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Is Japan Facing a Public Debt Crisis? Debt Financing and the Development of the JGB Market

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This article explores the idiosyncratic institutional features of public debt financing in Japan that have enabled the government to finance increasing public debt at low costs. It examines the three key aspects that contributed to the Japanese government bond (JGB) market development: (1) the surplus financial balance of the household sector; (2) the strong tradition of public financing; and (3) home bias, that is, little dependence on external financing. It argues that Japan's financial institutions' capacity to absorb JGBs is reaching the limit and that the Japanese government needs to take bolder measures to reverse the flow of financial intermediation, from the public to the private sector. It also suggests that restoring people's trust in the government's competence and leadership is an essential element for successful fiscal consolidation.

Key words: debt financing, fiscal consolidation, fiscal deficit, government bonds, Japan, public debt

Introduction

The current global financial crisis is having a substantial impact on the fiscal balances of advanced economies. The Organization for Economic Cooperation and Development (OECD) estimated that the gross borrowing needs of OECD governments would reach approximately US$16 trillion in 2009, and the outlook for 2010 is nearing US$16 trillion (Blommestein & Gok, 2009). However, if these economies continue to recover slowly and fears about the solvency of these governments continue to mount, interest rates will rise, thus increasing the public debt burden and creating a vicious spiral of economic downturn (Horton, Kumar, & Mauro, 2009; International Monetary Fund [IMF], 2009a). The crisis has worsened budget deficits and pushed up sovereign risks, increasing the potential spillovers across financial systems and threatening global financial stability (IMF, 2010). Indeed, concerns are mounting on the sovereign debt crises among the highly debt-ridden economies of the European Union. As of April 2010, Greece is on the verge of a sovereign debt crisis, and concerns are mounting on sovereign debt crises in Spain, Ireland, and Portugal, including potential spillovers across

the global financial markets (Blommestein & Gok, 2009; "Europe's Debt Crisis," 2010).

Notably, however, Japan is in the worst public debt situation among OECD economies. The level of Japan's public debt is exceptionally high. The gross financial liabilities of the Japanese government increased from 64.1% of gross domestic product (GDP) in 1991 to 172.1% at the end of fiscal year (FY) 2008, which is the highest level among OECD countries (OECD, 2009b). Japan's outstanding central government debt became the largest in the world in 1999, replacing the United States (OECD, 2008). In particular, the size of the Japanese government bond (JGB) market has grown at a remarkable rate over the past decade in the wake of the systemic banking crisis of 1997–1998. The Japanese government has issued more JGBs to fill the increasing gap between shrinking tax revenues and government expenditure; consequently, outstanding JGBs reached ¥720.5 trillion as of March 2010, far exceeding the annual GDP of FY 2009,[1] ¥475.9 trillion.[2] Aggravating the situation is the fiscal stimulus package as a coping mechanism for the current global financial crisis. In fact, from 2008 to 2009, the Japanese government launched a fiscal stimulus package totaling ¥132.2 trillion, or 13.4% of GDP (OECD, 2009a, p. 79).

This rising public debt in Japan casts a shadow on the outlook for Japan's future economy and raises intriguing questions. Is Japan facing a public debt crisis? Can the current level of public debt be sustainable in the future? Why has the Japanese government lost fiscal discipline? Finally, what needs to be done for fiscal consolidation? Research on rising fiscal deficits and public debt in advanced economies has focused on political and institutional factors that contribute to rising public debt, such as divided government (Alt & Lowry, 1994; Kontopoulos & Perotti, 1999; Roubini & Sachs, 1989; Roubini, Sachs, Honkapohja, & Cohen, 1989; Tsebelis & Chang, 2004), the electoral system and voting behavior (Tabellini & Alesina, 1990), the role of budgetary institutions (Shepsle, 1979; Wildavsky, 1986), political cycles of regime change (Roubini & Sachs, 1989),[3] intergenerational redistribution issues (Grossman & Helpman, 1998; Tabellini, 1991), and pork-barrel politics (Dixit & Londregan, 1996; Lancaster & Patterson, 1990; Shepsle & Weingast, 1981).[4] These studies provide helpful frameworks for understanding the political factors that have contributed to rising public debt in Japan. Indeed, Japan's increasing public debt was the result of a combination of various factors, such as declining political support for the ruling party and the divided government (Shimizu, 2007), intergenerational distribution issues due to the aging population structure (Chikara, 2003), pork-barrel politics (Calder, 1988; Yoshino & Sakakibara, 2002), and the role of budgetary institutions (Tomita, 2008; Toshiki, 2001).

Yet, these existing studies are not sufficient to explain the peculiar characteristics of public debt and debt financing in Japan. First, newly issued JGBs have been fully absorbed in the domestic markets for the past two decades, although the Japanese government has continuously issued a tremendous amount of JGBs. For instance, in 1990, the amount of outstanding JGBs was ¥166 trillion, but it increased to ¥720 trillion as of March 2010. From 2001 to 2009, the Japanese government issued more than ¥130 trillion of new JGBs annually, which supported from 31 to 43% of the annual government general account budget, but has always succeeded in selling such a large amount of JGBs.[5] Second, despite high debt, the Japanese government has been able to finance public debt at relatively

low costs. Despite the increasing amount of JGB issuance, average prices of JGBs have remained nearly constant, and interest rates have been much lower than instruments in other advanced economies, such as U.S. Treasury securities.[6] Moreover, unlike other cases of high public debt in advanced economies in which long-term interest rates increased due to the crowding out of investments to the private sector (Ford & Laxton, 1999; Paesani Strauch, & Kremer, 2006), the Japanese government has been able to maintain very low interest rates—virtually zero—for the past decade. Some idiosyncratic features of public financing in Japan contribute to peculiar debt financing in Japan.

This article explores the peculiar characteristics of public debt financing in Japan by investigating the historical pattern of the JGB market development. It specifically explores the idiosyncratic features of Japanese public debt by investigating three aspects: (1) the surplus financial balance of the household sector; (2) the strong tradition of public financing; and (3) home bias, that is, little dependence on external financing. This article argues that the strong tradition of public financing has served as a trap that worked against fiscal discipline by enabling domestic financial institutions to absorb JGBs. It also argues that Japan's financial institutions' capacity to absorb JGBs is becoming saturated and that the Japanese government needs to take measures that are bolder than fiscal adjustments of expenditure and revenues to reverse the flow of financial intermediation, from the public to the private sector, to create virtuous circles of economic growth and fiscal consolidation. Promoting more vibrant corporate bonds markets can be one of the essential measures to correct the "crowding out" of the corporate bond markets by the very large JGB market (e.g., Batten & Szilagyi, 2003).

The remainder of this article is organized as follows. First, I will review the historical trend of public debt by investigating the development of the JGB market. Second, I will explore key features of the JGB markets, and then discuss three idiosyncratic features of the financial system that have enabled the peculiar public debt financing as mentioned above: (1) the surplus financial balance of the household sector; (2) the strong tradition of public financing, specifically, the role of postal savings; and (3) home bias by Japanese financial institutions. Third, I will discuss the ongoing political debates on fiscal consolidation and government efforts for systematic public debt management since the early 2000s.

The Historical Trend of Public Debt and JGBs

The Japanese government issued the first government bonds on April 23, 1870, by offering 9% coupon bonds on the London market to construct a railroad system. It was also the first foreign currency–denominated debt security in modern Japanese financial history (Japan Securities Research Institute, 2009, p. 15). Government-debt securities were listed on the Tokyo Stock Exchange and the Osaka Securities Exchange, which were established in 1878 under the Stock Exchange Ordinance. The 1870s were called "the decade of stock-exchange stocks," and the subsequent 20 years were known as "the era of railroad stocks." Those railroad stocks were changed into government railroad bonds when the railroad companies were nationalized (Japan Securities Research Institute, 2009, p. 15). Japan went through the period of skyrocketing public debt during and after the Russo-Japanese War (1905) and World War II (1937–1945). After the

Russo-Japanese War (1905), government debt sharply increased from 23% of GDP in 1903 to 71% in 1910, due to the associated rise in risk premia on foreign debt. The Japanese government pursued a fiscal tightening policy, mandating contributions to a debt consolidation fund, while reducing the risk premium on foreign debt through economic growth. As a result, the debt ratio decreased to 23% of GDP in 1919 (Bank of Japan, 1966; IMF, 2009a, p. 33). Meanwhile, during the peak period of WWII in 1944, Japan's government debt reached approximately 204% of GDP. After the end of WWII, public debt decreased due to the hyperinflation that occurred; due to the hyperinflation, people's economic lives were severely damaged, although public debt went down to approximately 56% of GDP in 1946 (IMF, 2009a, p. 33). Since these historical periods, the Japanese government has not suffered from public debt until the mid-1990s.

Before the Burst of the Bubble Economy (1945–1990)

After the end of World War II, up through the end of 1965, the Japanese government did not issue debt-covering bonds. Immediately after WWII, the General Headquarters (GHQ) of the Supreme Commander for the Allied Powers (SCAP) did not approve an early reopening of the stock exchanges, and the Japan Securities Exchange was dissolved in 1947. It was reopened in May 1949 under a drastic amendment of the Securities and Exchange Law of 1948. By virtue of Article 65 of the Securities and Exchange Law, banking institutions were no longer allowed to engage in the securities business.

The Japanese government started to issue special debt-financing bonds in January 1966 under a supplementary budget. In FY 1965, the issued amount was less than ¥200 billion. However, the Japanese government issued a significant amount of debt-covering bonds to cope with the oil crises of the 1970s. From FY 1975, the government issued these bonds, totaling ¥5.7 trillion, to bolster the sagging economy due to skyrocketing oil prices. The size of outstanding JGBs was large enough to make the then-existing liquidity policy ineffective. City banks and other financial institutions, as members of an underwriting syndicate, purchased and held those JGBs.[7] Under these circumstances, in 1976, the Ministry of Finance (MOF) authorized the practice of concluding a *gensaki* agreement (repurchase agreements, or buybacks) between a securities company (the seller) and a regional bank (the buyer), whereby the seller agreed to repurchase the government securities at an agreed-upon price and, usually, at a stated time. This measure created a large-lot trading system on the bonds market and eased the ban on banking institutions from engaging in the securities business, imposed pursuant to Article 65 of the Securities and Exchange Law.

With the growing financial liberalization of the early 1980s, the Securities and Exchange Law was drastically revised in 1982, and the MOF authorized banks to sell government bonds over the counter (OTC) in April 1983. In addition, it allowed banks to deal in outstanding public bonds after January 1984.[8] Consequently, government debt securities developed a dominant presence and significance in the national securities markets, and the influence of the government's fiscal policy on the securities markets began to be important (Japan Securities Research Institute, 2009). The outstanding balance of government bonds increased from ¥70.5 trillion in 1980 to ¥166.3 trillion in 1990 (see Table 1). Meanwhile, with the booming economy, the Japanese government succeeded in

Table 1. Historical Trend of JGB Market and Debt Burden

Fiscal year	Issue amount[a]						Bond dependency ratio[b]	JGB outstanding (A)[c]	FILP bonds outstanding	(A) / GDP	National debt service[d] (B)	(B) / General account total
	New financial resource bonds			Refunding bonds	FILP bonds	Total						
	Subtotal	Construction bonds	Special debt-financing bonds									
1965[e]	0.2		0.2			0.2	5.3	0.2		0.6	0.0	0.6
1975	5.3	3.2	2.1	0.4		5.7	25.3	15.0		9.8	1.0	4.9
1980	14.2	7.0	7.2	0.3		14.5	32.6	70.5		28.6	5.3	12.5
1985	12.3	6.3	6.0	9.0		21.3	23.2	134.4		41.1	10.2	19.5
1990	7.3	6.3	−1.0	18.7		26.0	10.6	166.3		37.0	14.3	21.6
1995	21.2	16.4	4.8	25.4		46.6	28.0	225.2		45.4	13.2	18.6
1998	34.0	17.1	17.0	42.4		76.4	40.3	295.2		58.7	17.3	22.2
1999	37.5	13.2	24.3	40.1		77.6	42.1	331.7		66.4	19.8	24.2
2000	33.0	11.1	21.9	53.3		86.3	36.9	367.6		72.9	22.0	25.8
2001	30.0	9.1	20.9	59.3	43.9	133.2	35.4	392.4	43.8	79.5	17.2	20.8
2002	35.0	9.1	25.8	69.6	31.8	136.4	41.8	421.1	75.6	86.0	16.7	20.5
2003	35.3	6.7	28.7	74.9	28.5	138.8	42.9	457.0	91.8	92.6	16.8	20.5
2004	35.5	8.7	26.8	84.5	40.1	160.1	41.8	499.0	121.6	100.1	17.6	21.4
2005	31.3	7.8	23.5	105.5	28.2	165.0	36.6	526.9	139.4	104.6	18.4	22.4
2006	27.5	6.4	21.1	108.1	25.6	161.2	33.7	531.7	138.9	104.1	18.8	23.5
2007	25.4	6.0	19.3	99.2	16.8	141.3	31.0	541.5	139.8	105.0	21.0	25.3
2008	33.2	7.0	26.2	94.1	10.7	138.0	37.3	545.9	131.1	109.3	20.2	24.3

Source: MOF of Japan (2009, p. 83).
Notes: Unit: trillion yen, percentage.
[a]Issue amount is calculated on a revenue basis, up to FY 2007: settlement; FY 2008: 2nd supplementary.
[b]Bond dependency ratio is the issuance amount of new financial resource bonds/general account total, up to FY 2007: settlement; FY 2008: 2nd supplementary.
[c]JGB outstanding includes general bonds only and is calculated on a nominal basis, up to FY 2008: settlement.
[d]National Debt Service: initial.
[e]The figure of special deficit-financing bonds in FY 1965 includes revenue supplementary bonds issued at the time of the supplementary budget for reasons of expediency.

lowering its dependency on deficit financing, curbing the increase of outstanding public securities. The government's bond dependency ratio—the issuance amount of new financial resource bonds (both construction bonds and special debt-financing bonds) divided by the general account total of the annual budget—decreased substantially during the entire period of the 1980s. The bond dependency ratio decreased from 32.6% in 1980 to 10.6% in 1990 (see Table 1).

In summary, Japan consolidated a bank-centered financial system in which banks played a central role in mobilizing and distributing domestic capital, and alternative market-based forms of financing and investment have been relatively underdeveloped until recently.

Fiscal Expansionary Policy After the Burst of the Bubble Economy

The situation, however, started to change drastically in the opposite direction after the bubble burst in 1991. Both public debt and the issue amount of JGBs grew continuously through the 1990s up until FY 2005. When the asset bubble burst in 1991, the ruling Liberal Democratic Party (LDP) politicians and the MOF officials did not consider deflation a structural problem, but rather a temporary economic downturn. This perception worked to anchor a cognitive map in the policy community of the LDP politicians and MOF officials (Mori, Shiratsuka, & Taguchi, 2000; Yamamura, 1997).[9] They perceived that the fundamental problem of the Japanese economy originated in the decline of consumption. Therefore, to offset the decline in domestic demand, the government launched various fiscal stimulus packages, including a massive public works campaign to increase consumption levels.

The Hashimoto Cabinet (January 1996–July 1998) used multiple stimulus packages, among them a ¥16 trillion ($120 billion) fiscal stimulus package, which was 2–3% of GDP at the time. The Cabinet also cut ¥4 trillion ($30.5 billion) in income taxes. The Obuchi Cabinet (July 1998–April 2000) also passed ¥24 trillion (roughly $200 billion) for public spending. In total, from 1992 to 2002, the government launched 12 fiscal stimulus packages amounting to ¥136 trillion (OECD, 2002, p. 53). This expansionary fiscal policy was ineffective in reversing the economic downturn.[10] Instead, it aggravated the government's fiscal condition because it was carried out despite shrinking tax revenues. In 1990, the newly issued amount of JGBs was ¥25.9 trillion, but it reached ¥165 trillion in FY 2005. As a consequence, outstanding JGBs accumulated quickly, reaching ¥545.9 trillion at the end of February 2009 and exceeding the size of GDP from FY 2004 onward.

Impacts of the Systemic Banking Crisis in 1997–1998

The 1997–1998 systemic banking crisis was another severe shock to the prolonged deflation; after the crisis, Japan's public debt accumulated more rapidly (Toshiki, 2001). The Japanese government injected public funds to recapitalize failing banks to prevent the escalation of the banking crisis into a full-blown systemic economic crisis. In December 1997, the LDP and the MOF announced the Emergency Economic Package, in which the government would provide up to ¥30 trillion (approximately $240 billion) of public funds to failing banks by the end of March 1998 through the Deposit Insurance Corporation (Fukao, 2003, p. 371).

The situation became aggravated after the failure of two major banks. In 1998, the Long Term Credit Bank (LTCB) and the Nippon Credit Bank went bankrupt in October and December, respectively. LTCB's bankruptcy was a serious blow to the Japanese government and traditional banking system because it was not only the biggest bank failure in postwar Japan[11]—it was the biggest bank failure in the world. More significantly, LTCB was a symbol of the long-term-oriented Japanese banking system. After the failures, the Japanese government nationalized those two banks and made more public funds available, totaling ¥60 trillion, under the management of the Deposit Insurance Corporation of Japan: ¥17 trillion for the protection of the deposits of failed financial institutions; ¥18 trillion for banks under special public management and bridge banks; and ¥25 trillion for the recapitalization of financial institutions (Deposit Insurance Corporation of Japan, 1999, p. 78).

In the end, Japan's public debt levels increased throughout the 1990s, and gross financial liabilities rose from around 64.1% of GDP in 1991, a number comparable to that of other major advanced economies, to around 135.4% of GDP in 2000. Finally, in 2008, it rose to 172.1%—the highest among OECD countries. In absolute terms, Japan's outstanding central government debt became the largest in the world around 1999, replacing that of the United States. Japan's central government debt has increased over the past decade from US$3.6 trillion in 1998 to double that, US$7.2 trillion, in 2004 (OECD, 2008, p. 22).

We should note, however, that net financial liabilities of the Japanese government, which can be used as a better indicator of the government's creditworthiness, are in much better shape. As Table 2 shows, the net financial liabilities of the Japanese government were about 84.3% of GDP at the end of 2008, half of the gross financial liabilities, slightly lower than that of Italy. Such a low rate of net financial liabilities is partially due to Japanese government ownership of massive assets, such as shares of the Japan Post Bank, as we will see in the following sections. In addition, the Japanese government has benefited from various idiosyncratic features of the Japanese financial system in financing increasing debt.

Idiosyncratic Features of the JGB Markets

State of the JGB Markets: Increasing Volume and Diversification

As the Japanese government issued JGBs to fill the widening gap between expenditures and revenues, the bond dependency ratio increased rapidly as well. In 1990, the amount of newly issued JGBs was ¥26.0 trillion, but it reached ¥165 trillion in FY 2005. Outstanding JGBs accumulated at a remarkable speed, reaching ¥545.9 trillion at the end of February 2009 and exceeding the size of GDP from FY 2004 onward (see Table 1). Accordingly, the size of the JGB market grew very quickly and, in 1999, became the largest in the world. In coping with the systemic banking crisis of 1997–1998, the volume of annually issued bonds increased rapidly from about ¥142.4 trillion in 1998 to ¥223.7 trillion in 2004. In particular, the volume of public bonds—and within public bonds, JGBs—has rapidly increased. It was about ¥100.2 trillion in 1998, but doubled in six years, reaching more than ¥200 trillion by 2004. A notable aspect is that the proportion of JGBs

Table 2. General Government Gross and Net Financial Liabilities, % of GDP

	1991		1998		2000		2002		2004		2006		2008	
	Gross[c]	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
France	39.5	18.4	70.3	40.6	65.6	35.1	67.3	41.8	73.9	45.3	70.9	37.2	76.1	41.9
Germany[a]	37.7	8.7	62.2	36.7	60.4	34.4	62.1	40.8	68.7	47.5	69.4	48.0	69.0	45.1
Italy	100.4	86.2	132.0	107.1	121.0	95.7	119.4	95.7	117.3	92.5	117.2	90.6	114.5	89.7
Japan[b]	64.1	12.6	113.2	46.2	135.4	60.4	152.3	72.6	165.5	82.7	172.1	84.3	172.1	84.3
United Kingdom	32.8	–1.4	52.5	32.6	45.1	26.8	40.8	23.7	43.5	25.8	46.0	27.8	57.0	33.6
United States	67.7	48.9	64.5	45.2	55.2	36.0	57.6	37.9	61.9	42.8	61.7	42.3	71.1	48.2
Euro area	59.2	36.3	80.1	53.3	75.2	47.3	74.2	49.5	75.9	51.0	74.6	47.7	73.4	44.7
Total OECD	59.4	32.7	72.2	42.7	68.7	37.6	70.8	39.5	74.7	42.7	75.0	40.9	78.7	42.2

Source: OECD (2009c).
Notes: [a]Includes the debt of the Inherited Debt Fund from 1995 onward.
[b]Includes the debt of the Japan Railway Settlement Corporation and the National Forest Special Account from 1998 onward.
[c]Gross debt data are not always comparable across countries due to different definitions or treatment of debt components. Notably, they include the funded portion of government employee pension liabilities for some OECD countries, including Australia and the United States. The debt position of these countries is thus overstated relative to other countries.

has been consistently dominant in the bond markets. JGBs have consistently accounted for over 90% of public bonds, reaching more than 80% of newly issued bonds in the securities markets (see Table 3).

JGBs became even more prominent in the actual trading volume of bonds, including the secondary bond markets. For the past decade, OTC bond-trading volumes[12] have increased dramatically. An overwhelming majority of bond transactions—on average more than 99% of bond purchasing and selling since 1997 and 100% from 2004—took place OTC rather than on exchanges (Japan Securities Research Institute, 2009, p. 95).[13] This OTC bond trading volume grew more than 2.5 times, from ¥3,836.7 trillion in FY 1999 to ¥12,096.7 trillion in FY 2007. In particular, the share of JGBs of the total OTC trading volume has been, on average, above 95% of the total OTC trading volume.

A number of factors have contributed to the sharp increase in the trading volume of bonds. First, the Japanese government has continuously issued massive amounts of JGBs, resulting in a large increase in those outstanding in the market. As we have seen in the previous section, the Japanese government sharply increased the amount of JGB issuances to fill the widening gap between tax revenues and expansionary fiscal policy.

Second, due to the financial turmoil of 1997–1998, financial institutions, especially banks, have tried to secure more liquidity by trading JGBs rather than holding them until their maturity. For instance, banks were historically net sellers of bonds, but as loan volume decreased due to the prolonged economic downturn throughout the 1990s, banks have engaged more in trading JGBs. JGBs were safe havens amid the increasing uncertainty in the financial markets. This investment pattern has contributed to shifting the overall financial intermediation by financial institutions from the private sector to the government-related public sector.

Third, government measures have enhanced the liquidity of the JGB market. Among various instruments, government measures facilitating bond borrowing and lending were critical for the expansion of JGB trading volume. For instance, the Japanese government repealed the securities transaction tax in March 1999 and in April 2001, and introduced new measures to improve the functions of the *gensaki* (repurchase agreements) market. Traditional *gensaki* transactions had several shortcomings when compared with their counterparts in the United States and Europe. Among others, the traditional *gensaki* market was insufficient to provide appropriate standard rules for calculating exposure in the event of counterparty default. The Japanese government introduced new rules for enhancing risk management, such as repricing the collateral value of bonds (Japan Securities Research Institute, 2009, p. 110). In addition, as a measure to facilitate arbitrage along the yield curve and to enhance the function of 10-year JGB futures, the MOF introduced "mini 10-year JGB Futures" in March 2009 (Ministry of Finance of Japan, 2009, p. 56).

Fourth, the government introduced JGB-based products to satisfy the demands of market participants; in particular, the government has greatly increased the issue amount of two-year and five-year JGBs. Traditionally, 10-year bonds were the major product of JGBs. Until 1993, more than 40% of JGBs were 10-year bonds. However, while going through the systemic banking crisis of 1997–1998, the government increased short- and medium-term JGBs, as financial institutions

Table 3. OTC Trading Volume of JGBs
(Unit: trillion yen)

Fiscal year	Bonds total[a] (a)	JGB total (b)	JGB ratio (b)/(a)	Interest-bearing super-long-term (over 10 years)		Interest-bearing long-term (6–10 years)		Interest-bearing medium-term (2–5 years)		Treasury bills		Financing bills	
				Volume	Share	Volume	Share	Volume	Share	Volume	Share	Volume	Share
1999	3,836.7	3,734.2	97.3%	62.1	1.7%	995.2	26.7%	69.1	1.8%	1,521.8	40.8%	1,085.2	29.1%
2000	4,061.2	3,898.1	96.0%	51.7	1.3%	975.6	25.0%	247.4	6.3%	1,066.1	27.3%	1,555.9	39.9%
2001	4,058.1	3,863.4	95.2%	70.5	1.8%	1,161.2	30.1%	385.7	10.0%	803.6	20.8%	1,439.7	37.3%
2002	3,666.0	3,429.8	93.6%	83.8	2.4%	1,291.6	37.7%	562.3	16.4%	465.0	13.6%	1,025.0	29.9%
2003	5,110.3	4,836.2	94.6%	179.9	3.7%	1,762.6	36.4%	941.0	19.5%	668.6	13.8%	1,265.1	26.2%
2004	6,481.5	6,178.6	95.3%	476.3	7.7%	2,117.9	34.3%	1,400.3	22.7%	485.5	7.9%	1,693.8	27.4%
2005	6,758.2	6,428.1	95.1%	828.9	12.9%	2,175.4	33.8%	1,606.1	25.0%	367.2	5.7%	1,450.4	22.6%
2006	9,153.0	8,881.7	97.0%	1,584.7	17.8%	2,793.5	31.5%	2,631.3	29.6%	342.8	3.9%	1,529.3	17.2%
2007	12,096.7	11,890.1	98.3%	2,476.7	20.8%	3,665.8	30.8%	3,192.6	26.9%	252.9	2.1%	2,302.0	19.4%
2008	11,288.1	11,118.4	98.5%	2,073.0	18.6%	4,025.1	36.2%	2,339.4	21.0%	260.6	2.3%	2,420.0	21.8%

Source: Japan Securities Dealers Association (2009).
Notes: [a]Bonds total includes both public and private bonds, such as corporate bonds, bank debentures, and yen-denominated foreign bonds.
Data are based on monthly reports on the total OTC trading volume by all members of the Japan Securities Dealers Association.
Each summed figure may not match the ones in the relevant total columns because of rounding.
Trading volume is the sum of sales and purchases, including the trading volume of bonds with repurchase agreements.
Sales and purchases are on a face-value basis.
The trading volume of government bonds, public offering municipal bonds, government-guaranteed bonds, specified asset-backed securities, and private offering municipal bonds is the aggregate trading volume of dealing in public bonds by securities companies and financial institutions.
The trading volume of government bonds (interest-bearing, long-term) up until March 2006 does not include the volume subscribed through competitive auctions of 10-year JGBs.
The trading volume of government bonds (treasury discount bills) includes the aggregate trading volume of treasury discount bills, treasury bills, and financing bills.

were searching for safe havens while avoiding risky long-term investments. Only ¥1.4 trillion (4.7%) worth of two-year bonds were issued in 1997; but in 1999, this increased to ¥7.7 trillion (11.6%) and then jumped to more than ¥15 trillion (17.8%) in 2000. Five-year bonds were not issued until 1999; then the issue amount rapidly increased to more than ¥11 trillion (13.4%) in 2000, and to more than ¥20 trillion from 2002, accounting for more than 20% of the total annual issue amount of JGBs since then (Ministry of Finance of Japan, 2009, p. 94). Meanwhile, the government has also gradually introduced longer-term (more than 10 years) JGBs since the early 2000s. Thus, the OTC trading volume of both medium- and super-long-term JGBs has greatly increased in the markets (see Table 3).

A more notable aspect, however, is that large amounts of JGBs have been fully absorbed in the domestic securities markets, and that the Japanese government has been able to finance government debt at relatively low cost. Among the various contributing factors to this phenomenon, three major factors need to be emphasized: (1) the surplus financial balance of the household sector; (2) the strong tradition of public financing, especially the role of postal savings; and (3) home bias and the contribution by private financial institutions.

The Contribution by the Household Sector

The household sector finances a large portion of JGBs. If we only look at the official individual ownership of JGBs, it is pretty low—slightly over 5% of the total outstanding, as of the end of 2008. However, if indirect channels are considered, the household sector finances at least around 50% of total JGBs (mainly through banks), notably through postal savings and pension funds (IMF, 2009b, p. 12).

If we look at the flow of funds among major economic sectors, as Table 4 shows, the financial balance of the household sector had been constantly in surplus until 2006, increasing from ¥238.8 trillion in 1980 to ¥674.8 trillion in 1990, and then reaching a peak of ¥1,150 trillion by the end of 2006. It has started to shrink only recently. In contrast, the financial balance of the central government has constantly worsened, from a ¥58 trillion deficit in 1980 to one of more than ¥583 trillion by the end of 2008. Nonfinancial corporations have also been in the red, but overall liabilities decreased after 1999. In particular, between 2002 and 2004, when the Japanese economy recovered from the long deflation due to increased exports to China, liabilities of nonfinancial corporations decreased sharply. Again, under the current global financial crisis, the liabilities of nonfinancial corporations have been shrinking rapidly, from ¥412 trillion in 2007 to ¥296 trillion in 2008, mainly due to deleveraging by financial institutions. The overseas sector has been constantly in the red due to massive capital flights (see Table 4). Therefore, if it were not for the surplus balance of the household sector, the government could not have financed accumulating deficits easily. This becomes much clearer if we look closely at the balance sheet of the household sector.

Historically, the Japanese household sector held, on average, more than 50% of their financial assets as bank savings. Under the bank-centered financial system, people's investment options had been constrained, and people were accustomed to keeping financial assets as bank deposits (Kyoji, 2003). In addition, out of total

Table 4. Financial Balance (Surplus/Deficit) of Major Sectors, 1980–2008

	Households	Nonfinancial corporations	Central government	Local governments	Social security funds	Overseas	Total balance
1980	238.8	−227.0	−58.4	−15.9	47.8	−7.8	−22.5
1985	423.1	−367.1	−139.8	−28.9	82.5	−28.5	−58.8
1990	674.8	−627.6	−136.2	−17.1	129.7	−51.8	−28.3
1995	848.7	−711.0	−212.7	−49.1	185.1	−85.9	−24.8
1998	911.3	−607.1	−325.8	−85.1	209.1	−35.8	−33.4
1999	983.6	−699.4	−361.5	−89.7	216.4	−87.8	−38.5
2000	974.9	−593.1	−394.9	−97.0	214.9	−135.7	−31.0
2001	968.4	−503.7	−415.6	−101.2	213.2	−176.2	−15.3
2002	959.4	−441.4	−452.1	−109.3	211.1	−179.2	−11.4
2003	1018.4	−477.7	−482.2	−109.0	217.1	−163.2	3.4
2004	1037.0	−460.4	−503.8	−112.3	219.5	−192.5	−12.4
2005	1123.2	−548.6	−543.4	−109.4	228.6	−176.9	−26.7
2006	1150.0	−559.8	−545.5	−108.4	227.9	−218.2	−54.0
2007	1080.3	−412.8	−568.6	−107.5	216.5	−242.4	−34.5
2008	1030.1	−296.0	−583.7	−105.3	199.1	−248.8	−4.6

Source: Bank of Japan (2009).
Note: Unit: trillion yen.

bank savings, the ratio of long-term deposits was very high and was kept above 70% during the 1990s. Under increasing fear of financial collapse or crisis, bank deposits were the safest investment option for people because the government fully guaranteed them. If we look at the annual survey data conducted by the Bank of Japan on people's financial activities, the average Japanese put more priority on security than profitability in choosing financial products, and this risk-averse tendency became even more pronounced in the 1990s (Central Council for Financial Services Information, 2009). This financially conservative, risk-averse behavior worked against any sudden change in banking practices, such as reforming the deposit guarantee system.

A comparison with the household sector in the United States makes this point clearer. According to the comparison of the flow of funds between Japan and the United States at the end of March 2009, households in Japan have ¥1,410 trillion ($14.8 trillion at a rate of ¥95 to the dollar) worth of financial assets; in the United States, households have $40.3 trillion (Bank of Japan, 2009, chart 2). The composition of financial assets held by households is very different. In Japan, financial assets are composed of mostly currency and deposits (55.8%) and insurance and pension reserves (28.2%); however, in the United States, the portion of currency and deposits is only 15.7%. In contrast, the largest portion in the United States is shares and equities (30.6%), which is only 5.6% in Japan. Japanese financial assets are much less diversified and, in particular, investment-related assets are much lower than in the United States. This shows the tendency toward risk-aversion among Japanese households, but at the same time, it reflects the lack of investment opportunities due to the long constraints that suppressed the development of vibrant capital markets in Japan.

This trend has continued consistently for many years. In the 1990s, easing monetary policy, even with zero interest rates, did not help to boost domestic consumption. Along with other factors, demographics worked against monetary easing. An aging population caused not only fiscal problems regarding pension reform, but also worked as a limiting factor that delayed financial reforms.[14] Generally, the life-cycle hypothesis (Ando & Modigliani, 1963) suggests that the savings rate in elderly households should be lower than the average for all households, since, after retirement, one consumes the assets one has accumulated during working life. Nevertheless, the average savings rate among elderly Japanese is actually higher than the average for all households.[15] The composition of savings and debts was distinctively unbalanced across different age groups. Older groups had more savings than debts, and these older groups were hard hit by falling property prices because they had invested in real estate during the 1980s. These older groups came to be far more concerned about their postretirement life, particularly such aspects as the cost of nursing care, and did not spend their savings on consumption. Since the older age groups were the core support base of the LDP, the LDP tried to delay the abolition of deposit guarantees. For the LDP, no strong incentives existed to accelerate the financial reforms that would also disrupt its main support base.

A significant change, however, is occurring in the composition of household assets: namely, a shift from saving to investing. Notably, the amount of time deposit saving has substantially decreased, reaching a peak of ¥592.6 trillion in 1999 and then down to ¥456 trillion at the end of 2008 (see Table 5). The Japanese

Table 5. Balance Sheet of the Household Sector (1980–2008)

	Assets						Liabilities			Net balance (A)–(B)
	Assets total (A)	Time and savings deposits	Securities other than shares	Shares and other equities	Insurance and pension reserves	Others	Liability total (B)	Loans	Others	
1980	372.0	180.9	31.8	49.2	49.9	60.1	133.2	106.0	27.2	238.8
1985	626.6	280.8	62.1	100.4	102.1	81.2	203.5	161.0	42.5	423.1
1990	1,017.1	407.8	98.7	172.2	211.6	126.8	342.3	280.8	61.4	674.8
1995	1,256.2	525.4	103.3	144.0	318.6	164.9	407.4	332.8	74.6	848.7
1998	1,327.8	584.3	81.5	96.3	358.9	206.8	416.5	348.3	68.2	911.3
1999	1,401.1	592.6	82.5	138.3	369.9	217.8	417.6	354.4	63.2	983.6
2000	1,388.8	586.3	82.0	107.4	377.6	235.4	413.9	351.7	62.2	974.9
2001	1,371.1	557.2	72.3	85.4	379.0	277.3	402.8	344.5	58.3	968.4
2002	1,356.8	487.5	62.6	72.1	377.0	357.6	397.3	335.9	61.4	959.4
2003	1,408.5	479.2	65.3	117.5	377.5	369.0	390.1	332.5	57.5	1,018.4
2004	1,427.1	465.6	73.9	133.6	382.2	371.8	390.1	328.1	62.0	1,037.0
2005	1,516.6	445.9	92.6	197.3	391.2	389.6	393.4	330.2	63.3	1,123.2
2006	1,543.7	440.6	108.0	200.8	400.6	393.8	393.7	326.9	66.8	1,150.0
2007	1,464.5	443.8	107.4	119.7	402.6	390.9	384.3	320.4	63.8	1,080.3
2008	1,410.4	456.6	90.2	79.7	397.3	386.7	380.3	315.5	64.8	1,030.1

Source: Bank of Japan (2009).
Note: Unit: trillion yen.

now seem more interested in investment instruments, as security firms and banks provide various financial services for investments. Securities distribution channels for individual investors expanded with the addition of brokerage by banks in 2004 and at post offices in 2005; online trading began as well.

Given the dominant role played by the household sector in public debt financing, a declining household savings rate driven by aging could put significant pressure on the market. With the population aging, the savings rate is expected to decline further, and in the end, the capacity of the household sector to absorb public debt will shrink significantly. More importantly, social security spending will increase rapidly due to the aging population. Recently, the total fertility rate of Japan—the number of children each woman is expected to have in her lifetime—has stabilized, but it is still just 1.37, far below the 2.07 replacement rate. Japan's National Institute of Population and Social Security Research (2006) predicts that by 2055, the number of people in Japan will fall 30% to just under 90 million, and the number of people under 65 will nearly halve. Consequently, the tax burden on the shrinking workforce will increase markedly, just as social security spending needs to increase.[16]

The Strong Tradition of Public Financing: The Role of Postal Savings

There is a strong tradition of "fiscal dominance over finance" in policy-making within the Japanese government, specifically within the MOF. The Meiji government adopted the postal saving system to make assets available for the central government to finance new investments (Calder, 1990; Cargill & Yoshino, 2003; Ferber, 2002), adopting a Western banking system to manage recently incurred debt. Yet, systematic budgeting by a central authority did not exist prior to 1876. In 1873, the Meiji government adopted a postal saving system by emulating the example of the British Postal Savings Bank (Ferber, 2002; Tamaki, 1995; Tsutsui, 2001). Deposit funds collected by postal savings were exclusively entrusted to the MOF. The MOF managed, invested, and distributed funds in the form of loans or subsidies through a number of intermediaries, such as state-owned or quasi-state-owned financial institutions; yet, in the first three decades of the Meiji period, these assets directly financed the budget because tax revenues were insufficient to cover the Meiji government's ambitious programs (Ferber, 2002, pp. 141–144).

In the tradition of "fiscal dominance over finance" in the Japanese budget system, special accounts, separate from the general account, were institutionalized. In 1890, special accounts numbered 32, but by 1900, the number of special accounts had risen to 44. These special accounts were out of the scrutiny by the Diet, and the MOF had almost exclusive power over the operation of these accounts. Indeed, the growth of assets held in special accounts was greater than that held in the general account. Furthermore, the weight of the general account in the prewar years showed a long downward run, while the special accounts dominated the central government's expenditure with a 62.7% share (Emi, 1963). The funds collected by postal savings were used for investment programs attached to these special accounts. These trends suggest that in the course of Japan's establishment of the modern banking system, savings assets played a central role in allowing the government to meet its fiscal objectives (Ferber, 2002,

p. 144). This tradition, once established, exerted a strong influence over financial policy-making until quite recently.

Meanwhile, Japan consolidated a two-tier financial structure in which public financial institutions and private banks divided the roles of fundraising and providing loans to different economic actors. In fact, one of the unique features of Japan's financial structure has been the large and looming presence of public finance. Japan's public finance played a critical role, particularly during the period of high growth in the 1950s and 1960s. Its influence has continued until quite recently. Japan's public financial institutions continuously held about 40% of the market share in fundraising and loans until the early 2000s. The funds collected by postal savings, postal life insurance, and pension funds have traditionally been channeled through the Fiscal Investment and Loan Program (FILP), and until April 2001, virtually all public finance funds were entrusted to the Trust Fund Bureau of the MOF at an interest rate fixed near the rate of the 10-year government bond. Furthermore, government financial institutions, special public corporations, and local governments used these FILP funds as a supplement to the government's budget. Among those public financial institutions, postal savings (currently Japan Post Bank) played a crucial role in channeling funds from the household sector to the government-related sector.

In the historical trend of assets composition of postal savings, we can find that deposits with the FILP decreased sharply following the FILP reform measure in 2001, while the proportion of JGB and FILP bonds increased sharply (Tomita, 2008). As Table 6 shows, postal savings, reaching a peak of ¥325 trillion in 1999, declined to ¥231 trillion by the end of 2006—just before they started to be partially privatized. During the same period, the purchase of JGBs and FILP bonds increased sharply, from about ¥28.6 trillion to ¥140 trillion, reaching 60.6% of the total assets (see Table 6).

With the beginning of privatization in 2006, Japan Post Bank was allowed to expand its investment in other assets. In addition, the pension fund no longer has an obligation to purchase JGBs or FILP bonds. Given the massive size of assets held by these institutions, even a moderate shift from JGBs to other assets could have a significant impact on the cost of government debt financing and add further fiscal burden for the government.[17] What makes the future situation more complicated is that a decline in the home bias, particularly among private financial institutions, could also affect the market's absorptive capacity in the medium to long term.

Home Bias: Little Dependence on External Financing

The Japanese JGB market differs from the government bond markets of other advanced economies in that the market is heavily home biased, as the Japanese government has never issued JGBs in the foreign financial markets. Table 7 illustrates outstanding debt securities issued by major advanced countries. As the table shows, for the past decade, the Japanese government's outstanding volume of debt securities has increased faster than that of any other country. At the same time, the volume of Japan's outstanding debt securities surpassed that of the United States around 2002–2003, reaching more than US$4.5 trillion of market value. In addition, the absolute volume of domestic securities has more than

Table 6. Asset Composition of Postal Savings, 1980–2006

	JGBs and FILP bonds (a)	Deposits with the Fiscal Loan Fund (b)	Loans	Total assets (c)	Ratio of JGBs + FILP bonds (a)/(c)	Ratio of FILP deposits (b)/(c)
1980	0	605,082	3,050	608,649	0.0%	99.4%
1985	0	1,013,243	5,114	1,019,102	0.0%	99.4%
1990	55,185	1,367,934	7,221	1,505,761	3.7%	90.8%
1996	199,943	2,292,210	12,255	2,742,689	7.3%	83.6%
1997	234,257	2,454,467	13,373	2,960,520	7.9%	82.9%
1998	282,723	2,564,300	11,907	3,162,541	8.9%	81.1%
1999	286,161	2,588,680	12,141	3,246,613	8.8%	79.7%
2000	265,366	2,476,384	5,262	3,114,976	8.5%	79.5%
2001	543,552	2,076,021	8,969	2,996,974	18.1%	69.3%
2002	762,891	1,773,200	20,310	2,900,502	26.3%	61.1%
2003	875,855	1,560,954	35,663	2,802,833	31.2%	55.7%
2004	1,096,993	1,176,119	40,182	2,653,085	41.3%	44.3%
2005	1,262,417	798,969	43,863	2,459,226	51.3%	32.5%
2006	1,400,238	522,435	54,960	2,308,898	60.6%	22.6%

Source: Bank of Japan (2009).
Note: Unit: 100 million yen.

Table 7. Outstanding Domestic and International Debt Securities Issued by Governments

		1998	2000	2002	2004	2006	2008
Total[a]	Domestic (A)	13151.1	13230.5	15687.5	22102.0	24149.5	29787.3
	International	710.3	767.7	956.7	1413.0	1621.8	1878.6
France	Domestic	670.5	595.5	767.8	1175.4	1209.3	1436.7
	International	2.5	4.5	12.9	22.6	31.8	44.8
Germany	Domestic	653.5	595.7	780.9	1194.0	1222.7	1364.3
	International	4.5	14.1	78.0	183.8	256.2	282.4
Italy	Domestic	1208.1	970.2	1112.3	1494.9	1538.8	1779.7
	International	58.3	66.7	95.9	198.4	220.8	219.0
Japan	Domestic (B)	2832.7	3618.1	4543.7	6836.7	6747.8	9113.2
	(B)/(A)	21.5%	27.3%	29.0%	30.9%	27.9%	30.6%
	International	5.9	5.3	4.4	3.3	2.9	3.1
United Kingdom	Domestic	464.3	426.5	473.7	674.3	835.1	826.6
	International	12.0	11.1	0.4	3.5	6.4	8.5
United States	Domestic (C)	4434.4	4105.7	4544.4	5528.9	6230.0	7888.2
	(C)/(A)	33.7%	31.0%	29.0%	25.0%	25.8%	26.5%
	International	4.0	3.6	3.1	3.1	3.3	3.8

Source: Bank for International Settlements (2009, Table 16A, Table 12D).
Notes: Unit: billion US$.
[a]This means a total of 48 reporting countries to the Bank for International Settlements.

tripled, from US$2.8 trillion in 1998 to US$9.1 trillion in 2008, while the outstanding volume of international debt securities has been in decline (see Table 7).

Both the Japanese and the U.S. governments have relied on domestic debt securities. However, foreign investors' share of U.S. government debt securities reached more than 50% at the end of 2008. Major foreign purchasers are the Chinese and Japanese governments, totaling more than US$1.4 trillion.[18] In the Japanese case, foreign ownership is still low—approximately 6.8% at the end of 2008. In terms of ownership distribution of government securities, we can see that the Japanese case is an outlier compared with other advanced countries. For instance, the share of foreign investors in government securities holders in Britain, Germany, and France at the end of 2008 was 36.5%, 52.6%, and 31.8%, respectively (Ministry of Finance of Japan, 2009, p. 59).

If domestic investors keep purchasing JGBs—whether it is motivated by moral duty, patriotism, lack of other investment opportunities, or for economic profits—the Japanese government does not have to worry extensively about insolvency or increasing the burden for debt financing. However, if this situation changes in the future, it will be much more difficult for the government to roll over existing debt and to finance new funds at low costs. In short, the absorptive capacity of government debt financing may be constrained in the future, and such a gloomy prospect has intensified political conflicts about the appropriate way to achieve fiscal consolidation in the future.

Political Struggle for Fiscal Consolidation

To prevent the further deterioration of public debt, the Japanese government has tried to tackle the issue by launching various measures to strengthen the debt management system, by (1) centralizing the policy-making process of macroeconomic policies through empowering the Cabinet Office and by (2) reorganizing government debt-related organizations within the MOF. However, politicians have often disagreed on the appropriate way to achieve fiscal consolidation. In most cases, the conflicts have been about how to prioritize economic growth, how to adjust government expenditures, and how to broaden tax revenues.

Change for Systematic Debt Management

The Japanese government has tried to set out a medium-term plan for fiscal consolidation, which was part of the larger policy-making process for the economy. A significant change in the fiscal policy-making process began with the creation of a consultative organ, the Council on Economic and Fiscal Policy, in January 2001 within the Cabinet Office. This was a meaningful attempt at checking and balancing the monopolized power of planning budgets by the MOF. Its purpose is to facilitate full exercise of the prime minister's leadership while sufficiently reflecting the opinions of private-sector experts in economic and fiscal policy formation. It formulates basic policies on structural reform and fiscal policy and conducts overviews of annual budget allocation. The Council articulates basic principles of the budget for the next fiscal year and presents fundamental policies for medium-term economic and fiscal management and perspectives.

Meanwhile, the MOF reorganized its government debt-related organization for better systematic debt management by strengthening both planning and operation functions of government debt. The Financial Bureau of the MOF has strengthened its government debt management system by reforming the organization and increasing the number of staff since July 2004. First, in an attempt to manage government debt more systematically, the MOF has reformed the organizational structure of the Finance Bureau. It created the position of Deputy Director-General of the Financial Bureau, whose responsibility is planning and monitoring the government debt system. Second, as an attempt to strengthen the planning and operation functions of the government debt management system with the MOF, the Finance Bureau divided Government Debt Division into two divisions: the Government Debt Policy Planning and Legal Division and the Market Finance Division. Third, until FY 2003, a single Government Debt Division managed all government debts, but with the organizational change, more staff, especially experts from the private sector, were recruited. For instance, the number of debt management–related staff was 33 in 1999, but it increased to 41 in 2002, and then to 53 after the Government Debt Division in 2004 was split into two divisions. If staff members dispatched from the private sector are included, the number rose to 57 in 2004. In addition, the MOF created a section in charge of managing circulation of JGBs under the Market Finance Division in 2006, and the number of staff reached 56–60, if private experts are included.[19]

Political Struggle With the LDP: "Rising Tide" versus "Fiscal Hawks"

After the Koizumi Cabinet (April 2001–September 2006), there has been a political split within the LDP concerning the method of fiscal consolidation. One group of politicians, called "rising tide (*ageshioha*)," has claimed that the government should put more emphasis on economic growth while trying to restrain government spending. Proponents of this view—such as Nakagawa Hidenao (former chairperson of Policy Affairs Research Council of the LDP) and Itou Tatsuya (former Minister of Finance)—emphasize that bureaucrats have not fully disclosed the scale of hidden government assets (*maizoukin*) under the Special Budget Accounts while exaggerating the actual state of public debt intentionally to push their policy agenda, such as increasing taxes (Hidenao, 2006, 2008; Kenji & Takahashi, 2008; Takahashi, 2008). This view focuses more on the side of government expenditure—particularly expenditure reduction—to achieve surplus, strongly opposing the idea of increasing taxes. However, one of the concerns this policy proposal raises is that the government's growth-oriented policy can produce (hyper-)inflation.

With the efforts of this group in the Diet, the Special Account Law was enacted in June 2006. This law specifies (1) the abolition or consolidation of the existing special accounts, (2) the alignment of accounting procedures with those applied to the General Budget Account, and (3) the disclosure of information on special accounts. As a follow-up measure, the Act on Special Accounts was revised to integrate 31 special account laws that existed at the end of FY 2006. As a result, it became a legal requirement to obtain a Diet resolution for any Special Accounts needing to borrow money. At the same time, borrowing for Special Accounts by issuing government bonds was abolished except for the Special Account for FILP and the Government Debt Consolidation Fund, which only issued refinancing bonds. In addition, with the revised act, surpluses in Special Accounts were to be transferred to the General Account. It was estimated that the surplus of Special Accounts amounted to ¥45 trillion at the end of 2005 (Kitazawa, 2009).

In contrast, another group of politicians in the LDP, called "fiscal hawks (*zaisei-takaha*)," has insisted that the government's macroeconomic policy should put more emphasis on fiscal consolidation, as the rise of social security expenses is inevitable with an aging population. Proponents of this view—such as Yosano Kaoru (former Minister of the Ministry of Finance), Yanagisawa Hakuo (ex-MOF bureaucrat, former Minister of Finance & Social Welfare), and Tanikagi Sadakazu (former Minister of Transportation)—emphasize that the government should not pursue macroeconomic policies based on an excessively high rate of economic growth. Instead, it should put more emphasis on comprehensive tax reforms, including the increase of consumption tax to broaden and increase tax revenues.[20] This group has insisted that achieving surplus in the primary fiscal balance is urgent, targeting the turnaround year to be 2011. However, this group has often been accused of representing the bureaucrats' interests, especially the MOF. It has been politically sensitive to claim the inevitability of increasing taxes.

With the consistent efforts of this group in the LDP and the MOF, a more systematic and comprehensive fiscal consolidation plan was formulated around 2006. The Cabinet announced "Basic Policies 2006" by Cabinet decision in July 2006. In the Basic Policies, the first phase of fiscal consolidation was designated from FY 2001 to FY 2006. This had already been accomplished during the

Koizumi Cabinet under the "Trinity Reforms."[21] Basic Policies designated the second phase of fiscal consolidation from FY 2007 to early 2010, targeting the achievement of a fiscal surplus in the primary balance of the central and local governments combined by FY 2010 as a first step toward fiscal consolidation. The third phase was designated from early 2010 to mid-2010s. During this period, the government would decrease the debt-to-GDP ratio at a steady pace while ensuring a surplus in the primary balance of the central and local governments. With continuing efforts since 2001, the deficit in the primary balance of the central and local government has improved, from 5.7% of GDP in FY 2002 to 1.3% of GDP in FY 2007.

Due to the global financial crisis, however, the fiscal situation is being severely aggravated. The government froze the medium-term plan for limiting government spending and launched a series of fiscal stimulus packages: two supplementary budgets in FY 2008, followed by additional stimulus in the regular budget of FY 2009 and the supplementary budget in May 2009. Taken together, the stimulus package is the largest among the G7 countries after the United States (5.6% of GDP), amounting to 4.7% of GDP in 2008 (OECD, 2009a, p. 77). Moreover, the Japanese government estimates that the deficit in the overall fiscal balance, including debt service payment, will reach a high level of approximately 6.4% of GDP in FY 2009 (Cabinet Office of Japan, 2009, p. 5).

Conclusion

Idiosyncratic features of the public debt and financial systems—including home bias, household surpluses, and the existence of a stable pool of public financial institutions—have enabled the Japanese government to finance mounting public debt at low costs. However, the favorable conditions that enabled the government to finance public debt at relatively low costs are coming to an end. Domestic financial sectors' absorptive capacity for increasing public debt is reaching the limit. As we have seen above, the surplus balance of households has been in decline, and it is expected to decline further due to the current global financial crisis. Meanwhile, social security spending is expected to increase substantially due to the rapidly aging population. Moreover, with the ongoing market-oriented reforms in public financial institutions, such as Japan Post Bank, and with currency appreciation under long-lasting, virtually zero-interest rate conditions, it is likely that Japanese investors and financial institutions may engage in more carry trade, investing in foreign financial markets, targeting currency and interest rate differentials. However, promoting foreign sales of JGBs will be much constrained in the coming years due to the increasing sovereign debt risks and spillovers across the global public bonds markets. In short, the Japanese government will have more difficulty rolling over existing debt and financing new funds at low costs. Reflecting this gloomy outlook, concerns about Japan's fiscal sustainability have amplified recently.

We should note, however, that Japan's public debt is different from those sovereign debt crises in the past, as well as the recent sovereign default risks in some Euro zone countries. First of all, Japan is not facing a sovereign default risk. As we have seen, foreign ownership is minimal in the share of public debt composition, and Japan is still accumulating surpluses in trade, in addition to

sizable foreign reserves. Therefore, the risk of either a currency crisis or sovereign default is almost nonexistent. Second, it looks to be unlikely that either Japanese financial institutions or the Japanese people will change their pattern of financial activities abruptly in the near future. To the contrary, under highly uncertain financial circumstances, it is more likely that they will prefer long-term security to short-term profitability. Purchasing JGBs will remain one of the most secure investment opportunities while the current financial crisis remains. Therefore, we can reasonably claim that Japan is not facing an impending sovereign debt crisis. It is true, however, that the Japanese public debt problem has deepened for the past two decades, and the daunting task of fiscal consolidation lies ahead, which may take more than a decade.

As historical episodes of public debt reduction demonstrate, creating a political and economic momentum that can turn the vicious cycle of debt into one of economic growth and fiscal adjustments is critical for successful fiscal consolidation. Japan seems to have gained momentum for change in the landslide victory of the Democratic Party of Japan (DPJ) in the House of Representatives election last year. However, as LDP politicians remain split over the methods of fiscal consolidation, the Hatoyama Cabinet (or the DPJ) is placed in the difficult position of choosing conflicting policy options for fiscal consolidation, such as tax cuts vs. tax increases, and spending cuts vs. spending increases. Whichever policy options the DPJ takes, it is likely to intensify political polarization in regard to the cost sharing for fiscal consolidation and the effectiveness for economic recovery. In the end, the government will need to enforce unpopular policy measures—such as increasing taxes, cutting public spending in general and social spending in particular, and increasing interest rates to achieve long-term benefits to the economy. The government may also need to appeal to patriotism or moral duty, demanding individual sacrifice for the country. Some Japanese scholars have already begun to discuss the possibility of introducing the "irredeemable government bond" for fiscal consolidation (see Zusho, Gemki, Satoshi, & Manabu, 2009). It is yet to be seen whether such JGB products will be introduced, but for successful fiscal consolidation, it is most urgent—albeit most difficult to achieve—for the government to restore people's trust in the government's competence and leadership.

The Japanese government needs to take bolder measures to reverse the flow of financial intermediation, from the public to the private sector. With the benefit of hindsight, it is clear that the Japanese government should have taken bolder actions earlier to tackle the structural problems in the financial sector after the burst of the asset bubble in 1991 or after the systemic banking crisis in 1997–1998. In the end, the expanding JGB market has contributed to developing the domestic securities markets; however, the JGB market has absorbed most of the domestically available funds, and it has continuously strengthened public financing, which has crowded out capital flows to the private sector. To create economic momentum to turn the current vicious debt spiral into a virtuous one, Japan needs substantial economic breakthroughs for growth. It requires creating more vibrant private capital markets, for instance, by developing corporate bond markets, which can channel financial resources to more efficient private sectors. In the end, fiscal consolidation should proceed with structural reforms to develop alternative institutional channels, complementing the traditional bank-dominant

system, which can mediate the financial assets of the household to more productive economic sectors and activities. Adjusting fiscal spending is just one of the minimal requirements for fiscal consolidation.

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Notes

[1]In Japan, the fiscal year starts on April 1 and ends at the end of March each year.

[2]The most updated information on outstanding JGBs and GDP is available at the websites of the Ministry of Finance (http://www.mof.go.jp) and the Cabinet Office (http://www.esri.cao.go.jp).

[3]Roubini and Sachs (1989) claimed that "there is a clear tendency for larger deficits in countries characterized by a short average tenure of government and by the presence of many political parties in a ruling coalition" (p. 903).

[4]For a detailed literature review on the subject, see Alesina and Perotti (1995).

[5]For the most recent information on outstanding JGBs, visit the website of the Ministry of Finance of Japan (available at http://www.mof.go.jp/english/jgb-e.htm).

[6]While the average interest rate for 10-year JGBs from January 2002 to March 2010 was 1.42%, the interest rate for 10-year U.S. Treasury securities was more than 4%. For more information on the results of various JGB auctions and applied interest rates on JGBs, see the official website of the Ministry of Finance of Japan (http://www.mof.go.jp/jgb.htm). For more information on the historical data on U.S. interest rates, see the U.S. Federal Reserve website (http://federalreserve.gov/releases/h15/data.htm).

[7]This syndicate underwriting system was only for 10-year government bonds, and it was abolished in March 2006.

[8]Currently, almost all bond purchasing and selling—100% in the case of JGBs—are traded through OTC transactions.

[9]Interviews conducted with MOF bureaucrats in February and June of 2004.

[10]There exists an opposite view that the Japanese government fiscal stimulus packages saved the Japanese economy. Koo (2008) claims that "disastrous consequences were avoided only because the government took the opposite course of action. By administering fiscal stimulus, which was also the right thing to do, the government succeeded in preventing a catastrophic decline in the nation's standard of living despite the economic crisis. In this sense, it could be argued that Japan's fiscal stimulus was one of the most successful economic policies in human history" p. (25).

[11]LTCB's financial derivatives exposure was around ¥50 trillion ($360 billion) at that time, and it had assets of ¥26 trillion.

[12]The MOF authorized banks to sell government bonds over the counter in April 1983 after the revision of the Securities and Exchange Law was drastically revised in 1982, allowing banks to deal in outstanding public bonds from January 1984.

[13]Many reasons contribute to this overwhelming OTC trading, but one of the main reasons is that there are so many issuances of bonds that it is practically impossible to list all of them on exchanges. In addition, bonds are more efficiently traded over the counter, where trades are executed based on the terms individually negotiated between buyers and sellers.

[14]Recently, the staff of the Bank of Japan published empirical studies emphasizing the demographic factors in regard to the savings rate and consumption patterns. See Bank of Japan (2006) and Koga (2006).

[15]Interestingly enough, and in contrast to the Japanese case, in the United States, the savings rate peaks during middle age and then declines in proportion to age.

[16]The Ministry of Welfare data show the government's social security spending reaching ¥41,000 trillion ($430 trillion) in 2015, up 42% from 2006 (Dickie, 2009).

[17]The IMF estimates that a 10% shift would amount to ¥20–¥30 trillion, 4–6% of GDP. See IMF (July 2009).

[18]As of June 2009, China holds $776.4 billion of U.S. treasury securities and Japan holds $711.8 billion of U.S. treasury securities.

[19]I am thankful to Mr. Ishida, Mr. Fujita, Mr. Ueda, and Ms. Toyota for providing valuable information on the internal organizational change within the Government Debt Division.

[20]For more details on the policy battle between these two groups during the Abe and Fukuda Cabinet, see Shimizu (2007).

[21]Trinity Reforms were introduced to reduce the budget deficits of both the central and local governments while promoting the decentralization process in three key areas: local tax, local allocation tax grant, and national government disbursement. For more details, see Doi (2004).

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