The Global Financial Crisis: Lessons from Japan's Lost Decade of the 1990s

Dick K. Nanto
Specialist in Industry and Trade

May 4, 2009

Congressional Research Service
7-5700
www.crs.gov
RS22960

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

During the 1990s and into the early years of the 21st century, Japan experienced prolonged recessionary economic conditions triggered by the bursting of a bubble in its equity and real estate markets and an ensuing banking crisis. Although the current global financial crisis is much more than Japan's "Great Recession" writ large, many have turned to Japan's experience to either support or oppose various policies and to improve general understanding of the underlying forces of financial crises.

In fiscal policy, the Japanese experience has been used both as an example of stimulus packages that did not work and as a rationale for making stimulus packages large enough to help ensure that they would work. Fiscal stimulus did have the desired economic effect in Japan, but it mainly substituted for depressed bank lending and consumer spending. Recovery had to wait until the balance sheets of banks and households had been rehabilitated. Japan also shifted its policy focus toward reducing its fiscal deficit "too early" after authorities thought the recession had ended in 1996. The ensuing increase in taxes along with reduced fiscal stimulus (along with the 1997-98 Asian Financial Crisis) pushed the economy back into recession. In monetary policy, the Bank of Japan's zero-interest rate policy demonstrated the futility of attempting to induce investment and consumer credit purchases through low borrowing rates. The Japanese experience also may be instructive in resolving problems of companies that technically are bankrupt but are being kept alive through outside financial support and in dealing with nationalization and subsequent privatization of insolvent banks. Japan's case also illustrates that national debt may continue to rise for years after the financial crisis has ended.

With respect to rehabilitating banks, Japan's five bank rescue packages may hold some lessons for the United States. Most of the packages were administered by the Deposit Insurance Corporation of Japan (DICJ). The packages had an announced value of $495 billion. The DICJ reports that it provided $399 billion to Japan's troubled financial institutions of which it has recovered $195 billion. Overcoming the crisis in Japan's banks took a combination of capital injections, new laws and regulations, stronger oversight, a reorganization of the banking sector, moderate economic recovery, and several years of banks working off their non-performing loans. This report will be updated as circumstances warrant.

Contents

Figures

Tables

Contacts

The global financial and economic crisis is unprecedented in many ways yet not so unique that the experience of other countries is bereft of lessons to be learned. Among the major industrialized economies of the world, Japan's lost decade of the 1990s[1] (what some call Japan's Great Recession[2]), when it encountered a period of prolonged stagnation caused by the bursting of speculative bubbles and a prolonged banking crisis, is often cited as relevant for policymakers today. The drop in prices on Japan's equity markets combined with a sharp decline in land prices generated losses of about ¥1,500 trillion ($14 trillion) or roughly three times Japan's gross domestic product at that time.[3] As of early 2009, one estimate is that the current global financial crisis may have generated losses in the capital valuation of financial assets world-wide of as much as $50 trillion or about the equivalent of the combined gross domestic product (GDP) of the world.[4] (As equity markets recover, some of these losses may be reversed.)

A study by the Joint Economic Committee of Congress concluded that "a series of fiscal and monetary blunders by the Japanese government transformed the inevitable post-bubble recession into a "lost decade" of deflation and stagnation.[5] When the U.S. Treasury planned the $700 billion rescue package (Emergency Economic Stabilization Act of 2008, P.L. P.L. 110-343) to address the U.S. financial crisis, it reportedly examined the experience of Japan as that country grappled with its banking crisis in the 1990s.[6]

In fiscal policy, the Japanese experience has been used both as an example of stimulus packages that did not work and as a rationale for making stimulus packages large enough to help ensure that they would work. In monetary policy, the Bank of Japan's zero-interest rate policy demonstrated the futility of attempting to "push a string" (induce investment and consumer credit purchases through low borrowing rates). It also demonstrated the importance of strengthening the balance sheets of banks in order for lending to recover and the role of the Deposit Insurance Corporation of Japan in helping to rid the system of "toxic bank assets." The Japanese experience also may be instructive in resolving problems of "zombie corporations" (companies that technically are bankrupt but are being "kept alive" through loans and other financial support), in dealing with nationalization and subsequent privatization of insolvent banks, and in coping with deflation. Japan financed its fiscal stimuli by relying on issuing new debt. As a result, government debt as a percent of gross domestic product has soared to 167% of GDP.

The Japanese experience, combined with that of the Great Depression, has provided a new framework for understanding and analyzing financial crises and policy. Traditionally, economists have viewed the causes of the Great Depression through a macroeconomic lens and have focused

[1] Stagnant economic conditions in Japan actually lasted through 2002, in part due to the 2001 U.S. recession.

[2] Kenneth N. Kuttner and Adam S. Posen, "The Great Recession: Lessons for Macroeconomic Policy from Japan," in Kenneth N. Kuttner, Adam S. Posen, Stanley Fischer, and John Makin, *Brookings Papers on Economic Activity*, 2001, 2, The Brookings Institution, Washington, DC, pp. 93-183.

[3] Richard C. Koo, *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession* (Singapore: John Wiley & Sons [Asia]), 2008), p. 16.

[4] Claudio M. Loser, *Global financial turmoil and Emerging Market Economies: Major contagion and a shocking loss of wealth?*, Asian Development Bank, Manila, Philippines, c2009, Discussion Paper. p. 7. The $50 trillion decline reflects the reduced capitalization of stock markets, loss in the value of bonds, supported by mortgages and other assets, and the depreciation of many currencies with respect to the US dollar.

[5] U.S. Congress, Joint Economic Committee, *Policy Lessons from Japan's Lost Decade,* 110th Cong., 2nd sess., December 2008, Research Report #110-30, released by Hon. Jim Saxton.

[6] Faiola, Anthony and David Cho. "Alternative Solutions Diverge From Administration's Approach," *The Washington Post*, September 24, 2008. p. A.1.

on monetary and fiscal policy. In terms of monetary policy, the conclusion of scholars has been that a contraction in the money supply was a primary cause of the length and severity of the Great Depression and that the depression could have been avoided through a more judicious application of monetary policy. This interpretation and its implicit policy recommendations were outlined by Ben Bernanke when he was a member of the Federal Reserve Board in a 2004 lecture on role of the Federal Reserve and of monetary factors in the origin and propagation of the Great Depression.[7] On the fiscal policy side, particularly after the publication of John Maynard Keynes' *General Theory of Employment, Interest, and Money,* economists have pointed out that the depression ended only after spending for war provided the increase in aggregate demand needed for recovery. In the case of Japan's lost decade of the 1990s, policy analysts advocated expansionary monetary and fiscal policies but also added a microeconomic aspect. They argued that Japan needed to make structural changes in the form of deregulation and privatization of government enterprises in order to make its economy more efficient.

For policymakers, the framework for analysis and the lens through which a financial crisis is viewed often provides the rationale for subsequent policy prescriptions. If one believes that misguided monetary policy caused and prolonged the Great Depression, then policy prescriptions tend to focus on actions that will inject reserves into the banking system and increase the supply of money in the economy. If one sees the problem as a lack of aggregate demand, the implicit policy prescription tends to focus on fiscal stimuli. If one believes that the problem is structural—on the supply side—then the remedies tend toward deregulation and economic efficiency.

In Japan's case, a study by economist Richard Koo argues that Japan's problem was not completely monetary, fiscal, or structural. He presents evidence that the Japanese economy suffered a "balance sheet recession" and goes a step further by applying the balance-sheet approach to analysis of the Great Depression and the current global financial crisis. He asserts that a balance-sheet analysis explains the problem better than relying on traditional macro- and microeconomic analysis. Koo's premise is that a financial crisis that generates huge losses in wealth (financial assets in particular) causes both firms and households to place priority on repairing their balance sheets.[8] For firms, such a priority implies behavior to minimize debt rather than to maximize profit. For households, it implies increasing savings at the expense of consumption. Under a balance sheet recession, lowering interest rates and increasing the money supply do not generate comparable increases in lending because neither households nor firms are inclined to add more debt until their liabilities are brought more into balance with their lower levels of assets. [9] Under a balance-sheet recession, once monetary policy has reached a limit (zero interest rates), direct government purchases of debt and removing debt from company or household balance sheets tends to be more effective than injecting funds into banks to induce them to lend when potential borrowers are hunkering down and trying to rebalance their assets and liabilities. Also, if households and businesses are not willing to spend, then stimulative fiscal policy may be the next-best option in promoting economic recovery. The London *Economist* has

[7] Ben Bernanke, *Money, Gold, and the Great Depression*, Federal Reserve Board, Remarks by Governor Ben S. Bernanke At the H. Parker Willis Lecture in Economic Policy, Washington and Lee University, Lexington, Virginia , March 2, 2004. Bernanke cited Milton Friedman and Anna Schwartz's book, *A Monetary History of the United States, 1867-1960,* written in 1963, as a basis for much of his analysis.

[8] For a brief review of U.S. bank balance sheet problems, see CRS Report RL34730, *Troubled Asset Relief Program: Legislation and Treasury Implementation*, by Baird Webel and Edward V. Murphy, p. 25ff.

[9] Richard C. Koo, *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession* (Singapore: John Wiley & Sons [Asia]), 2008).

noted that "history suggests that balance-sheet recessions are long and that the recoveries which eventually follow them are feeble.[10]

This report reviews the major actions by the Japanese government in dealing with its crisis and highlights some of the lessons learned from their experience.

Origins of Japan's Banking Crisis

Like the current U.S. financial crisis, Japan's began with stock market and real estate bubbles. During the latter half of the 1980s, Japan's monetary authorities flooded the market with liquidity (money) in order to enable businesses to cope with the rising value of the yen. Businesses did invest in new capital equipment to become more competitive in international markets, but the excess liquidity also found its way into speculation in Japan's stock market, in real estate ventures, and in foreign investments. At that time, the market value of both land and equities was rising so fast that investors and speculators could hardly miss. Investors tended to ignore risks. The larger mistake for them was not to borrow and invest and consequently not be positioned to reap the returns from rising markets. Banks considered most loans with real estate as collateral as being unquestionably secure. Then the bubbles burst.

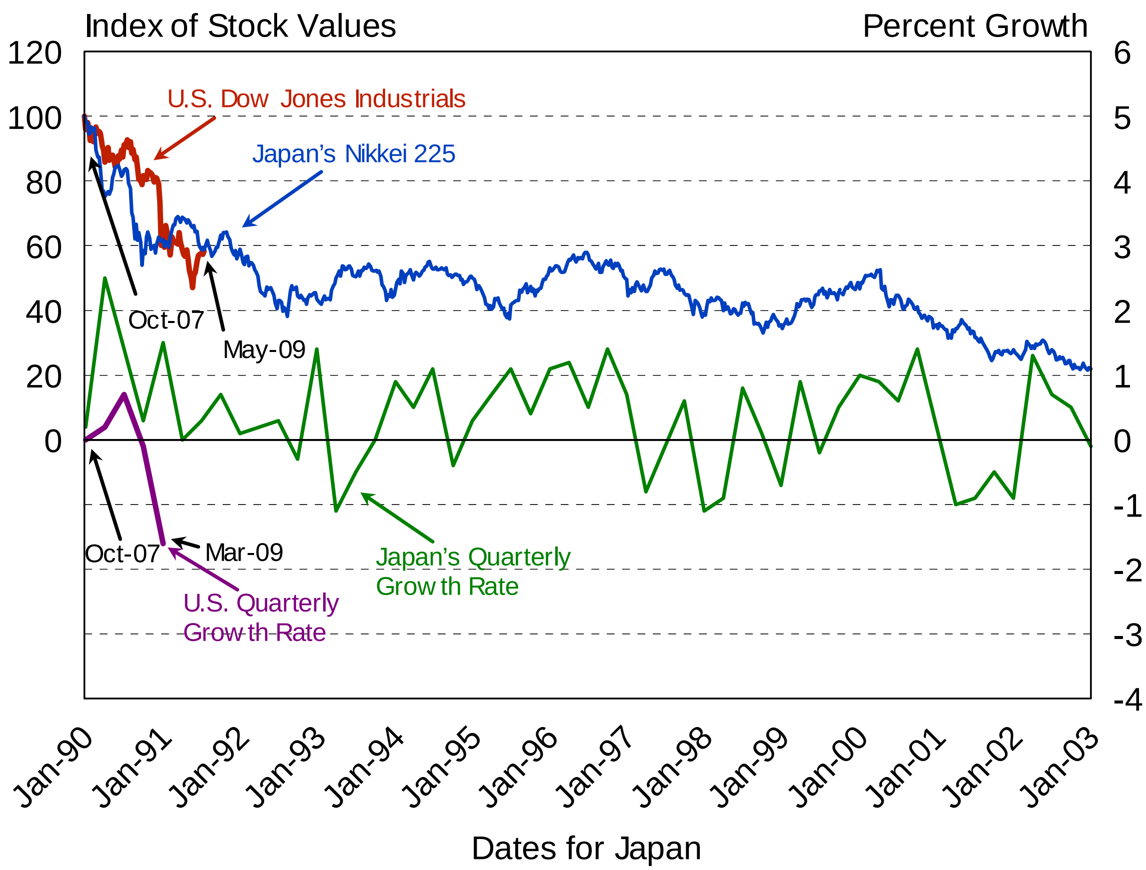
As indicated in **Figure 1**, Japan's Nikkei stock market average had peaked in 1989 (at 40,000) and dropped by 50% in one year and more than 78% (to about 8,700) by the end of 2002.[11] Japan's banks are allowed to hold equities as part of their capital base. The value of the unrealized capital gains on such stock holdings dropped from $355 billion in 1989 to about $40 billion in 2002. This drastically reduced key capital reserves for many banks. Also, by 2000, commercial land values in the six major metropolitan areas had fallen by 80% from their peak level in 1991. Residential and industrial land values also had fallen by nearly 20%.[12]

[10] "A Glimmer of Hope?," *The Economist* (London), April 25, 2009, p. 13.

[11] In early May 2009, the Nikkei was at about 8,950.

[12] Bank of Japan. *Financial and Economic Statistics Monthly*, various issues.

Figure 1. Japan's Lost Decade of the 1990s Compared with the Current U.S. Financial Crisis (October 2008-April 2009) Stock Values and Quarterly Growth Rates



Source: Factiva Market Indices; Global Insight; Japan, Cabinet Office, Economic and Social Research Institute.

Notes: Japan's Nikkei 225 Stock Market Index vs. the U.S. Dow Jones Industrial Average. Growth rates are quarterly changes (not annualized).

The bursting of this economic bubble caused the value of collateral underlying many bank loans to drop below the value of their loan principal. Also, commercial real estate ventures, especially office buildings, became unprofitable as rents fell. What began as a financial and banking crisis soon caused the overall Japanese economy to slow. As the economy stagnated, companies faced excess capacity, excess inventories, and lower profits. Also as more and more loans turned sour, more and more of the underlying real estate had to be sold at "bargain" prices. In 1995, Japan's banks reported $280 billion in non-performing loans,[13] but this figure turned out to be vastly understated.[14]

Unlike the situation in the United States under the current global economic crisis, Japanese financial institutions tended not to bundle and repackage their loans as collateralized debt obligations or rely as extensively on derivatives and credit default swaps. Mortgage defaults in Japan also tended to be on commercial property, not on private residences. The country also had

[13] Japan. Financial Services Agency.

[14] For details, see CRS Report RS20994, *Japan's Banking "Crisis"*, by Dick K. Nanto.

no subprime or Alternate-A loans, but lending in Japan, particularly commercial lending, often was relational (based on connections and relations) rather than being purely market based. Therefore, many commercial loans had been extended partly because of close corporate ties (rather than arms-length due diligence) and turned sour. Before the definition of a non-performing loan was tightened, moreover, Japanese banks often extended small additional loans to borrowers in default in order for the borrower to make a payment of interest and to keep the loan from being reported as non-performing.

The adverse effects of the bursting of Japan's real estate and stock bubbles soon spread to the entire economy. Economic growth rates fell from more than 5% per year during the late 1980s to less than 2% per year during the first half of the 1990s with a slight increase in growth in 1996 as the economy began a temporary recovery but then dropped into recession in 1998 and 1999 as fiscal policy tightened and the 1997-98 Asian Financial Crisis developed. Growth remained anemic through the early years of the new century as the recession of 2001 took its toll on Japan too. After 2001, economic growth rates did not recover to their pre-crisis levels. For Japan, the lost decade of the 1990s became an extended L-shaped recession (rather than a U- or V-shaped downturn and recovery).

Japan's Policies to Cope with the Banking Crisis

The bursting of Japan's stock and real estate bubbles in 1989 and 1990 had been induced by the Bank of Japan by a tightening of monetary policy (mainly through increases in interest rates), although it is not clear that the monetary authorities anticipated the severity and depth of the downturn in the economy. As the banking crisis developed, the government's initial strategy was forbearance (patience while not forcing banks to report paper losses or disclose all non-performing loans), protecting depositors by strengthening deposit protection, providing emergency liquidity, and assisting in mergers of some failed institutions. The basic attitude at the time was that Japan's banking system was like a convoy of ships. The government oversaw and intervened extensively to ensure not only that banks followed its policies but that stronger banks helped weaker banks in order to keep the convoy of domestic banks moving along together. If possible, no major bank would be allowed to sink (although some eventually did).

An issue related to forbearance and the bank convoy problems was the "community banking mentality" under which banks tended to view clients as a part of their community and to eschew short-term profit maximization in favor of maximizing profits over the lifetime of the borrowing firm. This helps to explain why commercial banks continued to lend to firms that were already in default in their repayments ("zombie companies"), a practice that often resulted in even more non-performing loans being generated.

In 1992, the government authorized the creation of the Cooperative Credit Purchasing Company (CCPC) to help banks dispose of non-performing loans. This was patterned somewhat after the Resolution Trust Corporation in the United States (that operated from 1989-1995) and dealt only with loans with real estate as collateral.[15] In 1993, the top 21 banks sold ¥1.3 trillion in non-performing loans to the CCPC, an amount that accounted for 54% of all loans written off in that year. The way that the CCPC worked was that the selling bank would extend credit to the CCPC

[15] [Japan. Ministry of Finance.], "*Notice of Establishment of Cooperative Credit Purchasing Company, Limited*," January 1993, 8 p.

for the entire purchase cost of the non-performing loan plus all processing expenses. The bank then would be able to count the gap between the loan principal and the selling price as a capital loss for tax purposes. When the collateral underlying the loan was sold, the CCPC then repaid the credit extended by the selling bank.[16] About half of the underlying value of the non-performing loans was recovered by the CCPC through sales of the underlying assets.

The hope of the government was that if it could keep banks operating, their profits from operations and capital gains from equity holdings could fund the write-offs of bad loans. Even with the decline in stock prices, banks had acquired much of their holdings of equities years before at par value, and most still carried unrealized capital gains.[17] In addition, the low (and from 1995 zero) interest rate policy of the Bank of Japan allowed banks to generate higher-than-usual profits by the larger difference between their borrowing and lending rates of interest. Despite billions of dollars in write-offs, however, nonperforming loans appeared as fast as they were being taken off the books. Over the crisis, Japan's banks wrote off a cumulative total of $318 billion (¥37.2 trillion) in non-performing loans, but new ones appeared so fast that the total outstanding amount continued to increase and peaked in March 2002 at $330 billion (¥43.2 trillion) or 8.4% of total lending.[18]

On the fiscal policy side, Japan's government announced stimulus packages in 1992, twice in 1993, in 1994, and twice in 1995. (See **Table 1**.) In addition, the government's budget provided considerable fiscal stimulus. The new spending in each package amounted to between 0.3% and 1.5% of GDP. The economy responded after 1993 by slowly beginning to recover.

In 1995, five years into Japan's crisis, the situation worsened following the bankruptcy of several specialized housing loan companies (*jusen*). In 1996, the government made its first injection of capital to purchase assets from ailing housing lenders. This rescue operation proved to be quite politically unpopular and may have contributed later to tentativeness by the government to take stronger policies to combat the recession.

According to a leading Japanese economist, by 1995 the problem of the burst speculative bubble that caused the failures of several financial institutions was over. The "sorry state of the Japanese economy since 1995 [was] the result of weak fiscal, monetary, and supervision policies." A series of policy errors by Japan made the small problem of a burst bubble much larger than need have been the case.[19]

In 1996, many thought the economy was well on the road to recovery, but much of the rise in aggregate demand could be traced to the spending for reconstruction in the aftermath of the Kansai earthquake and to consumers buying durables in anticipation of a rise in the consumption tax (national sales tax) that occurred in 1997.

[16] The directors of the CCPC included representatives from the major banks, trust companies, and other financial institutions. For details on the structure of the CCPC, see Mitsubishi Bank Announces Basic Structure of 'Purchasing Entity.' Mitsubishi Bank press release. October 30, 1992. Report on Tax Compromise, Stimulus Package. Kyodo News wire service. February 8, 1994.

[17] Japan had no mark-to-market accounting rule that required assets to be valued at current market prices.

[18] Japan. Financial Services Agency. Quoted in Organization for Economic Cooperation and Development, *OECD Economic Surveys, Japan (Paris, OECD Publishing) Vol. 2006/13, July 2006*, p. 53.

[19] Takatoshi Ito, "Retrospective on the Bubble Period and Its Relationship to Developments in the 1990s," *The World Economy*, vol. 26, no. 3 (March 2003), pp. 298-299.

By 1997, Japan's banking sector was in a full systemic crisis. The government responded by making $250 billion (¥30 trillion) available of which $108 billion (¥13 trillion) went to banks and $142 billion (¥17 trillion) to the Deposit Insurance Corporation of Japan. In 1998, the government bought the bankrupt Long-Term Credit Bank[20] and Nippon Credit Bank.[21] These two banks had no consumer deposit system but borrowed funds on financial markets to lend on a long-term basis to businesses. These banks were eventually sold to private investors. The government also took over the management of many financial institutions.

In March 1998, the government injected another $14 billion (¥1.8 trillion) to bolster bank balance sheets and in March 1999 injected another $62.5 billion (¥7.5 trillion). By October 1998, the government had invested $495 billion (¥60 trillion yen), or 12% of gross domestic product, for the financial support of banks.[22]

Through a combination of capital injections, new laws and regulations, stronger oversight, a reorganization of the banking sector,[23] moderate economic recovery, and several years of banks working off their non-performing loans, the Japanese banking sector eventually recovered. By September 2005, the banks reported 3.5% of their total lending as non-performing, a level considered to be tolerable.

In combating the effects of the crisis, the Japanese government pursued a combination of monetary policy, direct intervention, and fiscal stimulus packages. As shown in **Table 1**, the government announced nine stimulus packages during the 1990s. (There also was a negative stimulus in April 1997 when the government raised its consumption tax [national sales tax] from 3% to 5% in an attempt to reduce its fiscal deficit.) The total amounts for the packages are somewhat misleading because some of the packages incorporated items that had already been included in previous budgets or packages. Other items, such as funds for construction, may not have been actually spent until the next fiscal year. Also, parts of the packages awaited parliamentary approval and may not actually have been funded. The Japanese government, therefore, usually indicated how much of each package was new spending. The Japanese government referred to the new spending as "real water" (*mamizu*). The figures for the percentages of gross domestic product (GDP) listed in the "Total" column, therefore, should be considered to be upper bounds. The table also lists the percentages of GDP based on the share of new spending only. Note that in 1993, 1995, and 1998 there were two stimulus packages announced per year. In those cases, the combined total stimulus as a percent of GDP was 4.0% for 1993, 3.4% for 1995, and 8.4% for 1998.

[20] In 2000, sold to the New York-based Ripplewood Holdings and other investors and changed name to Shinsei Bank.

[21] In 2000, sold to private investors and changed name to Aozora Bank, Ltd.

[22] For the United States, 12% of GDP in 2008 dollars is about $1.7 trillion.

[23] The Industrial Bank of Japan, Daiichi Kangyo, Fuji, and Yasuda Trust Banks merged to form the Mizuho Financial Group (2003). The Bank of Tokyo-Mitsubishi, Mitsubishi Trust Bank, and Nippon Trust Bank merged to form the Mitsubishi Tokyo Financial Group (2001). Sumitomo Bank and Sakura Bank merged to form the Sumitomo Mitsui Financial Group (2002). Sanwa Bank, Tokai Bank, and Toyo Trust & Banking merged to form UFJ Holdings (2001). Asahi Bank merged with Daiwa Bank to form Resona Holdings (2001).

Table 1. Japan's Fiscal Stimulus Packages in the 1990s

(In billions of dollars and trillions of yen unless otherwise indicated)

						Percent of GDP	
Date Announced	**Infra-structure**	**Tax Cuts**	**Other**	**Total**	**New Spending Share (%)**	**Total**	**New Spending Only**
Aug. 28, 1992	$47.3 (¥6.3)	—	$33.8 (¥4.5)	$ 81.1 (¥10.7)	39.6	2.1	0.8
Apr. 13, 1993	$67.6 (¥7.6)	$1.8 (¥0.2)	$48.0 (¥5.4)	$117.4 (¥13.2)	33.4	2.7	0.9
Sep. 16, 1993	$19.0 (¥2.0)	—	$39.8 (¥4.2)	$ 58.8 (¥6.2)	23.4	1.3	0.3
Feb. 8, 1994	$42.7 (¥4.5)	$55.9 (¥5.8)	$46.4 (¥4.9)	$145.0 (¥15.3)	?	3.0	?
Apr. 14, 1995	$13.1 (¥1.1)	—	$41.9 (¥3.5)	$ 55.0 (¥4.6)	56.3	1.0	0.6
Sep. 20, 1995	$64.7 (¥6.5)	—	$62.7 (¥6.3)	$127.4 (¥12.8)	62.5	2.4	1.5
Apr. 24, 1998	$58.4 (¥7.7)	$34.9 (¥4.6)	$33.4 (¥4.4)	$126.6 (¥16.7)	?	3.3	?
Nov. 16, 1998	$67.3 (¥8.1)	$49.8 (¥6.0)	$81.4 (¥9.8)	$198.5 (¥23.9)	?	5.1	?
Nov. 11, 1999	$64.8 (¥6.8)	$57.1 (¥6.0)	$49.5 (¥5.2)	$171.4 (¥18.0)	36.1	3.9	1.4
Oct. 20, 2000	$43.4 (¥4.7)		$58.2 (¥6.3)	$101.6 (¥11.0)			

Source: Economist Intelligence Unit, Country Report, *Japan, Main Report*, February 9, 1999. OECD, *Economic Outlook*, December 1998. Japan Economic Institute, *JEI Report*, November 20, 1999. Hiroshi Yamagiwa, "Government Unveils Stimulus Package, *Japan Times* (International), November 16-30, 1999, p. 11.

Net Cost of the Bank Rescue Operations

The various bank rescue operations in Japan were administered primarily by the Deposit Insurance Corporation of Japan (DICJ). When a financial institution fails, the DICJ may extend assistance to another financial institution that purchases assets or merges with the failed financial institution in order to facilitate the transaction. The DICJ also works to prevent financial institutions from failing. The forms of assistance include a direct money grant, a loan or deposit of funds, purchase of assets, a guarantee or assumption of debts, a subscription of preferred stock, and loss sharing. Not all of the activities of the DICJ, however, are related to the bailout packages. It also has ongoing operations associated with its traditional function of insuring bank deposits. The annual reports of the DICJ, however, provide detail on the disposition of $399 billion of the $495 billion in funds announced in Japan's financial assistance packages.

As shown in **Table 2**, as of March 2007, the DICJ had provided financial assistance in the amount of $399 billion. This included 180 cases with grants of $159 billion, asset purchases of $83 billion, capital injections of $106 billion, and other assistance (mostly loans) of $51 billion.

The grants were funded by $110 billion (¥13 trillion) in DICJ bonds issued (repaid from taxpayer funds) and from premiums from deposit insurance. Of the asset purchases of $83 billion, the DICJ recovered $79 billion. The asset purchases included $54 billion in assets from failed financial institutions (of which $60 billion had been recovered) and $25 billion in shares purchased (of which $14 billion had been recovered).

Table 2. The Deposit Insurance Corporation of Japan's Assistance to Financial Institutions and Funds Recovered as of March 2007

Type	Amount Provided	Amount Recovered
1. Grants	$159 billion (¥18.6 trillion)	None
2. Purchase of Assets	$83 billion (¥9.8 trillion)	$79 billion (¥9.3 trillion)
Of which:		
Purchase of assets from failed institutions	$54 billion (¥6.3 trillion)	$60 billion (¥7.0 trillion)
Purchase of shares from banks under public management	$25 billion (¥2.9 trillion)	$14 billion (¥1.6 trillion)
3. Capital Injections Under Five Bailout Packages	$106 billion (¥12.4 trillion)	$75 billion (¥8.7 trillion)
4. Other	$51 billion (¥6.0 trillion)	$41 billion (¥4.8 trillion)
Of which:		
Loans	$36 billion (¥4.2 trillion)	$36 billion (¥4.2 trillion)
Total	$399 billion	$195 billion

Source: Deposit Insurance Corporation of Japan, *Annual Report 2006*, p. 70.

Note: All values converted at the March 2007 exchange rate of 116,26 yen per dollar.

Capital injections included purchases of preferred/common stock and subordinated bonds and the extending of subordinated loans.

Capital injections of $106 billion came under five different rescue packages and included subscriptions to preferred or common stock, purchases of subordinated bonds, and the extending of subordinated loans. The DICJ had injected capital into 25 different banks. As of March 2007, $31.3 billion of these assets was still held by the DICJ in the form of preferred shares, common shares, and subordinated loans.

The $51 billion in the "Other" category included loans to banks which were under special public management, taking delivery of assets under warranty for latent defects, compensation for losses, lending to assuming financial institutions, and debt assumption. The last capital injection reported by the DICJ was in March 2003.[24]

[24] Deposit Insurance Corporation of Japan. *Annual Report 2006*, p. 19, 91. Note: 65% of the outstanding balance of shares was in the Resona Bank. In 2006, the DICJ received $132 million in dividends from these Resona Bank shares but paid $57 million in interest on its bonds floated to finance the purchase of the shares.

The Resolution and Collection Corporation (RCC), a subsidiary of the DICJ, borrows funds from the DICJ to purchase and dispose of assets (within three years) from sound financial institutions and some under special public management. As of March 2007, the RCC had purchased assets with claims of $34.5 billion (¥4.0 trillion) for a discounted price of $3.0 billion (¥355.7 billion). These assets had been sold for $5.2 billion (¥609.4 billion) for a gain of 172% for the RCC. In essence, the RCC paid about 9 cents on a dollar for the troubled assets and was able to dispose of them at a profit. The DICJ consults with the Purchase Price Examination Board (an advisory body to the DICJ) with respect to the price it pays for assets. The RCC made no purchases in FY2006 (ending in March 2007).[25]

Deficit Spending and the National Debt

As Japan's economy stagnated and the size of the government's fiscal stimulus escalated, Japan's government debt also soared. This is consistent with other financial crises in the world in which public debt typically doubles, even adjusting for inflation, in the three years following a crisis.[26] As shown in **Figure 2**, Japan's central government debt as a percent of GDP rose from 47% in 1990 to 65% in 1995 and to 106% in 2000. By comparison, in 1992, the percentages for both the United States and Japan were at 48%, while in 2008 the United States was at 40% while Japan was at 167%.

In economic theory, there is what is called Ricardian equivalence. Named after English economist David Ricardo (1772-1823), the Ricardian equivalence theorem asserts that government deficits are anticipated by individuals who increase their saving because they realize that borrowing today has to be repaid later.[27] The implication of this theorem is that when a government tries to stimulate demand by increasing government spending to be financed by debt, total demand remains unchanged because the public will save funds from the extra government spending in order to pay for future tax increases that will be initiated to pay off the debt.

One analysis of Japan's experience in the 1990s, however, concluded that although Ricardian equivalence effects did exist, they were not large enough to be relevant to fiscal policy. In other words, fiscal stimulus packages had multiplier effects of about the size expected despite the relatively high saving rates in Japan and public awareness of the rising government debt. Even "wasteful" public spending had the expected multiplier effect. As for tax cuts, those targeted to the most liquidity constrained tended to have the largest effects.[28] Another analysis concluded that the fiscal stimulus over the course of the 1990s was necessary since the limitations on monetary stimulus (zero interest rates) left little choice but to do so. However, by pursuing stimulus without a more vigorous effort to clean up the non-performing loan problem or broader economic deregulation, the impact of fiscal deficits on restoring growth had been muted.[29]

[25] *Ibid.*, p. 22, 70, 84.

[26] Kenneth Rogoff, "Not a Pretty Picture," *International Economy*, vol. XXIII, no. 1 (Winter 2009), p. 76.

[27] http://www.economyprofessor.com/economictheories/ricardian-equivalence-theorem.php.

[28] Kenneth N. Kuttner and Adam S. Posen, "The Great Recession: Lessons for Macroeconomic Policy from Japan," in Kenneth N. Kuttner, Adam S. Posen, Stanley Fischer, and John Makin, *Brookings Papers on Economic Activity*, 2001, 2, The Brookings Institution, Washington, DC, p. 157.

[29] Edward J. Lincoln, *Japan: Long-term Budget Challenges*, Council on Foreign Relations, Paper prepared for the conference on the Long-Term Budget Challenge: Public Finance and Fiscal Sustainability in the G-7, June 2-4, 2005, Washington, DC, May 2005, p. 26.

In 1996, when Japanese authorities thought the recession might be over, attention turned toward "reconstructing government finances" (reducing the budget deficit). By 1995, the central government financed 28% of its budget through borrowing. Japan's Fiscal Structural Reform Act, implemented from Japan's fiscal year (JFY) 1997, included targets of reducing the ratio of government debt to Gross Domestic Product to 60% and the ratio of the government deficit to GDP to 3% by the year 2003.[30] This tightening of fiscal policy, however, apparently occurred too soon and is thought to have prolonged the recession.[31] As one analysis concluded, the government had erred in overestimating the strength of the economic recovery in 1996.[32] By 2003, instead of 60%, the government debt-to-GDP ratio had risen to 141%, and instead of 3%, the government deficit to GDP ratio had increased to 5.4%.

The Japanese experience also highlights the great difficulty in reducing the "debt burden" in an economy that continues to stagnate. Even during the 2002-2007 period of relatively strong economic growth, the size of the national debt continued to grow.

The servicing of the national debt in Japan requires both interest payments and payments for redemptions plus administrative costs. The Japanese government reports two categories of expenditures for servicing the debt. The first is Interest Paid on the debt and the second is National Debt Service (also referred to as Bond Expenditures in the budget). National Debt Service includes (1) interest paid; (2) redemption of the national debt (an amount equal to 1.6% of the total government bonds outstanding at the beginning of the previous fiscal year and an amount not less than half of any surplus in the government account for each of the preceding two fiscal years); and (3) administrative expenses.[33]

The bottom of **Figure 2** shows interest payments as a percentage of federal government expenditures for the United States and Japan. For Japan, the share of expenditures for interest has declined from about 17% in the early 1990s to 11.5% in 2007. This decline occurred despite Japan's ballooning national debt primarily because of the drop in interest rates as part of the government's monetary policy. For the United States, the share of interest in outlays also fell from around 15% for most of the 1990s to 8.3% in 2008. The question for both nations is whether this trend can continue given the large fiscal deficits being incurred in 2009. In particular, will investors have to be coaxed to hold a larger share of government bonds in their portfolios with higher rates of interest and will they have to be compensated for what may be an increasing risk that governments will inflate away the value of their assets or even default on debts in the future.

---

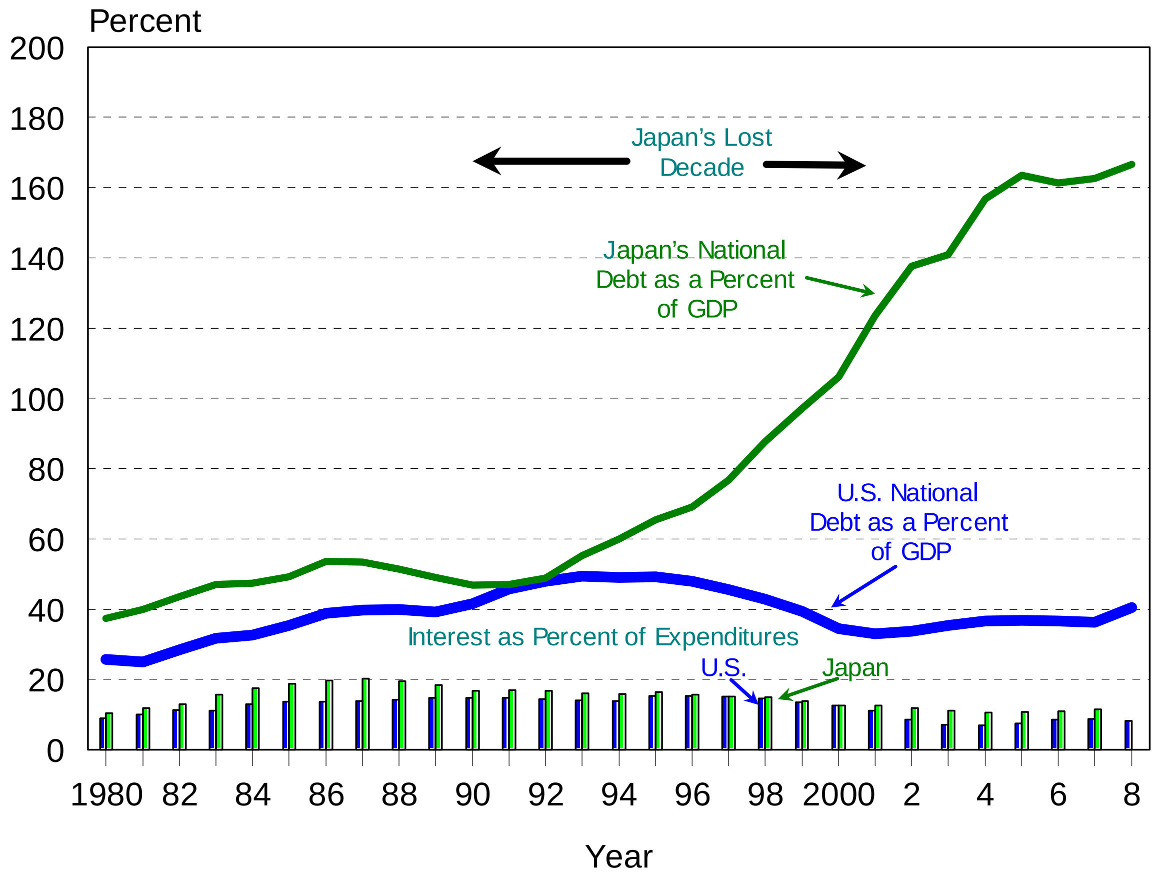
[30] Toshihiro Ihori, "Japan's Fiscal Policy: Sustainability of Government Deficits," *Seoul Journal of Economics*, Spring 2004.

[31] Kuttner and Posen, "The Great Recession," p. 157.

[32] Lincoln, *Japan: Long-term Budget Challenges*, p. 20.

[33] In JFY2001, National Debt Service consisted of ¥6,291.3 billion ($51.8 billion) for redemptions, ¥9,777.9 billion ($80.5 billion) for interest, and ¥214.8 billion ($1.8 billion) for administrative expenses.

Figure 2. Japan's and U.S. Federal Government Debt as a Percent of Gross Domestic Product and Interest Payments as a Percent of Government Expenditures



Source: Congressional Research Service using OECD statistics http://stats.oecd.org and Japan Ministry of Finance (for 2007-2008 Japanese data) for National Debt data.

Notes: Data do not include local government debt or government guaranteed debt.

Lessons Learned

The following are various lessons and observations that observers have gleaned from the Japanese experience.

- Authorities underestimated the nature and seriousness of the banking problem at first. Most thought the financial problems would resolve themselves through economic growth and by keeping central bank interest rates low in order to increase bank margins and profitability.
- There was a slow recognition of the extent of non-performing loans and the carrying of "zombie" firms that technically were bankrupt but were kept alive by banks. This delayed resolution of the problem.
- Transparency and an updating of definitions and reporting requirements with respect to non-performing loans was important in realizing the true extent of the

problems. Many of the rescues of ailing financial firms by a healthier financial institution required a government injection of capital in some form.

- There appeared to be a lack of domestic or external constraints and of political leadership that would have urged authorities to take more decisive action earlier.[34]
- The government began by creating new institutions to handle emergency financial assistance but later transferred such activities to the Deposit Insurance Corporation of Japan (DICJ), an institution that already was working with troubled financial institutions. The DICJ also was given permanent authority to assist ailing financial institutions when so ordered by the Prime Minister.
- The Japanese government injected capital into financial institutions in several ways depending on the situation. In most cases, the DICJ could use its discretion in determining the nature of the assistance.
- Troubled assets were bought at a steep discount from their face value from sound financial institutions (to inject capital) and disposed of without unduly disturbing markets—usually within three years. The two banks that were nationalized were later sold to private investors. Capital injections also took the form of subscriptions to stock, grants, and subordinated loans.
- Even with the $495 billion financial support packages, between 1998 and 2003, Japan's banks wrote off some $318 billion in non-performing loans. The burden was shared.
- Government holdings of corporate shares have generated dividend income and capital gains for the DICJ.
- Since there are fewer banks in Japan, the authorities could focus recovery efforts on several large banks and fewer than 200 smaller financial institutions (there are about 8,500 banks in the United States) which facilitated information gathering and coordination.
- When Japan announced an early financial rescue package, it placed stringent conditions on the assistance that banks were unwilling to accept. The net result was that the banks ignored the package and tried to bolster their balance sheets by not lending. This was seen as worsening the economic conditions for the country.[35] Most of the assistance to failing institutions, however, carried conditions that were enforced by the DICJ.
- New technologies, globalization, and the blurring of boundaries between types of financial products and institutions made risk management increasingly difficult for financial regulators.[36]

---

[34] Kawai, Masahiro. "Reform of the Japanese Banking System." *International Economics and Economic Policy*. Heidelberg: Dec. 2005. Vol. 2, Issue 4; p. 307ff.

[35] Slater, Dan. "Economist Draws Parallels Between U.S., Japan Banking Crises, *Business Week*, March 31, 2008. Internet edition.

[36] Nagano, Satoshi. "Lessons Learnt from the mounting Non-performing Loans in Japan after the 1990s," *Journal of Financial Services Marketing*, Vol. 11, 2, pp. 180-89.

- The bursting of the real estate bubble in Japan caused more difficulty for banks than the bursting of the bubble in stocks because the decline in real estate values affected the value of collateral on much bank lending.[37]
- Japan is considered to have acted too slowly with respect to monetary policy, fiscal policy, and the resolution of problems in the banking sector. Once the economy began to recover, fiscal policy is thought to have tightened too soon.[38]

Author Contact Information

Dick K. Nanto
Specialist in Industry and Trade
dnanto@crs.loc.gov, 7-7754

[37] Browne, Lynn Elaine. "Does Japan Offer Any Lessons for the United States?" *New England Economic Review*, 2001, 3, p. 3.

[38] Ibid.