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Developments in the Functioning of the JGB Markets from the Perspective of the Usage of the Securities Lending Facility

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The Bank of Japan provides a temporary and secondary source of Japanese Government Bonds (JGBs) to market participants under its Securities Lending Facility (SLF) in its efforts to improve liquidity in the JGB markets and to maintain smooth market functioning. Borrowing from the SLF surged at the beginning of 2023, when liquidity in the JGB markets declined significantly, due to massive selling pressure on JGBs reflecting speculation over the termination of Yield Curve Control and to the subsequent large-scale JGB purchases by the Bank, and remained elevated before starting to decline in mid-2024. The recent decline in borrowing from the SLF is considered to have been driven by the gradual improvement in the functioning of the JGB markets, including the cash, futures, and repo markets, reflecting the reduction in JGB purchases by the Bank and the stabilization of the repo rates as well as changes in investors' positions. Nevertheless, the SLF continues to underpin liquidity in the JGB markets, as there remain a number of JGB issues, in particular 10-year off-the-run issues, of which the Bank holds a significant share. The Bank will continue to closely monitor the functioning of the JGB markets as reflected in the usage of the SLF.

Introduction

The Bank of Japan introduced the Securities Lending Facility (SLF) in April 2004, under which the Bank provides a temporary and secondary source of Japanese Government Bonds (JGBs) to market participants, in its efforts to improve liquidity in the JGB markets and to maintain smooth market functioning.[1]

The objective of this facility is as follows. In the secondary market for government bonds, participants often engage in transactions that involve selling securities that they do not own (short-selling) for market-making or speculative purposes, in which case they must procure these particular securities through purchasing or borrowing from others before delivering the securities to the buyers. In such transactions, if the sellers are unable to procure securities for some reason and unable to deliver them frequently or on a large scale, market participants may face difficulties engaging in market-making or speculative activities through short-selling. The SLF helps to avoid such situation by ensuring that the sellers can borrow specific securities from the Bank as a temporary and secondary source.

Given this objective, upon introducing the SLF, the Bank set the "minimum fee rate" for the use of the facility at 100 basis points, which was fairly higher than the prevailing market rates. It also set the maximum number of days for which counterparties can use the SLF to one day, in principle. Since the beginning of Quantitative and Qualitative Monetary Easing (QQE) in April 2013, however, the Bank has modified the terms and conditions for the SLF as necessary to maintain the functioning of the JGB markets, given that the Bank's large-scale JGB purchases have been expected to affect the availability of JGBs in the market. Major relaxation measures concerning the SLF include: (i) lowering the minimum fee rate (currently, 25 basis points), (ii) raising the upper limit on the amount of sales per issue (the upper limit has been currently eliminated), and (iii) raising the upper limit on the consecutive-day purchases of the same issue (currently, 50 business days).[2]

Following the implementation of these measures, the SLF started to become more frequently used under the Bank's large-scale monetary easing, thus contributing to improving liquidity in the JGB markets and maintaining smooth market functioning. In particular, borrowing from the SLF increased significantly from mid-2022 onward, when investors began to anticipate higher interest rates reflecting price developments in and outside Japan and the Bank, in response, considerably increased the amount of its JGB purchases to curb upward pressure on interest rates. Since then, the amount of borrowing from the SLF has varied depending on the tightness of the supply-demand conditions for JGBs. In other words, borrowing from the SLF is considered to reflect the underlying functioning of the JGB markets, including the cash and futures markets as well as the repo markets, where the lending and borrowing of bonds takes place. Thus, this paper examines the functioning of the JGB markets by analyzing how the volume of borrowing from the SLF has changed in recent years depending on the supply-demand conditions for JGBs.

Borrowing from the SLF in Recent Years

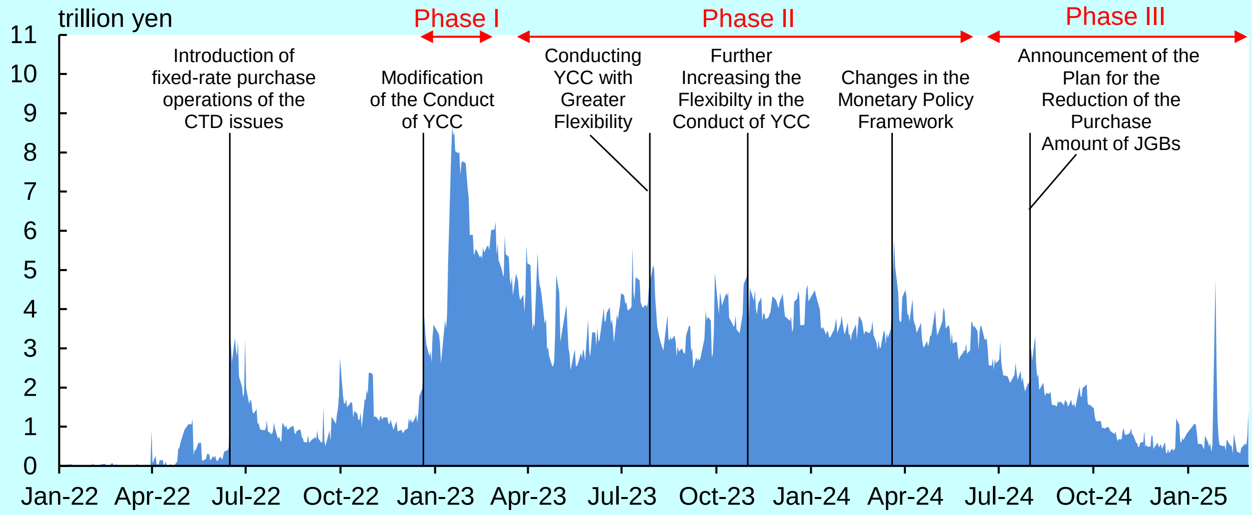
Developments in borrowing from the SLF in recent years can be broadly divided into the following three phases (Chart 1).

The first phase is the period between the end of 2022 and early 2023, when borrowing from the SLF increased rapidly. At the December 2022 Monetary Policy Meeting (MPM), the Bank decided to modify the conduct of Yield Curve Control (YCC) by expanding the range of 10-year JGB yield fluctuations from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points. This modification brought about speculation in the JGB markets that the Bank would further modify or change its monetary policy, which resulted in strong upward pressure on interest rates. To curb such pressure, the Bank significantly increased the amount of its JGB purchases through fixed-rate purchase operations and unscheduled purchase operations. Consequently, the amount of the Bank's JGB purchases reached about 23 trillion yen in January 2023, marking the monthly record high.

As the supply-demand conditions for JGBs became increasingly tight due to the large-scale purchases by the Bank, some investors engaged in sizable short-selling based on the premise that they would continue using the SLF over the long term. This in turn urged market participants who seemed to have become the counterparties of such short-selling to submit a large amount of bids for the Bank's JGB purchase operations. As a result, the share of three on-the-run 10-year JGB issues held by the Bank temporarily exceeded 100 percent, leading to a further tightening of the supply-demand conditions for JGBs. Moreover, the deviation from the arbitrage relationship between cash and futures prices widened as a result of the significant decline in the free float of JGBs available to market participants.[3] This fueled basis trades (particularly, short basis trades where investors sell overvalued bonds while buying undervalued futures), again leading to increased borrowing from the SLF for the cheapest-to-deliver (CTD) issues.[4] Against these backdrops, daily borrowing from the SLF surged to over 8 trillion at its peak in January 2023.[5]

The second phase is the period from early spring 2023 to mid-2024, when borrowing from the SLF stayed at a high level. Looking back at the period through early spring 2023, the Bank announced in February 2023 that it would implement measures concerning the SLF such as revising the minimum fee rate for three on-the-run 10-year JGB issues of which supply-demand conditions could be deemed excessively tightened over the long term.[6] In addition,

[Chart 1] Developments in Borrowing from the Securities Lending Facility



Source: Bank of Japan.

upward pressure on JGB yields waned following the decline in overseas interest rates due to heightened uncertainties concerning the financial sectors in the United States and Europe in March 2023. As a result, sizable short-selling activities observed during the first phase became subdued, and daily borrowing from the SLF temporarily declined to about 2.5 trillion yen in May 2023.

Nonetheless, even after the Bank decided to increase the flexibility in its conduct of YCC at July and October 2023 MPMs, daily borrowing from the SLF remained at a high level of about 3 to 5 trillion yen. In addition to the aforementioned basis trades, two reasons can be pointed out. First, the Bank continued its large-scale JGB purchases under YCC, although the amount of the purchases declined compared to the peak period. Consequently, the share of JGBs—most notably 10-year JGBs—held by the Bank remained high. Second, against this backdrop, investors continued to build up or maintain short positions in JGBs on the whole with speculation that the Bank would terminate YCC and lift the negative interest rate policy in the near future. As a result, the underlying demand for the SLF remained buoyant throughout the second phase.

The third phase is the period from mid-2024 to the present, during which borrowing from the SLF has significantly declined. While daily borrowing from the SLF was about 4 trillion yen soon after the "Changes in the Monetary Policy Framework" in March 2024, the volume has been on a downward trend since mid-2024, falling below 1 trillion yen in October 2024 for the first time since December 2022. Since then, although there was a temporary increase right after the January 2025 MPM, daily borrowing from the SLF has averaged at about several hundred billion yen.

The decline in borrowing from the SLF in the third phase from mid-2024 has been caused by such factors as changes in supply-demand conditions for JGBs in the cash and futures markets as well as in the repo markets, where market participants engage in lending and borrowing of JGBs. The following sections summarize changes in (i) the amount of the free float of JGBs available to market participants, (ii) investors' positions, and (iii) the rate formation in the repo markets, as well as their impact on the usage of the SLF.

Drivers of the Decline in Borrowing (i): Increase in the Free Float of JGBs Available to Market Participants

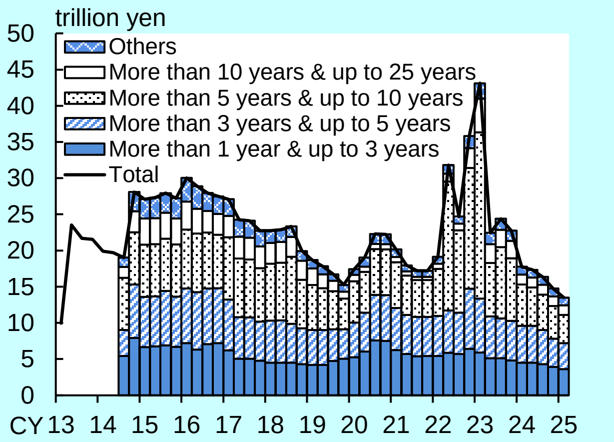
The first driver of the recent decline in borrowing from the SLF is the modest improvement of the supply-demand conditions for JGBs due to an increase in outstanding bonds in the market. More specifically, the ongoing reduction in JGB purchases by the Bank has led to an increase in the free float of on-the-run JGB issues available to market participants. In addition, Liquidity Enhancement Auctions conducted by the Ministry of Finance and the reduction in the amount of CTD issues repurchased by the Bank under the SLF have both contributed to increasing the free float of off-the-run JGB issues.

Progress in the reduction of JGB purchases by the Bank

As noted in the previous section, the amount of JGB purchases by the Bank increased significantly after the Bank modified its conduct of YCC in December 2022 and remained at a high level even after the Bank started to conduct YCC with greater flexibility in July 2023.[7] Since summer 2024, however, the Bank has been reducing the amount of its monthly purchases by about 400 billion yen each quarter, in line with the plan for the reduction of JGB purchases decided at the July 2024 MPM. Accordingly, the amount of its quarterly purchases in the January-March quarter of 2025 is expected to be about 13.5 trillion yen, the lowest level since the introduction of QQE in the April-June quarter of 2013 (Chart 2). In terms of the amount of the reduction by maturity segment, the Bank has so far been giving priority to reducing the purchases of JGBs with a residual maturity of up to 10 years, given the large size of the Bank's purchases relative to the amount of monthly issuance in this segment.

As the reduction of JGB purchases has progressed, there has been a clear change in the supply-demand conditions for on-the-run issues, as evidenced in the Bank's share of 10-year JGB holdings. From mid-2022 to the first half of 2023, the Bank often held the vast majority of on-the-run 10-year JGB issues right after their issuance, as it continued large-scale purchases via fixed-rate and unscheduled operations, as explained in the previous section (Chart 3). Recently, however, the share of on-the-run 10-year JGB issues held by the Bank has been at a relatively low level as a trend, and this has been seen as a consequence of the ongoing reduction of the Bank's JGB purchases. The Bank's share of on-the-run issues of 2- and 5-year JGBs has also shown a similar trend.[8]

[Chart 2] Amount of JGB Purchases by the Bank of Japan



Note: Figures include fixed-rate purchases. "Others" includes purchases in the residual maturity zones of "up to 1 year" and "more than 25 years" and purchases of inflation-indexed bonds and floating-rate bonds. The breakdown is not shown for the period between 2013Q1 and 2014Q2 as the original data include different residual maturity segments.
Source: Bank of Japan.

[Chart 3] Share of 10-Year JGBs Held by the Bank of Japan

%

CY	22				23				24				25
Month	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan
10-yr JGB #360	68	71	74	79	86	88	88	88	88	88	88	88	88
#361	53	54	57	66	82	88	88	88	88	88	88	88	88
#362	59	63	66	72	80	84	85	85	85	85	85	85	85
#363	35	45	47	59	68	75	81	81	81	81	81	81	81
#364	20	34	69	76	77	78	83	83	83	83	83	83	83
#365	1	40	64	83	83	83	84	84	84	84	84	83	82
#366		76	89	92	96	96	95	95	95	95	95	93	87
#367			29	76	106	92	90	90	90	90	90	90	88
#368				109	104	95	94	93	93	93	93	93	90
#369					111	90	89	89	89	89	89	89	89
#370						56	58	73	78	81	81	81	81
#371							44	52	56	58	60	63	64
#372								70	54	54	59	62	63
#373									17	29	36	43	44
#374										30	29	39	39
#375											20	18	26
#376												5	15
#377													12

Above 90%
80-90%
70-80%
60-70%
50-60%

Note: The bold frames indicate the month in which the 10-year JGB issue was first issued. Figures are as of the end of each month.
Sources: Ministry of Finance; Bank of Japan.

The increase in the free float of the on-the-run JGB issues has enabled market participants with short positions in those securities to easily meet their bond borrowing needs in the SC repo market. As a result, the SLF has been rarely used for newly issued JGBs.

Liquidity Enhancement Auctions and the Bank's reduction of repurchase amount under the SLF

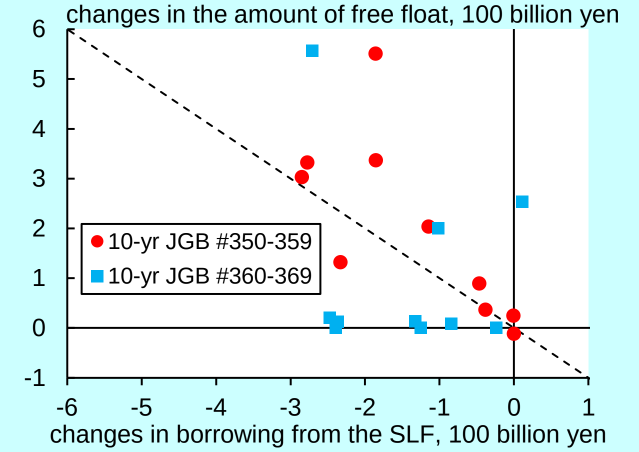
While the reduction of JGB purchases by the Bank has eased the supply-demand conditions for on-the-run JGB issues, it does not have direct impact on the supply-demand balance of off-the-run JGB issues, of which the Bank already holds a significant share. In this regard, (i) Liquidity Enhancement Auctions conducted by the Ministry of Finance and (ii) the Bank's measure to reduce the amount of JGB issues it repurchases under the SLF (in other words, a measure in which counterparties purchase securities they have borrowed from the Bank under the SLF) are considered to play a key role in increasing the free float of off-the-run JGB issues in the market, thereby contributing to the reduced SLF usage for these securities.

With the aim of maintaining and improving liquidity in the JGB markets, Liquidity Enhancement Auctions are conducted by the Ministry of Finance in the form of a tap auction for existing JGB issues that have structural liquidity shortages or temporary liquidity shortages due to expanding demand.[9] They are conducted through competitive bidding based on the yield spreads relative to the previous business day. As pointed out by participants of the Meetings of JGB Market Special Participants (i.e., primary dealers) in the past, the auction results are typically subject to the change in the shape of the yield curve on the auction day and the resulting change in the relative ease of winning across eligible JGB issues. Even so, the recent auction results indicate that JGB issues that are largely held by the Bank and thus in relatively tight demand have been reopened.

Meanwhile, given that the JGB issues of which the Bank holds a significant share are expected to become CTD issues, the Bank clarified in October 2024 that it would accept counterparties' request for a reduction in the amount of CTD issues it repurchases under the SLF, if the reduction is deemed to contribute to improving the liquidity of the JGB markets.[10] Since then, the Bank has implemented the reduction several times, thereby contributing to the modest increase in the free float of CTD issues in the market.

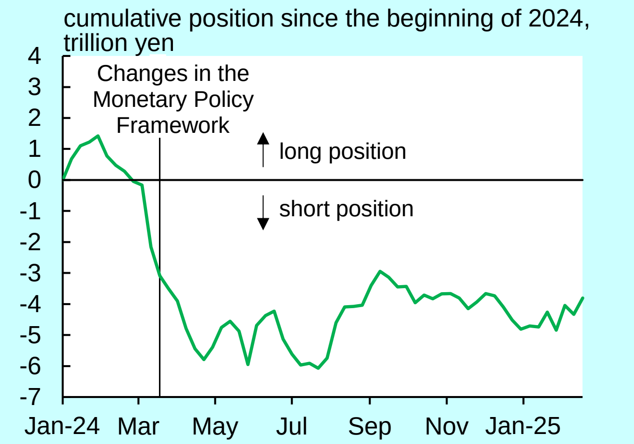
To assess the effects of Liquidity Enhancement Auctions and the Bank's reduction of the repurchase amount under the SLF on the supply-demand conditions for off-the-run JGBs, this paper analyzes the relationship between the usage of the SLF and the amount of the free float of JGBs (Chart 4). The results indicate that borrowing from the SLF has declined broadly in line with the increase in the free float with respect to the JGB issues that have been recently reopened in Liquidity Enhancement Auctions (namely 10-year JGBs #355–359) and those for which the Bank has reduced the repurchase amount under the SLF.

[Chart 4] Relationship between the Free Float of 10-Year JGBs and the Usage of the SLF



Note: Figures are changes from March to December 2024. Changes in the amount of free float are calculated using the month-end figures, while those in borrowing from the SLF are calculated using monthly averages. The dashed line shows the negative 45 degree line.
Sources: Bank of Japan; Ministry of Finance.

[Chart 5] Developments in JGB Futures Trading by Foreign Investors



Source: Osaka Exchange.

Drivers of the Decline in Borrowing (ii): Changes in Investors' Positions

Besides the increase in the free float of JGBs available to market participants, changes in investors' positions are also considered to have played a major role in the recent decline in borrowing from the SLF.

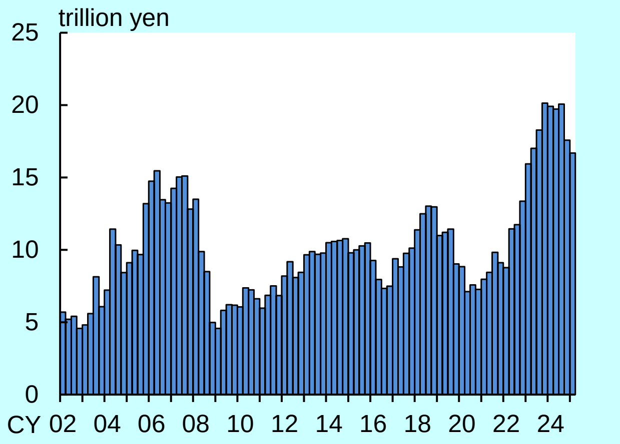
The developments in JGB futures trading by foreign investors—who themselves are the major players in the JGB futures market—show that they started to build up short positions in early spring 2024, on the back of speculation over the lifting of the negative interest rate policy and the termination of YCC as well as expectations for additional rate hikes in response to yen's depreciation and speculation over the reduction in JGB purchases by the Bank (Chart 5). However, when investors' risk sentiment deteriorated in early August 2024, triggered by concerns over the slowdown in the U.S. economy and the subsequent sell-offs in the global stock market, foreign investors quickly unwound their short positions. While this paper focuses on investors' positions in the JGB futures market due to data limitations, both overseas and domestic investors also actively manage their positions in the cash and swap markets, which appear to have followed a trend similar to that in the futures market. That is to say, short positions also increased in these markets in early spring 2024 before shrinking in the summer. Such large-scale unwinding of short positions is deemed to have driven the decline in the SLF usage by reducing the bond borrowing needs in the SC repo market.[11]

As Japan's economic activity and prices have shown developments broadly in line with the Bank's projections in the *Outlook for Economic Activity and Prices*, investors (mainly foreign investors) seem to have resumed building short positions since early autumn 2024 amid rising expectations for additional rate hikes (Chart 5). Based on available data and market intelligence, two characteristics can be pointed out for the recent developments in investors' positions.

First, as the Bank terminated YCC in March 2024 and has been reducing its JGB purchases since August, investors have meticulously constructed positions by combining long and short positions across different maturities based on the relative values. This contrasts with the once common investment strategy under YCC of building outright short positions in JGBs with a residual maturity of 7 to 10 years. Against this backdrop, the total amount of short positions in the market does not seem to have accumulated as much as before. Indeed, open interest in JGBs futures has recently declined compared to its peak level, albeit remaining relatively high (Chart 6). Second, even when investors create new short positions in cash JGBs, they have tended to use either on-the-run or adjacent off-the-run issues whose supply-demand conditions have been eased, instead of using the issues that are largely held by the Bank and, thus, still tight in demand.

As a result of these changes in investors' positions, there has been no significant increase in borrowing from the SLF in spite of the recent increase in short positions mainly due to investors' rising expectations for additional rate hikes (Chart 1).

[Chart 6] Open Interest in JGB Futures



Note: Figures are quarter averages of the sum of the nearest contract month and the second contract month.
Source: Osaka Exchange.

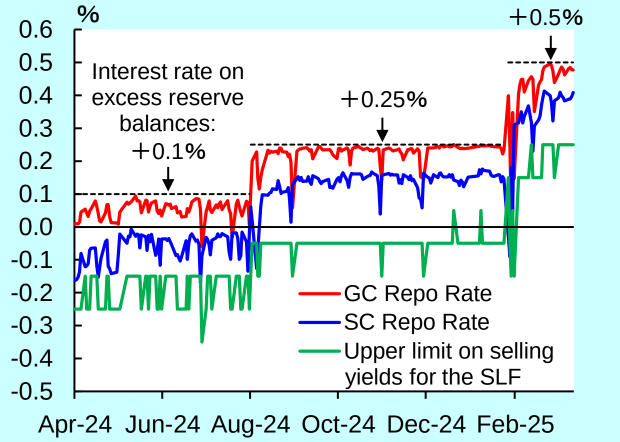
Drivers of the Decline in Borrowing (iii): Stabilization of the Repo Rates

As a state with positive interest rates has been gradually taking root in Japan, the rate formation has become more stabilized in the GC repo market, where underlying securities to be received as collateral are not specified. Besides the supply-demand factors in the JGB markets, such stabilization of the GC repo rate has also led to the recent decline in borrowing from the SLF.

To understand this point, the following summarizes how the GC repo rate affects the SC repo rate. The Bank determines how much and which JGB issue it lends under the SLF through an auction where counterparties submit "selling yields." In doing so, the Banks sets an upper limit on the selling yields (hereafter, SLF rate) to impose certain costs. Since the Bank sets the SLF rate based on the GC repo rate[12], the stability of the GC repo rate stabilizes the SLF rate. Furthermore, market participants determine the rate at which they lend or borrow JGB issues with one another in the SC repo market (where underlying securities are specified) taking into account the SLF rate, which is essentially the cost of procuring the securities from the Bank. Thus, the GC repo rate influences the SC repo rate with the SLF rate serving as a key channel.

Considering this relationship, this paper looks at the recent developments in these three rates. First, for some time after the lifting of the negative interest rate policy in March 2024, the GC repo rate exhibited a relatively large volatility on a daily basis, depending on the amount of funding needs of securities companies. Accordingly, the SLF rate also showed daily fluctuations (Chart 7).[13] Since summer 2024, however, the GC repo rate has moved up to a level close to the interest rate on excess reserve balances, and the size of daily fluctuations has also been reduced.[14] As a result, the SLF rate has stabilized, and the SC repo rate has also been stable compared to immediately after the termination of the negative interest rate policy. Market participants have attributed the increase in SC repo transactions (including term ones) compared to immediately after the termination of the negative interest rate policy to the fact that borrowers' and lenders' prospects for JGB rates in the SC repo market have become more converged. These developments have also contributed to the decline in the SLF usage.

[Chart 7] Repo Rates and the Upper Limit on Selling Yields for the SLF

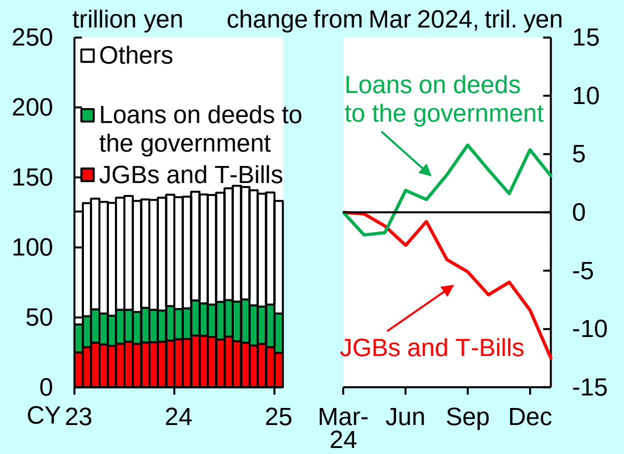


Note: Figures for the SC repo rate are volume-weighted averages of all traded issues for SC repo trades. GC and SC repo rates are both T/N rates.
Sources: Bank of Japan; Japan Securities Dealers Association; JBOND Totan Securities.

Meanwhile, there was a temporary surge in the SLF usage, both in terms of the amount of borrowing and the number of issues borrowed, immediately after the January 2025 MPM, amid a sharp decline in the GC repo rate reflecting a tightening of supply-demand conditions in the repo markets due to rollover constraints concerning term transactions whose maturities were concentrated on the date right after the MPM.[15] However, this situation was resolved in about a week, and the GC repo rate has stabilized again near the interest rate on excess reserve balances since February 2025.

One of the key factors behind the stabilization of the GC repo rate since summer 2024 is that, as a state with positive interest rates has gradually been taking root in Japan, banks have been active in cash borrowing in the repo markets for arbitrage purposes within the range of their collateral. In particular, JGBs have been utilized more effectively as collateral for borrowing cash in the GC repo market since summer 2024. Indeed, the data on the collateral accepted by the Bank show that financial institutions have withdrawn a portion of government securities, such as JGBs and treasury discount bills ("T-bills"), while pledging more loans on deeds (Chart 8). The stabilization of the GC repo rate is also attributable to the fact that the loans amounting to around 10 trillion yen provided through the 2-year Funds-Supplying Operations against Pooled Collateral conducted about 2 years ago matured in January 2025 and that this somewhat alleviated collateral constraints faced by financial institutions.

[Chart 8] Collateral Accepted by the Bank of Japan



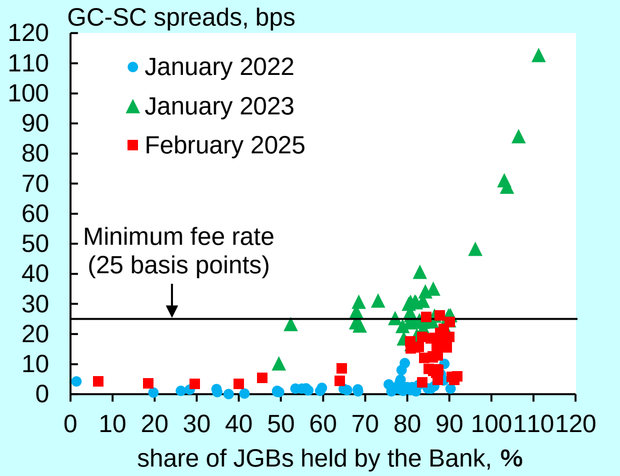
Note: Based on collateral values.
Source: Bank of Japan.

Conclusion

Borrowing from the SLF increased significantly when the supply-demand conditions for JGBs became severely tight as a result of the sharp rise in the amount of JGB purchases by the Bank under YCC, and stayed high. However, it has declined since mid-2024 due to the following three factors: (i) the increase in the free float of JGBs available to market participants, (ii) changes in investors' positions, and (iii) the stabilization of the repo rates. The recent decline in borrowing from the SLF can be regarded as evidence that the supply-demand conditions in the JGB markets have been easing somewhat and that the functioning of the repo markets has been improving to some extent.

Indeed, the GC-SC spreads, which show the scarcity of JGBs, have recently been narrowing on the whole (Chart 9). Against this backdrop, there has been a clear declining trend in the number of JGB issues that are cheaper to borrow from the Bank through the SLF than from securities lenders in the SC repo market since summer 2024.

[Chart 9] Share of 10-Year JGBs Held by the Bank of Japan and GC-SC spreads



Note: Figures for the GC-SC spreads are monthly averages. Figures for the shares of JGBs held by the Bank are as of the end of each month.
Sources: Bank of Japan; Ministry of Finance; Japan Securities Dealers Association; JBOND Totan Securities.

That being said, there remain a number of JGB issues—in particular, off-the-run issues of 10-year JGBs with a residual maturity of around 8 years or less—of which the Bank holds a significant share. Indeed, compared with the beginning of 2022, when the SLF was barely used, the GC-SC spreads have remained wide, mainly for the JGB issues that are largely held by the Bank (Chart 9). Under these circumstances, the SLF continues to be regularly used for a certain number of JGB issues, albeit at a lower volume. Moreover, borrowing from the SLF surged both in terms of the amount the number of issues in late January 2025, when the supply-demand conditions temporarily tightened in the entire repo markets. As such, the SLF is considered to continue playing a role in underpinning liquidity in the JGB markets.

The Bank has currently been reducing the amount of its monthly purchases of JGBs by about 400 billion yen each quarter, in line with the plan for the reduction of purchases decided at the July 2024 MPM. The progress in the reduction is expected to further improve the supply-demand conditions in the repo markets by increasing the free float of JGBs. In addition, the Bank has made efforts to ease the tight supply-demand balance for off-the-run issues of 10-year JGBs by clarifying that the Bank will accept counterparties' request to reduce the Bank's repurchase amount of the CTD issues, of which the Bank holds a significant share, if the reduction is deemed to contribute to improving liquidity in the JGB markets.[16] The Bank will continue to closely monitor the functioning of the secondary market for JGBs, as reflected in the usage of the SLF, including the effects of these measures.

[1] For more details on the background of the introduction of the SLF and the market developments at that time, see the following report.

Financial Markets Department, Bank of Japan (2004), *Money Market Operations in Fiscal 2003*.

[2] Other relaxation measures include the following. In April 2019, the Bank relaxed the terms and conditions for the SLF for the first and second CTD issues of which the share of the Bank's holdings was 80 percent or more, and decided that it would accept counterparties' requests for a reduction of the amount of the CTD issues repurchased by the Bank if the reduction was deemed to contribute to improving liquidity in the JGB markets. In addition, in June 2022, the Bank increased the upper limit on the consecutive-day purchases of the CTD issues.

[3] In this paper, outstanding bonds in the market, or the "free float" of bonds, refer to the total amount issued less the amount held by the Bank.

[4] According to Aziz and Jackman (2022), the deviation from the arbitrage relationship between cash and futures prices also widened in Australia, where YCC was implemented similarly to Japan, which led to greater use of SLF, along with an increase in short basis trades, where investors hold short positions in overvalued CTD issues and long positions in undervalued futures.

Aziz, Ahmet, and Ben Jackman (2022), "The RBA and AOFM Securities Facilities," *RBA Bulletin*, December 2022, pp. 52-59.

[5] For more details on the Bank's conduct of JGB purchases and the treatment of the SLF after the modification of the conduct of YCC in December 2022, see the following report.

Financial Markets Department, Bank of Japan (2023), *Market Operations in Fiscal 2022*.

[6] For more details, see the following release.

"Market Operations for Three On-the-Run Issues of 10-year Japanese Government Bonds" (February 16, 2023).

[7] From November 2023 to January 2024, the Bank somewhat reduced the amount of its JGB purchases on the back of (i) the easing of the upward pressure on the Japanese long-term interest rates amid a decline in U.S. long-term interest rates and (ii) the tightening of the supply-demand conditions for JGBs due to an increase in JGB purchases by some large investors.

[8] The results of the Bank's JGB purchase operations also indicate that the supply-demand conditions for JGBs have improved somewhat recently. When the Bank was purchasing a significant amount of JGBs, the lowest accepted bid yields tended to be lower than the prevailing market yields. With progress being made in the reduction of JGB purchases, however, it has been increasingly the case that the lowest accepted bid yields are roughly the same as the prevailing market yields.

[9] When Liquidity Enhancement Auctions were introduced in April 2006, only 20-year JGBs with a residual maturity of 11 to 16 years were eligible for reopening. Since then, however, taking into account market environments and other factors, the Ministry of Finance has modified the issuance amount and eligible issues. In August 2024, for example, it increased the amount of issuance in a Liquidity Enhancement Auction for JGBs with a residual maturity of 5 to 15.5 years, of which the free float has been relatively scarce. For more details on Liquidity Enhancement Auctions, see the following report.

Financial Bureau, Ministry of Finance (2024), *Debt Management Report 2024*, pp. 71-72.

[10] For more information, see the following release. It should be noted that, as described in footnote 2, the relaxation of the terms and conditions for the SLF for the CTD issues was introduced in April 2019, and the following release is solely the clarification of the measures.

"Continuation of the Relaxation of the Terms and Conditions for the Securities Lending Facility for the Cheapest-to-Deliver Issues" (October 16, 2024).

[11] Besides short selling cash JGBs, investors may construct short positions in JGB futures or synthetic short positions, the latter of which involves combining cash options. Even under these cases, securities companies on the opposite side of the trade tend to hold short positions in cash JGBs to hedge interest rate risk to which they are exposed from such market making activities. Therefore, when investors cover their short positions by, for example, buying back futures, securities companies' short positions are also expected to shrink.

[12] More precisely, the SLF rate is calculated as "the rate considered in light of the Tokyo Repo Rate (T/N) minus the minimum free rate." The minimum fee rate is currently 25 basis points.

[13] For more details on the developments in the Japanese money markets after the Bank lifted the negative interest rate policy, see the following report.

Financial Markets Department, Bank of Japan (2024), "Developments in the Japanese Money Markets and their Functioning with Excess Reserves – Including Developments after the Termination of the Negative Interest Rate Policy –," *BOJ Reports and Research Papers*.

[14] In the meantime, there has not been a situation where the GC repo rate has spiked to a level clearly above the interest rate on excess reserve balances. This is because, with abundant excess reserves, when the GC repo rate is higher than the interest rate on excess reserve balances, financial institutions eligible for the Complementary Deposit Facility, such as city banks, turn to the cash lending side from the cash borrowing side.

[15] In response to the tightening of the supply-demand conditions in the repo markets, the Bank announced on January 24, 2025, that it would temporarily raise the maximum number of JGB issues on which counterparties can submit their bids for the SLF (the release is only available in Japanese). On January 27, borrowing from the SLF reached about 4.76 trillion yen, marking its highest level since March 2024, whereas the number of JGB issues for which the SLF was used reached a historical high of 104.

[16] The Bank has also sought to increase the transparency of the treatment of the reduction and clarified in January 2025 the criteria for how it would judge, upon a counterparty's request, whether the reduction contributes to improving the liquidity of the JGB market. For more information, see the following release.

"Treatment of the Reduction in the Amount of the Cheapest-to-Deliver Issues Repurchased by the Bank of Japan under the Securities Lending Facility" (January 16, 2025).

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