Journal of Financial Crises

Volume 4 | Issue 2

2022

Japan: Special Funds-Supplying Operations

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Yale Program on Financial Stability Case Study
July 15, 2022

Abstract

The Bank of Japan responded to the COVID-19 economic downturn in March 2020 with several financial stability interventions. The Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19) (SFSO) offered interest-free loans of up to one year in maturity to eligible financial institutions in an attempt to encourage broader lending to Japanese businesses and households. Counterparties could pledge as collateral a broad range of corporate and private debt, including corporate bonds and asset-backed securities. Enhancements made throughout the program's operation led to substantial increases in SFSO use. First, the BoJ expanded institution and collateral eligibility, as well as maximum lending limits, to encourage SFSO-eligible financial institutions to increase lending to small and medium-sized enterprises (SMEs) and households. Second, the BoJ said it would pay a positive interest rate on a portion of a financial institution's balances with the central bank, corresponding to the amount of its outstanding SFSO loans. Third, the BoJ essentially reduced the amount of reserves financial institutions held with the central bank at negative interest rates. These provisions meant that the BoJ effectively paid banks to use the new facility. SFSO lending to a broad range of financial institutions, including regional banks and financial cooperatives, totaled JPY 64.8 trillion (roughly USD 0.6 trillion) as of year-end March 2021, helping spur active lending to businesses.

Keywords: Japan, lending facility, market liquidity programs, special funds-supplying operations

[1] This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering market support programs in response to COVID-19. Cases are available from the *Journal of Financial Crises* at https://elischolar.library.yale.edu/journal-of-financial-crises/.

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Overview

The Japanese government, in line with other countries, imposed lockdowns and travel restrictions in March 2020 in response to the spread of COVID-19, triggering significant stresses to its financial system and the broader economy. Private consumption contracted sharply, along with exports and industrial production, and business sentiment dropped (BoJ 2020i). The Japanese bond market experienced a bout of illiquidity, corporate financing conditions worsened in response to firms' financial positions, and long-term interest rates rose (BoJ 2021j).

To ease monetary policy and maintain a high level of liquidity, the BoJ increased outright purchases of commercial paper, corporate bonds, Japanese government bonds, exchange-traded funds, and Japanese real estate investment trust instruments (BoJ 2021j). The central bank's policymakers also created the "Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID19)" (SFSO) (BoJ 2021j, 3–6). Like an earlier version of the SFSO that the BoJ created during the Global Financial Crisis (GFC), policymakers activated the program to facilitate financing by offering loans with generous terms against eligible collateral (Buchholtz 2020).[3] The COVID-19 program offered interest-free loans of up to one year in maturity to encourage lending to Japanese businesses (BoJ 2021j; BoJ 2021f).

Key Terms

Purpose: To "ensure smooth private sector financing and maintain stability in financial markets"

Launch Dates	Announced: March 16, 2020
Operational Date	March 24, 2020
End Date	March 31, 2022
Legal Authority	Article 33 of the Bank of Japan Act
Administrators	Bank of Japan
Overall Size	No announced size limit
Term	Up to one year
Interest Rate	0% per annum
Collateral	Broad variety of corporate debt and certain household debt
Peak Utilization	JPY 64.8 trillion as of year-end March 2021

In April 2020, the BoJ said it would pay a positive 0.1% interest rate on a portion of a financial institution's current account balances with the central bank corresponding to the amount of its SFSO loans, at a time when the BoJ's policy rate was negative 0.1%.[4]

[3] See Part of a Package key design decision for further discussion of the GFC SFSO program.

[4] Financial institutions hold current accounts at the BoJ. Most of these deposits are reserves subject to the BoJ's reserve requirements. See (BoJ 2022) for an explanation of current account deposits.

The BoJ also added twice the amount outstanding of borrowing via the SFSO to financial institutions' "Macro Add-on Balances" (BoJ 2020i, 15–17). Macro Add-on Balances are the portion of financial institutions' balances with the central bank that carry a zero interest rate, according to the negative interest rate policy that the BoJ introduced in 2016 (BoJ 2021c).

Eligible SFSO participants included financial institutions that had BoJ accounts and that the BoJ deemed sufficiently creditworthy, certain financial cooperatives, and the Development Bank of Japan (BoJ 2020i). Counterparties could pledge as collateral a broad range of corporate and private debt. Maximum loan amounts were based on the value of a financial institution's collateral. The BoJ later said that it would also consider how much a given financial institution had lent to small and medium-sized enterprises (SMEs) in response to and independent of COVID-19 government incentives (BoJ 2021f). The SME lending provision was one of several changes the BoJ made to the program in 2020 and 2021.

In March 2021, the BoJ said it would pay a premium interest rate of 0.2% in current account balances that corresponded to SFSO funds against certain money lent *outside* of government-incentivized programs (BoJ 2021h). The BoJ called this incentive program the "Interest Scheme to Promote Lending." It continued to pay 0.1% interest on balances corresponding to other loans.

The BoJ's annual Market Operations report showed outstanding SFSO loans of JPY 64.8 trillion (roughly USD 0.6 trillion)[5] on March 31, 2021, the end of its 2020 fiscal year (BoJ 2021j). The monthly time series data the BoJ releases do not break out SFSO lending individually. Rather, the data include SFSO lending as part of aggregate loans against pooled collateral, which includes lending operations conducted prior to the pandemic (BoJ 2021a).[6] These grouped data show rapid growth in these lending programs: The BoJ's lending in this category surged to JPY 133 trillion in August 2021 from JPY 49 trillion in February 2020, a month before the SFSO was activated and the COVID-19 pandemic began.[7]

Summary Evaluation

Analysts and researchers have published little evaluation of the SFSO. The BoJ's 2020 Market Operations report noted strong demand for the facility. The report said that the "loans were utilized by a wide range of sectors and the amount outstanding of the loans increased significantly throughout the fiscal year" (BoJ 2021j, 4).

Financial institutions appeared to have been actively lending to businesses, suggesting that the SFSO's operations had been effective, according to Ayaka Nakamura of the research and consulting firm Daiwa Institute of Research (Nakamura 2020). The central bank attributed the SFSO's early success to the positive interest rate the BoJ paid on current account balances

[5] Per Federal Reserve Foreign Exchange Rate data, USD 1 = JPY 108 on March 2, 2020.

[6] See Size key design decision for further discussion of other BoJ special lending facilities.

[7] See the Bank of Japan's Account data.

corresponding to SFSO loans and the Macro Add-on Balance incentive policy, described in further detail in the Interest Rates key design decision (BoJ 2021j).

Katsumi Ishibashi, a senior analyst at investment company Fidelity International, said in a published report that the BoJ's decision to apply positive interest rates to outstanding balances on current accounts corresponding to lending through the SFSO provided more incentive for banks to use the facility. It eased "potential negative impacts on the banks if they provide further loans to corporates" (Ishibashi 2020). As Ishibashi explains, Japanese financial institutions would not need to worry about facing the BoJ's negative interest rate policy if they were to extend more loans that came back to the banks as deposits that would have previously led to further increases in current account balances where banks could have been charged a -0.1% interest rate (Ishibashi 2020).

"This subtle but meaningful change [makes] the policy framework for commercial banks more consistent with the BOJ's emergency support policy objectives and will help support the healthier functioning of the financial system," Ishibashi said (Ishibashi 2020).

The BoJ said the increased use of SFSO operations magnified the effects of the central bank's various asset purchase programs through an increase in financial institutions' demand for collateral (BoJ 2021j).

Context: Japan 2019–2020	
GDP (SAAR, nominal GDP in LCU converted to USD)	\$5.1 trillion in 2019 \$5.2 trillion in 2020
GDP per capita (SAAR, nominal GDP in LCU converted to USD)	\$40,778 in 2019 \$40,193 in 2020
Sovereign credit rating (five-year senior debt)	Data for 2019: Moody's: A1 S&P: A+u Fitch: A Data for 2020: Moody's: A1 S&P: A+u Fitch: A
Size of banking system	\$7.8 trillion in 2019 \$8.9 trillion in 2020
Size of banking system as a percentage of GDP	153.63% in 2019 171.21% in 2020
Size of banking system as a percentage of financial system	52.70% in 2019 53.95% in 2020
Five-bank concentration of banking system	39.42% in 2019 43.88% in 2020
Foreign involvement in banking system	Data not available for 2019 Data not available for 2020
Government ownership of banking system	Data not available for 2019 Data not available for 2020
Existence of deposit insurance	Yes in 2019 Yes in 2020
Sources: Bloomberg; World Bank Global Financial Development Database; World Bank Deposit Insurance Dataset.	

Key Design Decisions

1. **Purpose: The Bank of Japan created the Special Funds-Supplying Operations to promote lending to Japanese businesses and households and to maintain stability in financial markets.**

Through the SFSO, the Bank of Japan (BoJ) provided loans at favorable terms to financial institutions to encourage business lending (BoJ 2021f). The program was designed to "encourage financial institutions to actively facilitate financing of their client firms despite their own severe business conditions" (BoJ 2020g). This, in turn, would "alleviate the anxiety of business managers whose firms were experiencing a deterioration in financial positions" (BoJ 2020g, 14).

2. **Part of a Package: The BoJ created the SFSO as part of a broader suite of measures to protect the Japanese economy.**

The SFSO was one measure in the BoJ's three-part strategy to contain the economic fallout of the COVID-19 pandemic, which included:

1. Implementing the "Special Program to Support Financing in Response to the Novel Coronavirus (COVID-19)."
    a. Significantly increasing amounts of outright purchases of commercial paper and corporate bonds.
    b. The creation of SFSO.
2. Providing ample funds in yen and foreign currencies without setting upper limits, mainly through purchases of Japanese government bonds and the U.S. dollar funds-supplying operation through which the BoJ offered counterparties USD-denominated loans.
3. Actively purchasing exchange-traded funds and Japanese real estate investment trust instruments (BoJ 2021j, 3-6).

The BoJ also deferred by one year the full implementation of the finalized Basel III standards and encouraged banks to use their capital and liquidity buffers.[8] The Financial Services Agency of Japan and the BoJ jointly eased leverage coverage requirements (Kuroda 2020b).

The BoJ made several changes to the SFSO as the program progressed. Figure 1 provides an overview of those changes, which are discussed in further detail elsewhere in this case study.

[8] The oversight body of the Basel Committee on Banking Supervision, a Bank for International Settlements group that sets bank regulations standards, agreed to delay the implementation of Basel III standards because its members wanted banks and supervisors to "commit their full resources to respond to the impact of Covid-19" (Bank for International Settlements 2020).

Figure 1. Timeline of Important Bank of Japan SFSO Changes

Change Announcement	Summary of Changes
April 27, 2020: BoJ Monetary Policy Meeting	• Expanded the range of eligible collateral to private debt in general, including asset-backed securities and interests in trusts holding housing loans. • Included a wider range of eligible counterparties by adding, for example, financial cooperatives. • Applied a positive interest rate of 0.1% to the outstanding balances of current accounts held by participating financial institutions at the BoJ that correspond to the amounts outstanding of loans provided through the operation. • Would add twice the amount outstanding of borrowing via the SFSO to financial institutions' Macro Add-on Balances. • Changed facility name to "Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19)" from "Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19)" as part of various changes to better support small and medium-sized enterprises (SMEs).
May 22, 2020: *Unscheduled* BoJ Monetary Policy Meeting	• Extended end date to March 31, 2021. • Introduced the "New Fund-Provisioning Measure" that was integrated into the SFSO: The calculation of maximum lending amounts to eligible counterparties from the SFSO from May 2020 forward included amounts outstanding of eligible loans that an institution made to SMEs.
December 17–18, 2020: BoJ Monetary Policy Meeting	• Extended end date to September 30, 2021. • Removed upper limit on lending that the BoJ would provide to each eligible counterparty (JPY 100 billion) against loans that financial institutions made on their own to eligible SMEs (outside of government-sponsored programs).

March 18–19, 2021: BoJ Monetary Policy Meeting	• Created the "Interest Scheme to Promote Lending" that applied a 0.2% incentive interest rate to money in current account balances that corresponds to SFSO funds against certain money lent *outside* of government-incentivized programs. It continued to apply a 0.1% interest rate for other loans and the private debt pledged as collateral.
June 17–18, 2021: BoJ Monetary Policy Meeting	• Extended end date to March 31, 2022.

Sources: Meeting minutes: BoJ 2020i; BoJ 2020h; BoJ 2021g; BoJ 2021i; BoJ 2021h. Related press releases: BoJ 2020b; BoJ 2020a; BoJ 2020c; BoJ 2020d; BoJ 2020e; BoJ 2020f; BoJ 2021d; BoJ 2021e.

The BoJ activated a version of the SFSO during the Global Financial Crisis (GFC)[9]. The main differences between the earlier and later SFSO include (Buchholtz 2020):

- The COVID-19 SFSO charged a 0% loan interest rate, whereas the GFC SFSO provided loans at a rate equal to the average target uncollateralized overnight call rate, which was 0.1% throughout the facility's life.

- By paying a positive interest rate on financial institutions' current account balances proportionate to their SFSO lending, the COVID-19 SFSO effectively paid financial institutions to participate; the GFC SFSO did not include this benefit.

- The COVID-19 SFSO loans were available at maturities of up to a year, whereas the GFC SFSO provided one- to three-month loans.

- The BoJ held operations once a month for most of the operation of the COVID-19 SFSO, whereas the central bank eventually held operations once a week for the GFC SFSO.

3. Legal Authority: Article 33 of the Bank of Japan Act gives the central bank the power to make loans against certain kinds of collateral.

Article 33 allows the BoJ to make loans against a wide variety of collateral, including negotiable instruments, Japanese government securities, or in the form of electronically recorded monetary claims (Bank of Japan Act 1997).[10]

[9] See Buchholtz 2020, a YPFS case study documenting and evaluating the GFC SFSO program.

[10] Japanese policymakers use the "electronically recorded" description in various policy documents because the country's financial system has been transitioning from physical certificates to electronic transactions since the late 2000s (Japan Securities Depository Center 2009). Officials call this process "dematerialization," a word that is now often used to describe certain assets, such as *dematerialized* commercial paper (BoJ 2000).

4. Governance: The Bank of Japan Act requires the central bank to submit a biannual report detailing its operations to the Japanese legislature.

The biannual reports must detail the currency and monetary policy measures the BoJ takes, such as interest rate moves and reserve requirement ratio changes (Bank of Japan Act 1997; BoJ 2021b).

5. Administration: The BoJ implemented the program.

The BoJ's Operations Department administered the SFSO (BoJ 2021f). The central bank did not appear to use a third party to help implement the SFSO.

6. Communication: BoJ officials said the SFSO would encourage financial institutions to play a necessary intermediation role in the Japanese economy, which would alleviate businesses' financing concerns. It increasingly emphasized the benefits for small businesses and households.

By encouraging lending via the SFSO, the BoJ said, the program would provide a "sense of security" to both market participants and the Japanese public (Kuroda 2020a, 4).

BoJ officials initially positioned the SFSO as a corporate financing facility (BoJ 2020g) but removed the word "corporate" from the facility's title in April 2020 as it attempted to reach smaller businesses (BoJ 2020i, 16–17). In May 2020, a member of the BoJ's Policy Board said it was imperative that the BoJ clarify that the program's targets were "wide-ranging, from large firms to sole proprietors" (BoJ 2020h, 5). BoJ policymakers said that by supporting the country's financial institutions, the facility also supported firms and households (BoJ 2021j).

Officials also said that the increased use of the SFSO magnified the effects of the BoJ's various asset purchase programs by increasing financial institutions' demand for collateral (BoJ 2021j).

7. Disclosure: The Bank of Japan Act requires the central bank to publish its business operations and balance sheet annually.

The BoJ exceeds this responsibility, releasing balance sheet updates every 10 days (Bank of Japan Act 1997; BoJ 2021b). The BoJ does not report SFSO transaction-level data.

8. Use of SPV: This key design decision does not apply to the SFSO.

This key design decision does not apply to the SFSO.

9. Size: The SFSO did not have an overall predetermined size, but policymakers did limit the total amount that eligible counterparties could borrow.

Though BoJ officials did not set an explicit overall lending limit for the SFSO, the facility is capped by the pool of available collateral that meets the central bank's requirements (BoJ

2021f). The BoJ expanded the range of SFSO eligible collateral and eligible counterparties during its April 2020 monetary policy meeting (BoJ 2020i).

Policymakers did limit how much *individual counterparties* could borrow from the SFSO. This maximum is the sum of an institution's collateral pledged to the SFSO plus its total amount of loans outstanding to SMEs through (or similar to) certain government programs (BoJ 2021f).[11] See Loan Amounts key design decision for further discussion of the calculation of individual lending limits.

BoJ policymakers added the SME loan portion of the calculation as part of its broader efforts to support smaller enterprises (BoJ 2020h). This was one of several tweaks BoJ officials made to its maximum lending amount policy (see Figure 1). For example, when the central bank first activated the SFSO in early 2020, the BoJ's calculation included just corporate debt (BoJ 2020a), but it later updated the calculation to include a broader variety of collateral, which expanded the maximum amount certain counterparties could borrow from the SFSO (BoJ 2020i).

The BoJ's 2020 Market Operations report showed SFSO outstanding loans totaled JPY 64.8 trillion on March 31, 2021, the end of its 2020 fiscal year (BoJ 2021j). The monthly time series data the BoJ releases do not break out SFSO lending individually. Rather, the data include SFSO lending as part of aggregate loans against pooled collateral, which include lending operations conducted prior to the pandemic.[12] These grouped data show rapid growth in these lending programs: The BoJ's lending in this category surged to JPY 133 trillion in August 2021 from JPY 49 trillion in February 2020, a month before the COVID-19 pandemic began and the SFSO was activated and (see Figure 2).[13]

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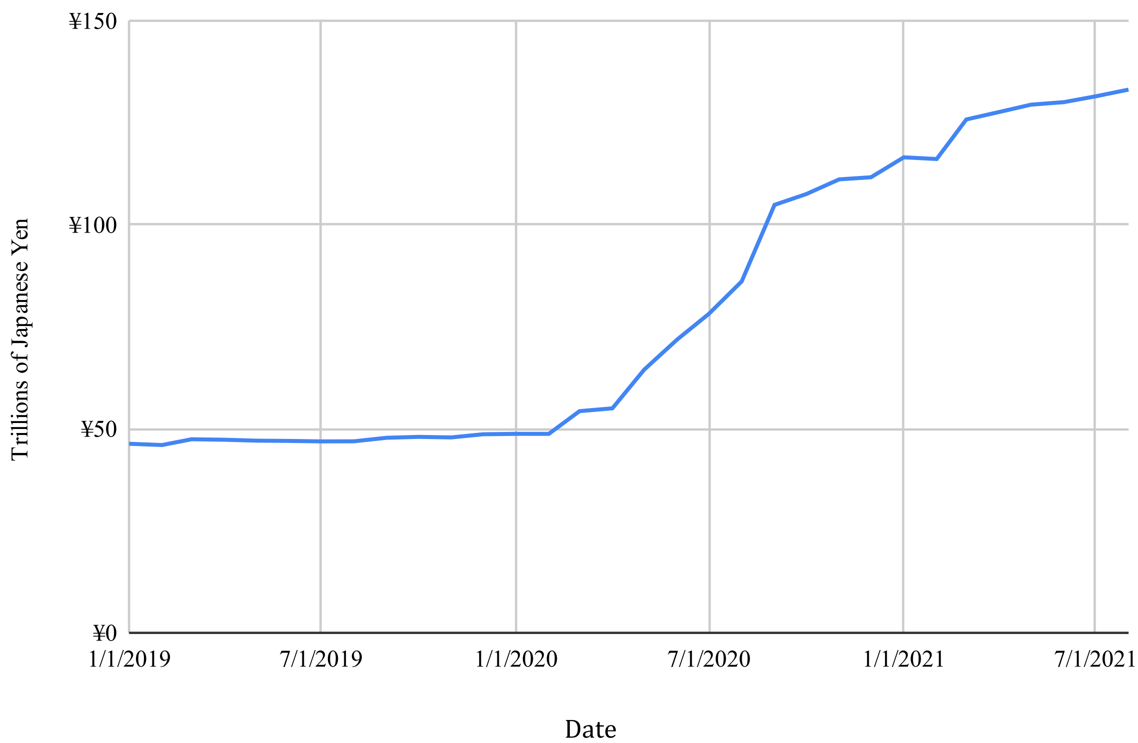
[11] For example, the Ministry of Economy, Trade and Industry created a program supporting SME financing by guaranteeing 80% of eligible loans to eligible SMEs (Ministry of Economy, Trade and Industry 2020).

[12] An example of a facility grouped with the SFSO in BoJ reporting is the BoJ's "Funds-Supplying Operations against Pooled Collateral," which was created in 2006 to facilitate money market operations by substituting the previously paper-based bill-purchasing operations with paperless operations against pooled collateral (BoJ 2006). Another example is the "Funds-Supplying Operation to Support Financial Institutions in Disaster Areas of the 2016 Kumamoto Earthquake" facility, created in 2016 to support financial institutions in areas hit by natural disasters to help meet demand for rebuilding funds (BoJ 2016).

[13] See the Bank of Japan's Account data.

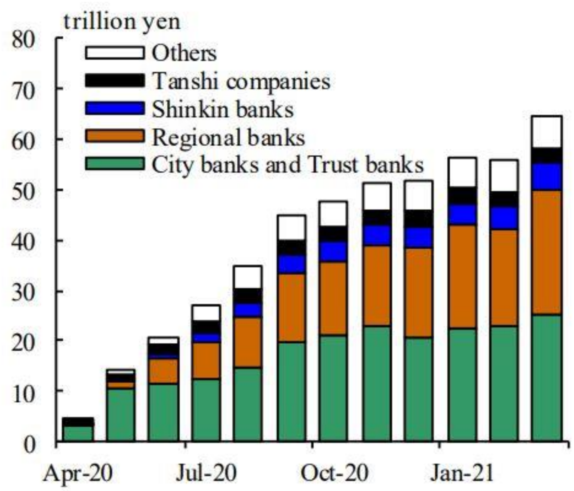
Figure 2. Loans by Funds-Supplying Operations Against Pooled Collateral



Source: Bank of Japan Accounts.

When the program launched in March 2020, primarily city banks, trust banks, and money market brokers (called *tanshi* companies) borrowed through the SFSO (BoJ 2021j). Regional banks and financial credit cooperatives, known as *shinkin* banks, began using the facility as the BoJ broadened counterparty eligibility in April 2020 (BoJ 2021j). Use of the SFSO by regional banks increased substantially after the BoJ expanded eligible collateral to include private debt, and in particular beneficial interests of a trust in house loans (BoJ 2021j) (see Figure 3).

Figure 3. Amounts Outstanding of Special Operations in Response to COVID-19 by Sector



Source: Bank of Japan.

10. Sources of Funding: The BoJ expanded its balance sheet to lend to financial institutions via the SFSO.

The BoJ's balance sheet expanded to JPY 714.6 trillion at the end of March 2021, up from JPY 110.1 trillion a year earlier at the start of the pandemic (BoJ 2021j).

The BoJ has aggressively and innovatively used its balance sheet to conduct unconventional monetary policy and secure financial stability since the late 1990s, when it purchased asset-backed securities and asset-backed commercial paper to ease credit conditions (Shiratsuka 2010). Other major central banks, such as the US Federal Reserve and the European Central Bank, took similar actions nearly a decade later during the GFC (Logan and Bindseil 2019).

11. Eligible Institutions: Eligible SFSO participants included financial institutions with BoJ accounts that the BoJ deemed sufficiently creditworthy, the Development Bank of Japan, and certain financial cooperatives.

SFSO eligibility was initially limited to financial institutions with BoJ accounts that the BoJ deemed creditworthy (BoJ 2020a). The standards by which the BoJ examined and deemed a potential counterparty sufficiently creditworthy are unclear with available documentation.

In late April 2020, BoJ officials broadened eligibility to include the Development Bank of Japan and member banks of financial cooperative central organizations (BoJ 2020i).[14] These member institutions resemble credit unions in the US and disproportionately lend to SMEs.

Financial cooperative member institutions wanting to tap the SFSO had to work through their cooperative's parent organizations. The BoJ provided a separate set of rules that the parent organizations had to use to tap SFSO funding for their member institutions. For example, the parent organization had to request, in advance, their member institutions' collateral offerings (BoJ 2020j).

12. Auction or Standing Facility: The SFSO was a standing lending facility through which the BoJ held operations at least once a month.

The BoJ initially held SFSO operations twice a month through August 2020 and scaled them back to once a month from September 2020 onward (BoJ 2021j). The BoJ held operations once a week for the GFC SFSO (Buchholtz 2020).

13. Loan or Purchase: The SFSO provides interest-free loans to certain counterparties against eligible collateral.

The BoJ structured the SFSO's lending terms to encourage counterparties to lend to Japan's broader business community (BoJ 2021f).

14. Eligible Assets: BoJ policymakers allowed a broad range of collateral, including corporate and private debt. The BoJ structured the SFSO's lending terms to encourage counterparties to lend to Japan's broader business community.

Initially, the SFSO accepted only corporate debt, but after its April 2020 monetary policy meeting, the BoJ broadened the list of eligible collateral to include the following (BoJ 2020i; BoJ 2021f):

- Corporate bonds;
- Dematerialized commercial paper issued by domestic corporations, foreign corporations with guarantees, and real estate investment corporations, in addition to non-electronic commercial paper;
- Asset-backed securities;
- Dematerialized asset-backed commercial paper;
- Bonds issued by real estate investment corporations;

[14] The central organizations include the Shinkin Central Bank, the Shinkumi Federation Bank, the Rokinren Bank, and the Norinchukin Bank (BoJ 2020j).

- Bills drawn by companies and real estate investment corporations;
- Electronically recorded monetary claims on companies and on real estate investment corporations;
- Loans on deeds to companies (including those denominated in USD) and to real estate investment corporations; and
- Beneficial interests of a trust in housing loans.

The assets also had to meet standards outlined in the BoJ's eligible collateral guidelines. The BoJ sets these guidelines to enhance transparency, protect itself from losses, and implement monetary and currency policy (BoJ 2000; BoJ 2009). The guidelines vary by asset type and include maturity limits, creditworthiness standards, limitations on the types of underlying investments, and the structure of the assets themselves (BoJ 2000).[15]

The GFC SFSO also accepted a broad range of corporate debt as collateral (Buchholtz 2020).

15. Loan Amounts: The BoJ limited individual loan amounts to the sum of eligible pledged collateral and the amounts outstanding of loans made by eligible counterparties to SMEs in response to COVID-19.

This maximum amount for an individual financial institution was calculated by summing (BoJ 2021f):

(1) The total value of eligible collateral pledged to the SFSO at the time of the loan disbursement;[16]

(2) The amount of loans outstanding to SMEs in response to COVID-19 through credit guarantees by the country's guarantee corporations or the program to reduce/exempt interest rates; and

(3) The amount outstanding of SME loans that are equivalent to the funds lent through the previously mentioned government initiatives but that an institution lent out independent of such programs.

At the time the loan was disbursed, this sum could not exceed the unused value of the total pool of eligible collateral pledged by all borrowers to the BoJ (BoJ 2021f). The BoJ initially placed a JPY 100 billion (roughly USD 1 billion) limit on funds that it would offer counterparties against loans made to SMEs on their own (outside of government programs). It later removed this limit to encourage broader lending to SMEs (BoJ 2021j).

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[15] See BoJ (2000) for a list of full requirements.

[16] Maximum loan amount rules for financial cooperatives were nearly identical to the rules for other financial institutions, with one exception. In calculating the maximum loan figure, cooperatives would use 50% of the face value of eligible private debt. This 50% rule does not apply to COVID-19-related lending outlined in points 2 and 3 of the calculation, just point 1 (BoJ 2020j).

The GFC SFSO was similar to the COVID-19 SFSO in that counterparties' borrowing was limited by the total value of corporate debt collateral available (Buchholtz 2020).

16. Haircuts or Purchase Price: The BoJ priced collateral using historical market price fluctuations and the assets' residual maturity.

The BoJ uses historical market price fluctuations (actual or estimated) and the asset's residual maturity to calculate the margin on eligible collateral (BoJ 2000). The BoJ used a similar formula to price collateral for its GFC SFSO (Buchholtz 2020).

17. Interest Rates: SFSO loans were interest-free, but the BoJ effectively paid financial institutions to participate in the program through important changes to the SFSO's terms.

Financial institutions paid no interest on loans in the COVID-19 SFSO program. In contrast, the GFC SFSO provided loans at a rate equal to the average target uncollateralized overnight call rate (Buchholtz 2020). Throughout 2020, the short-term prime lending rate adopted by the largest number of city banks, a measure the BoJ uses to track rates, was 1.48%.[17]

However, the BoJ effectively paid financial institutions to use the COVID-19 SFSO program by implementing important changes to the facility's terms (BoJ 2020i).

First, the BoJ said in April 2020 that it would pay a positive 0.1% interest rate on a portion of a financial institution's current account balances with the central bank corresponding to the amount of its SFSO loans, at a time when the BoJ's policy rate was negative 0.1%.

Second, the BoJ agreed to add twice the amount outstanding of borrowing via the SFSO to financial institutions' "Macro Add-on Balances" (BoJ 2020i, 15–17). Macro Add-on Balances are the portion of financial institutions' balances with the central bank that carry a zero interest rate, according to the negative interest rate policy that the BoJ introduced in 2016. The BoJ applies negative interest rates to the portion of financial institutions' balances that it calls the "Policy-Rate Balances" tier. It applies a positive interest rate to the "Basic Balances" tier (BoJ 2021c). The Policy-Rate Balance is the balance in excess of the Basic Balance and Macro Add-on Balance.[18]

The BoJ increased these incentives in March 2021 with the "Interest Scheme to Promote Lending" (BoJ 2021h, 35–36). Under this new incentive structure, the BoJ applied a positive 0.2% incentive interest rate to money in current account balances that corresponds to SFSO funds against certain money lent outside of government-incentivized programs. The central bank continued to apply a positive 0.1% interest rate to funds provided through the SFSO against other eligible loans and the private debt pledged as collateral (BoJ 2021h).

The BoJ said it would raise incentives when policymakers lower the central bank's short-term policy interest rate, potentially mitigating "the impact on financial institutions' profits

[17] See Bank of Japan historical prime lending rates data.
[18] See (BoJ 2021j, 25–26) for further explanation of the tiering system.

to a certain degree at the time of rate cuts" (Kuroda 2021, 6–7). The more a bank makes qualifying loans, the more funds in that bank's current account that will receive a 0.2% interest rate, offsetting the impact of the given negative rate.

18. Fees: The BoJ did not appear to charge fees.

The central bank did not charge fees for SFSO loans (BoJ 2021f).

19. Loan Maturity: SFSO loan maturities were under one year.

The SFSO's terms limited maturities to a year (BoJ 2021f), but the central bank in practice used shorter-term maturities, initially three months and later extended to six months (BoJ 2021j). The GFC SFSO, in contrast, provided one- to three-month loans (Buchholtz 2020).

20. Other Restrictions on Eligible Participants: The BoJ required financial cooperative parent organizations to monitor their member financial institutions' credit risk standards.

The BoJ required that financial cooperative parent organizations ensure adequate credit risk standards of their member financial institutions that received SFSO funding. BoJ officials reserved the right to suspend loan disbursements to parent organizations if they did not adhere to SFSO rules (BoJ 2020j).

The central bank did not appear to impose restrictions on other SFSO participants. Overall, the BoJ reserved the right to exclude otherwise eligible counterparties from SFSO participation if the central bank deemed the measure prudent (BoJ 2021f).

21. Regulatory Relief: This key design decision does not apply to the SFSO.

This key design decision does not apply to the SFSO.

22. International Coordination: This key design decision does not apply to the SFSO.

This key design decision does not apply to the SFSO.

23. Duration: Lending through the SFSO was expected to end on March 31, 2022.

BoJ officials planned to stop accepting new applications for loans through the SFSO on March 31, 2022 (BoJ 2021i). Policymakers extended this deadline multiple times since the SFSO's initial activation (see Figure 1).

During the April 2020 monetary policy meeting, BoJ Governor Haruhiko Kuroda asked BoJ staff to consider measures that would enhance the central bank's easing policies and support Japanese businesses (BoJ 2020i). Days before an unscheduled Policy Board meeting in which the SFSO's deadline was extended to March 2021, Governor Kuroda publicly expressed concerns that corporate financing conditions were not adequately accommodative, citing rising commercial paper issuance rates and broad deterioration in financial positions across firm size (Kuroda 2020a; BoJ 2020h). He said that because "the economy [was] in an increasingly severe situation, the stress on the financial system [had] been growing in Japan" and though "tension in financial markets [had] abated somewhat, the markets have remained nervous due to a decline in liquidity" (Kuroda 2020a, 3).

The BoJ in December 2020 extended the SFSO's deadline six months to September 30, 2021, because Policy Board members predicted that business financing conditions would remain stressed because of the government's continued COVID-19 mitigation measures (BoJ 2021g). The Policy Board in June 2021 extended the program's duration another six months to March 31, 2022, because the move would "indicate its direction to financial institutions early and give a sense of security, mainly to firms that received loans from these institutions" (BoJ 2021i, 17; 26).

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