

# **Japan's disposal of bad loans: failure or success?**

**— A review of Japan's experience with bad debt disposals  
and its implications for the global financial crisis —**

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As of winter 2009, the US and a number of other countries are experiencing serious credit crunches coupled with problems in the financial sector related to bad loans. These problems were triggered by an asset price bubble and its subsequent collapse and are identical to those that Japan faced starting in the 1990s.

The Japanese government implemented a total of nine policies in response to the banking problem brought about by the post-bubble collapse. The cost of these programs to taxpayers was 11,499.9 billion yen, or 2.32 percent of nominal fiscal year 2008 GDP. Japan was able to keep costs in check by adopting a gradualist approach and allowing banks to dispose of bad loans over time, as earnings allowed.

While the government's actions were not entirely without fault, they had a substantial positive impact. The government's injections of capital into banks and the special credit guarantees provided to small businesses were both successful in eradicating the credit crunch soon after their implementation, something that cannot be said for the TARP more than a year after its implementation.

In particular, the US in response to the credit crunch ignored the fact that the twin objectives of strengthening individual banks and easing a nationwide credit crunch are at heart contradictory. Hence, the credit crunch continues while some banks are returning public funds to the government. Financial authorities in the US and Europe may have to implement further capital injections in order to end the credit crunch.

As the US responds to the financial crisis and the problems with bad loans, it needs to learn from Japan's experience and do more to ease the credit crunch while allowing financial institutions to dispose of bad loans over a longer period. The disposals should proceed at a realistic pace that does not put undue stress on banks' financial positions.

# I Was Japan's response to the financial crisis really a failure?

## 1 Why Japan's experience is worthy of review

The collapse of US investment bank Lehman Brothers in September 2008 triggered a severe global recession. Governments and central banks responded with a wide range of measures including a massive fiscal stimulus, government guarantees of bank liabilities, injections of capital into the banking system, and liquidity-supply operations. Owing in part to these efforts, the sharp contraction in economic activity was arrested around mid-2009.

In retrospect, all of these policies had been implemented in Japan following the collapse of the late-1980s asset price bubble. For those familiar with that period, current events seem like a rerun of an old television program first shown in Japan. This time, the primary cause of systemic financial concerns was a series of housing bubbles, most notable in the US but also observed in other nations.

Figure 1 shows the S&P/Case-Shiller home price index, a key indicator of US house prices, trends in the Case-Shiller index futures,<sup>1</sup> and the price of condominiums in the Tokyo and Osaka areas during Japan's real estate bubble 15 years earlier. It shows that house prices in the US bubble behaved very similarly to those in Japan during and after its bubble.

While the asset category driving the bubbles is different—commercial real estate in Japan versus residential

real estate in the US—the fundamental characteristics are identical. For instance, the credit crunch that appeared in Japan seven years after the bubble burst can already be observed in the US. The US corporate sector, which is not directly related to the housing bubble, has already experienced a marked drop in demand for funds, as did Japanese businesses starting in 1998. Moreover, US commercial real estate, which followed the fall in residential real estate prices, has now experienced greater price declines than has housing.

Japan's recession lasted from the early 1990s until 2005 and is often referenced in discussions about the current global financial crisis. In Europe and the US, however, Japan's approach to nonperforming loan disposals is often viewed as an example to avoid because of the time and effort it required.

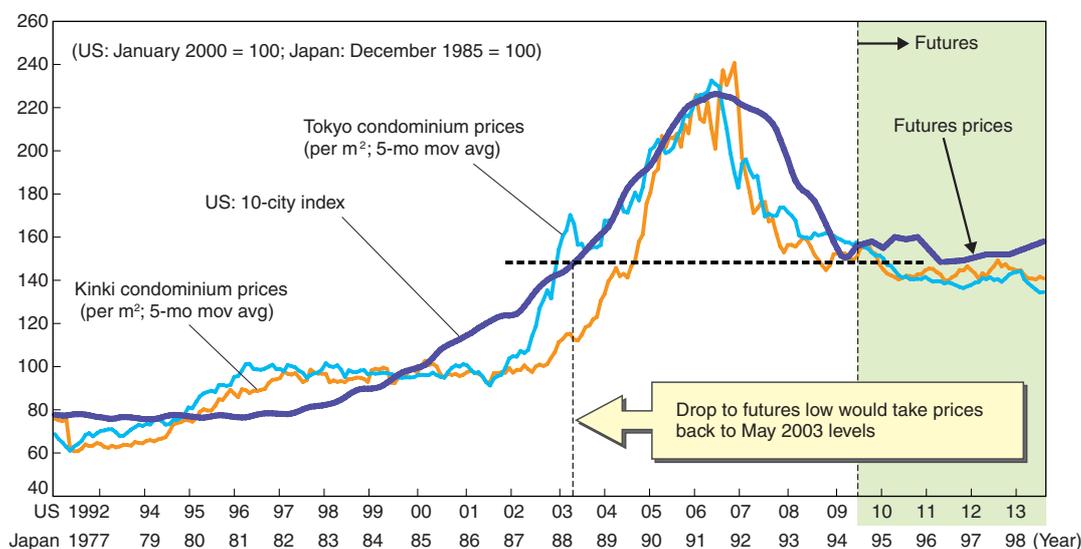
US Treasury Secretary Timothy Geithner has argued that Japan's recession lasted as long as it did because banks were slow to write off their bad debts, impairing their ability to supply funds.

Were the measures implemented by Japan in fact a failure? In this report we consider the actual cost to taxpayers of nine measures implemented in the 1990s and early 2000s to address the financial crisis and their effect on the credit crunch.

## 2 Our estimates

Broadly speaking, Japan came up with nine responses to the post-bubble financial crisis (Table 1). We estimate that these measures cost taxpayers 11,499.9 billion yen (Table 1), or 2.32 percent of fiscal year 2008 GDP. Although this is not an insignificant figure, it would be a mistake to assume that most of the nonperforming loan problems were dealt with using public funds.

**Figure 1. Post-bubble conditions in US resemble those in 1990s Japan**



Note: Futures prices as of September 30, 2009.  
 Source: Standard & Poor's, S&P/Case-Shiller home price index; Bloomberg; Real Estate Economic Institute, Condominium market trends in Tokyo metro area (in Japanese) and Condominium market trends in Kinki district (in Japanese).

**Table 1. Cost to taxpayers of nine financial crisis measures**

	(¥ billion)
	Gain/loss
1. Capital injections to financial institutions	1,076.4
2. Grants to successor banks in form of JGBs	-10,432.6
3. Special BOJ loans to Yamaichi Securities	-111.1
4. Purchases of bad loans (Table 4)	598.1
Resolution and Collection Corporation	1,167
Assets with collateral guarantees	-568.9
5. Measures to deal with problems at housing loan companies	-1,171.1
Central government subsidies (primary losses)	-680
Secondary losses on received assets	-491.1
6. Purchase of equities from bank portfolios (Table 5)	1,123.7
7. Industrial Revitalization Corporation	74.5
8. Special credit guarantees for small businesses	-2,081.4
9. Compensation of banks for losses incurred	-576.4
Total	-11,499.9

Source: Estimates by authors based on various data.

In fact, private-sector financial institutions in Japan put up a total of 100 trillion yen to dispose of nonperforming loans during this period. The bulk of these funds came from current earnings or the proceeds of asset sales. In view of the fact that some 1,500 trillion yen in national wealth was lost in the real estate and stock markets alone between the bubble's collapse and 2002, 100 trillion is not extremely large.

Those arguing that Japan's disposal of bad loans was a failure also tend to cite the fact that it took the banking system 15 years to write off all its bad debts. However a review of past financial crises calls this view into question.

For example, the US took well over a decade to clean up the Latin American debt crisis, which erupted in 1982. By going slowly, the US was able to keep the cleanup's cost to taxpayers at zero. In contrast, the US savings and loan crisis in 1989 was dealt with in a relatively short period, but ended up costing taxpayers 160 billion dollars (¥14.4 trillion at an exchange rate of ¥90/\$).

Most of the cost to Japanese taxpayers of writing off the banking sector's bad loans following the bubble's collapse went to protect deposits at failed financial institutions (Table 1). As we argue below, this should have been paid out of deposit insurance premiums contributed by banks. The government was forced to pick up the tab only because almost no funds remained when bad loan problems came to the fore.

### 3 Where our estimates differ from those of EU and IMF

The European Commission and IMF have recently presented their own estimates of the cost of Japan's

financial crisis to taxpayers.<sup>2</sup> The European Commission estimates the cost at some 70 trillion yen, or 13.9 percent of nominal GDP, while the IMF pegs the cost at 21.8 trillion yen, or just over 4 percent of GDP. The large disparity between these figures and the authors' estimate of 11.5 trillion yen is attributable to a number of factors.

First, the European Commission arrived at its estimate by taking government expenditures related to the crisis over the five years from 1997 (see below) to 2002 and subtracting money returned to the government from asset sales and so on. However, as we analyze in detail below, most of the money injected into the banking system in 1998 and 1999 was not paid back until 2004 to 2005, some seven or eight years later.

The IMF took an approach closer to that of the authors in that it did not set a deadline. However, its interpretation of the situation differs from our own in two ways.

First, the IMF views the cost of deposit insurance differently. To insure the safety of deposits, the Japanese government made grants of nearly 19 trillion yen to the successor banks that assumed the assets and liabilities of failed institutions through the Deposit Insurance Corporation of Japan. The IMF's estimate treated the money paid to these banks by the Deposit Insurance Corporation as a cost to taxpayers.

The deposit insurance system, however, is meant to be funded by premiums from private-sector financial institutions. The excessively low premiums at the time meant that the insurance fund was far from adequate. The government granted 13 trillion yen in JGBs to the Deposit Insurance Corporation to offset this shortfall.

The Deposit Insurance Corporation gave 10,432.6 billion yen of this amount to the banks and returned the remainder to the government. In other words, the real cost to the taxpayers of this measure was 10,432.6 billion yen, not 13 trillion yen.

The IMF estimate also defines the cost to taxpayers as the difference between the money actually injected by the government to achieve its policy goals and the money estimated to have been returned to the government as of March 2008. Because 10.5 trillion yen of the 12.4 trillion yen in capital injections to the banks had been returned by that date, the IMF viewed the 1.9 trillion yen difference as the ultimate cost to taxpayers.

This approach neglects the fact that banks added a premium to the original amount received when they repaid the government. Moreover, the government and BOJ made money when they sold the shares they had purchased from the banks' equity portfolios. In fact, one of their key goals in selling shares was to minimize losses.

In light of the above, estimates of the actual cost to taxpayers should not simply compare the money initially injected with the money recovered within a given time, as the IMF did. They should also consider how the people involved strived to reduce the final cost to taxpayers, given the huge scale of the problem.

## II Overview of Japan’s response to the financial crisis and attendant costs

This section provides an overview of the policies implemented by Japan over the last 15 years and discusses the actual cost to taxpayers of those policies.

First, the cost to taxpayers is considered to consist of:

- (1) Government subsidies and outlays to compensate for losses; and
- (2) Losses incurred by government programs and capital losses on assets held by the government.

The second will be treated as a cost to taxpayers only if the government ultimately bears the loss.<sup>3</sup> When the operations of an entity like the Industrial Revitalization Corporation generate a profit, we consider that action as having reduced the cost to taxpayers because the profit is either transferred to the national treasury or paid out in national and local taxes. Any unrealized gains or losses on stocks with a market value were also reflected in our estimate.

One example of something we would not consider to be a cost to taxpayers was the total amount of special credit guarantees provided by the government in 1998 to ease the credit crunch for small businesses. Only losses actually incurred by the guarantee program are counted as a cost to taxpayers.

Of the nine measures listed in Table 1, some of the entities—like the Industrial Revitalization Corporation (item #7 in the Table)—have already completed their mission and been disbanded. Others, including the measures for housing finance companies (#5 in the list) and the special credit guarantees for small businesses (#8 in the list), remain in operation even though they have largely completed their loan recoveries. As of

March 2009, the government and BOJ still carried more than 3 trillion yen in equities purchased from banks (book-value basis).

Accordingly, we need to keep in mind that our 11,499.9 billion estimate of the cost to taxpayers is an estimate *as of* October 2009 and could increase or decrease depending on future developments.

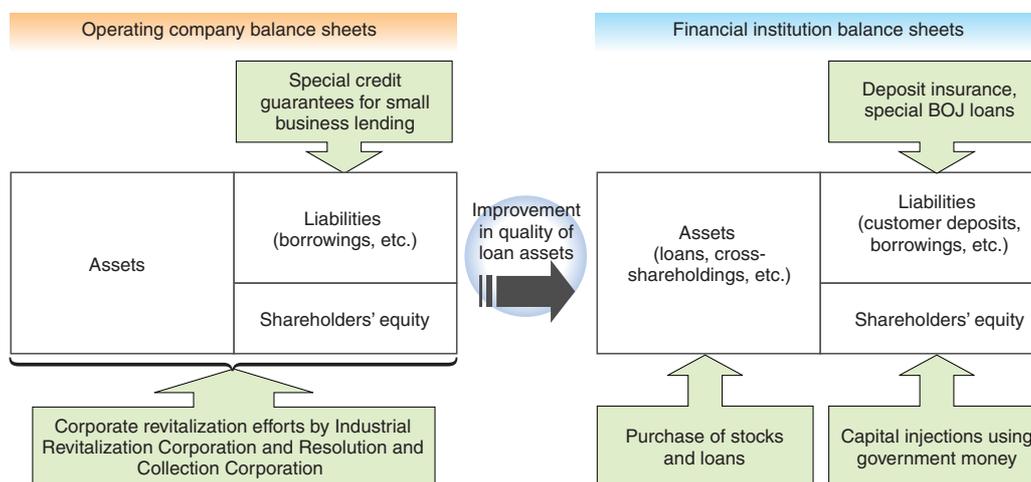
The government measures examined in this report are limited to those that were designed to stop the deterioration of bank capital, assets and liabilities (Figure 2). The only exceptions were the special credit guarantees for small business lending and industrial revival efforts exemplified by the Industrial Revitalization Corporation. While these measures dealt directly with borrowing firms, they were indirectly meant to arrest the deterioration in bank balance sheets by laying the groundwork for a recovery in the quality of lenders’ loans and other assets.

### 1 Capital injections to banks

In 1997, when the Hashimoto administration embarked on the path of fiscal consolidation, epitomized by its decision to raise the consumption tax rate, foreign investors in the Japanese stock market foresaw economic weakness and commenced a “sell Japan” campaign, leading to sharp declines in the yen and Japanese equities. Domestic banks, with their large holdings of foreign currency loans and cross-shareholdings, found it increasingly difficult to maintain their capital adequacy ratios (capital/risk-adjusted assets) because falling share prices were reducing the numerator (45% of unrealized capital gains on shareholdings was counted as capital) while the depreciating yen was increasing the denominator.

The situation was exacerbated by the Ministry of Finance’s decision in October 1997 to issue guidelines requiring the strict application of the new BIS capital rules by March 1998. Banks responded to the challenge of meeting capital adequacy ratios by shedding assets,

Figure 2. Conceptual diagram of financial crisis measures



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prompting a nation-wide credit crunch. The subsequent failures in November of Sanyo Securities, Yamaichi Securities and Hokkaido Takushoku Bank plunged Japan's financial system into turmoil.

From an individual bank perspective, cutting assets was clearly the right thing to do. Further encouragement was offered by bank analysts, Keio University professor Heizo Takenaka<sup>4</sup>, and even the *Financial Times*<sup>5</sup>, all of whom argued that banks should remove any assets not making a meaningful contribution to earnings from their balance sheets. While this might have been the right advice for individual institutions, it had the potential to inflict severe damage on the broader economy when implemented by the banking sector as a whole because the economic activity supported by those assets could grind to a halt.

The resulting credit crunch sent Japan's economy into meltdown, with GDP shrinking for five straight quarters.<sup>6</sup>

The government responded with the Law for the Stabilization of Financial Functions, which sought to ease the credit crunch that resulted as banks strove to maintain their capital adequacy ratios. The government established a 13 trillion yen facility in February 1998 to provide capital to distressed banks. At the time, however, both the injector and the injectee were wary of the unfamiliar undertaking, and 21 major banks,<sup>7</sup> including city banks and long-term credit banks, had accepted just 1,815.6 billion yen in government funds as of the end of March 1998.

Because this first capital injection represented only 4.4 percent of the 21 banks' total shareholders' equity of 41,055.2 billion yen (the end of March 1998), it produced only a modest improvement in capital adequacy

ratios, from 9.14 percent at the end of September 1997 to 9.54 percent at the end of March 1998. As a result, the first capital injection was able to prevent a further worsening of the current crunch but was not large enough to end it (Figure 3).

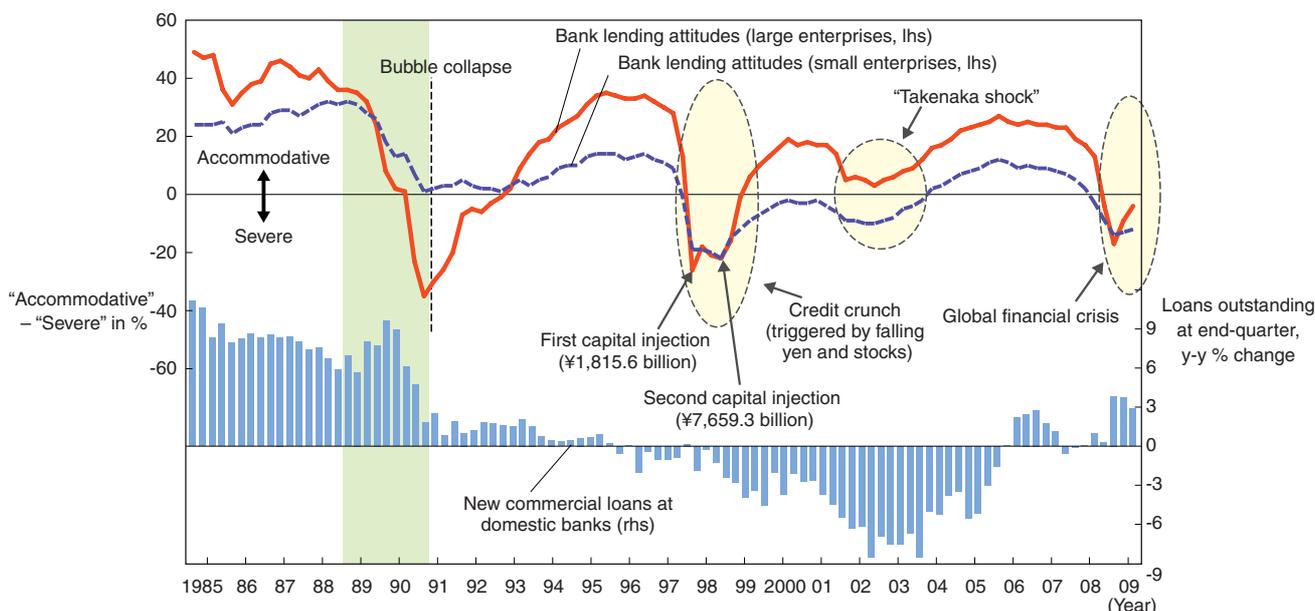
The government then passed the Law for Early Strengthening of Financial Functions and conducted another round of capital injections into 15 banks in March 1999.<sup>8</sup> This second infusion was far larger (¥7,659.3 billion) and consisted mostly of preferred equity, which is counted as Tier 1 capital. (The first injection consisted mostly of subordinated notes and loans, which are treated as Tier 2 capital.<sup>8</sup>) Consequently, the average capital adequacy ratio at the 15 banks receiving injections rose from 9.66 percent at the end of September 1998 to 11.56 percent at the end of March 1999.

This, together with the special credit guarantees for small business borrowers in autumn 1998, led to a significant improvement in bank lending attitudes and marked the beginning of the end of the credit crunch.

Many banks also received subsequent capital infusions. Chief among them was Resona Holdings, which received 1.96 trillion yen under the Deposit Insurance Law in June 2003. In the eleven and a half years from March 1998 to September 2009, the Deposit Insurance Corporation provided a total of 12,663.4 billion yen in capital to 40 financial institutions in return for equity and debt. Of this figure, 3,160.4 billion yen was still outstanding on September 30, 2009, with 9,503.0 billion yen (book-value basis) having been recovered through repayments by the banks and share sales in the market.

As Table 2 shows, however, actual disposals over this period totaled 10,884.6 billion yen, or 1,381.6 billion

**Figure 3. Two capital injections needed to end Japan's credit crunch: bank lending attitudes from a borrower's perspective**



Note: Shaded portion indicates period of monetary tightening.  
Source: BOJ, *Tankan*, Loans and Discounts Outstanding by Sector.

**Table 2. Capital injections outstanding and amount returned**

(¥ billion)

Fiscal year	1997	98	99	2000	01	02	03	04	05	06	07	08	09
Capital injections outstanding	1,815.6	9,274.9	9,749.9	9,786.9	9,970.9	9,296.3	10,315.3	8,914	6,639.6	3,567.6	3,430.6	3,105.4	3,160.4
Capital returned	0	0	100.6	362.2	0	674.6	990	1,527.9	2,520.1	3,854.7	192.2	592.5	69.9
Cumulative capital returned (book-value basis)	0 0	0 0	100.6 100	462.7 450	462.7 450	1,137.3 1,124.6	2,127.4 2,071.6	3,655.2 3,472.9	6,175.3 5,747.3	10,030 8,859.8	10,222.2 8,996.8	10,814.7 9,443	10,884.6 9,503
Cumulative gains/losses	0	0	0.6	12.7	12.7	12.7	55.8	182.3	428	1,170.2	1,225.5	1,371.7	1,381.6

Note: Figures for fiscal year 2009 are as of September 30, 2009. Recently the outstanding balance of injections has increased because of capital infusions to certain banks under the Law for the Strengthening of Financial System Functions.

Source: NRI, based on Deposit Insurance Corporation of Japan website.

yen more than the book value of the assets. This amount represents the profit made by the Deposit Insurance Corporation.

In a 2005 comment titled “Regarding the Short-term Disposal of Preferred Shares Acquired in Capital Injections,” the Deposit Insurance Corporation gives as one criterion for disposal of the shares the ability to sell them at a price greater than the acquisition cost in order to prevent any loss to the government.

Once the financial institutions that received injections of public money have recovered to the point where they can “repay” that money, their shares have generally risen in value since the time they were issued to the Deposit Insurance Corporation.<sup>10</sup>

If the Deposit Insurance Corporation continues to follow the same approach, disposal of the remaining shares may also produce a “gain” barring additional failures of financial institutions receiving capital.

On the other hand, as part of the first capital infusion in March 1998, the government bought 130 billion yen in preferred shares and made 46.6 billion yen in perpetual subordinated loans to the Long-Term Credit Bank of Japan (LTCBJ). It also acquired 60 billion yen in preferred shares from Nippon Credit Bank (NCB). The former institution failed that October, and the latter followed in December. The book value of the shares in these institutions held by the Deposit Insurance Corporation was therefore reduced to 0.

When the Deposit Insurance Corporation sold the two banks to the private sector, it reduced its capital stake, from 100 million shares to 74.528 million shares (¥96.8 billion) at LTCBJ and from 120 million shares to 48.144 million shares (at present, ¥24.1 billion) at NCB, in order to reduce its equity stake to less than 33 percent of the total.<sup>11</sup>

At present, it holds preferred shares in the two banks worth a combined 120.9 billion yen on a book-value basis.

The government also injected fresh capital into the two banks in the form of preferred shares when it sold them. Some of these preferred shares had already been converted to common shares and sold in the market. At present, the government still holds 120 billion for Shin-

sei Bank (the former LTCB) and 155.3 billion for Aozora Bank (the former NCB), for a total of 275.3 billion yen.<sup>12</sup> As a result, the remaining value of government capital in the two banks stands at 396.2 billion yen, equal to the 120.9 billion of taxpayer money originally injected in 1998 plus 275.3 billion yen that remains from the new injections.

The *Nikkei* reported that the Financial Services Agency will not allow the banks to return this 275.3 billion yen unless they attach a premium of about 180 billion yen.<sup>13</sup> If that actually happens, then the 69.1 billion yen in preferred equity that the government wrote off when it sold the banks (¥33.2 billion for LTCBJ; ¥35.9 billion for NCB) will be recovered with a premium when the banks ultimately repay the government.

However, the shares of both banks are currently trading at 121 yen (as of Jan. 19, 2010). Since the government owns 469.13 million common shares of Shinsei<sup>14</sup> and 282.57 million preferred shares of Aozora, the government’s holding is now worth only 90.992 billion yen. This amount is just a quarter of the book value of 396.2 billion yen. If we consider the 305.2 billion yen difference between the market and book values as a loss to taxpayers, the total gain for taxpayers from the capital injection program is 1.38 trillion yen minus 305.2 billion yen, or 1.0764 trillion yen.

## 2 Involvement in liability side of bank balance sheets

The Deposit Insurance Corporation of Japan has two basic methods for channeling funds to failed financial institutions. It can (1) grant money to the failed bank to protect depositors or (2) acquire assets—chiefly bad loans—from the failed institution. We will discuss the first method here and cover the second in the next section.

### (1) Money grants from the Deposit Insurance Corporation

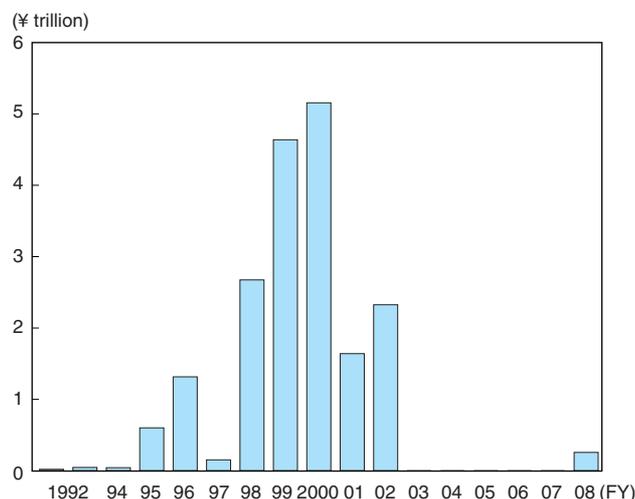
Since first providing funds to a failed institution in 1991 (Toho Sogo Bank in Ehime Prefecture; the funds were given in the form of a loan), the Deposit Insurance Corporation of Japan has provided assistance to 181

institutions. Grants to these institutions totaled 18,867.3 billion yen as of the end of March 2009 (Figure 4).

This assistance should have been funded by the deposit insurance premiums that banks contributed over the years. However, as Figure 5 shows, the deposit insurance fund was used up by the end of fiscal year 1996.

Consequently, 10,432.6 billion yen of the money granted to financial institutions was obtained by cashing in JGBs provided by the government to the Deposit Insurance Corporation, as noted above. In effect, this money came from the national treasury, representing a cost to taxpayers. The remaining 8 trillion yen should have been funded by banks' deposit insurance premiums, but any shortfall has been covered by the issue of government-guaranteed bonds by the Deposit Insurance Corporation.

**Figure 4. Grants from Deposit Insurance Corporation to successor banks**



Source: Deposit Insurance Corporation of Japan, Annual Report 2008.

Figure 5 shows that the deposit insurance fund shortfall has fallen from a peak of 4,006.5 billion yen at the end of fiscal year 2002 to 910.5 billion yen at the end of fiscal year 2008 as the economy recovered and banks' operations stabilized. Because the shortfall has been declining by 460 billion yen to 550 billion yen per year since fiscal year 2003, a simple calculation suggests that the insurance fund will be restored to solvency by the end of fiscal year 2010.

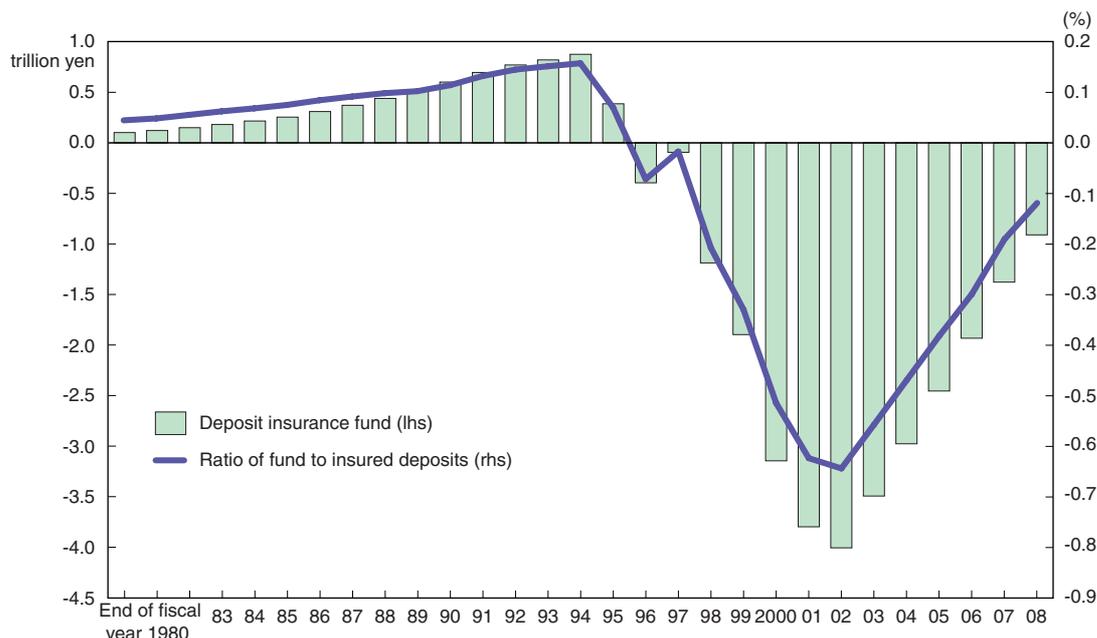
The primary reason why deposits had to be protected at a substantial cost to taxpayers was that the deposit insurance fund was severely underfunded relative to the size of the losses. The outstanding value of the fund peaked at the end fiscal year 1994 at 876.0 billion yen, or merely 0.158 percent of the 555,711.2 billion yen in insured deposits at that time.

In contrast, the target ratio of the insurance fund to insured deposits at the Federal Deposit Insurance Corporation (FDIC) in the US stood at 1.25 percent in 2008. If the Deposit Insurance Corporation of Japan had maintained its insurance fund at 1.25 percent of insured deposits, it would have been worth about 6,950 billion yen at the end of fiscal year 1994.

The underfunding is attributable to Japan's extremely low deposit insurance premiums prior to the bubble collapse. Until 1996, when the 10 million yen upper limit on deposit insurance was lifted, premiums ranged from 0.006 to 0.012 percent.

In contrast, when the US established its deposit insurance system after the Great Depression in the 1930s, the premium rate was 0.0833 percent at the FDIC and 0.125 percent at the Federal Savings and Loan Insurance Corporation (FSLIC).<sup>15</sup> These figures are close to the premiums currently charged in Japan

**Figure 5. Japan's deposit insurance system was severely underfunded**



Source: Deposit Insurance Corporation of Japan, Annual Report 2008.

**Table 3. Deposit insurance in Japan**

Fiscal year	Premium rate (%)		Special premium rate <sup>(3)</sup>	Total
1971 (system launched)	0.006			
82 –	0.008			
86 –	0.012			
96 –	0.048		0.036	0.084
2001	Specified deposits <sup>(1)</sup> 0.048	Other deposits 0.048	0.036	0.084
02	0.094	0.080		
03 –	Settlement deposits <sup>(2)</sup> 0.09	Ordinary deposits 0.080		
05	0.115	0.083		
06	0.110	0.080		
07	0.110	0.080		
08	0.108	0.081		
09	0.107	0.081		

Notes: (1) "Specified deposits" refers to checking deposits, ordinary deposits and special ("separate and restricted") deposits. (2) "Settlement deposits" refers to checking deposits, ordinary deposits and special deposits in fiscal year 2003 and fiscal year 2004 and to non-interest-paying deposits for settlement services in fiscal year 2005 and after. (3) Special premiums were established to fund the expansion of the program to cover unlimited deposits, a special measure adopted from fiscal year 1996 to fiscal year 2001.

Source: Deposit Insurance Corporation of Japan website, April 1, 2009.

(0.107% on settlement deposits and 0.081% on ordinary deposits in fiscal year 2009) and are between 6.9 and 10.4 times the 0.012 percent premium charged from fiscal year 1986 to 1996.

In short, Japan's deposit insurance system had an obligation to charge banks an appropriate deposit insurance premium rate and build up an insurance fund to prepare for a possible financial crisis, yet not only were the reserves clearly underfunded, but there was not even a guideline regarding the approximate level of funding considered necessary. In effect, operation of the system was based on the tacit assumption that no Japanese bank would ever fail. This basic structural shortcoming meant that if a financial crisis did occur, the system would stop functioning and end up costing taxpayers more than 10 trillion yen.

Of course one cannot blame the entire 10 trillion yen shortfall on the inadequacy of the deposit insurance system because the system was asked to cover far more than it was originally intended to when the government announced the blanket deposit guarantee and removed the 10 million yen cap on insured deposits in 1996. In other words, the enormity of the situation was such that even with a well-funded deposit insurance system, the chances were high that some sort of government help would be necessary.

What would the outcome have been if Japan had kept the 10 million yen cap on insured deposits in the second half of the 1990s? There is a significant possibility that systemic concerns triggered by the collapse of Yamaichi Securities and Hokkaido Takushoku Bank would have sparked runs on numerous financial institutions, leading to a major catastrophe.

Attempting to restore financial system functions once things had reached that stage would probably have entailed astronomical costs, as the recent example of Lehman Brothers shows. Financial assistance from US, European and British authorities in the wake of the Lehman collapse currently stands at 9 trillion dollars (or ¥810 trillion at an exchange rate of ¥90/\$).<sup>16</sup>

Viewed in this light, while the 10 trillion yen-plus bill for Japanese taxpayers may seem large, it helped prevent further turmoil in the financial system and society as a whole.

## (2) Special BOJ loans to Yamaichi Securities

In November 1997, Yamaichi Securities, one of the nation's four leading brokerages, decided to close its doors after massive off-balance-sheet liabilities were discovered. In order to maintain "trust and order," the Bank of Japan took the unusual step of supplying funds to the brokerage via Fuji Bank (now Mizuho Corporate Bank). At their peak, loans outstanding under this facility reached 1.2 trillion yen.<sup>17</sup>

On November 24, 1997, the day this measure was announced, the Governor of the BOJ said "given that Yamaichi Securities is not insolvent and the government seeks to put in place a strong system to allow for the firm's resolution, I see no need for concern about the recovery of funds provided by the Bank." After the brokerage was declared bankrupt in 1999, however, the BOJ recorded loan-loss provisions against that portion of the loans not likely to be recovered via disposals of collateral or the liquidation dividends.

At the end of each fiscal year, the BOJ transfers to the national treasury an amount equal to the Bank's final

profits for the year (surplus for the current period) less transfers to statutory reserves and dividends paid.<sup>18</sup> By reducing the BOJ's earnings, the loan-loss provisions lowered the amount that could be submitted to the national treasury. The loss on the BOJ's loans to Yamaichi Securities is therefore a cost to taxpayers.

The liquidation of Yamaichi Securities took nearly six years to complete and did not end until January 26, 2005. By that time, loans outstanding from the BOJ had dropped to 111.1 billion as a result of recoveries. This was the final unrecoverable amount for the BOJ and, by implication, the final cost to taxpayers of the Bank's loans to Yamaichi Securities.

### 3 Purchases of assets from financial institutions

#### (1) Purchases of bad loans

##### ① Recovery of bad loans by the Resolution and Collection Corporation (Resolution and Collection Bank)

In Japan, the growth in bad loans brought on by the bubble's collapse produced a steady increase in bankruptcies at credit unions and other small financial institutions from around the end of 1994. In response, the government revised the Deposit Insurance Law in 1996 and added asset purchases to the list of methods by which the Deposit Insurance Corporation could channel funds to failed financial institutions. Asset purchase operations were entrusted to the Resolution and Collection Corporation, which was also responsible for actual recoveries.

The Financial Reconstruction Law, passed in 1998, also authorized the purchase of assets from healthy financial institutions until the end of March 2001 as a means of stabilizing and restoring Japan's financial system functions. The period for buying assets was subsequently extended by three years, to the end of March 2004. Most of the assets purchased under this authority were bad loans to bankrupt and technically bankrupt borrowers and borrowers in danger of failing.

Table 4 shows the results of the acquisitions and recoveries by the Resolution and Collection Corporation. As of March 2009, cumulative recoveries had already exceeded the purchase price of the assets by 1,167.0 billion yen.

When buying bad assets from financial institutions, the government must accurately estimate the fair market value of the bad loan and purchase the asset at that price in order to ensure a profit on the loan recovery or borrower revival efforts. The authors estimate that the Resolution and Collection Corporation was able to buy bad assets at a 78.2 percent discount to book value in the case of failed financial institutions and at a 91.2 percent discount to book value in the case of healthy financial institutions.<sup>19</sup>

From another perspective, cumulative recoveries exceeded the acquisition cost and prevented a loss to taxpayers because the Resolution and Collection Corporation acquired these bad assets at such a large discount.

Acquisition cost is a vexing issue in attempting to address banking problems by removing bad assets from the balance sheets of financial institutions.

If the goal is to minimize the ultimate cost to taxpayers, the government should pay as little as possible. However, that forces the financial institution holding the asset to record a large write-down and a correspondingly large loss.

If, on the other hand, the government buys the bad asset at a price close to book value, the loss is more likely to be borne by the government in the recovery process, resulting in a greater cost for taxpayers.

As Table 4 shows, the total value of assets purchased from healthy institutions by the Resolution and Collection Corporation was an order of magnitude lower than that of assets purchased from failed institutions. This serves as a reminder of how easy it is to remove bad assets from the balance sheets of failed financial institutions and how *difficult* it is to remove assets on which large losses must be booked from the balance sheets of healthy institutions.

##### ② Assets purchased with buyback clauses

When the Long-Term Credit Bank of Japan and the Nippon Credit Bank failed in 1998, the government placed both lenders into special public receivership based on the Financial Reconstruction Law. A separately established Financial Reconstruction Committee examined the assets of both banks and divided them into "ineligible assets" (bad loans) and "eligible assets." The former were taken by the Resolution and Collection Corporation while the latter were assumed by the successor banks.

**Table 4. Recoveries of loans acquired by the Resolution and Collection Corporation**

	Purchase price	Cumulative recoveries	Gain
Loans purchased from failed institutions	6,482.1	7,341.5	859.4
Loans purchased from healthy institutions	353.3	660.9	307.6
Total	6,835.4	8,002.4	1,167

Note: As of the end of March 2009.

Source: Deposit Insurance Corporation of Japan, "Funds provided and assets recovered as of the end of March 2009."

The owners of the successor banks were worried about deterioration in the quality of the eligible assets they had assumed, which would lead to secondary losses. When drawing up the final transfer contracts, it was therefore decided to add a special buyback clause stipulating that the government would bear the risk of any deterioration in asset quality.

According to the Board of Audit's fiscal year 2004 Audit Report, the agreements were structured as follows: for loan-related assets transferred to the successor bank and worth at least 100 million yen, the Resolution and Collection Corporation was required to purchase the asset when problems developed within approximately three years of the transfer<sup>20</sup> and the value of the asset was deemed to have been impaired by at least 20 percent.

Here, "problems" were defined as a situation in which two conditions hold: (1) there has been a three-month or longer delinquency in principal or interest payments by the borrower, technical insolvency of the same or carry-forward losses, and (2) there was a change in the basis for the Financial Reconstruction Committee's decision to label the asset an "eligible asset," or the basis for the original decision no longer held.

Under such agreements, the Resolution and Collection Corporation assumed a total of 1,222.6 billion yen in loans from Shinsei Bank and Aozora Bank. As noted above, the Deposit Insurance Corporation entrusted the collection of these assets to the Resolution and Collection Corporation, which had collected a total of 653.7 billion yen as of March 31, 2009. In other words, 568.9 billion yen (¥1,222.6 billion acquisition cost less ¥653.7 billion collected) had yet to be collected as of the end of March 2009.

According to the Board of Audit's fiscal year 2006 Audit Report, the Resolution and Collection Corporation held only 170.3 billion (book-value basis) in loans with buyback clauses at the end of fiscal year 2006, which means that 420.2 billion yen—the 1,222.6 billion yen acquisition cost less cumulative recoveries of 632.1 billion yen less 170.3 billion yen—had already been recorded as losses on sales or disposals. The report also noted that the loan-loss provision rate for the remaining 170.3 billion yen in loans already exceeded 75 percent, which suggests that there is little likelihood of loan recoveries substantially exceeding the figure noted above.

These data indicate that the quality of assets assumed under loan buyback agreements declined markedly and that the loans were recovered only at values far below the price paid by the Deposit Insurance Corporation.

The maximum cost to taxpayers of these buyback clauses, therefore, would be the 568.9 billion yen that remained uncollected at the end of fiscal year 2008—i.e., the acquisition cost less cumulative recoveries as of the end of fiscal year 2008.

We therefore estimate that the government's purchase of bad loans had produced a gain of 598.1 billion yen as

of the end of March 2009—the 1,167.0 billion yen gain on recoveries reported by the Resolution and Collection Corporation less the 568.9 billion yen loss to taxpayers from assets with buyback clauses.

## (2) Cleaning up the *jusen* problem

Starting in the 1970s, *jusen*, or housing loan companies, were created around private financial institutions with the objective of providing home loans. In the bubble period, however, these organizations began lending to real estate firms and developers, leaving them with massive inventories of bad loans after the bubble collapsed. The crisis at the *jusen* also created serious financial problems for the agriculture and forestry-affiliated financial institutions that had lent them large sums of money.

In 1996, the government passed Special Measures to Promote the Resolution of the Assets and Liabilities of the *Jusen* Companies, also known as the *Jusen* Law, with the aim of disposing of the bad loans at seven of these companies. The Housing Loan Administration Company (later renamed the Resolution and Collection Corporation and referred to as such both above and below) was also established.

The Resolution and Collection Corporation purchased 6,112.9 billion yen (book value) of the 12,612.2 billion yen in loans held by the seven *jusen* for a price of 6,094.4 billion yen. The remaining 6,499.3 billion yen in loans was written off with a 1,210.0 billion yen grant (primary loss) and 5,289.3 billion yen in debt forgiveness by private financial institutions. The 1,210.0 billion yen in assistance consisted of 530.0 billion yen in grants from private financial institutions and 680.0 billion yen in subsidies from the national government. The latter figure can be viewed as a cost to taxpayers for the primary losses.

However, subsequent deterioration in loan quality also produced secondary losses on the 6,094.4 billion yen in loans acquired by the Resolution and Collection Corporation. The aforementioned *Jusen* Law stipulated that the national government and private financial institutions were to share these losses equally.

The government's share was to be handled as follows. In the event that gains on loan recoveries were greater than one half (i.e., the government's share) of the secondary losses, the difference was to be transferred to the national treasury via the Deposit Insurance Corporation, and there would be no additional cost to taxpayers. But if the gains on loan recoveries were less than one half the secondary losses, the government was allowed under the *Jusen* Law to compensate the Resolution and Collection Corporation (via the Deposit Insurance Corporation) for losses incurred to the extent the budget allowed. In this case, there would be an additional cost to taxpayers from the secondary losses.

As of the end of fiscal year 2008, the Resolution and Collection Corporation had recorded secondary losses

on its jusen account totaling 1,144.4 billion yen. One half of this figure, or 572.2 billion yen, less gains on recoveries (adjusted for transfers to the national treasury) of 213.7 billion yen, equals 358.5 billion yen, which was subject to loss compensation by the national government.

Following the approach outlined in the Board of Audit's fiscal year 2006 Audit Report, the maximum potential government subsidy will be no greater than 479.6 billion yen—equal to 358.5 billion yen plus half of 242.1 billion yen—if we assume that future secondary losses will equal the 242.1 billion in loan-loss provisions in the Resolution and Collection Corporation's jusen account as of the end of fiscal year 2008.

Accordingly, we estimate the cost to taxpayers of cleaning up the jusen problem at 1,159.6 billion yen, consisting of 680.0 billion yen in primary losses and 479.6 billion in secondary losses.

### (3) Purchase of equities held by financial institutions

One major difference between Japan's financial system and those of Europe and the US is the long history of cross-shareholdings. Under this system banks hold large equity stakes in operating companies, which in turn hold shares in their banks. This system was in place long before the bubble and generated large unrealized profits for banks during the bubble period because the shares were carried at a low book value.

The banks continued to hold these positions even after the bubble burst. They engaged in so-called cross trades—which involved selling the shares, recording the gain, and then immediately buying the shares back—to fund bad loan disposals by realizing unrealized gains.

The existence of these paper profits was partly responsible for banks' lax risk management during the bubble period. At the same time, however, the paper profits made it possible—to some extent, at least—for banks to clean up bad debt after the bubble collapsed.

However, the more these cross trades were carried out, the higher the book value of banks' shareholdings

became. Banks gradually grew more vulnerable to share price declines, and bank management became increasingly influenced by developments in the stock market.

As part of the emergency economic package announced in April 2001, the government stipulated that banks' equity portfolios would be limited to the value of shareholders' equity. Any shareholdings in excess of that amount would have to be sold off by a certain deadline. The government also created an entity to purchase equities sold under this requirement. The Banks' Shareholdings Purchase Corporation acquired shares from banks from February 2002 to the end of September 2006.

Separately, the Bank of Japan decided at its September 2002 Policy Board meeting to enhance financial system stability by purchasing equities held by banks in order to reduce the equity holdings of financial institutions. From November 2002 to the end of September 2004, the BOJ bought shares held by the banks. After the acquisition period had ended, the equities purchased by the BOJ and the Banks' Shareholdings Purchase Corporation were eventually sold—mostly on the market.

The Deposit Insurance Corporation also purchased shares held by the former LTCBJ and NCB during the workouts of those institutions and eventually sold them back to Shinsei Bank and Aozora Bank.

Table 5 summarizes the gains and losses on equity sales and investments recorded by these three entities. The Banks' Shareholdings Purchase Corporation was formed as a joint-stock company and, as such, paid taxes on any gains. Our calculations take into account those tax payments.

The three bodies had unrealized losses of 745.3 billion yen at the end of March 2009. They also had 1,869.0 billion yen in cumulative gains on the sale and management of securities. The 1,123.7 billion yen net difference between these two figures represents a gain to taxpayers as of the end of March 2009. Since share prices were exceptionally depressed in March 2009, the gain to taxpayers is likely to be much greater now.

**Table 5. Gains/losses on purchase of shares held by financial institutions**

	Total purchases	Outstanding			Cumulative gains/losses		
		Book value	Market value	Unrealized gain/loss	Sales/management	Taxes paid	Total
Banks' Shareholdings Purchase Corporation	1,628.3	437.4	399.9	- 37.5	503.6	365	868.6
Equity purchases by BOJ	2,018	1,143.4	1,241.3	97.9	663		663
Shares held by former LTCBJ and NCB	2,939.7	1,568.5	762.8	- 805.7	337.4		337.4
Total	6,586	3,149.3	2,404	- 745.3	1,504	365	1,869

(¥ billion)

Gain as of the end of March 2009 **1,123.7**

Note: Outstanding totals for the Banks' Shareholdings Purchase Corporation include the effect of 41.5 billion yen in purchases resumed starting in October 2008. The amount of tax paid on gains related to shares purchased from the former Long-Term Credit Bank of Japan (LTCBJ) and Nippon Credit Bank (NCB) and shares purchased by the BOJ could not be calculated and therefore was not included in these estimates.

Source: NRI, based on Deposit Insurance Corporation of Japan, Bank of Japan and Banks' Shareholdings Purchase Corporation data.

## 4 Corporate assistance policies

### (1) Industrial Revitalization Corporation

The Industrial Revitalization Corporation (IRC) was launched in May 2003 with the goal of speeding up the bad loan disposal process by helping companies restructure. Before that, differences of opinion among creditors (banks) had often impeded corporate restructuring efforts.

From its foundation until the deadline at the end of March 2005, the IRC assisted 41 companies by purchasing loans from banks. On March 15, 2007, the IRC was disbanded after completing all of its corporate restructuring projects.

According to news reports published some three months later, the IRC paid 43.28 billion yen—residual assets less distributions to shareholders—to the national treasury in the form of surplus. During its lifetime, it also paid 31.2 billion yen in national and local taxes.

The sum of these two amounts—74.5 billion yen—represents the effective gain to taxpayers from the Industrial Revitalization Corporation.

### (2) Special credit guarantees for small businesses

As noted earlier in this report, Japan's credit crunch did not begin in earnest until November 1997. At that time, the government responded not only with the injections of capital into the banks, as previously noted, but also by creating a framework in October 1998 to stabilize small business financing by providing special loan guarantees.

This program was separate from the ordinary guarantees extended by credit guarantee corporations at the prefectural level. When the program was launched, the government set a deadline of March 2000 and capped the guarantees that could be issued at 20 trillion yen. However, in November 1999, strong demand from small businesses led to a one-year extension of the program and an increase in the size of the facility to 30 trillion yen.

In Japan, the guarantees themselves are provided by credit guarantee corporations at the prefectural level. These organizations buy reinsurance from the Japan Finance Corporation (which was known as the Small Business Credit Insurance Corporation until the end of June 1999 and subsequently as the Japan Small and Medium Enterprise Corporation) to protect themselves against possible defaults, which would require compensation of the lender. In this arrangement, the credit guarantee corporation is responsible for only 20 percent of the payment, with the reinsuring body putting up the remaining 80 percent.

When it created the special guarantee system, the government estimated losses at 1.45 trillion yen according to the Board of Audit's fiscal year 2005 Audit Report. This figure was based on the assumption of a payout ratio (guarantee payments/outstanding value of insured loans) of 10 percent or 8 percent and a recovery rate

(cumulative recoveries/guarantee payments) of 50 percent.<sup>21</sup>

The government invested a total of 1.16 trillion yen in the Japan Finance Corporation, which was responsible for bearing 80 percent of any losses under the reinsurance agreements, between fiscal year 1998 and 2002 to help pay for the special guarantees. The government also invested 290.0 billion yen to bolster the capital of the prefectural credit guarantee corporations, which were responsible for the remaining 20 percent, in fiscal years 1998 and 1999 via the prefectural governments.

While this program was in effect, the credit guarantee corporations approved guarantees totaling 28,910.7 billion yen by the end of the March 2001 deadline. They paid out a total of 2,445.5 billion yen caused by defaults on the guaranteed loans. Because they also managed to recover 364.1 billion yen from the defaulting borrowers, the effective loss was 2,081.4 billion yen, which represents a cost to taxpayers as of the end of February 2009.

This figure is 631.4 billion yen more than the initially expected loss of 1.45 trillion. The reason, as noted in the Board of Audit's fiscal year 2005 Audit Report, was low recovery rates.

As of February 2009, the payout ratio was 8.46 percent, which is in line with the original assumption of 8–10 percent. However, the recovery rate of 14.9 percent was far less than the originally envisioned 50 percent and was ultimately responsible for the increased cost to taxpayers.

In summary, the special credit guarantee system for small businesses cost taxpayers more than 2 trillion yen, and some have criticized it for creating a moral hazard for financial institutions and borrowers.

However, an economist, Iichiro Uesugi, noted in a 2008 essay titled "Were the government's special credit guarantees effective?," the ratio of long-term borrowings to total assets at companies taking advantage of this program rose sharply, easing the credit crunch.

As Figure 3 shows, bank lending attitudes as experienced by corporate borrowers improved substantially starting in the second half of fiscal year 1999 when this program was launched and the second injection of capital was implemented. This suggests that the special credit guarantee system helped ease the credit crunch.

The government was able to support almost 30 trillion yen in private financing with an expenditures of 2 trillion yen by means of this program. The question that needs to be asked is whether the program had a greater positive impact on GDP than the same 2 trillion yen spent on infrastructure or tax cuts would have had under similar (crisis-like) conditions. While this discussion lies outside the scope of this report, we think the use of 2 trillion yen to support 30 trillion yen in financing during a severe credit crunch is a worthwhile result. The special credit guarantee system, together with the injections of capital, prevented a deepening of the credit crunch from sending the Japanese economy into a deflationary spiral.

## 5 Loss compensation by the Deposit Insurance Corporation

Section 62 of the Financial Reconstruction Law, which was passed in October 1998, states that the Deposit Insurance Corporation of Japan “may, with the Prime Minister’s consent, provide compensation to banks under special public receivership for losses incurred in the course of their operations.”

In 1998, both LTCBJ and NCB were placed under special public receivership after going bankrupt. They subsequently applied for compensation of their losses by the Deposit Insurance Corporation under this law. As of the end of March 2009, the two lenders had received compensation totaling 494.4 billion yen.

During the workout of Tokyo Kyowa Credit Union, Anzen Credit Union, Cosmo Credit Union, Osaka Fumin Credit Cooperative and Yuai Credit Cooperative, all of which failed in 1994 and 1995, the prefectural credit union associations that assumed the bad debts of these institutions transferred the nonperforming loans to the Shinkumi Federation Bank at book value as payment in kind.

These bad loans were then purchased at fair market value by the Resolution and Collection Corporation, which was entrusted with this duty by the Deposit Insurance Corporation. This sale generated a loss of 82,016 million yen for the Shinkumi Federation Bank, which was compensated by the Deposit Insurance Corporation under Supplementary Section 6 of the Deposit Insurance Law.

The 576.4 billion yen sum of these two amounts—494.4 billion yen plus 82.0 billion yen—can be considered a loss to taxpayers because it is not assumed that it will be returned to the Deposit Insurance Corporation.

## III Learning from Japan’s experience

We have examined Japan’s disposals of bad loans and financial crisis measures from the 1990s onward and estimated their cost to taxpayers.

The massive funding shortfall of Japan’s deposit insurance system, a result of the excessively low premiums charged to banks in earlier years, was in itself responsible for a bill to taxpayers of more than 10 trillion yen. The special credit guarantee program for small businesses added another 2 trillion yen.

However, without these fiscal outlays, there might have been tremendous social turmoil, including runs on banks, a rapid deflationary spiral in the broader economy, and a sharp increase in unemployment. As a result, any assessment of the cost of these measures should take into account not just the size of the outlays but also the potential cost to taxpayers if those measures had not been adopted.

In the aftermath of the bubble collapse, Japan lost national wealth totaling 1,500 trillion yen in stock and real estate alone, and the banks had to absorb 100 trillion yen in losses stemming from the disposal of nonperforming loans. That the bill to taxpayers of dealing with this massive damage was just over 11 trillion yen should be viewed as a great success. As noted above, financial assistance to Western financial institutions in the current crisis is reported to total approximately 9 trillion dollars. While direct comparisons of these two numbers are not appropriate, the fact that the final bill to Japanese taxpayers was just over 11 trillion yen is nothing short of miraculous.

### 1 Japan’s lessons for the current financial crisis

Some argue that while the direct cost to Japanese taxpayers may have been relatively small, the long time spent dealing with the aftermath of the crisis delayed the eventual recovery and therefore took a heavy toll on the public. The statement by US Treasury Secretary Geithner at the beginning of this report is representative of this camp’s views. Most of the arguments, however, are based on a misunderstanding of the problems in Japan’s banking sector. Some of the key misconceptions will be discussed below.

#### (1) Impact of measures taken in response to Japan’s credit crunch

In Mr. Geithner’s view, the delay in the disposal of bad loans at Japanese banks significantly prolonged the credit crunch, which in turn caused the economic slump to drag out. However, as Figure 3 shows, there was no credit crunch in Japan until the second half of 1997. In fact, in 1995 and 1996, lending attitudes at Japanese banks were as aggressive as they had been during the bubble period.

The credit crunch came later, in 1997, after the Hashimoto administration embarked on premature fiscal consolidation. This triggered a meltdown in the Japanese economy, which proceeded to shrink for five consecutive quarters. The subsequent fall in the yen increased the denominator (risk-adjusted assets) in Japanese banks’ capital adequacy ratio, while the drop in share prices reduced the numerator (shareholders’ equity), forcing banks to cut back on lending.

The government’s two capital injections and the special credit guarantee program produced a sharp improvement in bank lending attitudes starting in March 1999, as Figure 3 shows. In other words, the measures taken by the government succeeded in eradicating the credit crunch.

Moreover, it took Japan only five months from the emergence of the credit squeeze, in October 1997, until the government’s first injection of capital. While the scale of the March 1998 infusion was clearly insufficient

in hindsight, it did succeed in preventing conditions from deteriorating. The second injection in March 1999 ended the credit crunch.

In the US, meanwhile, the credit squeeze sparked by subprime loan problems first hit consumers in September 2007 but it was not until November 2008, 14 months later, that the government authorized a capital infusion of 700 billion dollars for troubled financial institutions. During this period, the US economy slowed substantially.

As early as February 2008, at the Tokyo meeting of G7 finance ministers and central bankers, then-Finance Minister Fukushiro Nukaga tried to persuade his US counterpart to inject taxpayer money into troubled financial institutions. Treasury Secretary Hank Paulson, however, refused to heed Nukaga's advice, arguing that no such need existed. The subsequent failures of Bear Stearns and Lehman Brothers might have been avoided if the US authorities had followed Nukaga's advice.

After a near meltdown of the US financial system following the Lehman fiasco, Mr. Paulson finally turned around and told Congress that 700 billion dollars was needed to ease the credit crunch, which had hit consumers hard. Yet, today the credit squeeze is still worsening, with no signs of improvement.

Figure 6 shows trends in commercial lending standards at US banks in the form of a diffusion index based on the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices. A positive diffusion index (DI) indicates that more banks tightened than eased credit standards over the last three months, while a

negative value indicates that more banks eased standards than tightened them.

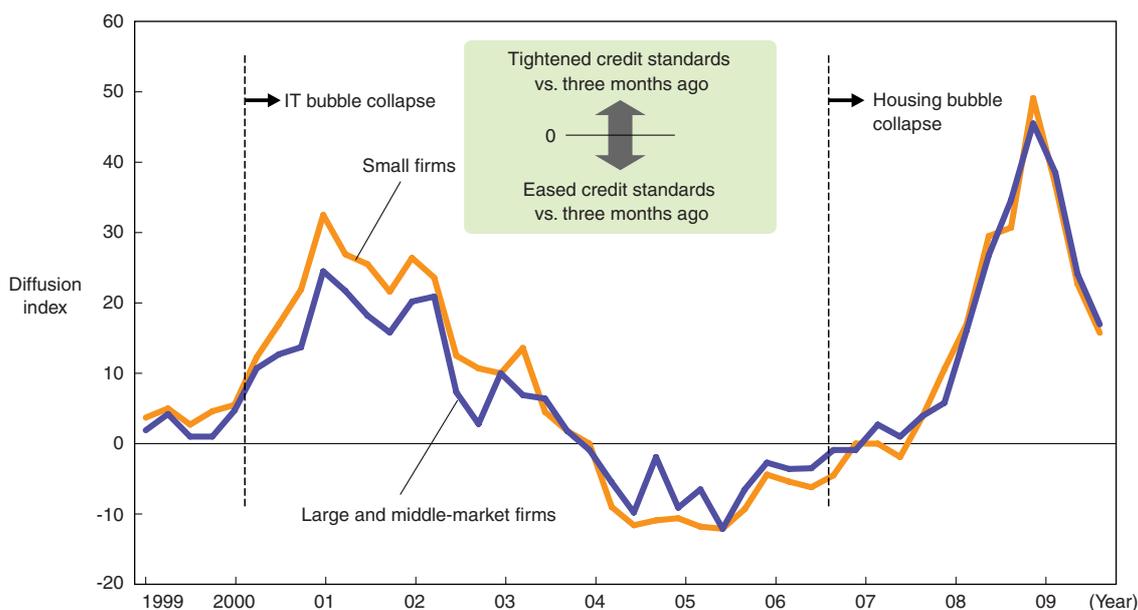
The DI turned positive for large and middle-market firms in January 2007 and for small firms in July 2007, indicating the start of the credit crunch. While the pace of deterioration has moderated somewhat recently, credit standards have continued to tighten for more than two years.

This condition stands in sharp contrast to the situation in Japan, where the government succeeded in arresting the credit crunch starting with an injection of capital in March 1998. While the US injection of capital contributed to the normalization of the interbank market, it has yet to ease the credit squeeze faced by operating companies and individuals. In fact, some of the large banks have already repaid the government even as the credit crunch continues. This means the TARP, which was designed to end the credit crunch, has failed completely in its task.

Why was Japan's injection of capital successful in ending the credit crunch while the US infusion was not? The key difference is that the Japanese authorities, at the beginning of the crisis, were made aware of the contradictions inherent in trying to (1) strengthen individual banks while also (2) easing the nationwide credit crunch. The US authorities have yet to realize that there is a contradiction.

In order to strengthen individual banks and raise their capital adequacy ratios it is essential that banks jettison loans and other assets that do not contribute to earnings. This is clearly the right course of action from the

**Figure 6. US banks continue to tighten credit standards**



Note: Diffusion index for corporate lending standards based on responses to question:

"Over the past three months, how have your bank's credit standards for approving applications for C&I loans or credit lines ... changed?" DI is defined as (number of respondents answering "tightened considerably" + 0.5 x number of respondents answering "tightened somewhat") - (number of respondents answering "eased considerably" + 0.5 x number of respondents answering "eased somewhat").

Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

perspective of an individual bank. However, if all banks attempt to do so simultaneously, the economic activity supported by those loans or assets suddenly grinds to a halt, with major adverse consequences for the economy and asset prices. The resulting economic weakness and asset price declines can cause further growth in banks' bad loans, creating a vicious cycle and aggravating the credit crunch.

In a systemic crisis, where many banks face the same problem, the authorities must place first priority on saving the economy by ending the credit crunch. Only then should they worry about strengthening individual banks.

In February 1998, Japan tried to achieve both objectives at once by attaching a variety of conditions regarding banks' financial strength to the injections of capital. The Japanese banks rejected those conditions, however, and not a single lender applied for capital under the program. The decision not to take public money was easy because pundits, including those in the Western media<sup>22</sup>, were demanding that banks make themselves "lean and mean" by cutting lending instead of taking government money.

To prevent its policy from ending in failure, the government abandoned most of its conditions and begged the banks to take the capital to end the credit crunch. After much persuasion and some arm-twisting over a three-week period, banks finally agreed to apply for public funds<sup>23</sup>. In effect, the government decided to give precedence to easing the nationwide credit crunch over improving the financial positions of individual lenders. That decision brought Japan's credit squeeze to an end.

The US authorities, on the other hand, half-forced financial institutions to accept injections of capital in November 2008. As a result, they never had to face up to the fact that strengthening individual banks and

resolving the credit crunch are contradictory objectives. Furthermore, they subsequently shifted their focus from the macroeconomic goal of boosting lending to policies aimed at bolstering individual institutions.

This approach was underscored by Treasury Secretary Geithner's requirement that banks seeking to repay the US government be able to raise funds on the private capital market. If the Treasury secretary's goal was to resolve the credit crunch, he should have told banks wanting to repay the government to demonstrate a substantial increase in lending to small and medium-sized companies for a predetermined number of years.

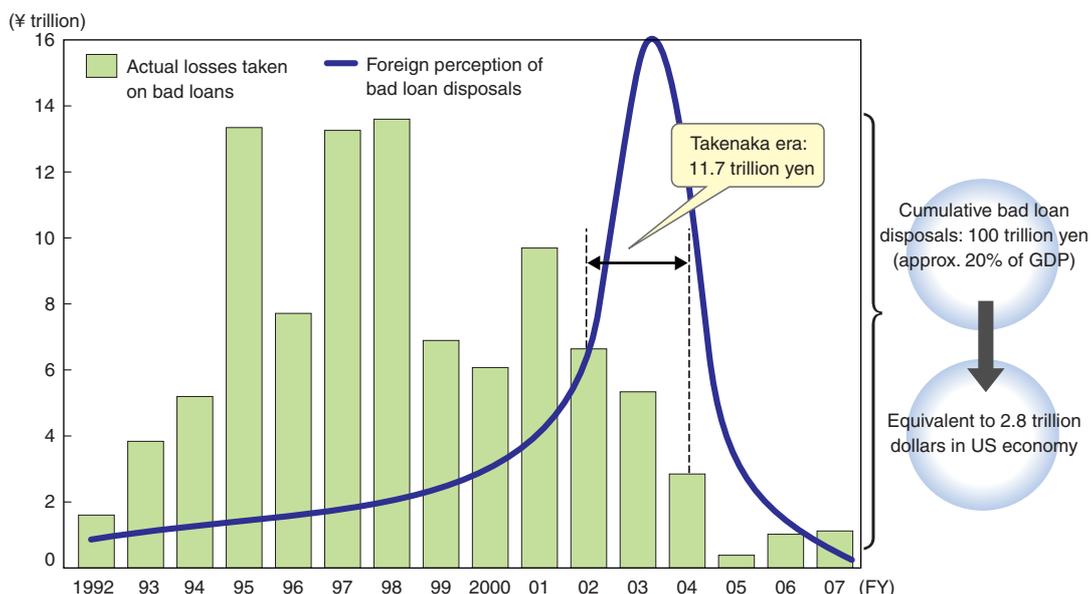
In Japan, lending attitudes improved because Japanese authorities realized in February 1998 that the two objectives (strengthening individual banks and easing the credit crunch) were contradictory and decided to assign priority to the second.

If the credit crunch continues, US authorities may be forced to consider another injection of capital. In that case, they will need to correct their priorities if they hope to avoid a repeat of the failure of 2008.

**(2) Should bad loans be written off as quickly as possible?**

Some in the West argue that Japan postponed the necessary bad loan disposals until Heizo Takenaka was appointed financial services minister, and that this delay prolonged the recession. Contrary to foreign perceptions, however, Japanese banks were already recording massive loan-loss provisions in the late 1990s. The losses recorded by Japanese banks amounted to 83 trillion yen, or more than 80 percent of the bad loans by the time Mr. Takenaka arrived on the scene (Figure 7). During his time as financial services minister, from September 30, 2002, to September 27, 2004, the losses recorded by

**Figure 7. Japan had completed majority of bad loan disposals by 2000**



Source: Financial Services Agency, Nonperforming Loans.

Japan's disposal of bad loans: failure or success?

Japanese banks were a paltry 11.7 trillion yen. The foreign misperception resulted mostly because foreigners were looking at Japanese banks' non-performing loan data that was not adjusted for loan-loss provisions.

While some might argue that the pace of disposals illustrated in Figure 7 was still too slow, we should remember that the demand for private loans had fallen sharply as Japanese businesses collectively paid down debt to repair the balance sheet damage wrought by the collapse of a debt-financed bubble.

As shown in Figure 3, banks were just as willing to lend money in 1995 as they were at the peak of the bubble, and interest rates had already fallen to nearly zero, yet there was almost no new private-sector borrowing. Under such conditions, improvements in bank financial health driven by rapid bad loan disposals would not have sparked an economic recovery because there were so few borrowers.

If the economic slump could be attributed to banks' refusal to lend to willing borrowers (because of bad loan problems), it would have made sense for the government to step in with taxpayer money and remove the bottleneck in the banking sector. In reality, however, there were very few borrowers. When the obstacle to recovery is a lack of borrowers rather than lenders, there is no reason for banks to accelerate the disposals of bad loans, and certainly no reason to inject large quantities of taxpayer money to do so.

Accordingly, the possibility that speeding up bad loan disposals (Figure 7) would have hastened economic recovery is vanishingly small. Foreign criticism of Japan's bad loan disposals is based on the assumption

that there were many willing borrowers. That assumption simply did not hold in Japan, where the bubble's collapse had left many private companies minimizing debt instead of maximizing profits in order to nurse balance sheet wounds.

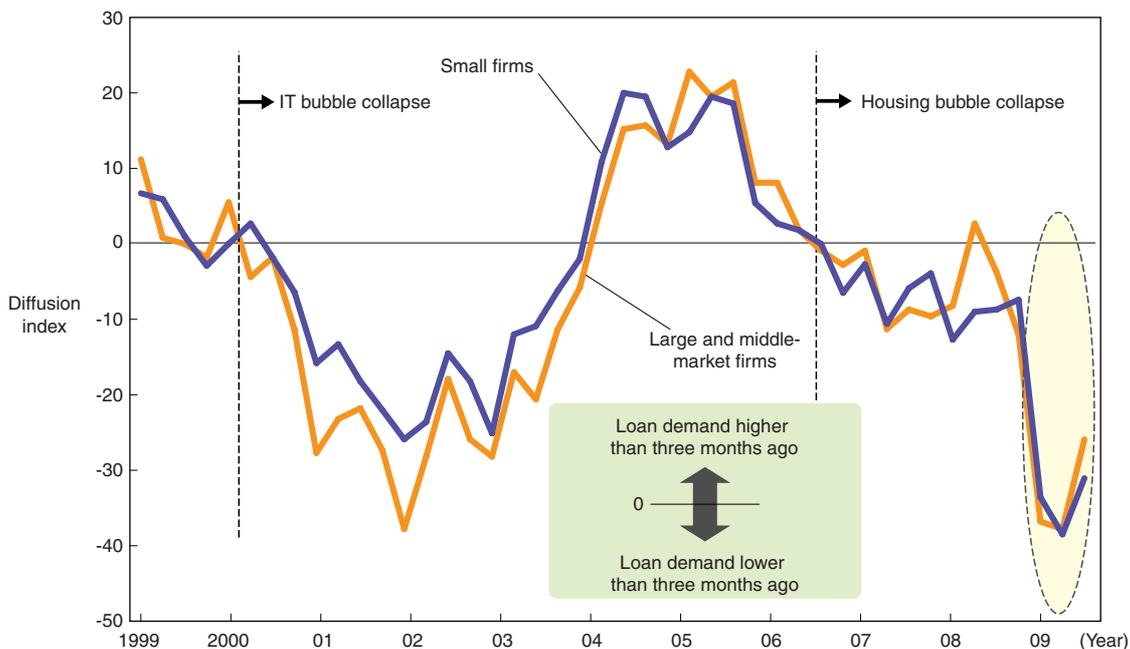
It should be noted that it is front-page news when bankers are not lending money, while it is seldom reported when borrowers are not borrowing money because of balance sheet problems. In terms of a policy response, the latter case is far more difficult to deal with, while the former case can be addressed with injections of capital and liquidity.

The same problem can be observed in the US since late 2008. According to the Fed survey of lending officers noted above, loan demand by private companies has fallen steadily over the past year (circled portion in Figure 8) despite interest rates that are close to zero. This is happening because the bursting of the debt-financed bubble damaged millions of balance sheets, which in turn prompted the private sector to deleverage—to pay down debt—echoing the situation in Japan after the collapse of its bubble in 1990. Inasmuch as businesses have been reducing their borrowing since late 2008, there is less need for US banks to rush ahead with bad loan disposals.

Unlike Japan, which overcame its credit crunch relatively quickly, the US is still suffering from a severe credit squeeze, where even existing borrowers are having difficulty rolling over their loans. This means the authorities need to continue injecting capital and liquidity.

There is also a deep-seated view in Europe and the US that banks will not actively increase lending as long

**Figure 8. Loan demand of US businesses fell sharply**



Note: Diffusion index for corporate loan demand calculated based on responses to question: "How has demand for C&I loans changed over the past three months?" DI is defined as (number of respondents answering "substantially stronger" + 0.5 x number of respondents answering "moderately stronger") - (number of respondents answering "substantially weaker" + 0.5 x number of respondents answering "moderately weaker").  
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

as they are still saddled with bad loans on their books. However, the examples of Japanese banks in the 1990s and the US banks following the Latin American debt crisis in the 1980s demonstrate that, given injections of capital and/or a realistic bad debt disposal policy, banks will increase lending even if they still hold substantial bad debts. During the latter case, when American banks were devastated when all countries south of the Texas-Mexico border went belly up, careful handling of the crisis by Paul Volcker, the then Chairman of the Federal Reserve, managed to keep the banks lending throughout the duration of the workout, which lasted more than ten years. These examples also show that a bad loan problem does not equate to a credit crunch, and a credit crunch can be resolved without disposing of all nonperforming loans as long as the authorities respond appropriately.

Japan's injections of capital in March 1998 and 1999 were noteworthy because the authorities did not force banks to dispose of their bad loans immediately. Had they done so, it is almost certain that an injection of capital of that magnitude (¥9,474.9 billion) would have disappeared in bad loan disposals in no time. Consequently, it would not have been possible to support lending and resolve the credit crunch.

US banks have a significant amount of bad loans: in April 2009, the IMF estimated bad debt-related losses at 2.7 trillion dollars.<sup>24</sup> Taxpayers, meanwhile, have indicated no willingness to provide more money for bank rescue efforts since the 700 billion dollar TARP (Troubled Asset Relief Program) was unveiled in October 2008.

If this state of affairs continues, the US must walk the same path as Japan did, supporting lending with a limited amount of government capital while forcing banks to dispose of bad debts over time with recurring profits. To prevent the remaining nonperforming loans from creating further turmoil in the financial system, a credible bad loan disposal program that is monitored by the authorities and has a realistic write-off period (say, 10 years) is needed. If people believed that such a program would definitely solve the problem over the prescribed period, they would stop worrying about the bad loans that remain on the banks' books.

Japan did not have an official bad loan disposal program, but Japanese banks had already booked losses on 83 percent of their bad loans by 2002, and most of the write-offs were funded with bank earnings and unrealized gains, not taxpayer money (Figure 7). US banks, unlike their Japanese counterparts, have no unrealized gains to tap. However, they enjoy far larger spreads and should be able to fund bad loan disposals with period earnings.

### (3) Differences in government financing methods

The injections of government money into financial institutions in Japan in the 1990s and in the US starting in

late 2008 also differed greatly in how the government raised the necessary funds.

In Japan, the government provided a loan guarantee framework to the Deposit Insurance Corporation of Japan, which within that framework borrowed from the Bank of Japan and private financial institutions or issued bonds. The proceeds were then used to acquire preferred equity issued by financial institutions. This framework of government guarantees expanded to 53 trillion yen at its peak. Since the injections of public funds did not require the government to raise funds directly, they did not increase the (narrowly defined) fiscal deficit.

In contrast, in the US, the 700 billion dollar capital injection from TARP was funded by the issue of Treasury securities, so the budget deficit did increase along with the TARP funds.

These two fundraising methods may have different political ramifications.

Consider a scenario in which the government injected a total of 30.0 billion dollars in public funds to a number of financial institutions in exchange for preferred shares that were bought back and retired seven years later for 33.0 billion dollars, representing a 10 percent premium. Here, the actual cash flows for the (narrowly defined) government would be quite different, as noted below.

First, when the funds are borrowed by a separate entity using a government guarantee, the only actual cash flow for the government is the 3.0 billion dollar premium, which is obtained when the public funds are paid back and which contributes to the fiscal surplus.

However, when the government raises money directly by issuing bonds, it records a budget deficit of 30.0 billion dollars from the bond issue as soon as the capital is injected. A budget surplus of 33.0 billion dollars is then recorded seven years later when the funds are paid back.

Therefore, while in reality both operations are conducted using the government's credit as collateral, the use of a government guarantee means that the ultimate increase or decrease in the fiscal deficit is known only when the funds are repaid. In contrast, if the government procures the funds directly, a large fiscal deficit results when the assistance begins, and another large shift in the fiscal balance occurs when the program is concluded.

The (initial) large budget deficit, in turn, may force voters, politicians and market participants to take an excessively cautious view of the government's excessive budget problems. That caution, in turn, may make it difficult for the government to take the actions that are necessary.

This problem is multiplied during a balance sheet recession when both the real economy and the banking system are in need of substantial government assistance. A balance sheet recession is triggered when the bursting of a debt-financed bubble leaves private sector balance sheets in tatters and forces the private sector to

shift away from the usual goal of profit maximization to debt minimization, even with very low interest rates. Dealing with such a recession requires the government to borrow and spend the excess private savings generated by private sector deleveraging. Tax revenues also fall sharply, causing the fiscal deficit to widen further.

An increase in the fiscal deficit incurred can focus the attention of politicians and the media on the government’s budget constraints and increase pressure on the government to rush ahead with deficit-reduction efforts. By relying on the issuance of Treasury bonds instead of loan guarantees, the government exposes itself to demands for fiscal consolidation because the apparent headline deficit is bigger with bond issuance.

If the government gives in to these pressures and embarks on fiscal consolidation before the private sector has time to complete its balance sheet adjustments or before the banks have time to return to health, conditions in the real economy are likely to worsen. That, in turn, will force the government to engage in further stimulus to provide additional support for the economy and financial institutions in a vicious cycle.

Viewed in this way, the two fundraising methods ultimately have the same impact but can have very different ramifications for political economy. If the wrong one is chosen, it has the potential to prompt premature fiscal consolidation and ultimately prolong the recession and banking crisis.

## 2 Japan’s main lesson for the West: put time on your side

The global financial crisis triggered by subprime loan problems was still in progress at the time of this writing, and the outlook remains uncertain.

In order to rescue individual financial institutions such as Bear Stearns, Citigroup and AIG, the US authorities provided massive funds and credit guarantees via the Treasury Department and the Federal Reserve.

According to an article in the September 2, 2009, issue of *The Wall Street Journal* (Asian edition), risk assets assumed by the Fed, the Treasury, and the FDIC totaled 2,394.4 billion dollars, while gains on those assets amounted to 35.2 billion dollars.<sup>25</sup>

Meanwhile, the Government Accountability Office<sup>26</sup> in the US recently reported that the facilities for Fed and Treasury Department assistance for AIG totaled 182,335 million dollars as of September 2, 2009, with 120,698.5 million dollars provided under this framework thus far.

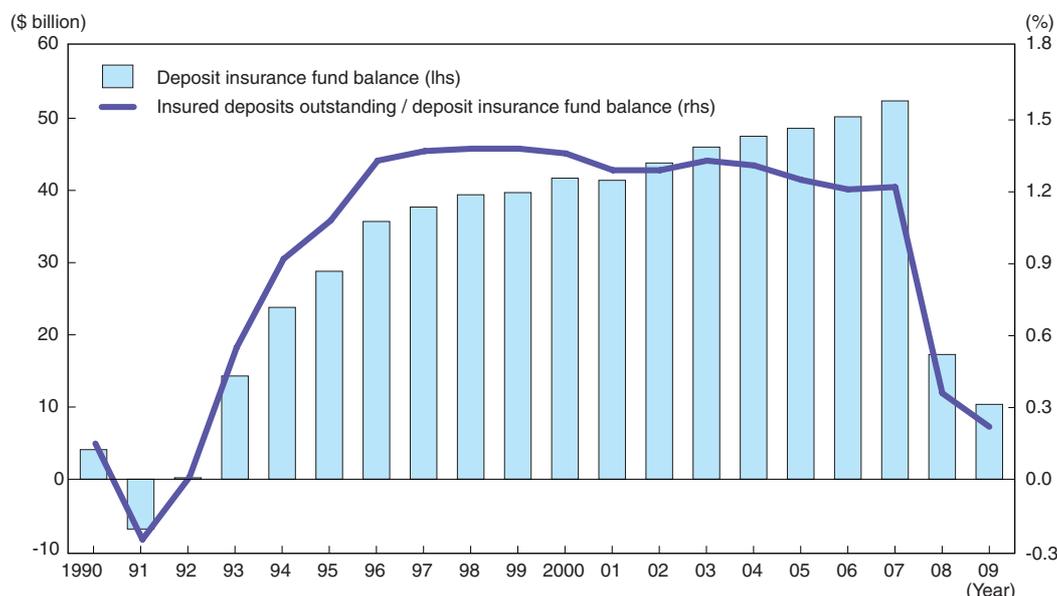
The measures undertaken by the US government and the Fed are far greater in scale than those implemented by Japan and, as the GAO report points out, the final cost to taxpayers is not yet known.

The deposit insurance fund at the FDIC has also shrunk drastically since the financial crisis began in earnest in 2008. The fund amounted to just 0.22 percent of insured deposits at the end of June 2009. Meanwhile, bank failures were up sharply, from 25 in 2008 to 140 in 2009 (Figure 9).

The FDIC’s list of “problem” banks included 552 lenders as of the end of September 2009, representing 6.8 percent of the 8,099 banks in the US. If lenders continue to fail, the deposit insurance fund may dry up, just as it did in Japan in the 1990s. In that event, either the FDIC would have to increase the premiums it charges member institutions or the government would have to step in with taxpayer money, as happened in Japan.

At the time this report was written, the US housing market was showing some signs of stabilization, but the commercial real estate market was declining sharply,

Figure 9. US deposit insurance fund over time



Source: Federal Deposit Insurance Corporation, June 30, 2009.

sparking concerns about bad debt problems at the many banks with exposure to this sector. Japan's experience, however, showed that there is no need to rush bad debt disposal, and that it is possible to deal with the problem at a minimum cost to taxpayers by "putting time on our side."

A great deal of trial and error was required to arrive at this conclusion, including the realization that Japan's first injection of capital was not large enough. Attaching excessive conditions for capital injection resulted in no takers (Japan) or a rush to pay back the money (US) even before the credit crunch was resolved. Some of the actions taken by the government also created the seeds of future problems. By adopting an overbearing attitude in bank inspections and forcing banks to dispose of non-performing loans quickly, which was contrary to the original understanding of the 1998 and 1999 capital injections, the Takenaka era financial revitalization program completely destroyed the relationship of trust between private banks and financial authorities.

The price for this mistake was paid when Japan experienced a credit crunch in the wake of the Lehman-triggered financial crisis. The Aso government responded promptly by trying to inject capital into undercapitalized banks under the Law for the Strengthening of Financial System Functions. However, only a handful of small banks agreed to take the money because most banks no longer trusted financial authorities. As a result, the government's prompt offer to inject capital failed to arrest the credit crunch until the global market itself stabilized.

There are both good and bad lessons from Japan's experience since the 1990s for Western nations facing a financial crisis today. Two lessons are critical. First, when micro and macro policy goals conflict, priority should always be given to the macro goal. Second, if the public is not supportive of a bank bailout, the government must put time on its side and encourage banks to dispose of their bad loans gradually although in a credible fashion.

#### Notes

- 1 S&P/Case-Shiller housing price futures are traded on the Chicago Mercantile Exchange.
- 2 See European Commission, "Public Finances in EMU 2009," 2009; A. Spilimbergo et al., "Fiscal Policy for the Crisis," IMF Staff Position Note, SPN/08/01, December 29, 2008.
- 3 The Financial Reconstruction Law, which was created in response to the financial crisis, stipulates that any "profits" must ultimately be transferred to the national treasury, but it does not say who should bear the losses. However, Senior State Secretary for Finance, Yoshinori Ono, in a question-and-answer session before the Diet in April 2000, said "the government will deal with any losses with appropriate budget measures." In the event that losses are incurred in relation to the Financial

Reconstruction Law, there is a significant likelihood that the eventual bill will be paid by taxpayers via fiscal outlays.

- 4 Nikkei, January 13, 1998.
- 5 For example, *Financial Times*, November 21, 2002.
- 6 According to the latest available GDP data, growth on a q-q basis was not actually negative for five straight quarters. Instead, the economy contracted in Q2 and Q3 1997 and Q1 and Q2 1998. However, at the time of the Q4 1998 release (March 13, 1999), it was reported that GDP had shrunk for five successive quarters. What is important here is that policy decisions and public opinion at that time were influenced by the data available at the time and not by the subsequently revised data.
- 7 Twenty-one banks received injections of capital in March 1998: Dai-Ichi Kangyo Bank, Fuji Bank, Nippon Kogyo Bank, Yasuda Trust & Banking, Sakura Bank, Sumitomo Bank, Bank of Mitsubishi-Tokyo, Mitsubishi Trust & Banking, Sanwa Bank, Tokai Bank, Toyo Trust & Banking, Asahi Bank, Daiwa Bank, Sumitomo Trust & Banking, Mitsui Trust & Banking, Chuo Trust & Banking, Bank of Yokohama, Hokuriku Bank, Ashikaga Bank, Long-Term Credit Bank of Japan and Nippon Credit Bank (all names as of 1998).
- 8 The following fifteen banks received capital infusions in March 1999: Dai-Ichi Kangyo Bank, Fuji Bank, Nippon Kogyo Bank, Sakura Bank, Sumitomo Bank, Mitsubishi Trust & Banking, Sanwa Bank, Tokai Bank, Toyo Trust & Banking, Daiwa Bank, Asahi Bank, Sumitomo Trust & Banking, Mitsui Trust & Banking, Chuo Trust & Banking and Bank of Yokohama (all names as of 1999).
- 9 Of the 1,815.6 trillion yen capital injected in March 1998, 321.0 billion yen went to buy preferred equity: 99.0 billion yen to Dai-Ichi Kangyo Bank, 32.0 billion yen to Chuo Trust & Banking, 130.0 billion yen to Long-Term Credit Bank of Japan and 60.0 billion yen to Nippon Credit Bank.
- 10 In recent examples, HokuHoku Financial Group, the holding company for Hokuriku Bank and Hokkaido Bank, both of which received public funds, paid 22.0 billion yen to the Deposit Insurance Corporation of Japan in August 2009 to buy back and retire the preferred shares held by that organization. This represented a 2.0 billion yen premium to the initial value of the shares.
- 11 In Responding to the Heisei financial crisis: the role of deposit insurance (in Japanese) (Kinzai Institute for Financial Affairs, 2007).
- 12 When the government sold the two banks, Shinsei and Aozora received injections of public funds of 240.0 billion yen and 260.0 billion yen, respectively, in exchange for preferred equity. The government subsequently converted 120.0 billion yen of its 240.0 billion yen stake in Shinsei into common equity and sold the shares. The remaining 120.0 billion yen is held by the Deposit Insurance Corporation in the form of common equity. Of the government's 260.0 billion yen stake in Aozora, 104.72 billion yen was converted into common equity and sold when Aozora was listed.
- 13 "Paper loss on government-held shares in banks receiving capital injections narrows to 52 billion yen at 10 banks," Nikkei morning edition, July 25, 2009.

- 14 For Shinsei Bank, 120 billion yen of capital was injected by the government in return for preferred shares, which were then converted to 200 million common shares when the bank was re-listed in 2007. The 7.4528 million shares of preferred stock retained by the government since LTCB days were converted to 269.128 million common shares of Shinsei Bank at the end of 2008.
- 15 Deposit Insurance Corporation of Japan, ed., *Response to the Heisei financial crisis: the role of deposit insurance* (in Japanese), Kinzai Institute for Financial Affairs, 2007.
- 16 According to the IMF's "Global Financial Stability Report, April 2009: Responding to the Financial Crisis and Measuring Systemic Risks," central banks in the US, the eurozone and the UK had supplied liquidity totaling 1.95 trillion dollars, while governments in those regions had purchased assets totaling 2.525 trillion dollars and provided guarantees totaling 4.48 trillion dollars. Altogether, government assistance amounted to 8.955 trillion dollars.
- 17 Yamaichi Securities company history committee, *100 years of Yamaichi Securities* (in Japanese), 1998.
- 18 The Bank of Japan Law stipulates that 5 percent of retained earnings at the end of each fiscal period are to be set aside as statutory reserves and added to the BOJ's capital account, with any amount remaining after dividends are paid to be remitted to the national treasury. In the fiscal year ended March 2009, the Bank transferred 15 percent of its retained earnings, or three times the normal amount, to its statutory reserves as a provision against losses related to the financial crisis.
- 19 According to our estimates based on materials made public by the Resolution and Collection Corporation, the RCC acquired assets with a book value of 22,426.6 billion yen from failed institutions for 4,885.0 billion yen and bought assets with a book value of 4,046.0 billion yen from healthy institutions for 355.7 billion yen. The discounts on the purchases from the two groups were 78.2 percent and 91.2 percent, respectively. Loans acquired from failed institutions were estimated by taking asset purchases from 171 failed banks (preliminary data) and adding purchases from Ashikaga Bank and the Shinkumi Federation Bank. Hence, the figures for principal and so on differ substantially from those in Table 4.
- 20 Strictly speaking, the deadline for exercising the loan buyback clauses was three years after the transfer of stock for Long-Term Credit Bank of Japan and three years and one month for Nippon Credit Bank.
- 21 According to the Board of Audit's FY05 Audit Report, the detailed basis for estimating the fiscal burden at 1.45 trillion yen was as follows. When the 20 trillion yen credit guarantee framework was initially established, expected losses of 1 trillion yen were determined by assuming that guarantee payments would amount to 10 percent of the framework and that 50 percent of this figure would be unrecoverable. When another 10 trillion yen was added to the framework, the same process was applied to half this amount to produce expected losses of 250 billion yen. For the remaining 5 trillion yen, the assumed amount of guarantee payments was lowered to 8 percent because credit guarantees issued under this program required the borrower to submit a business improvement plan. The same non-recovery rate of 50 percent was then applied to the product of 8 percent and 5 trillion yen, leading to expected losses of 200 billion yen.
- 22 For example, Nikkei, January 18, 1998, and *Financial Times* Lex column, February 9, 1998.
- 23 "Understanding the Misunderstandings: The Real Story," Chapter 7, pp. 143-167, in R. Koo, *Balance Sheet Recession: Japan's Struggle with Uncharted Economics and its Global Implications*.
- 24 In "Global Financial Stability Report, April 2009: Responding to the Financial Crisis and Measuring Systemic Risks," the IMF estimated the financial crisis would result in total losses of 2,712 billion dollars for US financial institutions, 1,193 billion dollars for European institutions, and 149 billion dollars for Japanese institutions. Combined losses for the three regions were estimated at 4,054 billion dollars. In "Global Financial Stability Report, October 2009: Navigating the Financial Challenges Ahead," as a result of improvements in the market environment, the IMF's estimate of combined global losses from 2007 to 2010 had dropped about 16 percent, to 3,400 billion dollars.
- 25 This article ("Bailouts yield returns for US taxpayers amid risk") broke down risk assets as follows: 2,107.0 billion dollars for the Fed, 248.8 billion dollars for the Treasury and 386.0 billion dollars for the FDIC. Gains were estimated at 16.4 billion dollars for the Fed, 9.5 billion dollars for the Treasury and 9.3 billion dollars for the FDIC.
- 26 Government Accountability Office, "Troubled Asset Relief Program: Status of Government Assistance Provided to AIG," Report to Congressional Committees, September 2009.

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- 3 Board of Audit, FY07 Audit Report, 2008.
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- 7 R. Koo and S. Murayama, *Synchronous global balance sheet recession: is there a future for financial capitalism?* (in Japanese), Tokuma Shoten, 2009.
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- 19 United States Government Accountability Office, “Troubled Asset Relief Program: Status of Government Assistance Provided to AIG,” Report to Congressional Committees, September 2009.
- 20 “Bailouts yield returns for US taxpayers amid risk,” *The Wall Street Journal*, September 2, 2009.

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