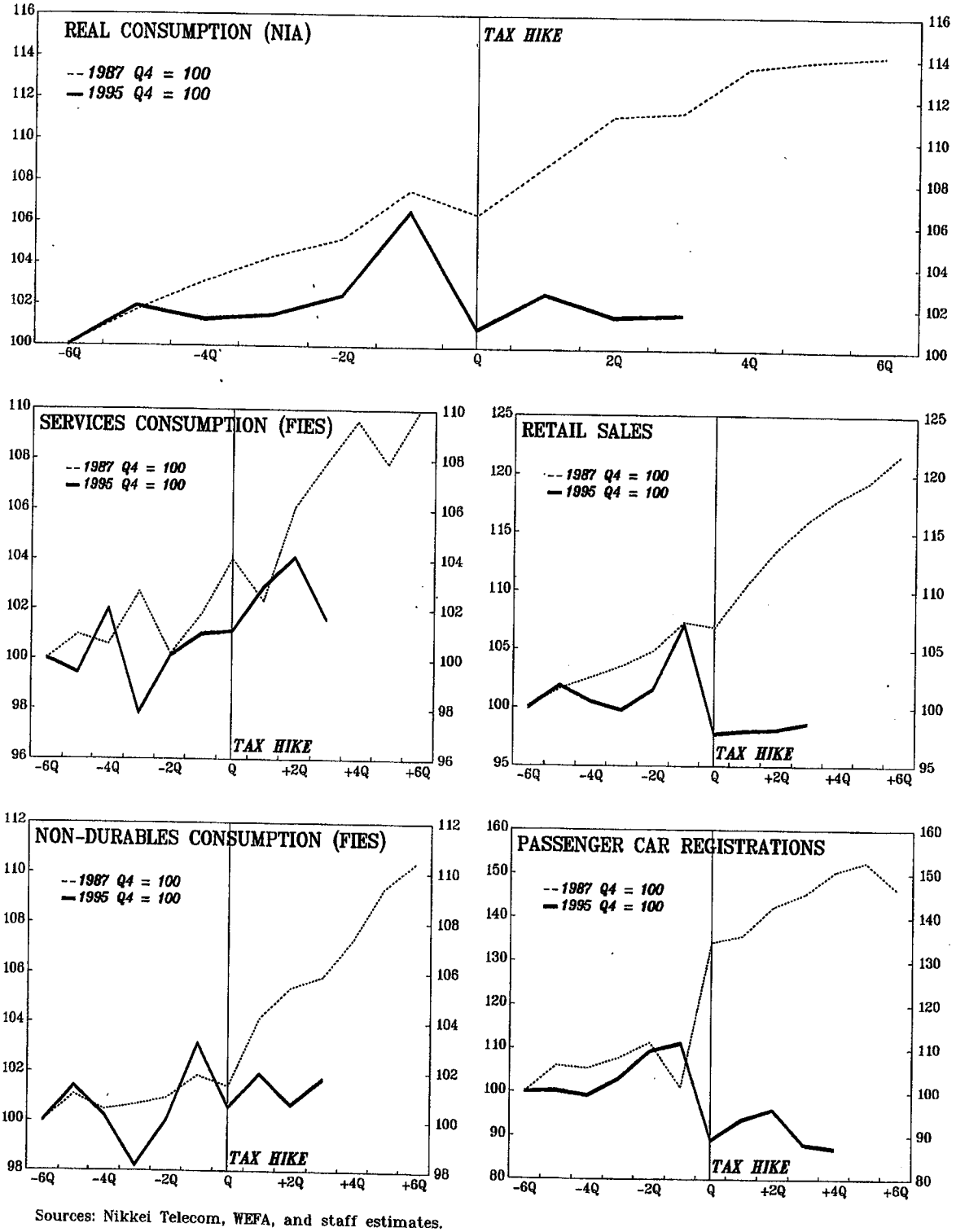
[14]Data on consumption come from various sources. The national income accounts (NIA) report quarterly data on consumption and (non-seasonally adjusted) compensation of employees with a lag of about 2 months, but the components of consumption—durable, semi-durable, and nondurable goods and services—and disposable income are not available. More timely monthly indicators of consumption include data on retail sales and car registrations, as well as the family income and expenditure survey (FIES). The FIES reports consumption by type of good, as well as labor and disposable income, thus covering most of the deficiencies in the NIA data. Unfortunately, the FIES and NIA data have very different underlying trends for variables such as the average propensity to consume, leading to concerns about the representativeness of the FIES survey methodology.

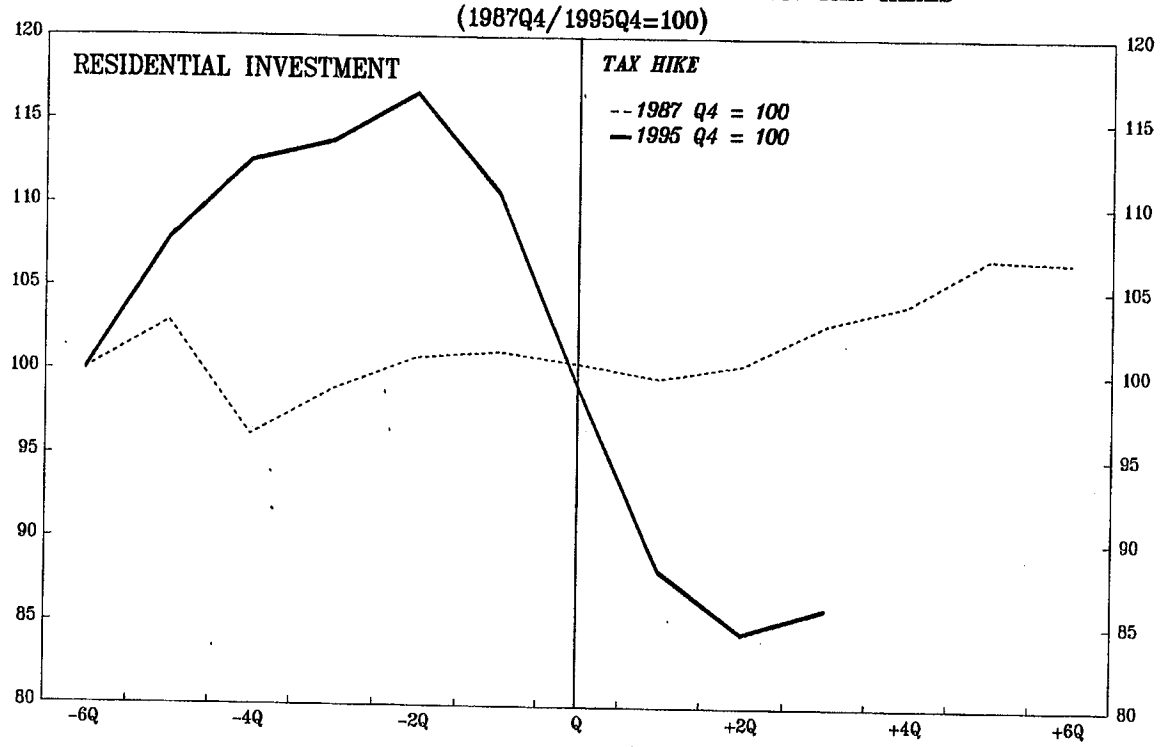
[15]The rise in automobile registrations in 1989 reflects other tax changes implemented at the same time as the consumption tax hike.

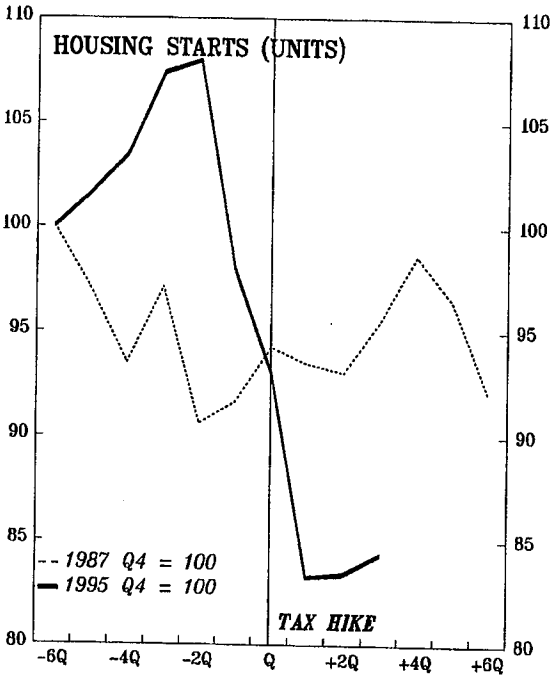
CHART 1.6
JAPAN
HOUSEHOLD SPENDING AND CONSUMPTION TAX HIKES
(1987Q4/1995Q4 INDEX=100)

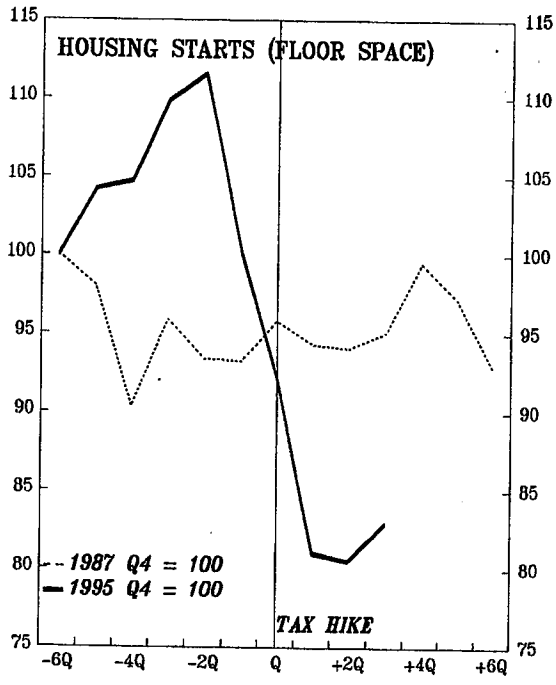


Sources: Nikkei Telecom, WEFA, and staff estimates.

CHART I.7
JAPAN
RESIDENTIAL INVESTMENT AND CONSUMPTION TAX HIKES
(1987Q4/1995Q4=100)







Sources: Nikkei Telecom, WEFA, and staff estimates.

28. **Theory suggests that household consumption responds to movements in real interest rates, disposable income, and consumer confidence.**[16] Real interest rates define the value of consumption over time; in particular, the "demand shifting" observed in early 1997 reflects the anticipated impact of the consumption tax hike on the real interest rate. Changes in disposable income matter because some individuals are liquidity constrained, and hence vary their consumption in line with their income. Uncertainty about economic prospects—reflected in consumer confidence indicators—signals households' expectations of permanent income, which determines the spending of forward-looking individuals, and can also encourage precautionary saving.

29. **Disposable income in FY1997 was eroded by higher taxes and social security contributions.**[17] In addition to the consumption tax hike, the FY1997 budget increased income taxes by ¥2 trillion as existing temporary tax rebates were ended,[18] while social security charges were raised in both September 1996 (pension contribution rates) and September 1997 (mainly health care copayments). The overall impact was to lower real disposable by over ¥7¾ trillion (2¼ percent of disposable income) in FY1997.

Effects of Fiscal Measures on Real Disposable Income, FY1997

	Amount in ¥ trillions	Percentage Change
Consumption tax hike	-4	-1¼
End of temporary tax cuts	-2	-½
Pension contributions	-1	-¼
Increase in health charges	-¾	-¼
Total	-7¾	-2¼

Notes: Only those parts of the pension and health increases relevant for FY1997 are included in the calculations.

30. **An estimated consumption function was used to assess how far the recent movements in consumption were predictable**. The model assumes that in the long run

[16]Longer term influences on consumption include demographic trends and wealth.

[17]In 1989, the introduction of the consumption tax was designed to be roughly revenue neutral in the short term. In 1997, by contrast, the increase was an offset to tax cuts enacted in 1995.

[18]The temporary tax cuts were provided in June and December, so their elimination had particularly large effects on disposable income in those months.

consumption depends on the level of the real interest rate, wealth, demographic variables, and disposable income, and that in the short run the change in consumption also responds to the change in disposable income (reflecting the influence of liquidity constraints) and the change in the real interest rate. In order to capture the return to households from varying the timing of their purchases in response to changes in indirect taxes, the real interest rate was calculated in a forward-looking manner. The model implies that a 5 percent fall in real disposable income lowers consumption by around 1 percent in the short run, while an anticipated 7 percentage point rise in the annualized real interest rate has a similar impact.

Model of Household Consumption

The following consumption equation was estimated, using quarterly data for 1980–96:

$$\Delta c_t = 0.01 + 0.18\ \Delta y_t - 0.15\ \Delta r_t - 0.38\ ecm_{t-1},\ R^2 = 0.38,$$
$$\quad (7.6)\quad (3.2)\qquad (3.5)\qquad (3.7)$$

and

$$ecm_t = c_t - 0.11\ w_t - 0.22\ land_t - 0.34\ y_t - 1.96\ dep_t - 0.10\ r_t,$$

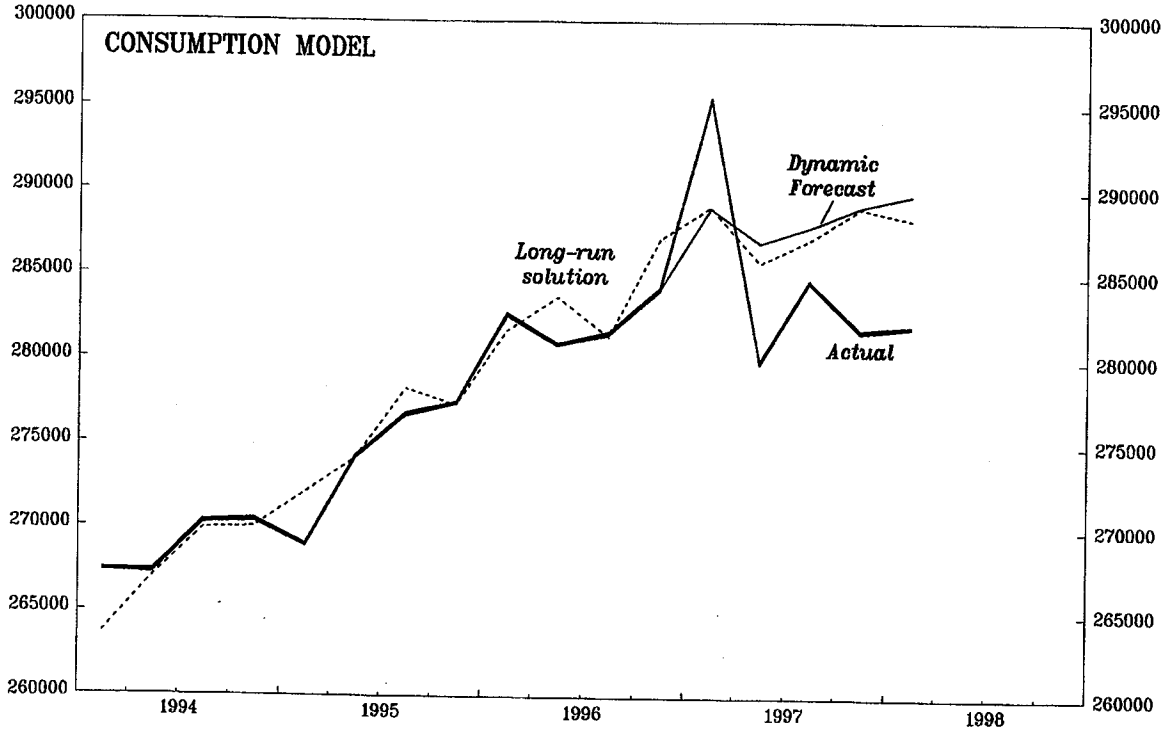
where c_t is the log of consumption, y_t is the log of disposable income, r_t is the forward-looking real short-term interest rate, w_t is the log of household financial net assets, $land_t$ is the logarithm of the real price of land, dep_t is the dependency ratio, ecm_t is the difference between actual consumption and its long-run equilibrium and t-statistics are reported in parentheses.

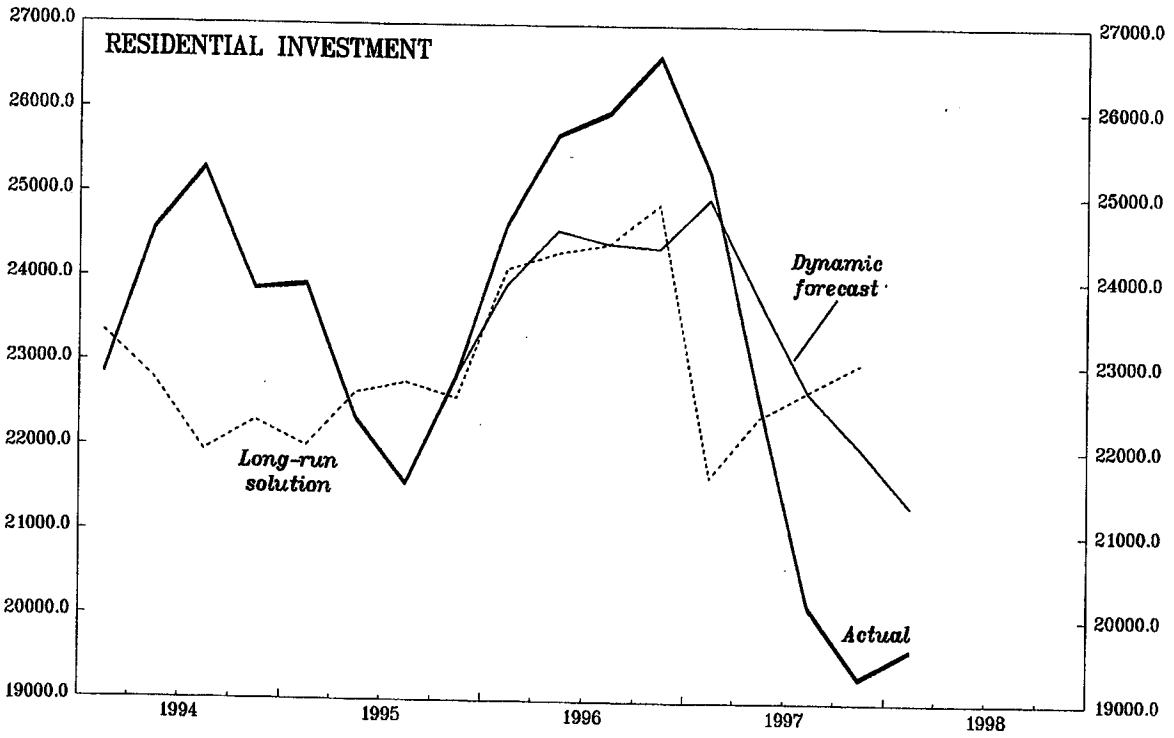
As both disposable income and the real interest rate are potentially endogenous (disposable income because it may be correlated with unexpected shocks to permanent income, and the real interest rate because it contains future outcomes for inflation), the dynamic equation was estimated using two-stage least squares. The instruments were a constant term, lagged values of consumption, lagged values of income (movements in income should help predict consumption in a permanent income model), the lagged real interest rate, lagged values of inflation and nominal interest rates, and a dummy for the introduction of the consumption tax.

31. **Applying this equation to 1997–98 data, the projections significantly underestimated the observed shift in consumption demand**, with a 2 percent under-prediction in the first quarter of 1997 being roughly offset by the over-prediction in the next quarter (Chart I.8).[19] Actual consumption moved closer to the predicted value in the third quarter of 1997, but subsequently diverged again. The renewed weakness of consumption in late 1997 and early 1998 probably reflected the impact of other factors, including financial closures and the sharp increase in unemployment, both of which might be expected to raise precautionary savings.

[19]Disposable income was projected using national income account data on wage incomes and FIES data on the gap between wage income and disposable income.

CHART I.8
JAPAN
PREDICTIONS FROM MODELS





Source: Nikkei Telecom, WEFA.

32. **Similar results were found for residential investment**. An econometric equation was estimated in which the short-run behavior of residential investment depends upon changes in activity and tax hikes, while the long-run equilibrium depends upon real wealth, real land prices and real interest rates.[20] The predictions from this equation, shown in the lower panel of Chart I.8, indicate that the rise in residential investment spending before the consumption tax hike and, in particular, the downturn after the tax hike were much larger than might have been anticipated based on earlier behavior.

33. **These results suggest that the recent weakness in household spending was larger than would have been expected on the basis of tax and income developments**. Even taking into account the impact of tax hikes on real interest rates and disposable income, consumption and residential investment are weaker than would be expected from past behavior. The most likely explanation is that failures of financial institutions, higher unemployment, and reduced job security lowered expectations of permanent income, reduced consumer confidence, and caused a rise in precautionary savings. While some of these factors may be transitory, others may be associated with more fundamental structural shifts in the economy, suggesting that at least some of the current weakness in spending may be protracted.

C. To What Extent Does the Recent Weakness Reflect Lower Potential Growth?

34. **The normal uncertainties surrounding estimates of potential growth are exacerbated in the present situation by the volatility of output and the fact that the economy appears to have deviated significantly from historical trends**. The staff bases its estimates of potential output on a Cobb-Douglas function of the net capital stock, the trend value of labor inputs, and the trend value for total factor productivity (Chart I.9).[21]

35. **These estimates of potential growth suggest that both cyclical and structural factors have contributed to the growth slowdown since the bursting of the asset-price bubble**. At the cyclical peak in 1990, the excess demand gap reached roughly 4 percent of potential output, compared with an excess supply gap estimated at around 6 percent in the first quarter of 1998. However, during the same period the estimated underlying potential growth rate of the economy also slowed markedly, from around 3½ percent during 1980–90

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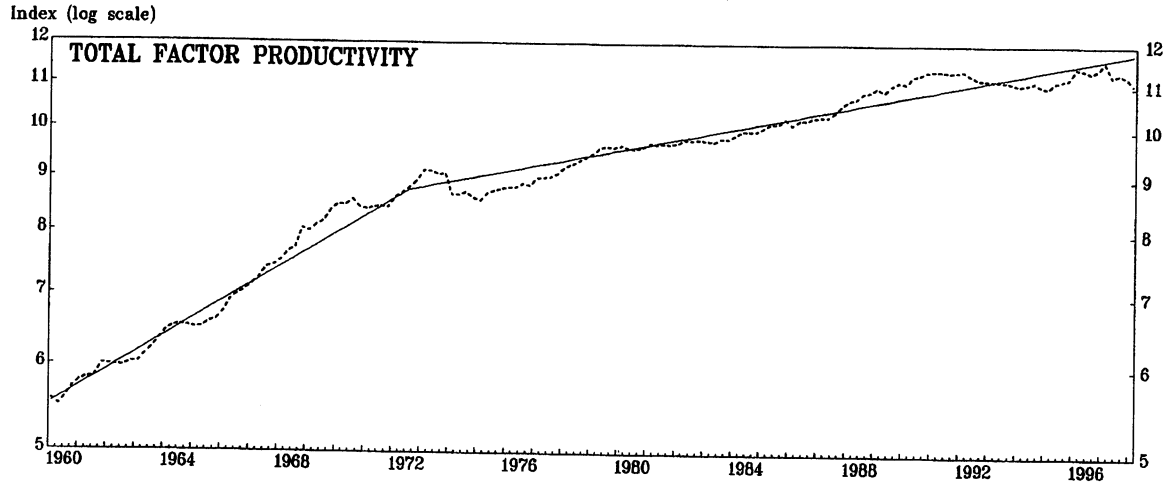
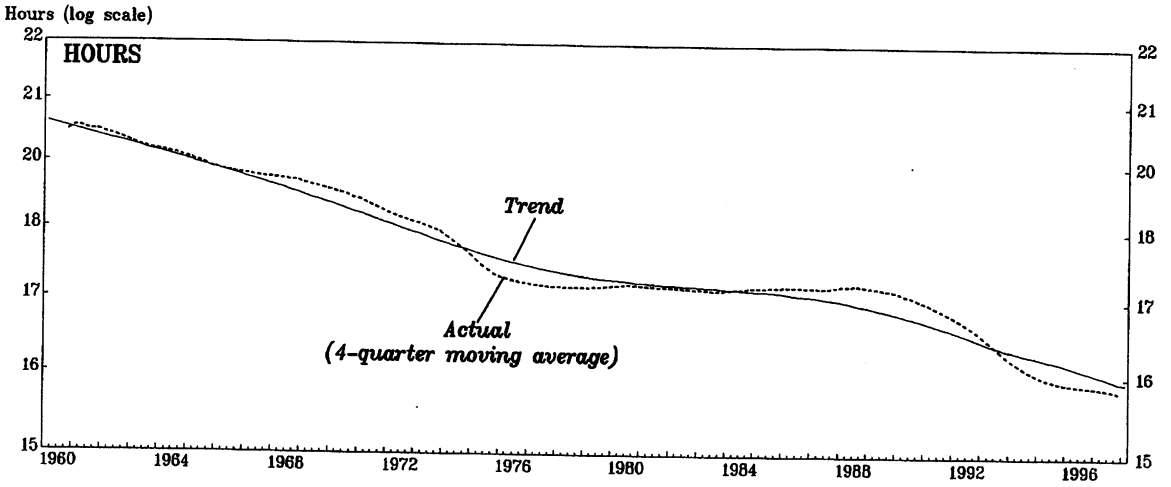
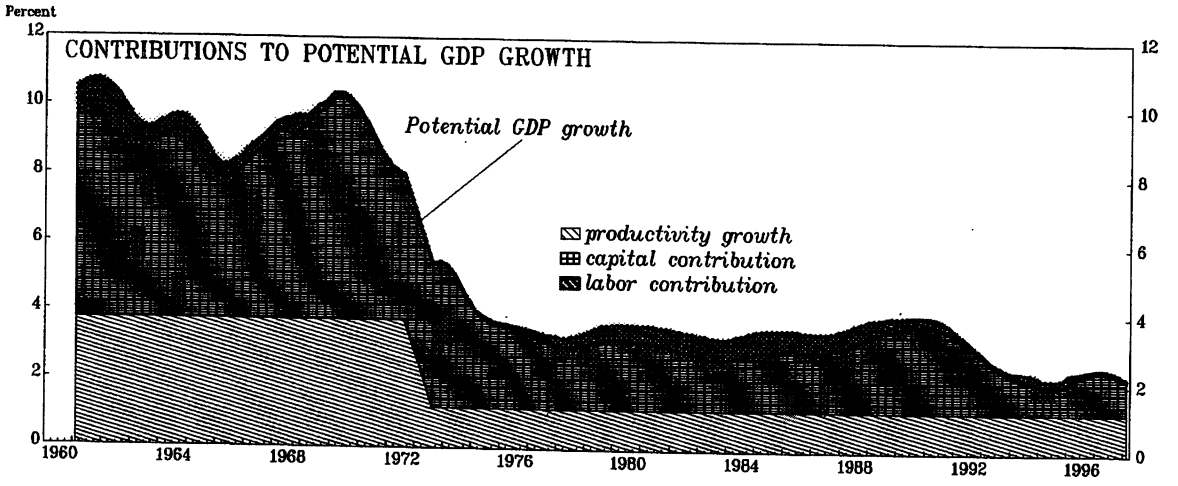
[20]As the impact of the tax hike was less easy to define, it was modeled using a simple dummy variable rather than the real interest rate.

[21]The labor input is assumed equal the product of employment and average monthly hours, compared with estimates presented in last year's report (*Japan—Economic and Policy Developments*, IMF Staff Country Report No. 97/91, October 1997, Chapter II), which were based simply on total employment. The trends for the labor inputs are based on a Hodrick-Prescott filter of the actual data, and the trend for TFP is based on a log-linear time trend, broken in 1972.

CHART I.9
JAPAN
TOTAL FACTOR PRODUCTIVITY, HOURS, AND POTENTIAL GDP







Source: Staff estimates.

to 2¾ percent during 1991–1997 (potential growth is estimated to have fallen to around 2 percent in early 1998). Thus, almost half of the decline in growth during the 1991–97 period compared to the previous decade can be ascribed to structural factors that have slowed potential growth.

Japan: GDP Growth Decomposition[1]
(In percent)

	1970–79	1980–90	1991–97	1997
Actual GDP	5.2	3.9	1.7	0.8
Employment	0.5	0.8	0.4	0.7
Hours	-0.5	-0.2	-0.7	-0.6
Capital	3.5	1.9	1.4	1.2
Factor productivity	1.6	1.4	0.6	-0.4
Potential GDP	5.6	3.6	2.7	2.4
Trend employment	0.6	0.7	0.7	0.6
Trend hours	-0.5	-0.2	-0.5	-0.5
Capital	3.5	1.9	1.4	1.2
Trend factor productivity	2.0	1.2	1.2	1.2

Source: Staff estimates.
[1]Period averages are the average of annual growth rates. Trend hours and trend employment are estimated on the basis of a Hodrick-Prescott filter, and trend TFP is assumed to be a log-linear time trend, segmented in 1972.

36. **Labor's contribution to potential growth has fallen sharply**. This decline has reflected the effects of demographic changes—the growth of the working age population fell from around 1 percent during the 1980s to minus ¼ percent in 1996, as well as an increase in the natural unemployment rate from around 2½ during the late 1980s to 3 percent by 1998, which has been partly offset by continued increases in the participation rate. A significant decline in average hours worked—owing to legislation mandating a 5-day, 40-hour work week—also reduced the growth of the labor input.

37. **A decline in the business investment rate also contributed to the slowdown in potential growth**. The rate of capital accumulation fell sharply during the 1990s owing to the decline in investment as a ratio to GDP. This, in turn, reflected the effects of balance sheet difficulties, as well as efforts by firms to unwind excess capital stocks accumulated during the bubble period. During the late 1980s, the capital stock-to-potential GDP ratio rose well above the trend that had been established over the previous decade.

38. **There is considerable uncertainty regarding the extent to which capital stock adjustments have been completed.** Measures of the capital-to-potential output ratio suggest that the capital stock adjustment has not yet been completed, since the ratio still exceeds its historical trend level (Chart I.3). However, these estimates may overstate the effective capital

stock, since large amounts of capital accumulated during the bubble period may be relatively unproductive, either because of technological change or because of excessive investment in the real estate or other sectors.[22] Also, the estimate of the trend and actual capital-to-potential output ratios are highly dependent on the underlying estimate of potential output, which itself is subject to uncertainty. By contrast, to the extent that the trend increase in the "equilibrium" capital-output ratio has slowed in recent years—including in response to the fact that Japan's capital-output ratio has broadly caught up with that of other industrial countries—then the required adjustment to the capital stock could be even greater.

39. **Underlying total factor productivity (TFP) growth may also have slowed in the 1990s.** In the estimates of potential GDP described above, TFP is assumed to have continued to grow at a 1¼ percent rate, as in the 1980s. However, the actual growth of total factor productivity—the measure of the economy's overall rate of productivity growth—fell to only ½ percent during 1991–97, well below trend. A decline in TFP growth is typical in a cyclical downturn, particularly in the context of the Japanese labor market, since firms tend to avoid layoffs in favor of cutting real wages. However, the magnitude of the decline in actual TFP suggests that its underlying trend may have slowed, in which case the output gap and potential growth may be smaller than estimated.

D. Economic Prospects in 1998

40. **Even with a pick-up in the second half of 1998, GDP is projected to decline by 1¾ percent in 1998 as a whole.** After the sharp first-quarter drop, monthly data suggest that GDP growth was again negative in the second quarter. In the second half of 1998, domestic demand is expected to receive a significant boost from the additional spending contained in the April 1998 fiscal package and the Government's commitment to frontload FY1998 spending. Nonetheless, fiscal stimulus is likely to be partially offset by underlying weakness in private sector and foreign demand.

41. **Household consumption and residential investment are expected to remain subdued, despite income tax cuts.** Factors expected to weigh on consumption include weak sentiment, and a sharp deceleration of disposable income growth related to a lack of employment growth, modest wage increases, and the continued shift toward low-wage, part-time employment. Although disposable income will be boosted by the income tax cuts

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[22]A breakdown of investment into machinery and equipment and structures is not available, but loans to the real estate and construction sectors totaled just over 15 percent of total loans to the private sector during 1986–91. A further data complication is that official estimates of the net capital stock—which is a more relevant concept for gauging the economy's productive capacity—are not available. Thus, the net capital stock series used in the estimates of potential GDP were constructed by subtracting from gross investment an ad hoc estimate of the depreciation rate, which may be significantly different from the true depreciation rate.

announced in December 1997 and April 1998, the impact may be offset in part by continued high levels of precautionary savings, particularly given expectations that tax increases would need to be unwound to achieve medium-term fiscal consolidation.

42. **Business investment is expected to decline sharply in 1998**. The June *Tankan* survey suggested that principal enterprises expect to reduce investment outlays by 1¼ percent and small enterprises reducing capital spending by 19 percent in FY1998. Lower investment plans reflect a drop in profitability, continued weak confidence in growth prospects, and a substantial inventory overhang.[23] Survey evidence suggests that the decline in spending will be especially severe in sectors that invested heavily in recent years to meet growing demands for information technology-related materials. The construction and real estate sectors are also expected to be hard hit, owing to continued high vacancy rates and the earlier drop in public investment. In addition, a reduction in business inventories is expected to have a negative impact on growth in 1998.

43. **Net exports are expected to be roughly flat during the latter half of 1998**. Export volumes to the rest of Asia would remain compressed owing to the regional crisis, although the impact on net exports is expected to be offset by weak domestic demand for imports. The current account surplus is projected to reach 3¼ percent of GDP, owing to the effect of weak commodity prices and regional export unit values on the terms of trade.

44. **The large output gap and the decline in wholesale prices is expected to put further downward pressure on prices**. The CPI is expected to increase by about ½ percent in 1998, on a year-over-year basis, but to decline by nearly ½ percent on a fourth-quarter to fourth-quarter basis. However, downside risks to the inflation outlook are suggested by the fact that inflation in Japan has tended to be relatively responsive to changes in the employment gap (i.e., the difference between the actual unemployment rate and the natural rate),[24] which is estimated to be in the range of 1 percentage point.

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[23]Among principal enterprises, manufacturers expected a 1½ percent decline in profits in FY1998 and nonmanufacturers expected a 4¼ percent decline, following drops of 6¼ percent and 8 percent in FY1997, respectively. A recent Ministry of Finance survey showed an even more pessimistic picture—nonfinancial firms expected recurring profits to decline by 11¾ percent in FY1998, following a 6½ percent decline in FY1997. Nonmanufacturers projected profit declines of 16 percent.

[24]A simple inflation equation (estimated on quarterly data over 1983–97) illustrates the effect of the cycle on inflation:

(continued...)

E. Medium-Term Prospects for the Saving-Investment Balance

45. **The yen's recent depreciation against the U.S. dollar raises questions about the consistency of the current exchange rate with medium-term fundamentals.**[25] The yen has depreciated significantly from mid-1995, and since early 1997 appears in real effective terms to be well below the trends established since the early 1970s (Chart I.10). Although exchange rate weakness would be expected in the face of a cyclical downturn, the current value of the yen, if maintained in real effective terms, would imply a substantial increase in the current account surplus over time. On the basis of the staff's trade model, an unchanged exchange rate, and current WEO projections for partner countries, the current account surplus would rise to over 4 percent of GDP in 2003, even assuming a substantial recovery of activity in Japan that largely eliminates the current output gap.[26]

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[24](...continued)

$$\Delta\pi(t) = \underset{(2.35)}{-0.1830}\,\Delta\pi(t-1) + \underset{(1.57)}{0.01}\,\Delta\mu(t) - \underset{(2.01)}{2.44}\,\Delta gap(t) + \underset{(7.04)}{4.74}\,d89 + \underset{(6.11)}{3.88}\,d97;\quad R^2 = 0.27,\ DW = 2.56$$

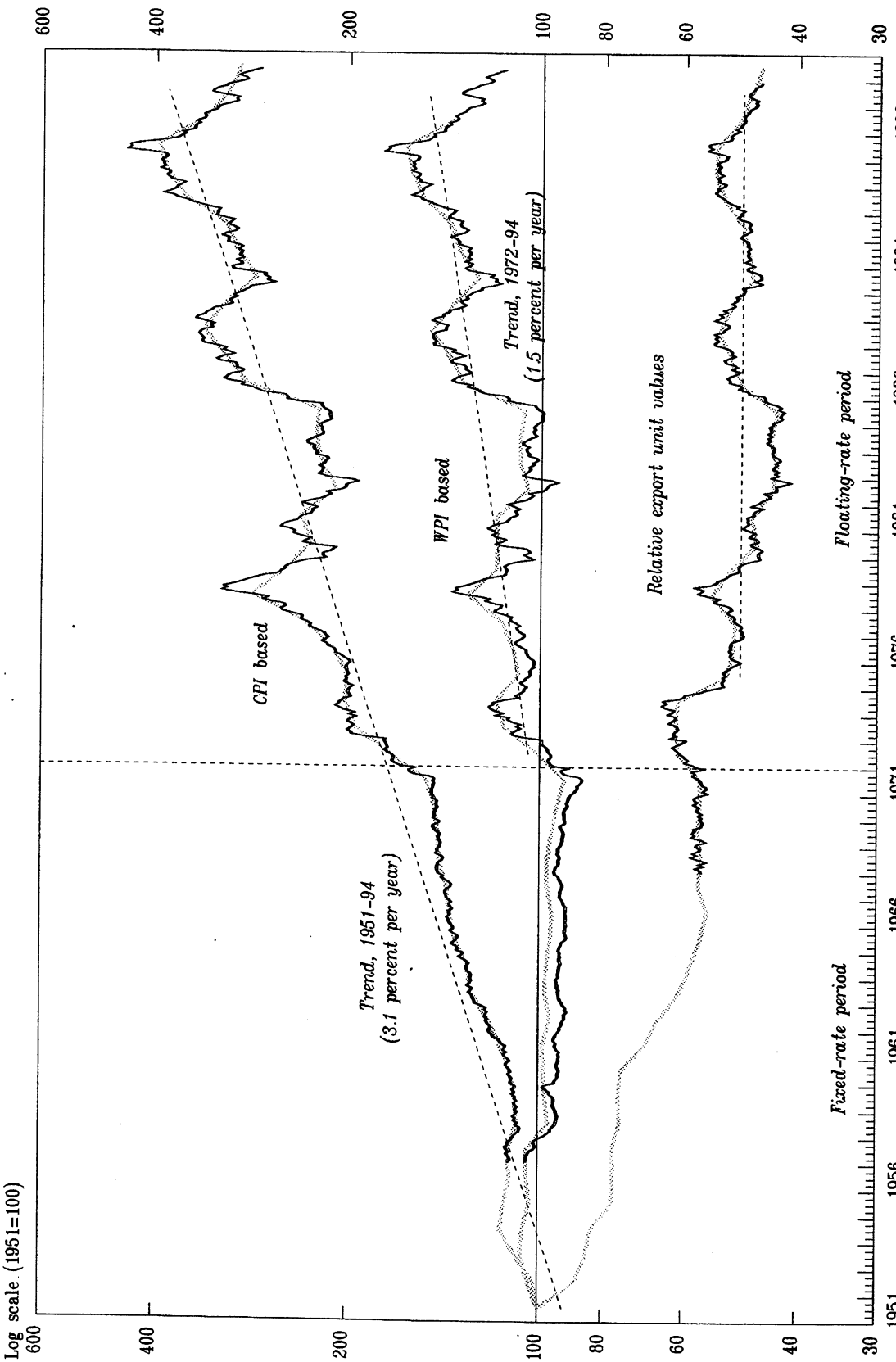
where π is core inflation (quarter-over-quarter at an annual rate), μ is percentage change in the import deflator (national accounts basis), d89 and d97 are dummy variables for the consumption tax, and gap is the difference between the unemployment rate and the natural rate (estimated using a Hodrick-Prescott filter). In this case a 1 percentage point increase in the unemployment gap would lower the inflation rate roughly 2 percentage points (after taking into account the effect of the lagged inflation rate). This result is broadly consistent with the results reported by Fumihira Nishizaki "The NAIRU in Japan: Measurement and its Implications," OECD Economics Department Working Paper No. 173 (1997).

[25]For a discussion of the Fund's approach to measuring exchange rate misalignments, see Peter Clark, Leonardo Bartolini, Tamim Bayoumi, and Steven Symansky, *Exchange Rates and Economic Fundamentals: A Framework for Analysis*, IMF Occasional Paper No. 115 (Washington DC: International Monetary Fund, 1994). The framework essentially involves comparing the saving investment balance predicted on the basis of demographics, fiscal policy and other fundamentals, with the current account balance that results from a standard trade model, assuming current levels of exchange rates and full employment.

[26]For a description of the staff's approach to modeling the current account, see Bankim Chadha, "External Adjustment in Japan: Recent Developments and the Medium-Term Outlook," in *Japan—Selected Issues*, IMF Staff Country Report No. 96/114 (October 1996), pp. 150–172. Medium-term SI prospects and the implications for the exchange rate are also discussed in more detail by Guy Meredith, "The Yen: Past Movements and Future Prospects," in Bijan B. Aghevli, Tamim Bayoumi, and Guy Meredith (eds.), *Structural Change in Japan: Macroeconomic Impact and Policy Challenges* (Washington DC: International Monetary Fund, 1998), pp. 13–50.

CHART I.10
JAPAN

ALTERNATIVE MEASURES OF THE REAL EFFECTIVE EXCHANGE RATE, 1951-98 1/



Sources: Nikkei Telecom, WEFA, and staff estimates.
1/ CPI-based rate employs an average of G-7 partner countries; WPI-based rate employs an average of G-7 partner countries for which WPIs are available: US, Germany, UK; Relative export unit values are based on G-7 partner countries.

46. **By contrast the underlying saving-investment (SI) balance is estimated to be in the range of ¼–2¼ percent of GDP (tabulation).** Demographic factors are expected to weigh heavily on the SI balance over the medium term. In particular, the dependency ratio—the ratio of nonworking age population to the working age population—is projected to rise from around 45 percent to 50 percent between 1997 and 2003, which would be expected to reduce the private saving rate by around 1–2 percentage points of GDP.[27] An increase in public saving—in line with the authorities' commitment to fiscal consolidation and the effects of a cyclical recovery—would only partially offset the impact of demographics, since higher public saving would be partly offset by lower private saving. Moreover, the private investment rate in Japan has been below trend in recent years, owing to efforts by the business sector to work off the excesses of the bubble period. If previous investment trends were to be re-established, this also would tend to raise the investment ratio and lower the SI balance.

Saving-Investment Balances
(In percent of GDP)

	Proj. 1998	Proj. 2003
Current account surplus[1]	3¼	4¼
Estimated underlying S-I balance[2]		
Single equation model	2½	2¼
Three-equation model	¾	¼

[1]Current account projections are based on a trade model, assuming an unchanged real effective exchange rate and a substantial narrowing of the output gap by 2003.

[2]The estimates of the underlying SI balance are based on the empirical work in Hamid Faruqee and Guy Debelle, "Saving-Investment Balances in Industrial Countries: An Empirical Investigation," in Peter Isard and Hamid Faruqee (eds.), *Exchange Rate Assessment: Recent Extensions and Applications of the Macroeconomic Balance Approach*, IMF Occasional Paper No. 167 (1998 forthcoming). The three-equation model comprised panel estimates of the saving rate, the investment rate, and current account as a share of GDP, using output per capita, the dependency rate, the output gap, and general government balance as a share of GDP as exogenous variables. The single equation estimates related the SI balance to the same exogenous variables, as well as the capital-output ratio and net foreign assets as a share of GDP.

47. **To close the substantial gap between the projected current account surplus and the underlying SI balance would require a significant real appreciation of the yen over the medium term.** For example, to close a 2 percentage point gap between the projected current account balance in 2003 and the underlying SI balance would require around a

[27]Although there is considerable uncertainty about the empirical evidence regarding the effect of demographics on saving behavior, many recent estimates suggest that a 1 percentage point increase in the dependency ratio tends to lower the saving rate by around 0.2–0.4 percentage points of GDP.

20–30 percent appreciation of the yen in real effective terms, based on conventional trade elasticities. Such an appreciation is somewhat larger than implied by real interest rate differentials, which imply a roughly 15 percent real appreciation over the next five years.[28] However, the implications of these results for the exchange rate, must be viewed with caution given the considerable uncertainty attached to the estimates of the current account and underlying SI balance five years hence.

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[28]This calculation is based on current differentials between 5-year government bond yields and on Consensus Forecast estimates of inflation rates for Japan and her major trading partners.

II. Fiscal Policy Issues[1]

1. **Fiscal policy in Japan is directed through three main channels**, all of which have been used in recent initiatives: the general account of the central government (which covers most central government activities); the Fiscal Investment and Loan program (the FILP, which takes money from the postal saving and social security systems and lends it to the private sector and local governments); and local governments (whose fiscal autonomy from the central government is limited).[2] After reviewing recent fiscal developments, this chapter examines the effectiveness of counter-cyclical policy in Japan in the 1990s and analyzes the medium-term sustainability of Japan's fiscal situation. These sections are followed by discussions of three areas of potential fiscal reform: transparency, the tax system, and public investment policy.

A. Recent Developments

2. **Between FY1991 and FY1996, policy was geared to providing stimulus to the economy**. A series of expansionary supplementary budgets was used to provide support for demand (Table II.1). As a result, the general government deficit (including social security) deteriorated by over 7 percent of GDP and the corresponding structural deficit expanded by about 6 percent of GDP (Chart II.1).[3]

3. **The FY1997 budget switched the fiscal stance from expansion to consolidation**. Measures included an increase in the consumption tax from 3 percent to 5 percent (raising revenues by about ¥4 trillion per year); termination of temporary individual income tax cuts (raising revenues by ¥2 trillion per year); and higher copayments for medical treatment (implemented in September 1997 and raising social security revenue by about ¥1½ trillion on a full-year basis). In addition, the phasing out of the September 1995 fiscal stimulus package contributed to a substantial fall of public investment during the latter half of 1996 and early 1997 (Chart II.2). The September 1996 increase in pension contributions (raising contributions by about ¥2 trillion on a full-year basis) also contributed to higher general government revenues in FY1997 compared to FY1996. Overall, the structural general government deficit was reduced from 3.6 percent of GDP in FY1996 to 2.4 percent of GDP in FY1997 (Table II.2).

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[1]Prepared by Tamim Bayoumi, Christopher Towe, and Ichiro Oishi.

[2]A more detailed description of Japan's fiscal accounts is provided in Tamin Bayoumi, "The Japanese Fiscal System and Fiscal Transparency," in B. Aghevli, T. Bayoumi, and G. Meredith (eds.), *Structural Change in Japan* (Washington: International Monetary Fund, 1998).

[3]Further details can be found in *Japan—Economic and Policy Developments*, IMF Staff Country Report No. 97/91 (October 1997).

Table II.1. Japan: Summary of Economic Stimulus Packages, 1993–98

(In trillions of yen, unless otherwise indicated)

Date Proposed	1993 April	1993 September	1994 February	1995 September	1998 April
Total package	13.2	6.2	15.3	14.2	16.7
(In percent of GDP)	(2.8)	(1.3)	(3.2)	(3.0)	(3.3)
Tax reductions	0.2	0.0	5.9	0.0	4.6 1/
(In percent of GDP)	(0.0)	(0.0)	(1.2)	(0.0)	(0.9)
Public investment 2/	7.6	2.0	4.5	6.5	7.7
(In percent of GDP)	(1.6)	(0.4)	(0.9)	(1.3)	(1.5)
Land purchases 3/	1.2	0.3	2.0	3.2	1.6
(In percent of GDP)	(0.3)	(0.1)	(0.4)	(0.7)	(0.3)
Increased lending by Housing Loan Corporation 4/	1.8	2.9	1.2	0.5	0.0
(In percent of GDP)	(0.4)	(0.6)	(0.3)	(0.1)	(0.0)
Increased lending by government-affiliated financial institutions	2.4	1.0	1.5	2.6 5/	2.0
(In percent of GDP)	(0.5)	(0.2)	(0.3)	(0.5)	(0.4)
Other	0.0	0.0	0.2	2.6	0.8
(In percent of GDP)	(0.0)	(0.0)	(0.0)	(0.5)	(0.2)

Sources: Data provided by the Japanese authorities; and staff estimates.

1/ Includes ¥0.3 trillion in welfare benefits.

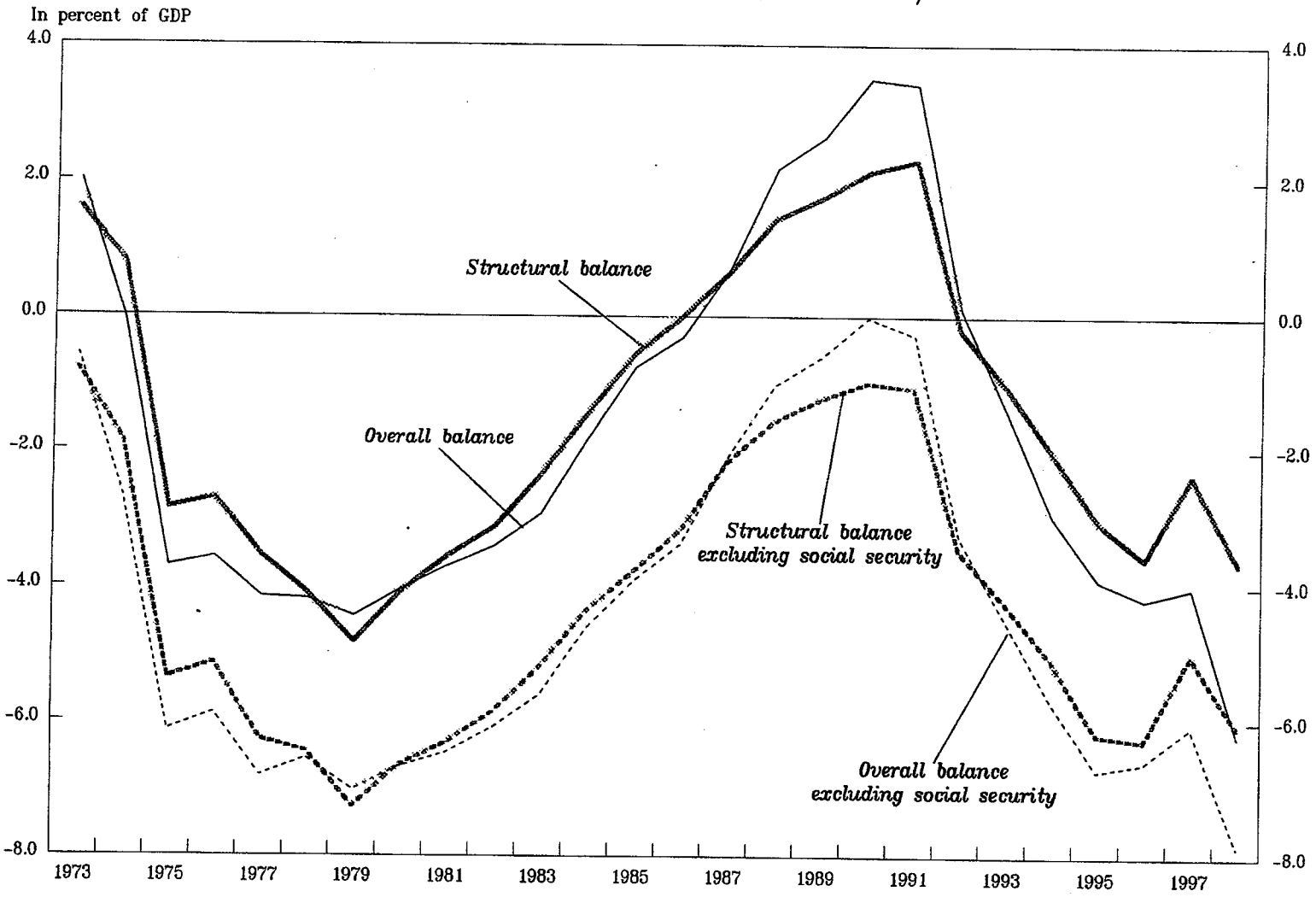
2/ Public investment comprises general public works (including land purchases), disaster reconstruction, buildings and equipment, and independent public works projects by local government.

3/ Excludes land acquisition for public works projects, which is included in public works spending.

4/ Includes loans by the Pension Welfare Service Public Corporation.

5/ Includes ¥1.3 trillion in lending by the Japan Corporation for small business.

CHART II.1
JAPAN
GENERAL GOVERNMENT BALANCE, FY1973-98 1/

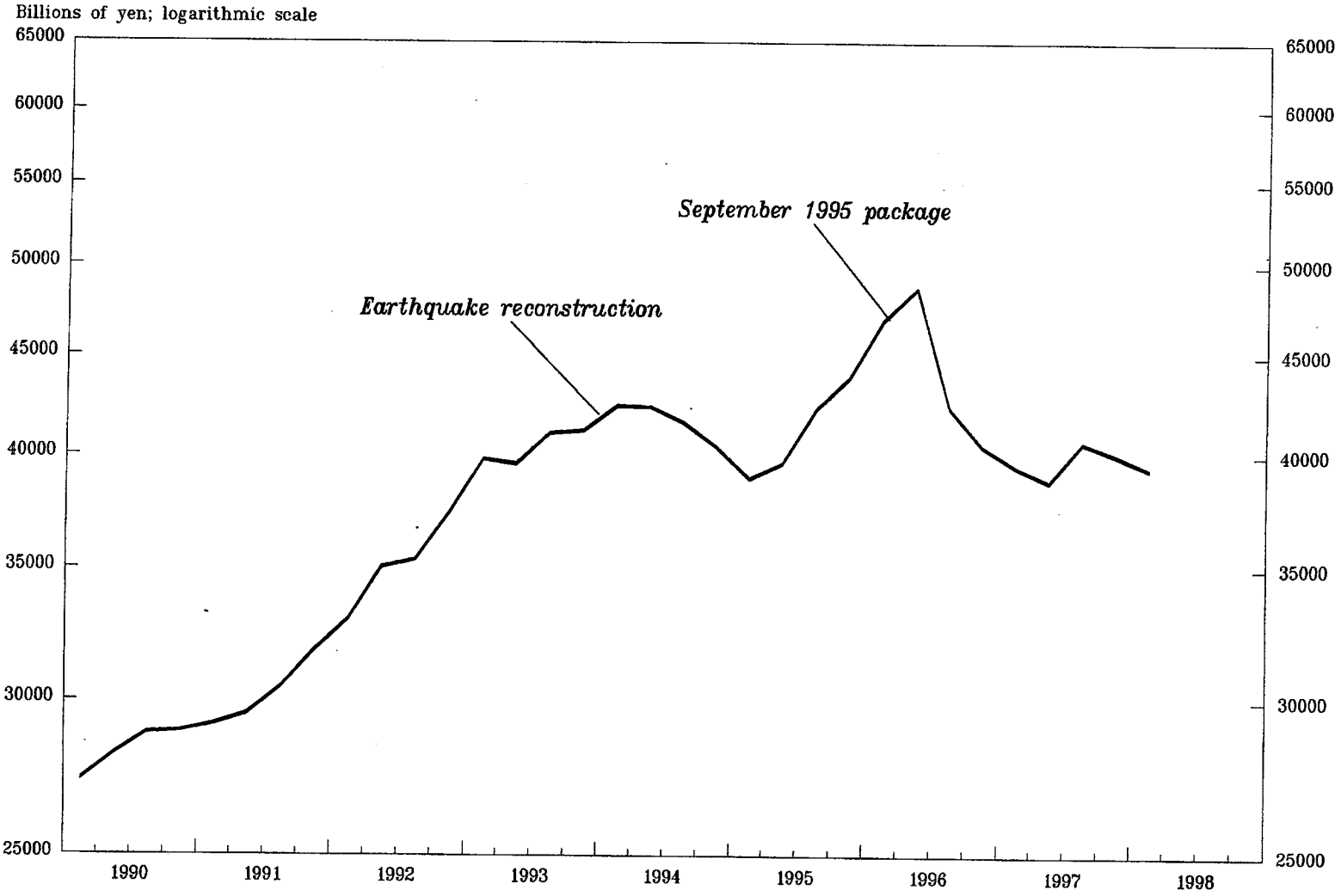


Sources: Ministry of Finance; Economic Planning Agency; and staff estimates and projections.

1/ The fiscal year is from April to March.

CHART II.2
JAPAN

PUBLIC INVESTMENT PROFILE, 1990-1998



Sources: Economic Planning Agency.

Table II.2. Japan: General Government Balances, FY1991-98 1/

	1991	1992	1993	1994	1995	1996	Est. 1997	Staff Projection 1998
	(In billions of yen, fiscal years)							
Revenues								
General government	157,696	153,182	154,702	151,593	156,166	158,181	165,324	163,377
Central government	67,498	62,236	64,020	60,839	59,883	60,655	63,394	62,648
Local government	62,169	62,283	60,955	60,104	62,045	63,372	66,794	65,909
Social security	62,839	65,111	67,001	68,752	73,527	74,882	77,569	78,790
Expenditures								
General government	141,899	152,616	161,396	165,763	175,228	179,252	185,570	194,729
Central government	68,451	72,303	77,600	78,368	80,350	80,841	80,692	85,533
Local government	62,532	67,578	68,781	69,843	74,997	76,484	80,159	82,496
Social security	45,728	49,183	52,290	55,655	59,692	62,655	67,153	70,670
Balances								
General government	15,797	567	-6,694	-14,170	-19,062	-21,071	-20,246	-31,352
(Excluding social security)	-1,315	-15,361	-21,405	-27,268	-32,897	-33,298	-30,662	-39,472
Central government	-952	-10,067	-13,580	-17,529	-20,468	-20,186	-17,297	-22,885
Local government	-362	-5,295	-7,826	-9,739	-12,429	-13,112	-13,364	-16,586
Social security	17,111	15,928	14,712	13,097	13,835	12,227	10,416	8,120
	(In percent of GDP)							
Revenues								
General government	34.1	32.5	32.5	31.7	31.9	31.4	32.8	32.5
Central government	14.6	13.2	13.4	12.7	12.2	12.0	12.6	12.4
Local government	13.4	13.2	12.8	12.5	12.7	12.6	13.2	13.1
Social security	13.6	13.8	14.1	14.4	15.0	14.9	15.4	15.7
Expenditures								
General government	30.6	32.4	33.9	34.6	35.8	35.6	36.8	38.7
Central government	14.8	15.3	16.3	16.4	16.4	16.1	16.0	17.0
Local government	13.5	14.3	14.4	14.6	15.3	15.2	15.9	16.4
Social security	9.9	10.4	11.0	11.6	12.2	12.4	13.3	14.0
Balances								
General government	3.4	0.1	-1.4	-3.0	-3.9	-4.2	-4.0	-6.2
(Excluding social security)	-0.3	-3.3	-4.5	-5.7	-6.7	-6.6	-6.1	-7.8
Central government	-0.2	-2.1	-2.8	-3.7	-4.2	-4.0	-3.4	-4.5
Local government	-0.1	-1.1	-1.6	-2.0	-2.5	-2.6	-2.6	-3.3
Social security	3.7	3.4	3.1	2.7	2.8	2.4	2.1	1.6
Structural balance 2/	2.3	-0.2	-1.1	-2.0	-3.0	-3.6	-2.4	-3.6
(Excluding social security)	-1.1	-3.5	-4.2	-5.1	-6.2	-6.3	-5.0	-6.1

Sources: Economic Planning Agency, Annual Report on National Accounts, 1996; and staff estimates and projections.

1/ The fiscal year begins on April 1.

2/ In percent of potential GDP.

4. **The government also laid down a path for medium-term fiscal consolidation in the Fiscal Structural Reform Act (FSRA), passed in November 1997.** The FSRA (i) set two medium-term fiscal targets to be achieved by FY2003—a reduction of the general government deficit (excluding social security) to under 3 percent of GDP, and an end to the issuance of deficit-financing bonds by the central government's general account;[4] (ii) placed limits on various categories of government spending between FY1998 and FY2000; and (iii) required that the issuance of deficit-financing bonds not increase from one year to the next between FY1997 and FY2003. (Further details are provided in Box II.1).

5. **In early December 1997, the government responded to weakness in the economy by announcing ¥2 trillion in income tax rebates**, provided as a fixed rebate for each tax payer and dependent.[5] The tax rebates were designed to be implemented as rapidly as possible, with ¥1 trillion in relief provided between February and April 1998 and much of the remainder within the following three months.[6] These rebates were subsequently included in the FY1997 supplementary budget. This budget also contained additional spending of about ¥1.9 trillion, mainly for disaster relief (together with plans to accelerate implementation of ¥1.5 trillion in FY1998 public works spending). Given savings in other areas of government spending in FY1997 (particularly interest payments), however, the increment to net government spending was a modest ¥0.7 trillion (or 0.1 percent of GDP).[7] The outturn for the FY1997 general account deficit will be higher than forecast in the supplementary budget, as tax revenues were about ¥1½ trillion lower than expected. The short-fall was mainly due to lower corporate tax receipts, reflecting the fall in profits from weaker-than-expected activity.[8]

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[4]Japanese government debt is divided into construction bonds (used to finance public investment) and deficit-financing bonds. Eliminating the issuance of deficit-financing bonds would bring Japan back to the "golden rule" policy (in which debt is only issued to finance investment spending) followed before the first oil shock.

[5] ¥26,000 per taxpayer and ¥13,000 per dependent.

[6]The tax rebates comprised ¥1.4 trillion in central government income tax cuts and ¥0.6 trillion in local income taxes. The timing of the rebates in 1998 varies by the type of taxpayer (worker or self-employed) and the type of tax (national or local).

[7]FILP lending to small- and medium-sized enterprises was also raised by over ¥1 trillion, to help alleviate the effects of the "credit crunch."

[8]In addition, in March 1998 the DIC injected ¥1.8 trillion in funds to the banks, out of ¥13 trillion set aside from this purpose. While this had no impact on the general account, these injections are included in the calculation of the general government deficit.

Box II.1. The Fiscal Structural Reform Act

The Fiscal Structural Reform Act (FSRA) was approved by the Diet in November 1997. Its major components were:

- **Medium-term fiscal targets.** By FY2003, the general government deficit (excluding social security) would be reduced to no more than 3 percentage points of GDP, and the issuance of deficit-financing bonds by the general account of the central government would be ended.

- **Expenditure restraint.** FY1998–2000 were defined as the "Special Reform Term." Concrete quantitative targets were set for major expenditure categories:

  - Increases in social security transfers from the central government, which would have risen by ¥800 billion without measures, would be contained at ¥300 billion for FY1998. For FY1999 and FY2000 these expenditures would increase by no more than 2 percent per year.
  - Public works spending would be cut by 7 percent in FY1998. For FY1999 and FY2000, public works spending would be no more than that in the previous year's initial budget.
  - General account ODA spending would be cut by about 10 percent in FY1998. For FY1999 and FY2000, ODA spending would be no more than that in the previous year's initial budget.
  - Defense-related expenditures during FY1998 to FY2000 would be no more than that in the previous year's initial budget.
  - General expenditure in the Local Public Finance Plan for FY1998 would be no more than that in the previous year's initial budget.
  - The ten-year ¥600 trillion government investment plan for FY1995–2004 would be extended by three years. Investment over the original ten-year term would be reduced to about ¥470 trillion.

- **Constraints on the issuance of debt.** The issuance of deficit-financing bonds would be no more than that in the previous year's initial budget during FY1998 to FY2003.

The FSRA was amended in May 1998 to make it more flexible in the face of weak economic conditions. The date by which the medium-term fiscal targets would be met was extended by two years (from FY2003 to FY2005). In addition, the government can waive the constraint on issuance of deficit-financing bonds in the face of difficult economic conditions, defined as:

- Less than 1 percent real GDP growth (annualized) in two consecutive quarters; or
- Less than 1 percent real GDP growth (annualized) in the most recent quarter with sluggish monthly indicators of private consumption, private investment, and employment; or
- A sharp economic downturn caused by unexpected internal or external economic shocks.

These provisions were applied to achieve passage of the FY1998 supplementary budget.

Although deficit financing constraints have been revised, the spending ceilings for different categories of expenditure have not been relaxed (except for social security). In particular, public works spending in the FY1999 budget remains constrained to be below that in the initial FY1998 budget. Given the large increase in public works spending in the FY1998 supplementary budget (¥2.8 trillion in additional spending compared to planned spending in the initial budget of ¥9.0 trillion), this implies a significant contraction in public works spending in FY1999.

6. **The FY1998 initial general account budget, announced at the same time as the FY1997 supplementary budget, was contractionary (Table II.3).** The general account deficit was to be reduced to ¥15.6 trillion, about ¥3.5 trillion (0.8 percent of GDP) lower than the revised deficit for FY1997.[9] The reduction largely reflected expenditure cuts mandated by the FSRA, with overall expenditures projected to decline from 15.5 percent of GDP in the revised FY 1997 budget to 14.9 percent of GDP.[10] Expenditure measures included:

- *A 7.8 percent reduction in planned public works spending.*
- *A 10.4 percent reduction in ODA expenditures* to ¥1.0 trillion (0.2 percent of GDP).[11]
- *A 2 percent increase in transfers to social security* (compared to an "unchanged policy" projection of around 5 percent), implemented through cuts in drug costs and restraints on reimbursement of doctors.

7. **The FY 1998 initial budget also contained tax measures that implied a net tax cut of ¥0.8 trillion (excluding income tax cuts) (Table II.4).** Details included:

- *A reduction in the national corporate tax rate of 3 percentage points*, to 34½ percent, with partially offsetting base-broadening measures (including reduced tax allowances for bonus payments, retirement payments, and tax-free reserves against loans) to be phased in over several years.
- *Halving the securities transaction tax and taxes on derivatives trading,* with a view to abolishing these taxes in FY1999 in conjunction with reform in capital gains taxes.
- *The suspension of the landholding tax*, a reduction in the capital gains tax on land transactions, and the suspension of double taxation of capital gains on corporate land deals.
- *An increase in deductions from individual income tax for educational expenses.*

8. **The FY1998 FILP budget and local finance plan were also contractionary**. FILP general spending (i.e., excluding portfolio investment) was budgeted to fall by 6.8 percent in FY1998 from the initial FY1997 level, the second consecutive year of decline (Table II.5). However, funds for public financial institutions that lend to small- and medium-sized enterprises (SMEs) were increased to help alleviate the impact of constraints on private bank

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[9]The FY1998 initial budget also included plans for the government to take responsibility for ¥26 trillion (5 percent of GDP) in debts of the Japan National Railway Settlement Corporation (JNRSC) and the Japan Forestry Service, raising government debt by an equivalent amount.

[10]Discretionary expenditures (total spending excluding national debt payments and local allocation tax grants) were projected to fall even more than overall expenditures.

[11]This refers only to ODA expenditures that pass through the general account.

Table II.3. Japan: Central Government General Account Budget, FY1994–98

(In billions of yen, fiscal years)

	1994 Settlement	1995 Settlement	1996 Initial	1996 Revised	1996 Settlement	1997 Initial	1997 Revised	1998 Initial	1998 Revised
Expenditures	73,614	75,939	75,105	77,771	78,848	77,390	78,533	77,669	82,315
Social security	13,603	14,543	14,288	15,000	15,032	14,550	15,460	14,843	15,295
Public works	13,208	12,795	9,618	11,218	12,340	9,745	10,525	8,985	11,833
Defense	4,638	4,720	4,846	4,849	4,815	4,948	4,954	4,940	4,947
Official aid	1,108	1,148	1,074	1,079	1,191	1,091	1,096	980	1,004
Foodstuff control	261	269	271	310	308	269	308	269	269
Transfer to the special account for industrial investment, etc.	163	1,241	172	172	161	172	172	160	160
National debt service 1/	13,422	12,820	16,375	16,084	16,084	16,802	16,268	17,263	17,319
Of which:									
Interest payments	(10,706)	(10,708)	(11,703)	(11,098)	(10,725)	(11,682)	(10,918)	(11,589)	(...)
Transfer of local allocation tax to local government	12,069	12,302	13,604	13,945	13,945	15,481	15,481	15,870	15,870
Revenues	57,220	56,585	54,057	54,480	55,442	60,665	59,464	62,111	60,639
Taxes and stamp duties	51,030	51,931	51,345	51,736	52,060	57,802	56,226	58,522	57,049
Miscellaneous	6,190	4,654	2,712	2,744	3,382	2,863	3,238	3,589	3,589
Deficit	16,393	19,354	21,048	23,291	23,409	16,725	19,069	15,558	21,676
Financing	16,393	19,354	21,048	23,291	23,406	16,725	19,069	15,558	21,676
Bond issues	16,490	21,247	21,029	22,368	21,748	16,707	18,458	15,557	21,675
Deficit-financing bonds	4,144	4,807	11,998	11,661	11,041	7,470	8,518	7,130	9,140
Construction bonds	12,346	16,440	9,031	10,707	10,707	9,237	9,940	8,427	12,535
Others									
Carried over surplus	-97	-1,894	19	924	1,658	18	611	1	1
Carry in	2,629	2,725	19	924	4,619	18	611	1	1
Carry out	-2,725	-4,619	0	0	-2,961	0	0	0	0
Memorandum items:									
In percent of GDP									
Expenditures	15.4	15.5	15.0	15.5	15.7	15.0	15.5	14.9	15.8
Revenues	11.9	11.6	10.8	10.9	11.0	11.8	11.8	12.0	11.7
Deficit	3.4	4.0	4.2	4.6	4.7	3.2	3.8	3.0	4.2
Bond financing	3.4	4.3	4.2	4.5	4.3	3.2	3.6	3.0	4.2
Deficit financing bonds	0.9	1.0	2.4	2.3	2.2	1.4	1.7	1.4	1.8
Public works	2.8	2.6	1.9	2.2	2.5	1.9	2.0	1.7	2.4

Source: Data provided by the Japanese authorities.

1/ Includes repayments of principal and running costs.

Table II.4. Japan: Tax Receipts of the Central Government General Account, FY1994–98

	1994 Settlement	1995 Settlement	1996 Initial	1996 Revised	1996 Settlement	1997 Initial	1997 Revised	1998 Initial	1998 Revised
				(In billions of yen, fiscal years)					
Individual income tax	20,418	19,515	19,338	18,995	18,965	20,882	19,530	20,555	19,149
Corporate income tax	12,363	13,735	13,548	13,986	14,483	14,432	14,758	15,274	15,207
Taxes on goods and services	11,218	11,372	11,611	11,711	11,750	15,522	15,378	16,514	16,514
Of which									
Consumption tax	(5,632)	(5,790)	(5,948)	(6,048)	(6,057)	(9,813)	(9,669)	(10,818)	(10,818)
Liquor tax	(2,113)	(2,061)	(2,111)	(2,111)	(2,071)	(2,063)	(2,063)	(2,058)	(2,058)
Gasoline tax	(1,813)	(1,865)	(1,875)	(1,875)	(1,915)	(1,956)	(1,956)	(1,996)	(1,996)
Tobacco tax	(1,040)	(1,042)	(1,040)	(1,040)	(1,080)	(1,062)	(1,062)	(1,020)	(1,020)
Custom duties	908	950	968	968	1,024	1,093	956	947	947
Stamp revenue	1,752	1,941	1,925	2,121	1,969	2,019	1,816	1,824	1,824
Other	4,371	4,418	3,955	3,955	3,869	3,854	3,788	3,408	3,408
Total tax and stamp revenue	51,030	51,391	51,345	51,736	52,060	57,802	56,226	58,522	57,049
				(Percentage change) 1/					
Individual income tax	-13.8	-4.4	-0.9	-2.7	-2.8	10.1	3.0	5.2	-2.0
Corporate income tax	1.9	11.1	-1.4	1.8	5.4	0.4	1.9	3.5	3.0
Taxes on goods and service	4.1	1.4	7.9	3.0	3.3	32.1	30.9	7.4	7.4
Total tax and stamp revenue	-5.7	1.8	-1.1	-0.4	0.2	11.0	8.0	4.1	1.5

Source: Data provided by the Japanese authorities and staff calculations.

1/ Percentage changes calculated relative to most recent data of previous year.

Table II.5. Japan: Fiscal Investment and Loan Program (FILP), FY1994–98

(In billions of yen, fiscal years)

	1994	1995	1996			1997		1998	
	Actual		Initial	Revised	Actual	Initial	Revised	Initial	Revised 1/
Sources of funds	50,324	45,039	53,725	54,092	50,877	56,157	57,735	57,759	64,366
Trust Fund Bureau	39,172	34,505	41,910	42,400	39,706	45,551	47,129	48,096	54,575
Postal savings	(13,760)	(16,393)	(10,000)	(...)	(11,522)	(11,700)	(...)	(11,400)	(...)
Welfare and national pensions	(6,921)	(7,730)	(6,920)	(...)	(7,319)	(7,300)	(...)	(6,000)	(...)
Repayment and other	(18,492)	(10,383)	(24,990)	(...)	(20,865)	(26,551)	(...)	(30,696)	(...)
Industrial investment special account	83	77	65	65	58	64	64	64	90
Postal life insurance fund	8,457	7,228	8,650	8,477	8,133	7,542	7,542	7,100	7,100
Government-guaranteed bonds and borrowing	2,612	3,229	3,100	3,150	2,981	3,000	3,000	2,500	2,601
Uses of funds 2/	50,324	45,039	53,725	54,092	50,877	56,157	57,735	57,759	64,366
Purchase of government bonds	0.0	2,851	4,600	4,976	4,976	4,800	4,800	7,800	7,800
FILP	50,324	42,189	49,125	49,116	45,901	51,357	52,935	49,959	56,566
Portfolio investments 3/	(8,450)	(7,950)	(8,591)	(8,591)	(8,591)	(12,030)	(12,030)	(13,300)	(17,300)
General FILP	41,874	34,239	40,534	40,524	37,310	39,327	40,905	36,659	39,266
Central government projects (special accounts)	(866)	(930)	(807)	(856)	(828)	(755)	(778)	(585)	(640)
Government nonfinancial enterprises	(10,573)	(8,679)	(9,374)	(9,379)	(8,374)	(8,754)	(8,754)	(7,248)	(7,427)
Government financial agencies	(23,048)	(14,628)	(21,273)	(20,760)	(18,878)	(20,888)	(22,442)	(20,927)	(21,949)
Of which Housing Finance Corporation	(12,141)	(4,970)	(10,910)	(10,910)	(10,121)	(10,647)	(10,647)	(9,918)	(9,918)
Local governments	(6,996)	(9,629)	(8,730)	(9,180)	(8,891)	(8,600)	(8,600)	(7,600)	(8,950)
Other	(391)	(373)	(350)	(350)	(339)	(331)	(331)	(299)	(299)
Memorandum items:									
Increase in General FILP (In percent) 4/	-3.3	-18.2	0.7	-8.3 5/	9.0	-3.0	0.9 5/	-6.8	-4.0 5/
General FILP as a percent of GDP 4/	8.7	7.0	8.1	8.1	7.4	7.7	8.1	7.1	7.6

Source: Ministry of Finance.

1/ As of June 1998

2/ Difference between "sources of funds" and "uses of funds" reflects short-term off-program investments of the Trust Fund Bureau.

3/ 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.

4/ Excludes portfolio investment.

5/ Compared with revised plan of the previous year.

lending (discussed further in Chapter III). The local finance plan for FY1998 projected zero growth in total government expenditures. Discretionary expenditures (i.e., excluding debt payments) were budgeted to decline by 1.6 percent, with local public works being projected to decline by 6 percent, similar to the reduction in the central government's general account public works spending mandated in the FSRA.

9. **Together with the FY1997 budget, these plans represented a considerable down-payment on medium-term fiscal consolidation**. Overall, the general government deficit (excluding social security) was projected to decline by 1.2 percentage points of GDP. The fall in the general government deficit (excluding social security) by 2 percentage points of GDP from FY1996 to FY1998 would have cut in half the distance from the FY2003 deficit target in just two years.

10. **However, planned fiscal consolidation efforts were overtaken by events**. As activity continued to weaken in early 1998, the government came under increasing pressure to stimulate activity through fiscal measures. In April 1998, immediately after the passage of the FY1998 initial budget, a ¥16.7 trillion stimulus package (the largest ever such package, see Table II.1) was announced, including ¥12 trillion (2½ percent of GDP) in "real water" measures directly affecting economic activity. The extra spending included:

- *¥7.7 trillion in additional public works spending*, comprising ¥6 trillion in additional public investment jointly financed by the central government and local governments,[12] ¥0.2 trillion in disaster relief, and ¥1.5 trillion in public works autonomously financed by local governments.
- *¥4.3 trillion in tax cuts*, comprising ¥2 trillion in income tax cuts in 1998, a further ¥2 trillion in 1999, and ¥0.3 trillion in other FY1998 tax relief aimed at stimulating investment through various tax deductions.[13]
- *¥4.7 trillion in additional measures* (not included in the "real water"), including ¥2.3 trillion in spending to support the real estate market (largely earmarked for land acquisition) and ¥2 trillion in additional lending to small- and medium-sized enterprises (SMEs) through the FILP.

11. **The central government portion of the stimulus package was contained in a supplementary budget approved by the Diet in June 1998 (see Table II.3)**. The budget

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[12]¥1.5 trillion for the environment and energy, ¥1 trillion for telecommunications, science and technology and another ¥1 trillion for social welfare, medical care and education, and ¥0.8 trillion each for transportation, disaster prevention, and redevelopment of urban districts.

[13]The 1998 tax cuts will be administered in a very similar manner to the earlier ¥2 trillion in tax rebates—each taxpayer and dependent will have their tax allowance increased by ¥29,000 and ¥14,500, respectively. The nature of the 1999 tax cuts has yet to be determined.

included ¥3.6 trillion (¾ percent of GDP) in additional social capital spending (the central government's share of the additional public works spending, implying that local governments are responsible for the remaining ¥4.1 trillion), ¥1.4 trillion (¼ percent of GDP) in income tax rebates (the central government's portion of the additional ¥2 trillion in tax cuts in 1998), as well as ¥0.6 trillion in additional official aid, mainly for the countries affected by the Asia crisis. Before the supplementary budget could be approved, however, the FSRA had to be amended to allow the limit on deficit-financing bonds to be waived (this was accomplished in May, see Box II.1). The FILP budget was also amended, to authorize additional general spending of ¥2.6 trillion (½ percent of GDP).

12. **The Government forecasts that these measures will increase the FY1998 general government deficit (excluding social security) by 2 percent of GDP** (from 4.7 percentage points of GDP to 6.7 percentage points). The staff's projections, based on real growth of 0.5 percent (compared to the official forecast of 1.9 percent) and including the costs of increased government land acquisition and possible future DIC injections to the banks, is for a deficit of 7.8 percent of GDP (Table II.2). As a result, the structural deficit (excluding social security) is projected to increase from 5.0 percent of potential GDP in FY1997 to 6.1 percent of potential GDP in FY1998.

13. **Despite increases in contributions, the social security surplus is expected to decline in FY1998 (Chart II.3).** Even with a weak economy, the staff projects that social security contributions will increase by 3.3 percent in FY1998, owing to the increase in pension contribution rates in September 1996 (the contribution rate for the EPI, the earnings-related part of the public pension system for private sector employees, was raised from 16.5 to 17.35 percent of eligible income) and higher health charges implemented in September 1997 (when co-payments for many beneficiaries were raised from 10 to 20 percent and charges for prescriptions were also increased).[14] However, expenditures are estimated to rise even more rapidly, largely reflecting the aging population. As a result, the social security surplus is projected to fall from 2.1 percent of GDP in FY1997 to 1.6 percent of GDP in FY1998, most of which reflects the impact of weak growth on revenues.

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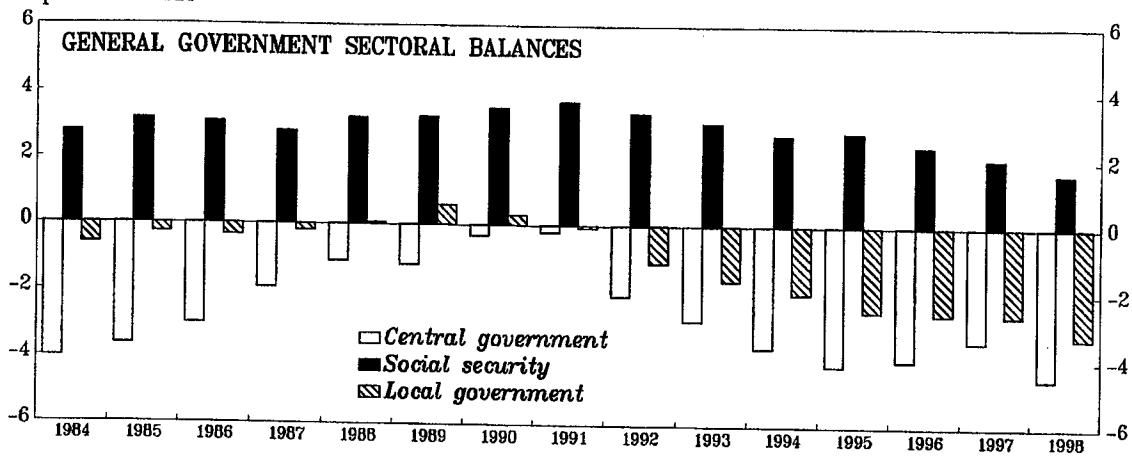
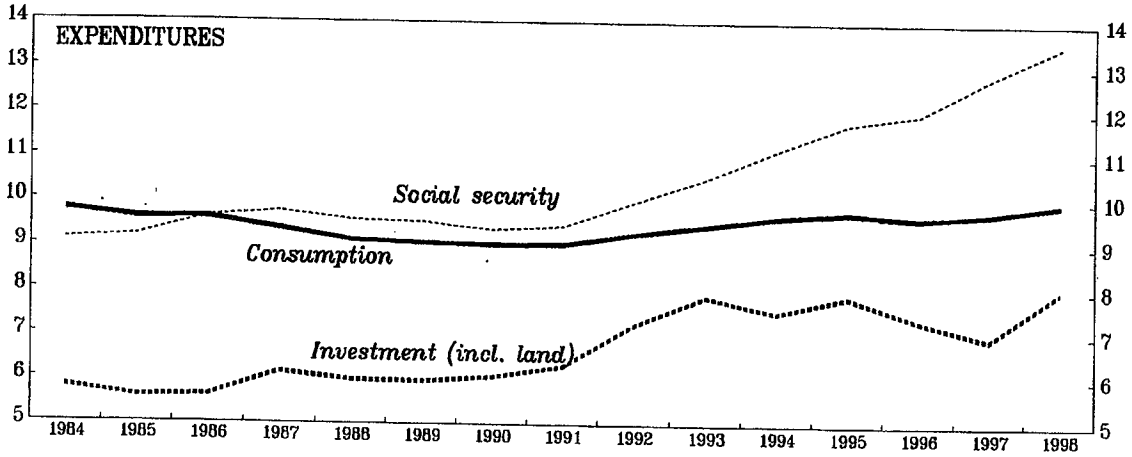
[14]More details can be found in *Japan—Economic and Policy Developments*, IMF Staff Country Report No. 97/91. The reduction in demand for health services stemming from this increase in charges has been larger than anticipated. Health care costs, which rose by 4.5 percent in FY1995 and 6.0 percent in FY1996, were projected to have risen by only 2.0 percent in FY1997 (compared to an estimated increase of 4.7 percent if no reforms had occurred). The Ministry of Health and Welfare is also committed to proposing significant further health reforms by FY2000, although no legislation has been proposed. Proposals will likely include reforms to drug pricing (to eliminate the premium between the prices paid by the health insurance system and those charged to patients), increasing medical charges for the aged, and reforming the nursing care system.

CHART II.3
JAPAN
GENERAL GOVERNMENT FISCAL INDICATORS
FY 1984-98 1/

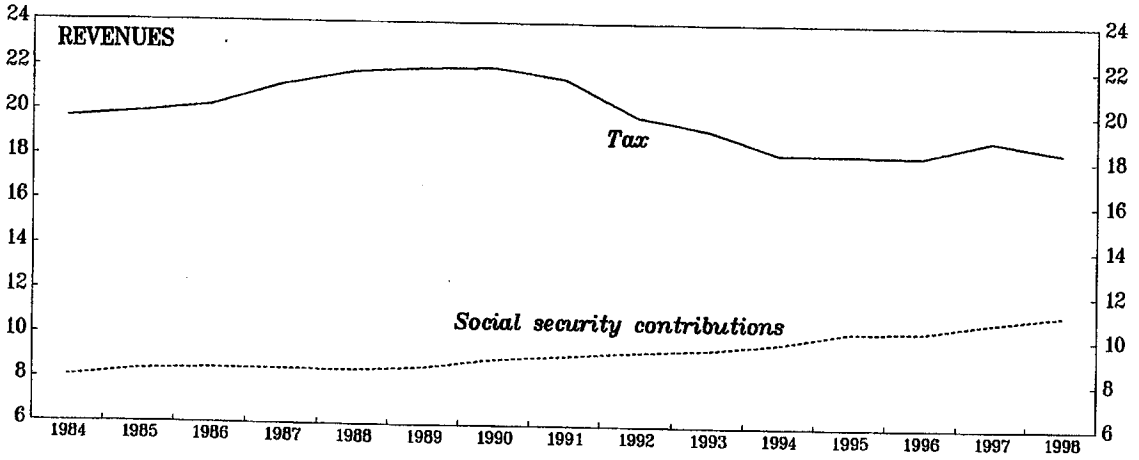
In percent of GDP



In percent of GDP



In percent of GDP



Sources: Economic Planning Agency, Annual Report on National Accounts; and staff estimates.

1/ Figures for FY 1997 and FY 1998 are staff estimates.

B. How Effective is Counter-Cyclical Fiscal Policy?

14. **Despite vigorous counter-cyclical fiscal policies in the 1990s, demand has continued to be weak**, raising questions about the effectiveness of fiscal policy in providing support for activity. In contrast, consolidation in FY1997 led to a larger and longer downturn in private demand than expected. Why did fiscal policy have such seemingly different impacts at different times in the 1990s? How does Japan's experience compare with those of other major industrial countries? And, what is the expected impact of the recent stimulus package on activity?

15. **While Japan's structural deficit deteriorated significantly in the 1990s, other major industrial countries generally consolidated**, with particularly large improvements in the structural balances of Italy, Canada, and Germany (tabulation below and Chart II.4).[15] This consolidation was accompanied by a slowdown in growth in most countries (with the important exception of the United States). However, the relative growth performance across countries is not obviously connected with changes in the fiscal balance. For example, the slowdown in growth was very similar across the three continental European economies, although the fiscal consolidation in France has been much smaller than Germany or, in particular, Italy, while the largest slowdown in growth was in Japan, which also had the greatest fiscal expansion.

Change in Structural Fiscal Balance and Growth, 1991–96

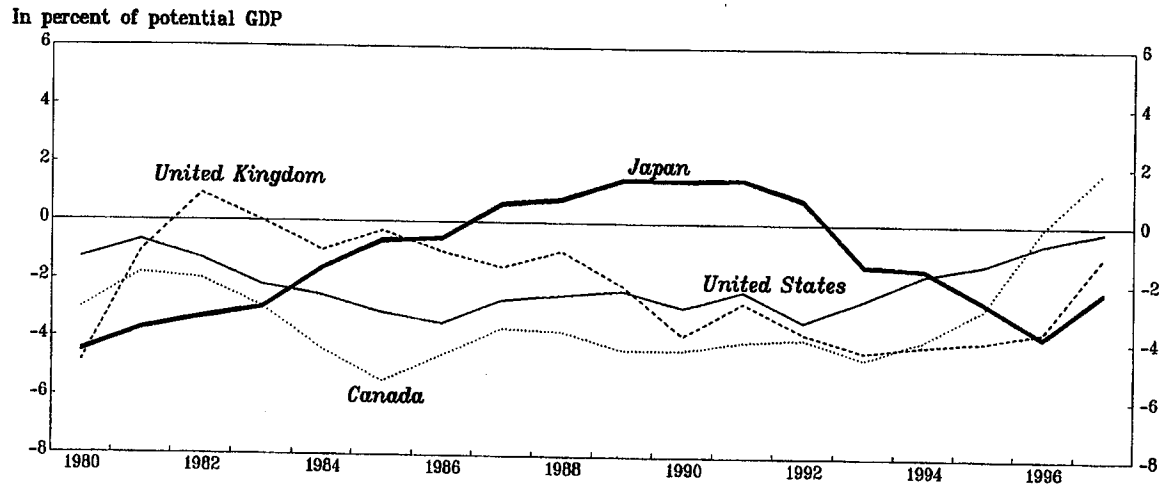
	Change in structural balance 1991–96 (In percent of GDP)	Average growth: 1991–96 vs. 1986–91 (In percent)
Japan	-5.3	-2.6
United States	1.7	0.4
Germany	3.9	-1.5
France	0.4	-1.4
Italy	5.7	-1.4
United Kingdom	-1.0	-0.3
Canada	4.0	-0.2
North America	1.9	0.3
Western Europe	2.3	-1.2

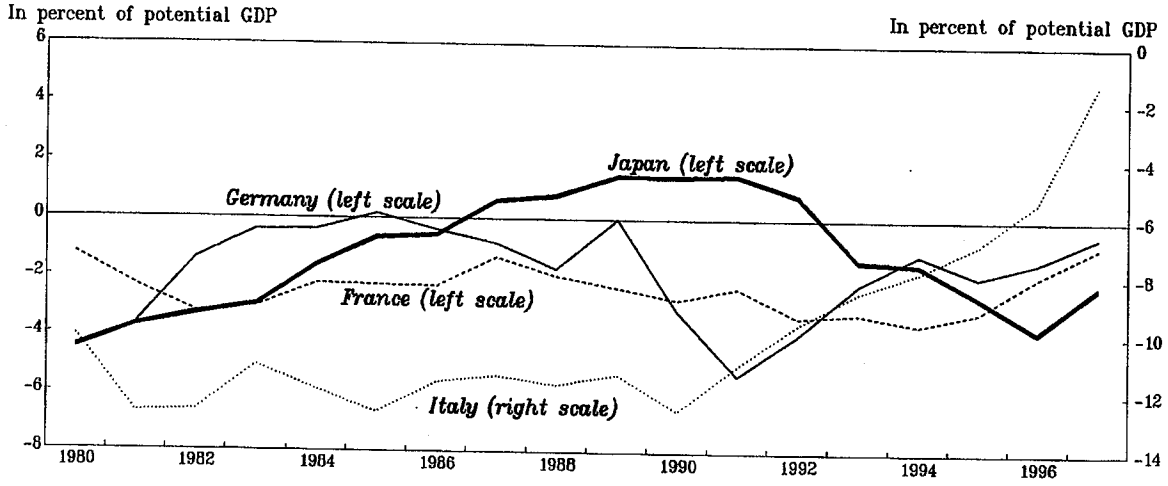
Source: WEO database.

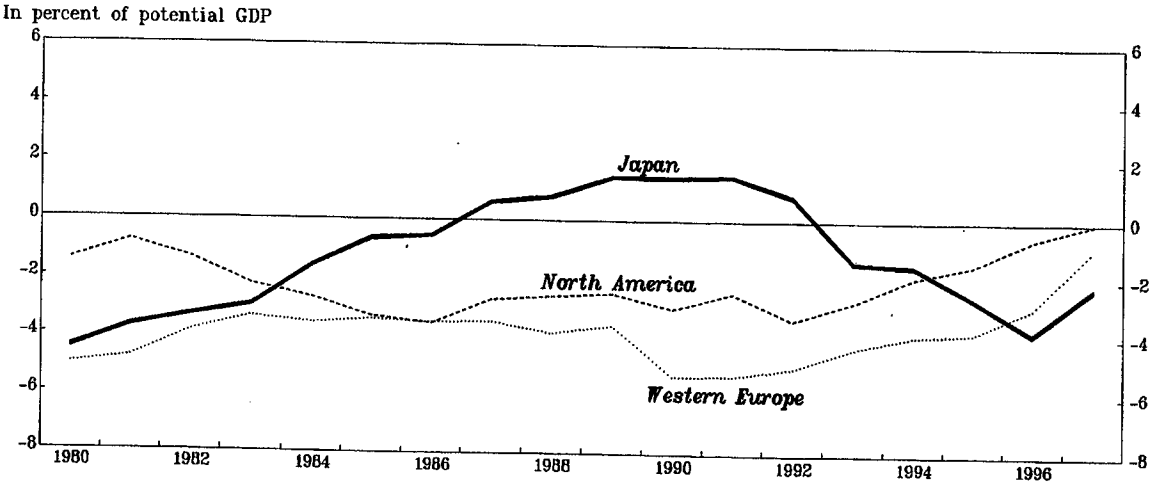
Notes: North America is a PPP-weighted GDP average of the United States and Canada, Western Europe is a PPP-weighted GDP average of Germany, France, Italy and the United Kingdom.

[15]By contrast, Japan's structural balance improved steadily in the 1980s while those in other countries remained relatively stable or deteriorated.

CHART II.4
JAPAN
STRUCTURAL BALANCES







Sources: IMF, World Economic Outlook and staff estimates. The values for western Europe and North America are calculated using PPP weights.

16. **The apparently loose connection between fiscal policy and growth performance does not necessarily mean that fiscal policy provides no boost to output.** The relationship is complicated because the causation can go the other way, with poor performance leading to a looser fiscal stance. This is certainly true in Japan, where most of the deterioration in the structural deficit reflected deliberate counter-cyclical policies announced in supplementary budgets. In addition, fiscal policy has only a temporary impact on aggregate demand, as the benefits (costs) of stimulus (consolidation) erode quite rapidly over time. Hence, there is unlikely to be a close relationship between medium-term changes in fiscal policy and growth.

17. **There are two main approaches to estimating the size of fiscal multipliers—simulations using macroeconomic models and direct econometric estimation.** Macroeconomic models have the advantage that the transmission channels are well defined, and that simulations can take account of particular circumstances.[16] The staff's multipliers have been based on simulations of changes in fiscal policy from a version of the Fund's MULTIMOD model. The "rules of thumb" derived from these simulations are that structural changes in direct expenditures have a multiplier of 1–1.2, while structural changes in transfers less taxes have a multiplier of around one-half.[17] These fiscal multipliers have been used by the staff to assess the impact of specific initiatives and are also incorporated into a more general assessment of the state of the economy through their role in the financial conditions index (FCI), which measures the net impact on aggregate demand of changes in fiscal policy, short-term real interest rates, the real exchange rate, and real stock prices.

18. **Direct econometric estimates of fiscal multipliers generally yield smaller values.** Studies of Japanese responses have found it particularly difficult to identify significant

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[16]For example, *Japan—Economic and Policy Developments*, IMF Staff Country Report 97/91 (October 1997) included a discussion of the impact of the credibility of future fiscal actions on fiscal multipliers. On the other hand, simulations rely on a given model structure, which may not always capture all of the mechanisms at work in the economy.

[17]For more details on the simulations, see G. Lipworth and G. Meredith, "Indicators of Monetary and Financial Conditions: A Reexamination" in *Japan—Selected Issues*, IMF Staff Country Report No. 96/114 (October 1996), reprinted in B. Aghevli, T. Bayoumi and G. Meredith (eds.) *Structural Change in Japan: Macroeconomic Impact and Policy Challenges* (Washington: International Monetary Fund, 1998). Other models produce similar results. For example, the Economic Planning Agency model has a multiplier of around 1¼ on government spending (K. Kawasaki, "Development of the ERI Compact Model," Discussion papers No. 64, (Tokyo: Economic Planning Agency, April 1996) and the OECD INTERLINK model has a short-term multiplier of 1.2 for government spending and 0.8 for taxes (*OECD Economic Surveys—Japan 1996*, Paris: Organization for Economic Cooperation and Development, 1996).

effects of taxes and transfers on output.[18] A possible limitation is that these studies typically do not consider the effects of asset prices, despite the fact that the bursting of the asset price bubble in the early 1990s was a major cause of the subsequent slowdown in activity. To investigate the role of asset prices further, an empirical counterpart to the staff's FCI index including fiscal policy variables, monetary variables, and asset prices (including real land prices in order to measure the negative impulses to the economy from the declining price of land) was estimated on quarterly data over 1980–96.

Output Gap Regression

The regression results were:

$$LGAP = 0.92*LGAP_{-1} - 0.21*\Delta RINT_{-1} - 0.02*\Delta LREX_{-1} + 0.57*\Delta GDIR$$
$$(24.7) \qquad (2.0) \qquad (1.6) \qquad (2.4)$$
$$- 0.07*\Delta TAX - 0.01*\Delta RLSTK_{-1} + 0.07*\Delta RLAND_{-1}$$
$$(1.3) \qquad (0.9) \qquad (3.7)$$

$R^2 = 0.93$, Durbin's H statistic = -1.5,

where LGAP is the log of the output gap, RINT is the real short-term interest rate, LREX is the log of the real exchange rate, GDIR is structural government spending on goods and services as a ratio to potential GDP, TAX is the structural value of government revenues net of other government spending, RLSTK is the log of real stock prices, and RLAND is the log of real land prices.

19. **The results from this equation are broadly consistent with the effects assumed in the staff's FCI index**, although the implied lags are somewhat longer than might have been anticipated and the coefficient on real stock prices is small, incorrectly signed, and insignificant.[19] In terms of fiscal policy, the coefficient on direct government spending is found to have a large and significant impact on output, consistent with the predictions of macroeconomic models. The coefficient on taxes net of transfers, however, while being correctly signed, is not significant at conventional levels, and the implied multiplier is

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[18]See, for example, M. Matsuoka, "Measuring the Effects of Fiscal Policy on Japan," mimeo, Daiwa Institute (November 1996) and J. Saito, "The Japanese Business Cycle After 1991," *Journal of Asian Economics*, Vol. 8:2, pp. 263–93 (1997). Both papers, which use vector autoregressions to identify the impact of fiscal policy on the economy, conclude that the multipliers are quite small.

[19]By contrast, the coefficient on real land prices, which is not included in the FCI, is highly significant, indicating that much of the deflation associated with the bursting of the asset bubble may have come through the effect of land prices on wealth and the banking system.

significantly smaller than that derived by the staff from macroeconomic simulations, although broadly similar to the VAR results discussed earlier.[20]

20. **The effectiveness of fiscal policy varies with circumstances**. Some of the most important are:

- *The composition of fiscal policy*. Direct spending on goods and services (government consumption and investment) will generally have a larger short-term impact on aggregate demand than taxes or transfers because all of the money allocated to goods and services is spent, while changes in income from taxes and transfers will be partly offset by saving.[21] In Japan, direct spending rose significantly during the fiscal expansion of FY1992–FY1993, fell significantly in FY1997, and is planned to rise again in FY1998 (see tabulation below). By contrast, annual direct government spending remained relatively stable during FY1994–FY1996.[22]

Composition of Changes in Fiscal Policy
(In percent of GDP)

	FY1992–93	FY1994–96	FY1997	FY1998
Change in:				
Structural deficit	3.4	2.7	-1.2	1.2
Of which:				
Direct spending	1.1	-0.1	-0.8	0.8
Minus taxes	2.2	1.1	-0.7	0.5
Net social security spending	0.2	0.5	0.0	0.0
Other transfers 1/	-0.1	1.1	0.3	-0.1

Source: Economic Planning Agency and staff calculations.
1/ Mainly net interest revenues and land acquisition.

- *The monetary response*. A supportive monetary policy will tend to increase the impact of fiscal policy on demand. Japanese interest rates were steadily lowered over

[20]The staff equation was also estimated as a VAR, which produced similar overall results.

[21]The marginal propensity to consume may also vary depending on the instrument being used, with changes in top tax rates and interest payments likely to have a smaller impact on private sector activity than equivalent changes in welfare benefits.

[22]More generally, the high quarter-to-quarter volatility of government investment (Chart II.2), as well as uncertainties created by a lack of fiscal transparency, may well have impaired private sector activity.

the first half of the 1990s, although the support for counter-cyclical fiscal policy was dampened by falling inflation (which raised real interest rates) and the appreciation of the yen in 1994 and early 1995. The subsequent depreciation of the currency, together with the demand shifting caused by the consumption tax hike of April 1997, helps to explain the high level of growth in 1996 and early 1997. Consolidation in FY1997 occurred against a background of unchanged (although very low) short-term interest rates, so that monetary policy provided no additional assistance for the economy.

- *The time path of policies*. Theory generally suggests that temporary and permanent policies could have different effects on private sector activity, and that compared to a temporary tax reduction, the anticipated increases in income in future years from a permanent tax cut could generate a larger boost in the consumption of forward looking consumers.[23] (This issue is discussed further below, using simulations from the IMF's macroeconomic model MULTIMOD.) The income tax cuts announced in early 1994 were temporary, as were those announced in late 1997 and early 1998, which may have decreased their effectiveness. Anticipated policy changes can also be important. Planned future increases in social security contributions may have depressed demand recently, while the anticipation of the consumption tax hike clearly created a significant shift in demand in early 1997 (see Chapter I).

- *The economic cycle*. Fiscal policy will generally be more effective when the economy is depressed than when it is overheated, as it is less likely to crowd out private sector demand. This implies that policy should have been more effective since the bursting of the asset price bubble, and should be particularly effective in current circumstances, given the level low level of private demand. However, the benefits of expansionary fiscal policy may well be obscured by the negative impulses to the economy from banking sector problems and, more recently, the Asia crisis.

- *The policy context*. If fiscal policy is on a clearly unsustainable path, then a credible move toward fiscal consolidation can spur private sector demand, as investors lower long-term interest rates in anticipation of future benefits. In Europe, credible adjustment is often associated with reductions in spending on transfers, signaling a willingness to cut bloated and inefficient government programs.[24] In Japan, the long-

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[23]This is one of the major results from the permanent income/life cycle models of consumption. Temporary changes in direct government spending, on the other hand, will, if anything, tend to be more effective as the impact on interest rate and the needed offset through tax policies will be less.

[24]There have been a number of papers on "expansionary fiscal contractions," surveyed and extended in A. Alesina, R. Perotti, and J. Tavares, "The Political Economy of Fiscal Adjustments," paper presented at the spring 1998 Brookings Panel and forthcoming in

(continued...)

term fiscal position may become a concern, particularly as gross general government debt approaches 100 percent of GDP and continues to rise.

21. **Simulations using a version of MULTIMOD helps to illustrate the importance of some of these factors.** The tabulation below reports (absolute) values of first-year multipliers from fiscal policy simulations which vary: (i) composition (direct government spending or taxes and transfers); (ii) timing (temporary or permanent);[25] and (iii) monetary response (a constant or flexible nominal interest rate). The multipliers broadly conform to the rules of thumb used by the staff, ranging from 1.07–1.30 for direct spending and 0.54–0.62 for taxes and transfers. Allowing interest rate changes to partly offset the fiscal expansion can lower multipliers significantly—from 1.30 to 1.07 for a permanent direct government spending shock. The results also confirm that (abstracting from monetary responses) a permanent tax change has a larger impact than a temporary one, although this effect is smaller than might have been anticipated, possibly reflecting the important role of disposable income (reflecting the behavior of liquidity constrained individuals) in the consumption function.

Fiscal Multipliers Under Alternative Assumptions

	Direct Government Spending		Tax or Transfers	
	Temporary	Permanent	Temporary	Permanent
No interest rate response	1.27	1.30	0.55	0.62
Flexible interest rate response	1.23	1.07	0.56	0.54

Note: Absolute values of multipliers are reported. The results come from simulations on a version of MULTIMOD adapted to conform more closely to the Japanese data.

22. **How do these considerations help explain the apparent lack of stimulus from of fiscal expansion through much of the 1990s, followed by a pronounced slowdown FY1997?** Two underlying factors are important:

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[24](...continued)
Brookings Papers on Economic Activity. European countries may have also benefited from the credibility provided to fiscal consolidation programs by the fiscal criteria laid out for entry into EMU.

[25]A temporary shock is maintained for one year, a permanent shock for 5 years.

- *Cyclical impulses*. Asset deflation and exchange rate appreciation operated against fiscal expansion in the early 1990s. These factors waned in 1996 when a cocktail of fiscal expansion, exchange rate depreciation, and low interest rates allowed the economy to expand relatively vigorously. However, 1997 saw fiscal contraction compounded by the Asia crisis and constraints on bank credit.

- *The composition and implementation of fiscal policy*. The stimulus to demand from fiscal expansion in the middle of the 1990s was limited by the small role played by direct government spending and the temporary nature of the announced tax stimulus.[26] By contrast, consolidation in FY1997 was associated with very significant cuts in government investment and permanent tax and social security contribution increases.

C. How Serious Is Japan's Fiscal Situation?

23. **While recent fiscal stimulus has been justified by the need to support the economy, the large fiscal deficit raises concerns about the longer term sustainability of the fiscal position**. The appropriate trade-off between these two competing needs—providing short-term support for activity and achieving a more sustainable stance over the medium term—requires an assessment of both the effectiveness of fiscal stimulus and the seriousness of the current fiscal situation. The previous section discussed the first issue, concluding that fiscal policy can be an effective macroeconomic tool. This section focuses on assessing the longer-term sustainability of the current fiscal position.[27]

24. **Fiscal sustainability is generally analyzed in terms of the trajectory of government debt implied by current policies**. If the debt dynamics imply an explosive path, or an increase of debt to unmanageable levels, then the policy is considered unsustainable. In Japan, such an assessment is complicated by the large amount of financial assets owned by the general government. Social security assets, which are accumulated to help pay for future public pensions, now sum to over 50 percent of GDP. However, if one takes into account the accumulated liabilities to future pensioners, the public pension system is in fact considerably underfunded. For this reason, staff analysis generally distinguishes the social security system from the remainder of general government, focusing on general government net debt (excluding social security) as the basic measure of the government's underlying debt position, while separately assessing the longer term viability of the social

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[26]Although there were ¥3.5 trillion in permanent income tax cuts in 1995, the revenue losses were subsequently offset by the 1997 consumption tax hike.

[27]This section focuses on fiscal data using the national income account definition of the general government. In addition to making international comparisons easier, this choice reflects the lack of fiscal autonomy of local governments and the complexity of the Japanese fiscal system, which make it difficult to assess the overall fiscal position from the central government's budget accounts.

security system.[28] A further complication is that financial claims held by the government—for example, claims on public enterprises—may in fact be worth less than the book value. The trajectory of gross general government debt thus also provides useful information on the gravity of the debt position, although care must be taken in interpreting the figures since double counting caused by government financial intermediation inflates the data.

25. **Japan's deficit is high by international standards, implying that debt is increasing rapidly**. Japan's general government deficit has been rising since the early 1990s, and, on current plans, the staff estimates that the general government fiscal deficit will be over 6 percent of GDP in FY1998, considerably higher than in the other major industrial countries (see tabulation below).[29] Adjusting for the large output gap reduces the deficit significantly—the structural deficit is estimated at 3.6 percent of GDP—but even on this basis Japan's deficit is the largest of the major industrial countries. Excluding the social security surplus, the general government deficit is estimated at almost 8 percent of GDP.

General Government Balances for the Major Industrial Countries, CY1998
(In percent of GDP)

	Actual	Structural	Actual excluding social security 1/
Japan 2/	-6.2	-3.6	-7.8 3/
United States	0.0	-0.2	-2.9
Germany	-2.7	-0.6	-2.8
France	-3.0	-0.9	-2.3
Italy	-2.7	-1.3	1.8
United Kingdom	-1.9	-1.0	2.9
Canada	1.1	1.9	3.4

Source: WEO database and EPA.
1/ Percent of potential GDP.
2/ FY1998
3/ The structural balance excluding social security in Japan is -6.0 percent of potential GDP.

[28]An alternative approach is to calculate very long-term projections of general government net debt to take account of future social security obligations, which yields very similar results to the staff's approach. For example, longer-term projections prepared through 2080 by the OECD indicate that, because of the rapidly aging population, Japan's net debt will rise more rapidly than that in other major industrial countries over the future. See "The Macroeconomic Implications of Ageing in a Global Context," OECD Report ECO/CPE/WP1(98)1.

[29]This is the largest deficit ratio since the current national income accounts were started in the mid-1950s.

26. **If social security assets are included, current levels of net general government debt are quite low.** In fact, at about 20 percent of GDP in 1997, Japan's net general government debt remains the lowest amongst the major industrial countries, even though it has risen by 15 percent of GDP since 1991 (see tabulation below). On current policies, the staff estimates that net general government debt would rise by slightly over 20 percentage points of GDP by FY2001.[30] However, the pace is projected to slow significantly after this, as fiscal consolidation is implemented to achieve the medium term fiscal targets laid out in the FSRA, and the net general government debt ratio is projected to stabilize at somewhat below 50 percentage points of GDP (Chart II.5).[31]

Major Industrial Countries—General Government Debt Position, CY1996
(In percent of GDP)

	Net debt including social security	Net debt excluding social security	Gross debt
Japan 1/	18.4	64.5	99.7–88.2 2/
United States	48.4	60.9	84.6
Germany	48.1	54.2	64.9
France	40.8	49.4	76.6
Italy	110.4	119.0	133.0
United Kingdom	44.0	44.0	65.4
Canada	68.4	74.7	109.6

Source: OECD, Economic Planning Agency, and staff calculations.
1/ Data for CY 1997.
2/ The larger figure is the official data, the lower figure the value used by the OECD (which excludes "nonprofit institutions controlled by the government").

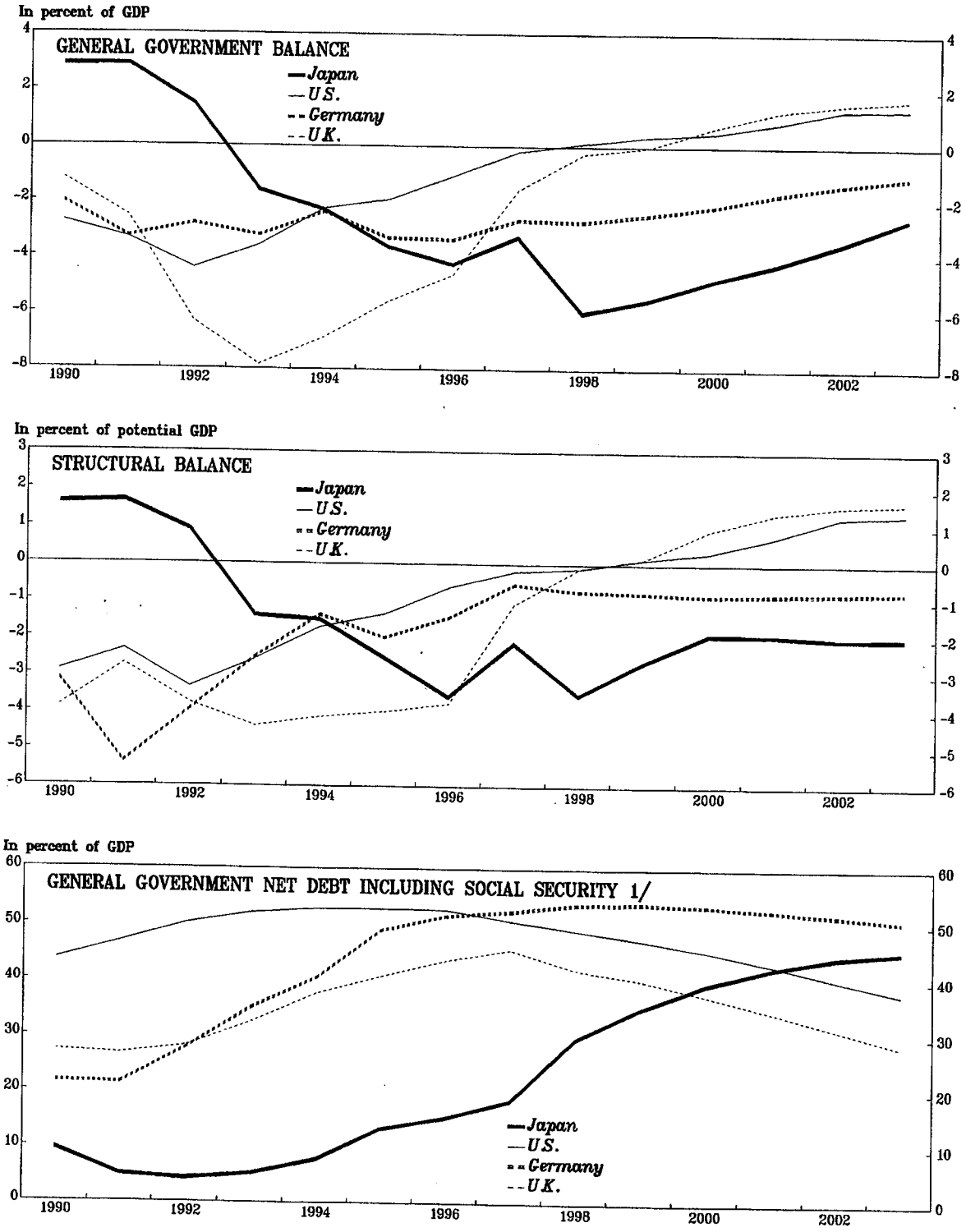
27. **The present social security system, however, implies large unfunded liabilities.** Japan has the most rapidly aging population amongst the major industrial countries, and to help to pay for this the public pension system has been running significant surpluses which

[30]This includes a 5 percent of GDP increase in 1998 caused by acceptance of responsibility for debts of the JNRSC and Forestry Service.

[31]The staff projection assumes a relatively smooth adjustment of the fiscal deficit to the medium-term goal set out in the FSRA. The debt trajectories are relatively insensitive to reasonable alternative paths for the deficit.

CHART II.5
JAPAN

COMPARATIVE INDICATORS OF GENERAL GOVERNMENT FISCAL POSITION, 1990-2003



Source: WEO database. Projection based on currently announced policies.
1/ The debt data for Japan from 1998 onwards include an allowance for the debts of the JNRSC and Fishery Service.

helps to reduce net general government debt. However, the system is projected to move into deficit by 2010 as the dependency ratio rises and the system matures. Indeed, international comparisons indicate that Japan's unfunded pension liability is at the upper end of the range for industrial countries (see tabulation below).[32]

Net Pension Liabilities 1995–2050
(In percent of GDP)

Japan	United States	Germany	France	Italy	United Kingdom	Canada
106.8	25.7	110.7	113.6	75.5	4.6	67.8

Source: S. Chand and A. Jaeger, *Aging Populations and Public Pensions Schemes*, IMF Occasional Paper No. 147 (December 1996).

Intergenerational equity is also an issue—generational accounts indicate that among the large industrial countries Japan has the largest imbalance between the fiscal liabilities of current and future generations.[33]

28. **Maintaining the current system of pension benefits will require very large increases in contributions.** If the government follows the path laid out in the 1994 pension reform plan, contribution rates would need to approximately double, from 17.35 percent of basic pay currently to 34.3 percent by 2025.[34] As part of its efforts towards reform, the

---

[32]The Pension Bureau of the Ministry of Health and Welfare estimates that the unfunded pension liability at current contribution rates is ¥490 trillion (close to 100 percent of GDP) for those in the system in March 2000, while the implied future liabilities of the system add a further ¥420 trillion (80 percent of GDP) to this total. J. Sakamoto, "Pension Reform and the Funding Alternative," paper given at the International Social Security Association held in Tokyo May 20-21 (ISSA/ACT/SEM/2/1(b)).

[33]This reflects the reliance on income-based taxes and contributions in the fiscal system, together with generous allowances and benefits for retirees, which means that the working population is the main provider of general government revenue while most transfers accrue to the elderly. A. Auerbach, L. Kotlikoff and W. Leibfritz, "Generational Accounts Around the World," Bank of Japan Institute for Monetary and Economic Studies (IMES) Discussion Paper 98-E2.

[34]These are the contribution rates for the EPI, the earnings-related public pension system for

(continued...)

Government has recently publicized some fairly general reform options, including cutting benefits by 40 percent over time to avoid the need for significant future hikes in contribution rates. The paper also provided estimates of the impact of alternative approaches to cutting costs.[35] Opinion polls on these proposals indicate that a majority of the public is in favor of a moderate reduction in benefits and more limited future increases in contribution rates than implied by the current system.

29. **Excluding the social security system from the fiscal data reveals a much less favorable medium-term fiscal picture.** Net general government debt (excluding social security) was almost 65 percent of GDP in 1997, considerably lower than in Italy but at the upper end of the other major industrial countries (Chart II.6). Furthermore, the debt dynamics also look less satisfactory. The rate of increase in debt over the last few years has been faster (over 30 percentage points of GDP since 1991). Staff projections, based on the plans for consolidation contained in the FSRA, indicate that net general government debt will continue to rise from its current level, stabilizing early in the next century at close to 100 percent of GDP.[36] To maintain this debt level over the longer term, however, further consolidation in general operations would be needed, to help provide a cushion for increasing transfers to the social security in the future due to an aging population.[37]

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[34](...continued)
most private sector employees. Half of the contribution is paid by the employee, the other half by the employer. Alternative economic assumptions generate somewhat different estimates for the final contribution rate, but this variation is relatively small compared to the projected increase in rates.

[35]These indicate that it would be possible to cap the contribution rate at around 20 percent of basic pay through a combination of costing-saving measures including raising the age of eligibility of the earnings-related scheme from 60 to 65, indexing benefits to consumer prices rather than wages (net of taxes), and cutting the income replacement rate from 62 percent to 50 percent.

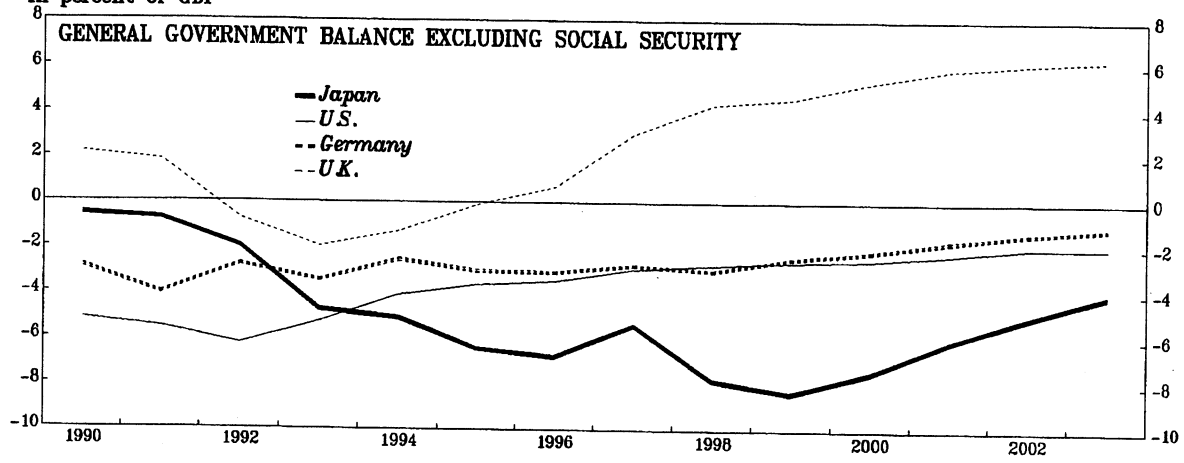
[36]As noted earlier, the staff projections assume a relatively smooth adjustment path for the general government structural deficit (excluding social security), but the calculations are relatively insensitive to reasonable alternative paths.

[37]The aging population will increase government transfers to the health care system, which is funded on a pay-as-you-go basis. The impact of higher medical costs on general government transfers to the health service is estimated by the staff to add around 1¼ percentage points of GDP between 1995 and 2025. In addition, rising transfers to the public pension system are estimated to raise spending by ¾ percent of GDP over the same period. See K. Okamura, "Japan's Medium- and Long-Term Fiscal Challenges," in *Japan—Selected Issues*, IMF Staff Country Report No. 96/114 (October 1996).

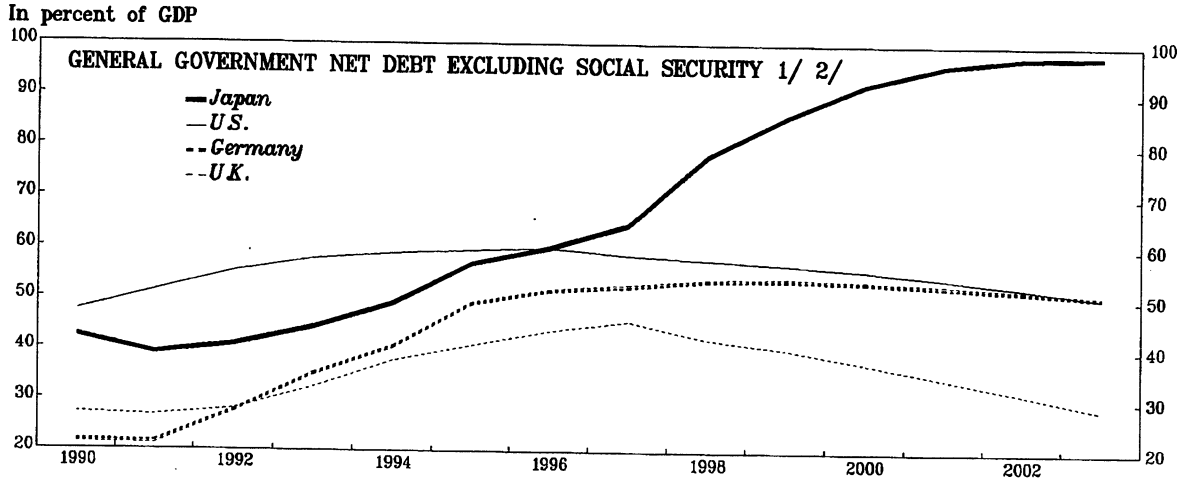
CHART II.6
JAPAN

COMPARATIVE INDICATORS OF GENERAL GOVERNMENT FISCAL POSITION, EXCLUDING SOCIAL SECURITY, 1990-2003

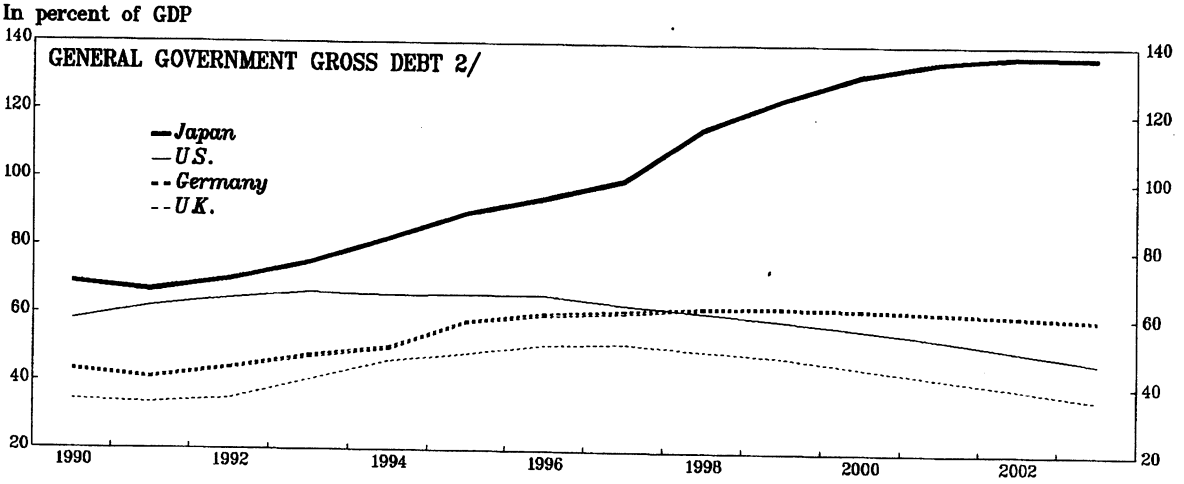
In percent of GDP



In percent of GDP



In percent of GDP



Source: WEO database. Projection based on currently announced policies.

1/ U.S. figure exludes social security trust funds; Germany and U.K. figures do not exclude social security, owing to data unavailability.
2/ Tne debt data for Japan from 1998 onward include an allowance for the debts of the JNRSC and Fishery Service.

30. **Gross general government debt is significantly higher than net debt (excluding social security)**, reflecting the important role played by the government in financial intermediation. Largely due to the complex web of financial transactions between the general government and public sector financial institutions associated with the FILP, the general government held financial assets with face value of over 35 percent of GDP in FY 1997. This implies gross general government debt of almost 100 percent of GDP in 1997. On present policies, this measure of debt would stabilize at close to 140 percent of GDP early in the next century (Chart II.6). However, this crude measure of gross general government debt almost certainly significantly overstates the true level of gross debt, in part due to the double counting caused by the inclusion of public financial intermediaries in the official definition of the general government sector.[38]

31. **However, the true value of general government net debt is likely to be higher than the official data** since the recovery value of general government assets (largely claims on the FILP lent to public financing corporations) is likely to be considerably lower than the book value. In the FY1998 budget, the central government took responsibility for nets debts of ¥26 trillion (5 percent of GDP) in debt of the Japan National Railway Settlement Corporation (JNRSC) and the Forestry Commission (both of which had received considerable amounts of money from the FILP), increasing general government net debt by the equivalent amount. Problems of this type may well exist in other areas of the FILP.[39]

32. **Market signals such as long-term interest rates show no signs that investors believe that the fiscal position is unsustainable.** Indeed, interest rates on long-term government bonds have recently fallen to historic lows reflecting confidence in future government fiscal policies and low demand for funds from the private sector.[40] Low bond

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[38]One source of double counting is that the official data include "non-profit institutions controlled by the government" in general government. The OECD adjusts the official data by placing these non-profit institutions in the public financial institution sector, on the basis that the most important of these corporations perform similar activities to other public financial intermediaries. Adjusting for this double counting reduces the figure for gross debt by just over 10 percent of GDP. See OECD "Policy Considerations in the Current Economic Situation," ECO/CPE/WP/98/5.

[39]Potential bad loans associated with the FILP are discussed further in D. Asher and A. Smithers, "Japan's Key Challenges for the 21st Century," SAIS Policy Forum Series, Johns Hopkins University (March 1998).

[40]This reflects, at least in part, the government's ability to achieve significant fiscal consolidation during the 1980s (albeit at a somewhat slower pace than originally planned), and the clear concern to address medium-term consolidation demonstrated by the recent passage of the FSRA.

rates imply that the funding cost of additional debt will be limited, while the high degree of slack in the economy will tend to reduce private sector crowding-out from fiscal expansion.

33. **In sum, Japan retains short-term room for maneuver but has a serious long-term fiscal problem associated with an aging population that will eventually need to be addressed.** The aging population will require medium-term consolidation of the general government position (excluding social security) as well as measures to ensure the viability of the social security system. Nevertheless, the government retains room to use fiscal policy in the short term as a macroeconomic policy tool, particularly in the absence of alternative instruments.

D. How Predictable is the Fiscal Stance?

34. **One of the difficulties in analyzing fiscal policy in Japan is the lack of transparency of the fiscal accounts.** The budget accounts are highly fractured, and assessing the future path of fiscal policy is hindered by the lack of medium-term budgetary planning. As a result, it is often difficult for analysts (and, possibly, even the Government) to assess the impact of announced policy changes on the underlying fiscal stance. The Fiscal Structural Reform Act (FSRA) has improved the situation by mandating that budgets include projections of the general government deficit (excluding social security), providing a medium-term target for fiscal policy, and incorporating plans for future spending in some areas, but the available information remains well short of best international practices identified in the Fund's Code of Fiscal Transparency.

35. **There is no unified budget for the central government, but rather budgets are presented separately for the major government accounts.** The central government's general account is the most important account for budgetary planning. It includes most central government tax revenues (but not social security contributions) and finances the majority of central government spending, although there are also numerous special accounts which oversee particular expenditure items. In addition, the FILP budget, which determines how funds raised through social security and postal savings are spent, is also used for policy purposes. FILP spending is about two-thirds of that of the general account. Consequently the FILP budget is often referred to as "the second budget."

36. **These complexities are particularly important because national accounts data are only available with a considerable lag.** Data on the overall general government stance are available nine months after the end of the fiscal year, while details of the behavior of sub-sectors of government (central government, local government, and social security) take somewhat longer, so that the fiscal stance in the recent past typically needs to be estimated on the basis of limited information. Earlier staff work has shown that the general account deficit

is of only limited use in predicting the deficit on a national accounts basis, partly reflecting complications to do with the timing of supplementary spending.[41]

37. **More recent staff analysis has considered the most useful indicators for projecting the components of general government expenditures and revenues.** Preliminary results indicate that several types of information, including revised budget projections and monthly indicators, are useful for predicting the fiscal stance currently and in the recent past, but that there is much more limited information available about the future outcomes. In particular, the outcomes for government investment and tax revenues—two of the major components of the overall fiscal stance—are better predicted by monthly indicators than budget projections.

38. **Difficulties in projecting the overall fiscal stance are only partly eased by the FSRA.** In order to monitor progress in achieving the medium-term fiscal target laid down in the legislation, the FSRA requires the government to publish projections of the general government deficit (excluding social security) for the next fiscal year in initial and supplementary budgets. These projections provide useful information in assessing the government's fiscal stance. However, since the estimates of the deficit are calculated from the financing side (using planned issuance of debt), corresponding projections of general government expenditures and revenues are not available. Expanding the methodology by incorporating projections of expenditures and revenues would provide a useful check of the consistency between the deficit projections and existing budgetary plans.

39. **Projecting fiscal policy over the medium term is complicated by the lack of detailed multi-year expenditure planning.** The budget process focuses almost exclusively on spending in the next fiscal year.[42] This encourages the use of short-term fiscal measures—such as temporary boosts to government investment and temporary income tax rebates—particularly in supplementary budget operations, as well as generating unnecessary uncertainty about the medium-term path of policy. Again, the FSRA has provided a medium-term target for fiscal consolidation and increased transparency by including some future spending commitments. However, even with these changes, the government's intentions as regards the path of government expenditures over the next few years remain highly uncertain.

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[41]Bayoumi, "The Japanese Fiscal System and Fiscal Transparency."

[42]Exceptions exist, such as the medium-term investment plan, which originally involved a commitment to spend ¥630 trillion on government investment between FY 1995 and FY 2004. However, there is little evidence that the investment plan was integrated into the annual budget process.

E. The Tax System—Where is Reform Needed?

40. **The recent weakening of economic performance has led to increasing attention to tax reform as a means to provide both short-term support for demand and longer-term supply-side gains.** The principal focus of this discussion has been on reducing high marginal income tax rates on individuals and firms, lowering the tax burden on property transactions, and widening tax bases as a means of stimulating activity and improving economic efficiency.

41. **Japan's overall tax burden is not heavy compared to other industrial countries.** General government revenues as a percentage of nominal GDP are among the lowest in the major industrial countries (28.5 percent of GDP in 1995, see tabulation below). While revenues are more highly dependent on direct tax revenue than is typically found in European countries, they are less so than the United States. The most striking feature of the tax system is the large amount of revenue raised from corporate income tax as compared to other major industrial countries (Chart II.7). This reflects, at least in part, the fact that local taxes on business are mainly levied on income.

General Government Revenue in 1995
(In percent of GDP)

Japan	United States	United Kingdom	Germany	France	Canada	Italy
28.5	27.9	35.3	39.2	44.5	37.2	41.3

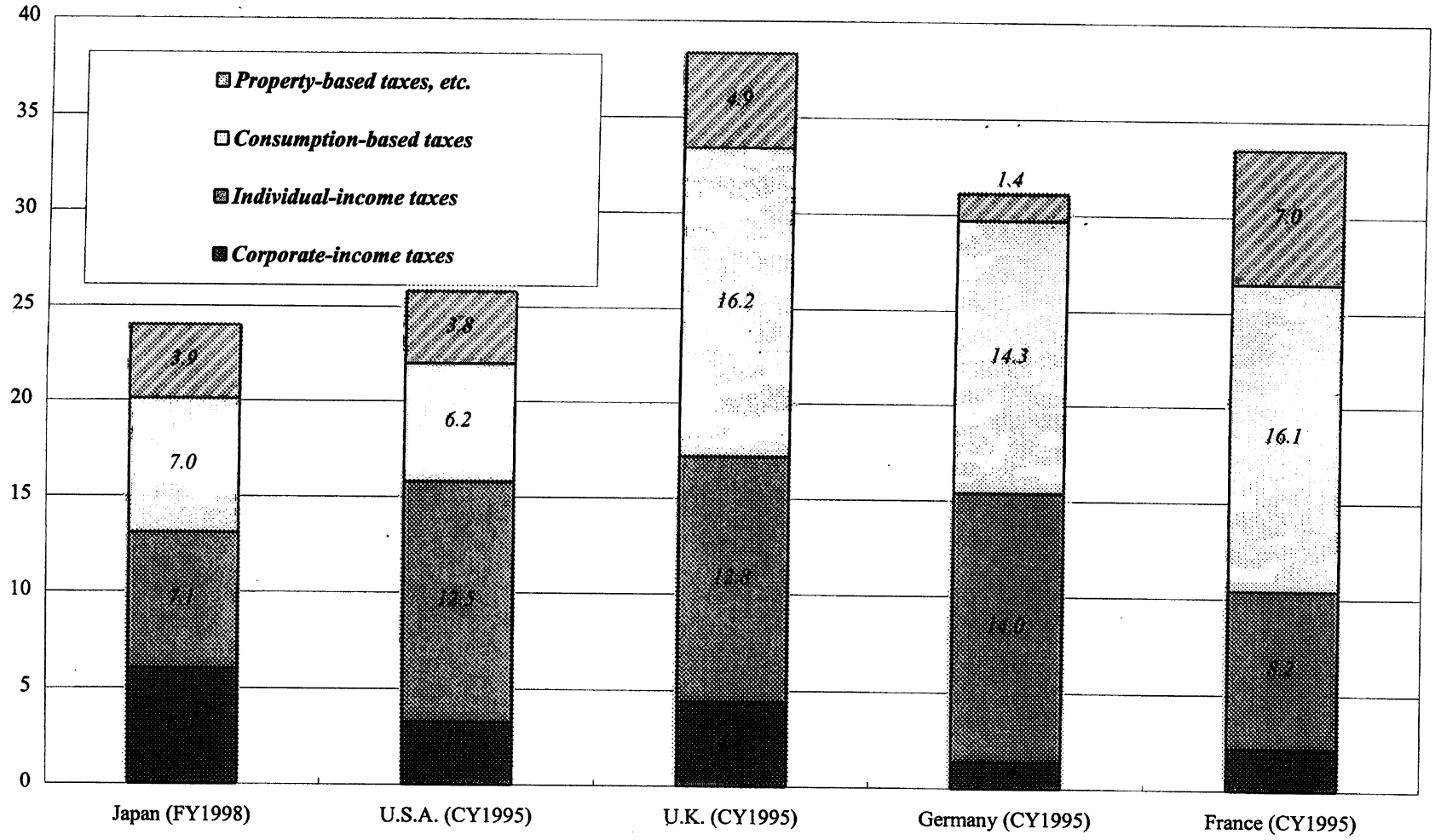
Source: OECD, *Revenue Statistics, 1965–96.*

42. **Despite a low overall tax burden, the personal and corporate income tax systems are characterized by high top marginal tax rates and narrow bases.** The minimum income level for personal income taxes is among the highest in the five major industrial countries (Table II.6), and only one-third of firms pay corporate income taxes (Table II.7). As a result, a limited number of individuals and corporations provide a large portion of tax revenues.

43. **The personal and corporate tax systems have both undergone reforms in the 1990s.** In 1995, individual income tax rates were lowered significantly (offset by an increase in the consumption tax rate, from 3 percent to 5 percent, implemented in April 1997). As regards corporate income taxes, the central government tax rate was reduced by 3 percentage points in April 1998, from 37.5 percent to 34.5 percent. This was accompanied by a range of base-broadening measures to be implemented over several years.

CHART II.7
JAPAN
INTERNATIONAL COMPARISON OF TAX REVENUE: NATIONAL AND LOCAL TAXES

In percent of national income



Souce: Ministry of Finance.

Table II.6. Japan: International Comparison of National Income Taxes 1/
(Salaried Worker with Wife and Two Children)

	Range of Tax Rates	Number of Brackets	Minimum Taxable Amount
Japan	10–50 percent 2/	5	¥3,616,000
U.S.	15–39.6 percent 3/	5	¥2,448,000
U.K.	20–40 percent	3	¥1,056,000
France	10.5–54 percent	6	¥3,202,000
Germany	25.9–53 percent 4/	Equation	¥3,738,000

Source: Ministry of Finance.

1/ Foreign exchange rates applied to the calculation: US$1 = ¥119; £1 = ¥195; 1DM = ¥67; 1FF = ¥20.
2/ In addition to the national tax, a local income tax, which has three brackets (5–15 percent).
3/ In addition to the national tax, there are local income taxes are imposed by state, county, and city. (For example, in New York state, the local income tax has five-brackets ranging from 4–6.85 percent).
4/ In addition to the national tax, there is a Joint and Additional Tax (5.5 percent of the tax amount) imposed.

Table II.7. Japan: Effective Corporate Tax Rates and Distribution of Firms

Type of firm	Number of firms		Tax rate
	(In thousands)	(In percent)	(In percent)
Firms making losses	1,576	64.7	0
SMEs whose income is no more than ¥8 million	602	24.7	36.65–37.83
Larger SMEs	24	10.0	37.83–49.98
Large firms	15	0.6	47.16–49.98
Total	2,436	100.0	...

Source: National Tax Administration.

44. **More recently, the Government has announced its intention to consider more sweeping tax reform.** More specifically, Prime Minister Obuchi pledged to reduce the corporate tax rate to an international comparable level (generally interpreted as a 40 percent tax rate compared to just over 46 percent currently) from FY1999, and to lower the top marginal tax rate from 65 percent to 50 percent from CY1999. The tax cuts would be implemented in the context of a longer term review of the tax system.

Individual Income Tax System

45. **Effective tax rates on most individuals are low because of generous deductions.** The basic allowance and dependent allowances are amongst the highest in the major industrial countries; salaried workers are also able to claim a generous earned salary exemption, to compensate them for the numerous business allowances provided to the self-employed and farmers; social security contributions are deducted from taxable income; and allowances for pensioners are also generous.[43] As a result, a "typical" salaried worker who earned ¥8 million in 1996 (around $55,000) with a wife and two children had income tax payments of only ¥ 0.38 million (4.8 percent of earnings, see tabulation below).

Calculation of National Individual Income Tax: 1996

A business employee who earned ¥8 million annually (around $55,000) with a wife and two children had tax payments of ¥0.38 million (4.8 percent of income), which is derived as follows:

Gross wage income:	¥8.00 million
Less earned salary deduction (10 percent of salary + ¥1.2 million)	-¥2.00 million
Sub total	¥6.00 million
Less	
Basic allowance	¥0.38 million
Spouse allowance	¥0.38 million
Special spouse allowance	¥0.38 million
Dependent allowance	¥0.91 million
Social insurance deduction	¥0.41 million
Taxable wage income	¥3.54 million
Tax payments	
10 percent of tax rate is applied to ¥3.3 million:	¥0.33 million
20 percent of tax rate is applied to the remaining ¥0.24 million:	¥0.05 million
Total tax payment	¥0.38 million
	(4.8 percent of gross wage income)

Source: Ministry of Finance.

[43]H. Takahashi, "Prospects for Personal Income Tax Reform in Japan," *JEI Report* 24A (June 26, 1998) contains a more detailed discussion of personal tax allowances.

46. **High top marginal tax rates skew income tax revenues toward the wealthy**. The top marginal tax rate is 65 percent (50 percent for central government income taxes and 15 percent for local income taxes), the highest in the five largest industrial countries. However, these very high tax rates are only relevant for those with very high incomes. As a result, the top 6½ percent of taxpayers (those who earn more than ¥15 million) paid about 40 percent of central government income taxes in 1996 (Table II.8).

47. **The taxation of pension income is light**. Public pension contributions are tax deductible, and, while benefits are subject to income taxes, multiple deductions (for public pension income and for old age, etc.) substantially raise the tax threshold. The benefits from private defined-benefit pension plans are generally paid in a lump-sum, which also receive generous tax treatment. As a result of these allowances, the pension income of most households is largely tax exempt.[44]

48. **Investment income is largely taxed on a withholding basis, rather than being integrated with the taxation of wage income**. In particular, interest payments are subject to a flat 20 percent withholding tax. The main reason for separating the taxation of investment income from wage income is the difficulty of tracking investment income. Proposals for the introduction of tax identification numbers (tax IDs), which would allow the integration of the taxation of earned and unearned income and help to lower tax avoidance, have failed to achieve sufficient political support.[45]

49. **Future reforms of the income tax system should aim improve work incentives by reducing the upper marginal tax rates, while widening the tax base to maintain revenues, and integrating taxation of different types of income**. Options for base broadening include:

- *Lowering basic exemptions* (particularly for spouses), as well as reducing the earned income allowance and the associated business allowances provided to the self-employed and farmers.

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[44]On the other hand, no tax benefits are currently provided for defined-contribution pension plans.

[45]Tax avoidance is believed especially significant in the case of the self-employed and the agricultural sector, as exemplified by the "9-6-4 (Ku-ro-yon)" and "10-5-3 (To-go-san)" sayings. These numbers refer to the proportion of income that is understood to be reported to the tax authorities: 90–100 percent for salaried workers, 50–60 percent for the self-employed, and 30–40 percent for farmers.

Table II.8. Japan: Number of Taxpayers, Total Employment Income, and Income Tax Payment by Income Bracket (1996)

Employment income brackets (In millions yen)	Number of tax payers		Total employment income		Income tax payment	
	Numbers (In thousands)	Share (In percent)	Amount (In 100 million yen)	Share (In percent)	Amount (In 100 million yen)	Share (In percent)
0–1	479	1.2	2,789	0.1	213	0.2
1–2	3,419	8.7	54,310	2.8	1,345	1.3
2–3	6,230	15.9	158,778	8.0	5,021	4.9
3–4	7328	18.7	256,351	13.0	8,471	8.2
4–5	6,244	15.9	280,175	14.2	9,222	9.0
5–6	4,802	12.3	263,861	13.4	8,898	8.7
6–7	3,215	8.2	208,179	10.6	7,429	7.2
Subtotal	31,717	80.9	1,224,442	62.1	40,599	39.5
7–8	2,372	6.1	177,094	9.0	7,707	7.5
8–9	1,604	4.1	135,837	6.9	7,168	7.0
9–10	1,004	2.6	95,168	4.8	6,137	6.0
Subtotal	4,980	12.7	408,098	20.7	21,012	20.4
10–15	1,963	5.0	232,610	11.8	21,461	20.9
15–20	378	1.0	64,247	3.3	9,475	9.2
20–25	87	0.2	20,098	1.0	3,956	3.8
25+	64	0.2	23,254	1.2	6,294	6.1
Subtotal	2,493	6.4	340,210	17.2	41,186	40.1
Total	39,189	100.0	1,972,750	100.0	102,797	100.0

Source: Ministry of Finance

Note: Of the total 44,896,000 employment income earners who worked throughout the year, 5,706,000 (12.7 percent) were nontaxpayers.

- *Reducing allowances for pension income and unifying the tax treatment of all forms of pensions* (i.e., public, private defined-benefit, and private defined-contribution plans). A government committee is currently considering how to reform the taxation of pensions.
- *Taxing of fringe benefits*, in particular housing benefits.
- *Introducing a tax ID system.* This would help to reduce tax avoidance and make the taxation of investment income more progressive, thereby helping to alleviate the concerns about equity associated with reducing high marginal tax rates.
- *Gradually increasing consumption tax rates* (in small enough increments to avoid the economic dislocation caused by the most recent consumption tax hike). Taxing expenditures rather than income would help maintain tax buoyancy in the face of an aging population with a declining workforce and reduce the intergenerational inequities noted above.

Corporate Income Tax System

50. **The corporate income tax rate is high, but many firms do not pay taxes.** The basic corporate income tax rate is about 46 percent, higher than in the United States, the United Kingdom, and France (but lower than that in Germany).[46] In 1996, however, 65 percent of companies did not pay any corporate income tax, reflecting low economic growth, generous carry-over provisions, and generous allowances for SMEs (Table II.7). As a result, a small number of large firms pay most of the taxes. In 1995, the largest 3¼ percent of total firms in terms of capitalization (which represent slightly less than one-third of total sales) paid 72 percent of total corporate income tax revenue (Table II.9).

51. **While a significant number of tax allowances were eliminated in the FY1998 budget**, there remains scope for further broadening of the corporate tax base, particularly as regards SMEs. Base-widening reforms could include:

- *Switching the tax base for local corporate taxes from income to a broader measure of activity, such as turnover.* By widening the number of firms liable for corporate taxes, the tax burden on profitable firms would be lowered.
- *Lowering the five-year time period for the carry-over of tax losses.* About 20 percent of firms are profitable but do not pay taxes because of past losses. There are over ¥55 trillion—10 percent of GDP—in tax losses outstanding.
- *Reducing the ¥8 million annual income below which a lower central government tax rate (of 25 percent) is levied.* This would lower the incentives for large companies to use small subsidiaries as tax shelters (see below).

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[46]The national tax rate is 34.5 percent, while local taxes add a further 10 percent. SMEs are subject to a lower national tax rate of 25 percent on income of less than ¥8 million.

Table II.9. Japan: Stratification of Corporations by Capitalization, 1995

Capitalization (¥ millions)	Number of firms (Thousands)	Number of firms (Percent of Total)	Sales (100 million yen)	Taxes Paid (100 million yen)	Taxes Paid (Percent of total)
0–1	83,163	3.5	418,686	969	0.8
1–5	1,003,254	41.7	872,970	3,386	2.9
5–10	413,625	17.2	709,321	2,860	2.5
10–50	825,737	34.3	3,433,673	25,049	21.6
50–100	44,372	1.8	1,060,751	9,236	8.0
100–1,000	28,044	1.2	2,060,156	16,900	14.6
1,000–5,000	3,989	0.2	1,160,113	11,372	9.8
5,000–10,000	791	0.0	518,242	6,373	5.5
10,000+	1,052	0.0	4,069,094	39,570	34.2
Total	2,404,027	100.0	14,302,996	115,715	100.0

Source: Annual Statistics Report, National Tax Administration

- *Decreasing entertainment allowance for SMEs* (companies whose book-value of capital is less than ¥50 million) and reducing donation allowances.

52. **Introducing consolidated taxation is also an important reform objective.** Corporate taxes are currently levied on an unconsolidated basis, so that wholly owned subsidiaries are taxed separately from the parent company. Introducing consolidated taxation might provide greater incentives to set up holding companies, to the extent that losses in one company could be offset against profits in another. This could raise the incentives for needed corporate restructuring, at the cost of lower corporate tax revenues. Consolidated taxation would also end the incentive for large companies to create numerous small "subsidiaries" which are able to take advantage of the lower tax rates and more generous allowances allowed to SMEs.[47] Consolidated corporate taxation could be linked to the introduction of consolidated corporate accounting, due to occur on a limited basis in FY1999. While introducing consolidated taxation, due consideration will need to be given to other related issues, such as the design of the Commercial Code, the control of tax evasion, and the revenue effect.

Property Taxes

53. **Although tax rates have been reduced recently, taxes on many property transactions remain high, reducing liquidity and underlying values.** Property market transactions have been sluggish through most of the 1990s. The FY1998 budget incorporated a number of reforms of taxes on assets, aimed at reviving the property market and supporting "big bang" financial reforms (discussed earlier). Additional reforms could include:

- *Reducing the 5 percent real estate registration tax for large houses.*
- *Lowering the 4 percent real property acquisition and the 3 percent special land holding taxes.*
- *Exempting transfers of property or mortgages from one financial institution to another from the registration, license and real property acquisition taxes.* These taxes are a disincentive for the acquisition of assets of failed institutions, and hence an impediment to solving problems in the financial system.
- *Lowering taxes on inheritance and gifts*, which reduce incentives to transfer properties.

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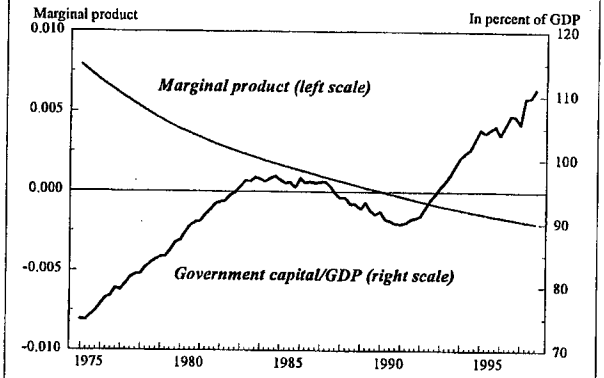
[47]For example, Sony has over 800 "subsidiaries."

F. Public Investment: Sources of Inefficiency and Prospects for Reform

54. **Concern regarding the efficiency of government public investment has grown in recent years.** This partly reflects fear that the massive increase in government spending since the early 1990s has led to a wasteful misallocation of resources, as well as growing awareness of the need for substantial fiscal consolidation in the medium term in order to prepare for demographic pressures.

55. **There is growing empirical evidence of diminishing returns to public investment since the 1980s.** Figure II.1 contains staff estimates of the marginal productivity of the government capital stock, which suggest that such productivity has declined sharply over time and possibly even turned negative during the 1990s.[48]

FIGURE II.1. MARGINAL PRODUCT OF GOVERNMENT CAPITAL STOCK



Factors underlying low returns to public investment

56. **An important explanation for the diminishing returns to public investment is its sheer size in Japan, which is substantially larger than in other industrial countries (Chart II.8).**[49] For example, after averaging around 6½ percent of GDP during the latter half

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[48]The estimates are based on a regression equation relating economy-wide productivity to private capital-labor ratio and the government capital stock:

$$\log(Y/L) = 3.28 + 0.61*\log(K/L) + 0.068*\log(G) - 0.01*\log(\text{trend}*G);\ R^2 = 0.99$$
$$(9.62)(19.14) \qquad (1.07) \qquad (2.72)$$

where Y is real GDP, L is a measure of trend employment, K is the net stock of business capital, and G is the net stock of government capital (estimation was over 1960–97, t-statistics in parentheses).

[49]Despite rapid government investment growth, in some areas Japan's social capital does lag

(continued...)

of the 1980s, general government public investment grew rapidly during the 1990s and peaked at 8¾ percent of GDP in 1996. This compares with ratios to GDP of only about 2 percent in other industrial countries. As a result of high public works spending, roughly 11 percent of the labor force is employed in the construction sector, compared with around 5½ percent in the United States. A recent study by Daiwa Institute of Research suggests that one reason why the impact of public investment on economy-wide labor productivity is negative is that it diverts labor and other resources to the construction sector, which is relatively inefficient.[50]

57. **The productivity of public investment in Japan may also be adversely affected by its volatility**, which has been considerably greater than in other industrial countries, especially in recent years (Chart II.8). The higher volatility reflects a number of factors, including the greater use of public investment as a tool of counter-cyclical policy, as well as the use of public investment for disaster—especially earthquake—relief. Given the rigidities in Japanese employment practices, this volatility implies a larger-than-otherwise level of employment in the sectors most affected by public investment. For example, employment in the construction sector is over 10 percent of the labor force in Japan, versus around 5½ percent in the United States (Chart II.8).

58. **Limited control by the central authorities over project implementation, and weak incentives for local governments to achieve cost effectiveness, may also have reduced the quality of public investment.**[51] The fiscal system in Japan is highly centralized,

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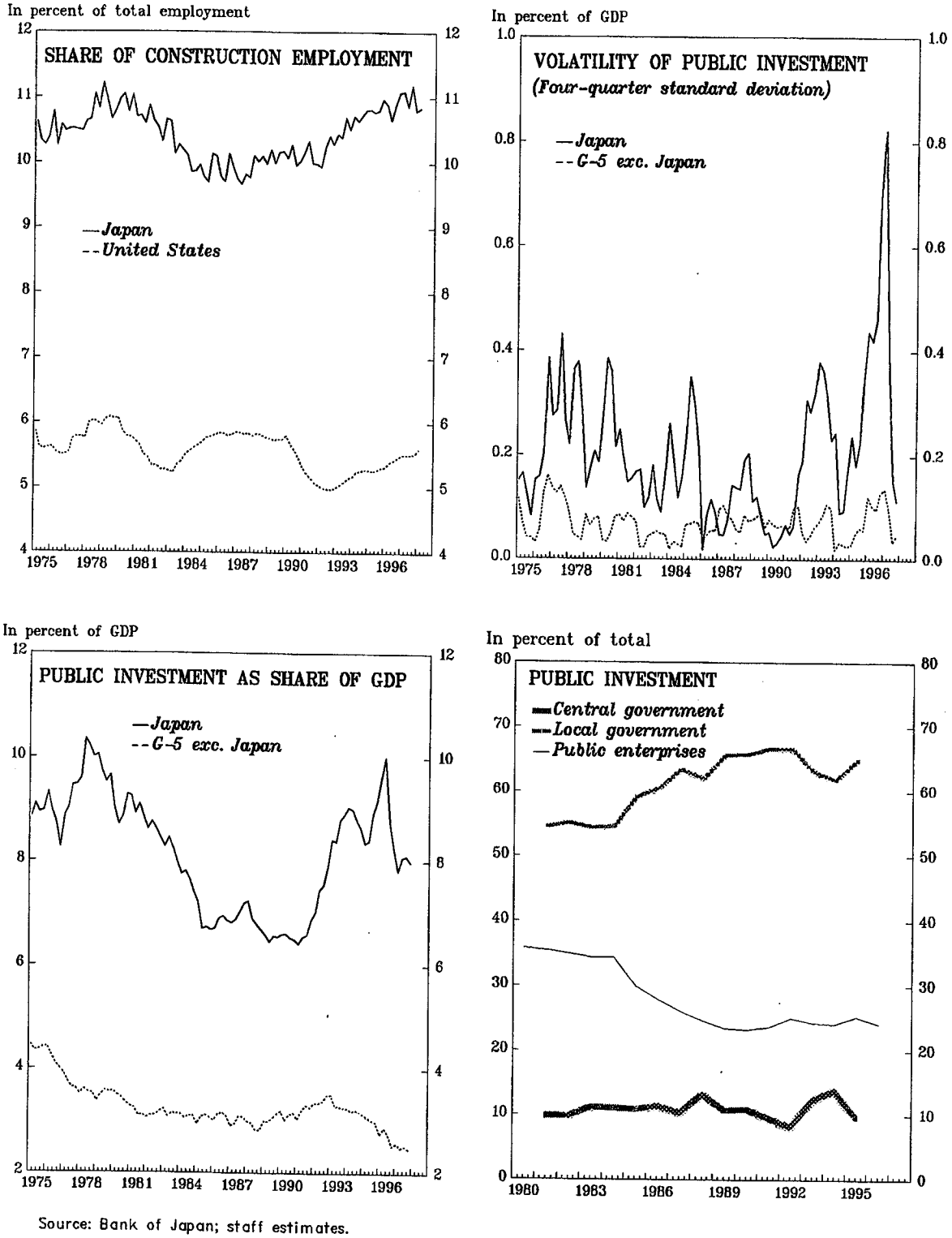
[49](...continued)
behind that of other industrial countries. For example, only 54 percent of the population has access to underground sewers, versus ratios of 70–100 percent in other industrial countries. Park area per capita also is low, as is the ratio of high speed motor ways. See *Japan 1998: An International Comparison* (Tokyo: Keizai Koho Center, 1997).

[50]Daiwa Institute of Research Ltd., *Economic Forecasts & Review*, April 1998. Annual reports by the Board of Audit suggest frequent cases of waste and inefficiency. The FY 1994 report noted ¥85 billion had been spent on six sub-projects of the Multipurpose Dam Project over 19–29 years, but that there seemed to be no particular plan for the start of the main project. For a discussion, see the Economic Planning Agency, *Economic Survey of Japan: 1996–1997*, (Tokyo: Government of Japan, 1997), p. 77.

[51]For a discussion of fiscal federalism in Japan, see D. Mihaljek, "Intergovernmental Relations and Local Public Finance in Japan," in Teresa Ter-Minassian (editor). *Fiscal Federalism in Theory and Practice* (Washington DC: International Monetary Fund, 1997). Mihaljek presents evidence to suggest that decentralization of spending responsibility has tended to help reduce total public spending in Japan, but notes that the relatively modest local government tax base reduces the incentives for expenditure efficiency.

CHART II.8
JAPAN
PUBLIC INVESTMENT INDICATORS, 1975–97



Source: Bank of Japan; staff estimates.

in the sense that most spending and tax policies are set by the central govenment. However, while roughly two thirds of total public investment is funded by the central government's general account or the FILP, over 70 percent of spending is actually performed by local governments and public enterprises (Chart II.8).[52] As a result, though local governments collect only about 40 percent of tax revenues in Japan, they administer well over 50 percent of government spending, a difference that is well above the ratio in other countries. The fact that only a modest share of local government investment is funded from own tax revenues reduces incentives to achieve efficiencies.

59. **The use of public investment to achieve distributional objectives also has contributed to inefficiencies**. An explicit policy objective for public investment spending in Japan has been to "correct regional disparities," which has meant that spending is skewed toward low-income and rural regions.[53] Political factors may also have affected the distribution of spending; rural areas have a relatively large voting weight in the Diet.[54] Econometric evidence prepared by the Economic Planning Agency suggests that the return to social capital in cities is roughly twice the rate of return in the outlying regions.[55]

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[52] Funding of local government projects from the central government's general account is principally in the form of grants, earmarked for specific projects. In addition, the FILP provides loans, either directly to public enterprises and public financial institutions, or in the form of purchases of local authorities' bonds.

[53]See, for example, the June 1997 Cabinet decision on fiscal structural reform.

[54]Yoshihisa Kitai, "The importance of public investment in local regions," in *LTCB Monthly* (November 1997) reports that there has been a strong positive correlation between the number of Diet seats per capita and cumulative public investment per capita in different regions. Rural areas also have a disproportionate voting weight in the Diet owing to the massive shift in the population toward urban centers occurred during the 1950s and 1960s. The emphasis on using public investment to equalize income across regions also intensified after 1970 in response to the disparities that resulted from rapid growth of urban areas during the previous decade. The November 1994 Election System Reform Bill, which shifted a number of seats from a proportional constituency to a winner-take-all basis, is expected to reduce relative importance of rural constituencies in the Diet.

[55]The social capital stock in urban areas is considerably lower than in rural regions. For example, in Tokyo, Osaka, and Nagoya is there is only one mile of paved road per automobile versus over two mile per automobile in the regions. Other indicators (including number of hospital bed, libraries, and nursing homes) are similarly skewed. See Economic Planning Agency, *Economic Survey of Japan: 1996–1997* (Tokyo: Government of Japan, 1997), pp. 75-85.

60. **A specific example of the effect of distributional objectives on efficiency is reverse contracting**. Local government and public corporations have tended to favor small- and medium-sized contractors during the bidding process (in some cases, companies were required to be headquartered in the area in which the project was to be implemented).[56] In practice, however, local contractors subcontract out projects to larger companies, in turn restricting competition and increasing project costs.

61. **Inflexible project allocations are another source of inefficiency**. Ministries' share of public investment is determined on the basis of negotiations between the spending ministries and the Ministry of Finance. The share of funds allocated toward projects administered by the Ministry of Construction and the Ministry of Agriculture have remained relatively high and constant over the last 20 years, possibly reflecting the political importance of the construction and agricultural sectors (tabulation below). Some observers suggest that this has implied excessive construction of dams, ports in rural areas, and agricultural infrastructure projects.[57]

Share of Public Works in
Japan's General Account, by Objectives
(In percent)

	1975	1985	1990	1995	1996	1997
Flood prevention and irrigation	16	16	18	15	15	15
Roads	32	27	29	26	26	27
Ports, fishery ports, and airports	8	7	8	7	6	7
Housing	9	14	12	12	14	14
Sewerage	10	14	15	15	16	17
Agricultural infrastructure	12	13	14	13	13	13
Forestry roads	3	2	3	3	3	4
Other (including disaster relief)	10	7	1	7	8	4

Source: Ito, *The Japanese Economy*, and data provided by Japanese authorities.

[56]A recent report by the Central Council on Construction Contracting Business "Future Directions of the Construction Industry Coping with Structural Change of the Market" (February 4, 1998) has called for limits on the practice.

[57]For a discussion, see Takatoshi Ito, *The Japanese Economy* (Cambridge MA: MIT Press, 1996), Chapter 6.

62. **Noncompetitive and nontransparent bidding procedures have significantly inflated construction costs.** The OECD estimates that the cost of civil engineering projects is 80 percent higher in Japan than in the United States and almost 60 percent above costs in the European Union.[58] High costs reflect high domestic prices and practices that have limited competition, including from foreign firms, including reverse subcontracting and the designated bidder system (which restricts the firms eligible to bid on contracts to those that have demonstrated an ability to work in Japan). In addition, "discretionary contract procedures" (*zuii-keiyaku*)—which allows local governments to assign design and consulting projects without competitive tenders, and the practice of prearranging the winner of public works tenders (*dango*) are reported to be common.[59]

63. **Weak governance, and the close ties between the government and corporate sectors, may also have exacerbated waste and inefficiency.** The Ministry of Construction wields significant influence over the construction industry—it is responsible for licensing firms, establishing eligibility criteria for tenders, and formulating spending priorities.[60] At the same time, however—the practice of *amakudari*—i.e., of hiring retired government officials—is especially prevalent in the construction industry.

Recent efforts to reform public investment

64. **An Action Plan on the Reform of the Bidding and Contracting Procedures for Public Works was adopted by the government in 1994.** The Plan included commitments to hold open tenders for projects, and reduce constraints on foreign firms, established more transparent bidding procedures, and sought to limit the scope for bid rigging (*dango*). More recently, the *Action Guidelines on Measures to Reduce Public Works Costs* were adopted as part of a June 1997 cabinet decision. The Guidelines aimed at reducing the cost of public works by at least 10 percent over the three-year period beginning in FY1997, and included a commitment to curbing "illegal acts."

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[58]OECD, *Economic Survey, Japan 1997* (Paris: Organization for Economic Cooperation and Development, 1997), pp. 66–69.

[59]For example, it is reported that books are published that list preset prices for construction projects and lists companies that are allowed to supply materials. For a discussion, see Mark Tilton, "Regulatory Reform, Antitrust, and Market Opening in Japan," in Mark Tilton and Lonny Carlile (editors), *Is Japan Changing Its Ways? Regulatory Reform and the Japanese Economy* (Washington, D.C.: The Brookings Institution Press, forthcoming). Efforts to reduce bid rigging intensified following a number of high-profile bribery scandals in 1994.

[60]William H. Cooper, "Japan—U.S. Trade: The Construction Services Issue," Congressional Research Service: Report No. 93-957E (November 1993).

65. **In addition, a Reassessment System has been adopted in order to improve the efficiency of ongoing public works projects.** The system involves a review of project implementation five years after approval including consideration of: (i) progress toward completion; (ii) the social and environmental implications of the project; (iii) potential revisions to the cost-benefit implications of the project; and (iv) consideration of the scope for cost cutting. Sixty-eight projects were canceled in FY 1998 under this system. Moreover, cost-benefit analysis for pubic works also has begun to be applied. The system was adopted on a trial basis in FY 1997, and was applied more widely beginning in FY 1998.[61]

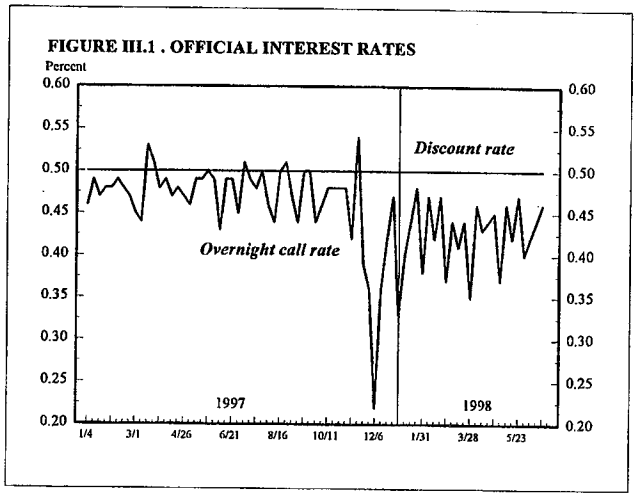
66. **Most recently, a Private Financing Initiative has been endorsed by the Government.** This initiative is modeled on a similar U.K. program that aimed to increase private sector involvement in implementation and administration of public works projects. The Government envisages encouraging greater private sector involvement in three areas: (i) projects where user fees are involved, including toll roads; (ii) projects where the public and private sectors had a joint interest, including urban renewal; (iii) projects where private sector administration of facilities was practical, e.g., prisons.

[61]Although the cost-benefit analysis appears to be somewhat rudimentary, insofar as it focusses on comparing projects within sectors, but not across different sectors.

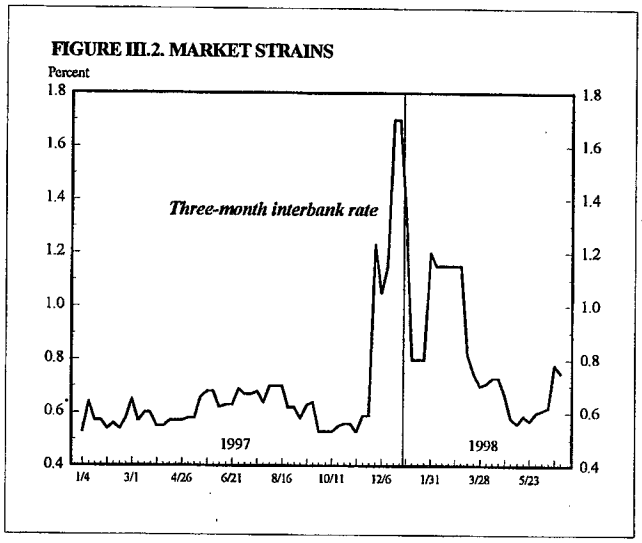
III. Monetary Policy Issues[1]

A. Recent Developments

1. **Monetary policy continued to be highly accommodative over the last year (Figure III.1).** The official discount rate (ODR) has remained at a record-low of ½ percent since September 1995, and the operational policy target—the uncollateralized overnight call rate—has been held slightly below the ODR. Long-term interest rates on government bonds have fallen steadily since the economy started to slow in early 1997, and in June reached the lowest levels in recorded history (Chart III.1).



2. **The Japanese interbank market has been subject to considerable turbulence since November 1997 (Figure III.2).** The collapse of Sanyo Securities in the first week of November resulted in the first-ever default in the overnight call money market, and was followed in mid-month by the failures of Hokkaido Takushoku Bank (HTB) and Yamaichi Securities. Concerns about counter-party risk related to possible further financial failures drove up market interest rates (including the "Japan premium" in international markets) and limited interbank liquidity, particularly for weaker institutions and for transactions maturing after March 31, 1998 (the end of the financial year). Market pressures eased considerably after March, but intensified again in June on market concerns largely associated with the Long-Term Credit Bank (LTCB).



3. **To help curb the rise in short-term interest rates, and to stabilize market conditions, the Bank of Japan (BoJ) has supplied ample liquidity to the financial system, thereby relieving strains on financial institutions.** As an immediate consequence of the November financial failures, the BoJ increased its loans under Article 38 (which

[1]Prepared by Tamim Bayoumi.

allows the BoJ to provide financing to financial institutions in the process of being closed) by around ¥3½ trillion yen, mainly to HTB and Yamaichi Securities, and also provided liquidity through loans under Article 33 (which allows the BoJ to provide financing to solvent institutions).[2] In addition, the BoJ injected longer-term liquidity (up to 3 months in duration) to the market by buying bills, commercial paper, and Japanese government bonds (JGBs) through repo operations.[3] These "twist" operations[4] helped to reduce the end-March hump in the yield curve. It also provided support for financial intermediation through the commercial paper market, thereby allowing banks facing liquidity shortages to maintain commercial ties with clients.

4. **These operations led to a rapid increase in the BoJ's balance sheet**. Total assets ballooned by ¥29.1 trillion at the end of March 1998 compared to a year earlier, an increase of almost 50 percent. Short-term market operations were ¥15.4 trillion higher than a year earlier—¥6.1 trillion in JGB-repos, ¥5.2 trillion in additional bills (including commercial paper), and ¥4.1 trillion in additional loans.[5] The remainder of the expansion in the BoJ's balance sheet largely reflected double counting of repo operations (both the underlying asset and the cash collateral are booked on the asset side, with equivalent double counting for liabilities) and an increase in holdings of government bonds. Short-term market support has been substantially reduced since the end of the financial year, falling by over half between end-March and end-June, with Article 33 loans to solvent institutions being almost fully repaid (some of the decline in short-term operations was also seasonal in nature). Market reports suggest that the BoJ has again been injecting large amounts of liquidity in June and July in response to market disruptions associated with uncertainties about the LTCB, through repurchase operations using JGBs and commercial bills.

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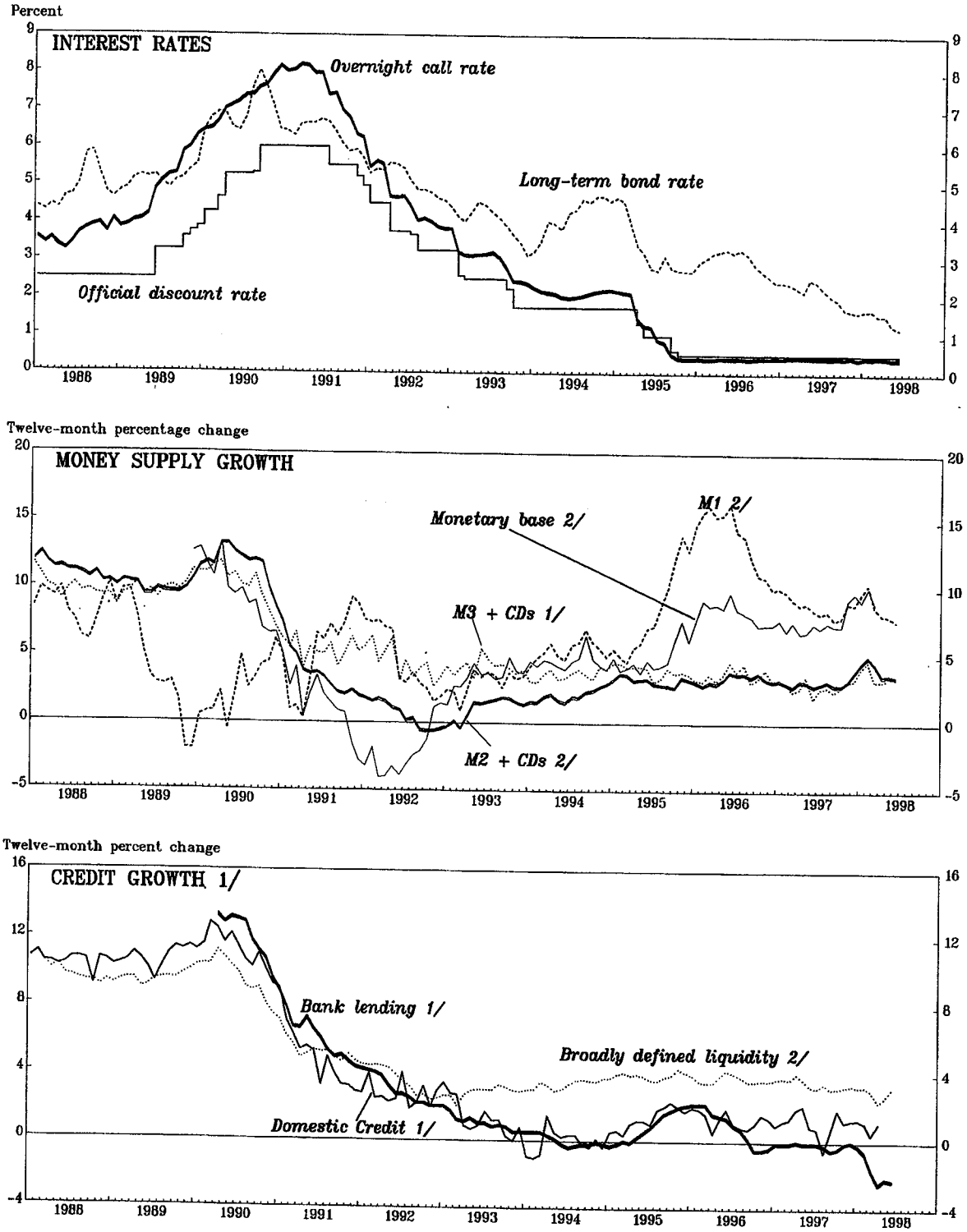
[2]The current Article 38 was called Article 25 before the new Bank of Japan Law became effective from April 1998. Similarly, Article 33 was earlier known as Article 20.

[3]BoJ repo operations using JGBs were first introduced in October 1997, to assist in implementing open market operations.

[4]So called because they aim to "twist" the yield curve.

[5]Including loans under Article 38.

CHART III.1
JAPAN
INTEREST RATES, MONEY, AND CREDIT, 1988-98



Sources: Nikkei Telecom, WEFA, and staff estimates.

1/ End of period.
2/ Period average.

Balance Sheet of the Bank of Japan: Assets
(In trillions of yen; end month)

	1997				1998	
	March	June	Sept.	Dec.	March	June
Loans	1.1	1.1	0.8	4.6	5.2	3.1
Of which: Article 38	(0.3)	(0.3)	(0.4)	(3.7)	(3.2)	...
JGB repos	0.0	0.0	0.0	2.3	6.1	2.4
Bills (including commercial paper)	5.4	1.3	4.8	9.5	10.6	3.6
Short-term operations	6.5	2.4	5.6	16.4	21.9	9.1
Double counting	0.0	0.0	0.0	2.3	6.1	2.4
JGBs	46.4	52.1	45.6	47.4	52.8	55.6
Total assets	62.4	61.3	56.5	71.4	91.5	75.4

Source: Bank of Japan.

5. **While most of the asset expansion was sterilized through sales of BoJ bills, some of the increase leaked through into the monetary base**, which accelerated modestly from a 12-month rate of increase of around 7 percent in early 1997 to over 10 percent in late 1997 and early 1998 (Chart III.1). This was accompanied by accelerations in the monetary aggregates—M1, M2+CDS, and M3+CDS. However, there was no appreciable impact on wider measures of monetary conditions, such as broadly defined liquidity which, if anything decelerated over the period. The lack of impact on wider measures of monetary conditions reflected a shift in portfolio preference toward more liquid assets in response to the low level of interest rates.

6. **The new Bank of Japan Law, which became effective from April 1998, has increased the BoJ's independence**. Monetary policy is now decided by a nine-person Policy Board that meets twice-monthly, made up of the BoJ Governor, two Deputy Governors, and six non-BOJ officials, mainly business people and academics. The Government is allowed to send representatives to the meetings; they have no voting power, but can request (although not insist on) a delay in implementation of any policy changes. Any decisions with regard to monetary policy are announced immediately after the conclusion of the meeting, while minutes are published with a delay of approximately one month. The minutes indicate that the discussions have been lively, and that a wide range of considerations and views are currently contributing to the setting of policy. Decisions have not been unanimous recently, with some members of the Board apparently favoring lowering nominal interest rates further.

So far, such a step has been resisted for several reasons, including a reluctance to utilize the last remaining scope for interest rate action.[6]

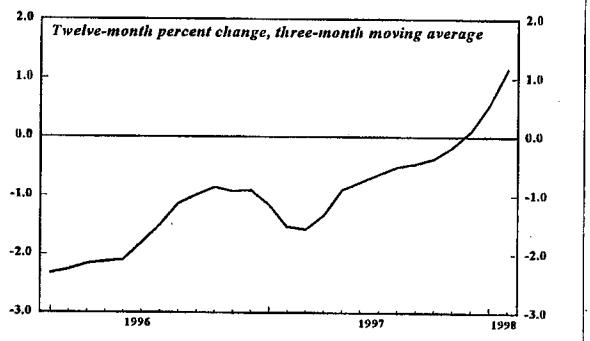
B. Has There Been A Credit Crunch?

7. **Bank lending, which had been lackluster since late 1996, weakened significantly after the failures of Sanyo Securities, HTB and Yamaichi Securities in late 1997 (Chart III.1).** By June 1998, outstanding bank loans hit a six-year low. This tightening of bank credit, which has occurred in spite of a highly accommodative monetary policy, occurred against a background of rising bankruptcies and negative assessments by businesses of banks' willingness to lend. Many commentators have argued that Japan is experiencing a "credit crunch," in which curbs on bank lending are forcing otherwise viable businesses into liquidation, weakening confidence and hurting activity.

8. **Surveys of corporate sentiment confirm that credit conditions tightened in late 1997 and early 1998 (Chart III.2).** Responses to the *tankan* survey question on banks' willingness to lend have deteriorated rapidly for all categories of enterprise, to levels not seen since the bursting of the asset price bubble in the early 1990s; surveys that focus specifically on small- and medium-sized enterprises (SMEs) show an even more striking deterioration in sentiment. Rising bankruptcies provide further indications of the impact of tightening credit conditions. While the recent weakness of activity would imply some increase in bankruptcies, current bankruptcy rates are significantly above predictions from a simple indicator model.[7]

9. **Loans to the business sector from public financial institutions were increased to help alleviate the downturn in private sector lending (Figure III.3).** By early 1998, loans to businesses from public sector financial intermediaries were rising at an annual rate of over 1 percent, after falling through 1996 and most of 1997. However, the increase in public sector credit was insufficient to significantly offset weakness in the private sector (loans from

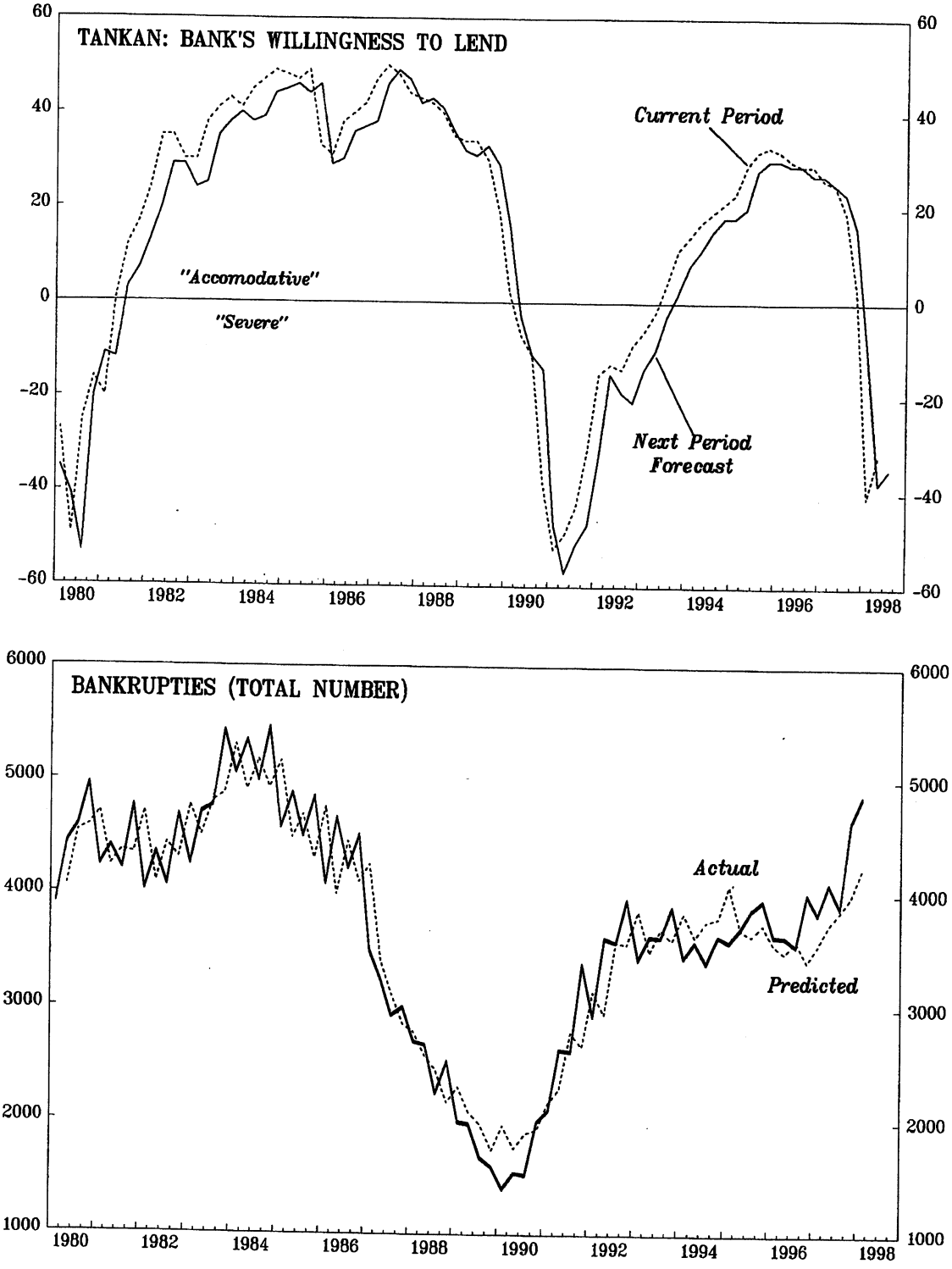
FIGURE III.3. PUBLIC SECTOR LOANS TO BUSINESS



[6]See, in particular, the minutes to the Policy Board meeting on June 12, 1998.

[7]The model relates the number of bankruptcies to their own lagged value, the output gap, the prime rate, and a time trend (the regression is BANKRUPT = 0.74*BANKRUPT(-1) - 13241*OUTPUT GAP + 18379*PRIME RATE + 42*TIME - 70832). Similar results are also found using the value of bankruptcies, instead of the number.

CHART III.2
JAPAN
INDICATORS OF CORPORATE DISTRESS, 1980-98

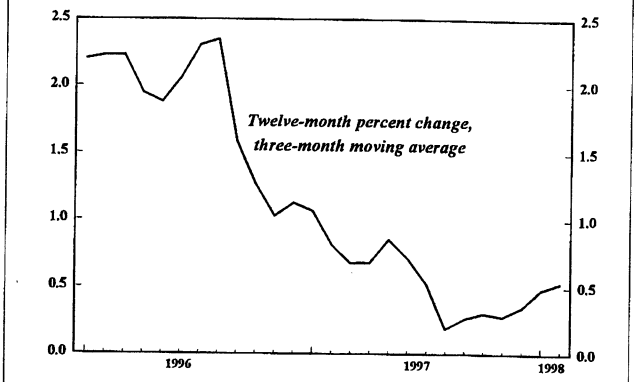


Sources: Nikkei Telecom, WEFA, and staff estimates.

public sector financial intermediaries to business are a relatively small proportion of the equivalent loans from private banks).[8]

10. **The tightening of bank credit has been particularly severe for small- and medium-sized enterprises (Figure III.4)**. Bank loans play a relatively important role in financial intermediation in Japan.[9] This is particularly true for SMEs, which receive over two-thirds of bank loans and have very limited access to alternative sources of funds.[10] Previous staff work has linked the anemic performance of SMEs over the early- to mid-1990s to constraints on bank financing.[11] These difficulties have continued—bank credit to SMEs decelerating significantly in 1997.

FIGURE III.4. SMALL- AND MEDIUM-SIZED ENTERPRISE LOANS



11. **Tighter bank credit has coincided with cut-backs in investment plans, particularly at smaller companies**. The June 1998 *tankan* survey indicates that fixed investment by small enterprises fell by 4½ percent in FY1997—4 percentage points more than for large companies. Spending cutbacks appear likely to continue. In the same survey,

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[8]Government loans to businesses were calculated as the sum of outstanding loans of the People's Finance Corporation, Japan Finance Corporation for Small Businesses, Small Business Credit Insurance Corporation, Japan Development Bank, Hokkaido and Tohoku Development Corporation, and Environmental Sanitation Business Finance Corporation.

[9]This is true in most non-"Anglo-Saxon" financial systems. For a comparison of financial system across a wide range of advanced countries see Claudio Borio, "Credit Characteristics and the Monetary Transmission Mechanism in Fourteen Industrial Countries," in K. Alders, K. Koedijk, C. Kool and C. Winder *Monetary Policy in a Converging Europe* (Amsterdam: Kluwer Academic Publishers, 1996).

[10]See Mitsuhiro Fukao, "Japanese Financial Instability and Weakness in Corporate Governance Structure," mimeo, Keio University (1998). While financial deregulation allowed large corporations greater access to bond markets since the late 1980s, there is no significant junk bond market to provide such funds for smaller firms.

[11]Robert Westcott, "Assessing the Risks of a Credit Squeeze Among Small- and Medium-Sized Enterprises in Japan," in *Japan—Selected Issues*, IMF Staff Country Report 96/114 (October 1996)

FY1998 spending by small companies is planned to be 19 percentage points lower than in the previous year, compared to a fall of 1¼ percentage points for their larger brethren.

12. **Several factors suggest the tightening of availability of bank lending does not simply reflect a lack of funding capacity or limited demand for bank lending:**

- Bank deposits have continued to increase, and the gap between the change in bank loans and bank deposits has widened to record levels.

- The amount of outstanding commercial paper and bills rose after November 1997, in spite of weak activity and higher interest costs.

13. **Macroeconomic factors only partly to explain recent loan activity.** To investigate the size of the autonomous decline in bank lending, a demand function was estimated relating bank loans to real GDP, the prime rate, and real land prices (to represent the impact of declines in the value of collateral). If banks were constraining their credit below "normal" demand, this equation should over predict actual behavior. A dynamic forecast since end-1996 indicates that by first quarter of 1998 predicted lending was about 4 percent higher than actually observed (Chart III.3).

Bank Loan Equation

The equation was estimated over 1980Q1–1996Q4. The results (with t-statistics reported in parentheses) were:

$$\Delta\log(\text{REAL LOANS}) = \underset{(8.8)}{0.72}*\Delta\log(\text{REAL LOANS})_{-1} + \underset{(2.5)}{0.38}*\Delta\log(\text{REAL GDP}) - \underset{(1.8)}{0.45}*\Delta\text{PRIME RATE} - \underset{(2.8)}{0.05}*\log(\text{LONG RUN})_{-1} + \underset{(1.0)}{0.0016},$$

$R^2 = 0.63$, DW = 2.41,

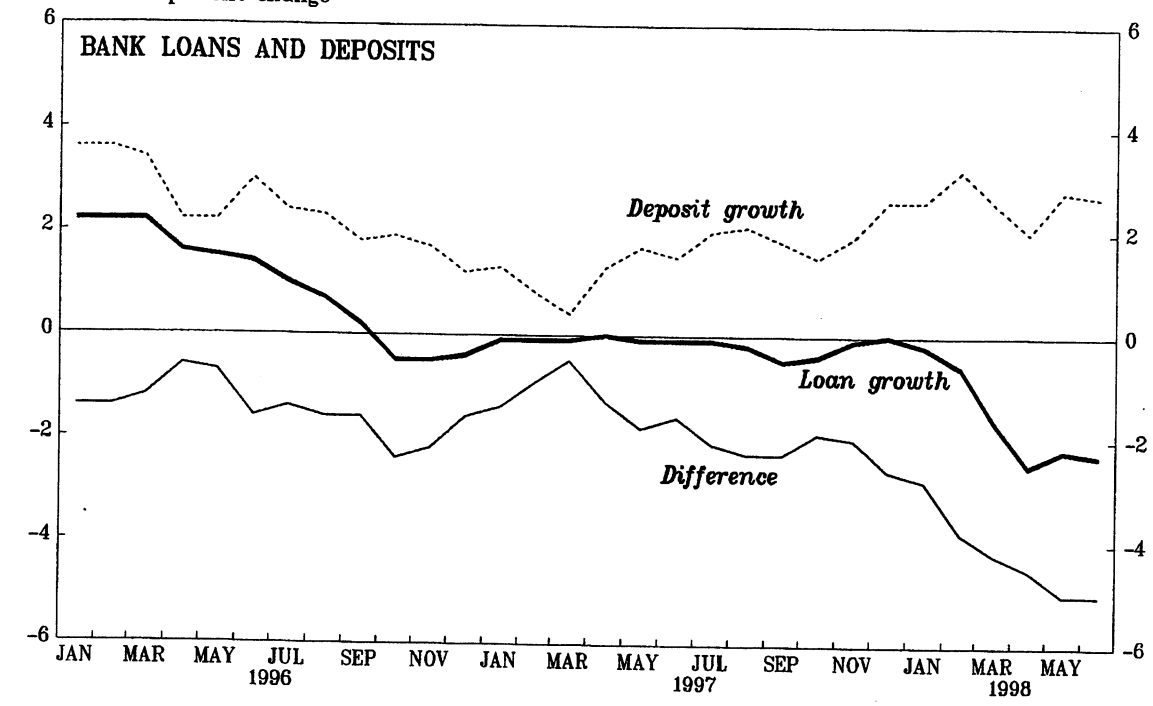
where LONG RUN = log(REAL LOANS) - 1.46*log(REAL GDP) + 4.65*PRIME RATE - 0.23*log(REAL LAND PRICES) + 8.98,

14. **Increasing attention to loan quality, shortage of bank capital and financial turbulence also played important roles in limiting credit (Chart II.4):**

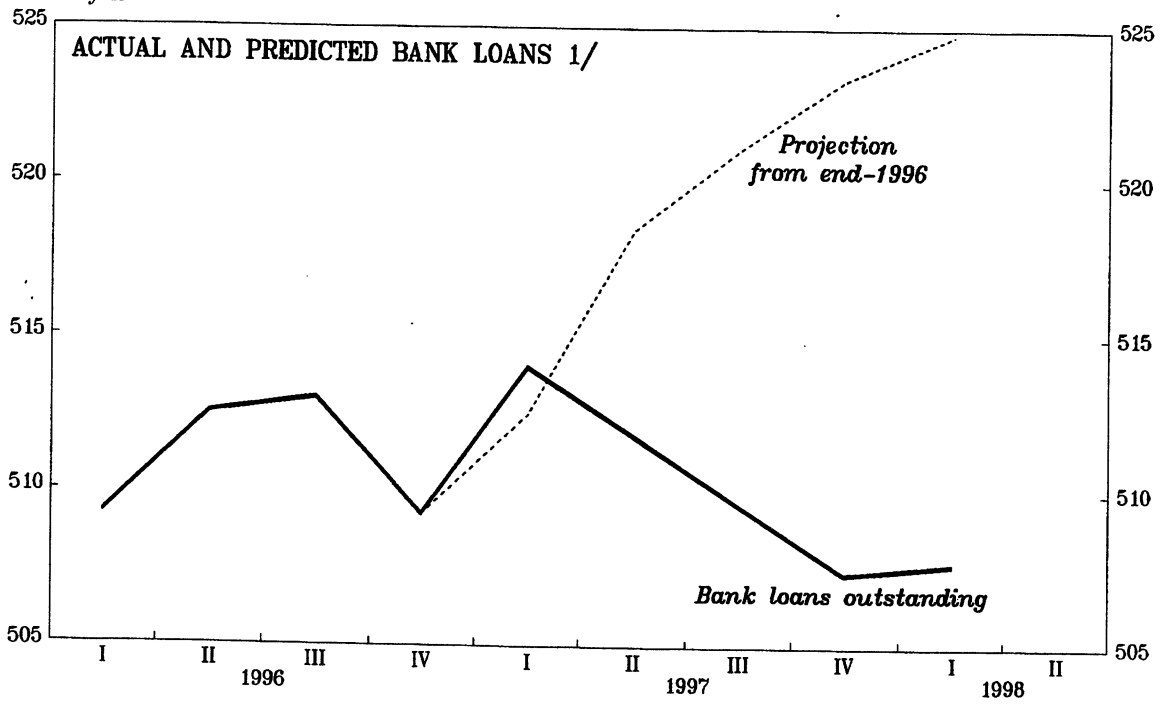
- **Increasing attention to loan quality.** The "big bang" financial reforms are causing banks and financial markets to become more aware of credit risks. (This has been clearly reflected in wider spreads for higher risk bonds—for example, the spread between 5-year Baa corporate bonds and the equivalent government security has

CHART III.3
JAPAN
BANK LOANS, 1996-98

Twelve-month percent change



Trillion yen



Sources: Nikkei Telecom, WEFA, and staff estimates.

1/ Projection from staff model reported in the text.

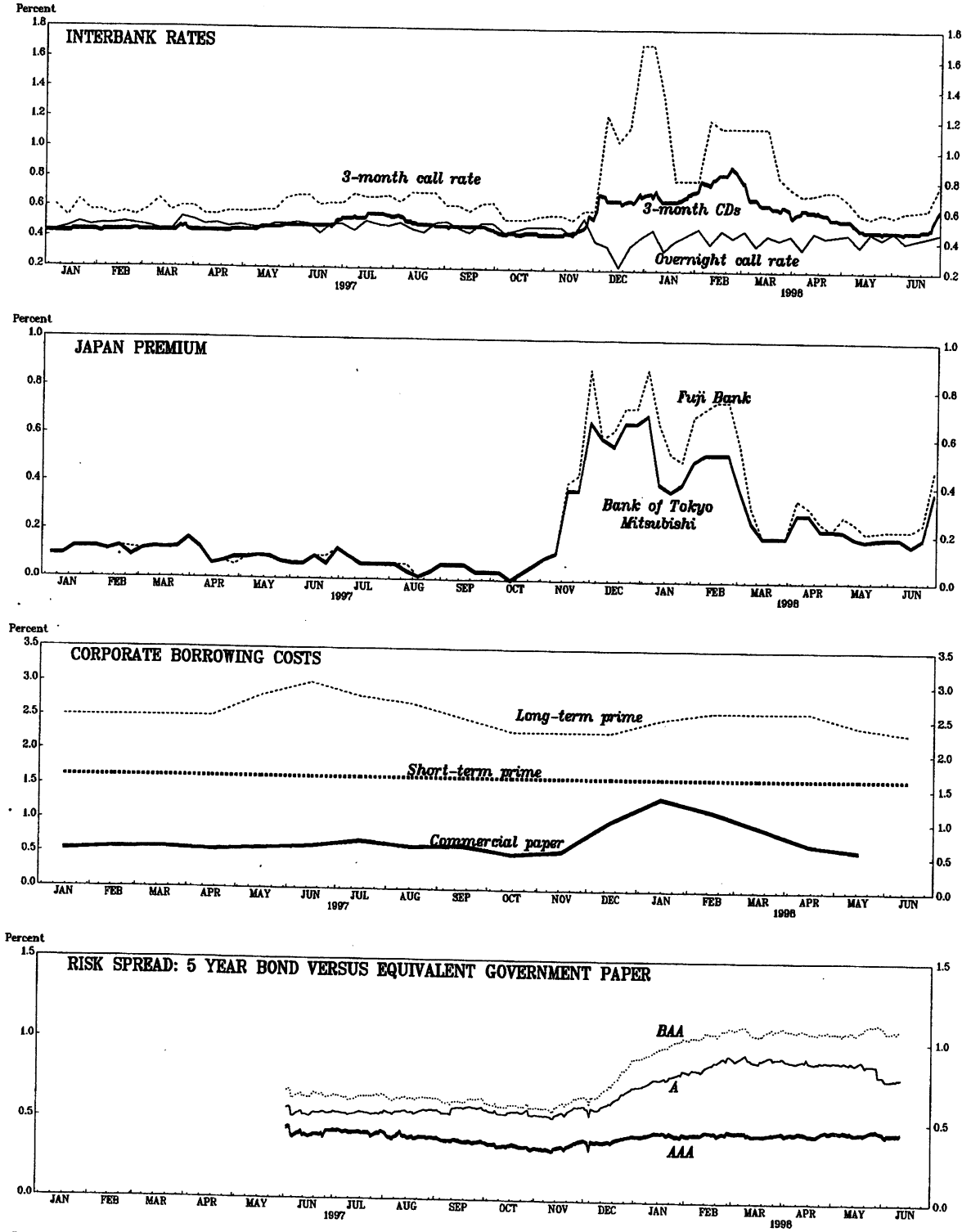
almost doubled since September to 110 basis points.) Banks' attention to loan quality has been heightened by the need for more stringent assessment of loan quality and provisioning requirements as part of the system of prompt corrective action (PCA) introduced on April 1, 1998. The shift away from the convoy system (in which stronger financial institutions were expected to assist their weaker brethren) and greater competition as market barriers are reduced have increased pressures to strengthen balance sheets.

- **Shortage of bank capital.** At the same time as the rewards to strong capitalization have increased, bank capital has been eroded by declining equity prices and the increased need to provision against bad loans. With low equity valuations increasing the cost of raising capital on the market, banks have preferred to shrink their risk-weighted asset base to enhance capital adequacy, largely by cutting bank lending. The major banks reduced their risk-weighted assets by 4 percent during FY1997.

- **Financial turbulence.** The collapse of HTB and Yamaichi Securities in November 1997 triggered sharp increases in bank CD rates and the Japan premium. Significant differences in funding costs between banks regarded by the markets as strong or weak have also become evident. To a significant extent, the interbank market ceased to provide a ready source of funds, despite large liquidity injections by the Bank of Japan. Higher funding costs for banks in turn put upward pressure on loan rates, even though the official discount rate remained at its record low of ½ percent.

15. **In sum, the heart of the "credit crunch" lies in a combination of increased sensitivity to risk and short-term liquidity shortages for banks**. The increased awareness of risk implied by higher spreads is in many respects a welcome development in Japanese financial markets, and over the longer term will improve the allocation of capital. It is unfortunate, however, that this reevaluation of credit risk coincided with a period of economic weakness, in which the ability of firms to obtain loans was already deteriorating along with overall economic conditions. The timing of banks' short-term liquidity problems, reflecting the failure to deal with underlying banking sector problems, has been even more unfortunate from a macroeconomic perspective, as the resulting constraints on bank loans amplified existing economic weaknesses related to fiscal consolidation and the Asia crisis.

CHART III.4
JAPAN
PRIVATE MARKET INTEREST RATE DEVELOPMENTS, 1997-98



Sources: Nikkei Telecom, WEFA, and Bank of Japan.

C. How Could Monetary Policy Further Support The Economy?

16. **With short-term interest rates close to their floor of zero, can monetary policy be used to further stimulate activity?** There are five main channels through which an expansionary monetary policy could, in principle, support the economy:[12]

- The **interest rate effect** in which lower short-term interest rates stimulate interest-sensitive components of demand such as investment and consumer durables.

- The **exchange rate effect** in which a lower differential between domestic and foreign interest rates leads to a depreciated real exchange rate and higher net exports.

- The **credit effect** in which monetary policy encourages greater financial intermediation. This can occur directly through encouraging bank lending (for example, by increasing banks' lending capacity), or indirectly through reducing frictions in credit markets caused by moral hazard and adverse selection (for example, by improving operating profits and collateral).

- The **wealth effect** in which increases in outside money, liquidity, and asset prices raise private wealth, which then encourages higher private sector spending.

- The **expectations effect**, in which expectations of higher future inflation reduces real interest rates and depreciates the exchange rate by lowering expectations of its future nominal value.

17. **The recent weakening of the real exchange rate has provided some support for the economy**, as shown by recent movements in the monetary conditions index (MCI), which is a weighted-average of the real interest rate and real exchange rate, and is used by the staff to measure monetary conditions (Chart III.5).[13] However, the Asia crisis limits the usefulness of the exchange rate channel in further reviving the economy, as a significant devaluation of the yen could exacerbate the financial crisis in the rest of Asia, hurting regional activity and partially offsetting any direct benefits to Japan's net exports.

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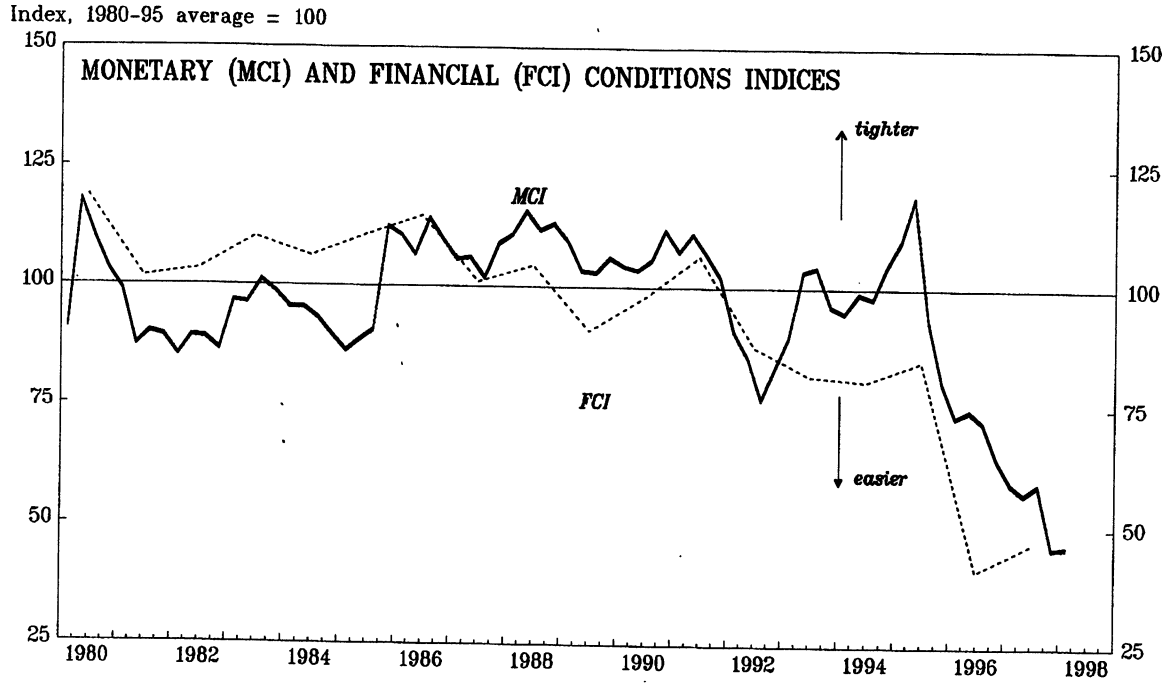
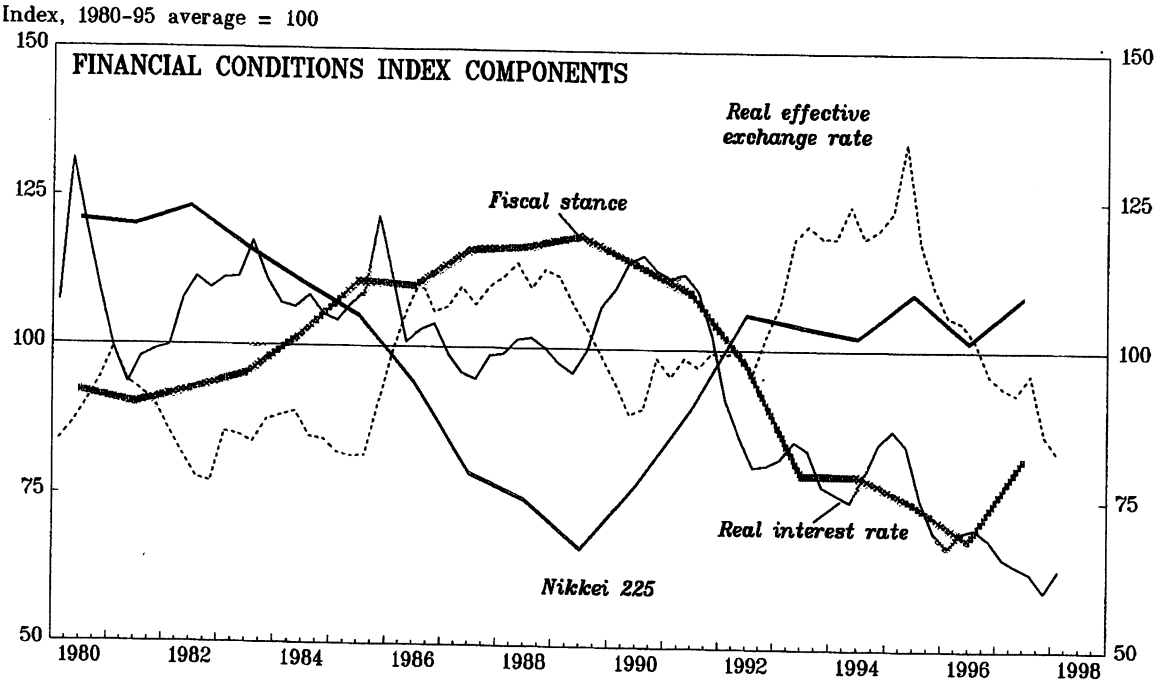
[12]For more details see the papers contained in a symposium on the monetary transmission mechanism published in the Fall 1995 *Journal of Economic Perspectives*, Vol. 9:4.

[13]See G. Lipworth and G. Meredith, "Indicators of Monetary and Financial Conditions: A Reexamination" in B. Aghevli, T. Bayoumi and G. Meredith (eds.), *Structural Change in Japan: Macroeconomic Impact and Policy Challenges* (Washington: International Monetary Fund, 1998).

CHART III.5
JAPAN

INDICATORS OF MONETARY AND FINANCIAL CONDITIONS, 1980-1998 1/





Sources: Nikkei Telecom, WEFA, and staff estimates

1/ An increase indicates a tightening of monetary and financial conditions. The MCI is a weighted average of changes in the real interest rate and the real exchange rate. The FCI also includes the change in the fiscal stance and the stock price index; this index is presented on an annual basis because quarterly fiscal data are not available.

18. **The BoJ has used shifts in its asset portfolio to support the credit channel.** The credit channel is normally viewed as an adjunct to interest rate policy, with lower official interest rates encouraging credit creation by widening banks' spreads and improving borrowers' profitability and borrowing capacity.[14] However, with banks under pressure to prune their loan portfolios and improve loan quality in order to strengthen balance sheets, credit conditions have become a major constraint on the effectiveness of monetary policy. By buying large amounts of commercial paper from banks on a repo basis, the BoJ allowed banks to provide credit to clients while limiting the impact on their risk-weighted assets.[15] Such direct support for credit channel is generally only useful at times of financial stress, when bank lending is being severely constrained by short-term factors.

19. **The wealth effect may be of limited use given the low level of interest rates.** Open market operations can be used to inject liquidity into the economy, either through banks or by direct purchases of real or financial assets, which may then be spent on goods or assets. With interest rates so low and the financial system weak, however, the distinction between money and other financial assets may well be blurring, with individuals becoming indifferent as to which they hold. In short, Japan may be approaching a liquidity trap, implying that expanding the monetary base by itself will not add significantly to aggregate demand.

20. **The final policy option would be to use the expectations effect, lowering real interest rates by increasing expectations about the future level of inflation.** The staff has previously argued that a positive inflation target could make monetary policy more effective and would help forestall deflationary pressures.[16] More recently Professor Krugman has argued that this expectations channel is the only way to make monetary policy effective in an economy such as Japan that may be in a liquidity trap.[17] Recent staff work using

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[14]B. Bernanke and M. Gertler "Inside the Black Box: The Credit Channel of Monetary Policy Transmission," *Journal of Economic Perspectives*, Fall 1995, Vol. 9:4, pp. 27–48.

[15]Some commentators have suggested that such operations could potentially be made more aggressive by buying assets outright, which would increase spending power by providing liquidity (and wealth) to the economy directly, at the cost of the authorities accepting the credit risk of the borrower. (The BoJ's recent operations mainly involved purchasing financial assets on a repo basis, so that the credit risk remained with the banks).

[16]G. Meredith, "Monetary Policy: A Summary of Staff Views," in B. Aghevli, T. Bayoumi, and G. Meredith (eds.), *Structural Change in Japan: Macroeconomic Impact and Policy Challenges*, (Washington: International Monetary Fund, 1998).

[17]Paul Krugman, "Japan's Trap," http:/web.mit.edu/krugman/www/japtrap.html. Briefly, the argument is that when equilibrium real interest rate and inflation expectations are both very low, the implied equilibrium nominal interest can be such that money and bonds become

(continued...)

MULTIMOD indicates that expectations of higher inflation could provide a significant boost to real activity if the commitment to higher inflation could be made credible.[18] The real interest rate would be reduced without any fall in nominal interest rates, while expectations of a higher future price level would trigger an immediate exchange rate depreciation, thereby lowering the real exchange rate.[19]

21. **A difficulty with implementing such a policy is making the commitment to higher inflation credible when the conventional levers of monetary policy appear largely ineffective**. Relying on public statements pledging the BoJ to reflation would be unlikely to be sufficient even when combined with more concrete actions, such as using the limited remaining room to lower nominal interest rates. A more tangible change in policy regime, involving the adoption of an explicit, above-zero, inflation target, would have more chance of success. Even in this case, however, the effectiveness of the strategy is open to doubt, because it would depend upon convincing markets that the BoJ would continue with a higher inflation target in the longer run. Success would bring its own difficulties, including the dilution of the Bank of Japan's hard-won anti-inflationary credentials and, perhaps even more importantly in current circumstances, the danger that the associated exchange rate depreciation could further destabilize financial markets in the rest of Asia.

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[17](...continued)
perfect substitutes. Increasing inflation expectations breaks this impasse.

[18]The size of the boost to activity is quite sensitive to the baseline, however, as it depends on the length of time that monetary policy is projected to be significantly constrained by the floor of zero percent on nominal interests rates.

[19]The rise in the expected future price level caused by higher expected inflation would tend to lower expectations about the future nominal value of the yen. With unchanged nominal interest rate differentials, such a future expected nominal depreciation would cause a depreciation of the current exchange rate.

IV. Resolving Japan's Banking System Problems[1]

A. Origins of Banking System Weakness and the Emerging Policy Response

1. **The roots of Japan's banking problems lie in the asset price inflation of the late 1980s.** Initial steps towards financial liberalization starting in the mid-1980s allowed small unsophisticated financial institutions (such as credit cooperatives) to venture into new areas, particularly funding housing finance companies affiliated to banks (the *jusen*) and other real estate investments. At the same time, with large corporations increasingly obtaining funds directly from capital markets, lending by the major banks also was increasingly directed toward real estate projects and small- and medium-sized enterprises, often collateralized by real estate. Rapid credit growth was accompanied by a doubling of stock prices over the second half of the 1980s and a massive rise in commercial real estate prices, which increased by 400 percent. A sharp increase in interest rates in 1990 burst this asset price bubble. Stock prices fell abruptly in 1990–91, and land prices continued to decline over the following seven-year period.

2. **Bank provisioning following the asset price collapse has been gradual.** In the absence of public funds and with limited scope for raising funds in equity markets, banks limited the pace of provisioning to that afforded by the resources from operating income and the realization of latent gains on stock holdings.[2] A departure from this pattern occurred at the end of FY1995, when banks made special provisions with a modest financial assistance from the government, in order to address the problems of the *jusen*. In the seven years through March 1998, the 19 major banks have set aside ¥37 trillion in provisions and write offs (Figure IV.1), which were only partially offset by the realization of ¥13 trillion in capital gains from stock holdings. For most of the period, the stock of disclosed nonperforming loans, net of reserves, remained at levels corresponding to a couple of years' operational income, with a continuous flow of new problem loans requiring new provisioning efforts.

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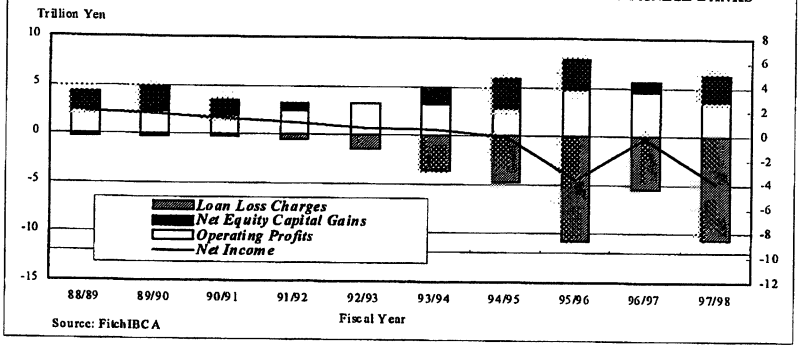
[1]Prepared by Joaquim Levy.

[2] Japanese banks have traditionally held a large portfolio of stocks. Banks' stockholdings corresponded to about 17 percent of the capitalization of the Japanese stock market in the mid-1970s, a share that rose to more than 25 percent by 1988, reflecting the expansion in cross-shareholdings among financial as well as nonfinancial corporations. Owing to the historical appreciation of stock prices, capital gains on these stocks, until realized, were translated into sizeable hidden reserves. The Nikkei 225 stock price index increased five fold in 1970–85, and another 350 percent in the following five years. In accordance with the 1988 Basle agreement establishing the capital adequacy requirement of 8 percent of risk-weighed assets, the Japanese authorities have allowed banks to include 45 percent of hidden reserves in Tier-2 capital.

The persistent deterioration of banks' profitability (the banks cumulated ¥6 trillion in losses over the period) led to a continuing decline in their stock prices and credit ratings (Chart IV.1) .

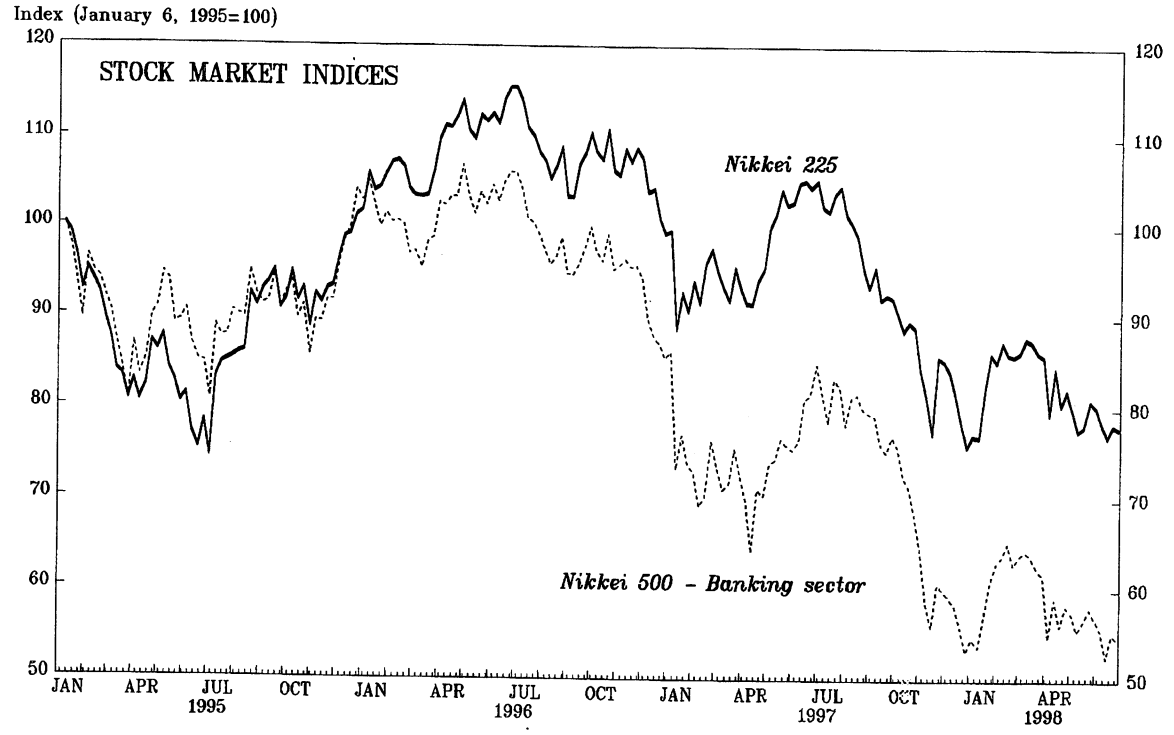
FIGURE IV.1. PROFITABILITY AND LOAN LOSS PROVISIONING OF MAJOR JAPANESE BANKS

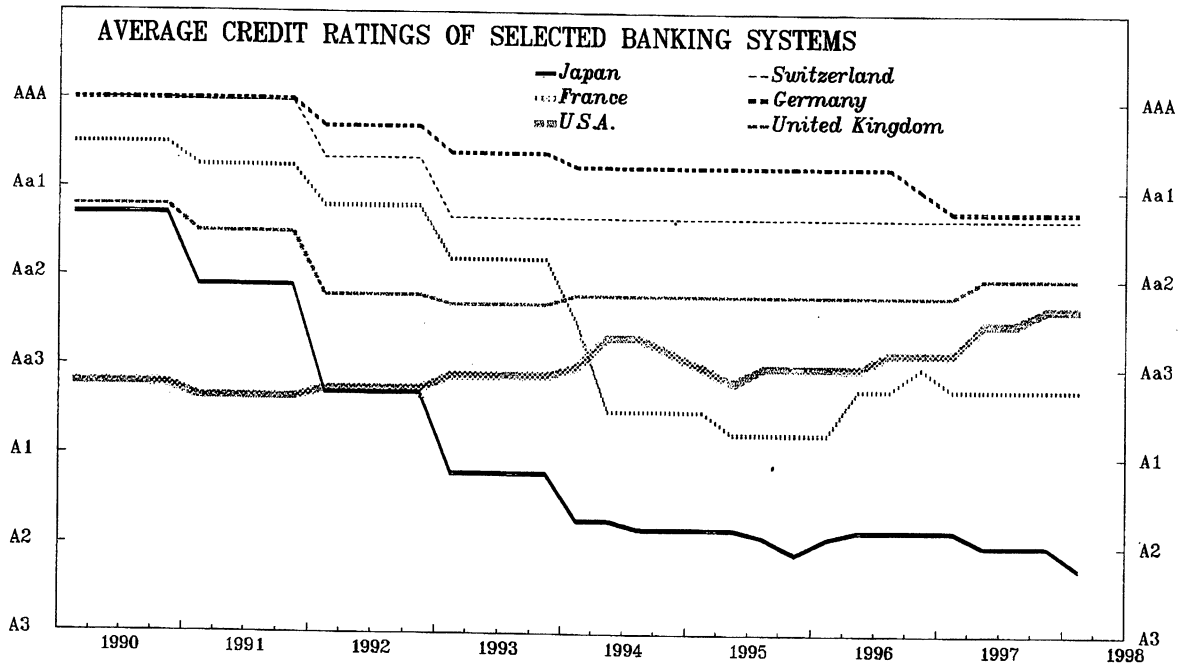


3. **The authorities' approach to the banking sector was predicated on the expectation that a resumption of economic growth would permit banks' and borrowers to recover their financial strength.** Over the last three years, however, this orientation has gradually changed, and the authorities have introduced a broad range of measures to address aspects of banks' problems more forcefully. In early 1996, the decision was taken to overhaul the regulatory and supervisory framework, after the large public outcry associated with the collapse and bailout of the *jusen*, and to extend the deposit insurance system to provide a full guarantee of bank deposits through 2001. Moreover, in late 1996, the government announced the "big bang" reforms, a blueprint to phase in free and open competition and permit market incentives to allocate capital within Japan (discussed in Chapter V). Key aspects of these measures started to be implemented in late 1997, while the authorities have responded to increasing banking strains with a series of additional steps, amid growing reluctance of banks themselves to participate in traditional, orchestrated "convoy-style" rescue operations. Notable among the new measures was the decision to provide public funds to strengthen the deposit insurance system and to facilitate the recapitalization, restructuring, and consolidation of Japanese banks. Since the spring of 1998, further initiatives have been announced, including mechanisms to catalyze the workout of real-estate backed loans and a "bridge bank" facility to reduce the transition costs associated with the resolution of failed banks.

4. **The overhaul of the regulatory and supervisory framework is based on three components.** The first component gives banks the main responsibility for assessing the asset quality of their portfolio and provisioning accordingly. It requires banks to periodically carry out a self-assessment of the quality of their assets, and to set loan loss provisions to reflect loss rates on different categories of loans, subject to external audits and approval by bank examiners. The second component involved the introduction of a framework for Prompt Corrective Action (PCA), which establishes a set of structured early intervention and resolution rules to be applied in response to a deterioration of regulatory capital below capital adequacy standards (8 percent for banks with international business, and 4 percent for banks with only domestic operations). The third component is the establishment of an independent Financial Supervisory Agency (FSA), separate from the Ministry of Finance (MOF), and in charge of carrying out the supervisory responsibilities previously carried out by the MOF. The self-assessment and PCA were applied from April 1998, while the FSA started its operations in June 1998.

CHART IV.1
JAPAN
BANKING SECTOR INDICATORS, 1990-98





Souces: WEFA, Bloomberg, and Moody's.

5. **Notwithstanding the progress being made, Japan's banking system problems continue to be a major source of downside risk for economic performance**. Weakness can be seen in four key areas:

- **Problem loans** remain to be fully recognized on banks' balance sheets. The scale of uncovered losses remains a major source of uncertainty.
- Banks' **capital base** is weak, especially once securities' holdings are marked to market and the full extent of deterioration in loan quality is recognized. Moreover, exposure of bank capital to market risk related to equity holdings remains a major source of vulnerability.
- The **process of loan recovery** continues to be cumbersome and slow, and is not well suited to moving forward the necessary corporate debt restructuring.
- Bank **franchise value** is being eroded by financial liberalization, with the situation of long-term credit banks and trust banks becoming increasingly difficult.[3]

B. Recent Banking Developments

6. **Banking system strains became increasingly apparent during the course of 1997**.[4] In April 1997, Hokkaido Takushoku Bank (HTB), one of the major commercial (city) banks announced a plan to merge with the smaller regional Hokkaido Bank, while one of the three long-term credit banks (Nippon Credit Bank) undertook a major restructuring with the financial support of private banks and the Bank of Japan. Over the summer, however, concern grew regarding the success of the merger of HTB, which finally stalled over the

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[3]Such banks do not have a retail base, and have been under threat from the change in regulations under the "big bang" that would allow all banks to issue long-term debentures (currently a monopoly of long-term credit banks) and sell investment trusts. In the case of the long-term credit banks, greater competition will compound the loss of their franchise value that started in the 1980s with the changes in the long-term financing of large Japanese corporations (which led these banks to have an exceptionally large exposure to the real estate sector). Trust banks, which receive most of their funds for investment from pension funds and insurance companies (acting inter alia as custodians of these funds), have already been weakened by the liberalization of pension fund allocation rules. The new rules now allow professional asset management companies to handle an increasing share of pension fund resources through diversified portfolios, and have reduced the attractiveness of standard investment trusts. Trust banks (including the specialized subsidiaries of city banks) and long-term credit banks account for about 10 percent of the assets of the Japanese banking system (Table IV.1).

[4]Strains were also felt in other sectors of the financial system, as discussed in Chapter V.

Table IV.1. Japan: Structure of the Banking System, March 1998
(In trillions of yen, unless otherwise noted)

	Number of banks	Deposits	Share of total deposits (in percent)	Loans and discounts	Share of total loans and discounts (in percent)	Assets	Share of total assets (in percent)
City banks 1/	9	258.5	35.0	272.3	40.4	457.3	39.3
Major trust banks 1/	7	26.0	3.5	35	5.3	67.0	5.8
Long-term credit banks 1/	3	13.1	1.8	48.2	7.2	86.0	7.4
Regional banks I 1/	64	171.0	23.2	138.7	20.6	200.3	17.2
Regional banks II	64	60.7	8.2	52.5	7.8	69.9	6.0
Other trust banks 1/ 2/	26	0.1	0.0	0.5	0.1	5.7	0.5
Shinkin banks	401	98.4	13.3	70.4	10.5	111.3	9.6
Credit Cooperatives and Associations	2,397	100.0	14.0	45.0	7.0	106.0	9.0
Foreign banks 3/	93	9.4	1.3	10.7	1.6	60.3	5.2
Total Banking System:	3,064	737.6	100.0	673.5	100.0	1,163.9	100.0
(In percent of GDP):		145.5		132.8		229.6	
Memorandum item:							
Trust Fund Bureau 4/	1	223.1	23.2	295.6	30.5	392.1	25.2

Sources: Economic Statistics Monthly Bulletin; Bank of Japan; Federal Bankers Association of Japan.

1/ Includes balances in principal accounts of overseas branches.
2/ Mainly subsidiaries of city banks and other financial institutions.
3/ Principal accounts only.
4/ March 1997; deposit data are for Postal Saving System.

magnitude of HTB's bad assets and was postponed *sine die* in September (Box IV.1). The failure of Sanyo Securities on November 3 heightened concerns among market participants about the ability of Japanese financial institutions to honor their interbank obligations and led to a sharp decrease in the liquidity of the domestic interbank market and a substantial rise in the Japan premium (discussed in Chapter III). As a result of these pressures, HTB found itself unable to raise funds in the market. On November 17, it applied—with the support of its supervisors—to transfer its problem loans to the Deposit Insurance Corporation (DIC) and its healthy assets and liabilities to Hokuyo Bank, a second-tier regional bank also based in Hokkaido. The collapse of HTB was followed shortly thereafter by that of Yamaichi Securities, the fourth largest securities house in Japan.

7. **Prompt intervention by the Bank of Japan after the collapse of HTB and Yamaichi avoided the repetition of the financial market disruptions that followed the collapse of Sanyo Securities**, but overall market conditions continued to deteriorate in December. Fears of additional bank closures were reflected in large deposit withdrawals from weak banks, and contributed to the decision by credit rating agencies to consider downgrades for several banks. Market discipline led to a tiering in stock markets, with marked declines in stock prices of weaker banks. Market tension intensified with a spate of bad economic news in early December, which sent Japan's stock market to a six-year low, and raised pressures on banks whose capital bases were most vulnerable to changes in stock prices. The imminent implementation of the new supervisory framework, which requires supervisors to take prompt corrective action whenever a bank's capital-to-risk-weighed-asset ratio falls below a certain level, increased pressures on banks, and prompted banks' efforts to reduce their risk-weighted assets, contributing to the "credit crunch."

8. **Responding to this situation, in late December the Government announced a set of emergency measures to stabilize financial markets and bolster depositors' confidence**. The measures (discussed in more detail in Section D) centered on strengthening the financial condition of the Deposit Insurance Corporation (DIC) and providing public funds for bank recapitalization, and were accompanied by several regulatory changes that assisted the major banks to meet capital adequacy requirements—most notably permission to value securities at cost instead of the minimum of cost or market price, and to include unrealized gains on land holding in Tier 2 capital.

9. **This package represented the first time that public funds were made available to the banks on a massive scale**, and, together with provision of liquidity by the Bank of Japan, helped to reduce market pressures. The corresponding legislation was passed in late February, and in late March (shortly before the end of the financial year), all but one of the major banks and three large regional banks received capital injections. In order to address the concerns of weak banks that application for these funds could be interpreted as a signal of fragility, these injections were of similar magnitude irrespective of the size or needs of individual banks. The injections complemented banks' efforts to improve capital ratios by reducing risk-weighed assets, including through restrained lending, the sale or securitization of about

Box IV.1: The Collapse of Hokkaido Takushoku Bank

Hokkaido Takushoku Bank (HTB), also known as Takugin, was founded in 1900 as a state-supported bank aimed at providing funds for the development of the northern island of Hokkaido (Takushoku can be loosely translated as "colonial"). After World War II, it became the smallest national commercial "city" bank, with its activities remaining concentrated in Hokkaido. The island's economy is still less diversified than that of the south-central regions of Japan and was strongly affected by the collapse of the real estate market after the bursting of the asset price "bubble." HTB's 70-odd branches outside Hokkaido generated little income to the bank.

At the end of FY1996, HTB disclosed ¥935 billion in problem loans (equivalent to 10 percent of its assets), and announced a plan to merge with Hokkaido Bank—the 23rd largest regional bank—by the end of the following fiscal year and to withdraw from international operations. The main advantage seen by markets in the merger with the relatively small Hokkaido Bank (whose assets were about a third of those of HTB) was the possibility of a drastic consolidation of the two banks, whose geographic base overlapped (each had 133 branches on the island). Neither bank was particularly well capitalized and both had asset-quality problems (Hokkaido Bank had ¥166 billion in bad debts against a capitalization of ¥44 billion).

In early summer, the two banks agreed on standards to evaluate each bank's debts and provisioning requirements, but Hokkaido Bank started to express doubts about HTB's ability to absorb losses from its bad loans. In early July, HTB cut off credit to Tokai Kogyo Company (the 46th largest construction company in Japan). The decision of HTB, as a main bank, to let Tokai Kogyo file for bankruptcy contrasted with the support Fuji Bank, as main bank to the much larger Tobishima company, had offered in a similar situation and—although permitting the bank to clear the decks of a problem ahead of the merger—forced HTB to write off nearly ¥47 billion in loans. Concerns about the soundness of HTB's other loans, including to several subsidiaries, finally led the merger to be postponed *sine die* in early September.

In the following months, the HTB faced increasing difficulties in raising funds, and it finally collapsed after liquidity in the interbank market dried up following the failure of Sanyo Securities in early November.

An inspection carried out by the MOF in the weeks after HTB's collapse indicated that the bank's liabilities exceeded its assets by ¥840 billion, before accounting for ¥200 billion of bad loans to affiliated companies. The bank had ¥940 billion in bad loans and an additional ¥1,350 billion in questionable loans.

The resolution of HTB is expected to be completed by late 1998, with Hokuyo Bank and Chuo Trust Bank acting as receiving banks for the bank's good assets in the Hokkaido region and the main island (Honshu), respectively, and the RCB taking over the doubtful and uncollectible loans. The transfer of substandard loans to the receiving banks has been delayed by disagreements about the price of these transfers. Chuo Trust Bank, for its part, plans to apply for a recapitalization with DIC funds, as its capital was insufficient to support the stock of good loans received from HTB.

The collapse of HTB, in addition to representing a movement away from the "convoy" system in which strong banks are called to support the weak ones, underscored serious shortcomings in financial disclosure practices in Japan. The amount of bad loans uncovered by the supervisors after the collapse of the bank was much higher than that disclosed by the bank at the end of FY1996, and the asset quality was much worse than suggested by the provisions made by the bank. Notably, loans to Tokai Kogyo—which had been heavily restructured in 1993—were not included among problem loans disclosed by HTB, or by any of the other banks that held the company's remaining ¥80 billion in debt.

¥4 trillion in existing assets, and the issuance of non-voting preferred stock in international markets (at a significant premium over U.S. Treasury bonds).[5]

10. **At the end of the 1997 fiscal year, banks took up the room provided by access to public funds and changes in accounting methods to increase their provisions and writeoffs**, while succeeding in most cases in boosting their reported regulatory capital ratio (Table IV.2 and IV.3). A number of the strongest banks among the 19 major banks increased their loan loss provisions and charge offs by a factor of three to five vis-à-vis the previous fiscal year. Provisions and writeoffs for the major banks as a whole doubled to ¥10.6 trillion, while the total for all deposit-taking institutions amounted to ¥15 trillion. Because banks' net operating profits (*gyomu-juneki*) contracted sharply, especially among trust banks whose funding costs increased, the boost in provisions implied large negative pre-tax profits (*keijo rieki*) for most major banks, including all the city banks.

11. **Despite the increase in provisions, the credit ratings of several major banks continued to be lowered**, on concerns about profitability and asset quality. On June 26, 1998, one of the major Japanese banks, the Long-Term Credit Bank (LTCB) announced its intention to merge with Sumitomo Trust Bank (STB) with the assistance of the authorities. This came after a period of heavy market pressure on LTCB in the second half of June.[6]

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[5]In the final months of FY1997, four Japanese banks raised about US$5 billion in funds, using these instruments. These so-called Opco Preferred securities use a credit-linked note structure, similar to the "capital securities" or "trust-issued preferred stock" sold by U.S. banks since 1996, and refined by several European banks in 1997. Credit agencies have treated them broadly as debt-like instruments, similar to junk bonds, even if they rate them one notch above "speculative" instruments. These instruments were issued at premia of 225–440 basis points over U.S. Treasury paper, and were lightly traded afterwards (when reported premia widened to more than 600 basis points). Although not convertible (thus avoiding the risk of dilution) and nominally being perpetual securities, these securities can usually be called by the issuer after 10 years subject to supervisory approval; interest payments are tax-deductible under Japanese law. In general, these instruments are designed with U.S. pension funds in mind (i.e., satisfying the requirements of SEC's Regulation 144a) and are most often issued by a foreign subsidiary of the concerned bank. These interest-bearing instruments have been treated by regulators as Tier-1 capital because interest payments can be missed and are non-cumulative, i.e., payments need not to be made up to investors (but the bank must pay dividends on the instrument before paying dividends on its preferred stock or its common stock). Market observers have noted, however, that failure to make these payments would have severe reflections in the access of Japanese banks to international money markets.

[6]The LTCB is the second largest long-term credit bank, a type of bank that has relied on issuing long-term debentures to fund long-term corporate lending. The new bank would be the seventh largest in Japan.

Table IV.2. Japan: Capital Adequacy Ratios and Selected Hidden Reserves for the Major 19 Banks

(In percent of risk-weighted assets, except where noted otherwise; end-March)

	Total Ratio		Tier-1 Ratio	
	1997 Old Standard	1998 New Standard	1997 Old Standard	1998 New Standard
City Banks				
Tokyo-Mitsubishi Bank 3/	9.28	8.54	4.97	4.27
Dai-Ichi Kangyo	8.76	9.09	4.38	4.63
Sakura	8.93	9.13	4.46	4.56
Sumitomo	8.75	9.23	4.50	4.76
Fuji	9.23	9.41	4.80	4.79
Sanwa	9.11	9.61	4.55	4.80
Tokai	9.09	10.26	4.55	5.41
Asahi	8.71	9.39	4.44	4.69
Daiwa	9.02	10.30	4.73	5.35
Long-Term Credit Banks				
IBJ 3/	9.04	10.09	4.83	5.21
LTCB	9.22	10.32	4.61	5.16
NCB	2.99	8.25	1.50	4.29
Trust Banks 4/				
Mitsubishi Trust 3/	9.68	10.35	5.15	5.99
Sumitomo Trust	8.97	9.90	5.45	5.27
Mitsui Trust	9.56	10.41	5.35	6.02
Yasuda Trust	9.87	13.56	5.73	7.14
Toyo Trust	10.02	10.68	5.79	5.78
Chuo Trust	9.11	12.73	4.93	7.95
Nippon Trust	11.24	13.80	12.90	9.26

1/ Unrealized gains measured in relation to purchase values. Under the old standard, holdings of listed equities were accounted at the lowest of purchase (book) and market price for the effect of computing Tier-1 capital (i.e., a drop of market values below book values would reduce Tier-1 capital), and up to 45 percent of the excess of market value over book value could be included in Tier-2 capital. Under the new standard, banks can choose to use only book values (i.e., unrealized loss do not reduce Tier-1 capital, and unrealized gains cannot be included in Tier-2 capital).

2/ Under the new standard, up to 45 percent of unrealized capital gains on real estate holdings can be included in Tier-2 capital.

3/ These banks did not adopt the new (optional) standard.

4/ The risk weight of loans linked to trust accounts is less than the ordinary weight for loans.

Table IV.3. Japan: Profit and Loss Accounts of the Major Banks, end-FY1997 1/

(In billions of Japanese yen unless otherwise noted)

	Net Interest Revenue	Interest Margins (In percent)	Net Interest Revenue/ Total Revenue (In percent)	Fees/Total Revenue (In percent)	Gyomu -Juneki 2/	Profits on Securities Holdings	Loan-Loss Provisions	Keijo Rieki 3/
City banks								
Bank of Tokyo-Mitsubishi	623.6	1.5	66.2	10.3	342.9	197.4	1,549.1	-917.5
Dai-Ichi Kangyo Bank	554.7	1.6	77.9	10.3	323.1	292.7	752.9	-154.9
Sakura Bank	589.0	1.7	86.7	10.0	293.8	533.0	1,181.0	-417.2
Sumitomo Bank	585.7	1.6	83.0	9.8	308.1	136.8	1,072.9	-617.4
Fuji Bank	503.0	1.6	73.8	9.5	320.4	209.6	951.6	-576.3
Sanwa Bank	554.6	1.7	85.8	10.2	351.9	208.3	945.1	-413.4
Tokai Bank	303.5	1.5	72.1	10.1	173.0	155.1	391.5	-44.4
Asahi Bank	350.9	1.7	86.6	8.7	156.4	149.2	477.4	-189.8
Daiwa Bank	209.7	1.9	74.6	9.4	96.5	148.3	385.2	-151.2
Long-term credit banks								
Industrial Bank of Japan	277.3	1.2	70.5	19.4	230.7	68.0	647.3	-357.7
Long-Term Credit Bank of Japan	178.0	1.1	89.2	17.5	164.7	158.8	589.4	-320.0
Nippon Credit Bank	117.3	1.5	78.9	11.7	130.1	43.1	133.4	16.4
Trust Banks								
Mitsubishi Trust	310.9	2.5	89.0	8.1	223.2	68.8	287.1	5.7
Sumitomo Trust	227.3	2.1	74.0	9.1	131.4	89.9	333.0	-93.5
Mitsui Trust	177.2	1.9	97.1	10.5	121.2	183.0	238.9	4.4
Yasuda Trust	161.1	2.5	90.0	13.7	92.4	30.8	261.1	-151.3
Toyo Trust	126.5	1.6	79.1	19.1	49.1	35.3	122.4	16.1
Chuo Trust	81.4	2.2	71.6	17.9	58.4	40.7	88.8	9.1
Nippon Trust	27.3	0.2	80.5	19.8	2.2	5.4	156.0	-200.7
Total	5,959.0	1.7	80.4	12.4	3,569.5	2,754.2	10,564.1	-4,553.6

Source: Fitch -IBCA Ltd.

1/ Fiscal year ending March 31 of the year shown.

2/ Net operating profits before specific loan-loss charges and gains on the investment portfolio (source indicates that due to adjustments, this measure cannot be precisely calculated from public data).

3/ Pre-tax, pre-special-item current profits that include those from securities holdings.

The STB has indicated that a condition of the merger would be that the bad loans of LTCB would need to be shifted elsewhere, but the terms of the merger are still under discussion.

12. **Since the end of the fiscal year, the Japanese authorities have taken further steps to address banking sector problems**. Under the framework provided by the emergency measures approved at the beginning of the year, some 45 credit cooperatives and four small regional banks have been closed, thus accelerating the consolidation process that has reduced the number of Japanese deposit-taking institutions by some 15 percent since FY1992. In May 1998, plans were announced to establish a new mechanism for debt workouts, supported by adjustments in the tax treatment of debt forgiveness. This was followed by the announcement in early July 1998 of a "bridge bank" scheme to continue the operation of failed banks—including the extension of credit to "solvent borrowers in good faith"—thus reducing the transitional costs associated with bank closures. In the weeks following the inauguration of the FSA, the authorities also announced a plan to immediately inspect the 19 major banks. Such a plan came on the heels of calls from Bank of Japan officials (including the Governor) encouraging banks to disclose the results from the self assessment of their individual portfolios conducted at the end FY1997.

C. The Bad Loan Problem and Impediments to its Resolution

13. A variety of approaches have been used to estimate banks' bad loans and uncovered losses:

- **Disclosed non performing loans** (NPL) of all deposit-taking institutions amounted to ¥35 trillion at end-March 1998, based on new, more stringent, standards intended to be broadly in line with those used in the United States. On the old standard, banks' disclosed NPLs would have been ¥25 trillion at end-March 1998, down from ¥28 trillion at end-September 1997.[7]

- As an alternative to relying on disclosed nonperforming loan figures, rating agencies and other market participants have often estimated losses taking into account **the flow of real estate lending during the "bubble" period**, which amounted to about ¥80 trillion. Agencies estimate that most of the resulting stock is impaired, against a

[7]Nonperforming loans (NPLs) are defined to include loans to borrowers in bankruptcy, loans that have been restructured, and loans with interest arrears. The shift in accounting rules implemented last March requires disclosing a loan as nonperforming when interest arrears exceed three months (previously six months) and all restructured loans with reduced interest rates or extended maturities (previously only when the interest rate was reduced below the official discount rate).

residual value of collateral estimated at only ¥20–30 trillion.[8] This figure would include loans to the *jusen*, loans sold to the Cooperative Credit Purchasing Corporation (CCPC) special vehicle set up in 1993 (Box IV.2) and problem loans of banks' affiliates, as well as banks' own problem loans. Taking account of estimates of recoveries from collateral and accumulated loan loss reserves, total uncovered losses were estimated by Fitch-IBCA (a bank rating agency) at around ¥16 trillion at end-March-1998, mainly concentrated in the smaller regional banks and cooperatives.

- The **self-assessment of asset quality** conducted by banks showed total problem loans of ¥71 trillion net of specific loan-loss reserves at end-March 1998, although this estimate has not yet been subject to supervisory scrutiny. Problem loans under this definition include loans classified as substandard (category II), doubtful (category III), and loss (category IV). The equivalent figure for all deposit-taking institutions (including the credit cooperatives) is ¥88 trillion. These figures do not include loans sold to the CCPC and loans to the *jusen*.

14. **The self-assessment results can be used to estimate likely uncovered losses.** Using loss rates for the various categories derived from a Bank of Japan study of the loss experience over 1993–96, the self-assessment figures for end-March 1998 would imply a total uncovered loss in all deposit-taking institutions of ¥19 trillion (around 4 percent of GDP, see tabulation below). Nevertheless, many market analysts believe that the remaining uncovered losses are likely to be considerably higher because (i) banks may well have been over-optimistic in loan classification, placing too high a proportion of impaired loans in category II rather than categories III and IV and providing excessive valuation for loan collateral; (ii) loss rates for category II loans may be higher than during the 1990s when banks were not actively disposing of bad loans (even taking into account the special provisions made in 1995 and captured in some of the figures used in the Bank of Japan study); and (iii) the exposure to Asia may not be fully captured in category II loans, and may result in losses greater than the 2–3 percent currently provisioned (Table IV.4).

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[8] Official estimates agree that the collateral value of most impaired real-estate loans amounts to about thirty percent of the original value of the loan, reflecting broadly the 70–80 percent decline in commercial real estate prices since 1989.

Box IV.2: Resolution Agencies in Japan

The **Cooperative Credit Purchase Company** (CCPC) was created in 1993. The CCPC provided a mechanism to allow banks to transfer loans at a discount, thus satisfying tax requirements in the tax law, while avoiding bankruptcy of debtors (loan-loss provisions are automatically tax-deductible only when they follow the foreclosure of collateral or the sale of the loan at a loss). Banks remain responsible for covering the difference between the transfer price to CCPC and the final disposal price, and generally for managing the loan. Reflecting its main mandate, the CCPC does not actively seek to resolve the assets under its care, and at its current pace, it will take another 5-8 years to dispose of its inventory. Collections on an original portfolio of ¥15 trillion (purchased at a price of ¥5.7 trillion) have amounted to ¥1.1 trillion. Sales, which are most often arranged by debtors themselves, picked up in 1997, but are still low; moreover the disposal of the asset does not automatically entail a reduction in the debtor's liability, which occurs only after the three parties have received an agreement from the courts.

The **Housing Loans Administration Corporation** (HLAC) was created in 1996 to resolve within a 10-year period some 300,000 loans left by the seven failed housing financing companies affiliated with banks (the *jusen*), and received an endowment of ¥0.6 trillion for this purpose. The HLAC has liquidated about one-fifth of its original ¥4.6 trillion portfolio. Claims that banks have knowingly transferred to *jusen* their worst assets, and that as much as 10 percent of the ¥1 trillion corporate loan book the agency built up may be tied up to criminal (*yakuza*) concerns—suggest that loan recovery will continue to be slow.

The **Resolution and Collection Bank** (RCB) was, until recently, in charge of the assets of failed credit cooperatives only. RCB is the successor of the Tokyo Kyodo Bank created in 1995 to deal with assets left by the failure of credit unions in the Tokyo region. As of end-FY1997, the RCB had received loans with a face value of ¥1.5 trillion, at an average discount of about 70 percent. Although it is a bona fide resolution bank, the RCB has also been slow in selling assets. Despite the relatively high discount at which it received most of its assets, the RCB had sold only 19 percent of its inventory by end-FY1997.

Table IV.4. Japanese Bank Exposure to Asia

Exposure by major banks, end-FY1997 1/	Exposure	Provisioned
	(In US$ billion)	(In percent)
City banks		
Bank of Tokyo Mitsubishi	33.3	2.1
Dai-Ichi Kangyo Bank	12.1	3.0
Sakura Bank	12.1	1.9
Sumitomo Bank	13.6	3.0
Fuji Bank	11.4	2.0
Sanwa Bank	15.9	1.4
Tokai Bank	7.6	0.5
Daiwa Bank	2.3	7.3
Asahi Bank	3.8	1.0
Long-term banks	12.1	1.5
Trust banks	12.1	2.8
Total	136.3	2.2

Exposure by country 2/	End June 1997	End December 1997
	(In US$ billion)	
Korea	23.7	20.3
Indonesia	23.2	22.0
Malaysia	10.5	8.6
Thailand	37.8	33.2
Subtotal	95.2	84.1
China	17.5	19.6
Hong Kong	87.3	76.3
Singapore	65.1	58.7
Taiwan	3.0	3.5
Total	269.2	218.0

1/ Source: Bank's financial statements, reported by the Nihon Keizay Shinbun-Nikkei.
2/ Source: Bank of International Settlements.

Estimates of Loan Losses Based on the Self-Assessment Exercise 1/
(In trillions of yen, unless otherwise indicated)

	Assumed loss rate 2/	All deposit-taking institutions		All banks		Major banks	
		Classified loans	Implied losses	Classified loans	Implied losses	Classified loans	Implied losses
Category II	17	80.6	13.7	65.5	11.1	45.2	7.7
Category III	75	6.9	5.2	6.1	4.5	4.8	3.6
Category IV	100	0.0	0.0	0.0	0.0	0.0	0.0
Total	...	87.5	18.9	71.1	15.6	50.0	11.3

Source: Ministry of Finance; *Bank of Japan Quarterly Bulletin*, "Utilization of Financial Institutions Self Assessments in Enhancing Credit Risk Management", February 1998; and staff estimates.

1/ Net of specific provisions. Classified loans at end March 1998.
2/ Derived from Bank of Japan study.

15. **The persistence of large amounts of bad loans reflects the slow progress in dealing with the bad loan problem observed since the early 1990s.** Several factors have contributed to this outcome:

- Japanese banks and officials did not foresee the extended period of slow growth experienced in the 1990s and the continued slump in real estate prices. They believed that over time current earnings would be sufficient to build provisions and cover losses without public assistance.

- The complex web of relationships between bank shareholders and main customers reduced the incentives for banks to improve their profitability at the risk of the viability of borrowers.

- The legal infrastructure in Japan is not suited for dealing with recovery and debt restructuring in an expeditious fashion. Since there is no "project" financing, all loans to corporations are on a full recourse basis, implying that foreclosure of one loan would threaten the whole company. Moreover, foreclosure and bankruptcy procedures are cumbersome and can be time consuming, while procedures for out-of-court settlements are inflexible.

- With prospects for loan recovery limited, banks have little incentive to liquidate the questionable parts of their loan portfolios, as the carrying cost of bad loans (after

provisioning) is very low, and the potential for upswing in the value of the asset is greater than that of a further loss.

- Until recently, the process of loan securitization was difficult and costly, reducing the scope for sales of problem loans to private investors.[9]

- Provisions and debt forgiveness have not been automatically tax deductible, reducing banks incentives to set realistic levels of provisions or write off debts.

- Multiple liens attached to most real estate used as collateral, which have proved to be difficult to rank, consolidate, and clear (the CCPC, for instance, only accepts assets with single or well defined liens, held by parties who have reached agreement on the way to deal with the asset).

D. Use of Public Funds

16. **In December 1997, the authorities decided to provide ¥30 trillion in public funds for the purpose of strengthening the Deposit Insurance Corporation (DIC) and to create a financial crisis management fund.** In contrast to the vocal public opposition against providing public funds to resolve the *jusen*, this most recent initiative to provide public monies was broadly supported, in part because, after the failures in November, it was widely recognized that the resources of the DIC were inadequate.[10] These measures were followed in early July 1998 by the announcement of the "bridge bank" scheme.

17. **Legislation was adopted in February 1998 to provide the DIC with adequate financial resources** to offer the full protection of banks' deposits and most credits until March 2001 and to ensure the efficient management of assets received from failed banks.[11]

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[9]Notwithstanding these difficulties, ¥3 trillion of bad real-estate loans was sold in the past year, mainly through off-shore special-purpose corporations and at discounts reportedly varying between 70 and 95 percent.

[10]The projected income for the DIC in FY1996–2000 (including the surtax to protect deposits over ¥10 million) was ¥2.7 trillion, of which about ¥1.3 trillion was already committed by the time the HTB failed, and most of the remainder would be absorbed by HTB's net liabilities of around ¥1.1 trillion.

[11]According to statements by the authorities, unguaranteed loan trust and senior debts such as bank debentures are fully protected, but subordinated debt has not been explicitly included in this group. In the past, subordinated creditors (often financial institutions) have been required to bear some losses, even when the "subordination clauses" were not formally triggered by events leading to the collapse of the borrower.

The legislation also provided a mechanism for the DIC to play a role in the consolidation of the banking sector. The following measures were taken for these purposes:

- **To strengthen the deposit insurance system**, the DIC was provided with ¥7 trillion in the form of government bonds, plus the authority to issue an additional ¥10 trillion of government guaranteed bonds, if needed, to meet liquidity needs in purchasing assets from failed institutions.

- The **Resolution and Collection Bank (RCB)—a unit of the DIC—had its authority expanded** to permit it to take over assets from financial institutions in addition to credit cooperatives, and had its investigative powers and collection ability expanded.

- In addition to protecting depositors, the **DIC was allowed to purchase doubtful and other nonperforming loans from insolvent institutions to facilitate mergers** with healthy institutions or to create a new institution by combining two or more failed institutions.

- A new **Financial Management Account** was created, funded with ¥3 trillion in government bonds to be transferred to the DIC, and the authorization to the DIC to issue up to ¥10 trillion in government-guaranteed bonds, for the purpose of recapitalizing banks.

18. **The terms under which the DIC purchases problem loans remains a difficult issue**, since no comprehensive valuation framework (e.g., analysis of future cash flows under generally applied assumptions and specific parameters of individual loans) has been adopted.[12] In the first operation using the new framework announced in May (involving two banks in the Osaka region), these prices were not disclosed, but the recapitalization effort required from the original shareholders was small in proportion to the stock of substandard loans expected to be bought by the DIC. A related issue is that of the price paid by receiving banks for substandard loans. In the past, banks have received these loans at face value. As the quality of these assets deteriorated, however, the receiving bank faced growing problems. In the extreme case of Midori Bank, which itself failed three years after being set up as a receiving bank, the government felt compelled to recapitalize the bank without penalizing its

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[12]On July 12, the National Land Association announced that, in cooperation with the Japanese Association of Real Estate, it would change its method of assessing the value of land held by financial institutions as collateral to one based on discounted cashflows, instead of the traditional combination of the recent sale price of nearby property and the acquisition cost of the land in question. This could constitute a first step to widespread use of those methods.

shareholders.[13] In order to avoid the repetition of this experience, the authorities have recognized the need for transferring substandard loans at a realistic discount.

19. **The objective of the financial management crisis account is to permit the DIC to increase the capital base of banks** for any of the following purposes: (i) to support the merger of a failed bank (the receiving bank may need additional capital to support the received assets, independent of the quality or transfer price of these assets); (ii) to avert systemic risks; and (iii) to protect a region from the consequence of a liquidity crisis. Banks can apply to use this facility on a voluntary basis, and purchases are to be approved by a high-level committee, based on the submission of a program for improving banks' operations and management and criteria supporting the requirement in the law that the applying financial institutions are solvent. The facility entailed the establishment of a new account at the DIC to be used for the purchase of preferred stocks and subordinated loans or bonds issued by financial institutions until March 2001. The law required these purchases to be made under conditions that would not make future sales by the DIC of these instruments difficult, but did not establish an obligation of, or a time for, proceeding with such sales.

20. **All major banks (except for Nippon Trust, now a subsidiary of Bank of Tokyo-Mitsubishi) and three large regional banks qualified for a first round of recapitalization in March** on the grounds of reducing the systemic risks and after submitting plans to improve their operations. These plans were built around a reduction in personnel expenses, the closure of branches, and a decrease in the number of directors. Although most banks received about ¥100 billion, the terms under which the funds were provided varied among banks, reflecting the committee's judgement about the soundness of individual banks. These terms were based on the examination of banks' self-assessments and other documents provided by banks to the committee and the MOF (Table IV.5)

21. **In early July, the authorities announced a bridge bank facility** to take over the operations of failed institutions (Box IV.3). The aim would be to arrange a merger for a failed bank within two years, but three one-year extensions would be provided if necessary. A public holding company would manage all of the bridge banks. Necessary legislation is expected to be submitted to an extraordinary session of the Diet in late July.

22. **This new scheme shares some features with one of the approaches used in the United States by the Federal Deposit Insurance Corporation (FDIC) since the late 1980s**, and should facilitate the process of dealing with failed institutions without disrupting

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[13]Midori Bank was set up after the Hanshin earthquake as the successor to a failed regional bank, with capital contributions from financial institutions in the Kobe region and loans from the Bank of Japan. The authorities have indicated that this was a special case and that the treatment dispensed to this bank should not be seen as setting a precedent.

Table IV.5. Japan: Conditions for the Subscription of Capital Using Public Funds, March 1998 1/

(In billions of Japanese yen unless otherwise stated)

		Perpetual					Perpetual			Dated					Effect on
		Preferred Shares		Subordinated Loans			Subordinated Bonds			Subordinated Bonds			Stock	Moody's	Capital
	Total		Dividend		Spread (bp)			Spread (bp)			Spread (bp)		Price	Rating	Adequacy 4/
	Amount	Amount	ratio	Amount	A 2/	B 2/	Amount	A 2/	B 2/	Amount	A 2/	B 2/	Change 3/		(percent)
City banks															
Bank of Tokyo-Mitsubishi	100.0						100	90	240				-20	C	0.0
Dai-Ichi Kangyo Bank	99.0	99	75										-50	D	0.2
Sakura Bank	100.0						100	120	270				-57	E+	0.0
Sumitomo Bank	100.0						100	90	240				-19	D+	0.1
Fuji Bank	100.0						100	110	260				-68	D+	0.2
Sanwa Bank	100.0									100	55	125	-20	C	0.1
Tokai Bank	100.0			100	90	240							-47	D+	0.4
Asahi Bank	100.0			100	100	250							-43	D+	0.5
Daiwa Bank	100.0			100	270	270							-49	E	0.9
Long-term credit banks															
Industrial Bank of Japan	100.0									100	55	125	-46	D	0.2
Long-Term Credit Bank of Japan	176.6	130	100	47	245	395							-57	E	1.3
Nippon Credit Bank	60.0	60	300										-55	E	1.2
Trust banks															
Mitsubishi Trust	50.0						50	110	260				-26	D	0.4
Sumitomo Trust	100.0						100	110	260				-44	D	0.5
Mitsui Trust	100.0						100	145	295				-70	E	1.0
Yasuda Trust	150.0						150	245	395				-69	E	1.8
Toyo Trust	50.0						50	110	260				-19	D	0.6
Chuo Trust	60.0	32	250	28	245								-60	E	2.0
Nippon Trust	...												-45	E+	...
Regional banks															
Yokohama Bank	20.0			20	110	260	30	295	445				...	D+	0.2
Ashikaga Bank	30.0												...	E	n.a.
Hokuriku Bank	20.0			20	245	395							...	E	0.4
Total	1,815.6	321		415											

Source: Deposit Insurance Corporation (Japan), Moody's, and Bloomberg.

1/ Spreads measured in basis points (bp) vis-à-vis yen rates in the London market.

2/ A= Spread during the first five years, B= Spread after the first five years, if the bond is not called or the loan repaid.

3/ Percentage change between July 1, 1997 and January 1, 1998.

4/ Basle Committee capital adequacy ratio.

Box IV.3: The Design and Operation of the Bridge Bank Scheme

The bridge bank scheme would operate in two stages—a first phase in which the failed bank would continue to operate under a financial administrator and a second phase—relevant if a receiving bank cannot be quickly found—in which a public bridge bank would be set up temporarily to continue the bank's operations.

- When a bank fails, the Financial Supervision Agency (FSA) would promptly appoint a financial administrator (receiver) to administer the business and manage the assets of the bank. The failed bank would continue to provide loans to sound borrowers, upon approval by the administrator. Non-performing loans would be transferred to the Resolution and Collection Bank (RCB), with funding from the DIC.

- The financial administrator would seek to identify a suitable receiver bank to take over the failed bank's operations as soon as possible. However, if a suitable bank could not be identified quickly, then the bank's operations would be transferred to a public bridge bank. Public bridge banks would be established as subsidiaries of a holding company established by the Deposit Insurance Corporation (DIC).

- The high-level Financial Crisis Management Board (FCMB) would establish a committee to scrutinize the assets of the failed bank, and divide them between sound loans that would be kept with the bridge bank and bad loans to be transferred to the RCB. Guidelines for the classification are to be established by the FCMB. A critical issue will be the treatment of questionable (Category II) bank loans.

- The DIC would provide financial support to the public bridge banks as necessary, utilizing the ¥13 trillion fund set up earlier this year for bank recapitalization, as well as covering losses of the bank.

- The bridge bank would continue providing loans to sound borrowers taken over from the failed bank, upon approval by a special committee set up by the holding company. Loans to sound borrowers could also be provided by government financial institutions on the recommendation of the bridge bank. (The recent fiscal stimulus package contained additional funds for such additional lending.)

- The bridge banks are to be set up for an initial period of two years with a view to finding suitable bank or banks to take over their assets and liabilities. Up to three one-year extensions could be provided. How the exit process would be managed, including procedures to follow if a buyer is not found within five years, are not specified.

the credit mechanism. A number of details on its implementation, however, remain unclear, most notably the parameters guiding the choice of category II loans that will be deemed eligible to be transferred to a bridge bank (i.e., which loans would be allowed to be renewed), and which ones would be transferred to the RCB to be resolved. Also, new loans would need to be approved by a committee set up by the DIC following still-to-be established guidelines, but it is not clear how stringent the screening process will be. Finally, although the plan sets an initial two-year horizon for the resolution of bridge banks (with the possibility of three additional one-year extensions), the approach to be used to handle the eventual sale or liquidation of these institutions has not been disclosed. In the United States, in most cases bridge banks have been resolved quickly, with the FDIC prepared to accept low prices to find a buyer.[14]

E. Recent Initiatives to Help Debt Workouts

23. **The authorities have recently announced three sets of measures to help the workout of real estate loans**: the easing of regulations covering asset-backed securities and special purpose corporations (SPCs) for holding securitized assets, the use of public money to buy and consolidate odd plots of land and changes in zoning regulations for certain areas, and the creation of arbitration panels to mediate the resolution of bad loans.

24. **In June 1998, legislation aimed at stimulating the securitization of assets, in particular bad loans, was approved by the Diet**. The law—first announced in early 1997—will regulate securities backed by loans collateralized by real estate. It will also facilitate the creation of SPCs with the ability to secure claims on specific assets, supported by a centralized system for registering secured interest in (or ownership of) specified financial assets. Under the new regulations, the original borrowers will no longer need to be informed about the sale of their loans.[15] Favorable tax treatment will also be granted to these entities and the related transactions, reducing their cost. Although the basic framework for the establishment of the SPCs is well advanced, measures are still being formulated to ensure the full disclosure of the quality of the assets to be securitized (which was previously side stepped by allowing issuers to wrap the securities with enhancements from insurers).

25. **In May 1998, a plan was announced to establish an arbitration panel**, with the pertinent legislation expected to be submitted to the Diet shortly. The proposed panel would

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[14]The FDIC has used the bridge bank method to create 32 bridge banks from 114 separate institutions. Thirty of these institutions were resolved in seven months or less; the other two in less than 2½ years.

[15]Such a system is similar to that provided in the U.S. Uniform Commercial Code. Since 1993 the MOF has dispensed with the need to inform debtors prior to securitizing car loan and lease receipts.

clarify and consolidate the liens on real estate collateral and mediate the terms of agreements between debtors and creditors. To support such debt workouts, the tax code has been amended to permit banks to deduct from their taxable income the losses incurred as consequence of these agreements, and to allow debtors to offset the corresponding windfall gains against past and future losses.

F. Changes in Bank Regulation and Supervision

26. **In early 1998, several regulatory changes were made that made it easier for banks to meet their regulatory capital requirements**. These changes included both modifications in the accounting of banks' stock and land holdings, as well as in the weights assigned to several classes of assets held by banks:

- Banks were allowed to shift the **valuation of securities** in their portfolios from a "lower of cost or market" to a "cost" basis.[16] All but three of the 19 major banks switched to the new regime at the end of FY1997, with seven of them carrying unrealized losses in their stock portfolios totaling ¥1 trillion.[17]

- Banks were allowed to include 45 percent of **unrealized valuation gains on real estate** holdings in Tier-2 capital. The value of these gains for the largest 19 banks amounted to ¥1.2 trillion.

- Banks were allowed to fully account the formerly **mandatory reserves for losses on trading account securities** and the "Government Bond Price Fluctuation Reserves" as part of Tier-1 capital (the estimated contribution of this measure to banks' capital was estimated around at ¥0.1 trillion).

- The application of the 4 percent **capital adequacy ratio for banks without overseas operations** was postponed to March 31, 1999. This grace period was granted to banks that had submitted restructuring plans. Of the 80 international banks in early 1997, around 35 (including one of the major banks, the long-term credit bank Nippon Credit Bank) have withdrawn from international operations, thus potentially obtaining a grace period as well as halving their eventual capital adequacy requirement in relation to the 8 percent ratio required from other banks.

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[16]In an associated move, capital requirements on market risks were implemented in line with the amendments to the Basle Capital Accord. Banks can still change the lock-in prices of their stock holdings by selling and buying back such stocks at any time.

[17]The Nikkei 225 index fell 8 percent between end FY1996 and FY1997, which contributed to a ¥6.2 trillion loss on the equity portfolio of the 19 major banks. At the end of FY1997, remaining hidden reserves amounted to ¥1.7 trillion, concentrated in three banks.

27. **Several changes in the weights applied to specific classes of assets were also implemented**, following the Basle accord. These changes, in addition to their immediate effect on attenuating the risks of a credit crunch by easing bank's capital requirements, in some cases improved incentives for new financial intermediation mechanisms.

- The weight applied to loans to securities houses was reduced from 100 percent to 20 percent.

- Where the amount of recourse liability retained by a bank is less than 8 percent, the bank shall maintain capital for the recourse liability equal to the amount of credit retained.

- The weight on loans insured by credit guarantee associations was reduced to 10 percent, thus bolstering the effects of the resources made available by the government in early 1998 to guarantee or otherwise insure a ¥13 trillion flow of new loans during fiscal years 1997 and 1998.

- Banks with only domestic activities were allowed to net out compatible loans and deposits of same borrowers (the average cash and deposit to borrowing ratio of Japanese firms, although less than half of its value in the early 1990s, is still large, standing at around 15 percent).[18]

28. **The major changes in bank supervision were the application of the prompt corrective action (PCA) framework for banks with overseas operations as of April 1, 1998, and the start of operations of the new supervisory agency (the FSA) on June 22, 1998** (see Chapter V for a description of the structure, responsibilities, and operation of the FSA). The Japanese PCA framework is similar to, but somewhat less demanding than PCA as applied in the United States. For example, banks operations are only suspended when capital falls below zero (or there are strong indications that this will happen shortly), while in the United States, supervisors can intervene when the capital ratio falls below 2 percent (Table IV.6).

29. **Two weeks after the inauguration of the FSA, the authorities announced an imminent and intensive inspection of the 19 major banks**, to be carried out in collaboration with the Bank of Japan. At the occasion, the authorities noted that, based on the results of that inspection, strict measures would be taken, if necessary, depending on the

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[18]On-balance-sheet netting was allowed under the following conditions: (i) netting is legally enforceable; (ii) the maturity of the deposit is at least as long as the corresponding loan; (iii) the positions are denominated in the same currency; and (iv) the bank monitors the relevant exposure on a net basis.

Table IV.6. Japan and the United States: Summary of Prompt Corrective Action

Japan		United States		
Capital Ratios 1/	Actions	Capital Ratios 2/	Actions	
			Mandatory	Discretionary
		Well capitalized: Total ≥ 10 percent, and Tier 1≥ 6 percent, and Leverage ratio ≥ 5 percent.	None	None
		Adequately capitalized: Total ≥ 8 percent, and Tier 1≥ 4 percent, and Leverage ratio ≥ 4 percent, or Leverage ratio ≥ 3 percent if bank rated 1 in the most recent examination	Disallow brokered deposits except with FDIC approval.	None
International: < 8 percent; National: < 4 percent	Order formulation and implementation of management improvement plan.	Undercapitalized: Total < 8 percent, or Tier 1 < 4 percent, or Leverage ratio < 4 percent, or Leverage ratio < 3 percent if bank rated 1 in the most recent examination	Suspend dividends and management fees. Restrict asset growth. Require capital restoration plan, approval for acquisitions, branching, and new activities. Disallow brokered deposits.	Order recapitalization. Restrict interaffiliate transactions. Restrict deposit interest rates. Order other measures necessary to carry out prompt corrective action.
International: < 4 percent National: < 2 percent	Order recapitalization plan. Impose restraints on asset growth. Impose ban on new activities and branches and limits on current activities. Impose ban on new subsidiaries and overseas affiliates and limits on the current activities of such entities. Limit payment of dividends, as well as bonuses to directors and management. Limit deposits, interests rates.	Significantly undercapitalized: Total < 6 percent, or Tier 1 < 3 percent, or Leverage ratio < 3 percent	Same as above. Order recapitalization. Restrict interaffiliate transactions, deposit interest rates, and pay of officers.	Same as above. Order conservatorship/or receivership if bank fails to submit or implement a plan to recapitalize. Improve any provision to "critically undercapitalized" banks if necessary.
International and national: < 0 percent	Suspend whole or part of banking business. This order can be replaced with lesser actions if (i) the net value of assets, including unrealized gains is positive; (ii) the net value including unrealized gains is negative but expected to be positive after considering: (a) the implementation of management improvement plans and other specific measures; (b) business income and profitability; (c) the bad assets ratio. A business suspension order can be issued at any time when the net value of assets including unrealized losses is, or is expected to be negative.	Critically undercapitalized: Tangible equity to total assets ratio ≤ 2 percent	Same as above. Order receivership/ conservatorship within 90 days. Order receivership if critically undercapitalized for four quarters. Suspend payments on subordinated debt. Restrict certain other activities.	

Sources: Japan, Ministry of Finance; and United States, Federal Deposit Insurance Corporation;
[1]The international capital standards (Basle capital adequacy standards) apply to banks with international operations. The adjusted national capital standards apply to banks with purely domestic operations.
[2]The total capital ratio cited is the total risk-weighted capital; the leverage ratio is the ratio of Tier-1 capital to total assets.

supervisors' assessment of those banks' capital adequacy ratios and PCA rules. The measures mentioned ranged from the requirement of having banks drawing up and implementing special management improvement plans, to the suspension of the operations of severely undercapitalized banks.

G. Remaining Challenges and Risks

30. **In seeking to resolve Japan's banking problems, the greatest challenge will be to strike the proper balance between short-term macroeconomic objectives (of avoiding deflationary pressures and restoring growth) and the medium-term structural objectives of promoting and ensuring a market-based restructuring of Japan's banking sector.** The provision of ¥30 trillion in public funds to the DIC has provided scope for restoring the soundness of the banking system and supporting the resumption of economic growth on a sustained basis, by facilitating the resolution of insolvent banks and the recapitalization and deep restructuring of the core banking system. However, there are several key issues that will need to be addressed in the implementation of an effective restructuring strategy:

- First, **mechanisms are needed to encourage weak and undercapitalized banks to seek access to the recapitalization window**, in order that they can start lending again. These mechanisms also need to be compatible with a strategic reorientation of banks' activities, organization, and governance rules, toward a focus on shareholder value and return on equity. Such a reorientation will require much more than a reduction in personnel costs on the part of the major banks.

- Second, **it is important to ensure that access to the financial crisis management facility does not result in flows of low cost capital to inefficient sectors of the economy**, including the construction sector. Rather, these public monies need to contribute to the fundamental bank restructuring and resolution of the debt overhang that now exists in parts of the corporate sector.

- Third, the **potential financial gains from successful and profitable restructurings supported by capital injections with public funds should be shared with the DIC (and hence the taxpayer).**

31. To address these issues, the **implementation of recapitalization and restructuring plans with public funds should adhere to some guiding principles**, such as:

- Public funds should be targeted to create a stronger, more profitable banking system.
- Publicly funded asset acquisitions should be based on transparent, cash-flow based loan-valuation methods.
- Private market solutions should be encouraged to the extent possible.

- Shareholders and management should bear responsibility for losses and poor performance.
- The terms of recapitalization should provide clear and strong incentives for the eventual replacement of public sector funding with private market of capital.

32. **The use of public money has heightened the need for further improvements in accounting and disclosure standards, and in internal risk control mechanisms and corporate governance**. Although the introduction of bank self-assessment constitutes an improvement in this area, its effective implementation will depend on a continuous and close evaluation of its results by a core of well trained supervisors and on a clear translation of these results into banks' financial statements. Raising disclosure standards to the high end of the spectrum of international practice would also help restore market confidence. For instance, the reporting of asset quality to supervisors and the release of financial statements is currently done on a semiannual basis in Japan; in contrast, in a number of other advanced countries, such reporting is on a quarterly basis, thus providing more frequent opportunities for supervisors and markets to evaluate balance sheets.

33. **The introduction of the prompt correction action framework was a major step in establishing an effective structured mechanism for early intervention and resolution. However, the application of this framework in Japan also falls below the most stringent international practices**. For example, as mentioned above, in the United States, for example, the trigger points for determining regulatory action, such as whether a bank would be required to formulate a recapitalization and restructuring plan, or whether public intervention is required, are higher than in Japan. Also, the recent change in the accounting rules governing the valuation of securities holdings of Japanese banks has diluted the scope for the PCA framework to respond to an erosion of banks' true capital position. Moreover, the distinction for capital adequacy purposes between banks with and without overseas activities needs to be phased out over time, since domestic banks also need to be strongly capitalized.

34. **Effective banking supervision is the last line of defense for ensuring accurate recognition of asset quality problems and their prompt correction**. Experience in other advanced countries suggests that the challenges in fulfilling this task in Japan are likely to increase following the introduction of new financial instruments, the liberalization of entry in several financial activities, and the more complex organizational structures allowed by the "big bang." International experience also indicates that the success of the FSA in ensuring effective supervision will depend on providing the agency with a clear mandate, supported by operational autonomy, and balanced by public accountability.

35. **The effectiveness of recent initiatives to accelerate loan disposal will hinge on ensuring a transparent framework for the arbitration panels to decide on the efficient valuation of loans and sharing of losses**. An active secondary market for asset-backed securities would facilitate the work of those arbitrations panel by making the price-discovery process easier. The implementation of the securitization law next September should give a

boost to this market, if accompanied by the establishment of disclosure rules regarding the asset quality underlying the new securities. An acceleration of current plans to reform Japan's commercial code and bankruptcy laws—as is now being considered by the government—would help to establish a more enduring and comprehensive framework for the resolution of corporate distress, and would help to foster a more rapid resolution of bad debt problems. The key challenge will be to balance the legal principles of attempting to maximize the amount of funds recovered from debtors with the desire to preserve the economic value of collateral.

36. **The prompt resolution of banks' bad loan problems will be essential to prepare banks to face the increased in competition for the provision of financial services that is an inevitable consequence of the "big bang" reforms**. These reforms are also likely initially to put further strains on banks' balance sheets. On the liability side, the proliferation of mutual funds may reduce banks' deposits, and increase banks' cost of funding. Experience in other advanced countries indicates that banks often succeeded in raising funds in money markets to replace deposits, *inter alia*, by selling their liabilities to affiliated short-term mutual funds. Such a strategy, and a growing acceptance by Japanese investors of mutual funds sponsored by foreign firms or geared toward investments abroad, would raise banks' funding costs.

37. **The counterpart to these changes in the liability side of banks' balance sheets will probably involve a rebalancing of banks' portfolios of stocks and loans**, through a gradual reduction in their stock holdings as well as the securitization of loans. Some of the recent regulatory changes that have reduced the capital requirements associated with the holding of securitized loans and commercial papers can contribute to this process (thereby reducing the risk of a credit crunch during the liberalization process and favoring an increase in the return on banks' equity).

38. In sum, a shift away from high-volume, low-margin lending towards greater reliance on fee income and capital market operations would support a more profitable and efficient use of banks' capital, if adequately regulated and supervised. **These transformations in response to a changing environment would, however, remain difficult as long as doubts linger over the quality of banks' assets and the need for further provisioning**. The problems of managing risk in such circumstances are illustrated by recent difficulties in securitizing domestic corporate debt in the absence of assurances about the quality of the assets to be securitized, and the high premium charged by markets to hold uninsured liabilities of Japanese banks.

V. Financial Sector Reforms: Opportunities and Challenges[1]

1. **As the "big bang" financial liberalization gathers momentum, the restructuring of the Japanese financial system is just beginning.** The recently-established Financial Supervisory Agency (FSA) will have to ensure a high standard of supervision in the increasingly deregulated environment. This oversight will be especially important in the life insurance sector, where companies are suffering from declining investment yields and deteriorating asset quality, and in the securities sector, where the freeing of commissions will undermine an important source of revenue. At the same time, many corporate pension plans—which are currently under funded—will also have to be restructured.

A. "Big Bang" Financial Liberalization

2. **A wide-ranging liberalization of financial markets—the so-called "big bang"—was announced by the government in late 1996.**[2] The "big bang" is intended to increase competition, enhance transparency, and bring the legal, accounting, and supervisory systems in line with best international practice, so as to improve the performance of the financial sector and ensure that Tokyo can offer financial services comparable in range and sophistication to those found in London and New York. The proposals included liberalizing foreign exchange regulations; freeing stock commissions; reducing the constraints on the ability of banks, insurance companies, and securities firms to compete in each other's fields; and easing restrictions on new products. Many reform measures have already been implemented, more were enacted by the Diet as part of the comprehensive Financial System Reform Bill in early June 1998 and will be implemented during the current fiscal year, and further measures are scheduled for subsequent years (see Appendix).

3. **The "big bang" is expected to trigger a major restructuring of the Japanese financial sector.**[3] As the range of products offered at the retail level increases, the share of personal financial assets held as deposits at financial institutions is expected to decline from its current level of over 50 percent, which is high by international standards. Firms are expected to reduce their dependence on bank financing, as foreign investment banks compete with Japanese institutions in offering innovative corporate financing alternatives. At the same time, increased competitive pressures will likely lead to consolidation in the financial sector, and the removal of the ban on financial holding companies provides the umbrella under which this can occur. The elimination of fixed brokerage commissions is already putting

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[1]Prepared by James Morsink.

[2]See Chapter VI in *Japan—Economic and Policy Developments*, IMF Staff Country Report No. 97/91, October 1997.

[3]See, for example, Jon Choy, "Japan's Financial Market Big Bang: The First Shock Waves," *Japan Economic Institute Report* No. 22A, June 12, 1998.

pressure on the earnings of securities firms, especially small- and medium-sized ones. In addition, the role of foreign firms is expected to increase, often in partnership with Japanese financial institutions—especially those in need of capital and foreign managerial and technical expertise.[4]

B. Government Financial Intermediation

4. **An important issue that still needs to be resolved is the government's role in financial intermediation.** In particular, the Postal Saving system has an advantage over private deposit-taking institutions, because it pays no taxes or deposit insurance premia and is not subject to the same capital adequacy requirements.[5] Postal saving deposits also provide an attractive hedge against an increase in interest rates, since they can be redeemed without penalty after six months. Although the interest rate on postal saving deposits is set as a fraction (usually about 90 percent) of the average 3-year deposit rate at private banks, the differential is inadequate—especially when interest rates are low—to compensate for the nonpecuniary benefits of postal saving deposits, including greater liquidity and the backing by the full faith and credit of the government. As a result, the share of personal deposits with the postal saving system in total personal deposits increased sharply during the 1990s, as market interest rates fell and concerns about the financial positions of some private institutions increased (Chart V.1).[6]

5. **Postal saving funds are placed primarily with the Fiscal Investment and Loan Program (FILP), which onlends them largely through public sector financial institutions.** Some of this lending competes directly with activities of private sector financial intermediaries. (For example, outstanding mortgages by the Housing Loan Corporation exceed those by domestically licensed banks.) The government is now considering a package of reforms intended to ensure that postal saving funds are allocated by professional investment managers on commercial principles, but earlier proposals to privatize the system as part of administrative reform have been sidelined. Reforms to the FILP also are expected to improve the cost accounting of its onlending, and to reduce its automatic access

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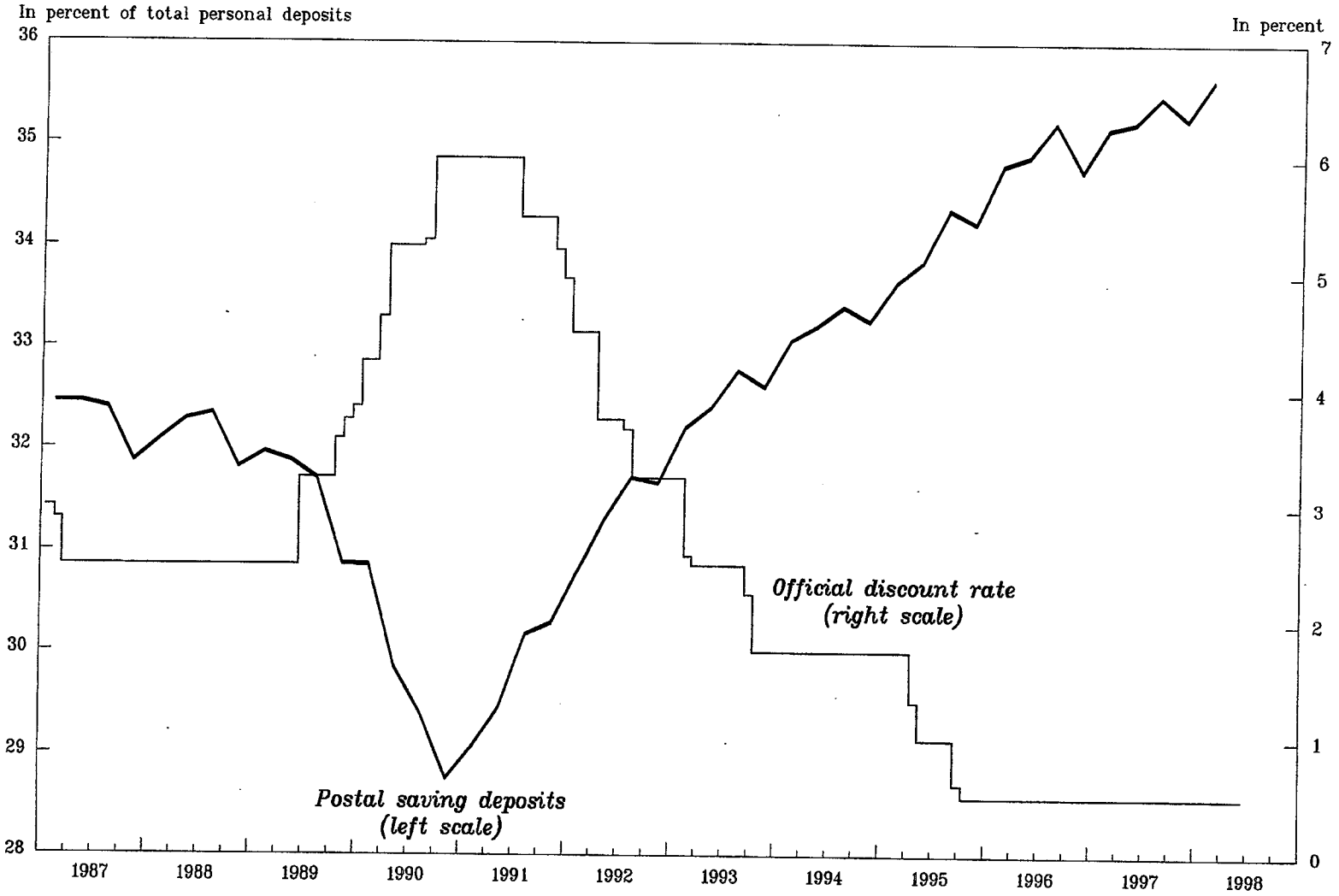
[4]Foreign institutions have already won a substantial share in securities trading and asset management business, and their role is likely to be extended more broadly following a series of recently announced acquisitions and strategic partnerships. For example, the Travelers Group—the U.S. financial services group—announced in early June 1998 that it would become the largest shareholder in Nikko Securities—Japan's third largest brokerage house—and would set up jointly-owned subsidiaries to operate in key markets.

[5]See Gabrielle Lipworth, "Postal Saving in Japan," in *Japan—Selected Issues,* IMF Staff Country Report No. 96/114 (September 1996).

[6]The share of personal deposits with the postal saving system in total personal financial assets has exhibited a similar pattern.

CHART V.1
JAPAN
POSTAL SAVING DEPOSITS, 1987-98



Source: Bank of Japan.

to funds from the postal saving and social security systems. These measures are hoped to provide greater discipline for those agencies that depend on FILP funding.

C. New Supervisory Structure

6. **Prompted by the need to ensure a high standard of financial supervision in an increasingly deregulated environment, legislation was passed that established a separate Financial Supervisory Agency (FSA), effective June 1998.**[7] The legislation transferred the authority for the inspection and supervision of all private financial institutions (including banks, insurance companies, and securities firms) from the Ministry of Finance (MOF) to the FSA, which is accountable to the Prime Minister. The FSA's mandate includes the authority to grant and revoke licenses and the authority related to resolving the problems of failed financial institutions, such as issuing corrective orders, suspending business, and approving mergers. The MOF retains jurisdiction over financial system planning and formulation—this is now the responsibility of a new Financial Planning Bureau, which replaces the old Banking and Securities Bureaus.

7. **The unified supervision of different types of financial institutions and the placement of this authority outside of the central bank are neither new in, or unique to, Japan.** While typically in the past most industrial countries had separate regulatory bodies for banks, insurance companies, securities houses, and pension funds, over the past decade several countries—including the United Kingdom, Canada, Australia, Sweden, Denmark, and Norway—have amalgamated financial supervision and separated supervisory authority from the central bank. Other countries, including Germany and Switzerland, which still have more than one regulatory body, also separate the regulation of banks from the central bank. Unlike other countries, Japan has always had unified supervision across different parts of the financial sector and a separation of supervision from central banking.

8. **By contrast, the division of supervisory responsibilities between the MOF, which is responsible for financial system policy-making, and the FSA, which is responsible for inspection and supervision, is new in Japan.** The motivation for the division is the belief that the clear distinction between these functions will improve transparency and fairness, but the precise allocation of roles between the FSA and the MOF will only become clear with practice. With regard to coordination with the Deposit Insurance Corporation, there is a potential for tension between the approval of funds to individual institutions (the responsibility of the FSA) and overall policies and funding (the responsibility of the MOF).

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[7]The BoJ continues to play a role in banking supervision given its ongoing responsibility for the smooth operation of the payments system. In fulfilling this obligation, it enters into contracts with individual financial institutions, which—among other things—provide for regular examinations by the BoJ.

9. **The delegation of authority directly from the Prime Minister is intended to give the FSA the necessary autonomy from special-interest influence to supervise and, if necessary, sanction private financial institutions.** However, some market participants have raised concerns about the degree of independence and resources of the FSA in practice.[8] First, most FSA employees (over 90 percent) were transferred from the MOF and many are on secondment. Second, the FSA—as an administrative agency—is funded by the government budget, which may limit its ability to devote the appropriate level of resources to financial supervision, including in the setting of the number and remuneration of its staff.[9] Third, given that the FSA has the same number of employees (about 400) as were formerly assigned to inspection and supervision at the MOF, there are concerns about the adequacy of staff resources in the context of a rapidly evolving financial environment.[10]

D. Life Insurance Companies

10. **The April 1997 failure of Nissan Mutual Life Insurance Company—the 16th largest life insurer and the first failure of a life insurer since World War II—has drawn attention to the difficulties facing the life insurance sector.** Life insurance companies have assets of ¥190 trillion, equivalent to about 38 percent of GDP (Table V.1). Life insurance policies, which account for about one-sixth of personal financial wealth and are held by about 95 percent of households, generally have large savings components, in part due to the tax-deductibility of life insurance premia.

11. **The performance of the life insurance sector has deteriorated in recent years because of negative spreads and declining asset quality.** Losses due to negative spreads—i.e., the difference between investment returns and the yield promised to

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[8]See, for example, the Report of the Council of the European Business Community, "Effective and Competitive Supervision in a Deregulated Environment," White Paper, April 1998.

[9]In other industrial countries, the supervisory agency commonly levies fees on financial institutions that are being supervised.

[10]The FSA supervises about 270 domestic and foreign banks, 80 insurance companies, and 230 securities companies, and directs the work of about 1,000 other staff in local finance offices, who supervise about 4,000 local cooperative financial institutions. By comparison, the number of supervisory staff in the United States is about 8,000 (of which about 1,800 are at the FDIC) and the new supervisory authority in the U.K. is expected to employ about 2,700.

Table V.1. Japan: Principal Assets of Life Insurance Companies and Banks, End-1997

	Life Insurance Companies		Banks	
	Amount (Trillions of yen)	Share (Percent)	Amount (Trillions of yen)	Share (Percent)
Cash 1/	18.7	9.8	58.0	7.4
Securities	96.1	50.2	128.3	16.3
Of which:				
Government bonds	30.8	16.1	40.7	5.2
Corporate bonds	12.7	6.6	18.8	2.4
Stocks	31.6	16.5	47.3	6.0
Foreign securities	19.2	10.0	17.1	2.2
Loans	63.4	33.1	493.0	62.6
Real estate	9.8	5.1	6.9	0.9
Initeroffice lending	...	...	23.8	3.0
Customers' liabilities for guarantees	...	...	33.2	4.2
Other items	3.4	1.8	44.7	5.7
Total assets	191.3	100.0	787.8	100.0

Source: Bank of Japan.

1/ Includes short-term deposits, entrustment of money, call loans, monetray claims, purchased, and bills purchased.

policyholders—for the eight largest life insurers increased to ¥1.2 trillion in FY1997.[11] Unlike banks, life insurers hold over half of their assets in the form of securities, mostly government bonds and stocks. Reflecting declining bond yields and the weak stock market, investment returns have fallen—the sector's average portfolio return fell from 2.93 percent in FY1996 to 2.45 percent in FY1997.[12] While the promised rate of return on new life insurance policies has also declined, and is currently about 2½ percent, the average interest cost of life insurers' long-term liabilities remains at about 4 percent, reflecting the higher contractual rates on policies written in the late 1980s and early 1990s.[13]

12. **Asset quality also is a major problem.** Life insurance companies have a substantial loan exposure to nonbank finance companies that provided funding to real estate developers, and to firms that engaged in ambitious expansion plans during the "bubble years."[14] The exposure of the sector's loan portfolio to Asia is not disclosed, but is also thought to be significant. Second, although holdings of foreign securities (about one-tenth of total assets) consist primarily of U.S. Treasury bonds, they are believed to be mostly unhedged against exchange rate risk and to include some investments in emerging market debt instruments. Third, unrealized losses on foreign real estate investments conducted in the 1980s are believed to be substantial. Finally, the life insurance sector holds more than half of the banking sector's total subordinated debt—this represents between 3 and 8 percent of assets of large insurance companies.

13. **The scope for addressing these pressures is limited since it is difficult for life insurance companies to adjust contractual rates of return on pre-existing policies.** Although promised rates of return can be cut on corporate pensions (about 25 percent of liabilities and traditionally a core business of life insurance companies), by law they cannot be cut on individual life insurance policies (about 60 percent of liabilities), except as part of

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[11]Life insurance policies in Japan typically include a savings component, on which interest accrues at a contractual rate (set when the policy is signed). Rates on contracts signed during the 1980s and early 1990s typically were 5½ percent.

[12]To boost their investment yields, life insurance companies are selling their stockholdings in major banks (life insurance companies hold about 10–15 percent of bank stock).

[13]The financial position of life insurers has also been adversely affected by the increase in life expectancy, which has reduced mortality gains. Mortality gains occur when the actual mortality rate is lower than the mortality assumption (an implication of rising life expectancy), so that death benefit payouts are lower.

[14]To increase asset management efficiency, some life insurance companies have started to sell bad loans, mostly unsecured loans to nonbank financial institutions.

workout procedures, as occurred with Nissan Mutual Life.[15] Moreover, reducing rates of return leads to large withdrawals, exacerbating institutions' cash flow problems. After life insurers reduced the return on corporate pensions from 4.5 percent to 2.5 percent in April 1996, pension managers—including the Pension Welfare Service Public Corporation, the government pension fund management institution—reacted by withdrawing large amounts of funds. As a result, the total value of individual insurance and pension policies fell in FY1997 for the first time since World War II, premium revenue declined, and policy cancellations reached unprecedented levels.

14. **The mutual status of most life insurance companies limits their financing options**. During the early 1990s, life insurance companies absorbed losses by realizing capital gains on their marketable securities and on real estate. However, the scope to absorb further losses has been eroded, particularly with the further declines in stock and real estate prices. Unrealized gains at the eight largest life insurers declined from ¥6.0 trillion at end-FY1996 to ¥4.1 trillion at end-FY1997, and these were concentrated in three companies.

15. **Life insurance companies have attempted to improve their capital adequacy by issuing "foundation funds" (*kikin*)**. Foundation funds are deeply subordinated obligations with a fixed-charge component and maturities in the range of 3–10 years. However, life insurers may be hard pressed to earn a positive spread on the proceeds in the current low interest rate environment. An insurer's ability to raise foundation funds is generally perceived to be a function of the strength of its business relationships with other corporations. Large life insurers typically hold substantial volumes of shares of their corporate clients, which has helped them develop business relationships that account for substantial revenues for group insurance policies. To date, it is these relationships that have provided the bulk of capital support in the form of foundation funds.[16]

16. **The reported solvency margins of almost all the major life insurance companies—released publicly this year for the first time—are well above 200 percent** (Table V.2). The only exception is Toho Mutual Life, which—along with several other companies—have announced plans to increase capital during the current fiscal year.[17] The solvency margin is the ratio of total capital (assets minus liability reserves) to the control level of capital. Liability reserves consist primarily of policy reserves—broadly speaking, the net present value of contingent obligations. The control level of capital is calculated

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[15]The average promised rate of return on the individual policies of Nissan Mutual Life, which were transferred to Aoba Life, was reduced from 5.5 percent to 2.75 percent.

[16]In the case of Nissan Mutual Life, business relationships with corporations were reportedly weak and therefore no-one was willing to fund policyholder losses.

[17]Toho Mutual Life and GE Financial Insurance, the 13th largest insurer in the U.S. and a unit of GE Capital Services, established a joint venture in April 1998 to take over Toho's new business. Toho Mutual Life now only manages its existing insurance policies.

Table V.2. Japan: Solvency Margins of Life Insurance Companies, End March 1998

Company	Margin
	(Percent)
Nippon Life Insurance	940
Dai-Ichi Mutual Life Insurance	632
Sumitomo Life Insurance	526
Meiji Mutual Life Insurance	720
Asahi Mutual Life Insurance	655
Mitsui Life Insurance	492
Yasuda Life Insurance	648
Chiyoda Life Insurance	314
Taiyo Mutual Life Insurance	873
Kyoei Life Insurance	301
Daido Mutual Life Insurance	1,017
Toho Mutual Life Insurance	154
Fukoku Mutual Life Insurance	722
Nippon Dantai Life Insurance	309
Daihyaku Mutual Life Insurance	295
Tokyo Mutual Life Insurance	432

Source: Nikkei News Service

according to a formula, which takes into account the need for a minimum safety cushion against the inherent unpredictability of the insurance business. When actual capital falls to the control level of capital the solvency margin is 100 percent. The fact that 15 of the 16 major life insurance companies report solvency margins of more than 200 percent suggests that an important prudential standard is satisfied.[18]

17. **However, the information content of solvency margins is limited by the methods used to value assets and liability reserves.**[19] Loan classification and provisioning practices are weak by international standards. For example, life insurance companies are not yet required to classify their loans into the four self-assessment categories already used by banks. Also, life insurance companies have not reduced the interest rate assumptions used to value liability reserves in line with declines in investment yields, resulting in inadequate liability reserves at prevailing interest rates.[20]

18. **Financial liberalization is expected to increase competition in the life insurance sector by allowing other financial institutions to enter the sector by 2001.** In the past, competition among life insurers was limited, reflecting the sector's high degree of concentration—the top seven firms account for 70 percent of insurance premium income and some analysts report that the industry association behaves like a cartel, in that it helps to determine premium, dividend, and commission levels.[21] In addition, the premium levels of the postal life insurance system (*Kampo*), which has a market share of about 10 percent, may act as a reference point for pricing. The need for regulatory approval of all new products, which allowed other insurers to examine and duplicate products, ensured a limited range of products with standard terms.

19. **Some deregulation has already occurred following the enactment of a new insurance law in April 1996.** The law allowed for greater price and product competition, and permitted direct marketing, but insurance premia continued to be set in cooperation with

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[18]Nissan Mutual Life is believed to have fallen below the 200 percent minimum requirement in March 1997, leading to the suspension of the company's operations in April 1997.

[19]This paragraph draws on Andrew Smithers, "The Japanese Life Insurance Industry," *Smithers and Co.* Report No. 112, November 1997, and on industry reports prepared by Goldman Sachs, Moody's Investors Service, and Standard and Poor's.

[20]In addition, the solvency margin gives 90 percent capital credit to unrealized gains on domestic equities, which is inconsistent with treatment of the banks, which are only allowed to count 45 percent of such gains in calculating Tier 2 capital.

[21]This compares to concentration ratios of 23 percent in the United States, 33 percent in the United Kingdom, 41 percent in Germany, and 57 percent in France. See Ostrom, Douglas, "From Colossus to Casualty: The Transformation of Japan's Insurance Industry," *Japan Economic Institute Report* No. 2A, January 16, 1998.

the industry association. The law also allowed nonlife (property and casualty, and other) insurers to engage in life insurance business through subsidiaries, which increased the number of active life insurance companies from 31 to 44.[22] Finally, the law established procedures for liability transfers, mergers, liquidations, and demutualization. The shift to more efficient distribution methods, including independent brokers, direct mail, telemarketing, and the internet, is expected to result in layoffs, as sales forces typically represent the majority of a life insurance company's employees.

20. **To ease policyholders' concerns about the life insurance sector, a policyholder protection fund will be established in December 1998 with a government guarantee on its financing through 2001.**[23] The technical reserves (i.e., contributions plus accumulated interest) of all life insurance policies will be fully covered until 2001 and up to 90 percent covered thereafter. The new fund will require contributions from life insurers (¥40 billion per year in addition to the amount being paid for Nissan Mutual Life), with a view to accumulating a standing amount of ¥400 billion. The government will guarantee the borrowing of the fund until 2001 and the BoJ is ready to provide short-term credit.

21. **The potential for excessive risk taking, or moral hazard, is compounded by limited financial disclosure requirements, which makes it difficult for investors to evaluate the soundness of life insurance companies.**[24] Some analysts report that life insurers have increased their exposure to higher yield/higher risk asset classes—including middle market loans, foreign currency denominated loans, and subordinated bonds—as they seek to boost investment yield. In response to these concerns, legislation was enacted in June 1998 that will improve disclosure requirements (including the mandatory disclosure of solvency margins) and institute a system of self-assessment of asset quality and prompt corrective action, effective April 1999. With the introduction of prompt corrective action, a solvency margin below 200 percent will trigger regulatory action.

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[22]However, life insurers will only be allowed to compete in the "third sector" (which is considered to have the greatest growth potential) in 2001.

[23]While the industry association had established a policyholder protection fund following the enactment of the new insurance law in 1996, the size of the fund proved insufficient to cover the losses of Nissan Mutual Life, and policyholders were forced to accept a reduction in their promised rate of return. The maximum amount available from the fund was set at ¥200 billion, which was not pre-funded but was to be collected when a life insurer became insolvent, with contributions from solvent companies to be proportional to their market share of the industry's total premium income. Following the failure of Nissan Mutual Life, the other 43 life insurers will be required to make a total annual payment of ¥23 billion for 10 years.

[24]Some analysts report that Japanese accounting practices are deficient in the areas of investment quality, asset valuation, and capital adequacy, compared to financial reporting systems in the United States or the United Kingdom.

E. Securities Firms

22. **The failures of Sanyo and Yamaichi Securities in November 1997 drew attention to important weaknesses in the securities sector.** On November 3, Sanyo Securities—a medium sized brokerage firm affiliated with Nomura Securities—became the first Japanese securities house in the post-World War II period to file for protection from its creditors. The financial condition of Sanyo Securities had been damaged by ¥128 billion in losses on loans to nonbank affiliates and was expected to deteriorate with the liberalization of brokerage fees. As a result of its failure, Sanyo Securities defaulted on some of its obligations, most notably interbank liabilities. These defaults heightened concerns among market participants about the ability of Japanese financial institutions to honor their obligations, leading to a sharp drop in liquidity in the interbank markets and a substantial rise in the Japan premium in these markets.

23. **Yamaichi Securities, the fourth largest securities house, filed on November 24 for voluntary dissolution following the discovery of ¥264 billion in off-balance-sheet losses.** The losses had been hidden from the firm's auditors since as early as 1991, mainly by being shifted to foreign accounts. The failure of Yamaichi Securities took markets by surprise, because it was considered solvent and had a well-established relationship with the large Fuyo *keiretsu* (to which Fuji Bank is connected). Prompt intervention by the Bank of Japan following Yamaichi's collapse avoided a repetition of the disruption to money markets that had followed the collapse of Sanyo Securities. The BoJ made available special (Article 25) loans to facilitate the payment of the firm's maturing obligations, and the MOF established a committee to oversee the orderly liquidation of the firm's assets.

24. **The failures of Sanyo and Yamaichi Securities have added to the pressures on securities firms stemming from their involvement in various bribery and corruption scandals.** The major remaining securities houses—Nomura, Daiwa, and Nikko—have all been convicted of making illegal payments (bribes) to racketeers (*sokaiyas*), who extorted money using the threat to disrupt general shareholder meetings by asking embarrassing questions of management. The penalties included 2½–5 month suspensions of eligibility to underwrite government debt issues and to engage in proprietary trading. All three firms suffered declines in revenues and market shares during the investigative and penalty phases, but the longer-term financial impact is not expected to be severe, as the firms appeared to regain most of their traditional clients once sanctions expired. Following the arrests and resignations related to the scandals, the three firms have appointed new management teams, which have announced plans to improve competitiveness. Accounting irregularities have highlighted the need for improved accounting standards, better internal and external controls, and stronger corporate governance within the securities industry.

25. **The failures of Sanyo and Yamaichi Securities and the *sokaiya* scandals depressed securities firms' profitability in FY1997**, following several years of weak performance since the collapse of the asset price bubble in the early 1990s. The weakness of

the stock market cut brokerage and underwriting revenue, and losses in distressed real-estate finance affiliates required additional provisioning. As a result, many securities firms were compelled to issue subordinated debt to increase their capital adequacy ratios.

26. **Financial liberalization is expected to increase competition in the securities industry by deregulating brokerage commissions and allowing entry by other financial institutions**. Notwithstanding the elimination of fixed commission rates on an increasing range of securities transactions, commissions still account for a large fraction of revenue at most securities houses. Reflecting the sharp decline in commissions on large-lot transactions that followed their liberalization in April 1998, some private sector analysts estimate that up to half of this revenue base will disappear when commissions are fully liberalized in 1999. This is expected to have a large negative impact on earnings, as securities brokerage typically requires high overhead costs that may be difficult to reduce quickly.

27. **The elimination of barriers between different sectors of the financial industry will likely bring about major consolidation**, similar to experience in the United States following the gradual relaxation of the Glass-Steagall restrictions and in the U.K. after London's "big bang." Domestic banks and insurance companies are interested in establishing a presence in the securities sector, and a number of foreign securities firms already have begun to operate. The increased competition, along with the evolution of corporate governance, is expected to put greater emphasis on profitability and substantial layoffs are likely to occur. Private sector analysts expect securities firms to shed many existing employees in order to acquire staff with specialized skills and experience in new products and services, including sophisticated trading instruments, global asset management, and risk management.

28. **A client protection fund will be established in December 1998, and supervision will be strengthened in FY1999**. The protection fund will cover funds received from clients but not yet invested in securities, with no limit until 2001 and up to ¥10 million per client thereafter. Securities firms will be required to make contributions to the fund, with the fee schedule to be decided by the industry in consultation with the MOF. The government will guarantee the borrowing of the fund until 2001 and the BOJ would provide short-term credit if necessary. At the same time, the recently-enacted Financial System Reform Act mandates a capital adequacy requirement, with quarterly data reporting, spot checks on compliance, and large penalties for misreporting.

F. Corporate Pension System

29. **There are increasing indications that the corporate pension system in Japan is seriously under funded.**[25] This is of concern because the system covers about 90 percent of the organized private-sector labor force and has about ¥170 trillion ($1.3 trillion) in assets. Precise estimates of the degree of underfunding are difficult because Japanese companies are not required to disclose information about their pension funds (they will only be required to do so starting in FY2000). However, analysis of the financial reports of 24 Japanese nonfinancial firms that publish their balance sheets according to U.S. Financial Accounting Standards shows that the average rate of pension asset coverage at end-FY1995 was about 75 percent and that only one pension plan was fully funded.[26] More recent data from these companies indicate that the degree of underfunding has increased in the past two years. Based on these data, some private analysts estimate the total underfunding in the corporate pension system at ¥60 trillion ($460 billion).[27]

30. **The underfunding of the corporate pension system has resulted from lower interest rates and the drop in asset prices.** The decline in interest rates has significantly reduced the ability of existing funds to generate returns to cover future pension liabilities.[28] Moreover, a large proportion of pension assets are invested in equities, which have fallen sharply in value. These losses have not been realized, since assets are valued at cost rather than current value. Some estimates suggest that the portion of pension fund assets held at trust banks had unrealized losses as of March 1996 of about ¥1.3 trillion, which was 5.6 percent of the pretax earnings of nonfinancial companies in FY1995. As the stock market has fallen since March 1996, unrealized losses are likely to have increased.

31. **As the underfunding is likely to persist in the future, many corporate pension plans will have to be restructured.** The liberalization of pension fund management rules, including

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[25]In Japan, the vast majority of firms have defined-benefit pension plans. By contrast, most firms in the United States have defined-contribution plans, for which the issue of funding does not arise.

[26]Teruki Morinaga and Mitsuhiro Fukao, "The Current State of the Japanese Corporate Pension System and Its Problems," mimeo, Keio University, (March 1997).

[27]By comparison, in the United States, the total underfunding of defined-benefit corporate pension plans in 1995 was $64 billion and is estimated to have fallen since then, reflecting the strong performance of the stock market. In the United States, defined-benefit plans are guaranteed by the Pension Benefit Guaranty Corporation, a U.S. federal corporation, which levies insurance premia on participating companies.

[28]The two main types of private-sector pensions are Employee Pension Funds (EPFs), which are supervised by the Ministry of Health and Welfare, and tax-qualified plans (TQPs), which are overseen by the Ministry of Finance.

the abolition of the so-called 5-3-3-2 rule (see appendix), is expected to improve investment returns, but rising life expectancy will increase future benefits. As a result, either firms will have to devote earnings to strengthening their pension plans (i.e., increase assets) or employees will have to suffer a cut in defined benefits (i.e., reduce liabilities), or both. Another consequence of the underfunding is a rising interest in defined-contribution plans. The government is presently studying tax changes that would transform an existing savings scheme (the "workers' property accumulation system") into defined-contribution pensions. However, a shift to such a system would not address the accumulated unfunded liability of the current system.

Financial Sector Liberalization Measures

The key measures that have already been implemented include the following:

- **Amendment of the Foreign Exchange Law:** The amended law, which came into effect in April 1998, eliminated the authorized foreign exchange bank system, which required that all foreign exchange transactions be conducted through authorized banks and that the Ministry of Finance provide prior approval for large foreign currency transactions. Now all companies, including securities firms and nonfinancial companies, are permitted to trade foreign currencies. Japanese households and firms are now permitted to remit funds to foreign-based financial institutions without pre-notification.[29]

- **Liberalization of commissions on stock transactions:** Starting in April 1998, commissions were liberalized on stock transactions with a value over ¥50 million (previously the floor was ¥1 billion). In April 1999, limits on brokerage commissions will be eliminated for stock transactions of all sizes.

- **Removal of the ban on financial holding companies:** Financial holding companies were banned soon after the end of World War II. Since March 1998, financial holding companies have been allowed to own controlling interests in other financial firms, such as banks, securities firms, and insurance companies, but not commercial (nonfinancial) entities.

- **Lifting of restrictions on the trading of securities derivatives:** As of April 1998, derivatives and options on individual stocks may be traded over-the-counter and on stock exchanges.

- **Broadening of permissible activities:** Banks are now allowed to underwrite corporate, convertible, and warrant bonds, as well as stock options, via their securities subsidiaries, and to lease office space to investment trust (mutual fund) companies for direct sales of investment trusts. Securities companies are now allowed to trade unlisted shares and to establish multi-purpose asset management accounts through which clients can make payments and settlements. Investment trusts may now hold unlisted shares, and investors may now invest in money market funds and medium-term government bond funds in any amount.

- **Abolition of the 5-3-3-2 rule:** This rule required pension fund managers to hold: (i) 50 percent or more of the assets under management in bank deposits, bonds, or loans; (ii) 30 percent or less in stocks; (iii) 30 percent or less in foreign-currency

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[29]Banks are still required to notify the authorities of their foreign transactions on an *ex post* basis.

denominated assets; and (iv) 20 percent or less in real property. The rule was first relaxed in 1997 for pension fund mangers who met certain criteria, and was removed entirely in January 1998.

- **Liberalization of corporate fund raising:** Clarifications of the commercial code concerning perpetual bonds and medium-term notes, as well as the introduction of a more efficient "book-building method" for initial public offerings of stocks, have facilitated corporate fund raising.

- **Tightening of disclosure standards**: Effective April 1, 1998, the definition of financial institutions' nonperforming loans was broadened to include all restructured loans, including those restructured at an interest rate above the Bank of Japan's (BOJ) discount rate, and loans that are three months past due (previously, six months past due). Also, pension funds are now required to disclose the market value of their securities holdings, rather than their cost.

The following measures will take effect during the remainder of FY1998:

- **Removal of obstacles to asset-backed securities:** Hitherto, the market for asset-backed securities had been stunted by the imposition of the securities tax on all securities transactions (making the repackaging of loans very costly) and the lack of an adequate registration system (making it difficult for purchasers of asset-backed securities to verify the ownership of underlying assets). To facilitate the creation of asset-backed securities, three changes will take effect in September 1998. First, tax and other regulations governing treatment of special purpose companies (SPCs) have been eased. Second, a new on-line central register, which will include a clear description of claims, will be established. Third, the requirement that the original borrower be notified of the sale of the loan will be eliminated.

- **Further broadening of permissible activities:** Banks will be allowed to sell mutual funds and new types of mutual funds will be permitted, such as incorporated and privately-placed mutual funds. The licensing requirement for securities firms will be replaced by a registration requirement. Investment advisory companies will be allowed to trade securities directly. The definition of securities will be expanded to include instruments such as depository receipts and covered warrants, which will remove ambiguity regarding their regulation. Proprietary trading systems will be allowed, and the requirement that all stock trading be conducted on exchanges will be lifted. Nonbank financial institutions will be allowed to issue bonds.

- **Improved investor protection in the securities and insurance sectors:** Financial disclosure rules will be strengthened, including the requirement of publication of solvency margins by insurance companies and capital adequacy ratios (still to be defined) by securities houses. Prompt corrective action frameworks, similar to that already implemented for banks, will come into effect for both sectors in FY1999.

Industry-funded investor protection funds for customers of securities firms and policyholders of insurance companies will be established in December 1998.

The following measures have been scheduled for implementation after FY1998:

- **Consolidated accounts:** Financial information will be disclosed on a consolidated basis starting in FY1999.

- **Removal of restriction on commercial bank funding:** At a date that remains to be determined, commercial banks will be allowed to issue straight bonds, reducing their dependence on deposits and further blurring the distinction between commercial and long-term credit banks.

- **Elimination of remaining barriers to entry between financial sectors:** Subject to the enactment of further legislation, by the end of FY1999 restrictions on the operations of banks' securities subsidiaries will be lifted, allowing them to deal in stocks. Banks will be allowed to compete in the insurance and securities sectors (and vice-versa) by the end of FY2000.

VI. Governance, Deregulation and Economic Performance[1]

1. **Until the 1990s, Japan's economic performance was viewed as a model for the rest of the world**—the government's success in fostering rapid industrialization was often used as an example for developing countries, and Japanese management practices were emulated by businesses in many other industrialized countries. The principal elements of the Japanese economic system considered to have contributed to its success included:[2]

- closely knit relationships—cemented by cross shareholdings—between industrial companies, their suppliers, and banks;

- stable labor relations, involving implicit guarantees of lifetime employment in exchange for low labor strife and costs, and high firm loyalty and productivity; and

- a close coordination of government policies and business interests, including a policy environment that favored relatively protected domestic markets, low costs of capital, and rapid industrialization.

2. **These features of the Japanese economic system were thought to have successfully assured businesses stable access to intermediate inputs, labor, and capital.** Also, by insulating a large share of the economy from the need to focus on short-term profit maximization, the system enabled the business sector to focus on longer term goals, including achieving a large and stable market share.

3. **However, with the sharp deterioration of Japan's economic performance since the beginning of the 1990s, questions have grown regarding the benefits of the Japanese approach**. As discussed in Chapter I, cyclical factors only explain part of the slowdown in output and productivity growth. It now appears that those features of the Japanese economy that had contributed to its earlier success may also have inhibited its ability to respond flexibly to the more recent challenges posed by the collapse of asset prices and associated weaknesses in the financial sector, globalization, demographic changes, and the rapid increase in information technology.

4. **An important manifestation of the recent decline has been the fall in the rates of return earned on equity in Japan**, to levels well below rates in other countries

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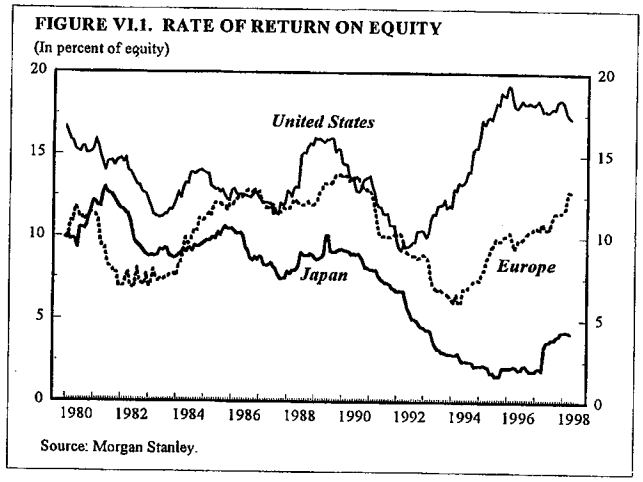
[1]Prepared by Ichiro Oishi and Christopher Towe.

[2]For a discussion of these issues see Yukio Noguchi, "The 1940 System: Japan under the Wartime Economy," and Koichi Hamada, "The Incentive Structure of a Managed Market Economy: Can it Survive the Millennium?" in *American Economic Review: Papers and Proceedings*, Vol. 88 No. 2 (May 1998).

(Figure VI.1).[3] Low rate of return, as well as the economy's weak performance, have raised concern that, despite the high level of household savings, the economy is not productive enough to maintain standards of living in the face of the rapid increase in the proportion of the retired population that is projected to occur early in the next century. Indeed, concern on this front has been an important impetus for recent deregulation and reform initiatives, including the "big bang" deregulation of the financial sector.



5. **The discussion in this chapter highlights five causes for the recent deterioration in the performance of the Japanese economy**:

- First, the system of corporate governance in Japan has been undermined by weaknesses in the banking sector and other factors.

- Second, a combination of high saving rates and capital market inefficiencies provided the Japanese business sector with cheap funding, reducing the need to ensure that investments yielded internationally comparable rates of return.

- Third, labor market practices—including the lifetime employment system—and government employment policies have limited the ability of Japanese businesses to respond flexibly to recent technological and other shocks.

- Fourth, low costs of capital have encouraged a large industrial base in Japan, which is adjusting relatively slowly to the pressures posed by globalization.

- Fifth, regulatory and other constraints have undermined efficiency in the nontradeables sectors, which has lagged behind that in other sectors of the economy.

6. **This chapter discusses each of these factors in turn**. It then briefly reviews the progress that has been made in the area of deregulation, discusses the empirical evidence that suggests that the benefits could be significant, and notes a number of areas where more rapid

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[3]The return on equity is measured as dividends plus capital gains. Data showing the relatively low return on capital in Japan are also reported in Albert Ando, John Hancock, and Gary Sawchuck, "Cost of Capital for the United States, Japan, and Canada," *NBER Reprint No. 2162* (1998), but the authors also note that data limitations mean that this conclusion is somewhat tenuous.

progress could be sought. A more detailed description of recent deregulation initiatives is contained in the Appendix.

A. Weaknesses in Corporate Governance

7. **Historically, corporate governance in Japan has been left mainly to the banking and corporate sectors**, through the "main bank" and *keiretsu* systems. The main bank system—which involves close and long-standing relationships between a bank and its principal corporate clients—has been shown to have been relatively successful.[4] The system assured firms of a steady source of funding, and centralized governance within the banking sector, which had an informational advantage that allowed it to effectively monitor performance. Banks were also well positioned to discipline corporate borrowers, by requiring management changes and financial restructuring in the case of firms that were performing inadequately. The *keiretsu* system—which also is typified by close relationships between corporations and their principal suppliers and distributors—had the advantage of assuring firms of a stable source of intermediate inputs and long-term access to distribution channels.

8. **The main bank and *keiretsu* systems were cemented by pervasive cross shareholdings**. The proportion of the shares of Japanese businesses held by other businesses has been around 50 percent during the past two decades, well above the rate in other industrial countries, and roughly 40 percent of listed shares were held by banks and nonbank financial institutions.[5] The predominant ownership role of banks and life insurers has reflected the importance of these institutions in intermediating between households and the corporate sector and the relatively low rates of stock ownership by the household sector. Japanese households held just less than 7 percent of their financial assets in the form of stocks in 1995, compared to rates of stock ownership of 23 percent in the United States and 13 percent in Germany.

9. **Extensive cross shareholdings have tended to reduce the role of noncorporate shareholders in corporate governance**, and also has contributed to a corporate culture that emphasizes the rights of employees and management over shareholder rights. The fact that executive directors of Japanese companies are usually appointed from the management ranks of the firm, or from affiliated companies, has strengthened this connection.[6] An often-cited illustration of the lack of shareholder rights in Japan is the fact that over 90 percent of companies' shareholder meetings are held on the same day. The weakness of noncorporate

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[4]See *OECD Economic Surveys: Japan, 1996* (Paris: Organization for Economic Cooperation and Development, 1996), Chapter V for a discussion.

[5]See "The Cost of Capital: Concepts and Estimation," *Bank of Japan Quarterly Bulletin*, Vol. 4, No. 2 (May 1996).

[6]For a more detailed discussion of this issue see *OECD Economic Surveys: Japan, 1996.*

oversight is also reflected in the influence of corporate racketeers (*sokaiya*)—who are reported to be paid large sums in order to avoid having embarrassing information revealed, including during shareholder meetings.[7]

10. **Notwithstanding its successes, the effectiveness of the main bank system for achieving high rates of return on capital has been questioned**. The fact that interest rate deregulation came relatively late to Japan meant that banks had a low-cost deposit base, implying that pressure by banks on the corporate sector to produce high rates of return was relatively mild.[8] As a result of low loan rates, and relatively high leverage, the real after-tax cost of funds in Japan has been significantly below that in other industrial countries.[9] The banking system also has been under relatively little pressure to achieve high rates of return on equity, since their major shareholders are life insurers, which are mostly organized as mutual societies and are themselves under relatively weak control by their owners.[10]

11. **The ability of banks to discipline the corporate sector was eroded considerably during the 1980s and 1990s**. During the bubble period in the late 1980s, the substantial capital gains earned on shares reduced further the pressure on banks to encourage corporate profitability and dividend payouts.[11] Share price inflation also increased bank capital markedly, providing more room for low-cost bank financing. At the same time, liberalization of the domestic financial market meant that higher-quality borrowers were increasingly accessing capital markets directly, so that a greater proportion of bank lending was being directed to the small- and medium-sized enterprise (SME) sector, whose performance was harder to monitor. In lending to SMEs, banks relied heavily on the value of collateral in making loan decisions, despite the fact that asset prices were unsustainably high. The collapse of asset prices in 1991 further constrained the banks' ability to enforce discipline on

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[7]A recent survey of company executives indicates that the timing of shareholder meetings is designed to avoid "turmoil" from shareholders, including from corporate extortioners (Nikkei News Internet Edition, June 25, 1998). Up to ¥20 billion annually is estimated to be paid to *sokaiya* organizations in the form of bogus magazine subscriptions (The Daily Yomiuri, May 5, 1998).

[8]Japan's Antimonopoly Law restricts a bank's share ownership of a company to no more than 5 percent of the company's capital.

[9]"The Cost of Capital," *BOJ*, 1996 presents estimates suggesting that the cost of capital in Japan was considerably lower than in the United States or the United Kingdom since the 1970s, but that the gap narrowed appreciably by the early 1990s.

[10]A little over 11 percent of the major banks' Tier-1 capital is owned by life insurers.

[11]For a discussion, see Economic Planning Agency, *Economic Survey of Japan: 1994–1995*, (Tokyo: Government of Japan, 1995), pp. 155–157.

the corporate sector. The drop in share prices eroded bank capital, making it more difficult to meet Basle minimum capital adequacy standards that were adopted in March 1993. This situation created a strong incentive for banks to obscure the fragility of the financial health of their corporate clients and avoid bankruptcies or restructuring.

12. **The absence of activity in the area of mergers and acquisitions (M&A) further reduced pressure to achieve satisfactory rates of return.** M&As are relatively infrequent in Japan, compared with other industrial countries, in part because the sale of a firm creates a perception of financial weakness and undermines the firm's relationships with its customers and suppliers, thereby eroding its franchise value.[12] Moreover, hostile takeovers, which have been used to extract value from poorly performing firms in other countries, are difficult to achieve because the extensiveness of cross shareholdings make it difficult to obtain a controlling interest in a firm.

13. **Weaknesses in accounting and disclosure standards have also adversely affected governance.** Accounting standards in Japan are generally not considered to be as demanding as those of the Generally Accepted Accounting Practice of the United States or the International Accounting Standard.[13] Internal audit and risk management systems are weak, and provide considerable scope for obscuring the financial situation of firms. Moreover, external examiners have sometimes been lax in ensuring proper disclosure, reflecting the effect of low accounting fees and insufficient recourse to the courts to punish auditors that have failed their fiduciary responsibilities. As a result of weaknesses in the external and internal auditing systems, questions have been raised about the extent to which the reports of outside auditors provide an accurate picture of the overall state of balance sheets. For example, when the fourth largest securities firm in Japan—Yamaichi Securities—failed in November 1997, long-standing accounting irregularities (shifting of losses to subsidiaries, or the practice of *tobashi*) came to light.[14]

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[12]For a discussion, see Economic Planning Agency, *Economic Survey of Japan: 1996–1997*, (Tokyo: Government of Japan, 1995), p. 133.

[13]For a discussion of the shortcomings of the Japanese accounting system, see Mitsuhiro Fukao, "Japanese Financial Instability and Weakness in the Corporate Governance Structure," *International Symposium on the Role of Markets and Governments, Conference Paper 98-2-6* (March 1998). One problem is the lack of consolidated accounts, although these will be required as of April 1, 1999. Sometime in 1998, the Business Accounting Council is expected to issue a report on measures to raise Japan's accounting practices to international standards, including requiring firms to report the value of securities at market cost. For a discussion see Jon Choy, "Japan's Financial Market Big Bang: The First Shock Waves," *Japan Economic Institute* Report No. 22A (June 12, 1998).

[14]Off balance sheet liabilities, particularly those of related to subsidiaries, are an important

(continued...)

14. **Bankruptcy laws have not helped enforce corporate discipline in Japan, and have discouraged restructuring**. Bankruptcy laws are cumbersome and time consuming—asset assessments for companies filing for court protection from creditors take three to seven months, and the resolution of bankruptcy proceedings can take over ten years. As a result of these delays, the underlying value of collateral is eroded, and considerable costs are imposed on both creditors and debtors. Another problem with existing legislation is that firms seeking protection are required to choose between liquidation or rehabilitation at the outset, and once this choice is made, it cannot be reversed. Also, existing legislation does not provide for bankruptcy proceedings to take into account extraterritorial assets, or does not recognize foreign bankruptcy proceedings. The existence of multiple liens is a further inhibition to foreclosure.[15]

B. Capital Market Inefficiencies

15. **Japan's domestic saving rate has averaged above 30 percent during the past decade, considerably higher than most industrial countries**. High levels of saving have tended to lower the cost of capital and promote investment in industrial capacity.[16] As a result, investment rates in Japan exceed by a substantial margin those in other industrial countries (Figure VI.2). High investment rates have contributed to rapid increases in the capital-output ratio compared with other major industrial countries, which in turn may have lowered the marginal rate of return on capital.[17]

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[14](...continued)
source of problems. For example, the failure of Daido Concrete in February 1998 was the result of its provision of implicit guarantees ("letters of awareness" or *shido nensho*) to the creditors of its overseas subsidiaries. For a discussion, see Kenichi Ohmae, "Five Strong Signals of Japan's Coming Crash," *Washington Post*, June 28, 1998.

[15]Plans have been announced to overhaul bankruptcy legislation to address some of these problems, but revisions would not be enacted until FY 2003.

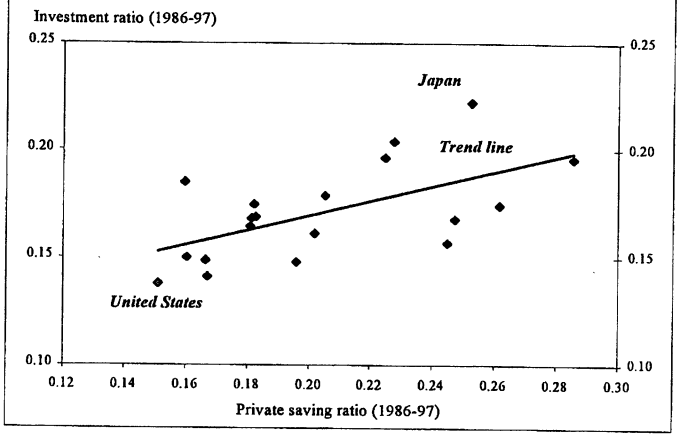
[16]Cross country studies typically confirm the high degree of correlation between saving and investment rates. For example, see Martin Feldstein and C. Y. Horioka, "Domestic Saving and International Capital Flows," *Economic Journal*, Vol. 90; and Economic Planning Agency, *Economic Survey of Japan: 1994-1995*, pp. 276–278.

[17]The factors that have been identified as explaining Japan's high saving rate include demographics and the large proportion of "prime savers" (i.e., those aged 45–64), the even distribution of income, housing costs, the bonus system, the importance of bequests in Japan, and differences in national accounting methodologies. While the Japanese saving and investment behavior appears unusual compared with other industrial countries, the more

(continued...)

16. **Investor portfolios in Japan have tended to be relatively undiversified internationally**. Direct holdings of foreign assets by household holdings represent only ¼ percent of their total financial assets, and indirect holdings (including through investment held by financial institutions) represent only a further 1¾ percent. To some extent, portfolio diversification has been discouraged by restrictions on capital mobility, as well as other regulatory constraints. Important examples of restrictions on international capital mobility included the so-called 5–3–2–2 regulation, which restricted pension funds' and life insurers' investments in overseas securities to no more than 30 percent of assets, and the Foreign Exchange Law, which required prior notification of all large foreign exchange transactions.

FIGURE VI.2. INDUSTRIAL COUNTRY SAVING/INVESTMENT RATIOS



17. **A number of these restrictions have been eased recently as part of the "big bang" financial sector reforms**—limits on pension fund investments were lifted at the beginning of 1998, and the Foreign Exchange Law was liberalized in April 1998—but significant additional restrictions remain.[18] For example, the tax treatment of household investments abroad also acts as a disincentive to portfolio diversification, since domestic investments are subject to only a 20 percent withholding at source and the income does not have to be reported, while all foreign income must be reported and marginal rates of up to 65 percent apply.

18. **A range of other financial market regulations also have contributed to low rates of return**. Liberalization of the Japanese capital market began considerably later than in other industrial countries. Notably, the process of deregulating interest rates was only completed in

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[17](...continued)
rapid rate of capital accumulation may simply reflect a catch up phenomenon, versus other factors. Nor does Japan's capital accumulation appear excessive in economic efficiency terms. For a discussion of these issues, see U. Baumgartner and G. Meredith (eds.), *Saving Behavior and the Asset Price "Bubble" in Japan: Analytical Studies*, Occasional Paper 124 (Washington DC: International Monetary Fund, 1995).

[18]It is unclear how significant a constraint the restrictions on foreign portfolio investment has been, since on average investments have been well below the 30 percent limit. For example, holdings of foreign assets by investment trusts were only about 6 percent of total assets, and the ratios for life insurers and nonlife insurers were 10 percent and 15 percent, respectively.

October 1994, and a host of other regulatory constraints are now only being lifted under the "big bang" initiative (see Chapter V for a more complete discussion). The process of unwinding cross shareholdings is also impeded by the Japanese Commercial Code, which restricts the ability of firms to purchase their own shares, except with the concurrence of two-thirds of its shareholders and with the use of funds that would have been paid out in the form of dividends.[19]

19. **Government financial institutions also have played an important role in intermediating savings in Japan, and have contributed to low yields on capital.**[20] Outstanding loans by these institutions have grown rapidly and reached nearly 30 percent of GDP in 1997 compared with just over 10 percent in the mid-1970s. These institutions have relied on captive sources of funding—the social security and postal savings systems—and provide policy-based lending to both households and the business sector. Loans rates by these institutions are tied to the yield on government bonds, and so are well below the prime rates charged by banks (even more preferential rates are provided for housing loans). The provision of government loans at below market rates has undoubtedly helped distort domestic capital markets and reduce rates of return.

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[19]The preferred means of reducing cross shareholdings is through buy backs (i.e., a firm's purchase of its stock from another corporation), since sales of stocks to the market risks further depressing already weak market valuations (for a discussion of the issue, see Fuka, "Japanese Financial Instability." However, buy backs have increased in recent years, encouraged by the changes to the tax treatment of imputed dividends, as well as legislation in June 1997 that permitted firms to buy back shares mid-fiscal year with the concurrence of their board of directors.

[20]These institutions include the Export-Import Bank of Japan (which provides export financing), the Japan Development Bank (which finances business investment), the Japan Finance Corporation for Small Business (which provides investment financing for small businesses) and the Housing Loan Corporation (which provides mortgage loans). Other financial institutions provide loans to specific geographical regions or sectors of the economy. For a discussion, see Akihiko Suzuki, "Facts and Problems in the Administration of Government Financial Institutions," *LTCBR Monthly* (March 1998).

C. Employment Policies and Practices

20. **The "lifetime employment system" in Japan involves implicit commitments by employers to avoid layoffs during periods of economic downturns** in exchange for low labor strife and worker loyalty.[21] The salary structure is consistent with this system—the age profile of the salary structure is relatively steep, so that long tenure is rewarded with higher salaries. For example, production workers in Japan with 20 or more years of experience earn roughly 75 percent more than those with less than two years' experience, whereas the gap is only around 30 percent in Europe. As a result, employees are reluctant to change jobs and lose seniority and income, and turnover at Japanese firms is considerably less than in other industrial countries—for example, the OECD estimates that average job tenure in Japan is 11 years, versus 7 years in the United States.[22]

21. **While this system was well suited for the rapid industrialization of Japanese manufacturing sector during the post-war period, it has impeded the ability of the business sector to respond flexibly** to technological change or the pressures from globalization. In particular, the growing emphasis on information technology has increased the importance of highly-specialized, knowledge-intensive individuals, and has reduced the importance of firm-specific skills. This, in turn, has increased the importance of compensation systems that reward performance rather than seniority. However, despite some gains, only around 20 percent of Japanese firms base their pay scales on merit; the rest compensate employees on the basis of seniority. Moreover, while the system was successful in containing labor costs when employment was growing rapidly since the majority of the workforce was at the low end of the pay scale, demographic trends mean that a larger proportion of the population is now at the upper end of pay scales, placing further pressure on labor costs.

22. **Government safety nets**, and their emphasis on preserving employment rather than facilitating mobility, have inhibited structural adjustment. In particular, to a much greater degree than in other countries, employment policies in Japan are aimed at discouraging layoffs. An important example is the "employment adjustment aid" that is provided to firms, which provides firms with wage subsidies in exchange for companies' assurances that they will maintain staffing levels.[23] Empirical evidence has confirmed that this system has

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[21]See *OECD Economic Surveys: Japan 1996*, Chapter IV for a discussion of employment practices in Japan.

[22]More recent data published by the U.S. Bureau of Labor Statistics suggests that average tenure in the United States is less than 4 years, while EPA points out that tenure at large Japanese firms is considerably higher than the average (closer to 12 years).

[23]The program subsidizes 50 percent of eligible firms' salaries for furloughed

(continued...)

increased the extent which Japanese employers responded to demand shocks by adjusting employment hours rather than employment.[24] By contrast, there is a relative lack of safety nets for the unemployed—the unemployment insurance system is relatively ungenerous, and government spending on social assistance is low by industrial country standards.[25] The absence of adequate safety nets reduces the incentive for employees to search for alternative employment, and inhibits firms from to restructuring their labor forces by reneging on implicit commitments to lifetime employment.

23. **Regulatory impediments constrain labor mobility**. For example, private placement firms have been restricted from operating in fields already covered by governmental placement agencies, and limits were placed on the fees that could be charged by private agencies. Some of these restrictions were relaxed in 1997, but the sector remains subject to considerable regulation.[26] Restrictions also have been placed on temporary employment

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[23](...continued)
workers—workers that remain on a firm's payroll but are otherwise unemployed. This system was expanded in 1995 to cover small enterprises, and for small and medium-sized firms this assistance can reach up to two-thirds of a person's salary. For example, at the cyclical trough, roughly 30 percent of all industries received some form of adjustment aid (*Monthly Labor Statistics and Research Bulletin*, May 1998; for a discussion of this program, see Nikkei News, March 4, 1998). Recently, the government has introduced schemes that have aimed at promoting labor mobility, including by subsidizing moving expenses, but the take up has been small.

[24]Masanori Hashimoto, "Aspects of Labor Market Adjustment in Japan," *Journal of Labor Economics*, Vol. 1 (1987), pp. 168–94.

[25]Douglas Ostrom, "Prospects for Economic Reform in Japan: Where is the Safety Net?" *Japan Economic Institute Report No 37A* (October 3, 1997), cites OECD statistics that suggest that unemployment benefits in Japan are almost 20 percent less generous than in the United States and 70 percent less generous than in the other OECD countries. *OECD Economic Surveys: Japan, 1996*, notes that Japan's expenditures on active labor market policies is only about 0.1 percent of GDP, considerably below the 0.7 percent average for the G-7, even taking into account the low level of unemployment in Japan.

[26]A number of these restrictions have been relaxed recently, or in the process of being phased out. For example, restrictions on fees were relaxed in the Labor Standards Law of 1997, and the positive list of occupations that such firms could handle was converted to a negative list, which included positions usually filled by new graduates. The new Law also eased barriers to entry for employment agencies, but still maintained a number of requirements. For a discussion see Kojima Noriaki, "Japanese Employment and Labor Laws in Transition," *Journal of Japanese Trade & Industry*, No. 4, 1997, pp. 8–11; and *OECD Economic Surveys:*
(continued...)

agencies. From 1986, these agencies were only able to provide services in 16 job categories, and though more recent deregulation increased the number to 26, these are mainly in relatively skilled occupations.

24. **The corporate pension system represents a further important constraint on labor mobility**. Pension plans are typically on a defined-benefit basis, and tend to provide pension benefits in the form of a lump-sum payment. The tax system provides a large deduction for the recipient of lump sum benefits, which do not apply to periodic pension benefits, and the tax allowance is substantially larger for amounts received after 20 years of service. As a result, there is a significant financial impediment to employees seeking alternative employment.[27]

D. Globalization, Deindustrialization, and the Manufacturing Sector

25. **Economic performance in the manufacturing and nonmanufacturing sectors in Japan has diverged markedly**. Although economy-wide productivity growth in Japan has been extremely rapid, this has largely reflected gains in the nonmanufacturing sector, as manufacturing sector productivity appears to have grown broadly in line with other industrial countries (Chart VI.1). However, productivity growth in the nonmanufacturing sector has been largely the result of massive capital investment, and its underlying efficiency has been weak. By contrast, labor productivity gains in the manufacturing sector have tended to result from technological and other improvements rather than capital accumulation.[28] For example, over the 1984–95 period, total factor productivity (TFP) growth in the manufacturing sector is estimated to have been strongly positive, while TFP growth was negative in the nonmanufacturing sector (see Table VI.1).

26. **Sectoral differences in efficiency appear to have been related to the regulatory burden placed on different industries**. The EPA notes that 42 percent of all industries in Japan were subject to some form of regulation in 1990, only slightly lower than the 47 percent rate in 1965 (see Table VI.1). However, the regulatory burden in the manufacturing sector, which has been relatively efficient, was only 14 percent in 1990, while the regulatory burden on the rest of the economy averaged around 50 percent. Similarly, TFP growth in the wholesale and retail sectors was rapid, possibly reflecting the impact of deregulation in these sectors. Differences in sectoral efficiency also are related to differences

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[26](...continued)
Japan, 1996.

[27]The authorities have recently announced their intention to review the tax treatment of pensions and promote defined-contribution pension plans. There is also a need to address the significant underfunding of the corporate pension system.

[28]Economic Planning Agency, *Economic Survey of Japan, 1994–95,* pp. 214–216.

Table VI.1. Estimates of Sectoral Productivity and Regulatory Burdens
(In percent)

Industry	Productivity 1/				Share of industry subject to regulation 2/	
	Labor productivity	Contribution of				
		Labor	Capital stock	TFP	1965	1990
Industry total	2.18	-0.28	2.36	0.11	47.8	41.8
Manufacturing	3.17	0.08	1.68	1.42	23.4	14.1
Consumer goods	0.82	0.11	1.30	-0.58	...	...
Materials	2.44	0.07	1.86	0.52	...	...
Machinery	5.44	0.03	1.93	3.48	...	...
Non-manufacturing	2.08	-0.45	2.82	-0.29	...	...
Agriculture, etc.	2.50	1.75	2.39	-1.64	85.7	87.1
Mining	2.76	1.49	0.59	0.67	100.0	100.0
Construction	1.80	-0.70	2.45	0.05	100.0	100.0
Electricity, gas, heat supply, water	2.63	-0.19	3.06	-0.23	100.0	100.0
Transportation and communications	1.89	-0.11	0.38	1.61	98.8	97.3
Wholesale and retail	3.13	-0.26	1.58	1.77	...	...
Financing and insurance	3.16	-0.36	3.28	0.24	100.0	100.0
Real estate	-0.58	-4.88	12.24	-7.94	2.6	7.5
Services	0.57	-0.69	5.08	-3.82	78.8	55.6

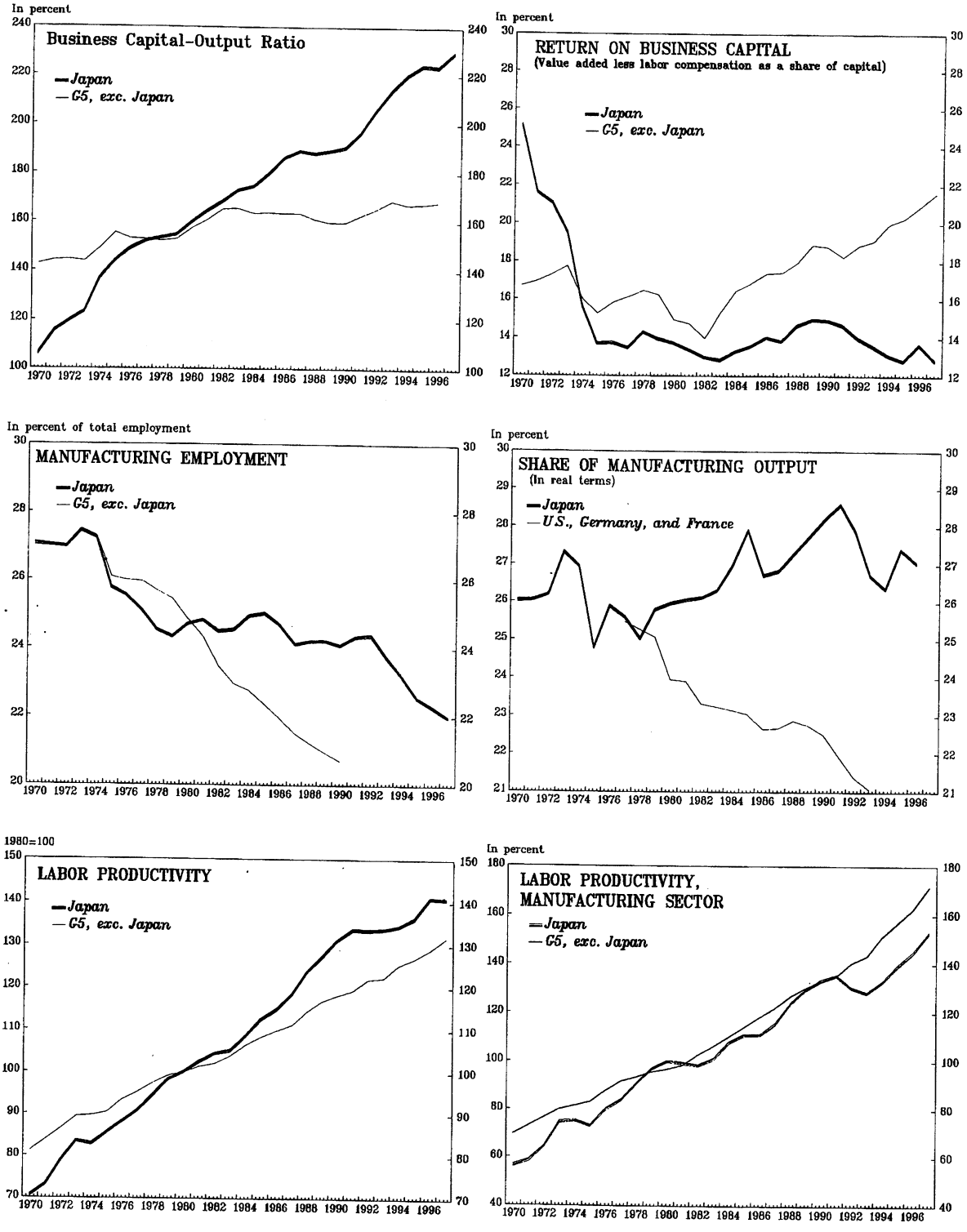
1/ Ministry of Labor, *White Paper on Labor: 1997- Summary* (Tokyo: Government of Japan, 1997)

2/ Economic Planning Agency, *Economic Survey of Japan, 1994–1995* (Tokyo: Government of Japan, 1996)

CHART VI.1

JAPAN

STRUCTURAL COMPARISONS BETWEEN JAPAN AND THE G5



Source: OECD, WEO Database, and staff estimates.

in exposure to external competition. For example, TFP growth has been especially rapid within the electrical machinery industry, which has been exposed to external competition, but TFP growth has been negative since 1980 in the food industry, which is highly regulated and relatively protected.

27. **Deindustrialization in Japan has proceeded less rapidly than in other advanced economies**, possibly reflecting the structural and other rigidities that have contributed to low returns on capital. Unlike most other industrial countries, Japan has not responded to the globalization of markets by reducing the share of manufacturing employment in favor of service-sector employment (Chart VI.1).[29] Recent empirical evidence suggests that productivity gains in the manufacturing sector, as well as higher per capita incomes, would normally be associated with a larger shift of resources into other sectors, as has been the case in many other industrial countries.[30] While the strength of the manufacturing sector may reflect the comparative advantage of Japanese producers, regulatory and other impediments discussed above may also have constrained the ability of the Japanese economy to develop new, particularly knowledge-based industries.

E. What are the Likely Benefits of Deregulation?

28. **Considerable progress has been made toward deregulation in recent years**, spurred by an increasing awareness of the role that structural factors have played in the economy's weak performance. A series of three-year Deregulation Action Plans (DAP) have been announced beginning in 1995, which have resulted in a number of important measures, and the authorities have responded to the downturn in economic activity that started in 1997 by attempting to accelerate these plans (details are provided in the Appendix). The latest DAP was announced in March 1998, and besides including a range of proposals, efforts have

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[29]For example, although manufacturing employment among OECD countries fell from around 27 percent in the early 1970s to close to 15 percent in recent years, the share of manufacturing employment in Japan has remained relatively stable at between 20–25 percent. For a discussion see the *World Economic Outlook*, May 1997, Chapter III. The slow adjustment of the manufacturing sector may also partly reflect the fact that the average age of Japan's capital stock is considerably less than in other industrial countries, owing to relatively rapid rates of capital accumulation in Japan.

[30]Robert Rowthorn and Ramana Ramaswamy, "Deindustrialization: Causes and Implications," *IMF Working Paper, WP/97/42* (April 1997). Productivity gains would be expected to cause the relative price of manufactures to fall, and encourage workers to move into the service sector. The demand for services is often considered to have a higher income elasticity, so that as income per capita rise, the demand for services rise faster than the demand for manufactured goods. For a discussion, see W. J. Baumol, S. Blackman, and E. N. Wolff, in *Productivity and American Leadership: The Long View* (Cambridge, MA: MIT Press, 1989).

been made to improve the administration of the authorities' reform effort by strengthening the role of the Deregulation Committee.

29. **However, the deregulation process has suffered from a number of shortcomings.** In particular, initiatives have often involved relaxing existing regulations rather than their complete elimination. For example, liberalization of the Large Scale Retail Stores (LSRS) Law tended to come in the form of gradual reductions in the size restrictions, rather than complete elimination, and restrictions on land use around factory areas (under the Factory Location Law) also have been relaxed but not withdrawn completely.[31] At the same time, the pace of deregulation has been slow, and at times measures have been undermined by the introduction of new regulations.[32] As a result, liberalization has appeared piecemeal and has not been accompanied by a significant reduction in red tape and other administrative burdens.

30. **There is considerable evidence to suggest that the longer-run benefits from a bolder and more ambitious approach to deregulation in Japan could be significant.** For example, a study by the Ministry of International Trade and Industry (MITI) suggests that deregulation measures that raised productivity to internationally comparable levels could increase GDP by 6 percent, compared to its baseline level, by the year 2001 (Table VI.2). This study is based on the assumption of full deregulation in five sectors (transportation, energy, telecommunications, finance, and distribution), and roughly one third of the estimated impact results from gains in the telecommunications field, with deregulation in the finance and distribution sectors also providing significant gains. A study by the EPA reached a similar conclusion on the overall magnitude of possible gains, placing greater emphasis on

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[31]Another example, is the governmental restriction on the number of lawyers passing the annual bar exam—although the Diet is considering raising the annual limit from 700 to 1,000, the question arises whether governmental restrictions are necessary at all.

[32]In the new DAP, for example, the target dates for a number of commitments remain vague or unambitious. Notably, the DAP only proposes consideration of deregulation in some areas, including the home nursing care industry and the construction sector, and does not address still-burdensome resale price maintenance restrictions in the area of publishing. Moreover, reforms to the postal saving system were less extensive than originally proposed, and the DAP does not substantively address the need to reduce the public sector's provision of loans to the private sector. Reform of bankruptcy legislation also is likely to take considerable time to complete, and the tax legislation necessary to complement the new holding company legislation has not been passed. Although the LSRS Law is to be eliminated, it is to be replaced with new legislation that would provide local governments with the authority to block stores from opening for environmental reasons.

Table VI.2. The Economic Benefits of Comprehensive Deregulation 1/
(In percent)

	Period considered	Change in differential: Between Japanese and foreign prices	Change in differential: Reduction in domestic prices	Increase in GDP
Nakatani (1994)	1992	-50	-16.5	9.4
Nakakita (1994)	1992	-100 1/	-22.0 1/	8.2
Japan Research Institute (1993)	...	-100	...	2.6
Smith (1994)	...	-50	-20.0	2.3
Daiwa Research Institute (1994)	1992	-100 2/	...	10.0
Economic Planning Agency (1994)	1992	-20 3/	...	8.0
Japan Center for Economic Research (1995)	1992	-100 4/	...	18.7
MITI (1997)	1995-2001	...	-3.4	6.0
Economic Planning Agency (1997)	1998-2003	...	-7.3	5.8
OECD (1997)	...	...	...	5.9

Source: Seiji Shimpo and Fumihara Nishizaki, "Measuring the Effects of Regulatory Reform in Japan: A Review," *Discussion Paper No. 74, Economic Research Institute*, Economic Planning Agency (March, 1997); MITI, "Summary of Report of the Study Group of the Effects of Deregulation," from MITI Web site; Economic Planning Agency, *Economic Survey of Japan: 1996–1997*, (Tokyo: Government of Japan, 1997); Organization for Economic Cooperation and Development, *OECD Economic Survey: Japan, 1997* (Paris: OECD, 1997).

1/ Regulated sectors only.

2/ Assumes that labor productivity in the nonmanufacturing sector relative to the manufacturing sector in Japan is raised to U.S. level, that markups over labor costs are the same in both countries are the same, and that the exchange rate is in equilibrium.

3/ Assumes that productivity is raised by 20 percent geometrically over 5 years in those sectors in which labor productivity is lower than in the United States.

4/ Assumes that unit labor costs in the nonmanufacturing sector relative to the manufacturing sector is reduced to that of the United States.

the retail, telecommunications, banking, and airline sectors.[33] The OECD's estimates of the potential gains to deregulation are roughly comparable, based on an assessment of gains to liberalization in the electricity, air and transport, telecommunications, and distribution sectors. They note that the gains from deregulation in these five areas would be significantly larger than the 3½–5 percent gains that would be obtained from similar deregulation in three major European countries.[34]

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[33]The EPA recently examined the effect of the privatization of the public telecommunications company (NTT) and the entry of the private competitor (NCC) in 1987, as well as the privatization of Japan Airlines, and the entry of a private competitor in 1986. The EPA's estimates suggest that roughly half the increase in the total factor productivity during 1987–95 in both the telecommunications and airlines sectors was due to the increased competition that followed deregulation. In addition, deregulation was associated with a more than 70 percent drop in the cost per telephone call, and a roughly 25 percent drop in per mile costs of air travel.

[34]*The OECD Report on Regulatory Reform*, Vol. II, (Paris: Organization for Economic Cooperation and Development, 1997).

Recent Deregulation Initiatives

31. During the 1990s, the Government has implemented a series of deregulation packages and structural reform initiatives. In March 1995, a three-year Deregulation Action Plan (DAP) was announced to provide the framework for the government's deregulation program. The DAP focussed on telecommunications, the distribution system, transportation, energy, and anti-monopoly legislation, and was updated in 1996 and 1997.[35]

32. A number of additional initiatives have been taken to accelerate DAP reforms in specific areas. These included "Structural Reform in Six Areas," which was formulated in December 1996 by the Economic Council (an advisory panel to the Prime Minister), and the "Program for Economic Structure Reform," which was adopted by the Cabinet in January 1997. An Administration Reform Law was approved by the Diet in 1998, which involved measures to reform the public sector. The various stimulus packages, including the November 1997 package, also included deregulation measures, including in areas such as information and telecommunication, education, and land use, although many of these measures involved acceleration of prior commitments rather than new initiatives.

Sectoral initiatives

33. In the area of **telecommunications,** restrictions on the sale of cellular phones were lifted in April 1994 and the price setting system was shifted from an approval to a registration system in December 1996. These initiatives contributed to the rapid growth in the mobile phone market—the number of customers increased by about 10 times between April 1994 and April 1997.[36] The 1997 update of the DAP also included a commitment to divide Nippon Telegraph and Telephone (NTT) into three separate corporations (East, West, and long distance) under a holding company by end-1999. Restrictions on foreign ownership in the domestic telecommunications sector were eliminated (the maximum share of foreign ownership had been 20 percent), although the one-third limit on foreign ownership of NTT remains.

34. The **Large Scale Retail Stores (LSRS) Law**—which restricts the opening of larger retail outlets, subject to an approval process—was progressively relaxed in 1990, 1992, and 1994. As a result, the duration of the approval process was shortened, store space restrictions were liberalized, and store closing times were extended. Consequently, the number of LSRS openings increased from 794 in 1989 to 2,206 in 1995. Entry restrictions in the area of wholesale and retail sales of rice were also liberalized in June 1996, with a shift from an approval to a registration system.

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[35]The DAP originally included 1,091 measures, and when the DAP was revised in 1996 and 1997, the number of items was revised to 1,797 and to 2,823, respectively.

[36]See "*Kisei-Kanwa no Genkyo 1997*" (Progress in Deregulation) by the Management and Coordination Agency

35. As regards **transportation,** the Ministry of Transport (MOT) announced in December 1996 that all the supply-demand adjustment restrictions in taxi, railway, bus, ship, and aviation, were to be abolished, although the liberalization is not expected to be completed until end-FY2001.[37] Taxi operators were given greater flexibility to set fares beginning in 1995, although full liberalization has not been achieved. In addition, supply-demand adjustment restrictions were partly liberalized in April 1997, including relaxation of the entry restriction, which set a minimum number of vehicles for new entrants. In the area of bus services, the requirement of government approval for building new stops was also lifted in favor of an ex post reporting system in April 1995.

36. A **new civil aviation pact** between the United States and Japan was completed in January 1998 to update the 1952 agreement on civil aviation under which three U.S. carriers (Northwest, United, and Federal Express) and only one Japanese carrier (Japan Air Lines) have unlimited rights to fly between the two countries and on to other Asian destinations. According to the agreement, All Nippon Airways and Nippon Cargo Airlines were granted unlimited access to the U.S. market, while 90 round-trip flights a week were added between the two nations by "nonincumbent" carriers, including American, Continental, and Delta. The two countries also agreed to begin talks on an "open skies pact" within three years.

37. The retail price setting system for **electricity and gas supply** was liberalized in January 1996, which has resulted in reductions in energy prices. Entry into the electric power generation industry was liberalized in December 1995, to allow sales by firms with co-generation capacity to sell to the power companies (but not directly to customers). As a result, about 15 percent of electricity is now generated by new entrants. Costs have declined, as electricity supplied by new firms is about 10–30 percent cheaper to produce than that generated by incumbent power generating firms. In addition, regulations restricting self-service gasoline stations were lifted in April 1998, which the Economic Planning Agency in Japan estimates will lower costs to consumers by about ¥18 billion.

38. As regards the **labor market,** the law for equal opportunity and treatment between men and women in employment was amended in June 1997, and will take effect in April 1999. The amendments include: prohibition of discrimination against women in recruitment, hiring, assignment, and promotion, which had previously been a "duty to endeavor;" the creation of a system to publish company names that violate the law; and the recognition of unilateral applications for mediation. Legislation also has relaxed restrictions that had been placed on over-time hours worked by women. Restrictions on the range of occupations where private placement firms could operate were relaxed from April 1997, and the 40-hour work week was made mandatory for all firms as of April 1997.

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[37]The supply-demand adjustment system involves restrictions on licencing of new entrants when the Ministry of Transport judges that there are already sufficient suppliers in the market.

39. Restrictions on **land use and real estate transactions** were relaxed in the November 1997 economic stimulus package. For example, procedures for converting agricultural land into other use were simplified, regulations on floor space-to-plot ratios were also eased, and the requirement of six-week prior registration of land purchases was eliminated in favor of a system of ex post notification.

Corporate structure

40. The ban on **non-financial holding companies** was lifted on December 1997 when a revised Anti-Monopoly Law took effect. The revised Anti-Monopoly Law retains restrictions on three types of holding companies: large-scale corporate groups that own leading companies in several different fields; groups that include both large financial and nonfinancial companies; and groups that include leading companies in related business fields.[38]

41. The ban on **financial holding companies** was lifted in March 1998. The Fair Trade Commission (FTC) also provided guidelines for exceptions to a rule that otherwise limits banks to holding no more than 5 percent, and insurers no more than 10 percent, of the stock of other companies. The guidelines put no restrictions on the shareholdings of financial institutions, but a holding company and its subsidiaries may not hold more than 15 percent of the stock of other companies.

42. While these new bills will promote the formation of holding companies, the associated corporate tax issues remain unsolved. In particular, the government has still not introduced a system of consolidated taxation of holding companies, which would allow holding companies to deduct losses of subsidiaries against their profits. Some market observers have suggested that this lack of consolidated tax system is a major reason for the fact that to date there have been very few cases in which companies have formed holding companies.

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[38]Guidelines released by the Fair Trade Commission provided detailed standards for the three cases. First, they prohibit formation of holding companies with assets exceeding ¥15 trillion or with companies having assets of more than ¥300 billion in more than five business fields. Second, they prohibit formation of a holding company with financial components having assets of more than ¥15 trillion and nonfinancial components of more than ¥300 billion. Finally, the guidelines prohibit formation of a holding company with more than five companies in related business fields, each of which holds more than 10 percent market share or lies within the top three companies in each business field.

Administrative reform

43. The Administrative Reform Act was enacted in June 1998, and aimed at improving the efficiency of government services. Under the Act, the number of ministries and agencies will be reduced by 2001 from the current 22 to 13, and the number of public servants will be reduced by at least 10 percent in the ten years from 2001. Notably the public works-related ministries and agencies are to be unified into a single ministry.

44. The role of the Prime Minister in the area of policy formulation will be strengthened, including by establishing a new Cabinet Secretariat that would plan and coordinate overall strategies for important policies, including foreign and fiscal policies. Overall responsibility for dealing with failed financial institutions will be maintained in the Ministry of Finance, while all other regulatory functions related to the financial market would be fully shifted to the Financial Supervision Agency in 2001.

45. Reforms to the system of public enterprises would require these agencies to use corporate accounting techniques. Although the three services run by the Ministry of Posts and Telecommunications—postal savings, postal life insurance, and mail delivery—will be maintained as government-run services, they will be transferred to a new public corporation in five years.[39]

FY1998–FY2000 Deregulation Action Plan

46. In March 1998, the Government approved **a new three-year (FY1998–FY2000) DAP**, which included 634 items. About 300 of the 624 items were new, and the remainder were carried over from the previous plan. The role of the Deregulation Committee has been expanded under the new DAP to include monitoring the pace of implementation of deregulation initiatives. In order to fulfil its new mandate, the number of members was increased from seven to eleven, and the committee has been assigned a staff of 15. Some of the main elements of the new plan included:

- **Telecommunication and information:** Access fees for long distance companies to use local telephone lines would be reduced in FY1999 by shifting from a historical-cost to a marginal-cost basis, and price setting in the telecommunication sector is to shift from an approval to a notification basis by end-1998.

- **Retail sales of electric power:** Non-utility power companies are expected to be permitted to sell electricity directly to large-lot users, effective in FY1999 at the earliest. This measure would increase competition in the power sector, which is presently dominated by 10 vertically integrated corporations that hold regional monopolies.

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[39]Earlier recommendations for full prioritization were dropped owing to political resistance.

- **Transportation:** Supply-demand adjustments (i.e., entry and other restrictions) would be abolished in FY1999-FY2001 in all transportation sectors, including bus, taxi, ship, and domestic aviation. Truck licensing restrictions would be eased in FY1998, by shifting from a prefectural basis to a broader economic zone basis. Moreover, the minimum entry requirement for trucking companies would be reduced from 20 trucks to five trucks by FY2000.

- **Health care:** Entry of private firms to visiting care business will be liberalized by end-FY1998. The liberalization of the nursing care sector also will be studied by end-FY1998.

- **Labor market:** Restrictions on dispatched workers business will be liberalized by end-FY1998.[40] In addition, more flexibility would be permitted regarding working hours—i.e., firms could flexibly apply the 40-hour work week—and internships are to be promoted.

- **Resale price maintenance:** The resale price maintenance system had been gradually abolished in all areas but publishing and music. Although the FTC had recommended complete abolition, the new DAP only commits to appropriate measures, and the details including the timetable for further action remain unclear.

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[40]Dispatched worker agencies act as temporary employment agencies. Currently, the range of occupations they are permitted deal is restricted.

VII. The Asia Crisis and Japan[1]

1. **The financial crisis in Asia and the economic slowdown in Japan are having substantial and ongoing spillover effects.** The main transmission channels for these effects are:

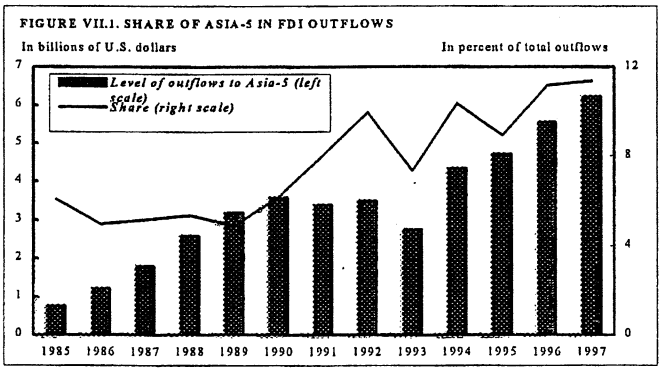
- **Trade linkages**: As a result of increasing economic integration within the Asia region over the past decade, Japan and the rest of Asia account for substantial shares of each other's exports and imports. Consequently, declines in domestic demand in one country have serious adverse effects on external demand in other countries in the region, and exchange rate changes have an important impact on relative prices.
- **Financial linkages**: Driven by the relocation of Japanese production capacity to Asia, Japanese capital flows played an important role in Asia's external financing in recent years. By contrast, the increasing fragility of the banking system in Japan is now dampening financial flows to Asia, while the contraction of economic activity in Asia is in turn leading to a deterioration in the asset quality of Japanese banks and reducing Japan's foreign investment income.
- **Other market linkages**: Reflecting these trade and financial relations, foreign exchange and stock markets in Asia and Japan are closely linked, allowing rapid transmission of disturbances across markets.

2. This chapter first provides an overview of Japan's increasing integration in the Asia region since the mid-1980s and then seeks to quantify the recent interaction through these linkages. The focus is on relations with the countries most affected by the Asia crisis: Indonesia, Korea, Malaysia, the Philippines, and Thailand (the Asia-5).

A. Increasing Economic Integration within the Asia Region

3. **Japan and Asia have become increasingly integrated over the past decade, as increased financial flows from Japan to Asia fostered the expansion and transformation of trade flows.** Japanese investment in Asia reflected the relocation of production capacity from Japan to Asia (the "hollowing out" of Japan), a process driven by both comparative advantage and macroeconomic factors. The share of Japan's outward direct investment going to the Asia-5 more than doubled from about 5 percent in the mid-1980s to about 11 percent in the mid-1990s (Figure VII.1).

FIGURE VII.1. SHARE OF ASIA-5 IN FDI OUTFLOWS



[1]Prepared by James Morsink.

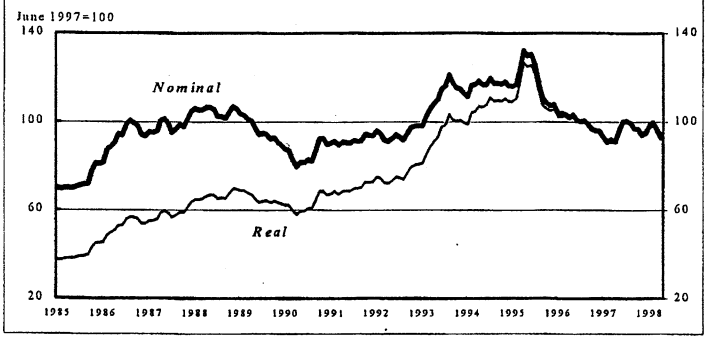
Lending by Japanese banks to all of Asia, including Hong Kong SAR and Singapore, reached almost $300 billion by the mid-1990s and accounted for more than half of total BIS-area bank lending to this region (Table VII.1).[2]

4. **Much of Japan's direct investment in Asia was in the manufacturing sector,**[3] in contrast to Japan's direct investment in the United States, which focussed on the financial services and real estate sectors. In the Asia-5, inward direct investment from Japan accounted for the largest share of total inflows (about one-fifth) during the 1990s. The establishment of production facilities in Asia allowed the combination of inexpensive skilled labor, which Asia had in relatively abundant supply, and imported capital and technology, in which Japan had a comparative advantage. At the same time, Japan's direct investment in Asia helped to shift Asia's comparative advantage in labor-intensive manufactured products toward higher value-added goods.

5. **The relocation of production was facilitated by the globalization of production processes, through outsourcing, especially in high-technology and information-related industries.** These industries are characterized by: (i) a variety of processing stages with different technological-, capital-, and labor-intensities; (ii) large economies of scale, for example in the production of memory chips; and (iii) international standardization for many parts, including microprocessing units, memories, and liquid crystal displays. Japanese firms in these industries took advantage of the increasing integration of the world economy to locate the labor-intensive stages of production in countries where wages were relatively low. As a result, trade with Asia in information-related products increased sharply—for example, the share of office machines in the Asia-5's exports to Japan rose from ½ percent in 1987 to 8 percent in 1997.

6. **The timing of the shift in production capacity largely reflected the increased openness to trade and investment of Asian developing countries, the yen appreciation, and the low cost of capital in Japan.** The adoption of adjustment and liberalization policies in Asian countries in the mid- to late 1980s created the

FIGURE VII.2. EFFECTIVE EXCHANGE RATES, 1985-98



[2]Within the Asia-5, Japanese banks' share of total lending was especially high in Indonesia and Thailand (about 55 percent).

[3]See Linda Goldberg and Michael Klein, "Foreign Direct Investment, Trade, and Real Exchange Rate Linkages in Southeast Asia and Latin America," *NBER Working Paper* No. 6344, December 1997.

Table VII.1. Japan: BIS-Area Bank Lending to Asia, 1993-97 1/

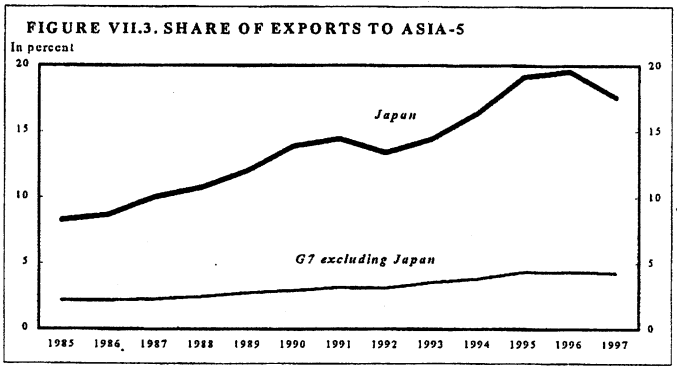
Borrower	Lender	1993	1994		1995		1996		1997	
		Dec.	June	Dec.	June	Dec.	June	Dec.	June	Dec.
					(billions of U.S. dollars)					
Levels										
Asia-5	Japan	50.6	58.0	69.0	81.3	87.9	91.2	93.7	97.2	86.7
	Other BIS area	66.9	76.9	86.8	106.3	122.4	146.4	167.5	177.2	172.0
	Total BIS area	117.5	134.9	155.8	187.5	210.3	237.6	261.1	274.5	258.7
	Japan's share (percent)	43	43	44	43	42	38	36	35	33
Total Asia 2/	Japan	285.2	310.7	337.8	382.3	323.0	265.3	264.8	276.2	249.7
	Other BIS area	236.5	290.7	317.3	371.6	417.0	473.0	498.4	546.7	538.1
	Total BIS area	521.7	601.4	655.1	753.9	740.0	738.3	763.3	822.9	787.8
	Japan's share (percent)	55	52	52	51	44	36	35	34	32
Changes over six months										
Asia-5	Japan	...	7.4	11.0	12.2	6.7	3.3	2.4	3.6	-10.6
	Other BIS area	...	10.0	9.8	19.5	16.1	24.0	21.1	9.7	-5.2
	Total BIS area	...	17.4	20.8	31.8	22.8	27.3	23.5	13.3	-15.8
Total Asia 2/	Japan	...	25.5	27.1	44.5	-59.4	-57.7	-0.5	11.4	-26.6
	Other BIS area	...	54.1	26.7	54.3	45.5	55.9	25.4	48.3	-8.6
	Total BIS area	...	79.7	53.7	98.8	-13.9	-1.8	25.0	59.6	-35.1

Source: Bank for International Settlements, *The Maturity, Sectoral and Nationality Distribution of International Bank Lending.*

1/ Data starting in December 1995 are not strictly comparable to earlier periods because of the revision of the Japanese balance of payments reporting system.
2/ Includes Hong Kong SAR and Singapore.

appropriate domestic conditions for the rapid expansion of foreign investment. The appreciation of Japan's real exchange rate, especially following the Plaza Accord in 1985 and again during 1993–95, provided Japanese companies with both the incentive and the resources to locate production abroad (Figure VII.2). The easy availability of capital in Japan, especially during the period of high growth and low interest rates during the late-1980s (the so-called "bubble period"), also contributed to the expansion of investment abroad by Japan.

7. **The relocation of production capacity, along with the acceleration of economic growth in Asia, led to the rapid expansion of trade.** The establishment of factories overseas increased Japanese exports of capital goods, and subsequently reduced Japanese exports of consumer products, as overseas production came online. Japan's exports to the Asia-5 more than doubled in U.S. dollar terms between the mid-1980s and the mid-1990s while the Asia-5's share of Japan's exports jumped to about 20 percent (Figure VII.3). Exports of capital goods (including machinery and motor vehicles) increased to about 60 percent of total exports to the Asia-5, while the share of consumer durables (mostly manufactured goods) fell to about 20 percent (Chart VII.1).



8. **The shift of production raised Japanese imports of manufactured goods and reduced imports of raw materials from Asia, reflecting the substitution of domestic production by overseas production (so-called "reverse imports").** As these reverse imports from Asia increased, the share of Japan's imports of consumer nondurables (including food and beverages) and intermediate goods (including raw materials and iron and steel) from the Asia-5 declined sharply, while the share of consumer durables and capital goods (including personal computers and other office machines) rose about 55 percent (Chart VII.1). Over the same period, the Asia-5's share of Japan's total imports remained broadly unchanged (Figure VII.4). The relocation of Japanese manufacturing facilities abroad helps to explain why standard trade models were underpredicting Japanese imports of manufactured goods from Asia in the early

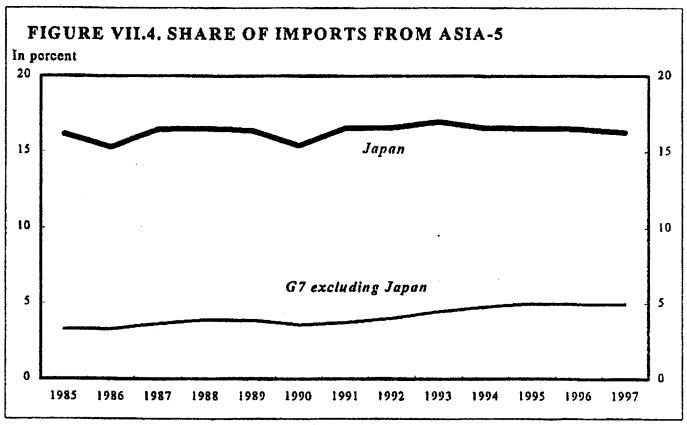
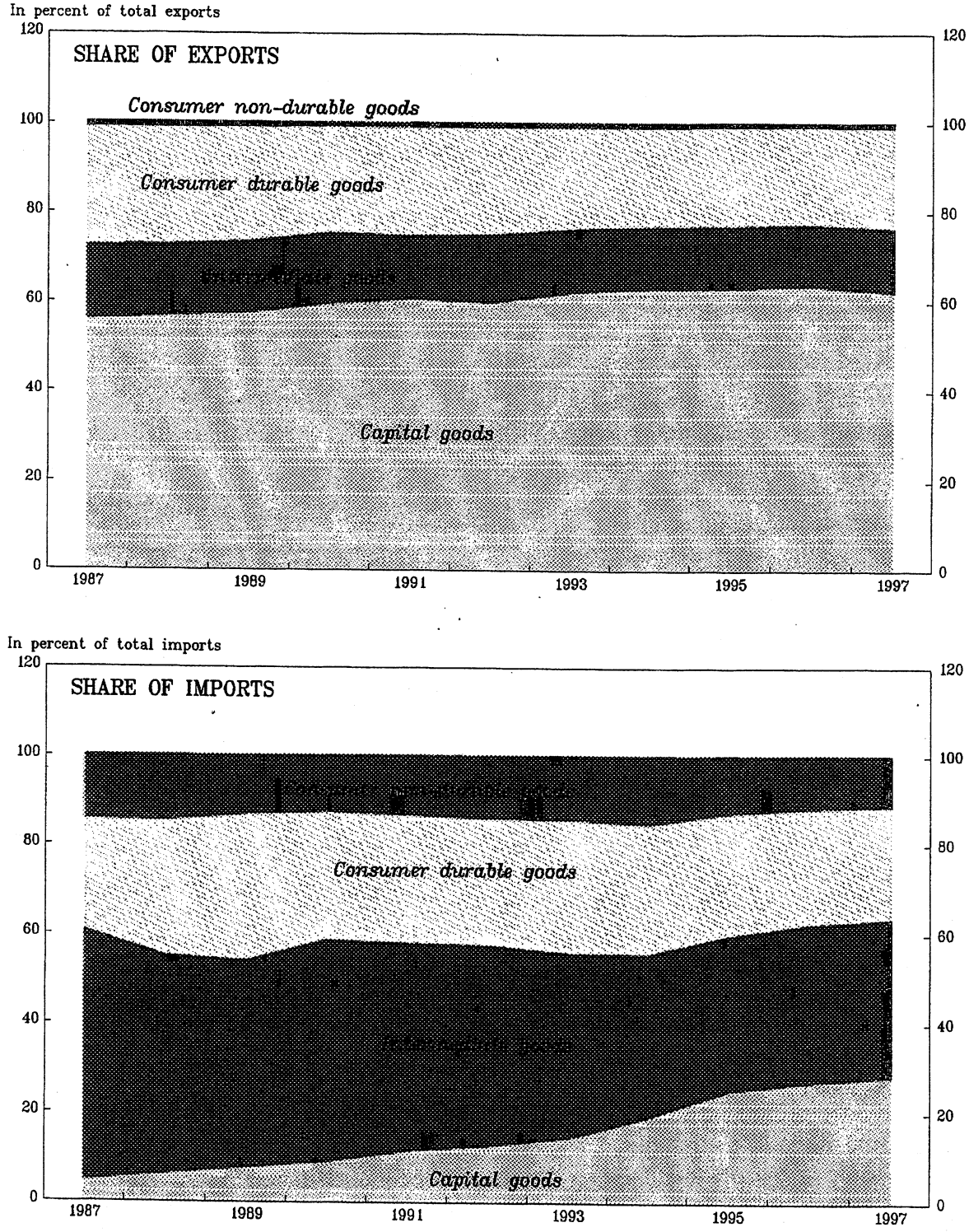


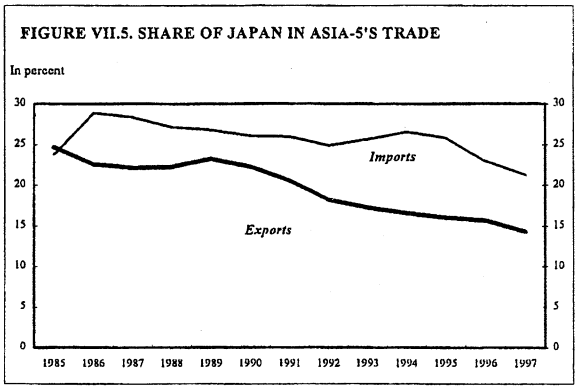
CHART VII.1
JAPAN
COMPOSITION OF TRADE WITH ASIA-5



Sources: Nikkei Telecom, WEFA, and staff estimates.

1990s.[4] Empirical work confirms that *flows* of Japanese FDI temporarily increased Japan's exports to Asia (while factories were being built), while the *stock* of Japanese FDI increased Japan's imports.[5]

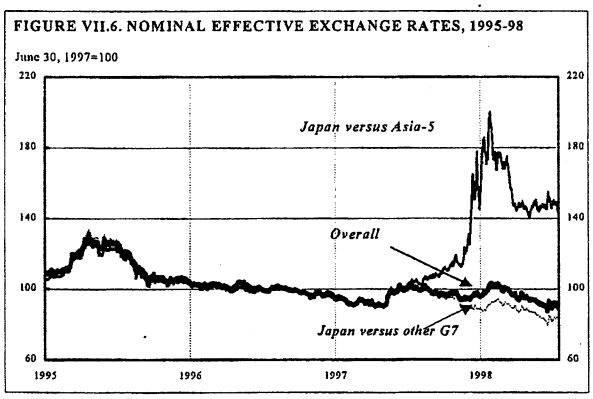
9. **As the increase in bilateral trade flows between Asia and Japan did not keep pace with the growth of Asia's total exports and imports, Asia's direction of trade actually shifted away from Japan.** Over the past decade, both the share of the Asia-5's exports destined for Japan and the share of imports originating in Japan have fallen somewhat (Figure VII.5). For the Asia-5 as a whole, Japan is less important as an export destination than the United States, which has a share of about 20 percent, but is the largest market for Indonesia, where it accounts for more than one-quarter of total exports.



B. Spillover Effects Between Japan and East Asia

Impact of East Asia on Japan

10. **The Asia crisis has already had a substantial adverse impact on Japan.** In addition to the sharp fall in Japan's exports to Asia, the quality of Japanese claims on Asia has deteriorated. The depreciation of the yen against other G7 currencies since mid-1997 reflected in part the expected impact of these adverse shocks (Figure VII.6). Similarly, the weakening of stock prices in Japan from mid-1997 reflected in



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[4]See Bankim Chadha, "External Adjustment in Japan: Recent Developments and the Medium-Term Outlook," in *Japan—Selected Issues*, IMF Staff Country Report No. 96/114, October 1996.

[5]See Tamim Bayoumi and Gabrielle Lipworth, "Japanese Foreign Direct Investment and Regional Trade," in Aghevli, Bijan, Tamim Bayoumi, and Guy Meredith (eds.), *Structural Change in Japan: Macroeconomic Impact and Policy Challenges*, (Washington DC, International Monetary Fund: 1998).

part concerns about the impact of the Asia crisis on the profitability of both Japanese financial and nonfinancial firms.[6]

11. **The contraction of Japan's exports to Asia has been exacerbated by the collapse of investment in Asia**. Japan's exports to the Asia-5 fell by almost 30 percent in U.S. dollar terms in the first five months of 1998 compared to the same period in 1997, and the share of Japan's exports destined for the Asia-5 decreased sharply (Chart VII.2). The decline in Japan's exports reflected the abrupt slowdown in real fixed investment in 1998 in the Asia-5 (a drop of some 30 percent). As a result, Japan's export of automobile-related goods, information-related goods, and capital goods and parts, have been particularly affected.

12. **The Asia crisis is putting downward pressure on prices in Japan, through lower import prices, but the effect has been small thus far**. The prices of Japan's imports from East Asia fell by about 10 percent in yen terms (about 15 percent in U.S. dollar terms) between early 1997 and early 1998, only moderately more than the overall decline in Japan's import prices (Chart VII.2). Given the large depreciations of the Asia-5 currencies against the yen (about 35 percent), this implies that the exchange rate pass-through has been limited so far, possibly reflecting the small shares of East Asian exporters in Japan and the expectation that some of the depreciation may be temporary.

13. **The Asia crisis is also putting broader pressure on the earnings of nonfinancial firms in Japan**. Japanese corporates are exposed to Asia not only through trading relationships, but also through loans, equity investments, long-term receivables, and guarantees in various projects. Thus, the negative shock to Japanese firms' external demand is exacerbated by a decline in investment income and a deterioration in asset quality. While these effects are difficult to quantify, especially given the depressed economic conditions in Japan, the Asia crisis has been cited by credit ratings agencies as an important factor in downgrading Japanese firms.

14. **The crisis in Asia has added to concerns about the asset quality of Japanese banks**. Aggregate BIS data show that, as of December 1997, Japan's banks had loans to the Asia-5 of about $87 billion (¥11 trillion), equivalent to about 2 percent of bank loans and 55 percent of the Tier-1 capital of Japan's major banks—a higher fraction than in any other major industrial country (Table VII.1).[7] This figure may overstate Japanese banks' vulnerability to the extent that about one-third of these loans were to foreign affiliates of Japanese companies, which in many cases can count on strong parent company support. Against this, a part of Japanese bank loans to Hong Kong SAR ($76 billion at end-1997) and

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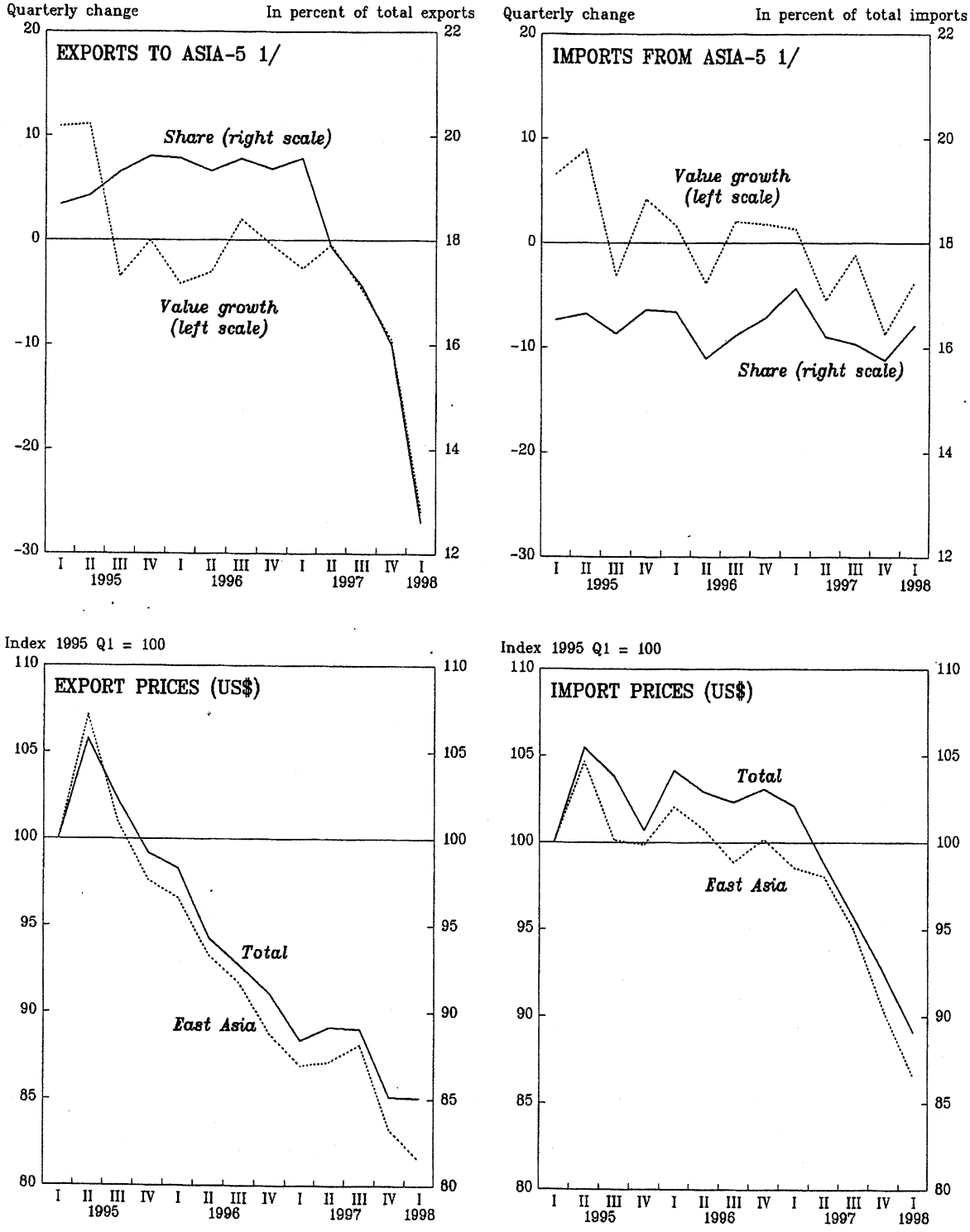
[6]However, these market linkages are difficult to quantify given the inherent volatility of asset markets.

[7]Total Japanese bank lending to Asia, including Hong Kong SAR and Singapore, was $250 billion at end-1997.

CHART VII.2
JAPAN
RECENT TRADE DEVELOPMENTS



Sources: Nikkei Telecom, WEFA, and staff estimates.

1/ In U.S. dollars; seasonally adjusted.

Singapore ($59 billion) were on-lent to the crisis countries, while some lending by European subsidiaries of Japanese banks may be mistakenly counted as lending by European banks. Although the absence of published detailed balance-sheet data (and the complete lack of published off-balance-sheet data) makes it difficult to provide a careful assessment of exposures and vulnerabilities, some analysts estimate that impaired loans of Japanese banks from exposure to Asia could be about $30 billion,[8] and have cited this vulnerability as an important factor behind the downgrading of their ratings.

Impact of Japan on East Asia

15. **Economic difficulties in Japan have exacerbated the Asia crisis.** The Asia-5's U.S. dollar value of exports to Japan are falling sharply (Table VII.2), while exports to other industrial countries are growing strongly. Moreover, capital flows from Japan to the Asia-5 have slowed, reflecting the fragility of Japanese banks as well as the financial problems of many Japanese corporates. The yen's weakness against non-Asian currencies has put downward pressure on Asian currencies, reflecting the impact of direct trade and financial linkages with Japan, as well as increased competition in third markets.

16. **The divergence between Asia's export performance to Japan versus other industrial countries is broadly consistent with the different cyclical positions and exchange rate movements across countries, but cannot be fully accounted for by standard trade equations.** This divergence was explored by comparing Asia's export volume growth to Japan with that to the United States (Table VII.2). Standard trade models explain real export growth in terms of the growth of foreign demand ("income") and changes in real exchange rates ("prices").[9] Although price indices for bilateral trade are not yet available, the available evidence suggests that the Asia-5's export prices[10] declined by about 15 percent in U.S. dollar terms in the first quarter of 1998 compared to the same quarter a

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[8]This number reflects the application of a 10-15 percent ratio (in line with banks' recent self-assessment exercises) to Japanese banks' total exposure to Asia ($250 billion as of end-1997). U.S. and European banks have typically provisioned at a rate of 10-15 percent, reflecting the higher risk of their exposures to Asia.

[9]See, among others, Takatoshi Ito, Peter Isard, Steven Symansky, and Tamim Bayoumi, "Exchange Rate Movements and their Impact on Trade and Investment in the APEC Region," *IMF Occasional Paper* No. 145 (December 1996), and Carmen Reinhart, "Devaluation, Relative Prices, and International Trade: Evidence from Developing Countries," *IMF Staff Papers*, Vol. 42 (June 1995).

[10]This particular calculation excludes Indonesia, because Indonesia's oil exports complicate the assessment of trade adjustment.

Table VII.2. Japan: Asian Country Trade Growth, 1997Q1–1998Q11/

	Percent change
Exports to Japan (in U.S. dollars)	-13.8
Price	-15.0
Volume	1.2
Exports to U.S. (in U.S. dollars)	15.9
Price	-15.0
Volume	36.0
Export values (in U.S. dollars)	2.0
Korea	8.7
Thailand	-2.9
Malaysia	-11.2
Philippines	18.4
Export prices (in U.S. dollars)	-15.0
Of which:	
Korea (unit values)	-19.5
Thailand	-18.9
Export volume	17.0
Of which:	
Korea	34.9
Thailand	15.0
Memorandum items:	
CPI inflation (local currency)	7.5
CPI inflation (in U.S. dollars)	-38.3
Partner country CPI inflation (in U.S. dollars)	-5.9
Exchange rate change (U.S. dollar per local currency)	-42.6

Source: WEO database.

1/ The countries consist of Korea, Thailand, Malaysia, and the Philippines.

year ago, reflecting in particular declines in commodity prices.[11] While Japan experienced a sharp decline in real GDP through the first quarter of 1998, the United States recorded growth of 4 percent. Even with the assumption of high short-run income elasticity (say of 1½ and 2, respectively, for Japan and the United States—in line with staff estimates), the implied price elasticity needed for consistency with the Asia-5's observed export volume growth rates to Japan and the United States would have to be twice as high for the United States as Japan (about 1½ and ¾, respectively).[12]

17. **The discrepancy between the implied price elasticities for Asian exports to Japan versus the U.S. may reflect underlying structural factors that are not fully captured by reduced-form trade equations**. In general, the commodity composition of exports to various trade partners may give rise to different price elasticities. For example, Asia's exports to the United States consist primarily of electrical and electronic goods, which compete directly with each other and may therefore be more price sensitive, while exports to Japan consist more of commodities, which may be more sensitive to the weakness of business fixed investment in Japan.[13] Also, standard trade elasticities may not fully incorporate the impact of the growth of Japanese firms' production facilities in Asia following many years of large flows of foreign direct investment.[14]

18. **Financial flows from Japan to Asia have slowed sharply since the onset of the crisis, reflecting both a decline in bank lending and a fall in foreign direct investment**. The fragility of Japanese banks has reduced their ability and willingness to extend loans. The fall in BIS-area bank lending to the Asia-5 between mid- and end-1997 ($16 billion) is mostly accounted for by the decline in lending by Japanese banks ($11 billion, Table VII.1). Although part of the decrease may reflect the depreciation of the yen against the U.S. dollar, valuation changes alone cannot explain the decline.[15] Also, valuation changes would tend to

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[11]Over the same period, Japanese domestic prices fell by about 3½ percent in U.S. dollar terms, while the U.S. CPI rose by about 1 percent.

[12]Standard trade equations also performed poorly in the aftermath of the Mexico crisis. Following the real depreciation of the peso, the price elasticity of exports to the U.S. was closer to 1½, rather than the unit elasticity used in standard trade equations.

[13]Japanese imports of construction materials are presently very weak, reflecting the severity of the current decline in residential investment and public works spending.

[14]For example, declines in domestic demand in Japan could have an amplified effect on Asian exports because Japanese production facilities in Asia are the marginal suppliers for Japanese firms.

[15]Assuming that 20 percent of private sector external debt is yen-denominated and the

(continued...)

have the same effect on Japanese banks' lending across countries, while in fact lending to Thailand actually increased and lending to Malaysia fell most sharply.

19. **Similarly, direct investment by Japanese firms in Asia has slowed, reflecting the reduced availability of capital in Japan.** Data from Japanese sources show that direct investment in Indonesia fell 35 percent in U.S. dollar terms in the second half of FY1997 (September 1997 to March 1998) from the year before. The growth of direct investment in Thailand declined significantly from 80 percent in the first half of the fiscal year to minus 3 percent in the second half.

C. Quantifying the Spillover Effects

20. **Different approaches to quantifying the cross-country impact of the crisis suggest that adverse spillover effects are in the range of 1-1¼ percent of GDP in Japan and somewhat larger in East Asia.** The common feature of all of these methods is the construction of simulation models (of varying degrees of complexity) to isolate the cross-country effects. The simplest approach is to use trade elasticities to calculate the adverse effects of trade shocks on economic activity. A more sophisticated approach is based on a regional model of aggregate demand and trade for East Asia and Japan. Finally, a dynamic model of the world economy (an extension of MULTIMOD) is used to incorporate financial flows and other non-crisis countries. While each of these models sheds some light on the magnitude of the spillover effects, each one has important drawbacks.

21. **A major difficulty faced by all of the approaches is how to calibrate the magnitudes of the shocks associated with the crisis.** The method used in each case was to infer the sizes of the shocks from the changes in the projections from the May 1997 WEO to the staff's latest outlook. While this is a simple and transparent technique of parametrizing the shocks, it means that these approaches cannot distinguish between exogenous shocks and the endogenous responses to them, and is subject to whatever biases may be included in the staff's outlook.

Trade Elasticities

22. **Simple calculations using trade elasticities suggest that Japan's output loss from spillover effects in 1998 will be about 1¼ percent of GDP.** These calculations incorporate: (i) the impact of foreign demand on exports; (ii) the impact of real exchange rate changes on imports; and (iii) the impact on foreign investment income (for Japan). However, these

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[15](...continued)
remainder U.S.-dollar denominated, based on the only available information on currency composition (for Thailand), would imply that the 12 percent depreciation of the yen between mid- and end-1997 would reduce U.S. dollar denominated debt about 2½ percent, or less than $3 billion.

calculations ignore financial linkages, including bank lending, foreign direct investment, and stock market effects. These calculations also do not take into account feedback relationships, i.e., the fact that a drop in domestic demand in Asia depresses output in Japan, which in turn reduces Japan's imports from Asia.

23. **The output loss in Japan reflects the export effect (minus 1 percent of GDP), the import effect (minus ¼ percent of GDP), and the earnings effect (minus 0.1 percent of GDP)**:

- **Export effect**: Projected import volumes in Japan's Asian trading partners in 1998 are lower by about 15 percent in the latest WEO projections than in the May 1997 WEO projections.[16] Given that roughly 40 percent of Japan's exports are destined for Asia, Japan's projected export volume would be reduced by about 6½ percent. Since exports represent about 13 percent of GDP in Japan, and using a multiplier of about 1¼ (broadly in line with standard MULTIMOD results), Japan's output will be lower by about 1 percent of GDP.[17]

- **Import effect**: The real depreciations of the Asian currencies would lower these countries' export prices and therefore increase in Japan's imports. Using import weights, Asian currencies depreciated by about 11 percent against the yen between mid-1997 and mid-1998, reflecting the large depreciations of many Asian currencies but also the offsetting appreciations of the Chinese yuan and the Hong Kong SAR dollar—which are pegged to the U.S. dollar—against the yen. As roughly one-third of Japan's imports are from Asia, this implies an effective appreciation of the yen of about 4 percent. Assuming that half the depreciation is eventually passed through in the form of lower prices, and an import price elasticity of ¾ (in line with the analysis discussed above), Japan's import volume would rise by about 2 percent. Given that imports account for about 12 percent of GDP and the multiplier effect, Japan's GDP would be reduced by about ¼ percent.

- **Earnings effect**: The reduced profitability of operations based in Asia would lower Japan's investment income from abroad. Given that interest payments and equity earnings from abroad together amount to about 1 percent of GDP, and assuming that earnings from Asia—which accounts for about 10 percent of the stock of Japan's outward direct investment—declines to zero, Japan's GDP would fall by about 0.1 percent.

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[16]For the purpose of this calculation, Asia is defined as China, Hong Kong SAR, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan Province of China, and Thailand.

[17]As Asia accounts for a much larger share of exports in Japan than in the United States or Germany, the Asian crisis will have a much greater adverse effect on Japan.

Regional Interaction of Trade and Aggregate Demand

24. **A regional model of trade and aggregate demand suggests that the output losses from spillover effects will be about 1 percent of GDP in Japan, 1¼ percent of GDP in Korea, and 1½ percent of GDP in Southeast Asia.**[18] This approach explicitly incorporates feedback effects by linking three areas: Japan, Korea, and Southeast Asia (SEA). For each area, real domestic demand is assumed to be a function of real GDP and real stock prices (to take into account the effect of financial market turbulence), and real import demand is assumed to be a function of the real effective exchange rate and the level of real domestic demand. The areas are linked by the import equations, which endogenously influence other areas' exports. Real GDP is then the sum of domestic demand and net exports.

25. **The model is parameterized using simple regression analysis, as well as with reference to previous studies.**[19] The magnitudes of the shocks are chosen to be broadly consistent with recent developments in the three areas. The exchange rate and stock market shocks are roughly equal to the real changes in these variables between mid-1997 and mid-1998. The shocks to domestic demand are roughly in line with the changes that have been made to WEO projections over the past year. As noted above, determining the appropriate sizes of the shocks is complicated by the fact that observed changes include the endogenous response to the crisis. The type and magnitude of the assumed shocks are summarized in the tabulation below.[20]

Assumed Shocks to Baseline
(Percent deviation from baseline)

	Japan	Korea	SEA
Exchange rate shock	-15	-40	-30
Stock price shock	-30	-50	-35
Domestic demand	-4	-10	-10

[18]See Appendix I for a description of the model. In this case, Southeast Asia is defined as Thailand, Malaysia, Indonesia, Philippines, Hong Kong SAR, Singapore, and Taiwan Province of China.

[19]Although the estimated empirical relationships were not always robust to changes in the specification or the sample period, the multipliers used are broadly consistent with observed developments and earlier studies (see Appendix I).

[20]The numbers refer to deviations from the baseline projections during the 1997–98 simulation period.

26. **The simulation results suggest that each area's own shocks have had the largest effect on its output, though spillover effects are important (tabulation).** In Japan, the total output loss is projected to be 5¾ percent, of which just under 5 percent results from shocks to domestic variables and 1 percent (about one-sixth of the total output loss) from shocks to other areas. In Korea and Southeast Asia, the total output losses are much larger, at 11¼ percent and 10¾ percent, respectively, of which 1¼ percent and 1½ percent (about one-tenth of the total output losses) are due to spillover effects. Within each block, the positive output effects of the exchange rate shocks are much smaller than the negative output effects of the domestic demand shocks, reflecting the Keynesian nature of the model and the high weight of domestic demand in GDP in each area. The magnitudes of the output losses stemming from demand shocks in other countries are generally similar to the effects of the exchange rate shocks.[21]

Regional Impact of Asia Crisis
(In percent of baseline 1998 GDP)

	Impact on:		
	Japan	**Korea**	**SEA**
Impact of shocks to:			
Japanese	**-4.9**	**-0.6**	**-1.0**
Domestic demand	-5.1	-0.3	-0.4
Exchange rate	1.0	-0.3	-0.5
Stock price	-0.8	0.0	-0.1
Korean	**-0.4**	**-9.9**	**-0.4**
Domestic demand	-0.3	-10.5	-0.4
Exchange rate	0.0	1.5	-0.1
Stock price	0.0	-0.9	0.0
SEA	**-0.5**	**-0.6**	**-9.0**
Domestic demand	-0.3	-0.3	-10.3
Exchange rate	-0.2	-0.2	2.0
Stock price	0.0	0.0	-0.7
Total impact	**-5.8**	**-11.2**	**-10.7**

27. **The results of this exercise are subject to a number of important caveats.** First, although the model takes account of the effect of stock market developments on domestic demand, other financial linkages are ignored, including the impact of interest rates or capital flows on real activity, and the effects of cross-country financial market interaction. This is potentially an important drawback given concerns that capital flows from Japan to East Asia have been constrained, reflecting the "credit crunch" in Japan. Second, the exclusion of

[21]Recent estimates by the Bank of Japan would suggest even greater spillover effects from both domestic demand and exchange rate shocks. See Kamada, Koichiro, Yasutaka Oenoki, and Katsunori Watanabe, "A Local Model of Asian Economies," *IMES Working Paper 98–5*, Bank of Japan (June 1998).

China, where growth is also expected to slow substantially as a result of the recent turmoil, may understate the effects of the crisis. However, the exclusion of the rest of the world (to which exports would be expected to rise) likely overstates the effects.

Global Interaction of Trade and Financial Flows

28. **An extension of the Fund's MULTIMOD model suggests that the spillover effects of the crisis could eventually be smaller than calculated in the two previous approaches, because the reversal of capital flows reduces interest rates in other countries, which stimulates the interest-sensitive components of demand throughout the world**. MULTIMOD is a dynamic, multi-country model of the world economy that explicitly includes a global capital market and forward-looking behavior of economic agents, and was designed in part to study the transmission of shocks across countries.[22] The model, which already includes blocks for each of the seven largest industrial countries and an aggregate block for other industrial countries, developing countries, and transition countries, has been augmented with explicit country blocks for Korea, Indonesia, and an aggregate block for Malaysia, the Philippines, and Thailand.[23] Using MULTIMOD, the magnitude of the shocks in East Asia and Japan are gauged using the change between the May 1997 (pre-crisis) WEO projections and the staff's initial projections for the summer 1998 WEO round.

29. **Simulation results from MULTIMOD suggest that, while the overall output declines are similar to those discussed in the regional trade model, the spillover effects are only small fractions of GDP (Table VII.3)**. The key factor behind this result is that capital flows, which tend to flee crisis countries, reduce interest rates in the rest of the world and thus stimulate the interest-sensitive components of aggregate demand elsewhere. In Japan, while the projected level of real GDP is 8 percent below its baseline in 1999, this is entirely the result of the Japan-specific shocks. East Asia has a small negative impact on activity in Japan in 1998, through trade flows, but thereafter the favorable response of interest-sensitive components of aggregate demand (including those outside Asia) to the decline in the real long-term interest rate outweighs the direct trade effect.

30. **Similarly, Indonesia, Korea and Southeast Asia are projected to suffer large declines in activity, but mostly due to their own shocks**. Japan has an adverse impact on East Asia of about minus 0.5 percent of GDP, reflecting its large share of these countries' exports. While the dominant transmission mechanism from Japan to East Asia is trade, as reflected in the deterioration of the current account balances, the Japan-specific shocks have a

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[22]Douglas Laxton, Peter Isard, Hamid Faruquee, Eswar Prasad, and Bart Turtelboom, *MULTIMOD Mark III: The Core Dynamic and Steady-State Models*, IMF Occasional Paper No. 164, (Washington DC: International Monetary Fund, 1998).

[23]Douglas Laxton and Michael Sarel, "The Impact of the Asian Crisis and the Slowdown in Japan: A MULTIMOD Simulation Approach," mimeo, 1998.

small (favorable) effect on real long-term interest rates in Southeast Asia, which partly mitigates the trade effect over time.

31. **These results, like those of the other approaches, are subject to important caveats**. First, and most important, MULTIMOD does not explicitly model bilateral financial relationships, so this approach cannot capture the effect of the "credit crunch" in Japan on bank lending to East Asia. Second, this approach cannot address "pure" contagion effects, such as the effect of an increase in the risk premium in one country on the risk premium in another or cross-country linkages between stock market prices.

Table VII.3. Japan: MULTIMOD Simulation Results

	1998	1999	2000
	(deviation from baseline)		
Japan			
Real GDP (percent)	-5.9	-8.3	-9.2
Japan shock	-5.7	-8.4	-9.4
East Asia shock	-0.1	0.1	0.2
Real long-term interest rate (percent)	-2.2	-3.2	-3.4
Japan shock	-1.9	-2.9	-3.2
East Asia shock	-0.3	-0.3	-0.3
Current account balance (billions of U.S. dollars)	29.9	23.3	22.6
Japan shock	44.1	41.1	42.7
East Asia shock	-14.2	-17.8	-20.2
Indonesia			
Real GDP (percent)	-19.8	-24.1	-27.1
Japan shock	-0.5	-0.5	-0.5
East Asia shock	-19.3	-23.6	-26.6
Real long-term interest rate (percent)	-1.1	-0.5	-0.4
Japan shock	-0.1	-0.1	-0.2
East Asia shock	-0.9	-0.3	-0.2
Current account balance (billions of U.S. dollars)	11.2	11.1	11.0
Japan shock	-1.2	-1.9	-2.8
East Asia shock	12.4	13.0	13.8
Korea			
Real GDP (percent)	-10.7	-16.6	-19.8
Japan shock	-0.4	-0.5	-0.4
East Asia shock	-10.3	-16.2	-19.4
Real long-term interest rate (percent)	-0.3	0.0	0.1
Japan shock	-0.1	0.0	-0.1
East Asia shock	-0.2	0.1	0.2
Current account balance (billions of U.S. dollars)	45.3	35.0	30.1
Japan shock	-1.6	-2.9	-3.8
East Asia shock	46.9	37.8	33.9
Malaysia, the Philippines, and Thailand			
Real GDP (percent)	-14.6	-19.2	-21.7
Japan shock	-0.4	-0.4	-0.5
East Asia shock	-14.2	-18.8	-21.2
Real long-term interest rate (percent)	0.5	0.8	0.7
Japan shock	0.0	0.0	-0.1
East Asia shock	0.6	0.8	0.8
Current account balance (billions of U.S. dollars)	33.8	27.9	22.4
Japan shock	-1.5	-2.6	-3.6
East Asia shock	35.3	30.5	26.0

Source: Laxton and Sarel (1998).

Description of Regional Model[24]

32. The model is composed of equations that endogenously explain aggregate demand for three country blocks: Japan (J), Korea (K), and Southeast Asia (A). In this case, Southeast Asia is defined to include Hong Kong SAR, Indonesia, Malaysia, the Philippines, Singapore, Taiwan Province of China, and Thailand.

For example, the Japan block is composed of the following three equations:

GDP Identity: $Y\_J = D\_J + (XW\_J - \alpha_{K\_J}*M\_K - \alpha_{A\_J}*M\_A) - M\_J$

Domestic Demand: $\log(D\_J) = \delta_0 + \delta_1*\log(Y\_J) + \delta_2*\log(S\_J) + \delta_3*\log(D\_J_{-1})$

Import demand: $\log(M\_J) = \mu_0 + \mu_1*\log(D\_J) + \mu_2*(e\_J) + \mu_3*(M\_J_{-1})$

All variables are expressed in real terms where:

Y_J = GDP in Japan
D_J = Domestic demand
M_K = Korea's imports of goods and services (NIA basis)
α_{K_J} = Share of Korea's imports from Japan
M_A = Asia's imports of goods and services (NIA basis)
α_{A_J} = Share of Asia's imports from Japan
XW_J = Japanese exports to the rest of the world (NIA basis)
S_J = The Japanese stock price index deflated by the CPI
e_J = Japan's real effective exchange rate index (CPI basis)

33. The first equation is an identity requiring that GDP equals the sum of domestic demand and net exports. Exports are the sum of imports from the other two blocks, multiplied by Japan's trade shares, plus Japan's exports to the rest of the world. For the purpose of this exercise, constant trade shares are assumed, whereas actual trade shares are time varying. In order to ensure that the national accounts identity holds, a residual is calculated for the first equation.

34. The second equation represents a domestic demand function (i.e., a behavioral relationship determining the sum of private consumption, investment, and government demand), which is determined by GDP, the real stock price index, and the lagged dependent variable. The third equation represents an import demand function, which is determined by domestic demand, the real effective exchange rate, and the lagged dependent variable.

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[24]This appendix was prepared by Christian Thimann and Christopher Towe.

35. The parameters of the domestic demand and import volume equations are imposed, but are broadly consistent with the results of OLS regressions, which were estimated for the three blocks individually.[25] The long-run elasticities are summarized below:

Long-Run Elasticities

	Japan	Korea	SEA
Domestic demand			
GDP	0.92	0.94	0.80
Stock prices	0.02	0.04	0.05
Import demand			
Domestic demand	1.24	1.08	1.00
Exchange rate	0.66	0.10	0.50

Thus, the three blocks represent nine equations that determine nine unknowns: imports, domestic demand, and GDP in Japan, Korea, and Southeast Asia. The exogenous variables that determine the equilibrium values of these variables are: world demand for exports from each of these regions, the real level of the stock market, and the real effective exchange rate.

[25]For Japan, import equations presented by B. Chadha in *Japan—Selected Issues*, IMF Staff Country Report No. 96/114 (October 1996) provided useful estimates, which suggested that in the long run import volumes are roughly unit elastic with respect to relative prices, but that the elasticity might be larger than unity in the case of domestic demand. Estimates of Korean import volume equations by L. Giorgianni and Gian Maria Milesi-Ferretti in "Determinants of Korean Trade Flows and the Geographical Destination," *IMF Working Paper* WP/97/54 (April 1997), suggest a near zero relative price elasticity and an elasticity for domestic absorption of around 1.3.