

## Japan: Selected Issues

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JAPAN

**Selected Issues**

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Approved by Asia and Pacific Department

July 11, 2005

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## I. THE DOMESTIC AND GLOBAL IMPACT OF JAPAN'S POLICIES FOR GROWTH<sup>1</sup>

### A. Introduction

1. **The analysis presented in this chapter illustrates the impact of fiscal and structural reforms on the Japanese and world economies.** Japan faces a sizable fiscal deficit, against a backdrop of weak trend growth and growing imbalances in the world economy. Moreover, upward pressure on healthcare and social security spending owing to an aging population will add significantly to strains on public resources in the years ahead. In light of these issues, the Japanese government is taking a range of measures aimed at raising productivity growth and stabilizing the public debt in relation to GDP over the medium term.<sup>2</sup>

2. **The analysis is based on an extended version of the IMF's Global Economy Model (GEM), building on approaches employed by Bank of Japan and Cabinet Office officials.** The GEM is the IMF's new multi-country model of macroeconomic interdependence that allows a rigorous assessment of the global adjustment process toward a more balanced external equilibrium.<sup>3</sup> The version used in the present analysis has five regions: Japan, the United States, emerging Asia, the euro area, and the rest of the world.

3. **Simulation results indicate that fiscal adjustment and productivity-enhancing reforms could reduce substantially Japan's fiscal imbalance with limited spillovers to the rest of the world.** Faster productivity growth would help lower Japan's debt and limit the tendency of fiscal consolidation to increase the external surplus. If even faster productivity gains could be achieved, Japan would make a further contribution to global rebalancing through a decline in its external surplus. The spillovers to the rest of the world appear to be modest, partly reflecting the size of the shocks and the diminished size of Japan in the world economy.

4. The rest of this chapter is organized as follows: section B provides more details on the GEM and describes the approach followed; section C reports and discusses the main results of the analysis; and section D concludes.

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<sup>1</sup>Prepared by Nicoletta Batini, Papa N'Diaye (ext. 39751), and Alessandro Rebucci, with support from Dirk Muir.

<sup>2</sup>See accompanying staff report for details.

<sup>3</sup>The April 2005 WEO essay on global current account imbalances (Chapter III) and the follow-up analysis in the forthcoming September 2005 WEO provide examples of how the GEM can be used to analyze the global imbalances. These essays build on a sizable body of related work at the IMF, notably by Hunt and Rebucci (2003), Faruquee (2004), Faruquee, Laxton, and Muir (2005), Batini and others (2005), and Kumhof, Laxton, and Muir (2005).

## B. The Research Strategy

### The model

5. **The GEM has a number of features that make it well-suited for this analysis.**

Unlike traditional macromodels, the GEM combines new-Keynesian features, such as monopolistic competition and nominal rigidities, with international trade in goods and assets derived from specialization, preferences, and technology, thereby offering rich transmission mechanisms.<sup>4</sup> For example, the home bias in consumption (i.e., a relative preference for the traded good produced at home) and the impact of changes in demand on the prices of *nontradable* goods create additional channels through which changes in the international pattern of current accounts affect real and nominal exchange rates. As a result, the dynamics of key variables in response to shocks might differ markedly both in sign and magnitude from what one would obtain in more traditional macromodels. In addition, these features of the model allow key macroeconomic outcomes (such as economic activity, the exchange rate, and financial asset positions) to depend on underlying structural parameters that are invariant to changes in macroeconomic policies, such as consumer preferences, technology, costs of adjustment of volumes and prices, and the degree of financial frictions. The model is thus robust to the Lucas critique and suitable for policy evaluation, a strength gained at the cost of considerable complexity in model building.

6. **Macroeconomic policies are represented by simple rules and affect the economy through a variety of channels.** Monetary policy follows a standard interest rate rule in which the monetary authority raises or lowers interest rates to stabilize inflation. Fiscal policy aims to achieve a long-run debt target through changes in taxes on labor and capital income. Among the economic effects of policies, changes in the government debt engender changes to the demand for long-run holdings of foreign assets, which affect consumers' net worth, and hence output. Also, fiscal policy affects the economy through its impact on the interest rate premium, defined as the difference between the interest rate on yen-denominated assets and that on U.S.-denominated assets of comparable maturities. Specifically, the interest rate premium depends explicitly on the level of debt in relation to GDP, thus inducing a positive long-run effect of fiscal consolidation on output.

7. **Both the steady state and the dynamics of the United States block are calibrated to the data.** For the other blocks, the parameters governing the dynamics are similar to those used to calibrate the U.S. block, but adjusted for country-specific information. Steady-state equilibrium values of key ratios and variables match actual data (2003 trade flow and foreign asset data and other structural features). The steady-state level of the real exchange rate and current account are broadly consistent with the benchmarks derived from structural estimation of saving-investment norms.<sup>5</sup> The calibration of the relationship between government

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<sup>4</sup>Pesenti (2005) describes the theoretical structure of the model. The version used here is also presented in Faruqee and others (2005).

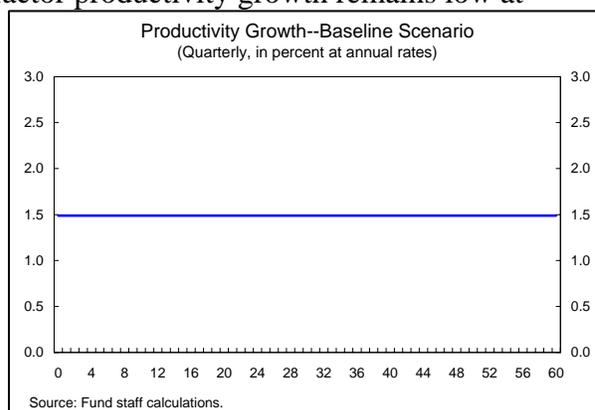
<sup>5</sup>See Faruqee and Isard (1998) for details.

debt and net foreign assets uses elasticities found in overlapping generations models employed at the IMF, such as the Global Fiscal Model (Botman and others, 2004, and Kumhof, Laxton, and Muir, 2005) and MULTIMOD (Laxton and others, 1998).

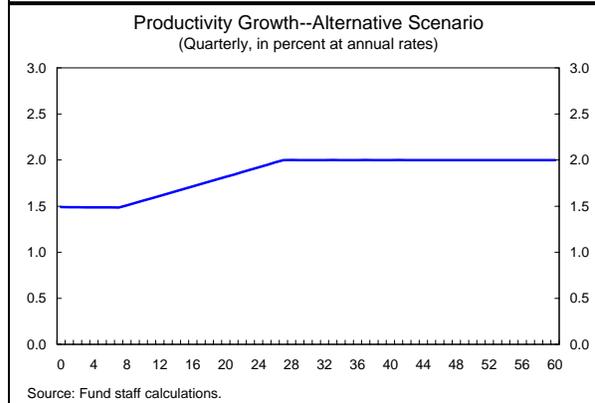
## Scenarios

### 8. The analysis compares a baseline and two alternative scenarios based on different assumptions for fiscal policy and productivity growth.<sup>6</sup>

- In the baseline scenario, Japan's total factor productivity growth remains low at 1.5 percent per year over the medium term.<sup>7</sup> Fiscal deficit reduction proceeds at a pace of ½ percent of GDP per year over a ten-year period. The ratio of net general government debt to GDP rises to 150 percent over the medium term, from about 80 percent in 2004.



- In the first alternative scenario (“structural and fiscal reform”), productivity growth increases to 2 percent by 2010 (entailing a gradual increase of ½ percentage point between 2005 and 2010). Also, a supplementary adjustment in the primary deficit of a ¼ percentage point of GDP per year over a ten-year period is simulated, reducing the primary deficit by an additional 2½ percentage points relative to the baseline. The debt-to-GDP ratio stabilizes at around 110 percent over the medium term.



- In the second alternative scenario (“larger structural reform payoffs”), an additional ½ percentage point increase in productivity growth is considered compared with the

<sup>6</sup>The results are not particularly sensitive to the choice of the baseline so paths for the baseline are not presented. A similar baseline is presented and discussed by Faruqee and others (2005). It assumes that there are preexisting global external imbalances, in line with Chapter III in the April 2005 WEO.

<sup>7</sup>In the long run, steady-state equilibrium requires that productivity grows at the same rate (assumed to be 2 percent) in every region.

previous scenario (with a total gradual increase of 1 percentage point between 2005 and 2010). Fiscal deficit reduction proceeds at the same pace as in the baseline scenario.

9. **Both the baseline and the alternative scenarios assume that the economy has emerged from the liquidity trap, deflation has ended, and the interest rate channel of monetary policy is fully effective.** While this is not the current situation, this assumption is expected to apply in the medium term.

### C. Results

10. **The simulation results suggest that faster productivity growth would both facilitate the reduction of Japan's fiscal imbalance and largely offset the adverse impact of fiscal consolidation on output growth and the external imbalance in the short run** (Figures I.1a and I.1b). Output growth declines about ¼ percentage point for only the first year, and thereafter follows the gradual increase in productivity growth. The current account surplus declines only about 0.1 percent of GDP initially and thereafter increases ½ percent of GDP (about \$25 billion). This amount is however small in comparison with global trade flows and global imbalances.

Effects of Structural and Fiscal Reforms (Alternative Scenario 1)  
(Percentage deviation from baseline)

	2005	2010	2015	2020
<b>Japan</b>				
Real GDP (level)	-0.2	0.7	2.5	5.3
Current account (percent of GDP)	-0.1	0.8	0.7	0.6
Government debt (percent of GDP)	0.3	-5.8	-17.8	-36.8
<b>United States</b>				
Real GDP (level)	0.0	0.0	0.0	0.1
Current account (percent of GDP)	0.0	-0.2	-0.2	-0.2
<b>Euro area</b>				
Real GDP (level)	0.0	0.0	0.0	0.0
Current account (percent of GDP)	0.0	0.0	0.0	0.0
<b>Emerging Asia</b>				
Real GDP (level)	0.0	-0.1	0.0	0.1
Current account (percent of GDP)	0.0	0.0	0.0	0.0
<b>Rest of the world</b>				
Real GDP (level)	0.0	0.0	0.0	0.0
Current account (percent of GDP)	0.0	0.0	0.0	0.0

Source: Fund staff estimates using Global Economic Model.

In more detail:

- The direct effect of faster productivity growth and fiscal adjustment lowers Japan's government debt-to-GDP ratio by about 37 percentage points over 15 years.
- The gradual increase in productivity growth lifts current and future factor returns, and hence stimulates investment and consumption through a wealth effect, despite the

negative effect on domestic demand from increased taxes. Overall, the strengthening of demand raises imports and narrows the trade surplus. Given the small size of the productivity improvement, the decline in Japan's external surplus is short-lived as it is dominated by the impact of fiscal consolidation in the medium term.

- With only a gradual supply-side response in tandem with the phased-in increase in productivity, in the near term there is excess demand for both domestically and foreign produced goods, and domestic prices rise relative to foreign prices. This induces a temporary appreciation of the exchange rate, reinforcing the impact of higher domestic demand on external balances. Over the medium term, however, supply catches up with demand both from the gradual increase in capacity and the negative effect of fiscal consolidation on demand. Accordingly, domestic prices decline, leading to a depreciation of the exchange rate back toward the baseline that dampens the negative effects of higher demand on external balances.
- Inflation is mainly driven by the changes in the exchange rate, as inflation falls initially and then rises subsequently. Rising inflationary pressure calls for a tighter monetary stance, which somewhat dampens the depreciation pressure on the exchange rate.
- However, because debt declines in relation to GDP, the interest rate is lower than it would otherwise be given that higher debt places a premium on the interest rate. With less crowding out in the transition and a higher capital stock, this also implies that output is slightly higher than it would otherwise be.
- Spillovers to the rest of the world are negligible in light of the size of the shocks.

**11. Even faster productivity growth could contribute to a near-term reduction in Japan's current account surplus, and hence help reduce global current account imbalances.** A gradual one percentage point increase in Japan's productivity growth would on impact reduce its trade and current account surpluses by about ½ percentage point of GDP (about \$25 billion) and ¾ percentage point of GDP (about \$35 billion), respectively (Figures I.2a and I.2b).<sup>8</sup>

- In this case, the current account surplus narrows more than with a smaller increase in productivity growth because the positive wealth effects stimulate investment and consumption to a larger extent. This decline in the current account balance is magnified by a larger appreciation of the exchange rate than under the previous scenario.

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<sup>8</sup>In this scenario, fiscal consolidation is assumed to proceed at the same pace as in the baseline.

- The rapid response of demand relative to supply puts upward pressure on inflation, calling for a tighter monetary stance and therefore higher interest rates, which reinforces the initial appreciation of the exchange rate.

Effects of Larger Structural Reforms Payoffs (Alternative Scenario 2)  
(Percentage deviation from baseline)

	2005	2010	2015	2020
Japan				
Real GDP (level)	0.0	3.1	7.8	14.6
Current account (percent of GDP)	-0.7	-0.1	0.3	0.4
Government debt (percent of GDP)	0.1	-4.3	-11.0	-22.6
United States				
Real GDP (level)	0.0	-0.1	0.0	0.1
Current account (percent of GDP)	0.1	0.0	-0.1	-0.1
Euro area				
Real GDP (level)	0.0	0.0	0.1	0.1
Current account (percent of GDP)	0.0	0.0	0.0	0.0
Emerging Asia				
Real GDP (level)	0.2	0.1	0.1	0.2
Current account (percent of GDP)	0.1	0.0	0.0	0.0
Rest of the world				
Real GDP (level)	0.0	0.0	0.0	0.1
Current account (percent of GDP)	0.0	0.0	0.0	0.0

Source: Fund staff estimates using Global Economic Model.

**12. Under this second scenario, the spillovers to the rest of the world would be marginally larger** (Figures I.2a and I.2b):

- In the United States, output growth is virtually unchanged as a temporary reduction in domestic demand is partly offset by an improvement in the trade balance. Domestic demand falls because investment is highly sensitive to interest rates, which rise to curb the inflationary effects of the initial depreciation of the U.S. dollar. However, this deterioration of domestic demand, along with the depreciation of the dollar, causes the U.S. trade deficit to decline. Together with positive valuation effects arising from the dollar depreciation, the decline in the trade deficit improves the U.S. NFA position in the short run.<sup>9</sup>
- In the euro area, the transmission mechanism is similar to that in the United States, although the spillovers are very small in light of the region's more limited trade linkages with Japan.

<sup>9</sup>Some features of the medium- to long-term effects may result from the specific combination of shocks used to build the baseline scenario (e.g., the large reduction in the U.S. debt-to-GDP ratio that starts in 2009).

- In emerging Asia, output growth picks up slightly in the short run, mainly due to an increase in both domestic and net external demand. Domestic demand improves mainly due to higher investment following a decline in real interest rates.<sup>10</sup> The exchange rate—which is pegged to the U.S. dollar—depreciates, boosting export growth and slowing import growth. The improvement in the current account is limited and does not lead to a significant change in the NFA position in relation to GDP.

#### **D. Conclusions**

13. **This chapter has presented an illustration of the possible response of the domestic and world economies to productivity-enhancing reforms and fiscal adjustment in Japan.** There are three main conclusions:

- Such a combination of actions would contribute to reducing Japan's fiscal imbalance, without jeopardizing the economic recovery or exacerbating existing global external imbalances.
- If the increase in productivity growth were more substantial, Japan's internal balance would improve further, output growth would be stronger, and the external surplus would decline.
- In both instances, however, the spillovers to the rest of the world appear modest, partly reflecting the size of the shocks and Japan's limited share of the world economy.

14. **The analysis presented here does not account for a possible disorderly U.S. dollar depreciation.** It is not clear how the conclusions would be affected by such an event, which could be a useful area of future research. Indeed, to the extent that fiscal policy and structural reforms in Japan and elsewhere contribute to an orderly resolution of global imbalances, and thus help prevent disruptive adjustments in currency and capital markets, the economic payoffs of reforms could be higher than envisaged here.

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<sup>10</sup>With monetary policy in emerging Asia assumed to continue to be geared toward maintaining the peg to the U.S. dollar, nominal domestic interest rates increase in tandem with U.S. rates, but the magnitude of the increase is not enough to offset the rise in inflation.

Figure I.1a. Structural and Fiscal Reforms (Alternative Scenario 1)  
(Percentage deviation from baseline)

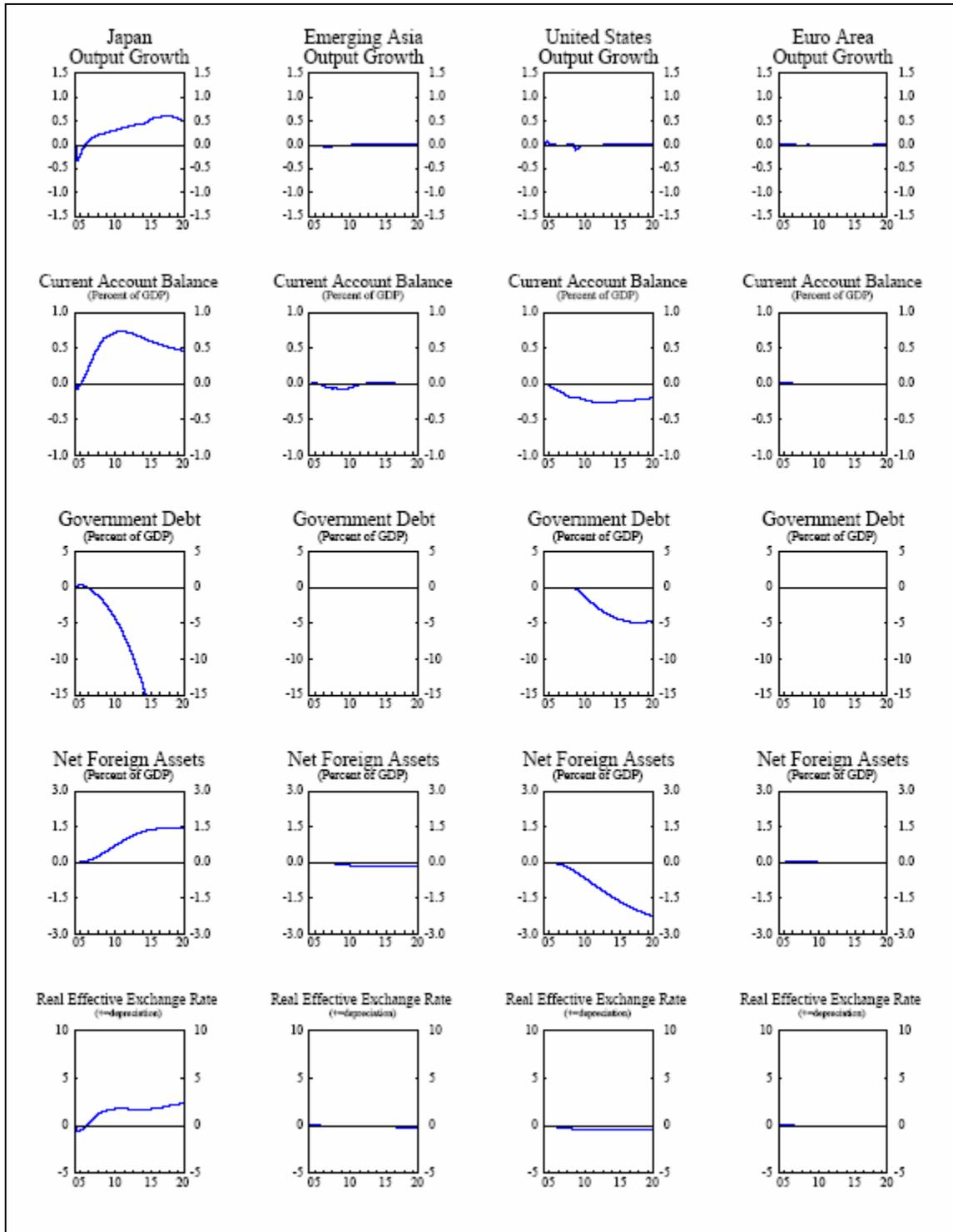


Figure I.1b. Structural and Fiscal Reforms (Alternative Scenario 1)  
(Percentage deviation from baseline)

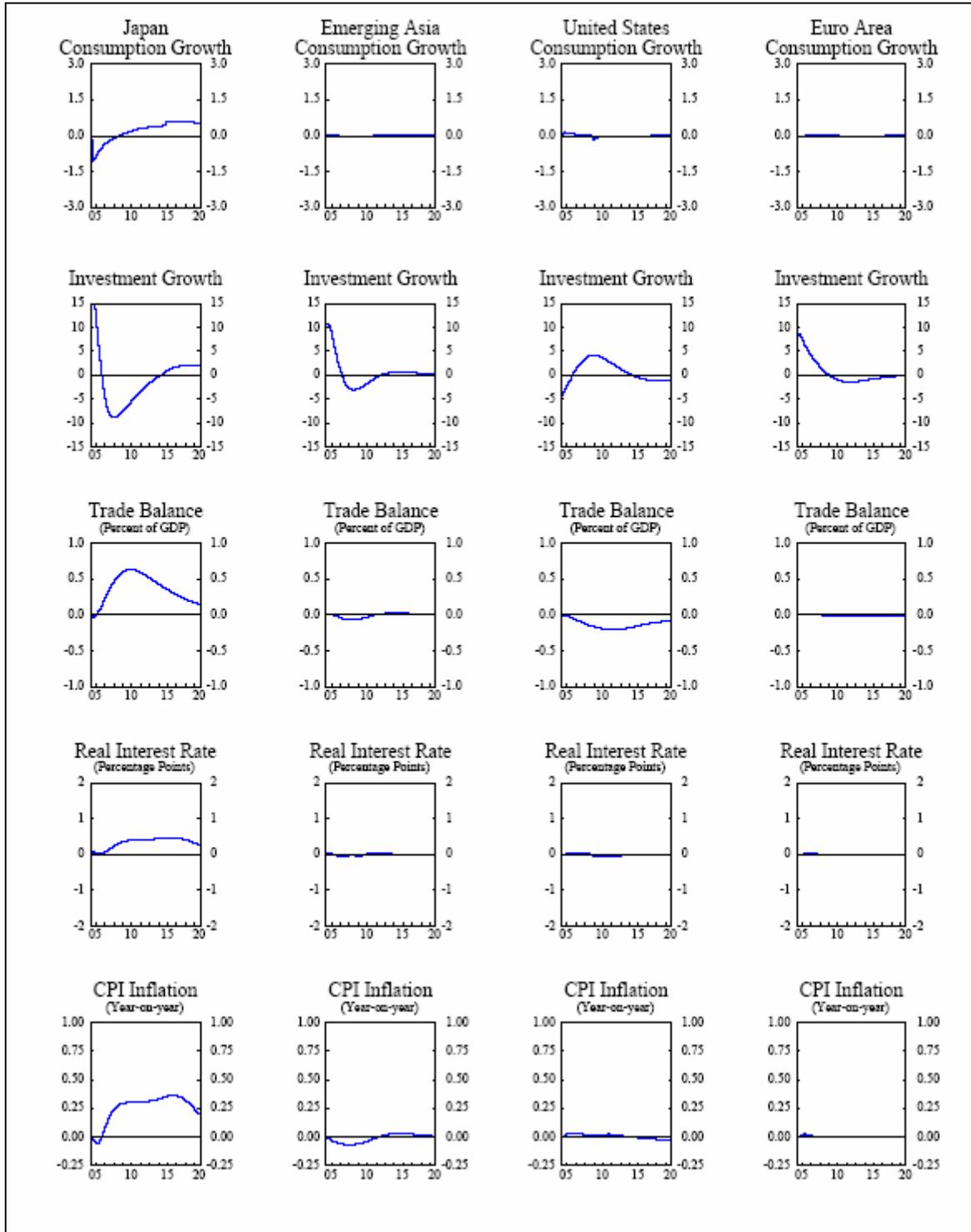


Figure I.2a. Larger Structural Reform Payoffs (Alternative Scenario 2)  
(Percentage deviation from baseline)

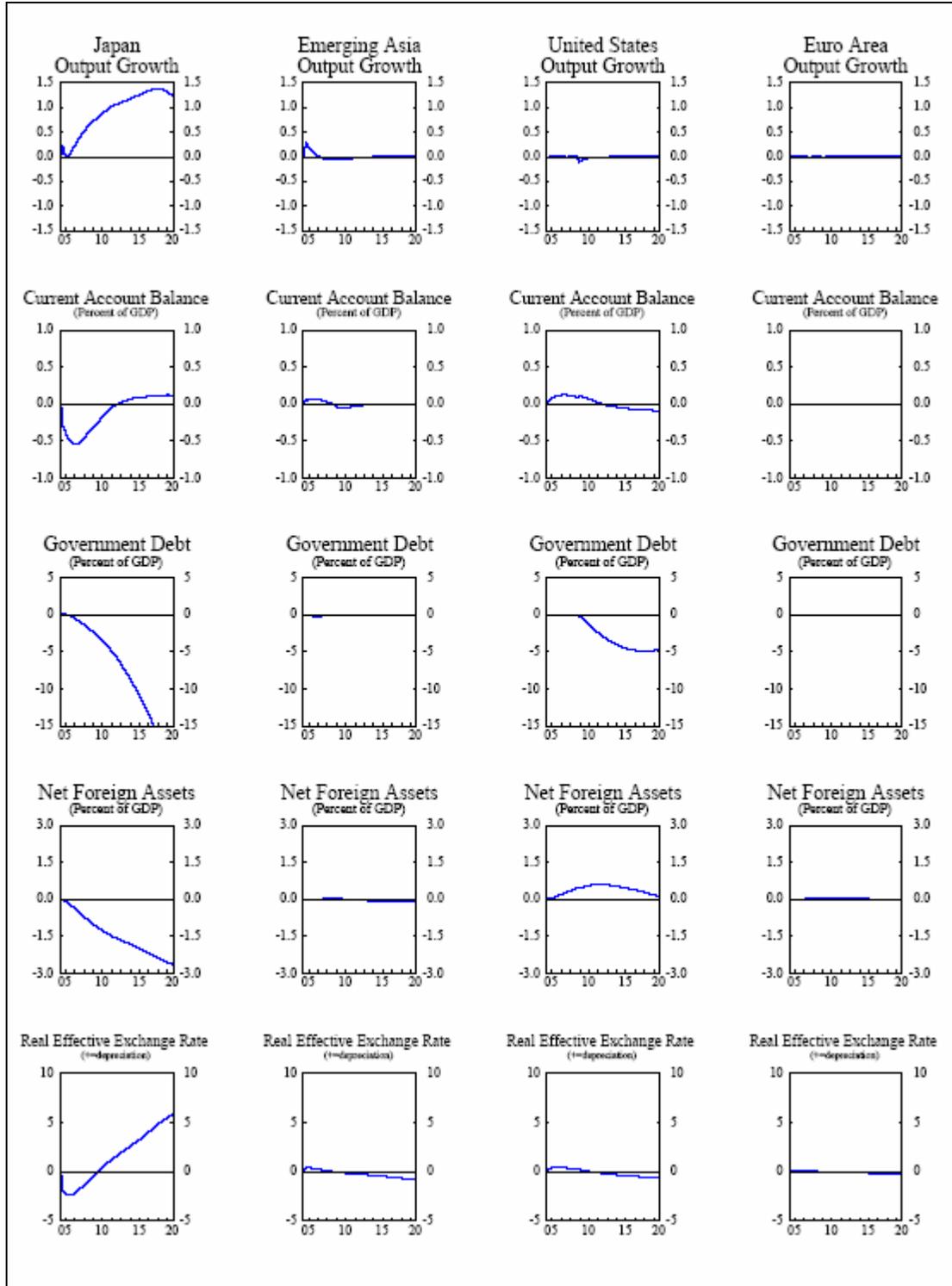
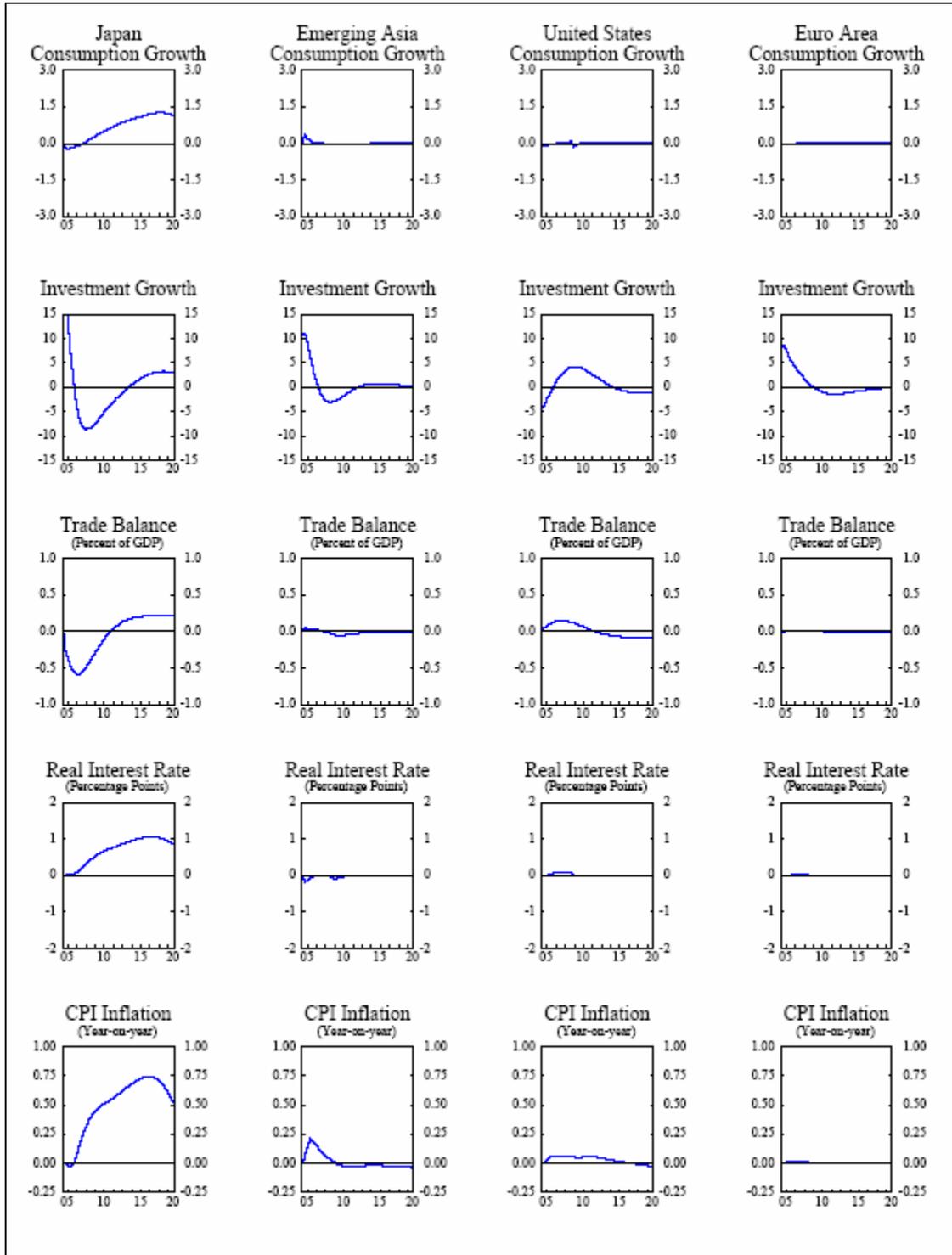


Figure I.2b. Larger Structural Reform Payoffs (Alternative Scenario 2)  
(Percentage deviation from baseline)



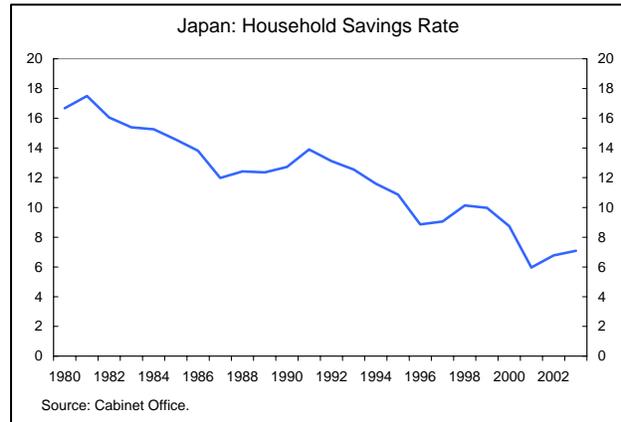
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## II. HOUSEHOLD SAVINGS IN JAPAN<sup>1</sup>

### A. Introduction

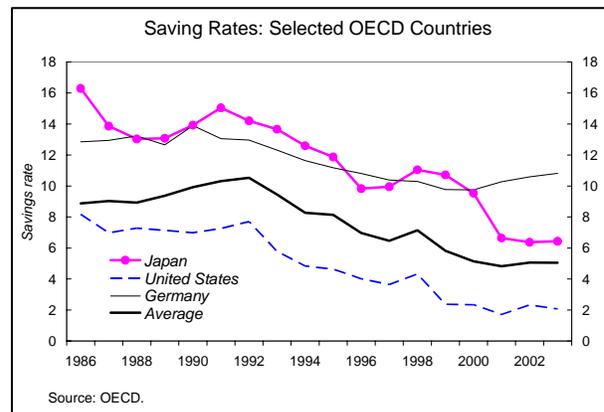
1. **Japan's household saving rate has fallen dramatically since the early 1980s.** The saving rate, based on national income accounts data, declined from 18 percent in 1981 to 6 percent in 2002 with a brief pause during the bubble years. This drop in savings has prompted discussion about Japanese savings in the future and long-term growth prospects. The interest in this issue has been growing as demographic projections indicate that Japan will experience a rapidly aging population, which could lead to a further reduction in household savings.<sup>2</sup>



2. **This chapter focuses on the implications of demographic change for household saving, presenting illustrative saving projections.** Section B reviews household savings behavior in Japan, comparing it with other OECD countries, and section C examines models of saving and demographics, and the official demographic projections. Section D considers evidence on aggregate saving behavior, using macro data; section E investigates household savings exploiting additional information on cohort behavior to provide a different perspective on savings trends. Finally, section F concludes.

### B. Japanese Savings in an International Context

3. **In a cross-country context, the decline in Japan's household savings rate stands out.** There are wide disparities in saving behavior across OECD member countries. The saving rate in the United States has also fallen, but from a low level, while saving rates in some continental European countries, such as Germany, have been reasonably stable. Japan, once considered a big saver relative to other



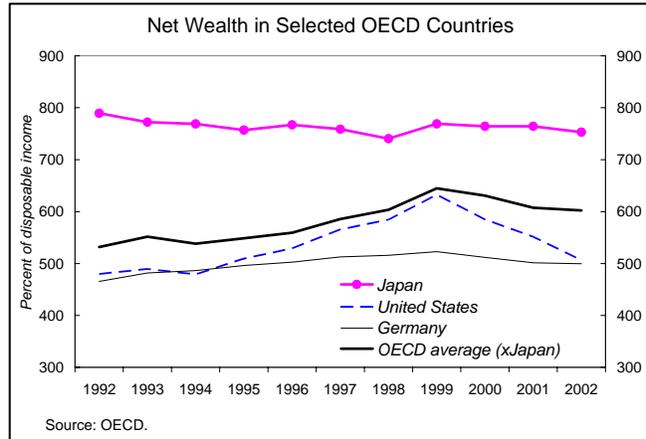
<sup>1</sup>Prepared by Hali Edison (ext. 36946).

<sup>2</sup>The September 2004 *World Economic Outlook* investigates how demographic change affects regional and global economies.

OECD countries, has seen its saving rate fall below that of many other OECD members, converging toward the OECD average.

4. **In spite of the secular decline in their savings, Japanese households' net wealth remains high relative to other industrialized countries.** Japan's large stock of wealth is a

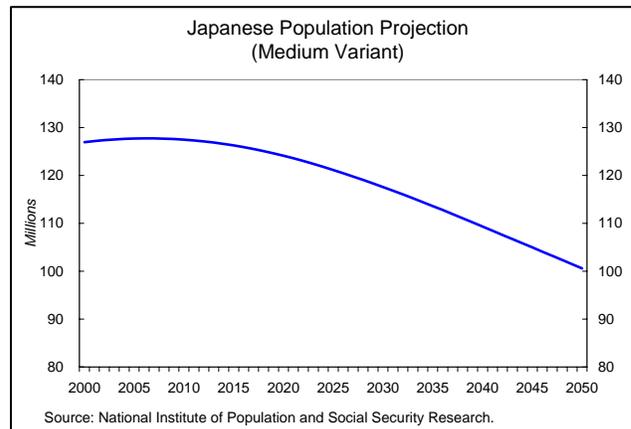
result of high saving rates during much of the postwar period and the associated rapid increase in land prices in the 1980s that pushed nonfinancial wealth to very high levels. Since the collapse in asset prices, the stock of wealth has remained flat in relation to income. By comparison, net wealth in the other G-7 countries has increased since the late 1980s, although some countries have experienced some unwinding of that increase, notably the United States after the tech bubble burst in 2000.



### C. Savings and Demographics

5. **Modern theories of consumption behavior find a strong link between demographics and savings.** The life-cycle model of household behavior regards saving as motivated by the desire of households to smooth lifetime consumption in the face of uneven income flows. It postulates that households save a portion of their income during their working years in order to finance their retirement. Thus, the higher the ratio of the retired population to the working-age population, the lower aggregate savings will be.

6. **Accordingly, population aging has important implications for the future savings behavior.** Official projections indicate that Japan's population is expected to stop growing before the end of the current decade and then is projected to decline by 27 million over the next 50 years.<sup>3</sup> Two main factors contribute to this demographic trend: the Japanese population has the lowest birth rate and the highest life expectancy among industrial countries, while inward immigration flows—typically

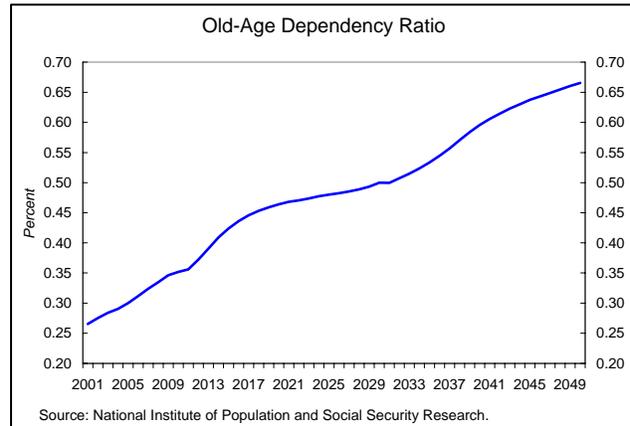


<sup>3</sup>This projection is from Japan's National Institute of Population and Social Security Research, representing the medium variant. As there is a great deal of uncertainty with such projections the Institute also produces high and low variant projections.

involving young workers—are very low by international standards.<sup>4</sup> Clearly, caution must be exercised when using long-term projections of this kind, as such projections become more uncertain the further into the future.

**7. Another important demographic factor is the development of the old-age**

**dependency ratio.** This is a broad indicator measuring the burden an aging society places on its working-age population and is defined as the ratio of the population aged 65 and over to the population aged 20 to 64. In 2000, this ratio was 28 percent. With the projected aging population, this old-age dependency ratio is expected to rise to 70 percent by 2050. Overall, these demographic trends may have a significant effect on the aggregate saving rate.



**8. There have been numerous studies of Japanese savings behavior.**<sup>5</sup> Most of the earlier studies focused on explaining Japan’s high saving rate before its rapid decline in the 1990s. Recently there has been renewed interest in explaining the downward trend in savings, linking it to the rapidly aging population. These studies have used aggregate household savings data from the national income accounts as well as data from household surveys. The next part of this chapter reviews the macro evidence on saving and demographics, while the following section examines household survey data, looking at saving behavior across different age cohorts. Combined with projected demographic trends, the analysis provides illustrative scenarios for household savings for the medium and longer term.

<sup>4</sup>The fertility rate in Japan is at present 1.2, compared with 2.1 in the United States. Life expectancy at birth is currently 81 years, the highest in the world and a full five years higher than in the United States. Since the 1950s, U.S. life expectancy has increased by 7 years, while Japanese life expectancy has risen by 17 years. Among OECD countries, Japan has one of the lowest shares of foreigners in the total population and labor force. In 1998, the population share of foreigners in Japan was 1.2 percent, while that of Switzerland was 19 percent.

<sup>5</sup>Some of the more important earlier studies include: Hayashi (1989, 1997), Hayashi, Ando, and Ferris (1988), Horioka (1984, 1997), and Yashiro and Oishi (1993). More recent studies explore the sharp decline in savings and the role of the elderly, including Horioka (2004a, b, c) and Koga (2005).

### D. Macro Evidence on the Impact of Demographics on Savings

9. **To quantify the interrelation between population dynamics and household savings, a standard aggregate saving equation is estimated first.** As discussed above, an important prediction of the life-cycle model is that an increase in the old-age dependency ratio toward more elderly households would reduce the aggregate saving rate. In addition, the model suggests that the larger the share of the young in the population, and the greater the stock of wealth, the lower the saving rate.<sup>6</sup> In some equation specifications, separate fiscal variables have been added to determine if private savings is subject to Ricardian equivalence, but this is not investigated in the present study.<sup>7</sup> To conduct the empirical analysis, annual national income data from 1980 to 2003 is used.

10. **The estimated aggregate household saving equation for Japan is consistent with the predictions of the life-cycle model.**<sup>8</sup> In particular, the coefficients on the old-age dependency ratio, young-age dependency ratio (defined as ratio of minors to working-age population), and wealth as a share of disposable income are all negative, while the coefficient on inflation is positive, capturing precautionary motives.<sup>9</sup> All of these estimates are statistically significant at the 10 percent level or above. As

Long-Run Saving Rate Model		
Variable	Coefficient	t-Statistic
Constant	30.67	4.80
Wealth to disposable income	-0.04	-2.72
Old age to working population	-0.25	-2.15
Young to working population	-0.20	-1.41
Inflation	0.26	2.02
R-square	0.94	Durbin-Watson 1.7
Sample	1980-2003	Nobs 24

Source: Fund staff estimates.

<sup>6</sup>The influence of wealth on savings may be ambiguous. During the late 1980s, the decline in savings rates coincided with sharp increases in household net wealth, indicating a strong negative correlation between the two series. At other times, the correlation between savings and wealth is positive, reflecting an increase in both income and wealth.

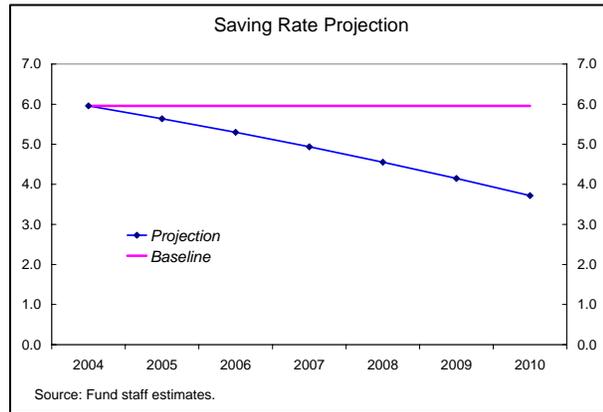
<sup>7</sup>Fiscal variables have been used to explain private savings and test for the possible presence of Ricardian equivalence, whereby forward-looking agents offset bond-financed tax reductions by higher savings. We do not follow this approach because the focus is on household rather than private savings. See for example OECD (2004), De Mello and others (2004), and DeSerres and Pelgrin (2003). The OECD estimate the offset coefficient to be about 35 percent in the short run and 70 percent in the long run.

<sup>8</sup>As pointed out by Meredith (1995), evidence based on aggregate data typically support the prediction of the life-cycle model regarding demographics and saving.

<sup>9</sup>There are several ways in which inflation can affect saving independently from its influence via the real interest rate. The increase in inflation may capture the effect of uncertainty such that as inflation rises saving would increase for precautionary motives. Also, an unexpected rise in inflation may lead households to hike savings to compensate for capital losses.

wealth increases, the saving rate declines as households tend to save less out of current income. As the number of retirees relative to the working-age population increases, the saving rate declines as retirees tend to spend out of their accumulated stock of wealth. Similarly, as the number of minors relative to the working-age population increases, the saving rate declines, as those who have not yet begun to work consume and do not save.

11. **For illustrative purposes it is possible to highlight the effect demographic changes may have on aggregate savings.** Based on the coefficient estimates and projections for the explanatory variables, household saving rates are projected to decline. For comparison, an initial or benchmark projection for saving for 2004–10 is generated that is based on setting the path of all the variables equal to their 2004 value. This yields a constant saving rate of 6.0 percent. An alternative path for the household saving rate, using estimates for the explanatory variables, projects savings to decline 2¼ percentage points by 2010.



12. **The demographic effects of aging are both statistically and economically significant.** The aggregate saving rate projection can be decomposed to show the contribution of each explanatory variable to the decline in the saving ratio: the projected rise in the old-age dependency rate more than fully accounts for the projected decline in savings over the medium term (see the table). The simulation of the model further into the future indicates that the household saving rate is likely to decline steadily in the coming decades as a result of the shift toward a more elderly population.

Contribution to Change in Saving Rate, 2004-2010					
	Wealth	Elderly	Youth	Inflation	Total change
Contribution	-0.8	-2.5	0.2	0.8	-2.2

Source: Fund staff estimates.

### E. Evidence Using Household Survey Data

13. **Further insight on the likely evolution of saving behavior can be gained by looking at household survey data.**<sup>10</sup> In particular, the data from the Family Income and Expenditure Survey (FIES) are used to examine the major features of the household saving rate, including the saving propensities across different age groups.<sup>11</sup> The general trend of the household saving rate based on the survey data is somewhat different from the trend revealed in the aggregate national accounts data. The discrepancy between these two data sources stems from differences in the way the two saving rates are defined, in particular the treatment of rents. Indeed, several authors have argued that it is quite difficult to reconcile the two series, owing to the number of transformations that are undertaken to derive the national accounts data.<sup>12</sup> Nevertheless, using the two data sources is helpful because each provides a different snapshot of household saving.

14. **Household saving behavior, as revealed by the survey data for the period 1995 to 2003, differs across age cohorts.** The data display a humped-shape pattern consistent with the life-cycle model. The saving rates are positive and large for each age category, with the 30 to 39 age group reporting the highest savings rate. As expected in a life-cycle model, the saving rate of elderly households (households with a head who is 60 years old or older) is lower than that of the younger households.

Savings Rate of Households						
Year	All ages	29 years or younger	30-39 years	40-49 years	50-59 years	60 or older
1995	27.5	28.0	31.3	25.4	28.3	22.8
1996	28.0	28.1	31.4	27.1	28.4	21.8
1997	28.0	30.4	31.3	26.9	28.3	22.4
1998	28.7	29.5	32.8	28.0	28.7	22.5
1999	28.5	28.8	32.7	28.5	27.3	21.0
2000	27.9	25.9	32.3	29.1	26.8	17.9
2001	27.9	24.0	33.8	27.5	27.0	18.4
2002	26.9	26.1	33.3	27.8	25.5	13.7
2003	26.0	28.4	32.3	27.0	24.1	12.1

Sources: Family Income and Expenditure Survey; and Fund staff estimates.

<sup>10</sup>This approach has been followed, for example, in Bosworth and others (1991), Kitamura and others (2001).

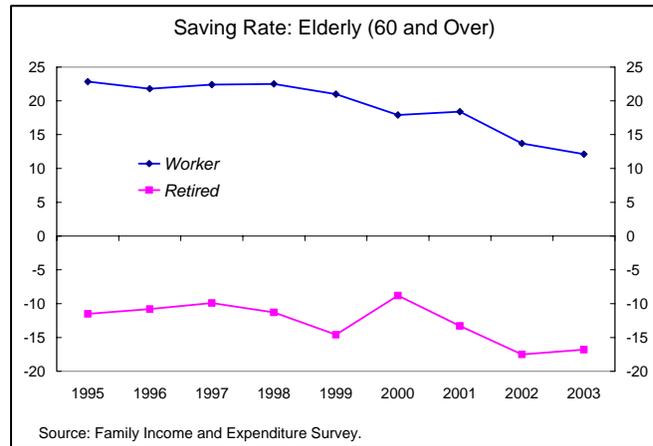
<sup>11</sup>The survey reports saving rates by age group for head of household for salaried workers, with two or more members. This coverage was expanded to include data on retired households (head of household over 60) after 1995.

<sup>12</sup>See, for example, Hayashi (1997), Kozo, Sato, and Inada (2003), and Koga (2005). In particular, according to Hayashi (1997) comparing the two saving rates is not straightforward because the SNA data involves many stages of imputations and transformations, while the survey data concern cash items. Specifically, he points to six major differences: i) imputed rents; ii) business income; iii) employment income; iv) medical expenditures; v) social security benefits; and vi) depreciation.

15. **In general, the saving rates for the different cohorts have been fairly stable over time.** There is one exception to this observation. The saving rate of elderly households with salaried workers has declined rapidly since the late 1990s, dropping to 12.1 percent from 22.6 percent. This decline has been associated with a fall in disposable income for this cohort while consumption remained roughly constant. The survey data indicate that the decline in disposable income was due to a fall in both employment income and public pension income.

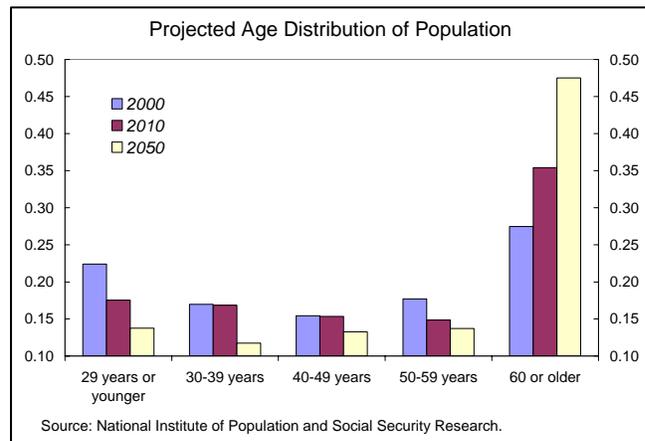
16. **The micro data allows for a comparison of the saving behavior for different types of elderly households.** The saving rate in the table above pertains to elderly households whose head of household is still working as a salaried worker and does not include information about the retired elderly.

In 1995 the FIES started collecting data on a broader set of elderly households including retired elderly households. The saving rate of retired households (where the head of household is older than 65 and retired) is negative and large in absolute magnitude, ranging from -5.2 percent to -19.6 percent. The aggregate saving rate of both retired and working households is -2.3 percent, compared with 23 percent for the working-age households computed from the 2003 FIES.



17. **Cohort saving data allow one to measure the likely impact of demographic changes on the saving rate.** We assume that the saving rates across different age groups remain unchanged from their most recent (2003) levels. This is a reasonable assumption as the saving rates of each age category (except elderly households) has been relatively stable over time.<sup>13</sup>

Population trends can then be used to project the aggregate saving rate out to 2050. This projection shows that the age distribution of the population is shifting toward older age groups and away from the younger age categories.<sup>14</sup> For example,



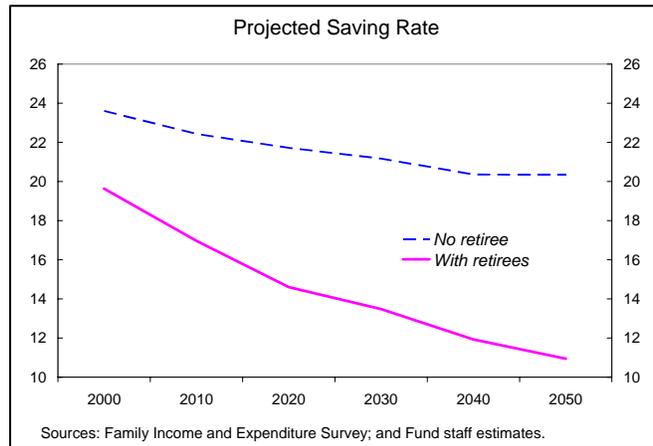
<sup>13</sup>Pension benefits are expected to fall further, but a reasonable assumption may be that the elderly extend their working life enabling them to maintain their savings rate.

<sup>14</sup>This scenario uses the medium variant population projection. The alternative high/low projections also yield similar results.

in 2000, the population over 16 years of age was 108 million and is projected to drop to 88 million by the year 2050. The share of the population over the age of 60 is projected to increase from 27 percent to nearly 50 percent by 2050, with the most rapid increase in the share of the elderly occurring in the current decade.

18. **The cohort saving behavior and the population projections illustrate once again that the saving rate is likely to fall.** The extent of the decrease is likely to depend importantly on the saving behavior of the over-60 population, which in turn will depend in part on the elderly's employment status. As a lower bound, it is assumed (although

implausibly) that there is no retirement. This projection captures simply the effect aging has on savings. Given this assumption, the projected saving rate declines 3½ percentage points by 2050, with the largest ten-year decline (1 percentage point drop) occurring in the current decade. A more plausible projection, based on the assumption that anyone older than 70 is retired and the 60–69 population remains working, generates a saving rate that declines 9 percentage points by 2050.<sup>15</sup> Once again, the largest fall (2½ percentage points) occurs in the current decade.



## F. Summary and Conclusion

19. **This chapter has analyzed the likely impact on the household saving rate from a shift of Japan's demographic structure toward a more elderly population.** Projections using both the aggregate data and the cohort data illustrate that the household saving data is likely to decline steadily in the coming decade. The results using the macroeconomic data suggest the saving rate will fall 2¼ percentage points after six years, while the cohort data indicate a decline, ranging between 1 to 2½ percentage points, depending on the elderly's employment status.

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<sup>15</sup>Applying the average saving rate of retired and working households yields a saving rate that declines 2¼ percentage points in the first decade and 6¼ percentage points by 2050.

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### III. AGRICULTURAL POLICIES IN JAPAN: DOMESTIC AND SPILLOVER EFFECTS<sup>1</sup>

1. **Government support of agriculture remains among Japan's main structural issues.** Present policies slow the reallocation of resources out of agriculture into sectors where they could be used more productively. Reducing support levels and better targeting support toward clear policy objectives would help to improve productivity and generate economic welfare benefits. In this context, agricultural policy reform can contribute to revitalizing Japan's economic growth.
2. **Other countries also have an interest in Japanese agricultural policy reform, because Japan's present policies have spillover effects on its trading partners.** Trade restrictions discourage imports, distort world prices for many farm products, and, by insulating the domestic market, exacerbate world price fluctuations. The impact on developing country food exporters is especially important, particularly in the context of the Doha Development Agenda for the ongoing multilateral trade negotiations under the WTO.
3. **This paper surveys present Japanese agricultural policies and highlights both its domestic effects and those on other countries.** It begins in Section A with a brief review of the agriculture sector, the sector's role in the Japanese economy, and the government's sectoral policy objectives, contrasting this with Japan's relatively open trade regime outside agriculture. Section B sketches the main policy mechanisms and describes the broad levels of support provided to the sector, drawing on calculations by the OECD and others to place this in the context of the support provided by other industrialized countries. The domestic and international effects of current policies are described in Section C, summarizing various modeling exercises and other analysis. Section D examines the current policy debate and provides concluding comments.

#### A. Recent Developments in Japanese Agriculture

4. **The agricultural sector now accounts for about 1 percent of Japan's GDP, about half its share in 1990, reflecting a continuation of the sector's marked post-war decline described by Citrin (1990).** Unlike much of the post-war period, when real GDP growth in agriculture was positive (albeit modestly so), since 1990 the sector has contracted by some 2 percent a year. As elsewhere, the low income-elasticity of food demand has translated over time to a decline in agriculture's share of economic activity; in Japan, however, this decline has been exacerbated by the sector's low productivity growth. Agriculture now accounts for 4 percent of employment, compared to 6½ percent in 1990. Reflecting the aging of the rural and farm population, less than 2 percent of total employment among those aged 25–54 is in agriculture; moreover, among “core agricultural producers” two-thirds are aged 60 or more, compared to one-third in 1985 and to one-fourth of the total 2003 population (Cabinet Office, 2004). From 1990–2003, cultivated land area fell 10 percent and is now 12½ percent of total

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<sup>1</sup>Prepared by Brad McDonald (ext. 36641).

area,<sup>2</sup> while the agricultural population fell 44 percent. FAO data indicate that despite other, higher, measures of agricultural employment, only some 380,000 men under age 60 engage mainly in farming.

Summary of Agriculture Sector

	1985	1990	1995	2000	2003
Agriculture share of GDP (current prices, percent)	2.4	1.9	1.4	1.1	1.1
Sector value-added (constant 1995 prices, billion yen)	8,178	8,635	7,187	6,827	6,387
Cultivated land (thousand hectares)	5,379	5,243	5,038	4,830	4,736
<i>Of which:</i> Paddy field	2,766	2,672	2,579	2,485	2,440
Area planted to rice (thousand hectares)	2,342	2,074	2,118	1,770	1,688
Commercial farm households (thousands)	3,315	2,971	2,651	2,337	2,205
<i>Of which:</i> Full-time or mainly engaged in farming	1,256	994	926	776	732
Employment (tens of thousands)	449	400	331	290	260
(Share of total)	7.7	6.4	5.1	4.5	4.1

Source: Ministry of Agriculture, Forestry, and Fisheries.

5. **Farm sizes remain small, despite the decline in labor use in the sector and some movement toward farm consolidation (including, recently, by leasing).** Farm size reflects various barriers to farmland conversion (in zoning, tax law, and property law) and is facilitated by farm support policies (Godo, 2000).<sup>3</sup> Along with the aging of the population and other factors, small farm size contributes to low productivity and stagnant growth (Cabinet Office, 2004).

6. **Despite heavy import protection and other farm support, Japan is among the world's largest net agricultural importers.** It accounts for about 10 percent of global imports of cereals, oilseeds, and meats, and about 5 percent of global imports of bananas, dairy products, fibers, sugar, and tropical beverages. These figures suggest the potential importance of Japan's policies for other countries.

7. **Complex and overlapping policy objectives have contributed to stagnant productivity in the sector and to unambitious reform implementation.** The main policy objectives through most of the past several decades were food security and self-sufficiency, and the equalization of living standards across farm and nonfarm workers. The 1961 Agricultural Basic Law, which provided broad guidance for agricultural and rural policy, foresaw reaching these objectives by strengthening rural infrastructure and increasing farm

<sup>2</sup>Farmland area has declined by about 1 percent a year over the past two decades, largely due to urbanization.

<sup>3</sup>The Council of Regulatory Reform's 2002 report highlighted the regulations on farmland utilization and their impact on farm size and efficiency.

efficiency, notably through larger farms. Over the years, Japanese policy makers have also stressed an environmental role for agriculture and have often cited the flood control benefits of well-maintained paddy fields. Directing policy toward maintaining self-sufficiency has not proven effective nor, as explored later in the paper, been without cost.

Self-Sufficiency Rates of Selected Food Products, 1960–2003

	1960	1970	1980	1985	1990	1995	2000	2003
	(In percent)							
Rice	102	106	87	107	100	103	95	95
Wheat	39	9	10	14	15	7	11	14
Vegetables	100	99	97	95	91	85	82	82
Beef	96	90	72	72	51	39	34	39
Pork	96	98	87	86	74	62	57	53
Milk and milk products	89	89	86	85	78	72	68	69
Sugar	18	23	29	33	32	31	29	35
Fruits	100	84	81	77	63	49	44	44
All food (calorie basis) 1/	79	60	53	53	48	43	40	40

Source: *Statistical Yearbook*, Ministry of Agriculture, Forestry, and Fisheries.

1/ Self-sufficiency on a value basis is presently estimated to be 70 percent.

8. **A new Basic Law was adopted in July 1999 and is based on the 1998 results from an advisory committee to the Prime Minister and agreement on the “Fundamental Principles of Agricultural Policy Reform” by the Liberal Democratic Party, the Ministry of Agriculture, Forestry, and Fisheries (MAFF), and the agricultural cooperatives (Honma, 2000).** The advisory committee’s report recognized that protectionism had made farmers inefficient and had slowed the sector’s structural adjustment, contributing to higher food imports and the relocation of food processing industries overseas. The agreement that followed stressed an increased role of prices and the market system. The main objectives under the new Basic Law are: i) securing a stable food supply; ii) developing rural areas; iii) sustainable agricultural development; and iv) fulfilling agriculture’s multifunctional roles—a reference to environmental effects and the benefits attached to an open and attractive country side. The new Basic Law explicitly recognizes a role for farm support decoupled from production (Honma, 2000; Trewin, 2000) and thus provides something of a way forward. The Agricultural Basic Plan adopted by Cabinet in March 2005 provides a framework that could support ambitious reform in this direction, but whether this will be pursued will depend in part on the outcome of the WTO Doha Round agricultural negotiations.

## B. Agricultural Policies in the Context of the Overall Trade Regime

### Nonagricultural policies

9. **Outside of agriculture, Japan maintains a broadly open trade regime.** Nonagricultural most favored nation (MFN)<sup>4</sup> tariffs average 3.7 percent, and 99 percent of all tariff lines are bound in the WTO (WTO, 2004). Comparable tariff averages for the European

### Nonagricultural Trade Policy Measures

The Market Access Map (MAcMap) database (Bouët and others, 2004) measures applied tariff rates, taking into consideration tariff rates under regional trade agreements and unilateral trade preferences for developing countries, and also utilizing equivalent measures of non *ad valorem* tariffs. For Japan, these estimates indicate very low tariff protection—less than 1 percent—for manufactures other than textiles, clothing, and footwear (TCF), compared to 1 to 2 percent for the EU and the United States. Reflecting high tariffs on footwear, Japan’s tariff protection of TCF is much higher than that for its other manufactures.

The Overall Trade Restrictiveness Index (OTRI) (Kee and others (2005)) is the equivalent *uniform* import tariff that, if substituted for present trade policies, would maintain imports at the observed level. The tariff component of the OTRI estimates utilize information on preferential tariffs as well as MFN tariff rates. Estimates for nontariff barriers are subject to wider measurement error than those for tariffs. For Japan, the uniform import tariff for nonagriculture that would leave total imports unchanged if substituted for present tariffs is 1.6 percent (see table). A uniform tariff of 7 percent would substitute for present tariff and nontariff barriers. These results are broadly similar to those for the EU and the United States.

MacMaps and OTRI Estimates for Nonagriculture

	MACMaps ad valorem equivalent	OTRI	
		Tariffs and NTBs	Tariffs only
		(In percent)	
Japan	...	7.3	1.6
Manufacturing	0.6	...	...
TCF	9.9	...	...
European Union	...	7.5	1.5
Manufacturing	1.8	...	...
TCF	6.4	...	...
United States	...	6.8	2.6
Manufacturing	1.3	...	...
TCF	10.4	...	...

Sources: Bouet and others (2004); Kee and others (2005).

<sup>4</sup>MFN tariffs are those applied on imports from WTO members (and sometimes extended to nonmembers). Lower rates may apply to imports under regional trade agreements or under unilateral tariff preferences granted to developing countries.

Union (EU) and the United States are 4 percent. Outside of agriculture and processed foods, high tariffs are largely limited to footwear. Although imports in some areas remain affected by regulatory and administrative procedures, the share of Japan Industrial Standards aligned with or equivalent to international standards rose from 21 percent in 1999 to 91 percent in 2003.<sup>5</sup> The coverage of nontariff barriers is now similar to that in the EU and the United States (OECD, 2005).

### **Aggregate measures of agricultural policy distortions**

10. **Protection and support for agriculture contrasts sharply with the generally liberal trade policies throughout most other areas of the economy.** Overall measures of agricultural policies show that producer prices in Japan are more than double world market prices, and that government policies account for well over half the receipts of Japanese farmers—the highest among the large industrial economies. Japanese consumers pay a little over two times prevailing world market prices for their farm products. In most OECD countries, agricultural support has begun to decrease and support mechanisms have become more targeted and less distortionary. In Japan, such reforms are at an early stage.

11. **A review of the OECD's calculations of producer support estimates<sup>6</sup> (PSEs) and other measures helps to put Japan's policies in context.** Japan's overall PSE has fluctuated between 50 and 70 percent of farm receipts over the period covered by estimates (since 1979) (Bull and Roberts, 2001), but without a clear downward trend. PSE calculations clearly show continued very high agricultural support among most industrial countries, although Japanese support, at 58 percent during 2001–03, is the highest among the large OECD countries and significantly exceeds that of the EU (35 percent) and the United States (20 percent). Several OECD countries have undertaken moderate (if uneven) reductions over the past 15 years, although support rates of 60 to 75 percent continue in countries such as Iceland, Korea, Norway, and Switzerland. PSEs for Australia and New Zealand, on the other hand, are just 2 to 4 percent.

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<sup>5</sup>See also WTO (2004), Section III(2)(v).

<sup>6</sup>The PSE is the gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture. The PSE is often expressed as a share of gross farm receipts.

Japan and OECD: Aggregate Agricultural Policy Indicators

	1986-88	2000	2001	2002	2003
<b>Japan</b>					
Producer subsidy equivalent (PSE)					
Share of gross farm receipts (percent)	61	60	59	57	58
Per full-time farmer equivalent (thousand U.S. dollars)	14	26	22	21	...
Per hectare of agricultural land (U.S. dollars)	9,163	11,122	9,335	9,028	...
Share of market price support in PSE (percent)	90	90	90	90	90
Total support equivalent (percent of GDP)	2.34	1.40	1.37	1.37	1.33
<b>OECD (including Japan)</b>					
Producer subsidy equivalent (PSE)					
Share of gross farm receipts (percent)	37	32	31	31	32
Per full-time farmer equivalent (thousand U.S. dollars)	10	11	10	11	...
Per hectare of agricultural land (U.S. dollars)	183	188	176	182	...
Share of market price support in PSE (percent)	77	63	61	64	62
Total support equivalent (percent of GDP)	2.30	1.26	1.21	1.21	1.19

Source: OECD.

**12. In addition to overall high support levels, there are two other important broad characteristics of Japan's policies.**

First, support varies greatly across products. Other industrial countries typically support a broad range of products relatively evenly. However, reflecting the dominance of rice in Japanese agriculture and as the main supported commodity, variability in commodity support in Japan is nearly double that of any other OECD country (OECD, 2004). This suggests that not only are there large distortions between agriculture and other sectors of the economy, but within agriculture as well.

PSEs for Selected Commodities					
	1986-88	2000	2001	2002	2003
	(Percent of farm-gate receipts)				
Aggregate PSE	61	60	59	57	58
Wheat	87	86	86	86	87
Other grains	86	84	81	81	81
Rice	84	88	86	83	83
Oilseeds	75	34	42	46	55
Sugar	66	43	40	41	41
Milk	84	79	76	77	77
Beef and veal	44	32	32	32	33
Pork	42	48	45	57	55
Poultry	12	11	11	11	11
Eggs	18	16	16	16	16
Other commodities	53	54	53	53	51

Source: OECD.

13. **A second important characteristic is the unusually high and persistent share of Japan’s farm support accorded through “market price support,” which has consistently accounted for 90 percent of Japan’s overall producer support.**<sup>7</sup> Traditionally,

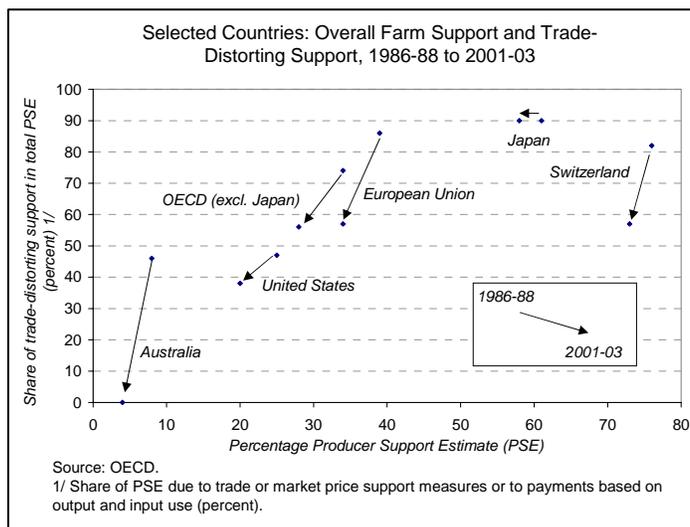
Japan’s market price support has been accomplished through a combination of import barriers and administrative prices, although in the past few years administrative prices have applied to fewer products and remaining administered prices have been frozen or reduced. Import barriers nevertheless remain high. According to the OTRI estimates of Kee and others, Japanese agricultural import barriers are equivalent (on a trade volume basis) to a 58 percent uniform tariff on agricultural products—compared to a 7 percent uniform tariff-equivalent outside agriculture.

OTRI Estimates for Agriculture		
	Tariffs and NTBs	Tariffs only
(In percent)		
Japan	58	32
European Union	45	13
United States	21	4

Source: Kee and others (2005).  
 Note: The OTRI is the uniform tariff that if substituted for current policy would leave import volume unchanged.

14. **The heavy reliance on market price support distorts internal market prices and thus both production and consumption.** It has important implications for the costs of

agricultural support in Japan and for spillover effects on other countries. Since the mid-1980s, several OECD countries have reduced the role of such support while cutting back on overall farm support rates. Among other OECD countries, the percentage PSE fell from 34 to 28 percent, and the share of that support provided through market price support was reduced from 74 to 56 percent. Others, such as Switzerland, have retained overall high support levels but reduced their reliance on market price support in favor of less-distortionary approaches.



15. **Public works expenditures in rural areas are not considered in aggregate measures of agricultural policy, but have been a large share of the MAFF budget.** The public works share of the MAFF budget rose from 30 percent in the 1970s to 54 percent by

<sup>7</sup>The figures provided here reflect both market price support (the wedge between internal Japanese market prices and world market prices) as well as direct subsidies on farm output and inputs.

1995. Although the increase—particularly during the post-bubble downturn—probably reflected in part the use of counter-cyclical fiscal stimulus packages, George Mulgan (2001) argues that the shift occurred to compensate farmers for reduced support prices and for steps toward market liberalization. Budget pressures and other factors reversed this trend in more recent years, and MAFF data indicate that the share fell to 44 percent by 2005. Within the MAFF budget, the public work shares of agriculture spending declined from 46 to 36 percent from 1995 to 2005.

16. **Like other developed countries and many middle-income countries, Japan unilaterally grants trade preferences to developing countries under the Generalized System of Preferences (GSP).** Japan's GSP scheme grants developing countries partial or full tariff preferences on about 20 percent of dutiable agricultural tariff lines. For the least-developed countries, the scheme provides full tariff preferences (duty-free access) for close to 40 percent of dutiable agricultural tariff lines.<sup>8</sup> Of least-developed countries' 2002 agricultural exports to Japan, 34 percent were products not subject to duty and 17 percent were eligible for preferences; the remainder were subject to full tariffs (Brenton and Ikezuki, 2005). However, as of 2002 only six least-developed countries received Japanese agricultural GSP benefits of 1 percent or more of their exports to Japan. The 2003 GSP changes are likely to have moderately increased the utilization of GSP preferences.

### C. Economic Impacts of Japanese Agricultural Policies

17. **It is often suggested that the high levels of agricultural support and the ways in which Japan implements this support significantly distort international trade as well as production and consumption within Japan.** Portions of the land, labor, and capital that are retained in agriculture could probably be used more productively in other activities. The high variability of support for different commodities suggests resource misallocation within agriculture as well. Present agricultural policies thus may detract from other efforts to improve economywide productivity and rejuvenate growth. High producer prices help sustain inefficient farm practices (as reflected in the small farm size) and encourage high input use.

18. **Standard analysis also suggests that high market prices (typically more than double world market prices) distort consumers' choices.** In a high-income country such as Japan, inelastic food demand suggests that high food prices would reduce overall food consumption modestly. However, differences across food groups (see the box) distort consumers' choices of different foods, and the burden of high food prices falls disproportionately on lower-income consumers, for whom food makes up a larger share of their budget.

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<sup>8</sup>These figures reflect the April 2003 changes to the GSP that broadened coverage and deepened preferences for least-developed countries.

19. **Overall, it could be argued that import barriers and other policies that promote production and tax consumption significantly distort trade.** Lower agricultural imports is the most direct effect, but high food prices also effectively tax other tradable sectors of the economy. Policy distortions thus spill over on other countries in various ways. Along with farm policies in other OECD countries and elsewhere, policies adversely impact many developing countries.

#### Summary of Policies for Key Commodities

The Uruguay Round Agreement on Agriculture (URAA) and concerns about low self-sufficiency and stagnating productivity growth have begun to generate changes in farm support policies. The 1999 Basic Law encourages more use of market mechanisms. Administered prices or fully guaranteed producer prices have been replaced with income stabilization schemes, introducing elements of market price signals. While not reducing overall agricultural support or protection, which remain high, these changes help set the stage for more fundamental policy reforms.

**Rice** policies included an import ban, administrative prices, and marketing restrictions. Japan agreed, under the URAA, to minimum amounts of rice imports beginning in 1995 (increasing thereafter); in 1999 it effectively converted the special treatment of rice to an import tariff (at a rate equivalent to several hundred percent), avoiding further increases in minimum access amounts. In line with the move toward market price mechanisms, administrative prices were replaced by the voluntary Rice Farming Income Stabilization Program, which partially compensates producers when market prices fall below their three-year average; participants must set aside land and pay part of the program costs. Still, rice producer prices are estimated to be ten times higher than in other japonica rice producing countries, while consumer prices are two to three times higher (Fukuda, Dyck, and Stout, 2003).

Income stabilization programs (sometimes without set asides) also exist for **wheat, barley, beef, pork, dairy, and sugar** (in conjunction with restrictive tariffs or other import barriers) and **oilseeds**. Public investment projects and certain other policy changes have consolidated rice paddies, encouraged leasing and contract farming, and diverted some 40 percent of paddy area from rice (in chronic oversupply) to other uses.

20. **Despite their substantial costs, Japan's agricultural policies do not seem to have been effective in meeting stated policy objectives.** Self-sufficiency rates have dropped steadily and now stand at about 40 percent on a calorie basis (and about 70 percent on a value basis), despite the unusually heavy policy focus on food security. Rural-urban income parity has partly reflected the large role of off-farm income for rural households.<sup>9</sup> The farm work

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<sup>9</sup>In 2003, for example, income from agricultural activities accounted for only about one-sixth of farming households' income (other income includes pension benefits) (MAFF, "Annual Report on Food, Agriculture and Rural Areas in Japan, FY2004," p. 111).

force has aged very rapidly, with very few younger workers participating. Agriculture sector productivity has stagnated, contributing to low economic growth economywide. The inefficiency of past policies need not imply that agricultural support must always be ineffective or inefficient, but suggests that heavy reliance on import restrictions and other forms of market price support as the means for attaining these objectives is costly and ineffective. The OECD estimates that only a fourth of the costs of market price support accrues to farm household income (Ash, 2004)—much of the rest is used up in higher input costs or in sustaining high land prices.

21. **Several studies have sought to illustrate the possible magnitude of the economic effects of agricultural policies in high-income countries.**<sup>10</sup> Bull and Roberts (2001) used a 17-region, 24-sector Asia- and agriculture-focused aggregation of the Global Trade Analysis

Project (GTAP) database now common in empirical general equilibrium (GE) trade studies.<sup>11</sup> The authors study a multilateral partial agricultural liberalization scenario under which agricultural import barriers and other support measures are halved. They estimate that under such a scenario, economic welfare in Japan would increase by the equivalent of 0.15 percent of GDP. However, their estimates suggest that in isolation from other countries' policies, Japanese farm policies on their own reduce Japanese economic welfare by the equivalent of

some ½ percent of GDP. Bull and Roberts' estimates also suggest that current policies greatly dampen imports of some product groups. Although their illustrative partial liberalization scenario would still leave high barriers to rice imports, for example, Japan's rice imports could nevertheless increase to a fourth of domestic consumption, from their

Bull and Roberts Model: Simulated Effects on Japan of Partial Multilateral Agricultural Reform Scenario				
	Imports		Import price	Production volume
	Value	Volume		
	(Percent change)			
Wheat	16.8	4.8	-18.0	-43.3
Other grains	8.1	1.2	-22.3	-49.7
Oilseeds	6.2	...	-6.5	-13.5
Live cattle and sheep	73.0	54.0	-16.9	-7.0
Other animal products	82.8	72.8	-21.6	-1.5
Beef and sheep meat	13.7	8.7	-8.5	-6.4
Other meat products	20.3	15.7	-11.6	-1.8
Vegetable oils and fats	7.1	4.2	3.0	-1.1
Dairy products	99.6	81.6	-32.4	-8.0
Processed rice	160.7	150.0	-37.0	-10.1
Sugar	24.0	21.0	-15.1	-7.1

Source: Bull and Roberts (2001).

<sup>10</sup>The studies reviewed in this section are conventional static analyses. They do not consider transitional effects, nor do they account for possible positive externalities (what some may refer to as the “multifunctionality” of agriculture) or negative externalities (such as the environmental effects of the additional input use associated with subsidized production).

<sup>11</sup>See the GTAP website at [www.gtap.agecon.purdue.edu](http://www.gtap.agecon.purdue.edu).

baseline 2004 projection of 9 percent. The table above summarizes the price effects in Japan under this scenario.

22. Other authors examining the effects of trade reforms include:

- Tokarick (2005) estimates the welfare impact on Japan of a full multilateral agricultural policy reform at ½ percent of GDP. Reflecting the negative terms of trade impact of higher world food prices (due mainly to policy changes in the EU and the United States), the estimated cost to Japan of its own farm policies would exceed ½ percent of GDP.
- Van der Mensbrugghe and Beghin (2004) simulate full, global agricultural reforms over the period 2005–15. They find value added in agriculture in Japan could be 25 to 30 percent lower than under present policies as productive factors move toward more efficient uses in other sectors.
- Anderson, Martin, and van der Mensbrugghe (2005) examine a global computable general equilibrium model version of the GTAP database. In their simulation, eliminating over ten years present global restrictions on merchandise trade (including agriculture) and agricultural support policies increases global welfare by nearly \$300 billion in 2015, or 0.7 percent of global GDP. Globally, food and agricultural policies account for about three-fifths of the costs of present policies. For Japan, the full liberalization of global merchandise trade could raise welfare by 1.1 percent of GDP.
- Francois and others (2004) use a 17-sector, 16-region CGE model to explore a number of issues surrounding the Doha Round trade negotiations, aggregating Japan together with Korea and other high-income Asian countries.<sup>12</sup> They suggest that, at least for the high-income Asia group that includes Japan, agricultural policy reform that results in a flow of the factors of production out of (constant returns to scale) agriculture and into (monopolistically competitive) sectors such as manufacturing could more than double the estimated welfare benefits of agricultural reforms.

23. **Industrial countries' trade distortions have taken on additional prominence in the context of the ongoing WTO Doha Round negotiations.** Many observers suggest that dismantling industrial countries' trade restrictions and agricultural subsidies would considerably aid developing countries' attainment of the Millennium Development Goals (MDGs). Modeling exercises tend to find that industrial countries' trade and agricultural liberalization would benefit developing countries in general, and many have emphasized the role of

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<sup>12</sup>See Francois, McDonald, and Nordstrom (1997).

agricultural reforms.<sup>13</sup> Importantly, modeling exercises and other economic analyses consistently conclude that a country's own policies have a greater impact on its economic performance than do those of other countries (even collectively). Nevertheless, increased access to the markets of industrial and middle-income countries would provide substantial benefits for, and encouragement for further reform by, many developing countries. According to research by Anderson, Martin, and van der Mensbrugghe (2005), which figures prominently in World Bank and International Monetary Fund (2005), under a hypothetical (and "ambitious") Doha Round outcome agricultural reform could account for two-thirds of the benefits resulting from all reforms in merchandise trade. Conventional estimates of welfare gains for developing countries as a group as a result of an ambitious Doha Round range around 1 percent of GDP; this could go higher if effects not captured in conventional assessments were to be included, such as if reforms were to help generate higher sustained growth.

#### D. What Lies Ahead?

24. **As much as in other industrial economies, Japan's agricultural policies reflect the calculus of political economy.** Protection rose as the relative size of the agricultural economy shrank and as the importance of food costs in consumer budgets declined. Consumers could more easily tolerate the costs of agricultural protection as their incomes rose, while farmers—a smaller but better organized group—formed effective lobbies (Honma, 2000).
25. **With rural incomes on par with urban incomes, using sectoral policies to raise prices to all producers—the way in which 90 percent of present agricultural support is provided—is particularly costly and ineffective.** It also burdens other countries and risks contributing to a vicious circle in which protectionism is mimicked by others. Support for farm income can be accomplished more efficiently and cheaply by moving away from market price support and toward direct payments to farmers (Yamashita, 2004). Such steps would follow the trend in other OECD countries away from market price support. Other countries have developed significant experience "decoupling" farm support from production (Baffes and de Gorter, 2005), and useful lessons from this experience (admittedly not all successful) can be brought to bear in Japan.
26. **While even direct income payments are likely to distort output, the benefits will be better targeted toward farm incomes and with little leakage into input costs.** Reduced

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<sup>13</sup>Models suggest positive but very uneven benefits for developing countries from industrial country agricultural reforms. Developing countries "would gain more if the developing and the developed nations simultaneously liberalized their agricultural sectors" (Francois and others, 2004). Charlton and Stiglitz (2005) stress that a "development-friendly" Doha Round would include not only industrial countries' agricultural reforms, but also tariff cuts on labor-intensive goods and reforms in services trade.

incentives for intensive use of inputs, such as pesticides and fertilizers, would carry environmental benefits. Other environmental objectives, such as the flood control benefits of rice paddies, could be better met through policies focused on the areas at risk. Alternative policies could also include targeting skills and technology for on-farm performance, targeting systemic low incomes through social safety nets and adjustment assistance, and diversifying income sources through rural development.

27. **There are signs of progress toward a gradual opening in agriculture.** According to Fujisue and Koike (2005), the decline in rural political power and disappointment with the self-sufficiency rate resulting from present policies have contributed to MAFF's willingness to examine in 2004 a role of imports in keeping a stable food supply. The Basic Plan adopted by Cabinet earlier this year posits the further reduction of import barriers and other market price supports in favor of less-distorting direct compensation to farmers—perhaps through tax incentives.

28. **By pressing ahead now with reforms, Japan can show leadership in bringing about an ambitious Doha Round outcome.** This leadership could leverage ambitious commitments in agriculture to be a positive force in other areas, such as reducing non-agricultural tariffs and strengthening WTO rules in anti-dumping and other disciplines. By opening its own markets in areas of interest to developing countries, and by helping forge a Doha outcome that leads other countries to do the same, Japan can help raise the development prospects of low-income countries.

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## IV. HOME BIAS IN JAPAN<sup>1</sup>

### A. Introduction and Summary

1. **An apparent preference for domestic over foreign assets, or “home bias,” has been a conspicuous feature of the behavior of many investors in Japan, both individual and institutional.** Home bias in Japan has declined markedly in the past decade by some measures, but remains higher than average for mature market countries. To the extent that a strong demonstrated preference for domestic assets in Japan results in a suboptimal allocation of financial assets, it would represent an unexploited opportunity for higher returns on investment in a country that has recently suffered from low rates of return, and that faces the prospect of having to cover a large pension funding gap. From a global perspective, an inefficient allocation held by Japanese investors could have consequences for the prices of foreign and domestic assets.

2. **This paper provides an assessment, by type of investor and in the aggregate, of the recent declines in home bias and of the remaining areas where portfolios are still concentrated in domestic assets.** It considers regulatory and structural changes that have affected the degree of home bias of different types of institutional investors. On the basis of a simple portfolio model, the likely effects, with regard to risk-adjusted returns, of past home bias are also gauged. The paper concludes with a discussion of the potential macroeconomic effects of continued reduction in home bias on the part of Japanese investors, and of policies that might contribute to the reduction in home bias.

3. **The paper finds that deregulation in Japan over the past decade has eliminated many obstacles to outward investment.** Changes in the government pension system and in government-run financial institutions (GFIs) have also favored greater holdings of foreign assets. As a result of these reforms, structural impediments to portfolio outflows in Japan no longer appear unusually high for a mature market country. Aversion to currency risk continues to be an important source of home bias, but some investors have recently become more accepting of this type of risk, as currency market volatility has decreased and domestic yields have remained low. Accordingly, reforms instituted several years ago may recently have started to have a noticeable impact on portfolio outflows.

### B. Previous Research on Home Bias

4. **Research on home bias frequently cites the international capital asset pricing model (ICAPM), developed by Sharpe and others, as a point of reference.** In most versions of the model, the mix of assets, and the relative proportions of those assets, held by an investor in the home country will be identical to those held by a foreign country investor. Accordingly, the share of own-country assets in each investor’s portfolio is equal to the share of the domestic market in the world market—an allocation that is characterized as the

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<sup>1</sup>Prepared by Chris Walker (ext. 38483).

absence of home bias. Empirical work on home bias in the 1980s and early 1990s found that this condition was far from obtaining, (e.g., Tesar, 1995) even in the most internationalized markets. More recently, authors (e.g., International Monetary Fund, 2005) have found a reduction in the degree of home bias in most developed country asset markets (although some have argued that the decline of home bias in Japan has been slow relative to other developed economies). Nevertheless, investors still often show a marked preference for domestic assets.

5. **A number of explanations have been suggested for the size and persistence of home bias, both in general and in Japan in particular.** If some goods are nontradeable, then under fairly general conditions, there will be some divergence from the ICAPM result on home bias.<sup>2</sup> Another exception that is sometimes believed to affect Japanese investors may occur in the case of currency risk (Lewis, 1999), if that risk cannot be fully hedged. Less studied in the academic literature, but likely to be a practical problem, is the possibility that demographic or other differences among countries may lead to international differences in the liability structures of specific institutional investors, and, thereby, in efficient portfolio allocations.<sup>3</sup> Factors specific to Japan, generally seen as important but less prominent in the academic literature, have included the role of government financial institutions in absorbing domestic savings, asset allocation of the national pension system, reporting requirements for capital outflows, and informal limits on the foreign asset holdings of institutional investors.

### C. Measures of Home Bias in Japan

6. **The standard measure of home bias in this study is selected to correspond to the ICAPM concept and to accommodate differences in domestic market size.** It is the share of foreign assets in the domestic portfolio, divided by the share of the foreign market(s) in the world market.<sup>4</sup> So calculated, a foreign asset acceptance ratio (FAAR) of 100 percent for a given market and investor would indicate the absence of any home bias—the lower the FAAR, the greater the home bias. Because investor behavior may differ substantially between equity and bond markets, and because regulatory, tax, prudential, and other structural factors may affect the two types of portfolio assets in different ways, FAARs are computed (when the data are available) for both bonds and equities.

7. **In 2003, the average FAAR in Japan across all types of investors was still relatively low by developed country standards, particularly for equities** (Figure IV.1).

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<sup>2</sup>See, for example, Rogoff-Obstfeld (1996), pp. 319–325.

<sup>3</sup>See, for example, April 2004 GFSR and September 2004 GFSR.

<sup>4</sup>This is measured as  $[(\text{foreign assets held by domestic residents})/(\text{domestic market capitalization} + \text{foreign assets held by domestic residents} - \text{domestic assets held by foreign residents})]/[(\text{world market capitalization} - \text{domestic market capitalization})/(\text{world market capitalization})]$ . This measure is also used in Bertaut and Grier (2004).

Nevertheless, the 2003 figure represents an improvement for Japan, with regard to willingness to hold foreign equities and foreign portfolio assets in general.<sup>5,6</sup>

8. **Gross portfolio outflows reached record rates in 2003 and 2004, contributing to the increase in the FAAR** (see Figure IV.1). One type of capital outflow not reflected in the FAAR measures is outward foreign direct investment, which peaked during Japan's asset market boom in the late 1980s, exceeding portfolio outflows in 1990, before subsiding to an average of ¥2 to ¥4 trillion a year. Although FDI is potentially important as a means of increasing asset diversification and reducing home bias, the analysis in the present study focuses primarily on portfolio flows.

#### **D. Institutional Investors and the Decline in Structural Sources of Home Bias**

9. **The past decade in Japan has been characterized by a decline in structural sources of home bias.** Nevertheless, there remain some structural factors, most of which are common to most mature market economies, that incline domestic investors toward certain classes of domestic assets. This section discusses recent reforms, remaining structural sources of home bias, and recent portfolio flows trends, by class of investor.

10. **Through 1998, most transactions on the capital/financial account were subject to the Foreign Exchange Control Law (FECL), which imposed fairly strict reporting requirements on capital outflows and prohibited certain types of forex-related derivatives transactions for all domestic investors.** While the law did not prohibit most types of capital outflows, it was widely believed to have a dampening effect on several types of outward investment. The law was amended in Japan's 1997–98 "financial big bang," with the idea of moving away from the notion of "controlling" foreign exchange transactions.

11. **Although the FECL applied to all investors, many structural sources of home bias have been industry-specific, and many of those structural sources have been eliminated.** The box below summarizes important regulatory and administrative changes in the past decade relevant to home bias in portfolio investment. As a consequence of these reforms, the regulatory environment faced by investors in Japan is now relatively open to acquisition of foreign assets, and, in general, does not appear to favor domestic over foreign

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<sup>5</sup>In the April 2005 WEO, this result is described as a relative lack of change in Japanese home bias, as the measure of home bias is implicitly computed as the difference between actual and benchmark holdings of foreign assets (the numerator and denominator of the FAAR), rather than as the ratio of the two. Because Japan's equity market capitalization declined substantially as a share of the world market capitalization in the 1990s, the FAAR and the WEO measures yield divergent conclusions about the home bias trend in Japan.

<sup>6</sup>There is some divergence from the FAARs for Japan in 2003, as different sources, including domestic flow of funds data, are used in the time series calculation.

assets. The following paragraphs detail the effects of specific reforms, and of recent economic developments, on holdings of foreign assets by type of investor.

### **Regulatory and Structural Changes with Implications for Home Bias**

1998	Elimination of Foreign Exchange Control Law (replaced by Foreign Exchange Law).
1998	Abandonment of informal asset allocation guidelines that indicated a limit of 30 percent of pension fund and life insurance funds in foreign assets.
1998	Measure to allow the sale of investment trusts (including trusts concentrating on foreign assets) through bank windows.
2001	Winding up of the Nempuku (public pension fund), which had invested primarily in domestic public works, and its replacement by the Government Pension Investment Fund, with an internationally diversified asset allocation target.
2001	Introduction of Defined Contribution Pension Law, allowing the establishment of corporate defined contribution pension plans.
2004	Measure to allow the sale of a wide range of securities through bank window (including sales of foreign shares).
2005	End of unlimited deposit insurance on domestic (interest-bearing) demand deposits, increasing relative attractiveness of foreign currency deposits.

### **Insurance**

12. **Life insurers were among the first Japanese investors to purchase large amounts of foreign portfolio assets** (see Figure IV.1). Japanese life insurers generally attempt to match the expected duration of their insurance liabilities with the purchase of longer duration bonds, as do life insurers elsewhere. Such bonds may be sovereign or corporate, foreign or domestic. Life insurers' inclination to hold foreign bonds has remained fairly steady since 1990, even through the introduction of risk-based capital adequacy standards in 1996. The same firms' willingness to hold foreign equities vis-à-vis domestic equities has been lower than their willingness to hold bonds, even as the share of domestic equities in life insurance portfolios declined from over 40 percent in 1989 to less than 10 percent in 2004.

13. **Japanese authorities have held discussions under the ongoing IAIS and IASB initiatives on solvency assessment and insurance accounting, which may be relevant for home bias.** While no major changes in insurance regulations are anticipated in the near future, some convergence, for example to more demanding risk based capital weightings, remains a possibility. That could have the effect of reducing the willingness of Japanese life insurers to hold foreign assets. Conversely, the difficulties that have been faced by Japanese

insurers in meeting recurring liabilities promised through older savings vehicles may prompt some firms to venture more into foreign markets in search of higher yields.

14. **Market participants have reported that life insurers tend to respond sensitively to both the forward premium and the level of foreign exchange rates in determining what share of assets to allocate to foreign bonds, and how much of the allocation to leave unhedged.** The forward premium rose in 2004 and the first half of 2005 with the increasing difference between short-term interest rates in Japan and the United States. As a result, the cost of hedging foreign currency exposure on investments in long-term bonds increased, and life insurers report that, while total holdings of foreign bonds have remained fairly constant over the past year, the share of unhedged bond holdings has risen.

### Pension funds

15. **Public pension assets amounted to ¥147 trillion at the end of March 2004 (about 29 percent of GDP).** Of the total, about half is currently administered by the Government Pension Investment Fund, which began to take over management of public pension funds from the Trust Fund Bureau in 2001. Previously, most of the public pension funds had been lent for public investment projects. Under the public pension reform of 2000, the funds were to be redirected from public investment to a conservative diversified target allocation (to be reached in 2008) that would include domestic equities and foreign bonds and equities, with professional fund managers engaged to do the detailed asset management. The target allocations for foreign bonds and foreign equities were raised by 1 percent each in March 2005.

Public Pension Portfolio Allocation <sup>1/</sup>			
	Initial 2008 Target	Revised 2008 Target	Actual 3/2005
Domestic bond share	73	72	75
Domestic equity share	12	11	8
Foreign bond share	7	8	5
Foreign equity share	8	9	6

Source: GPIF.  
<sup>1/</sup>All figures expressed in percent. Actual 3/05 allocation includes TFB component as domestic bonds.

16. **About one-third of the total of ¥85 trillion in private pension funds (end-March 2004) are already devoted to foreign assets** (see Figure IV.1). The share has risen steadily since 1998, partially in response to foreign exchange and pension reforms that included the abandonment of the informal 5-3-3-2 asset allocation guidelines<sup>7</sup>. Although market participants do not perceive major changes now under way in the relative share of foreign

<sup>7</sup>In practice, a large proportion of asset allocations appeared to be guided by the following limits: at least 50 percent in safe assets (government bonds or bank deposits), and no more than 30 percent in equities, no more than 30 percent in foreign assets, and no more than 20 percent in real estate.

assets held by defined benefit funds, the continuing transition from defined benefit to defined contribution plans may have the effect of continuing to increase the share of foreign assets held by private pension funds.<sup>8</sup> As a greater share of pension money shifts to defined contribution, the need of fund managers to match the expected duration of liabilities diminishes, and their freedom to aim for higher risk-adjusted returns increases.<sup>9</sup> This may also work to reduce home bias in private sector fund portfolios.

**17. Fund managers of both defined benefit and defined contribution plans indicate that, while foreign currency assets can, in some cases, provide a useful natural hedge against inflation, Japan's long experience with consumer price deflation has kept demand for inflation hedges at a minimum.** Conversely, the tendency of the yen to remain in a relatively narrow trading range over the past five years may have increased tolerance for currency exposure.

#### **Mutual funds (investment trusts) and individuals**

**18. The amount of money in investment trusts is still somewhat low by mature market standards, at about 11 percent of GDP or ¥58 trillion at the end of 2004, but it has risen by 48 percent since 1998.** Market participants consider this to be related to the “big bang” reforms of 1997–98, notably a provision in the reforms allowing the sale of investment trusts through banks. Investment trusts are not subject to any limits on foreign asset holdings, and do not have any specific liability structure driving asset allocation. However, they do have a need to provide risk-adjusted returns that conform to their customers’ retirement or other financial objectives.

**19. Investment trusts’ exposure to foreign assets has recently increased, particularly in foreign bonds** (see Figure IV.1). Market participants report that the share of foreign bonds held by investment trusts continues to rise as households seek out savings vehicles that provide steady income flows at higher yields. Other factors cited as supporting this trend include Japan’s persistently low money market rates, the maturing of higher yielding domestic bonds, the end of blanket guarantees on domestic bank deposits, and the develop-

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<sup>8</sup>The Defined Contribution Pension Law of 2001 opened the way for the establishment of such plans.

<sup>9</sup>Defined contribution plans still accounted for only about 1 percent of private pensions at the end March 2004, but appear to have grown rapidly since then. As noted in Chapter III of the September 2004 GFSR, there is a sense in which defined contribution fund managers do not have a liability matching problem, since they are only committed to paying beneficiaries according to the eventual value of the fund’s investments. However, the fund manager’s fiduciary responsibility, and the goal of most fund beneficiaries, is to provide an adequate or desired level of income in retirement.

ment of individual foreign asset-based mutual funds tailored to the preference of many older households for a steady stream of yen income.

20. **Individual investors in Japan are also able to hold foreign assets directly and to hold foreign currency bank deposits in Japan, although for many types of foreign assets it may still be easier to gain exposure through investment trusts.** Some market participants note resistance on the part of individual investors to direct foreign currency exposure. This inclination has been supported by the yen's notable real appreciation trend over a 50-year span. Nevertheless, households' acceptance of foreign exchange risk may be rising slowly, spurred in part by the yen's relative stability in the past half-decade, the low level of domestic yields, and the end of blanket guarantees on savings deposits in April 2002 (the last factor may have reduced the relative appeal of yen deposits). A decline in the attractiveness of savings products available through government financial institutions (such as Postal Savings) may also have added to the relative appeal of foreign assets. Foreign currency deposits held by Japanese households rose from ¥1.2 trillion at the end of 1997 to ¥5.9 trillion by the end of 2004 (about 0.4 percent of gross household financial assets).

#### **E. Estimated Costs of Past Home Bias in Risk-Adjusted Returns**

21. **As one approach to assessing the extent to which an aversion to holding foreign assets may have limited investment performance, this section provides an order-of-magnitude estimate of the gains that would have been available to domestic investors in shifting to the optimal portfolio for a given level of risk (the "risk-reward" or "investment possibilities" frontier).** The frontier is estimated empirically using historical returns and covariances among the major foreign and domestic asset classes available to domestic investors in Japan. This approach does not presuppose whether international diversification would have benefited Japanese investors.<sup>10</sup> Actual portfolios are then located relative to the estimated frontier, to determine what changes in foreign asset holdings would have made the portfolios more efficient. The result provides a useful reference point for estimating the scale and cost of past home bias.

22. **In contrast with the ICAPM structure, in which the "safe" asset is not necessarily assumed to be a domestic asset, this approach acknowledges the role of currency risk in portfolio selection in Japan by assuming that the safe asset is a one-year domestic bond with a known yield (this has been very close to zero in recent years).** The returns on the other three asset classes (domestic equities, foreign bonds, and foreign equities) are determined from mean one-year yen returns over the period 1981–2004. Foreign bond returns are based on one-year Treasury yields or one-year U.S. dollar LIBOR rates at the beginning of each year, adjusted for ex-post currency movements. Foreign and domestic equity returns are based on historical one-year changes in the yen value of the S&P 500 and

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<sup>10</sup>The theoretical conditions underlying the ICAPM may not obtain in practice. In addition, the theoretical model does not indicate the scale of gains from moving to a more efficient portfolio, or whether the gains would outweigh the associated transactions costs.

the TOPIX, respectively. Covariances among asset classes are estimated from historical data. The mean returns and covariances (represented as correlations) are provided in the following tables. These are used to generate the estimated risk-return frontier for domestic investors in Japan, with the straight bold line showing the various combinations of expected return and volatility that would have been available to domestic investors.<sup>11</sup>

Correlation Matrix, 1981–2004 <sup>1/</sup>				
	Domestic Equity	Foreign Equity	Domestic Bond	Foreign Bond
Domestic equity	1	-0.15	0	-0.59
Foreign equity	-0.15	1	0	0.61
Domestic bond	0	0	1	0
Foreign bond	-0.59	0.61	0	1
<sup>1/</sup> Domestic bond variance assumed to be zero				

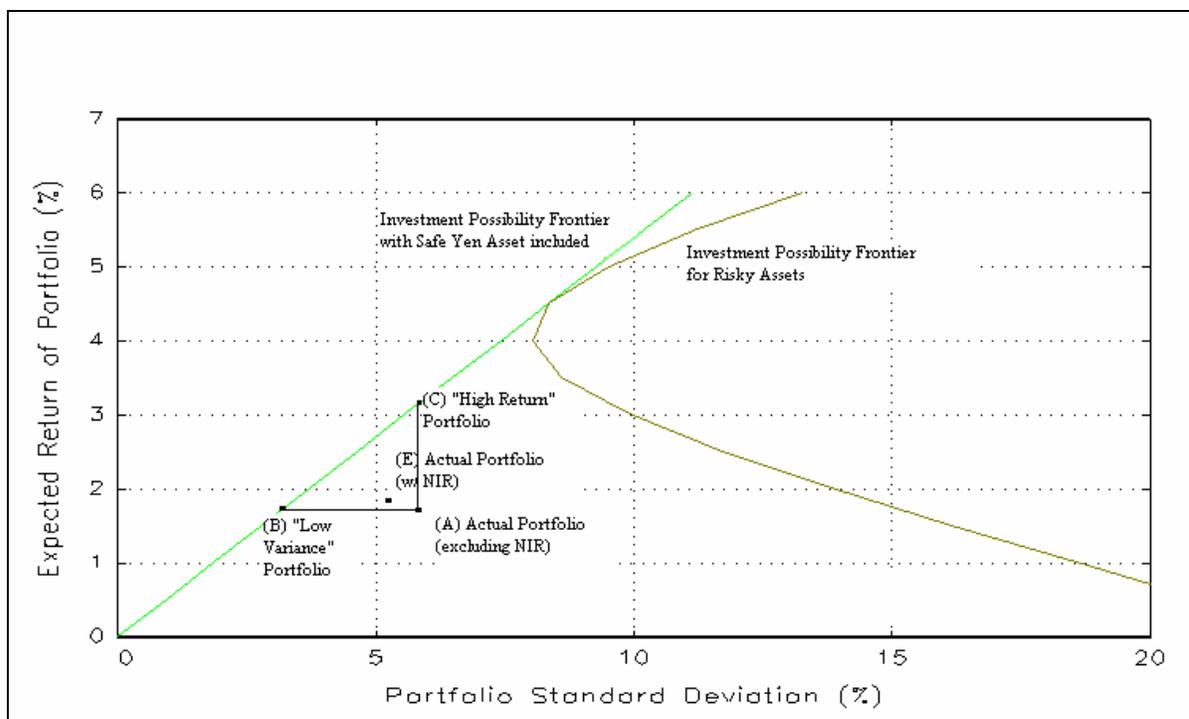
23. **The calculation suggests that there would have been gains in risk-adjusted returns in moving from the actual portfolio to the frontier.** The gains could have been as great as a reduction of volatility by half, an increase in expected returns of more than 1 percent, or some combination of those outcomes.<sup>12</sup> As shown in the table, shifting either in the direction of less volatility or in the direction of greater returns would have entailed substantial increases in holdings of foreign assets. Selecting the midpoint representing equal gains in reduced volatility and increased expected returns (last column of the table) implies that the foreign bond holdings would have increased from 7 percent to 33 percent and foreign equity holdings from 2 to 5 percent of their portfolios.<sup>13</sup> From the perspective of individual institutional investors, this calculation is independent of assumptions about liabilities. Consequently, it does not take into account the incentives facing, for example, a life

<sup>11</sup>Because the frontier is depicted in risk-return (expected return, standard deviation) space, it is not possible to see directly from the location of a portfolio in that space what the composition of the portfolio is. For points on the frontier, however, there is a one-to-one correspondence with a specific portfolio mix of the four assets. Two of these frontier points are shown relative to the “actual” portfolio, with the composition of the portfolios identified in boxes in the diagram.

<sup>12</sup>Any shift to the northwest in the diagram represents a gain for a risk averse investor, whatever the investor’s relative risk aversion. Holding expected returns steady and reducing volatility corresponds to a shift from point A to point B; holding volatility steady and raising expected returns corresponds to a shift to point C.

<sup>13</sup>The actual portfolio in the first column does not include the government’s holdings of \$673 billion in net international reserves (NIR) (end-2003), most of which is held in foreign bonds. The second column shows portfolio expected return and variance computed to include NIR.

insurance portfolio manager seeking a good match between the duration of the firm’s assets and that of its expected liabilities.



Actual and Alternative Portfolio Allocations <sup>1/</sup>					
	Actual Portfolio	Actual Portfolio (incl. NIR)	“Low Variance” Portfolio	“High Return” Portfolio	“Equal Gains” Portfolio
Domestic bond share	69	65	61	31	46
Domestic equity share	22	21	11	20	16
Foreign bond share	7	12	24	43	33
Foreign equity share	2	2	3	6	5
Expected return	1.79	1.89	1.79	3.18	2.49
Standard deviation	5.88	5.26	3.30	5.88	4.59

Sources: CPIS, BOJ flow of funds; and Fund staff calculations.  
<sup>1/</sup>All figures expressed in percent.

### F. Macroeconomic Consequences of Reduction in Home Bias

24. **For Japanese investors, a reduction in home bias would entail higher portfolio outflows, and, based on historical data, higher average returns on investment.** To gauge the likely impact on the balance of payments, one useful framework is the asset market model of Blanchard, Giavazzi, and Sa (2005), which allows for exogenous changes in the elasticity of substitution between foreign and domestic assets. In this framework, an increase in Japanese investors’ willingness to hold foreign assets (due, perhaps, to financial reform)

would cause a shift in the relative price of foreign and domestic assets, in the form of an initial yen weakening. Japan's current account balance would improve, due both to higher income inflows and to the trade effect of the yen depreciation.

25. **Over time, however, the yen would appreciate gradually after the initial depreciation, to compensate foreign investors for continuing to purchase more Japanese portfolio assets than they had before the change in home bias.**<sup>14</sup> The value of the yen in the steady state would be higher than in the initial state, as higher net investment income from Japan's improved net and gross foreign assets positions would allow the trade surplus to be lower than in the initial state. The effect on national income would be positive throughout. Such a sequence of adjustments is consistent with the idea that reduction in home bias may be an important channel for closing the pension funding gap associated with the demographic pressure of an aging society.

26. **While this framework is internally consistent, there are other conceivable scenarios, including an initial decline in the current account surplus if Japanese individuals increase domestic absorption in response to the opportunity to earn higher returns.** Even in this case, however, the shift in investors' relative preferences towards foreign assets would probably result in an initial exchange rate depreciation in response to the heightened outflows, in order to induce foreigners to hold more Japanese assets. The effect on national income would still be positive.

### G. Policy Considerations and Conclusion

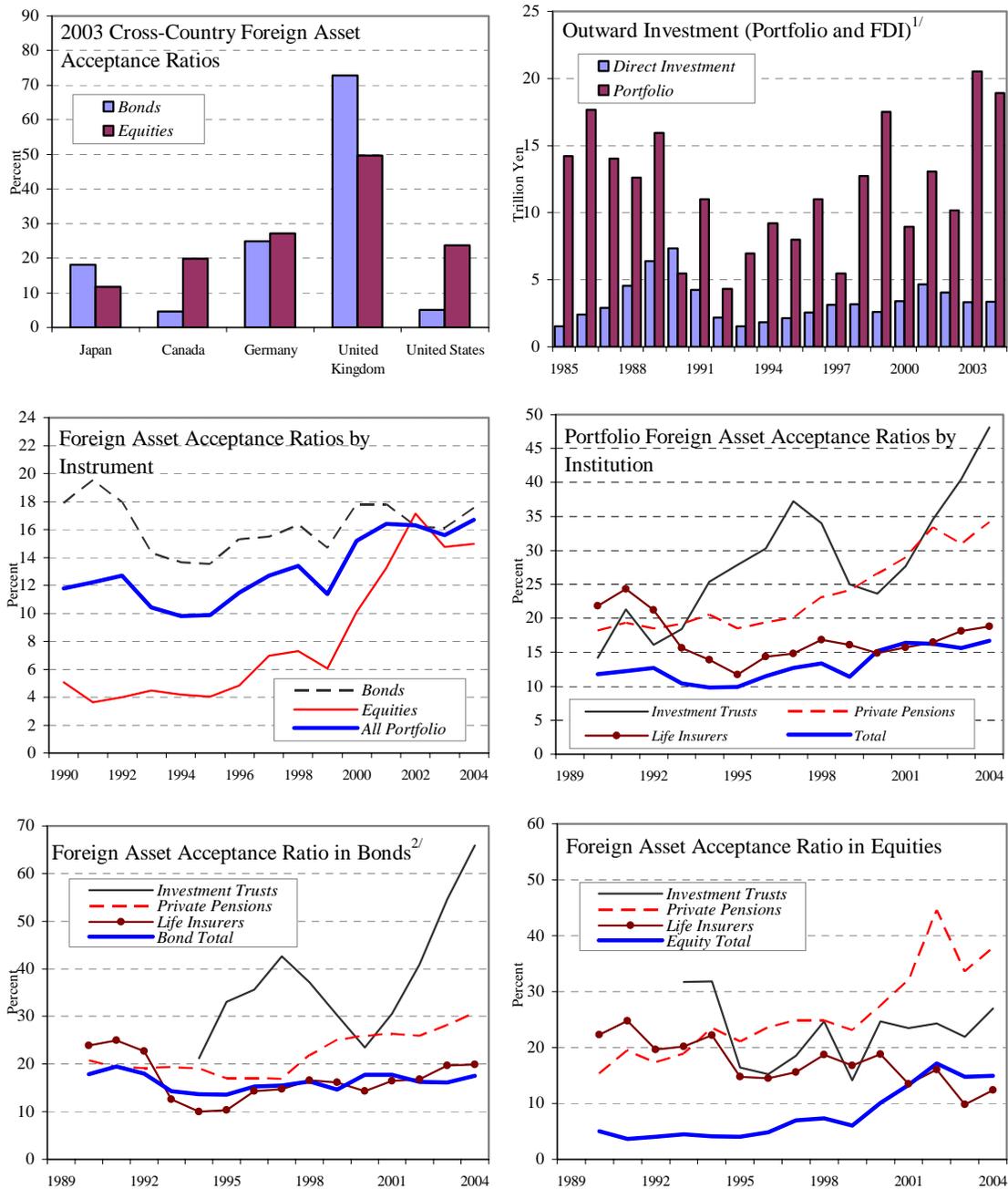
27. **Policies that have the effect of continuing to reduce home bias appear desirable, both from a global efficiency perspective and in light of the need to raise average returns on assets held by Japanese investors.** On the basis of Japan's experience since the financial big bang, structural reforms that expanded the range of financial products available to the public, and that increased their ease of purchase, appear to have contributed to a fall in home bias. Further policy changes, for example in continuing to open bank channels to include sales of a broader range of insurance products than is currently permitted, promise similar benefits. Continued shifts from defined benefit to defined contribution pension plans may also tend to reduce home bias. Even among defined benefit plans, an increase in targeted levels of foreign asset holdings may be justified from both liability hedging and risk-return perspectives.

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<sup>14</sup>If Japanese investors shift their portfolios from domestic to foreign assets, relative to the benchmark case, then foreigners must be induced through relative price changes to shift their portfolios in the direction of holding more Japanese assets—otherwise, asset markets will not clear. This requires offering a higher return to foreigners from holding Japanese assets than in the benchmark case, which requires that the yen be expected to appreciate over time. This requirement is met in the model with a one-time initial depreciation, followed by gradual appreciation.

28. **In the past decade, Japan has reduced or eliminated many of the administrative and regulatory sources of home bias, to the extent that the remaining structural impediments to acquiring or holding foreign assets do not appear out of the norm for a mature market country.** Over the same period, aversion to currency risk appears to have lessened, although it remains an important factor in asset allocation. Due in part to these changes, gross portfolio outflows have accelerated since 2002 and have continued at that higher pace. Home bias has declined, in the aggregate and for investors such as mutual funds. Where home bias is still significant, it may in part reflect a natural lag in adjusting asset stocks, pointing to the possibility of further reductions in home bias in the future.

Figure IV.1. Japan: Measures of Home Bias



Sources: IMF, WEO (April 2005); Bank of Japan; MOF; BOJ Flow of Funds; and Fund staff calculations.

1/ BOP basis. Portfolio flows do not include acquisition of net international reserves by the authorities.

2/ A ratio of 100 percent corresponds to zero home bias.

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## V. WHY IS JAPANESE BANKING SECTOR PROFITABILITY SO LOW?<sup>1</sup>

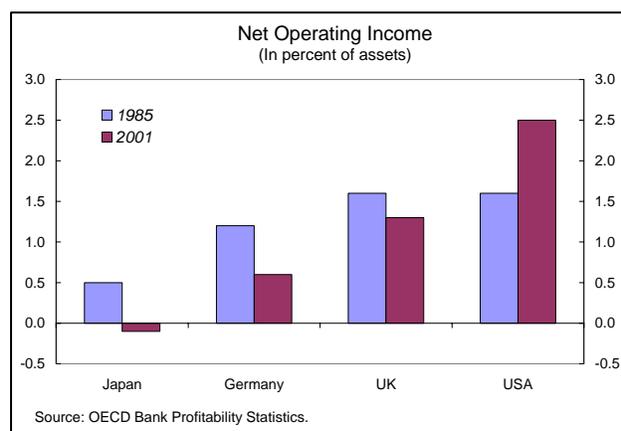
### A. Background

1. **Significant progress has been made in stabilizing the Japanese banking system in recent years.** Efforts to address the bad debt problem in the banking system, including public capital injections and heightened supervision by the Financial Services Agency (FSA), have borne fruit. Major banks lowered their nonperforming loan (NPL) ratios to below 3 percent by March 2005 and key indicators such as capitalization and bank ratings have also improved, although progress has lagged among the regional banks. Fears of a financial meltdown have eased, and the near-term stability of the banking system is not in doubt.

Key Indicators of Japanese Banks				
	Major banks		Regional banks	
	FY2001	FY2004	FY2001	FY2004
NPLs (trillion yen)	26.8	7.4	14.8	10.4
NPLs (ratio to total loans)	8.4	2.9	8.0	5.5
Capital ratio	10.8	11.6	9.3	9.4

Sources: FSA; and Fund staff estimates.

2. **Despite these improvements, bank profitability remains low by advanced country standards.** Japanese banks have much lower profit margins than their counterparts in other G-7 countries, and this situation has persisted over the past two decades. As a result of this low profitability, Japanese banks are more vulnerable to shocks and less able to absorb losses, which constrains their ability to perform effective financial intermediation and leaves them at risk of future capital shortfalls (retained earnings are a key potential source of bank capital). Going forward, raising core profitability is key to developing a healthy banking system that can support higher economic growth.



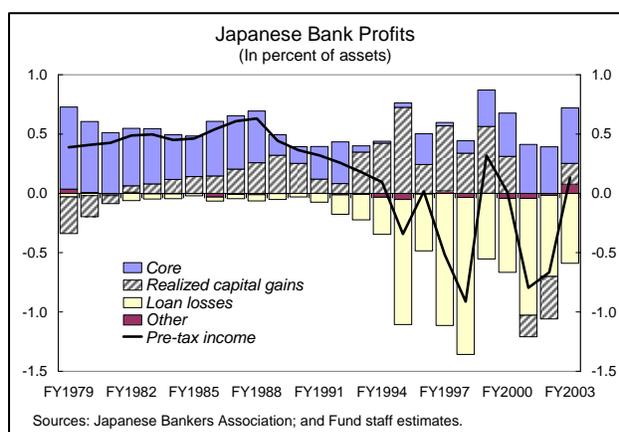
3. **This chapter explores the factors behind the low profitability of the banking system.** The next section will review developments in bank profitability among different sectors of the Japanese banking system, with a careful consideration of underlying core profitability. Section C will then explore a number of structural factors that may affect banking profitability, including the role of government financial institutions and Japan Post. Section D concludes with a consideration of the main priorities for revitalizing the banking system.

<sup>1</sup>Prepared by Alexander Wolfson (ext. 35637).

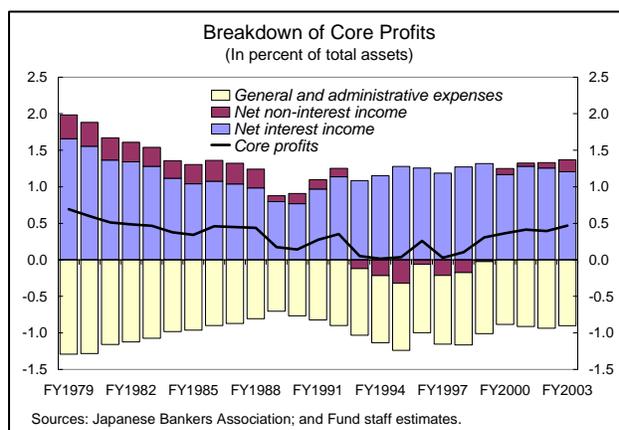
## B. Developments in Bank Profitability

4. **The Japanese banking system is characterized by a small number of large, internationally active major banks and a larger number of regional banks.** As of mid-2005, there were 11 major banks, down from 21 in the mid-1990s.<sup>2</sup> The major banks concentrate mostly in commercial and corporate lending. The 113 regional banks (in two tiers) emphasize local retail business as well as small and medium-size enterprises (SME) lending, and also participate in corporate loans. In addition to these private banks, government financial institutions play a dominant role in the financial system, especially Japan Post which is the country's largest deposit-taker by a wide margin.

5. **Overall profitability has improved in recent years, as credit costs stemming from the bubble period have declined.** The collapse in asset prices following the 1980s boom and subsequent economic slowdown left banks saddled with bad debts. Accordingly, over the past decade, Japanese banks have recorded over ¥60 trillion in loan losses (due to both write-offs and higher provisions), offset to some extent by gains on their holdings of bonds as interest rates declined. After large loan losses through FY2001—driven in part by heightened scrutiny by the FSA—credit costs have declined steadily and the banking system has begun to turn a profit. Most observers believe that this trend is set to continue, and the “stock problem” of bad debts has to a large extent been resolved.



6. **However, underlying core profitability has remained weak, as it has been for decades.** Excluding credit costs and capital gains or losses from holdings of securities and other assets, core profits in the banking system have averaged under ¥2 trillion per year since



<sup>2</sup>The number of major banks will decline once the merger of UFJ Holdings and Mitsubishi Tokyo Financial Group is concluded later this year.

FY1994, or under 0.25 percent of total assets.<sup>3</sup> The ratio has improved in recent years to about 0.5 percent of assets and 0.4 percent for the major banks alone; core profitability tends to be slightly higher among the regional banks, reflecting the higher interest margin achieved on SME lending. Even after this recent improvement, profitability remains low by international standards, with Japanese banks' net interest margins, noninterest revenues, and return on equity much lower than among their U.S. or U.K. counterparts.

### C. Factors Limiting Bank Profitability

#### Background

7. **Bank profitability is affected by a wide range of factors, and it is difficult to point to a single cause of low profitability.** Broadly speaking, as in other industries, bank profitability is driven by managerial decisions (particularly the deviation from best practices, which evolve over time) and external factors (Berger and Mester, 1999). The inefficient use of resources and limited success in pursuing profit-maximizing strategies could be a reflection of poor management, or an inability or unwillingness for shareholders to hold management to account. External factors can also affect bank profitability. Such factors include both cyclical economic developments which affect overall business conditions, as well as the institutional and regulatory environment facing banks. With such a wide variety of factors at play, it is unlikely that low bank profitability in Japan can be explained by a single cause.

8. **A number of recent studies have examined the poor performance of Japanese banks.** Much work has focused on the limitations of the *relationship-banking system*, which has discouraged banks from recognizing losses to large borrowers (Peek and Rosengren, 2003). *Excessive reliance on real estate collateral*, rather than forward-looking cash flow assessments of borrowers, has exacerbated these shortcomings. More generally, a number of researchers have focused on *weaknesses in credit allocation*, based on evidence that banks maintain loans to companies that will be unlikely to repay (Sekine and others, 2003). This work has been complemented by recent efforts to discern the underlying strength of Japanese bank balance sheets, in order to gain a more accurate understanding of their financial condition. Recent papers by Fukao (2003, 2004) have reclassified Japanese bank accounts and determined that their underlying health and profit potential is much weaker than headline numbers would suggest. After accounting for one-off factors such as valuation gains and loan loss charges, Fukao concludes that Japanese banks will be unable to generate sufficient profits to repay past capital injections (the analysis ends in FY2002, before the recent improvement in bank profits). The calculation of core profits in this chapter is inspired by Fukao's methodology.

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<sup>3</sup>Core profitability data are calculated from detailed balance sheet and profit and loss data prepared by the Japanese Bankers Association, and cover the period from fiscal year 1979 (ending March 1980) through fiscal year 2003.

## Cyclical factors

9. **Poor bank profitability could be a reflection of Japan's weak economic performance over the past decade.** Economic stagnation would tend to reduce the ability of borrowers to service their debts, with ongoing deflation exacerbating the situation. A vicious cycle could ensue, with weakened banks unable to support healthy lending activities, thereby contributing to a further slowdown. By contrast, a recovering economy would improve credit quality and strengthen the banks, potentially leading to a virtuous cycle. On this view, movements in bank profitability would mostly reflect broader economic developments.

10. **However, core profits do not appear to be very sensitive to cyclical economic developments.** As documented

above, core profitability has been low over the past two decades, even as the economy experienced episodes of booming growth and sharp contractions. Headline operating profits reported by Japanese banks (which includes credit costs and losses or gains on security holdings) generally fluctuate with indicators of the economic cycle in the expected manner, reflecting the strong association between the level of loan losses and indicators of economic health. However, there is no strong relationship between core profitability and indicators of the economic cycle, and the relationship with the level of loan losses is much weaker.

11. **Econometric analysis generally supports the view that low banking profitability is not well explained by cyclical factors.** In a regression framework including both major and regional banks, core profits are affected by the health of the corporate sector (represented by the debt-to-sales ratio) and the level of loan losses, but are not directly related to cyclical indicators. Core profits are not significantly affected by the level of interest rates, and the relationship between core profits

Correlation Between Profits and Economic Indicators (FY1979-FY2003)		
	Core profits	Overall profits 1/
10-year JGB rate	0.28	0.70
Unemployment rate	-0.02	-0.68
Capacity utilization	0.12	0.65
Nikkei index	-0.37	0.15
Loan losses	-0.34	-0.91
Source: Fund staff estimates.		
1/ Includes loan losses and gains on securities holdings.		

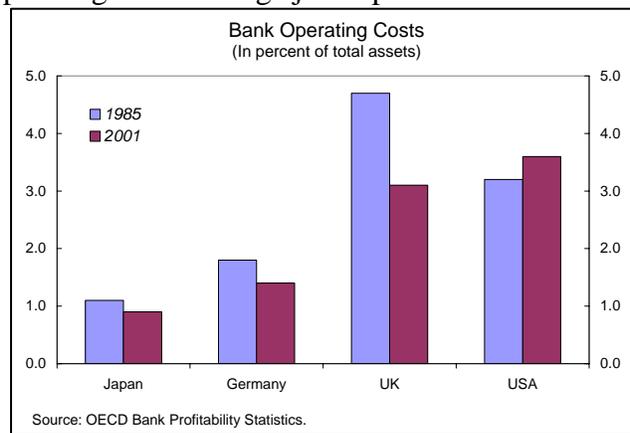
Regression Results: Core Profitability, FY1979-FY2003 1/			
Constant	3.33 (3.54)	3.41 (3.58)	1.71 (3.20)
Time trend	0.022 (1.89)	0.021 (1.77)	0.023 (1.85)
Major bank dummy	-0.249 (-6.04)	-0.263 (-6.49)	-0.249 (-5.84)
Debt/sales ratio	-0.630 (-4.83)	-0.622 (-4.71)	-0.600 (-4.46)
10-year JGB rate	0.011 (0.35)	0.020 (0.63)	0.010 (0.30)
Japan Post deposit share	-0.011 (-0.92)	-0.017 (-1.66)	0.001 (0.13)
Capacity utilization	-0.011 (-2.06)	-0.011 (-1.99)	... ...
Loan losses	-0.174 (-1.46)	... ...	-0.167 (-1.35)
Memorandum items			
Number of observations	50	50	50
R-squared	0.657	0.640	0.623
Source: Fund staff estimates.			
1/ t-statistics in parentheses.			

and capacity utilization, while significant, is of the incorrect sign.<sup>4</sup> Interestingly, in some specifications there is a negative relationship between core profits and Japan Post's share of total bank deposits although the level of significance is low (see below). The results suggest that weak core profitability is not just a reflection of the weak economic environment or high levels of loan losses, and that an improvement in the economic outlook in itself will be insufficient to improve bank profitability. Rather, fundamental structural factors appear to be at play.

### Cost and income structure

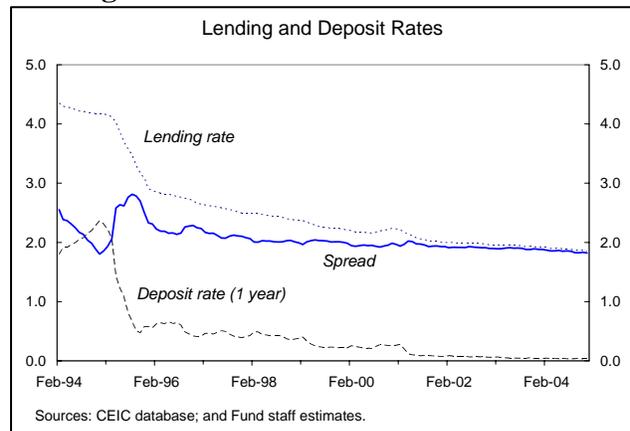
#### 12. Broadly speaking, Japanese banking profitability has been driven by weak revenues, rather than high costs. Banks' operating costs average just 1 percent of total

assets (of which about half are staff costs), much lower than in other countries. This reflects the major banks' relatively small branch networks, as well as a lower and flatter salary scale, with more limited use of performance bonuses. But it also reflects that Japanese banks have largely avoided high-margin products which also involve higher costs. While there may be some scope to achieve additional cost savings (for example, through the consolidation of banks or branches), the key to raising bank profitability will be to raise revenues.



#### 13. Japanese banks earn narrow interest margins and limited noninterest income.

Thin net interest income (about 1 to 1¼ percent of assets) is a reflection of the low returns associated with core banking business in Japan. The low interest margin is not merely a reflection of the current low interest rate environment, as it has been low for the past decade—even during periods when lending rates were more than double the sub-2 percent level observed recently. Noninterest income has also been very low, and even negative on a net basis in some years. In contrast with



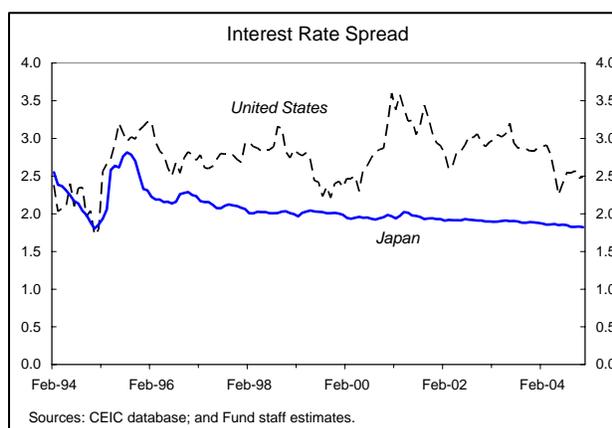
<sup>4</sup>Specifications with alternative cyclical indicators such as the unemployment rate or the stockmarket index also show no evidence of a positive relationship between the cyclical strength of the economy and the level of core profits.

banks in other developed countries, Japanese banks have not aggressively moved toward earning higher fee and commission income from investment banking and advisory services. This reflects banks' continued reliance on "plain vanilla" corporate lending, as well as regulatory barriers—recently eased—which have limited the range of services offered by banks. Consistent with this focus, Japanese banks have tended to stay away from higher-return business lines such as consumer and small firm finance, even though these appear to offer much higher returns. Schaede (2004) documents a gap in the overall interest rate structure, with bank loans at low interest rates, and loans from nonbank financial firms at much higher rates, and very few loans between these extremes.<sup>5</sup> However, banks have recently begun to move more aggressively into these areas, in part through the acquisition of consumer finance firms.

14. **To some extent, the narrow product range of Japanese banks reflects features of the Japanese financial system.** Compared with other industrial countries, corporations rely less heavily on public capital markets (both bonds and equities) for their financing needs, and individual investors hold a larger share of their wealth as bank deposits. Banks in other countries, with more vibrant capital markets, appear to engage in a wider range of activities, including greater securitization of their loan books, and offer more sophisticated deposit products. Indeed, the relative thinness of Japanese capital markets could make Japanese banks more hesitant to offer more complex but higher revenue products. However, markets for more sophisticated financial products are growing in Japan, with sharp increases in asset-backed securities and real estate investment trusts in recent years. Continued development of these markets could provide greater incentive for banks to improve their product mix and raise profits. In addition, ongoing moves to reduce the barriers between securities firms and banks should make it easier for banks to gain the expertise needed to move into fee-earning activities.

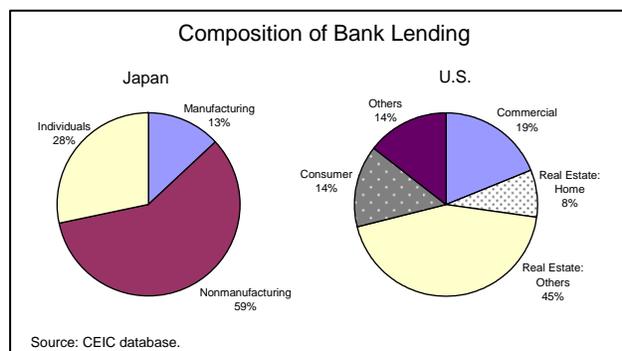
### Credit allocation and pricing

15. **The low interest rate on Japanese bank loans could constrain bank profitability.** The average interest rate on outstanding bank loans has recently declined to below 2 percent per year, although the real lending rate has been somewhat higher on account of deflation. As noted above, the spread between lending and deposit rates is low, and has been consistently below the spread observed in the United States, by



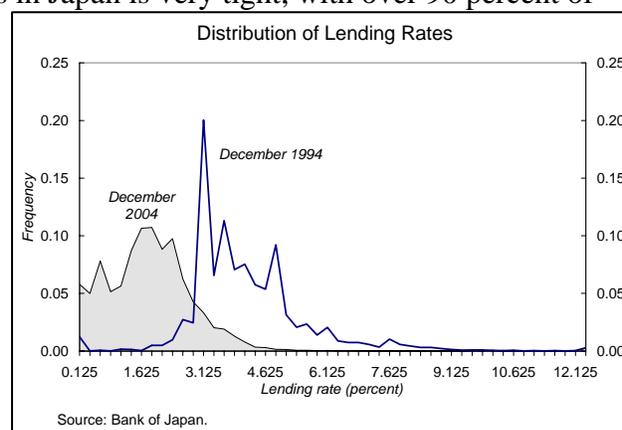
<sup>5</sup>Schaede ascribes part of this "gap" in the interest rate structure to the role of government financial institutions in providing subsidized lending to the SME market.

70 basis points on average over the last ten years. In part, this reflects the structure of the Japanese financial system, with a very high proportion of bank loans directed toward relatively low risk corporate borrowers (which command a relatively low interest rate). In some countries, these borrowers would rely primarily on the corporate bond market as a source of low cost funds, with bank loans generally directed toward higher-return products. For example, while classification may differ across countries, industrial borrowers (both manufacturing and nonmanufacturing) account for a much higher share of bank loans in Japan than in the United States.



**16. Low lending rates may reflect a lack of appropriate differentiation among borrowers.**

The distribution of lending rates in Japan is very tight, with over 90 percent of outstanding loans bearing an interest rate between 0 and 3 1/8 percent per year at end-2004. By contrast, in Australia (one of the countries to provide roughly comparable data), the same share of outstanding loans bear an interest rate in a much wider interval of between 4 and 11 percent per year. Lending rates have become less differentiated over time in Japan, but the tight distribution is a longstanding feature of the lending data. The limited differentiation in lending rates could indicate that Japanese banks are improperly pricing loans.



A recent study by Smith (2003) of syndicated loan contracts found that the interest rates from Japanese banks to Japanese borrowers were 25 to 50 basis points lower than loans to Japanese borrowers from foreign banks, holding other factors constant. Indeed, although loans arranged by Japanese banks were to riskier borrowers, on average, than the loans arranged by foreign banks, the interest rate was lower. This evidence supports the view that low interest revenues reflect in part a systemic underpricing of loans by Japanese banks.

**17. A number of researchers have suggested that low interest rates are a symptom of loan evergreening.**

For example, Sekine and others (2003) find evidence of “forbearance lending,” whereby Japanese banks were likely to extend loans to firms with deteriorating profitability and rising debt ratios, in the hopes of avoiding a costly default. Kashyap and others (2003) find that in 1996–2002, a large proportion of Japanese firms received loans below the lowest rate calculated to apply to high-quality borrowers, and that such loans were most readily available for firms in the weakest sectors. The authors take this as evidence that bank support for weak borrowers (commonly referred to as zombies) has harmed bank

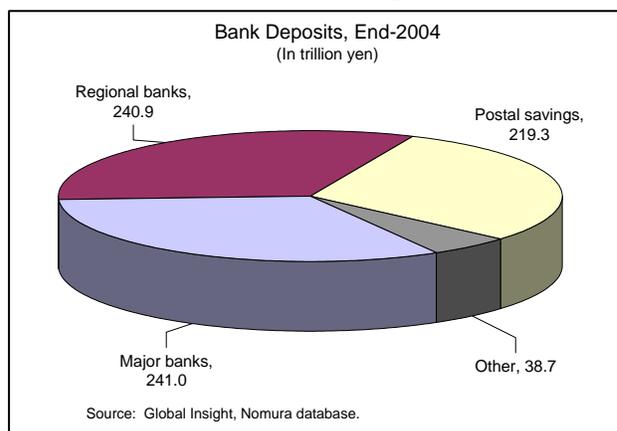
profitability. While such practices could persist, the improved health of the corporate sector in recent years, together with heightened oversight by the FSA, is likely to have reduced the extent of zombie lending. Indeed, estimates from private analysts suggest that new loans to distressed firms have fallen by over 80 percent since FY2001.<sup>6</sup>

### Bank governance

18. **The persistence of low bank profitability suggests that bank management has not been driven to raise profitability.** Japanese banks have only gradually moved into more profitable lines of business, and have been slow to cease lending to distressed companies. This suggests that bank managers have not felt shareholder pressure to recognize losses, clean up balance sheets, and raise profits (the pressure to take action has been largely external, from the FSA). Observers have pointed to the prevalence of cross-shareholdings (whereby banks hold shares in some of their main borrowers, who in turn hold bank shares) and the lack of independent boards of directors as key elements of bank governance in Japan (e.g., Hoshi and Kashyap, 2001). While it is difficult to assess the quality of bank governance directly, governance should improve as cross-shareholdings unwind and bank boards become more independent.<sup>7</sup>

### The role of government financial institutions

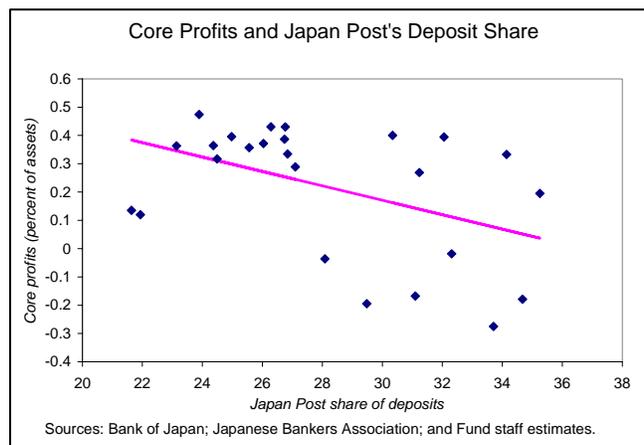
19. **Competition from GFIs could affect the profitability of private banks.** Although the government aims to consolidate the GFIs, they continue to hold a central place in the Japanese financial system. Japan Post, the biggest GFI, is the country's largest deposit-taker, with postal savings accounting for almost 25 percent of total deposits, and a network of almost 25,000 branches, compared with under 13,000 for major and regional private banks. Postal insurance accounts for a large share of the market. The Government Housing Loan Corporation (GHLC) holds about 30 percent of all home mortgages, and other GFIs are active in corporate and SME lending.



<sup>6</sup>According to one calculation, new loans to distressed firms are at the lowest point in over a decade (Jerram, 2005).

<sup>7</sup>The public bailout of one major bank involved the adoption of an independent board of directors.

20. **Special advantages have allowed the GFIs to offer products on more favorable terms than private banks.** While facing certain restrictions and obligations, Japan Post has been exempt from many of the costs faced by the private banking system, including deposit insurance premia, income taxes, and certain other taxes. In addition, Japan Post has faced a separate regulatory environment, with operations overseen by the Ministry of Internal Affairs and Communications, and the balance sheet reviewed by the FSA. These advantages have given Japan Post access to a large pool of low-cost deposits, including through ten-year *teigaku* deposits which can be redeemed early at no penalty. Japan Post does not appear to cause large distortions in the lending market, as its assets mostly consist of Japanese government bonds and bonds issued to finance public works projects (which might not be privately financed otherwise). However, the GHLC's dominant position in the home mortgage market may have limited the scope for private banks.<sup>8</sup> Competition from GFIs in mobilizing deposits and lending activities could put pressure on interest margins and profits at private banks. Indeed, as noted above, there does appear to be a negative relationship between Japan Post's share of deposits and core profits in the banking system.



21. **On balance, the impact of postal privatization on the private banking sector is likely to be positive.** Steps to level the playing field will likely encourage an inflow of deposits to the private banking system, especially if private banks are given access to Japan Post's branch network. This could reduce funding costs and provide a boost to net interest margins. There could also be gains as this additional funding base is redeployed away from the sorts of activities currently funded by postal savings deposits. The reallocation of resources towards more productive uses over time should increase overall economic efficiency, although its impact on bank profitability is uncertain, as loan pricing and standards could come under pressure as banks try to make use of the new deposit inflows.

#### D. Conclusion

22. **With banking system stability now achieved, policies are increasingly focused on raising bank profitability.** While no single factor accounts for the longstanding low banking profitability in Japan, weaknesses appear to relate more to low revenues, rather than high costs. Raising revenues is likely to require a change in focus of the banking system, with a

<sup>8</sup>Going forward, direct competition from the GHLC should be reduced as its activities are rationalized under a reform program.

move away from reliance on traditional low-yielding corporate finance toward new higher-revenue products. Policies increasingly need to focus on promoting a more profitable environment for private banks. The FSA's Program for Further Financial Reform (PFFR), announced in December 2004, could provide a useful framework for these reforms (the details of the plan are still being formulated). Key priorities would include the following:

- Ensuring that past balance sheet problems do not reemerge. This will involve continued regulatory scrutiny to ensure that loans are properly classified. The FSA's plans in the PFFR to assess banks' risk-management systems will also help ensure that loans are properly priced.
- Broadening the range of products and services which banks can provide. Banks have recently been allowed to offer mutual funds and insurance products to their customers, and the PFFR will extend further the scope of products offered through bank windows. Investor protection will be enhanced through a comprehensive Investment Services Law.
- Taking steps to enhance bank governance. Continuing to unwind cross-shareholdings and increasing the role of independent directors are important steps in this regard.
- Leveling the playing field with GFIs. The planned privatization of Japan Post will play a central role, especially as exemptions from fees and taxes are phased out.

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