Financial Functions Stabilization Act

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Financial Functions Stabilization Act$^{1,2}$

_Vaasavi Unnava$^3$

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Abstract

In 1990, the asset-pricing bubble in Japan peaked and began a steady decline. Over the next seven years, a series of bank failures induced the Japanese government to introduce the first of a series of capital injections in 1998, 1999, and 2004. The capital injection of 1998, authorized by the Financial Functions Stabilization Act, made ¥13 trillion ($103 billion) available to financial institutions that applied. By the end of the injection window, 21 banks and trusts applied for and received ¥1.8 trillion ($13.5 billion) in subordinated debt and loans and preferred shares. While there were no limits on compensation for management, the Act restricted dividend payments and required banks to submit restructuring plans. However, lack of oversight over bank balance sheets to pursue risk-based injection strategies, regulatory forbearance, and banks’ application for capitalization below balance sheet needs prevented complete recapitalization of the banks and led to a second recapitalization scheme one year later.

**Keywords:** capital injection, Financial Crisis Resolution Committee, Japanese Financial Crisis, Japan, _jusen_, regulatory forbearance, Resolution and Collection Bank

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1 This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering the responses to the global financial crisis that pertain to broad-based capital injection programs. Cases are available from the _Journal of Financial Crises_ at https://elischolar.library.yale.edu/journal-of-financial-crises/.

2 The Financial Function Stabilization Act is also referred to as the Act for Early Strengthening of Financial Functions, the Act on Emergency Measures for the Stabilization of Financial Functions (raw translation), the Financial Stabilization Law, or the Financial Function Early Strengthening Law, written as 金融機能安定化法 in Japanese.

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At a Glance

The bursting of the asset price bubble in Japan in 1990 led to the steady decline of Japanese asset prices. Due to high levels of interconnectedness in the system formed through keiretsu relationships between banks and firms, many banks became deeply undercapitalized due to both nonperforming loans and devalued assets. After the failure of four banks in 1997, the Japanese Diet passed the Financial Functions Stabilization Act on February 16, 1998.

The act allocated ¥13 trillion ($103 billion) of capital to inject into any bank and some non-bank financial institutions that applied. The Financial Crisis Management Committee (FCMC) reviewed each application. The applications required that applicants submit management improvement plans in addition to information on capital requests. The capital injections were contingent on estimates of need. They took the form of subordinated debts, loans, and preferred shares purchased by the Resolution and Collection Bank (RCB), a partial subsidiary of the Deposit Insurance Corporation of Japan (DICJ). The DICJ funded the RCB's purchasing through Bank of Japan bond issuances and government guarantees. There was no explicitly defined repurchase schedule.

Summary of Key Terms

| Purpose: To maintain credit order and the stability of the national economy while preventing the failure of financial institutions in Japan and overseas |
| Announcement Date | December 24, 1998 |
| Operational Date | February 16, 1998 |
| Injection Start Date | March 31, 1998 |
| End of Application Window | March 31, 2003 |
| Program Size | ¥13 trillion ($103 billion) | 4 |
| Usage | ¥1.8 trillion ($13.5 billion) | 5 |
| at peak utilization |
| Eligibility | Any financial institution; some nonbank financial institutions |
| Participants | 21 financial institutions |
| Administrator | Resolution and Collection Bank |
| Legal Authority | Passed through the Japanese Diet; executed by the Prime Minister's Office and DICJ. |

4 Converted based on March 31, 1998 dollar-yen exchange rate.
5 Converted based on March 31, 1998 dollar-yen exchange rate.
Between February 1998 and March 1998, 21 banks applied for capital injections and none were rejected. Overall, of the ¥13 trillion allocated, ¥1.8 trillion ($13.5 billion) was used to purchase preferred shares and subordinated bonds. Applicant banks, trusts, and regional banks received varying capital-underwriting terms. By 2017, all banks had repurchased their shares, loans, and debts.

**Summary Evaluation**

Experts believe the injection of 1998 did not fully recapitalize the system; eight months after the first recapitalization scheme, the Diet passed a second recapitalization scheme. The inability for the FCMC to examine bank balance sheet information for those banks applying, in addition to the policy of regulatory forbearance, prevented a full recapitalization of the system. After the capital injection on March 31, 1998, two banks that had received injections under this scheme failed and were nationalized under new legislation passed in October 1998.

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6 For more information on the Prompt Recapitalization Act, please refer to the YPFS case study Unnava (2021).
|-------------------------|
| **GDP** (SAAR, nominal GDP in LCU converted to USD) | $4.35 trillion in 1997  
$4.52 trillion in 1998 |
| **GDP per capita** (SAAR, nominal GDP in LCU converted to USD) | $35,022 in 1997  
$31,903 in 1998 |
| **Sovereign credit rating (Five-year senior debt)** | Data for Q4 1997:  
Fitch: AAA  
Moody's: Aaa  
S&P: AAA  
Data for Q4 1998:  
Fitch: AAA  
Moody's: Aa1  
S&P: AAA |
| **Size of banking system** | $9.86 trillion in 1997  
$9.73 trillion in 1998 |
| **Size of banking system as a percentage of GDP** | 226.5% in 1997  
215.1% in 1998 |
| **Size of banking system as a percentage of financial system** | 84.1% in 1997  
79.2% in 1998 |
| **Five-bank concentration of banking system** | 42.6% in 1997  
43.6% in 1998 |
| **Foreign involvement in banking system** | Data not available for 1997–98 |
| **Government ownership of banking system** | Data not available for 1997–98 |
| **Existence of deposit insurance** | Yes in 1997  
Yes in 1998 |

I. Overview

Background

Financial deregulation in Japan began in the early 1970s (Kanaya and Woo 2000; Nakaso 2001). However, uneven deregulation of similar activities by different types of financial entities had created opportunities for regulatory arbitrage (Kanaya and Woo 2000). Under the informal “convoy system,” the Ministry of Finance and Bank of Japan relied on stronger banks to bail out weaker banks (Kanaya and Woo 2000; Nakaso 2001). The convoy system created an implicit assumption among market participants that the banking system was “fail-safe” as banks expected the Ministry of Finance to offer solutions to problems banks faced. Banks supported the system because it facilitated mergers that allowed stronger banks to expand their branches, which had previously been a highly regulated activity (Nakaso 2001).

In 1986, the Diet, the legislative body of Japan, revised the Deposit Insurance Act to create a formal safety net. The new law provided the Deposit Insurance Corporation of Japan (DICJ) two policy options to address a failed bank: 1) liquidating failed banks, with each depositor protected up to ¥10 million; 2) transferring the business of a failed bank to an assuming bank. At the time, officials believed the DICJ would draw upon the new fund only in the rare event of a small-bank failure. In its first year, the DICJ had an insurance fund of only ¥300 billion, which was far less than would be needed to rescue a failing large bank (Nakaso 2001). At the time, the size of deposits for the top 10 banks in the Japanese financial system was ¥264 trillion7 (Nash 1988). This deposit insurance system’s small size and inflexibility eventually made it inadequate for the coming financial crisis of the 1990s (Nakaso 2001).

When Japanese stock market and real estate prices collapsed in 1990-92, the initial systemic implications appeared limited. The few sporadic financial failures were of limited scope and systemic importance (Nakaso 2001). But over the next decade, Japan would slip into a period of economic stagnation where real GDP growth fell below 1% for ten years, as seen in Figure 1 (Lipscy and Takinami 2013).

Officials were aware at this point that major banks like Nippon Credit Bank were transferring bad loans to paper companies to reduce their own balance-sheet exposure, but allowed such behavior to continue as the existing infrastructure permitted funneling bad debt—a practice known as tobashi that was controversial amongst finance ministry officials. By avoiding the liquidation of bad debt through this funneling behavior, banks never realized the bad debt at market price, leading to inflated asset values on bank balance sheets (Amyx 2006).

In October 1994, two months before the failures of Tokyo Kyowa and Anzen, two urban credit cooperatives, the Governor of the Bank of Japan, Yasushi Mieno, gave a speech remarking, “It is not the business of the central bank to save all financial institutions from failure. On the contrary, failure of an institution that has reasons to fail is even necessary from the viewpoint of nurturing a sound financial system” (Nakaso 2001). The Ministry of Finance also faced competing interests—given authority of both fiscal policy and financial regulation, the Ministry began to prioritize “budgets over banks,” where the use of public funds contradicted the balanced budgetary principles in the short term (Amyx 2006).

At the time, capital requirements for domestic Japanese banks were weaker than international standards. Japanese banks were encouraged to meet Basel I capital standards but received no formal penalties for noncompliance, as these standards were seen more as a managerial guidance (Allen, Chakraborty, and Watanabe 2009).

The failure of Tokyo Kyowa and Anzen in December 1994 tested the government’s infrastructure for dealing with unsound financial institutions. No stronger financial
institution was willing to take them over. Also, losses exceeded the amount that the DICJ was authorized to provide to protect insured depositors. On December 9, the BOJ established a new bank to assume the businesses of the two institutions, wiping out existing shareholders, and removing the management of the two institutions. The new bank, Tokyo Kyoudou Bank (TKB), was capitalized with ¥40 billion, of which the BOJ subscribed ¥20 billion and private financial institutions subscribed ¥20 billion. Private financial institutions also extended low-interest loans to the new bank. Virtually all Japanese financial institutions participated, providing capital and loans. The DICJ provided funds to protect insured depositors. However, the Bank of Japan’s role was controversial. Although the law allowed the central bank to provide risk capital to banks in its function as lender of last resort, it hadn’t done so since the 1960s (Nakaso 2001).

Private financial institutions were also increasingly reluctant to contribute to the convoy system, worrying about the impact on their own profitability and reputations (Nakaso 2001). Deregulation had also made it easier for banks to expand without facilitated mergers under the convoy system. In 1994, banks, for the first time, outright refused to participate in these rescues. In 1995, following another failure by a major bank, Moody’s changed its ratings criteria so that it would not take into consideration the possibility of a government-organized rescue; in this new system, Japanese banks received an average rating of “D” (Amyx 2006).

At this point, there was little room for the BOJ to ease monetary policy due to already low discount rates. As the state of the economy deteriorated, the BOJ began reducing interest rates rapidly, dropping the overnight lending rate from 6% in 1990 to 1% by 1995, shown in Figure 2 below (Lipscy and Takinami 2013). These low rates meant that from 1995 onwards, interest income for Japanese savers dropped by approximately ¥1 trillion yen per year (Amyx 2006). The central bank also was reluctant to lower rates further in fear of increasing inflation, even in the midst of a deflationary environment (Lipscy and Takinami 2013).
In this environment with little room for monetary policy stimulus, as well as limitations on deposit insurance, *jusen* trouble emerged, beginning in 1993 and reaching full scale by 1995. *Jusen* companies—non-bank lenders founded by banks and other financial institutions to make housing and real estate development loans—experienced massive losses of ¥6.4 trillion. After an intense debate in the Japanese Diet (the legislative body of Japan), the Diet passed the first publicly funded package to address the banking problem, allocating losses to founder banks, lender banks, agricultural financial institution, and public funding (Nakaso 2001). The usage of taxpayer funding to cover the losses of unviable, non-depository financial institutions met public outcry; an Asahi poll found 87% of the public opposed the *jusen* bailout (Lipsy and Takinami 2013; Nakaso 2001). As a result, the Minister of Finance promised the Diet that no further public-funded injections would occur except for the *jusen* injections (Lipsy and Takinami 2013).

Banks were also reluctant to take government funding through public injection. Not only would injections of public funding increase scrutiny of bank balance sheets, they would also call into question management practices and corporate salaries, and allow political intrusion into bank management decisions. In addition, issuance of new shares to the government would dilute the value of existing shares primarily held by other financial institutions and corporations (Amyx 2006).

By 1997, as the situation grew worse, with the collapse of four banks in succession, the BOJ acted as lender of last resort on an unprecedented scale (Nakaso 2001). In December 1997,
the ruling Liberal Democratic Party (LDP) announced Japan’s first recapitalization for banks in the post-war era (*Japan Times* 1997b).

**Program Description**

The Diet paired the intended recapitalization under the Financial Functions Stabilization Act with an amendment to the Deposit Insurance Act increasing depositor protection. The act allocated ¥17 trillion for depositor protection and ¥13 trillion for recapitalization for undercapitalized banks (*Japan Times* 1998i). The FFSA was a temporary measure intended to utilize public funding for capital injections to increase stability in the Japanese financial system (Nakaso 2001).

The day after the government announced the recapitalization program, the Nikkei average jumped 2.5% in a show of investor relief (*Japan Times* 1997c). However, some ratings agencies continued to downgrade major Japanese banks, with Standard & Poor’s downgrades occurring on December 25, one day after the announcement by the LDP (*Japan Times* 1997c). Moody’s kept ratings low, even after banks began applications for recapitalization in March 1998 (*Japan Times* 1998k).

After finalizing the banking bills, Prime Minister Ryutaro Hashimoto’s Cabinet submitted the finalized version of two bills—one for increased depositor protection and one for recapitalization—to the Diet on January 19, 1998 (*Japan Times* 1998e). To encourage the passage of the bills, Prime Minister Hashimoto unconventionally visited the Diet to give a series of speeches on the necessity of the financial system stability measures (*Japan Times* 1998a; *Japan Times* 1998b; *Japan Times* 1998d; *Japan Times* 1998f). After passing the Lower House on February 7, the bills passed the Upper House on February 16 and were formally enacted into law (*Japan Times* 1998h; *Japan Times* 1998i).

Before the recapitalization bill passed, the Japanese government worked to encourage banks to participate in the program, hoping that the vocal participation of stronger banks would encourage weaker rivals to participate as well (*Japan Times* 1998c). Several banks applied for the funding simultaneously on March 5, 1998 (*Japan Times* 1998k).

The Financial Crisis Management Committee (FCMC) oversaw the recapitalization. It consisted of seven members, including three from the private sector, the Minister of Finance, the Commissioner of the Financial Supervisory Agency (FSA), the President of the Bank of Japan, and the President of the DICJ. The Cabinet appointed members of the committee with consent from both houses of the Diet (Financial Functions Stabilization Act 1998). Dr. Yoko Sazanami, an academic at Keio University in Japan, chaired the committee (Madden and Dimand 2018). The FCMC, part of the DICJ, was responsible for identifying banks in need of capital injections and determining the amount and terms of such injections (Madden and Dimand 2018; Nakaso 2001). The Cabinet was responsible for terminating the operation of the FCMC (Financial Functions Stabilization Act 1998).

The DICJ was responsible for the asset management operations of the capital injections specified by the FCMC (Financial Functions Stabilization Act 1998). The DICJ purchased preferred shares or subordinated bonds from the financial institutions that applied for
capital under the recapitalization scheme (DICJ 2020; Financial Functions Stabilization Act 1998). The Crisis Management Account, an account set up for purchases under the FFSA, held the DICJ purchases (DICJ n.d.).

No banks were ineligible under the FFSA; while there was some debate about making the injections compulsory for certain banks, the idea was ultimately abandoned (Financial Functions Stabilization Act 1998; Nakaso 2001). Three non-bank financial institutions, all cooperatives, were also eligible, referred to by name in the law: Norinchukin Bank8; the Agricultural Cooperative Association; and the Federation of Fisheries Cooperative Associations (Financial Functions Stabilization Act 1998).

Banks requesting funding applied through the Chairman of the Financial Supervisory Agency (FSA), Japan’s bank regulator, who then applied on their behalf. The FCMC itself did not have supervisory power and could not look at any detailed balance sheet or supervisory information on the applicant banks (Financial Functions Stabilization Act 1998; Nakaso 2001). These banks would be required to submit management improvement plans through the FSA. In the plans, the banks would describe how they would improve management and operations, and secure assets. After the FCMC approved an application, it would go to the Prime Minister’s Cabinet for approval, by either the Prime Minister or the Minister of Finance. Once approved, the DICJ would purchase preferred shares, subordinated debt, or subordinated loans (Financial Functions Stabilization Act 1998).

**Outcomes**

In March 1998, 21 institutions applied for capital injections. Figure 3 below shows a table of the applications for capital made public.

The total application size amounted to close to ¥2 trillion. Within a week, the FCMC approved all 21 banks for the capital injections. However, two banks that had applied for subordinated debt and loans received less than requested, as the FCMC believed the use of such lower-quality capital would not sufficiently boost their capital adequacy ratios (Japan Times 1998). In March 1998, ¥1.8 trillion was injected into 21 banks, averaging 1.9% of risk-weighted assets (DICJ 2020; Giannetti and Simonov 2013). Every bank eventually repurchased the shares and subordinated debts sold to the DICJ under this program, as shown in Figures 4 and 5 below.

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8 Norinchukin Bank is a cooperative bank for agricultural, fishing, and forestry cooperatives in Japan.
### Figure 3: Applications for capital under the FFSA

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Amount (¥ billion)</th>
<th>Form of Capital</th>
<th>Estimated Capital Ratio Increase (%)</th>
<th>Projected FY1997 Year-End Adequacy Ratio (without injection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of Tokyo-Mitsubishi</td>
<td>100</td>
<td>SB</td>
<td>0.1</td>
<td>8.6</td>
</tr>
<tr>
<td>Sumitomo Bank</td>
<td>100</td>
<td>SB</td>
<td>0.2</td>
<td>8.9</td>
</tr>
<tr>
<td>Sanwa Bank</td>
<td>100</td>
<td>SB</td>
<td>0.2</td>
<td>8.5</td>
</tr>
<tr>
<td>Dai-Ichi Kangyo Bank</td>
<td>99</td>
<td>PS</td>
<td>0.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Fuji Bank</td>
<td>100</td>
<td>SB</td>
<td>—</td>
<td>8.6</td>
</tr>
<tr>
<td>Sakura Bank</td>
<td>100</td>
<td>SB</td>
<td>0.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Tokai Bank</td>
<td>100</td>
<td>SL</td>
<td>0.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Asahi Bank</td>
<td>100</td>
<td>SL</td>
<td>0.4</td>
<td>8.4</td>
</tr>
<tr>
<td>Daiwa Bank</td>
<td>100</td>
<td>SL</td>
<td>0.8</td>
<td>8.2</td>
</tr>
<tr>
<td>Industrial Bank of Japan</td>
<td>100</td>
<td>SB</td>
<td>0.3</td>
<td>9</td>
</tr>
<tr>
<td>Long-Term Credit Bank of Japan</td>
<td>200</td>
<td>PS SL</td>
<td>1.3</td>
<td>8.8</td>
</tr>
<tr>
<td>Nippon Credit Bank</td>
<td>290</td>
<td>SL PS</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Mitsubishi Trust and Banking Corp.</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sumitomo Trust and Banking Co.</td>
<td>100</td>
<td>SB</td>
<td>0.8</td>
<td>9-plus</td>
</tr>
<tr>
<td>Mitsui Trust and Banking Co.</td>
<td>100</td>
<td>SB</td>
<td>1</td>
<td>9.5</td>
</tr>
<tr>
<td>Yasuda Trust and Banking Co.</td>
<td>150</td>
<td>SB</td>
<td>1.2</td>
<td>10.8</td>
</tr>
<tr>
<td>Toyo Trust and Banking Co.</td>
<td>50</td>
<td>SB</td>
<td>0.7</td>
<td>10</td>
</tr>
<tr>
<td>Chuo Trust and Banking Co.</td>
<td>60</td>
<td>PS SL</td>
<td>2</td>
<td>9.4</td>
</tr>
<tr>
<td>Bank of Yokohama</td>
<td>20</td>
<td>SL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hokuriku Bank</td>
<td>—</td>
<td>SL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashikaga Bank</td>
<td>—</td>
<td>—</td>
<td></td>
<td>8.1</td>
</tr>
</tbody>
</table>

Note: the capital adequacy ratio projections are projected from Sept 1997. SB is short for subordinated bonds, SL for subordinated loans, and PS for preferred shares. The mark “—” means that the banks did not disclose data.

*Source: Japan Times 1998k.*
Figure 4: Timeline of subordinated debt and loan repurchasing

<table>
<thead>
<tr>
<th>Bank</th>
<th>Final Repurchase Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuji Bank</td>
<td>Mar-04</td>
</tr>
<tr>
<td>Industrial Bank of Japan</td>
<td>Mar-04</td>
</tr>
<tr>
<td>Yasuda Trust &amp; Banking</td>
<td>Sep-04</td>
</tr>
<tr>
<td>Sakura Bank</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Sumitomo Bank</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Bank of Tokyo-Mitsubishi</td>
<td>Feb-00</td>
</tr>
<tr>
<td>Mitsubishi Trust &amp; Banking</td>
<td>Dec-00</td>
</tr>
<tr>
<td>Sanwa Bank</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Tokai Bank</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Toyo Trust &amp; Banking</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Asahi Bank</td>
<td>Oct-05</td>
</tr>
<tr>
<td>Daiwa Bank</td>
<td>Sep-05</td>
</tr>
<tr>
<td>Sumitomo Trust &amp; Banking</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Mitsui Trust &amp; Banking</td>
<td>Mar-05</td>
</tr>
<tr>
<td>Chuo Trust &amp; Banking</td>
<td>Mar-03</td>
</tr>
<tr>
<td>Bank of Yokohama</td>
<td>May-03</td>
</tr>
<tr>
<td>Hokuriku Bank</td>
<td>Mar-06</td>
</tr>
<tr>
<td>Ashikaga Bank</td>
<td>Mar-04</td>
</tr>
<tr>
<td>Long-Term Credit Bank of Japan</td>
<td>Mar-03</td>
</tr>
</tbody>
</table>

Source: DICJ 2020.
### Figure 5: Timeline of preferred share repurchasing.

<table>
<thead>
<tr>
<th>Bank</th>
<th>Final Repurchase Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dai-Ichi Kangyo Bank</td>
<td>Aug-04</td>
</tr>
<tr>
<td>Chuo Trust and Banking</td>
<td>Jul-06</td>
</tr>
<tr>
<td>Long-Term Credit Bank of Japan</td>
<td>Nov-17</td>
</tr>
<tr>
<td>Nippon Credit Bank</td>
<td>Jun-15</td>
</tr>
</tbody>
</table>

*Source: DICJ 2020.*

The Japanese Diet passed a second, much larger recapitalization scheme, the Prompt Recapitalization Act, within a year of the FFSA injections. The new scheme made available an additional ¥25 trillion for capital injections into sound banks with liquidity needs. Under this scheme, the Japanese government ultimately allocated ¥8.6 trillion total.

## II. Key Design Decisions

1. **The Diet passed the Financial Functions Stabilization Act as part of a suite of financial stabilization bills that also included an amendment to the Deposit Insurance Act.**

   In December 1997, the ruling Liberal Democratic Party announced the first Japanese recapitalization for banks in the post-war era *(Japan Times 1997b)*. In a separate bill, the Diet amend the Deposit Insurance Act *(Japan Times 1998h; Japan Times 1998i)*. Through the new bills, a total of ¥30 trillion of public funds was made available: ¥17 trillion for the DICJ to cover the losses of failed financial institutions (up from an original ¥300 billion); ¥13 trillion for capital injections into banks *(Nakaso 2001)*.

   Prime Minister Hashimoto also announced a ¥2 trillion income tax reduction, aimed at jump-starting the economy, on December 17, 1997. The tax cut was funded through government-issued bonds and was submitted to the Diet as a supplement to the fiscal year 1997 budget *(Japan Times 1998a)*. On February 4, 1998, the Diet passed a supplementary budget that provided financing for the ¥2 trillion personal income tax cut *(Japan Times 1998g)*.

   The legislation was the first in a series of capital injections from 1998–2008, with a second capital injection in March 1998 and a third injection legislation in June 2004 *(Hoshi and Kashyap 2010)*.
2. The Japanese Diet thoroughly debated the Financial Functions Stabilization Act, which provided a legal basis for the capital injection, and announced it publicly; Prime Minister Hashimoto made a series of rare floor speeches during this time.

In December 1997, the ruling Liberal Democratic Party announced the first Japanese recapitalization for banks in the post-war era (Japan Times 1997b). The day after the announcement of the recapitalization, the Nikkei average jumped 2.5% in a show of investor relief. However, some ratings agencies continued downgrading major Japanese banks, with Standard & Poor’s downgrades occurring on December 25, one day after the announcement by the LDP (Japan Times 1997c). Moody’s kept ratings low, even after banks began applications for recapitalization in March 1998 (Japan Times 1998k).

The Financial Functions Stabilization Act established the intended recapitalization. The FFSA was a temporary measure intended to utilize public funding for capital injections to increase stability in the Japanese financial system (Nakaso 2001). The act allocated ¥13 trillion ($103 billion) for the recapitalization of undercapitalized banks (Japan Times 1998i).

After finalizing the banking bills, Prime Minister Ryutaro Hashimoto’s Cabinet submitted the finalized version of two bills—one for increased depositor protection and one for recapitalization—to the Diet on January 19, 1998 (Japan Times 1998e). To encourage the passage of the bills, Prime Minister Hashimoto unconventionally visited the Diet to give a series of speeches on the necessity of the financial system stability measures (Japan Times 1998a; Japan Times 1998b; Japan Times 1998d; Japan Times 1998f).

Additionally, prior to the passage of the bill, the Japanese government worked to encourage banks to participate in the program, praising banks choosing to participate in the program in the hope that the vocal participation of stronger banks would encourage weaker rivals to participate as well (Japan Times 1998c).

After passing the Lower House on February 7, the bills passed the Upper House on February 16 and were formally enacted into law (Japan Times 1998h; Japan Times 1998i).

3. The Deposit Insurance Corporation of Japan (DICJ) funded the capital injections and the Financial Crisis Management Committee, a committee of the DICJ, oversaw them.

To apply for funding, banks would submit plans to the Financial Supervisory Agency (FSA), who would then apply to the FCMC on their behalf (Financial Functions Stabilization Act 1998).

The FCMC served as an in-house committee of the DICJ (Japan Times 1998j). As the Prime Minister’s office hoped to have injections done before April 1, 1998, the beginning of the new fiscal year, the FCMC was on a strict timeline (Japan Times 1998h). The FCMC consisted of seven members, with three members from the private sector, the Minister of Finance, the Commissioner of the Financial Supervisory Agency, the President of the Bank of Japan, and the President of the DICJ (Financial Functions Stabilization Act 1998). Yoko
Sazanami, an academic at Keio University, chaired the Committee, though domestic finance was outside of Sazanami’s research focus as an international economist (Madden and Dimand 2018). The Cabinet-appointed members of the committee were appointed with consent from both houses of the Diet (Financial Functions Stabilization Act 1998). The Cabinet was responsible for terminating the operation of the FCMC (Financial Functions Stabilization Act 1998).

The FCMC met six times between February 16 and March 31 (Cargill, Hutchison, and Ito 2001). The committee decided votes through simple majority, with the Chairperson acting as the tie-breaking vote. After the decision passed through the committee, it was sent to the Cabinet for full approval. In the case of credit cooperatives, also eligible for capital injection under the Financial Functions Stabilization Act, the law required the prefectoral governor also be consulted. In the case of the Federation of Agricultural and Fisheries Cooperative Associations, the Minister of Agriculture, Forestry, and Fisheries was consulted (Financial Functions Stabilization Act 1998).

The Resolution and Collection Bank (RCB), the asset management corporation tasked with holding the preferred shares and subordinated loans and debts of the banks applying for capital injection, was formed from the reorganization of the Tokyo Kyoudou Bank in June 1996. At its formation, the RCB had a broader role as an assuming bank for failed credit cooperatives, when there were no assuming banks in the private sector. In addition, the RCB could purchase non-performing loans from failed financial institutions, increasing the incentives for solvent institutions to assume the failed institution (Nakaso 2001). After restructuring, the RCB became a 75% subsidiary of the DICJ, receiving ¥120 billion in capital from the DICJ, ¥20 billion from the Tokyo Kyoudou Bank, and ¥20 billion from the Bank of Japan (DICJ 2002; Nakaso 2001).

The DICJ acts independently of the Bank of Japan or the Treasury, though in close cooperation. The issuance of government-backed DICJ bonds, as well as annual budgetary appropriations, funds the DICJ’s financial assistance. In rare instances, the DICJ may borrow money directly from the Bank of Japan (FSB 2016). Funding for the FFSA came from ¥3 trillion of special government bonds that the DICJ could cash on request, and ¥10 trillion in government-guaranteed credit lines (Nakaso 2001).

Through the RCB, the DICJ purchased the preferred shares and subordinated debts of banks out of the crisis management account (Hoshi and Kashyap 2010; DICJ n.d.).

4. **Participation was voluntary and open to any domestic or foreign bank, as well as specified nonbank financial institutions.**

Any domestic or foreign bank was eligible for a capital injection, though no foreign banks participated in the injection (Financial Functions Stabilization Act 1998; DICJ n.d.). Credit cooperatives as well as Shinkin banks, a type of cooperative regional credit union, were also eligible. In addition to the financial institutions eligible for capital injection, a set of non-bank financial institutions, all cooperatives, were also eligible: Norinchukin Bank, Agricultural Cooperative Association, and the Federation of Fisheries Cooperative
Associations (DICJ 1998a). The law did not require the participation of any banks, though there was some debate regarding forced injections during the summer of 1998 during discussions to amend the capital injection framework. However, this idea was ultimately abandoned (Nakaso 2001).

There were some standards for screening in determining whether the banks needed capitalization: banks could not be losing money for three years prior to application, the banks applying were important to the financial and credit system, and banks were unlikely to fail. Details are shown in Figure 6 below.

**Figure 6: Screening standards for applicant banks**

<table>
<thead>
<tr>
<th><strong>In the case of a receiving financial institution such as a merger</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard 1</strong></td>
</tr>
<tr>
<td>The applicant financial institution is in a situation where its capital adequacy has deteriorated due to merger, etc.</td>
</tr>
<tr>
<td>Specifically, it is assumed that the capital adequacy ratio is recognized to have declined before and after the merger.</td>
</tr>
<tr>
<td><strong>Standard 2</strong></td>
</tr>
<tr>
<td>If the capital adequacy situation is not improved, there is a risk that maintenance of the credit order and stability of the regional economy may be seriously affected.</td>
</tr>
<tr>
<td><strong>Standard 3</strong></td>
</tr>
<tr>
<td>Must not exceed the scope necessary for the smooth implementation of resolution.</td>
</tr>
<tr>
<td>The larger of the following shall be the limit for underwriting of preferred stock, etc.</td>
</tr>
<tr>
<td>(1) Amount required to recover to the level of capital adequacy before the merger.</td>
</tr>
<tr>
<td>(2) Amount necessary to secure 8% (4% in the case of domestic standards) of risk assets of bankrupt financial institutions that have been added up due to mergers, etc.</td>
</tr>
</tbody>
</table>

**For general financial institutions**

| **Standard 1** |
| The management status of the applying financial institution has not deteriorated significantly. |
| Not applicable to any of the following. |
| (1) For the last three consecutive years, recurring profit or net profit has been in the red or no dividends. |
| (2) Be the third category as the trigger for early corrective action. Or, the capital adequacy ratio, which is the second category and does not assume underwriting of preferred stock, etc., is expected to remain in that category even after one year. |
Standard 2

If the capital adequacy situation is not improved, it may cause one of the following situations.

- (1) There is a risk that the financial function in Japan may be significantly impaired.
- (2) There may be a significant obstacle to economic activities such as corporate activities and employment situation in the region and field.

In making this decision, it is important to address promptly without overlooking the slightest signs of financial system anxiety.

Standard 3

The purpose is not to rebuild the management of the applying financial institution, but to maintain the credit order.

Standard 4

The applicant's financial institution is not considered to have a high probability of failing even after it has subscribed for preferred shares.

Standard 5

Disposal of preferred stock, etc., is not recognized as being extremely difficult after a considerable period of time.

In making this decision, take into account the financial status and profit level of the applicant financial institution, the prospect of improvement in the asset content and capital ratio, the merchandise of the preferred shares to be underwritten, the current market situation, and other factors.

Source: DICJ 1998a based on author's translation.

In addition to providing information in an application to determine whether banks met the screening criteria, banks also were required to submit management soundness plans, where they described plans to improve management structure, secure assets owned, and improve operations. These plans would be made public unless they could create uncertainty in the public about the bank's performance (DICJ 1998b). Under this, three banks that received public funds—the Long Term Credit Bank, Chuo Trust, and Nippon Credit Bank—publicly announced their intention to trim staff, promising to cut 2,900 employees over the following three years (Japan Times 1998m).

5. The underwriting terms of capital injections were dependent on capitalization status as reported by banks.

The FCMC was responsible for determining underwriting terms for preferred shares and subordinated debt issued through the recapitalization scheme (Financial Functions Stabilization Act 1998; Nakaso 2001). The FCMC determined the terms of the capital injections on a case-by-case basis. Banks received differing yield rates on subordinated bonds ranging from LIBOR + 0.55 percent to as high as LIBOR + 2.95 percent. After five years, the rates on subordinated bonds were raised by 1.50 percent. Banks selling preferred shares had differing conversion dates (DICJ 2020). The preferred shares purchased were converted to common shares after a grace period; Kanaya notes when
examining a similar policy utilized in the March 1999 capital injection that the conversion of common shares gave the government the opportunity to act as an activist shareholder, forcing restructuring if dissatisfied with the bank's progress (DICJ 2020; Kanaya and Woo 2000). While banks had the ability to acquire shares with approval by the DICJ, in practice, the small windows before conversion (at most seven months after the injection) led to all preferred shares in the injection being converted to common shares (DICJ 2020; Financial Functions Stabilization Act 1998).

Unlike the later recapitalization legislation, the Prompt Recapitalization Act, the law did not give the FCMC supervisory power as it was housed in the DICJ, a non-supervisory institution (Nakaso 2001). The FFSA instead required banks to self-report balance sheet information checked by independent auditors to the Financial Supervisory Agency. Banks applying for capital injections under the FFSA also were required to submit self-assessments on the quality of assets on their balance sheets to the Financial Supervisory Agency. Certified public accountants audited these self-assessments as well (FSA 1998).

These assets were partitioned into four categories:

Category I assets were assets not considered needing risk management in any form and were collectable;

Category II assets were credit exposures for which banks judged that adequate risk management on an exposure-by-exposure basis would be needed;

Category III assets were those about which banks had serious concerns in terms of their collection and were likely to incur losses, but banks were unable to determine the timing or size of the losses;

Finally, category IV losses were exposures that banks were unable to collect or valueless (FSA 1998).

Under this assessment structure, banks estimated the size of their categories II, III, and IV assets to be ¥65.3 trillion, ¥8.7 trillion, and ¥2.7 trillion respectively as of January 1998 (FSA 1998). The self-assessment results under the FFSA are shown in Figure 7 below.
### Figure 7: Results of self-assessment of asset quality for Japanese Banks applying for recapitalization under the Financial Function Stabilization Act (in billions of yen)

<table>
<thead>
<tr>
<th>Self-Assessment Result of Asset Quality</th>
<th>Total Credit Exposure</th>
<th>Category I</th>
<th>Category II</th>
<th>Category III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total of All Banks</strong></td>
<td>648,506</td>
<td>576,548</td>
<td>65,763</td>
<td>6,073</td>
</tr>
<tr>
<td><strong>Major Banks</strong></td>
<td>452,374</td>
<td>402,018</td>
<td>45,418</td>
<td>4,816</td>
</tr>
<tr>
<td><strong>Regional Banks</strong></td>
<td>196,132</td>
<td>174,530</td>
<td>20,345</td>
<td>1,257</td>
</tr>
<tr>
<td><strong>Cooperative Type Financial Institutions</strong></td>
<td>146,617</td>
<td>130,923</td>
<td>14,846</td>
<td>845</td>
</tr>
<tr>
<td><strong>Shinkin Banks</strong></td>
<td>74,563</td>
<td>64,411</td>
<td>9,753</td>
<td>397</td>
</tr>
<tr>
<td><strong>Credit Cooperatives</strong></td>
<td>15,342</td>
<td>12,801</td>
<td>2,223</td>
<td>318</td>
</tr>
<tr>
<td><strong>Agricultural Cooperatives</strong></td>
<td>29,961</td>
<td>28,626</td>
<td>1,304</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>795,123</td>
<td>707,471</td>
<td>80,609</td>
<td>6,918</td>
</tr>
</tbody>
</table>

Note: Due to write-off and provisions, banks whose closing account month is March do not have Category IV assets. However, for banks that have trust accounts, the closing time of the trust account is different from that of the banking account, therefore there is non-disposal of Category IV assets (¥118 billion), and total credit exposure includes the amount of Category IV.


Institutions submitted these audits to the Financial Supervisory Agency, which was responsible for submitting the application to the FCMC (FSA 1998; Financial Functions Stabilization Act 1998).

6. **There were no limits on shareholder compensation or management compensation.**

Unlike its successor, the Prompt Recapitalization Act, the FFSA did not place any moratorium on management compensation or dividends under the law. However, there was a requirement to pay some portion of the dividends to the DICJ, based on cabinet ordinance.

Average pay for executives of these banks varied by each bank. Some banks, such as the Tokai Bank, did not show a reduction in average pay but posited that the costs would decrease as the makeup of executive boards changed. Other banks such as the Bank of Tokyo-Mitsubishi showed cost cutting through maintaining average pay and decreasing the
number of executives. Most of the 21 banks planned to pay their executives ¥20 million or more a year, and stated so as part of their public restructuring plans (Japan Times 1998n).

7. There was no explicit exit strategy outlined or mandated for banks participating in the capital injection.

All banks receiving a capital injection in the form of subordinated loans or debt had step-up clauses on the debt or loans injected. The step-up clauses, increasing the yield of the bonds and debts, would come into effect six years after the injection. Each yield rate and change in rates varied by bank. In addition, a majority of the subordinated loans and debts purchased were perpetual, never expiring (DICJ 2020).

Banks receiving preferred shares faced mandatory conversion dates on the issued preferred shares. These mandatory conversion dates were set to take place within eight months of the capital injection (DICJ 2020).

All banks receiving capital injections repurchased their shares, loans, and debt, within ten years, with the exception of Nippon Credit Bank and the Long-Term Credit Bank of Japan, which repurchased their debts in June 2015 and November 2017, respectively (DICJ 2020). In the summer of 1998, the Long-Term Credit Bank of Japan failed, leading to the Financial Reconstruction Law, under which the Japanese government nationalized the bank. The Nippon Credit Bank followed in December 1998, and was nationalized under the same legislation (Nakaso 2001).

III. Evaluation

Many experts write that the capital injection of March 1998 was too small for the size of non-performing loans in the financial system. Within twelve months of this capital injection, two banks receiving capital, the Long-Term Credit Bank of Japan and the Nippon Credit Bank, failed and were subsequently nationalized (Allen, Chakraborty, and Watanabe 2009). Months after, the Diet passed a much larger capital injection scheme, the Prompt Recapitalization Act, allocating more funding and injecting more than quadruple the amount injected under the Financial Functions Stabilization Act. Montgomery and Shimizutani find that this second injection was more effective than the first round, as the first round primarily helped Japanese banks clear the 8% BIS capitalization ratio, but did not increasing lending, encourage restructuring, or increase write-offs of non-performing loans (Montgomery and Shimizutani 2009).

This was compounded by the capital requirements for domestic Japanese banks, which were weaker than international standards, at 4% necessary capitalization rather than the Basel Committee’s 8% capitalization ratio as part of Basel I standards (Allen, Chakraborty, and Watanabe 2009). In addition to weaker capital standards, the authorities also weakened accounting standards to allow banks to avoid marking down the depressed value of real estate and stocks. The allowed up to 45% of unrealized gains on securities to be counted as Tier II capital for banks with international operations. They also changed
regulations to allow banks the option of not applying the lower of cost or market accounting for equities held for investment purposes (Kanaya and Woo 2000). These accounting measures were not treated as formal requirements until after the FFSA capital injections had already been performed, and the authorities did not require mark-to-market accounting even after the recapitalization scheme was enacted (Allen, Chakraborty, and Watanabe 2009).

The policy of regulatory forbearance also affected the speed and size of the Japanese response to the non-performing loan problem. Japan was facing the “first instance of a ‘return to depression economics’ by an advanced developed economy in the post-World War II period” (Lipscy and Takinami 2013). The Liberal Democratic Party was increasingly vulnerable electorally during this time, providing opponents opportunity to criticize regulatory breakdown if the LDP acknowledged issues in the financial system through publicly funded capital injections (Amyx 2006). Japanese policymakers faced a skeptical public, reducing the ease with which correctional legislation could be passed; in particular, the lack of convincing precedent for recapitalizations made it difficult for Japanese political leaders to convince the public of its efficacy. Effective legislation also required trial and error (Lipscy and Takinami 2013).

The difficulty in experimentation, combined with the belief that the situation would eventually right itself, contributed to regulatory forbearance, such as relaxed accounting standards and concealing issues on balance sheets rather than addressing them. This experimentation and reluctance to immediately address the situation lead to the extended timeline for the financial crisis response in comparison to the United States during the Global Financial Crisis (Lipscy and Takinami 2013).

Japanese policymakers also encouraged or assisted the behavior of overstating stability in the Japanese market. Under the belief that the market would eventually right itself, the Ministry of Finance reported overly optimistic growth projections. From 1991–98, the EPA over-projected growth rates (Amyx 2006).

The limited supervisory capacity of the FCMC also affected the efficacy of injections under the recapitalization scheme. Allen et al show the capital injection of 1999 succeeded in comparison to the injections of 1998 due to the risk-based liability evaluations for capital injections in the Prompt Recapitalization Act, where regulators had access to bank balance sheets, in comparison to the Financial Function Stabilization Act, where the commission overseeing injections was unable to look at bank balance sheets (Allen, Chakraborty, and Watanabe 2009; Nakaso 2001). Without information allowing regulators to discern between individual bank’s risk exposures, regulators could not determine whether certain bank applications required more capital than requested.

This allowed banks to apply for similar capital injection amounts, regardless of their balance sheet needs. Banks’ fear of being singled out as a weak bank led to several banks applying for far less capital than they needed, with most banks matching the amount applied for by the healthiest bank. In applying for capital, banks banded together and applied independently and simultaneously, setting their capital application amount to the
same amount as the healthiest bank in the system in an attempt to hide which bank was truly the weakest bank (Hoshi and Kashyap 2010). This, paired with the self-assessment and reporting on non-performing loans on balance sheets and inability for the FCMC to examine bank balance sheets through supervisory capacities, prevented the capitalization of banks at the amount needed by the Japanese financial system.

IV. References


V. Key Program Documents

Summary of Program

(Nakaso 2001) The Financial Crisis in Japan during the 1990s: How the Bank of Japan Responded and the Lessons Learnt

Legal/Regulatory Guidance

(Financial Functions Stabilization Act 1998) 金融機能の安定化のための緊急措置に関する法律

(Outline of Examination Criteria for Underwriting of Preferred Stock, Etc.) 優先株式等の引受け等の審査基準の概要.

Media Stories

(Japan Times 1997b) LDP Calls for Further DIC Guarantees
An article describing the Liberal Democratic Party’s proposal for additional support for banks to bolster their capital. https://ypfs.som.yale.edu/library/ldp-calls-further-dic-guarantees.

(Japan Times 1997c) Nikkei Rises above 15,000
An article describing the gains to the Japanese stock index due to positive investor sentiment regarding the announcements of government support to the banking industry. https://ypfs.som.yale.edu/library/nikkei-rises-above-15000.

(Japan Times 1998a) Parties Unite over Policy: New Alliance Calls for Tax Cuts Worth ¥6 Trillion

(Japan Times 1998b) Hashimoto Vows Efforts to Protect Financial System.
An article describing the Prime Minister’s address to the Diet and his focus on supporting the
financial system.

(Japan Times 1998d) Hashimoto Restates Need for Stability
An article describing the Prime Minister's statement regarding the need to pass financial stabilization measures.

(Japan Times 1998e) Cabinet Sends Crisis Banking Bills to Diet
An article announcing that several bills to support the banking sector were sent to the legislature.

(Japan Times 1998f) Convoy System" Ruled out: Hashimoto Pushes Plan to Aid Banks
An article describing the continued efforts by the Japanese prime minister and government officials to provide capital injections to struggling banks.

(Japan Times 1998g) Diet Approves ¥1.14 Trillion Extra Budget
An article announcing that the legislature had formally approved a supplementary budget that included tax cuts.

(Japan Times 1998h) Lower House Passes Two Key Bank Bills
An article announcing that the House of Representatives had passed two bank support bills.
https://ypfs.som.yale.edu/library/lower-house-passes-two-key-bank-bills.

(Japan Times 1998i) Diet OKs Bills Allowing Public Aid for Banks
An article announcing the legislature's approval of the bank support measures.

(Japan Times 1998j) DIC Members Prioritize Finance System Stability
An article noting that an in-house Deposit Insurance Corporation committee's members agreed on the importance of financial stability measures as well as preventing abuse of the bank support measures.

(Japan Times 1998k) ¥2 Trillion Requested: 21 Banks Apply to Receive Public Funds
An article announcing that 21 Japanese commercial banks had applied for recapitalization under the bank support measures.

(Japan Times 1998l) ¥1.8 Trillion Injection: All 21 Banks to Get Public Funds
An article announcing that all 21 banks that had applied for recapitalization were approved...
to receive capital injections to strengthen their capital bases.

(Japan Times 1998r) ¥1.4 Trillion in Funds Allocated for 17 Banks
An article announcing that the cabinet approved capital injections into 17 banks as part of
the bank support measures.

(Nash 1988). Japan’s Banks: Top 10 in Deposits
A New York Times story noting that Japanese banks accounted for the top 10 largest banks by deposits.

Bank Crisis Bills to Pass Diet Monday.
An article announcing that bank support bills were expected to be enacted the following week.

Banks Praised for Accepting Public Funds.
An article describing the government’s support and approval of the banks that took part in
the recapitalization program.

Bill Earmarks ¥10 Trillion: Funds Would Be Used to Purchase Ailing Banks’ Shares.
An article describing a proposed bill that would recapitalize struggling banks.

LDP Approves Capital Injection for Norinchukin, Farm Banks.
An article describing the government’s approval of capital injections for Norinchukin and
farm banks.

Moody’s Unmoved by Bailout Plan.
An article noting that the government support plan did not change the negative outlook forecast by Moody’s.

Stimulus Measures yet to Convince Market
An article noting that the stimulus measures and bank support measures were considered insufiicient by international officials and investors.

Surprise Tax Cut Unveiled: ¥2 Trillion Reduction in Income, Resident Levies (Japan Times 1997a).
An article describing a tax cut in income and resident taxes as part of the supplementary budget.
Three Banks Receiving Public Funds Will Trim Staff
An article announcing that three of the banks receiving capital injections had plans to cut a
total of 2,000 employees over three years under their restructuring plans

Worst of Financial Crisis Is over, Mitsuzuka Says.
An article describing the finance minister’s statements regarding the recovery from the financial crisis.

Reports/Assessments

(Allen, Chakraborty, and Watanabe 2009) Regulatory Remedies for Banking Crises: Lessons from Japan
An overview of the regulatory policies of the Japanese government during the early parts of the financial crisis.

(Amyx 2006) Japan’s Financial Crisis: Institutional Rigidity and Reluctant Change
A book on the differing political incentives and structures contributing to the regulatory forbearance policies of Japan in the 1990s.

(Cargill, Hutchison, and Ito 2001 Financial Policy and Central Banking in Japan)
This book analyzes the financial policy and central banking policies in Japan prior to and after the financial crisis

(Giannetti and Simonov 2013) On the Real Effects of Bank Bailouts: Micro Evidence from Japan
Journal article that provides insight into the micro effects of the recapitalizations on Japanese banks.

A discussion paper on the potential policy responses to the financial crisis and their potential effectiveness.

(Hoshi and Kashyap 2010) Will the U.S. Bank Recapitalization Succeed? Eight Lessons from Japan
A research paper analyzing the U.S. response to the Global Financial Crisis applying lessons from the Japanese financial crisis.

(Kanaya and Woo 2000) The Japanese Banking Crisis of the 1990s - Sources and Lessons
An overview of the regulatory policies of the Japanese government during the early parts of the financial crisis.

(Lipsky and Takinami 2013) The Politics of Financial Crisis Response in Japan and the United States
A paper comparing the financial crisis response in Japan in the 1990s to the U.S. response to the Global Financial Crisis.

(Madden and Dimand 2018) Routledge Handbook of the History of Women’s Economic Thought
A handbook on women’s contributions to the history of economic thought that includes key figures in Japan.

(Montgomery and Shimizutani 2009) The Effectiveness of Bank Recapitalization Policies in Japan
A study that examines the effectiveness of bank recapitalization policies in Japan.

(Nakaso 2001) The Financial Crisis in Japan during the 1990s: How the Bank of Japan Responded and the Lessons Learnt
A research paper detailing the Japanese government’s response to the financial crisis.

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