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Market Operations in Fiscal 2022

Financial Markets Department
Bank of Japan

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I. Summary

The Bank of Japan pursued powerful monetary easing throughout fiscal 2022 under the framework of Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control, with a view to achieving the price stability target of 2 percent.

Turning to the environment surrounding the Bank's market operations, financial conditions in Japan, including those for small and medium-sized firms, maintained an improving trend throughout fiscal 2022 on the back of a pick-up in economic activity, although weakness in firms' financial positions remained in some segments. Global financial markets remained nervous amid concerns over uncertainties about monetary policy of central banks in the United States and Europe and a slowdown in the global economy. Under these circumstances, yields on Japanese government bonds (JGBs) remained under strong upward pressure throughout the fiscal year, mainly due to a rise in overseas interest rates and speculation over the Bank's monetary policy. Taking account of the changes in the environment surrounding financial markets -- mainly those mentioned above -- the Bank conducted various market operations, based on guidelines for market operations and for asset purchases decided at each Monetary Policy Meeting (MPM), and continued to (1) support financing mainly of firms, (2) maintain stability in financial markets, and (3) maintain accommodative financial conditions through supporting such financing and maintaining stability.

The following were the key points in the conduct of the Bank's operations throughout fiscal 2022.

The Bank conducted <u>outright purchases of JGBs</u> flexibly so that long-term interest rates (10-year JGB yields) would remain at around 0 percent under QQE with Yield Curve Control. Until the MPM held in December 2022, the Bank continued to indicate the purchase size per auction in a specific amount in the quarterly schedule of outright purchases of JGBs. Meanwhile, it adjusted the quarterly purchase size and the purchase frequency per month in a flexible manner, mainly based on the supply and demand conditions of JGBs in each zone. At the December 2022 MPM, the Bank decided to significantly increase the amount of JGB purchases while expanding the range of 10-year JGB yield fluctuations from the target level: from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points. Following this decision, it increased the amount of scheduled JGB purchases from January through March 2023 and conducted large-scale purchases. Furthermore, instead of indicating the specific purchase size, it started to announce the amount of purchases in a range form and adjust the purchase size per auction in a flexible manner. In addition to these scheduled purchases, it nimbly conducted additional outright purchases of JGBs and increased the amount of purchases even more, taking account of interest rate developments.

With regard to outright purchases of JGBs through the fixed-rate method, the Bank nimbly conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs and fixed-rate purchase operations of these issues for consecutive days until the MPM held in April 2022. At the April 2022 MPM, the Bank clarified that it would offer to purchase 10-year JGBs at 0.25 percent through fixed-rate purchase operations every business day, in principle. Thereafter, it conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs every business day from May 2. In addition, it conducted fixed-rate purchase operations of the cheapest-to-deliver (CTD) issue of JGB futures at 0.25 percent in June. Thereafter, it continued to conduct fixed-rate purchase operations of the CTD issue for consecutive days, while adding and changing the CTD issues applicable to the operations given the rollover of JGB futures contracts. After deciding to expand the range of 10-year JGB yield fluctuations from the target level at the MPM held in December 2022, the Bank conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs and the CTD issue every business day, while changing the fixed rate applied in the auctions from 0.25 percent to 0.5 percent. Also, it nimbly conducted fixed-rate purchase operations of 2-year, 5-year, and 20-year JGBs as necessary to encourage the formation of a yield curve consistent with the guidelines for market operations.

The Bank continued to offer the Funds-Supplying Operations against Pooled Collateral with a fixed interest rate of 0 percent and 2-week terms at a pace of roughly once every two weeks, in principle, throughout the fiscal year. From September 27, 2022, it conducted these operations without setting an upper limit on the amount of fund-provisioning, in light of the decision made at the MPM held in the month. After the start of 2023, the volatility in the JGB market remained elevated, mainly due to the rise in overseas interest rates and heightened speculation over the Bank's monetary policy. Against this background, the Bank conducted the operations with a loan duration of 2 years at a fixed interest rate of 0 percent to stabilize longer-term interest rates not only in the cash JGB market but also in other markets at a lower level without directly affecting supply and demand conditions of cash JGBs. At the MPM held in January 2023, it also decided to enhance the Funds-Supplying Operations against Pooled Collateral, including the extension of the duration of loans disbursed through the variable-rate method, in which interest rates on the loans were determined by multiple-rate competitive auctions, to within 10 years. Thereafter, it conducted the operations with a loan duration of 5 years through the variable-rate method.

With such conduct of JGB purchases and the Funds-Supplying Operations against Pooled Collateral, long-term interest rates mostly stayed at a level close to the upper bound of the fluctuations throughout the fiscal year, while fluctuating mainly in response to developments in overseas interest rates, economic and price conditions in Japan, and speculation over the Bank's monetary policy.

With regard to <u>outright purchases of treasury discount bills (T-Bills)</u>, the Bank flexibly adjusted the purchase amounts, taking into consideration developments in supply and demand conditions in the market, and offered purchases between 100 billion and 1 trillion yen per auction. As a result of these operations, the yields on T-Bills stayed below the level of the short-term policy interest rate (minus 0.1 percent), albeit with fluctuations.

The Bank conducted <u>outright purchases of exchange-traded funds (ETFs) and Japan real estate investment trusts (J-REITs)</u> as necessary in line with its guidelines for asset purchases so that their amounts outstanding would increase at annual paces with upper limits of about 12 trillion yen and about 180 billion yen, respectively.

<u>Outright purchases of CP and corporate bonds</u> were conducted in accordance with the Bank's guidelines for asset purchases that it would purchase these assets at about the same pace as prior to the COVID-19 pandemic, so that their amounts outstanding would gradually return to pre-pandemic levels, namely about 2 trillion yen for CP and about 3 trillion yen for corporate bonds. At the MPM held in December 2022, the Bank decided that, in adjusting the amount outstanding of corporate bonds, it would give due consideration to their issuance conditions. Furthermore, it decided on the guidelines for asset purchases that it would maintain the amount outstanding of CP at about 2 trillion yen at the MPM held in March 2023. As a result of these operations, issuance rates for CP stayed at a low level. The yield spreads between corporate bonds and JGBs widened as investors' risk sentiment became cautious, but leveled off after the start of 2023.

As for <u>the Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19)</u> (hereinafter referred to as the "Special Operations in Response to COVID-19"), the Bank decided at the MPM held in September 2022 to complete the fund-provisioning against loans that financial institutions make on the back of government support ("government-supported loans"), mainly to small and medium-sized firms, at the end of December 2022. It was also decided at the meeting to complete the fund-provisioning against loans that financial institutions make on their own ("non-government-supported loans"), mainly to small and medium-sized firms, at the end of March 2023. The amount outstanding of loans provided through the operations decreased significantly throughout the fiscal year to 6.0 trillion yen at the end of March 2023, since fund-provisioning against private debt pledged as collateral, which was completed at the end of fiscal 2021, gradually reached maturity.

With respect to the provision of foreign currency funds, the Bank offered 1-week operations under the U.S. Dollar Funds-Supplying Operations on a weekly basis in principle until March 17, 2023, based on the U.S. Dollar-Yen Swap Agreement with the Federal Reserve Bank of New York. From March 20, it offered the 1-week operations every business day, based on the agreement with the Bank of Canada, the Bank of England, the European Central Bank, the Federal Reserve System (Fed), and the Swiss National Bank to increase the frequency of the operations from weekly to daily as a coordinated action to enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements. U.S. dollar funding costs increased throughout the fiscal year, mainly due to a rise in the U.S. dollar overnight index swap (OIS) rate that reflected interest rate hikes by the Fed. The costs went up temporarily after mid-March 2023. This was due to an increase in the U.S. dollar funding premium that reflected the deterioration in risk sentiment in response to the failures of some U.S. financial institutions and concern over the business conditions of a financial institution in Europe. Nevertheless, there was no use of the operations, as Japanese banks had no particular problems in their funding.

With regard to the Securities Lending Facility, the Bank continued with measures to increase the number of Japanese government security (JGS) issues offered and raise the upper limit on the number of issues allowed for the submission of bids by a counterparty per auction, while conducting large-scale JGB purchases. In this situation, the amount of successful bids had been at a high level. In addition, the Bank relaxed the terms and conditions for the Securities Lending Facility of the CTD issues[1] from June 17, 2022, by increasing the upper limit on consecutive purchases of the same issue and extending the issues to be applicable for the relaxed conditions for the delivery of the CTD issues. The purpose of the relaxation was to ensure stability in the market by easing excessive tightening in supply and demand of JGSs in the repo market. Conversely, from February 27, 2023, the Bank changed the minimum fee rate and lowered the upper limit on the amount of sales per issue if necessary for three on-the-run issues of 10-year JGBs of which supply and demand conditions in the repo market could be deemed excessively tightened over the long term. This was to ensure the appropriate use of the Securities Lending Facility in line with its purpose as a means to provide a temporary and secondary source of JGSs, and to facilitate the Bank's market operations.

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[1] The first and second CTD issues for 10-year JGB futures in the nearest two contract months.

Under these circumstances, current account balances at the Bank decreased mainly due to the phasing out of the Special Operations in Response to COVID-19. The Benchmark Ratio was adjusted significantly upward in many reserve maintenance periods, reflecting a decline in macro add-on balances in line with the phasing out of the Special Operations in Response to COVID-19 and fund-provisioning through the Bank's large-scale purchases of JGBs. Amounts outstanding in the repo market and the uncollateralized call market were at high levels throughout the fiscal year. This was because (1) transaction needs in money markets continued on both the borrowing side and the lending side while the effects on the upper bound on macro add-on balances of the dissipation of the addition to macro add-on balances and the rise in the Benchmark Ratio differed from one sector to another, and (2) arbitrage trading using the three-tier system of current accounts at the Bank and arbitrage between the repo market rate and the call market rate were active. The call rate and the GC repo rate generally stayed at levels slightly above the short-term policy interest rate.

This report describes these market operations during fiscal 2022.

The rest of this paper is organized as follows. First, Chapter II describes developments in the Bank's balance sheet and in exogenous sources of changes in current account balances at the Bank. Next, Chapter III describes the developments in financial markets such as Japanese money markets and bond markets, and the conduct of each measure in market operations. Chapter IV explains changes in the frameworks related to market operations. Finally, Chapter V presents the Bank's actions to enhance dialogue with market participants.

II. The Bank's Balance Sheet and Exogenous Sources of Changes in Current Account Balances at the Bank

A. The Bank's Balance Sheet

Under the conduct of the aforementioned market operations, the Bank's balance sheet and the monetary base decreased, mainly due to the phasing out of the Special Operations in Response to COVID-19 (Chart 2-1).

The Bank's balance sheet stood at 735.1 trillion yen at the end of March 2023, a decrease of 1.1 trillion yen from a year earlier. Meanwhile, the monetary base amounted to 675.8 trillion yen at the end of March 2023, a decrease of 12.2 trillion yen from a year earlier.

On the asset side of the balance sheet, JGBs increased by 65.0 trillion yen from a year earlier to 576.2 trillion yen and the Funds-Supplying Operations against Pooled Collateral increased by 13.5 trillion yen to 14.0 trillion yen. These increases resulted from the Bank's large-scale purchases of JGBs and conducting the Funds-Supplying Operations against Pooled Collateral with loan durations of 2 years and 5 years, which took into account the strong upward pressure on interest rates observed throughout the fiscal year mainly on the back of the rise in overseas interest rates and speculation over the Bank's monetary policy. On the other hand, the Special Operations in Response to COVID-19 decreased significantly by 80.9 trillion yen from a year earlier to 6.0 trillion yen in line with the phasing out of the operations. Outright purchases of T-Bills also decreased by 9.4 trillion yen to 3.3 trillion yen, as the Bank conducted outright purchases flexibly taking into consideration developments in the supply and demand conditions in the market.

On the liability side of the balance sheet, banknotes increased by 2.1 trillion yen from a year earlier to 122.0 trillion yen. Payables under repurchase agreements increased by 4.5 trillion yen to 5.4 trillion yen, mainly due to an increase in the Securities Lending Facility. Deposits of the government increased by 2.6 trillion yen from a year earlier to 15.6 trillion yen. Meanwhile, current account balances at the Bank decreased by 14.1 trillion yen from a year earlier to 549.1 trillion yen.

Chart 2-1: The Bank's Balance Sheet

trillion yen

	End-Mar.2018	End-Mar.2019	End-Mar.2020	End-Mar.2021	End-Mar.2022	End-Mar.2023	Year-on-year
JGBs	426.6	459.6	473.5	495.8	511.2	576.2	+65.0
CP	2.1	2.0	2.6	2.9	2.5	2.1	-0.4
Corporate bonds	3.2	3.2	3.2	7.5	8.6	8.0	-0.6
ETFs	18.9	24.8	29.7	35.9	36.6	37.0	+0.5
J-REITs	0.48	0.52	0.58	0.67	0.67	0.67	+0.0
Loan Support Program	45.6	46.1	49.2	60.0	61.6	69.9	+8.3
Outright purchases of T-Bills	18.8	7.9	10.2	34.2	12.7	3.3	-9.4
Funds-Supplying Operation to Support Financial Institutions in Disaster Areas	0.5	0.7	0.5	0.5	0.5	0.2	-0.4
Special Operations in Response to COVID-19	-	-	3.4	64.8	86.8	6.0	-80.9
Funds-Supplying Operations to Support Financing for Climate Change Responses	-	-	-	-	2.0	4.4	+2.4
Funds-Supplying Operations against Pooled Collateral	0.4	0.7	1.2	0.5	0.5	14.0	+13.5
Foreign currency assets	6.4	6.7	26.0	7.7	8.3	9.1	+0.8
Total assets (including others)	528.3	557.0	604.5	714.6	736.3	735.1	-1.1
Banknotes	104.0	107.6	109.6	116.0	119.9	122.0	+2.1
Current account balances	378.2	393.9	395.3	522.6	563.2	549.1	-14.1
Other deposits	21.4	27.5	51.8	26.8	26.6	28.9	+2.3
Deposits of the government	15.1	17.5	12.6	36.9	13.0	15.6	+2.6
Payables under repurchase agreements	0.3	0.2	24.1	0.6	0.9	5.4	+4.5
Total liabilities and net assets (including others)	528.3	557.0	604.5	714.6	736.3	735.1	-1.1

Monetary base	487.0	506.3	509.8	643.6	688.0	675.8	-12.2

Notes: 1. "Loan Support Program" does not include the Special Rules for the U.S. Dollar Lending Arrangement to Enhance the Growth-Supporting Funding Facility.
2. "Outright purchases of T-Bills" does not reflect changes in the amount of T-Bills induced by, for example, the Bank's transactions with the government.
3. "Funds-Supplying Operation to Support Financial Institutions in Disaster Areas" includes the funds-supplying operations to support financial institutions in disaster areas of the Great East Japan Earthquake and of the 2016 Kumamoto Earthquake before they were abolished.
4. "Special Operations in Response to COVID-19" at the end-March 2020 is the balance of the Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19).
5. "Foreign currency assets" is the sum of foreign currency-denominated assets held by the Bank, foreign currency loans by the U.S. Dollar Funds-Supplying Operations against Pooled Collateral, and other assets.
6. "Other deposits" represents deposits such as those held by foreign central banks.
7. "Payables under repurchase agreements" includes the Securities Lending Facility, sales of JGSs with repurchase agreements, and the Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations.

B. Developments in Exogenous Sources of Changes in Current Account Balances at the Bank

Financial institutions' current account balances at the Bank change along with market operations as well as receipts and payments of banknotes and treasury funds between financial institutions and the Bank or the government. Changes in current account balances at the Bank resulting from factors other than market operations are called "exogenous sources of changes in current account balances at the Bank." Exogenous sources of changes in current account balances at the Bank are categorized into (1) "changes in banknotes" resulting from exchanges of banknotes for deposits in the current accounts, and (2) "changes in treasury funds and others" mainly resulting from exchanges of funds between the current accounts and government deposits.

During fiscal 2022, exogenous sources of changes in current account balances at the Bank caused current account balances to decrease by 92.0 trillion yen as banknote issuance increased and the transfer of funds to government deposits due to changes in treasury funds and others also went up. The amount of decrease was larger than the 87.8 trillion yen decrease in fiscal 2021.

1. Changes in Banknotes

The outstanding balance of banknotes continued on an uptrend during fiscal 2022, reaching a seasonal peak of 125.1 trillion yen (an increase of 2.5 percent year-on-year) at the end of December 2022, and 122.0 trillion yen (an increase of 1.7 percent year-on-year) at the end of March 2023 (Chart 2-2). Reflecting this increase in banknote issuance, changes in banknotes continued to be a source of decrease in current account balances at the Bank in fiscal 2022, with the amount of net issuance standing at 2.1 trillion yen.

As for the cumulative changes in banknotes by fiscal year from the start of fiscal 2022, seasonal changes in issuance and redemption generally followed the same pattern as fiscal 2021 (Chart 2-3).

Chart 2-2: Outstanding Balance of Banknotes Issued

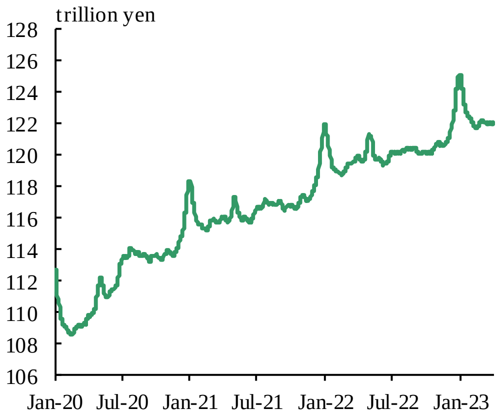
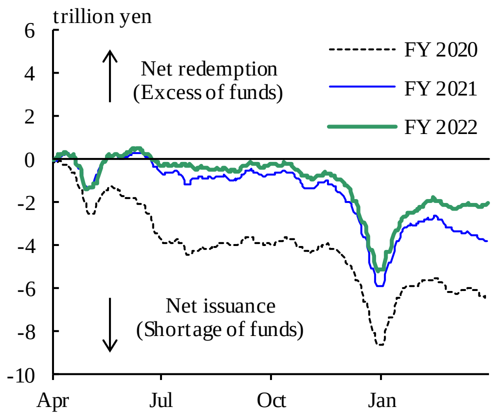


Chart 2-3: Cumulative Changes in Banknotes from the Start of the Fiscal Year



2. Changes in Treasury Funds and Others

In fiscal 2022, changes in treasury funds and others amounted to net receipts of 89.9 trillion yen (decrease in current account balances at the Bank),[2] an increase from the net receipts of 84.0 trillion yen in fiscal 2021 (Chart 2-4). After adjusting for the increment by which the repayment amount to financial institutions decreased as a result of the Bank having purchased JGBs and T-Bills as part of its market operations (hereinafter referred to as the "repayment adjustment"),[3] net receipts amounted to 7.2 trillion yen. Compared with fiscal 2021, when the amount was 21.9 trillion yen of net payments after the repayment adjustment, these net receipts decreased the current account balances at the Bank by 29.1 trillion yen (Charts 2-5 and 2-6). This was attributed mainly to the facts that net

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[2] The net amount of JGBs and T-Bills issued (or redeemed) is registered as changes in treasury funds and others, provided that the Bank does not engage in market operations. If the Bank purchases JGBs and T-Bills from financial institutions and holds them to maturity, these positions are not netted out. Specifically, the Bank records net receipts for changes in treasury funds and others (decrease in current account balances at the Bank) when JGBs and T-Bills are issued by the government. The Bank's purchases of JGBs and T-Bills are sources of increase in current account balances at the Bank, while the current account balances do not see a change upon redemption of the securities. As a result, changes in treasury funds and others record substantial net receipts (decreases in current account balances at the Bank) due to the Bank's market operations, although receipts and payments for changes in treasury funds and others are assumed to be largely commensurate with one another.

[3] With "repayment adjustments," regarding JGBs and T-Bills redeemed from the government to the Bank, adjustments are made to treat these as if the Bank sold them to financial institutions just before redemption and financial institutions received the redemptions from the government. For this reason, after repayment adjustments are carried out, there are changes in the amount of fluctuation for JGBs (with a residual maturity of more than 1 year) and T-Bills from among changes in treasury funds and others, as well as in purchases of JGBs and T-Bills as part of market operations (Chart 2-6).

payments under the "net fiscal payments" declined compared to fiscal 2021, and that "foreign exchange" turned to net receipts.

Specifically, "net fiscal payments" decreased as treasury funds payments to the private sector, such as vaccination expenses, cash payments to families with small children, and subsidies to restaurants and other facilities that complied with the requests for temporary closure and shortened business hours, decreased compared with fiscal 2021, although a large-scale budget was implemented for infection control measures related to COVID-19 and measures to address rising prices (Chart 2-7). Moreover, tax revenue for the government including corporate taxes and consumption taxes increased mainly due to the resumption of economic activities.

In addition, "foreign exchange" turned to net receipts, due to the receipt of yen funds related to U.S. dollar selling/yen purchasing foreign exchange interventions (for details, see Box 1).

As a result, the government deposit balance at the end of March 2023 increased by 2.6 trillion yen year-on-year to 15.6 trillion yen (Chart 2-8).

Developments of yen-denominated deposits received by the Bank from foreign central banks and international institutions also affect the current account balances at the Bank, which are included in the "others" of "Treasury funds and others." The balance of deposits received from overseas monetary authorities for the purpose of yen-denominated foreign reserves turned to net receipts in fiscal 2022. This balance tends to fluctuate significantly due mainly to the asset investment policies of the individual depositors, contributing to the daily fluctuations seen in the current account balances at the Bank.

Chart 2-4: Cumulative Changes in Treasury Funds and Others from the Start of the Fiscal Year

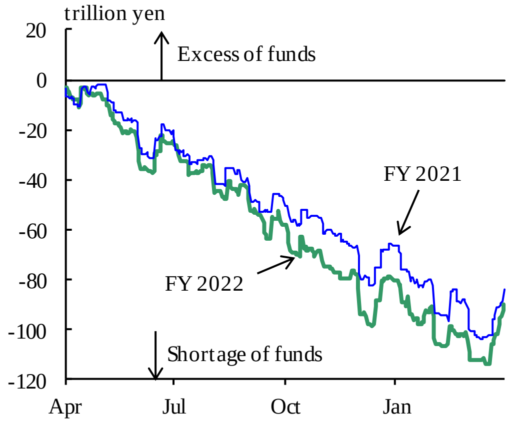


Chart 2-5: Cumulative Changes in Treasury Funds and Others from the Start of the Fiscal Year (After Repayment Adjustments)

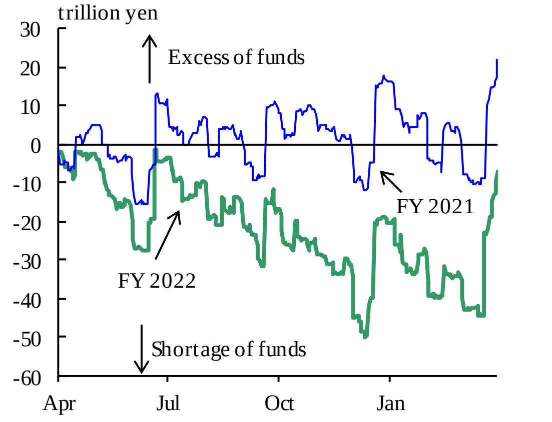


Chart 2-6: Sources of Changes in Current Account Balances at the Bank

trillion yen

	Before adjustment			After adjustment		
	FY 2021	FY 2022	Year-on-year	FY 2021	FY 2022	Year-on-year
Banknotes	-3.9	-2.1	1.8	-3.9	-2.1	1.8
Treasury funds and others	-84.0	-89.9	-6.0	21.9	-7.2	-29.1
Net fiscal payments	51.7	35.8	-15.9	51.7	35.8	-15.9
JGBs (more than 1 year)	-104.2	-102.2	2.0	-48.5	-37.0	11.5
T-Bills	-32.3	-12.2	20.0	17.9	5.3	-12.6
Foreign exchange	0.3	-9.3	-9.5	0.3	-9.3	-9.5
Others	0.5	-2.0	-2.5	0.5	-2.0	-2.5
Surplus/shortage of funds	-87.8	-92.0	-4.2	18.0	-9.3	-27.3
BOJ loans and market operations	128.4	77.9	-50.5	22.6	-4.8	-27.4
Outright purchases of JGBs	72.9	136.0	63.1	17.2	70.8	53.6
Outright purchases of T-Bills	28.8	8.1	-20.7	-21.4	-9.4	12.0
Special Operations in Response to COVID-19	22.0	-80.9	-102.9	22.0	-80.9	-102.9
Funds-Supplying Operations to Support Financing for Climate Change Responses	2.0	2.4	0.3	2.0	2.4	0.3
Funds-Supplying Operations against Pooled Collateral	0.0	13.5	13.4	0.0	13.5	13.4
Loan Support Program	1.6	8.3	6.7	1.6	8.3	6.7
Other loans and market operations	1.1	-9.4	-10.5	1.1	-9.4	-10.5
Net change in current account balances	40.6	-14.1	-54.7	40.6	-14.1	-54.7

Notes: 1. For banknotes, negative figures represent a net increase in banknotes. For treasury funds and others, negative figures represent net receipts of the treasury. For BOJ loans and market operations, positive figures represent the supply of funds.
2. The shaded areas indicate figures that increased or decreased after repayment adjustments.

Chart 2-7: Treasury Funds Payments to Private Sector

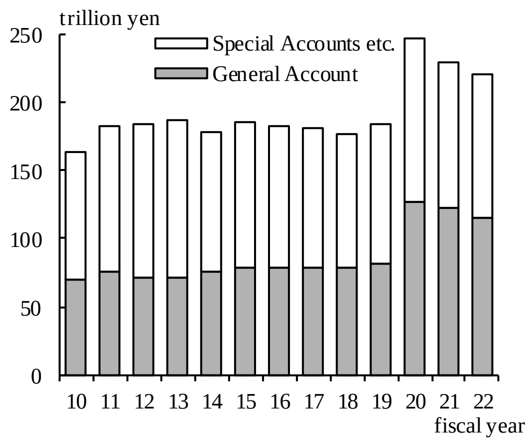
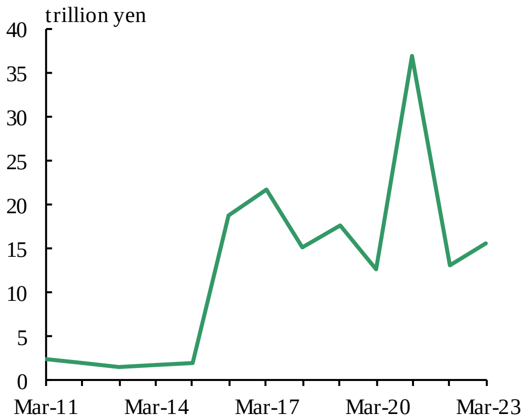


Chart 2-8: Government Deposit Balance



III. Developments in Markets and the Conduct of Individual Measures in Market Operations

A. Three-Tier System of Current Accounts at the Bank and Money Markets

1. Three-Tier System of Current Accounts

The Bank, under QQE with Yield Curve Control, adopted a three-tier system in which the outstanding balance of each financial institution's current account at the Bank was divided into three tiers. Under this system, a positive interest rate (0.1 percent) was applied to basic balances, a zero interest rate was applied to macro add-on balances, and a negative interest rate (minus 0.1 percent) was applied to policy-rate balances (Chart 3-1).

Chart 3-1: Three-Tier System of Current Accounts

Tier	Subject to Calculation	Applied interest rate
(1) Basic Balance	Benchmark Balance (average outstanding balance for 2015) – Required reserves	+0.1%
(2) Macro Add-on Balance	Benchmark Balance × Benchmark Ratio[4]	0.0%
	Balances associated with the Bank's various fund-provisioning measures[5] (Loan Balance 1)[6]	
	Increase in balances associated with the Bank's various fund-provisioning measures compared with at end-March 2016 (Loan Balance 2)	
	Amount based on the special rules for money reserve funds[7] and those for new institutions[8]	

[4] Ratio equally applied to all financial institutions.

[5] The Bank's measures include the Stimulating Bank Lending Facility, Growth-Supporting Funding Facility, Funds-Supplying Operation to Support Financial Institutions in Disaster Areas (including the funds-supplying operations to support financial institutions in disaster areas of the Great East Japan Earthquake and of the 2016 Kumamoto Earthquake, before they were abolished), the Special Operations in Response to COVID-19, and the Funds-Supplying Operations to Support Financing for Climate Change Responses.

[6] With a view to providing incentives to use various fund-provisioning measures (excluding fund-provisioning against government-supported loans through the Special Operations in Response to COVID-19), balances of those measures (Loan Balances 1) as well as the increase in balances compared with those at the end of March 2016 (Loan Balances 2) are included in the calculation of the Macro Add-on Balance limit.

[7] The smaller of the average amount outstanding of money reserve funds entrusted to an institution during the reserve maintenance periods from January to December 2015 (on a net asset basis; including the amount that was not deposited in the current accounts at the Bank as a result of investment) and that entrusted to an institution during the designated reserve maintenance period (on a net asset basis; excluding the amount that was not deposited in the current accounts as a result of investment).

	Amount added/reduced in the calculation of the limit of the Macro Add-on Balance[9]	
	Required reserves	
(3) Policy-Rate Balance	Amount obtained by subtracting (1) and (2) from current account balances	-0.1%

Some financial institutions may have allowances up to reaching the upper bound on their basic balances and macro add-on balances (hereinafter referred to as "unused allowances"), because the amount of their current account balances at the Bank falls below the upper bound. Other financial institutions may have policy-rate balances generated because the amount of their current account balances at the Bank exceeds the upper bound on their basic balances and macro add-on balances. Unused allowances or policy-rate balances constitute one of the factors that induce arbitrage trading by financial institutions, which is carried out by borrowing (lending) cash at interest rates that are lower (higher) than those applied according to their current account balances at the Bank and depositing funds in (supplying funds from) their current accounts at the Bank. Assuming that financial institutions with unused allowances in their basic balances and/or macro add-on balances utilize all of their unused allowances to borrow cash from financial institutions with policy-rate balances through such arbitrage trading, the policy-rate balance left is referred to as the "hypothetical policy-rate balance after arbitrage transactions have taken place in full" (the "hypothetical policy-rate balance").

During fiscal 2022, the Bank reviewed the Benchmark Ratio every reserve maintenance period so that the "hypothetical policy-rate balance" stayed at about 5 trillion yen. This was done in line with the policy to "reduce [this balance] from the current level of about 10 trillion yen on average" "…under the condition that the yield curve control can be conducted appropriately," that was decided at the MPM held on July 30 and 31, 2018. The Benchmark Ratio was adjusted significantly upward in many reserve maintenance periods, reflecting a decline in macro add-on balances in line with the phasing out of the Special Operations in Response to COVID-19 and fund-provisioning through the

[8] The balance obtained by multiplying the benchmark ratio by the Deemed Benchmark Balance based on the "Special Rules regarding Calculation of Interest of Complementary Deposit Facility for New Institutions."

[9] Amounts added to or reduced in the calculation of the limit of the Macro Add-on Balances introduced in light of the Bank's Assessment in March 2021. For details, see "Appendix 4: Operation of the Complementary Deposit Facility" ("Revision regarding 1." and "Revision regarding 2.") of the "Assessment for Further Effective and Sustainable Monetary Easing (The Background)" released on March 19, 2021.

Bank's large-scale purchases of JGBs (Chart 3-2).

Turning to developments in the "hypothetical policy-rate balance" during fiscal 2022, in certain reserve maintenance periods the balance was above the level of about 5 trillion yen, estimated at the time the Benchmark Ratio was set, owing to changes in treasury funds and others and the Bank's market operations that had not been expected at the time the Benchmark Ratio was set. In particular, "hypothetical policy-rate balance" reached a level exceeding 10 trillion yen when strong upward pressure on interest rates arose from the rise in overseas interest rates and heightened speculation over the Bank's monetary policy, as the Bank conducted large-scale purchases of JGBs (Chart 3-3).

Looking at "unused allowances," chiefly consisting of those of macro add-on balances, and actual policy-rate balances during fiscal 2022, in the April 2022 reserve maintenance period, unused allowances stood at a high level of 27 trillion yen, while policy-rate balances amounted to 40 trillion yen, the largest amount since the introduction of the three-tier system. This was mainly due to increased deviation in fund positions among different sectors, a development attributable to differences in the stance on the use of the Special Operations in Response to COVID-19. Toward the middle of the fiscal year, unused allowances mainly of regional banks diminished due to a decrease in the amount outstanding of funds provided through the Special Operations in Response to COVID-19, while policy-rate balances of foreign banks and other institutions subject to the Complementary Deposit Facility declined, owing to a rise in the Benchmark Ratio. Accordingly, deviation in fund positions among different sectors decreased, leading to declines in unused allowances and policy-rate balances on a macro basis. Thereafter, policy-rate balances increased toward the January 2023 reserve maintenance period, because current account balances of foreign banks and other institutions subject to the Complementary Deposit Facility increased due to large-scale redemption of JGBs and an increase of dollar-to-yen conversion resulting from heightened attractiveness of conversion to yen. Toward the end of March 2023, while unused allowances increased as a result of the raised Benchmark Ratio, policy-rate balances decreased chiefly due to purchases of securities by other institutions subject to the Complementary Deposit Facility (Chart 3-4).

Developments in the three-tier system described above are presented in Chart 3-5 by sector.

Chart 3-2: Benchmark Ratio

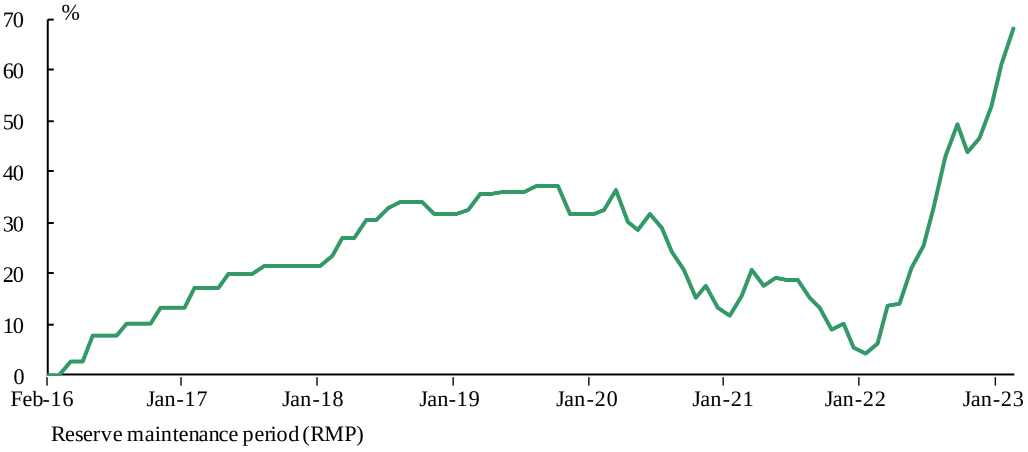


Chart 3-3: Upper Bound on the Basic Balance and the Macro Add-on Balance and the Hypothetical Policy-Rate Balance

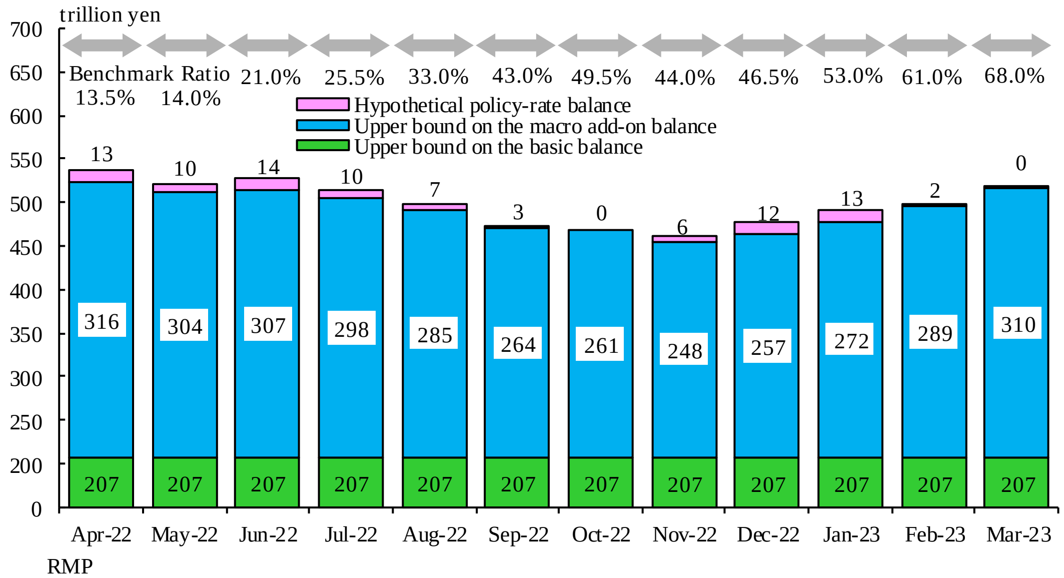


Chart 3-4: Unused Allowances in Tiers and the Policy-Rate Balance

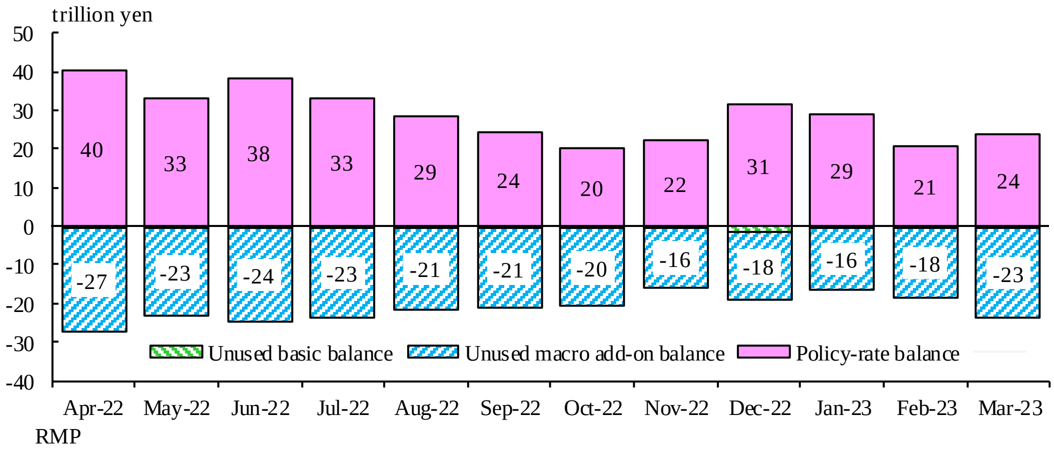
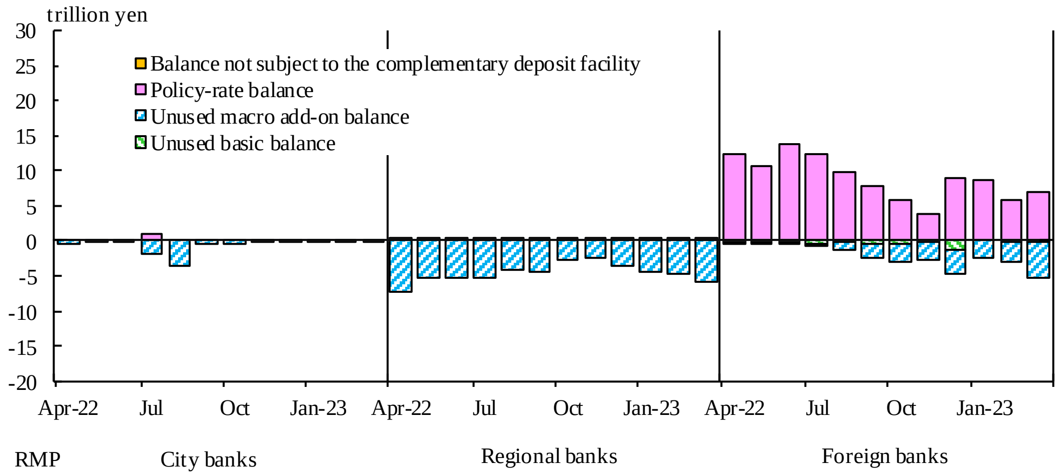
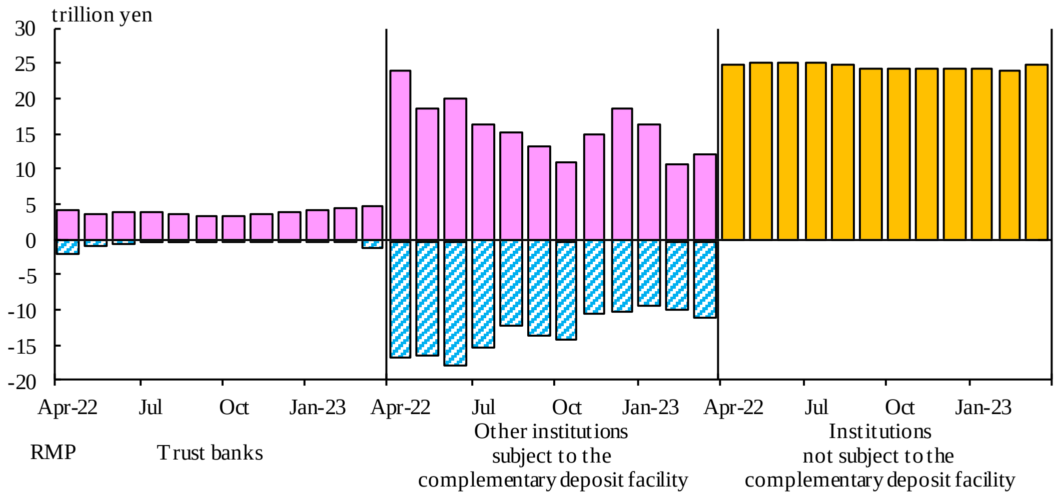


Chart 3-5: Three-Tier System of Current Accounts by Sector





Notes: 1. "Other institutions subject to the complementary deposit facility" are other institutions subject to the reserve requirement and institutions not subject to the reserve requirement.

2. Other institutions subject to the reserve requirement include the following: *Shinkin* Banks (with deposits of more than 160 billion yen); PayPay Bank; Seven Bank; Sony Bank; Rakuten Bank; SBI Sumishin Net Bank; au Jibun Bank; AEON Bank; Daiwa Next Bank; ORIX Bank; Custody Bank of Japan; SBI Shinsei Bank; Aozora Bank; Shinhan Bank Japan; The Resolution and Collection Corporation; The Norinchukin Bank; Japan Post Bank; Lawson Bank; GMO Aozora Net Bank; Minna Bank; and UI Bank.

3. Institutions not subject to the reserve requirement include the following: securities companies; *tanshi* companies (money market brokers); securities finance companies; Shinkin Central Bank; *Shinkin* Banks (with deposits of 160 billion yen or less); The Shoko Chukin Bank; The Shinkumi Federation Bank; and The Rokinren Bank.

4. "Institutions not subject to the complementary deposit facility" include the following: Japanese Bankers Association; Japanese Banks' Payment Clearing Network; Tokyo Financial Exchange; Japan Securities Clearing Corporation; JASDEC DVP Clearing Corporation; CLS BANK International; Development Bank of Japan; Japan Finance Corporation; Japan Bank for International Cooperation; and Deposit Insurance Corporation of Japan.

2. Uncollateralized Call Market

During fiscal 2022, the call rate stayed in the range of about minus 0.07 percent to minus 0.01 percent (Chart 3-6). Looking at the details, the call rate temporarily exceeded minus 0.01 percent mainly in the June and July 2022 reserve maintenance periods when some sectors borrowed cash more actively. However, it declined to around minus 0.08 percent on some occasions in the November 2022 reserve maintenance period after that trend abated.

On the cash borrowing side, mainly regional banks continued to be active in cash borrowing at the beginning of the fiscal year. Regional banks' financing capacity maintained at a high level, as the upper bound on their macro add-on balances was raised due to their use of the Special Operations in Response to COVID-19.[10] In this situation, as part of their moves to seek profit opportunities, they continued to actively engage in arbitrage trading to obtain call funds at a negative interest rate and keep them within their macro add-on balances. Toward the middle of the fiscal year, such arbitrage trading temporarily moderated as regional banks' financing capacity declined in line with the phasing out of the Special Operations in Response to COVID-19. Subsequently, arbitrage trading increased once again, as the financing capacity of city banks and regional banks grew again due to a rise in the upper bound on the macro add-on balances resulting from their increasing use of the Stimulating Bank Lending Facility and incremental rises in the Benchmark Ratio (Charts 3-7 and 3-8).

On the cash lending side, investment trusts remained major suppliers of funds in the call market, and some city banks and financial institutions of central organizations of financial cooperatives actively carried out fund operations for the purpose of arbitrage trading between the repo market and the call market.

The amount outstanding in the uncollateralized call market stood at a high level throughout fiscal 2022, albeit with fluctuations. This was owing to many financial institutions that were actively engaged in arbitrage trading using the three-tier system of their current accounts at the Bank (Chart 3-9).

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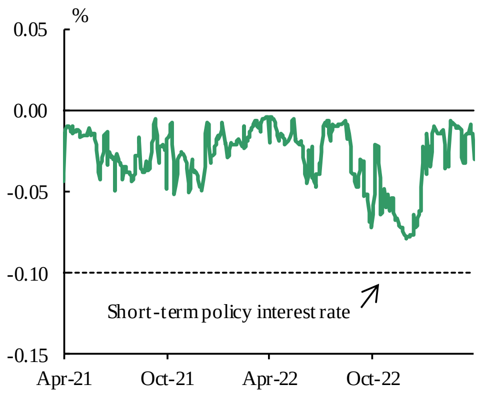
[10] The definition of financing capacity specifies that it is "calculated by deducting the balances of current accounts before trading in the uncollateralized call market from the upper bound on their basic balances and macro add-on balances." For details on the relationship between the financing capacity of regional banks and the uncollateralized call rate, see Box 3 in Market Operations in Fiscal 2017.

Chart 3-6: Uncollateralized Overnight Call Rate



Note: Weighted average.

Chart 3-7: Illustration of Financing Capacity

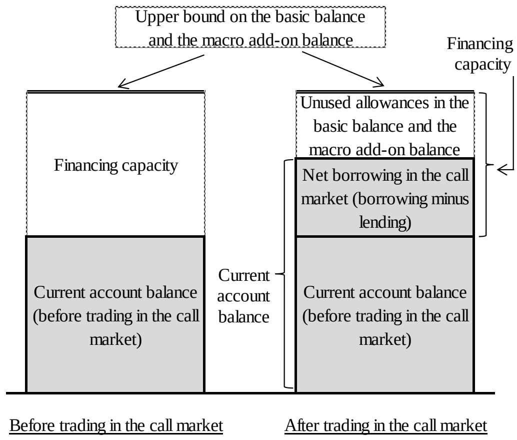


Chart 3-8: Financing Capacity of Regional Banks

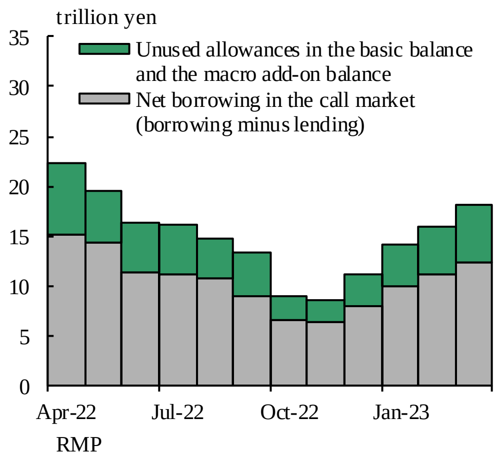
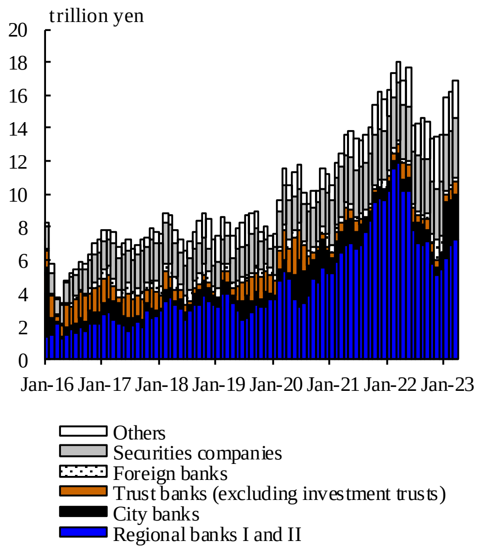
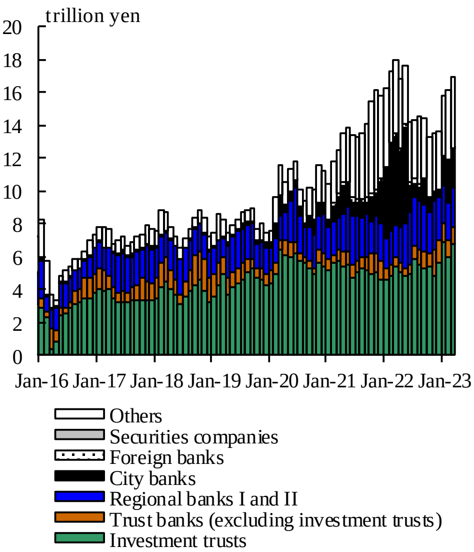


Chart 3-9: Amounts Outstanding in the Uncollateralized Call Market by Sector

(Cash Borrowing Side)



(Cash Lending Side)



Note: The figures are for transactions intermediated by *tanshi* companies. Monthly average.

3. GC Repo Market

During fiscal 2022, the GC repo rate generally stayed in the range of about minus 0.10 percent to minus 0.08 percent, a level slightly above the short-term policy rate, although the rate declined further on some occasions due to the effects of the Bank's large-scale purchases of JGBs (Chart 3-10).

Looking at the details, the GC repo rate fell to well below minus 0.10 percent on some occasions from April through July 2022 amid a strengthening of upward pressure on interest rates in the JGB market, as securities companies and banks weakened their stance on securities lending in the repo market in light of the possibility of their bidding in the Bank's unscheduled purchases of JGBs and fixed-rate purchase operations. Thereafter, the GC repo rate generally stood at around minus 0.10 percent, due partly to banks' more proactive stance on cash borrowing in line with a rise in the Benchmark Ratio. At the end of the fiscal year, the GC repo rate declined somewhat significantly relative to previous years, as some financial institutions weakened their stance on securities lending in the repo market to secure collateral for foreign currency funding, and the supply and demand conditions of T-Bills tightened due to increasing demand from overseas investors against the backdrop of a decline in the FX swap-implied yen rate from the U.S. dollar.

In the meantime, as for securities lending by securities companies, overnight repos temporarily increased as they involved overnight repos rather than term repos with a view to managing funds in a flexible manner amid the tightening supply and demand conditions of JGBs (Charts 3-11 and 3-12).

The amount outstanding in the repo market stayed higher than that in fiscal 2021. This was because demand for cash borrowing increased in line with a rise in the Benchmark Ratio, and there were also moves to borrow cash for the purpose of arbitrage trading between the repo market and the call market (Chart 3-13).

Chart 3-10: GC Repo Rate (O/N)

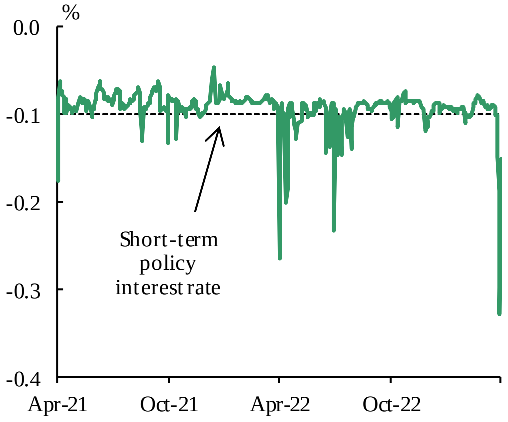
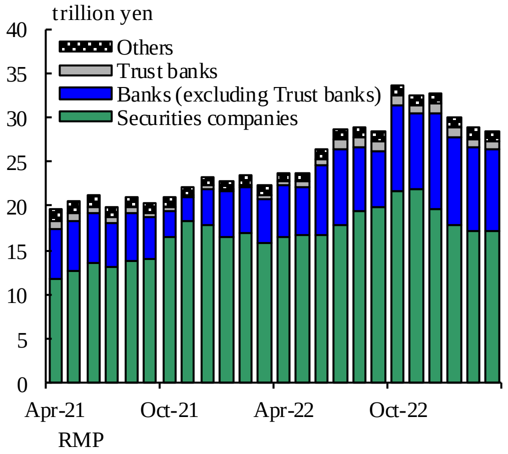
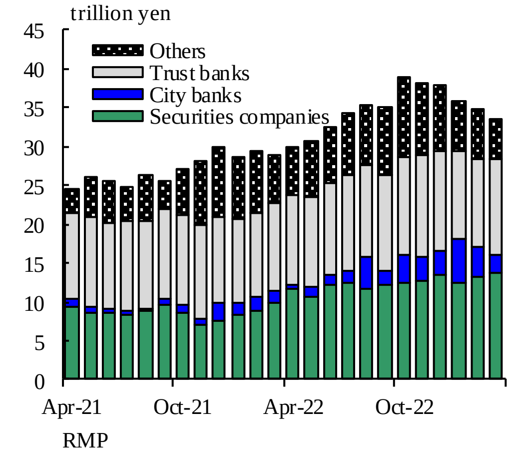


Chart 3-11: Cash Borrowing (Securities Lending) Side



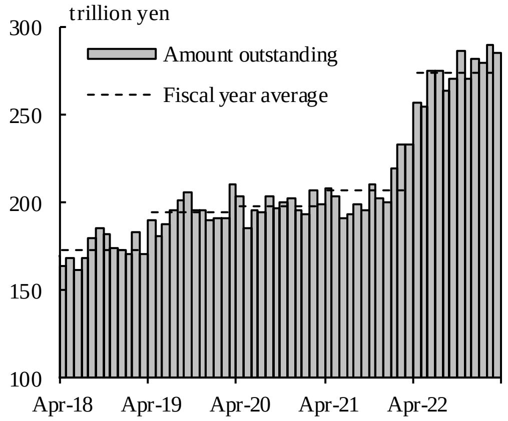
Note: The amount of the O/N cash borrowing (only the repo transactions) is aggregated, out of the daily flow data of the Statistics on Securities Financing Transactions in Japan.

Chart 3-12: Cash Lending (Securities Borrowing) Side



Note: The amount of the O/N cash lending (only the repo transactions) is aggregated, out of the daily flow data of the Statistics on Securities Financing Transactions in Japan.

Chart 3-13: Amounts Outstanding in the Repo Market



Note: Figures are the sum of securities lending with cash collateral and securities sales with repurchase agreements.

Box 1: Impact of Foreign Exchange Intervention on Current Account Balances at the Bank and Money Markets

During fiscal 2022, foreign exchange intervention (U.S. dollar selling/yen purchasing intervention) totaling approximately 9.2 trillion yen was conducted from September through October. In Japan, the Minister of Finance is responsible for foreign exchange intervention and decides the timing and amount of the intervention. The Bank carries out the actual operations based on instructions from the Minister of Finance and acts as the agent.

Foreign exchange intervention is the buying and selling of currencies, and is conducted by using the government's Foreign Exchange Fund Special Account (hereinafter referred to as the "FEFSA"), managed by the Minister of Finance. In the case of yen selling/U.S. dollar purchasing intervention, the dollar is bought under the FEFSA in exchange for yen funds raised through the issuance of Financing Bills (FBs). On the other hand, U.S. dollar selling/yen purchasing intervention is conducted by selling dollar funds held in the FEFSA in exchange for the yen.

Looking at more details on the general flow of funds in U.S. dollar selling/yen purchasing intervention, dollar funds held at the FEFSA are paid to the counterparty financial institution of the foreign currency intervention. Meanwhile, yen funds held by the financial institution are paid to the FEFSA through the counterparties' current accounts at the Bank, and this leads to a decrease in current account balances at the Bank. Ultimately, the FEFSA uses yen funds received from the intervention to redeem FBs that have already been issued. Since the redemption money is paid to financial institutions holding the FBs through their current accounts at the Bank, current account balances at the Bank increase. Consequently, in total, the effects of this series of transactions on current account balances offset one another (Box Chart 1-1).

Although the impact of foreign currency intervention on changes in current account balances at the Bank is eventually offset, a certain time difference occurs in the aforementioned receipt and payment of funds. In the case of U.S. dollar selling/yen purchasing intervention, yen funds are temporarily absorbed from current account balances at the Bank, causing a fund shortage on a macro basis. This itself could lead to an increase in the rates in the call market and the repo market. Under the present three-tier system of current accounts at the Bank, however, it is considered that the impact will be limited by the Bank's subsequent adjustment of the Benchmark Ratio. More specifically, the Bank sets the Benchmark Ratio used to calculate macro add-on balances for each reserve maintenance period so that the "hypothetical policy-rate balance" stays at about 5 trillion yen. If foreign exchange intervention is conducted, the Bank adjusts the Benchmark Ratio for the next reserve maintenance period in a way that takes into account changes brought about by the intervention in the current account balances at the Bank. Under this practice, a temporary fund shortage resulting from foreign exchange intervention is partly offset by downward adjustments to the Benchmark Ratio and the impact on short-term market interest rates is curbed. In fact, there was no significant change in the call rate and the GC repo rate in the reserve maintenance periods following the reserve maintenance periods when foreign exchange intervention was conducted, namely the October and November 2022 reserve maintenance periods, indicating that the impact of the foreign exchange intervention was limited (Box Chart 1-2).

Box Chart 1-1: Changes in Balance Sheets following Dollar Selling/Yen Purchasing Intervention

(1) Dollar Selling/Yen Purchasing Intervention

Bank of Japan	
	Government deposits (Yen) (+)
	Current account balances (Yen) (−)

FEFSA	
Government deposits (Yen) (+)	
Dollar Funds (−)	

Financial Institutions	
Dollar Funds (+)	
Current account balances (Yen) (−)	

(2) FBs Redemption

Bank of Japan	
	Government deposits (Yen) (−)
	Current account balances (Yen) (+)

FEFSA	
Government deposits (Yen) (−)	FBs (−)

Financial Institutions	
FBs (−)	
Current account balances (Yen) (+)	

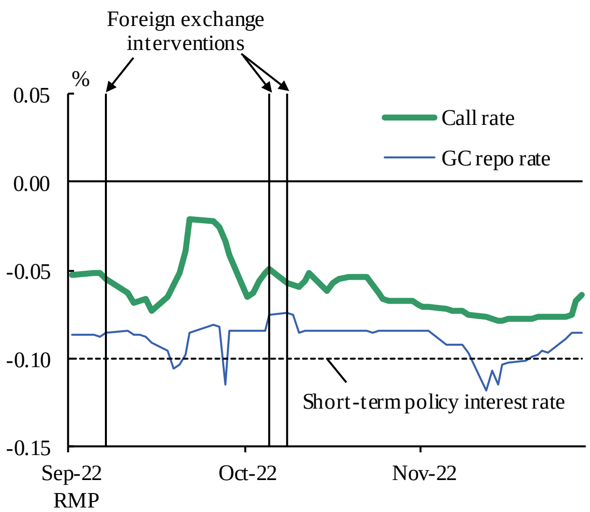
(3) After Transactions (Netting Out (1) and (2))

Bank of Japan	

FEFSA	
Dollar Funds (−)	FBs (−)

Financial Institutions	
Dollar Funds (+)	
FBs (−)	

Box Chart 1-2: Call Rate and GC Repo Rate before and after Foreign Exchange Interventions



Notes: 1. "Call rate" indicates the uncollateralized call rate (O/N). Weighted average.
2. "GC repo rate" indicates the Tokyo Repo Rate (O/N).

Box 2: Developments in the Uncollateralized Call Market with the Phasing Out of the Special Operations in Response to COVID-19

The amount outstanding of funds provided through the Special Operations in Response to COVID-19, which was introduced in March 2020, increased to 86.8 trillion yen at the end of March 2022, and then decreased to 6.0 trillion yen at the end of March 2023, as new loan disbursements under the operations were phased out. This box reviews developments in the uncollateralized call market with the phasing out of the operations, taking into account changes in fund positions by sector.

When the amount outstanding of funds provided through the operations increased, the operations brought about a rise in the upper bound on macro add-on balances of financial institutions using the operations through an increase in Loan Balance 2. At the same time, they also caused a reduction in the upper bound on macro add-on balances in all financial institutions' current accounts through a decrease in the Benchmark Ratio, which was set to adjust policy-rate balances. When the amount outstanding of funds provided through the operations decreased, the operations acted in the opposite direction.

Looking at changes in the upper bound on macro add-on balances of three sectors actively engaging in arbitrage trading in the uncollateralized call market (city banks, trust banks, and regional banks), from the March 2020 reserve maintenance period through the March 2022 reserve maintenance period, the upper bound on macro add-on balances of regional banks -- many of which actively used the operations -- increased due to an increase in Loan Balance 2. In the meantime, changes in the upper bound were relatively small for city banks and trust banks, since an increase in Loan Balance 2 brought about by their use of the operations was offset by the effects of a decline in the Benchmark Ratio. On the other hand, in and after the April 2022 reserve maintenance period, the upper bound was lowered for regional banks due to a decrease in Loan Balance 2 as a result of a decline in the amount outstanding of funds provided through the operations, whereas the upper bound for city banks and trust banks was raised because of significant upward adjustment to the Benchmark Ratio amid the Bank's large-scale purchases of JGBs and other measures (Box Chart 2-1).

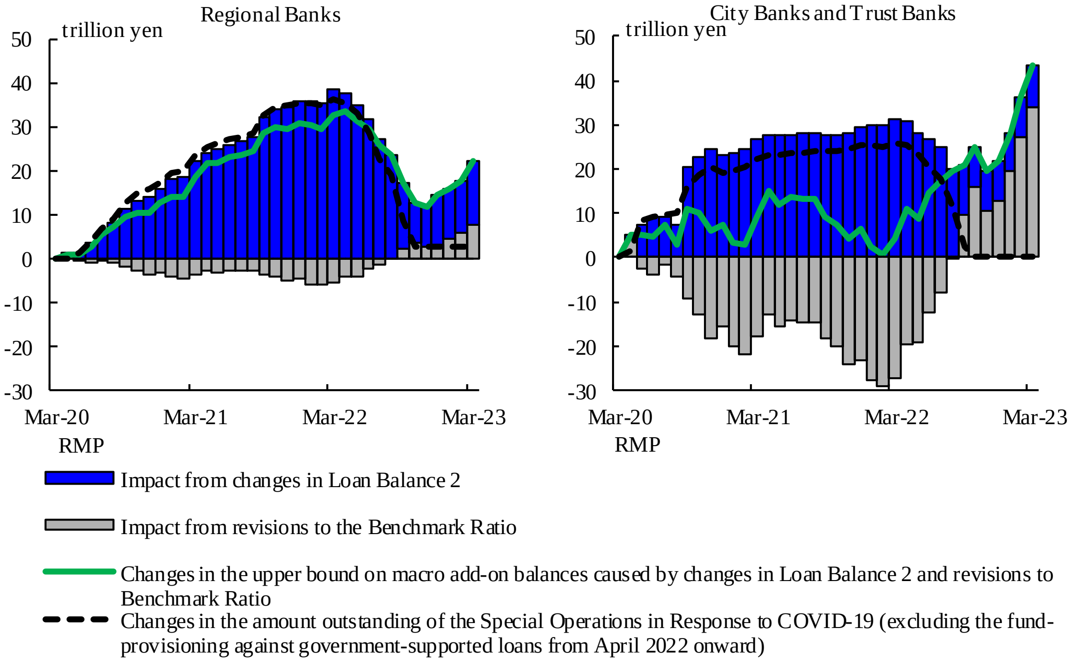
These changes in the upper bound on macro add-on balances brought about changes in cash lending/financing capacity that differed by sector in the uncollateralized call market. In this regard, when calculating policy-rate balances before arbitrage trading is conducted in the uncollateralized call market and unused allowances in the macro add-on balances and others by sector, it was confirmed that financing capacity, particularly of regional banks, in the uncollateralized call market was changed significantly by the use of the operations (Box Chart 2-2).

In addition, turning to the relationship between the "gap in fund supply and demand," which represents the cash lending capacity of the three sectors less their financing capacity, and the uncollateralized call rate, there is a tendency that the smaller the gap becomes (i.e., when the net amount of cash lending decreases, or the net amount of borrowing increases), the higher the call rate is, indicating a moderate correlation (Box Chart 2-3).

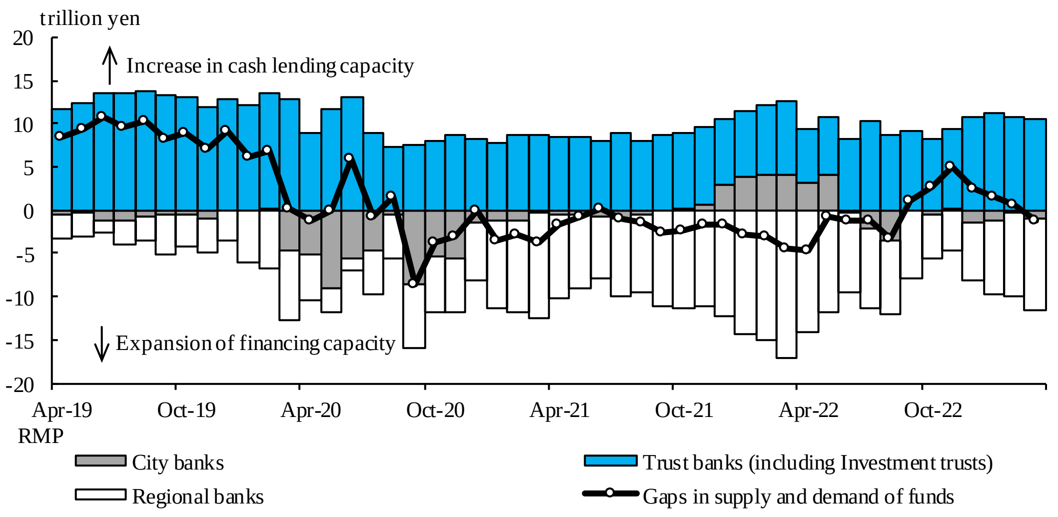
In fact, changes in the uncollateralized call rate since April 2022 show that the rate was on a declining trend in and after the April 2022 reserve maintenance period when the amount outstanding of funds provided through the Special Operations in Response to COVID-19 began to decrease, and from the September through November 2022 reserve maintenance periods, it temporarily fell to the lowest range since the introduction of the negative interest rate policy as the gap in fund supply and demand in the three sectors increased. Thereafter, from the January through March 2023 reserve maintenance periods, the gap in fund supply and demand in the three sectors narrowed partly because of a growth in Loan Balance 2 resulting from some regional banks and others increasing the use of the Stimulating Bank Lending Facility and other measures by utilizing collateral allowances arising from the maturity of the operations, as well as a further rise in the Benchmark Ratio. Accordingly, the call rate also turned upward.

In this box, an analysis of the three sectors was conducted for descriptive purposes. However, financial institutions that are less active in arbitrage trading also exist in the three sectors, and financial institutions that are active in arbitrage trading exist in other sectors as well. Moreover, the stance on arbitrage trading may also change depending on the level of short-term interest rates of the moment. In monitoring short-term money markets, the Bank tries to assess these aspects, as well as the supply and demand conditions of funds on a macro basis.

Box Chart 2-1: Changes in Upper Bound on Macro Add-on Balances and Amounts Outstanding of Special Operations in Response to COVID-19 by Sector



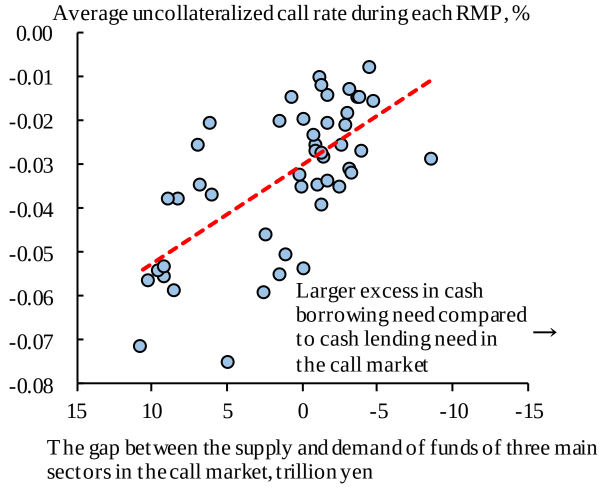
Box Chart 2-2: Fund Positions before Trading in the Uncollateralized Call Market by Sector



Notes: 1. Fund positions are calculated by estimating the policy-rate balances and unused allowances in basic balances and macro add-on balances before trading in the uncollateralized call market and netting out the estimated policy rate balances and unused allowances by sector. Trading in the uncollateralized call market is the trading intermediated by *tanshi* companies.

2. Cash lending by investment trusts is calculated as part of trust banks' funds-supplying capacity for descriptive purposes.

Box Chart 2-3: Correlation between Gaps in Fund Supply and Demand of Three Main Sectors and the Call Rate



Notes: 1. The three main sectors are city banks, trust banks (including investment trusts), and regional banks.
2. The sample periods are from the April 2019 RMP to the March 2023 RMP.
3. The dashed line indicates the regression line using the least squares method.

B. Developments in the T-Bill Market and Outright Purchases of T-Bills

1. T-Bill Market

During fiscal 2022, yields on T-Bills (3-month) stayed at a level below minus 0.1 percent, albeit with fluctuations (Chart 3-14). While the amount outstanding of T-Bills increased (Chart 3-15), their yields temporarily declined significantly toward October 2022 due to (1) collateral demand from domestic investors and (2) an increase in demand from foreign investors against the backdrop of a seasonal decline in the FX swap-implied yen rate from the U.S. dollar over the year end. Thereafter, even though the supply and demand conditions somewhat eased owing to the dissipation of the year-end factor, the rise in the yields was limited to a certain level due to continued demand from foreign investors. After mid-March 2023, the yields declined substantially, as demand from foreign investors increased due to a decline in the FX swap-implied yen rate from the U.S. dollar in response to the failures of some U.S. financial institutions and concern over the business conditions of a financial institution in Europe.

While yields on 6-month and 1-year T-Bills exhibited similar developments to those of 3-month T-Bills, the yield on 1-year T-Bills rose more significantly when the yields on JGBs with coupons in the short- to medium-term zone increased from the end of 2022 through the beginning of 2023.

In the meantime, looking at the amounts outstanding of T-Bill holdings by entity, the amounts outstanding of T-bills held by domestic investors stayed at high levels due to collateral demand for foreign currency funding and expected collateral demand for the Funds-Supplying Operations against Pooled Collateral, even as demand for collateral for the Special Operations in Response to COVID-19 declined. The amounts outstanding of T-bills held by foreign investors also stayed at high levels. On the other hand, the amount outstanding of T-bills held by the Bank decreased as it conducted outright purchases in modest amounts amid generally favorable supply and demand conditions (Chart 3-16).

Chart 3-14: Yields on T-Bills

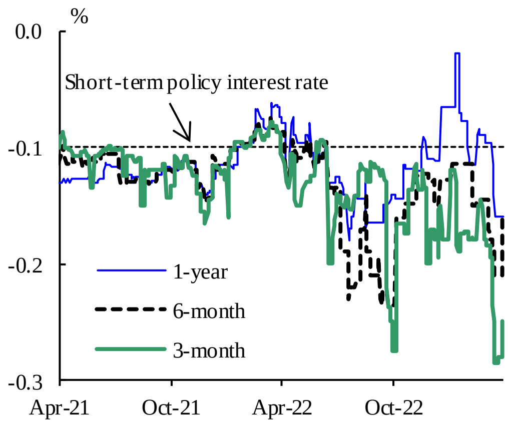


Chart 3-15: Amounts Outstanding of T-Bills by Maturity Period

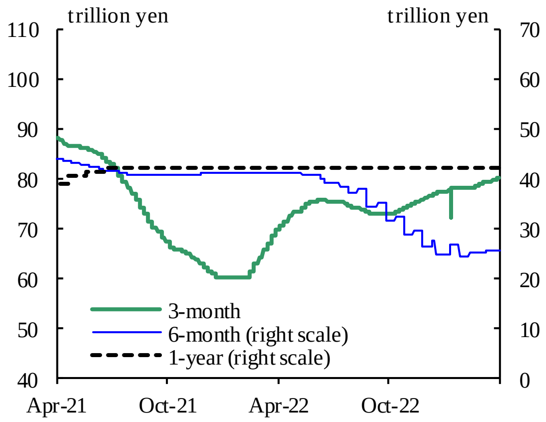
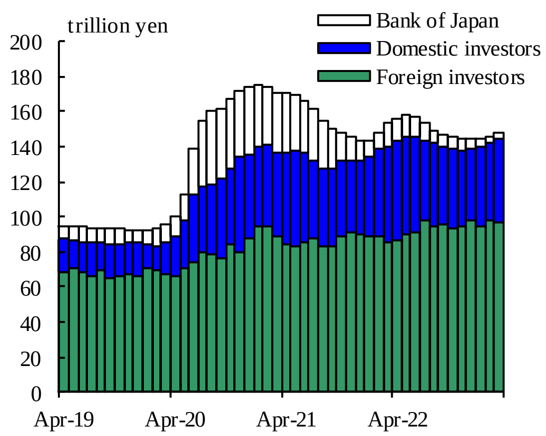


Chart 3-16: Amounts Outstanding of T-Bill Holdings by Entity



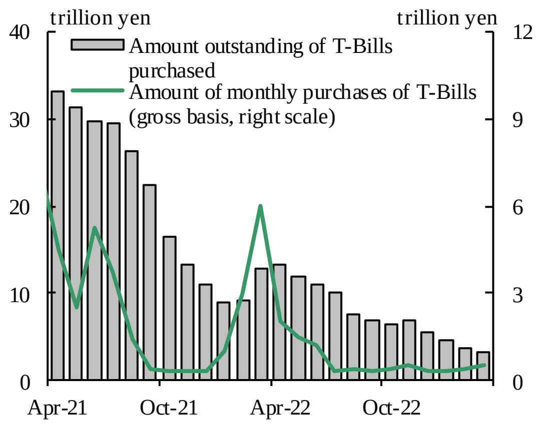
Note: Excludes T-Bills held by the government and the Fiscal Loan Fund, as well as those underwritten by the Bank. Figures for the amount outstanding of foreign investors' T-Bill holdings are estimated by adding monthly net investment flows to the quarterly gross external debts (general government/short-term debt securities). Figures for domestic investors are calculated by deducting the amounts outstanding of T-Bills held by the Bank and foreign investors from the total.

2. Outright Purchases of T-Bills

During fiscal 2022, the Bank flexibly conducted outright purchases of T-Bills, taking into consideration developments in supply and demand conditions in the market. At the beginning of fiscal 2022, the Bank conducted outright purchases of T-Bills worth about 500 billion to 1 trillion yen per auction, in response to the supply and demand conditions having eased mainly as a result of an increase in the amount of issuance of 3-month T-Bills. From the latter half of June, the Bank continued to purchase about 100 billion yen of T-Bills per auction in light of the abovementioned favorable supply and demand conditions. With respect to T-Bills eligible for purchases, the Bank continued its flexible operations while carefully taking into consideration trends in individual T-Bills and the background thereof and excluding some T-Bills in the case of, for example, a significant decline in the yield of such T-Bills relative to neighboring zones.

Under such operations, the amount outstanding of T-Bills purchased stood at 3.3 trillion yen at the end of March 2023, a decrease of 9.4 trillion yen from a year earlier (Chart 3-17).

Chart 3-17: Amounts Outstanding of T-Bills Purchased and Amounts of Monthly Purchases of T-Bills



C. Developments in the JGB Market and Outright Purchases of JGBs

1. Developments in the JGB Market

Throughout fiscal 2022, the target level of long-term interest rates was maintained at around 0 percent under QQE with Yield Curve Control. In this situation, Japanese long-term interest rates mostly stayed at a level close to the upper limit of the range of fluctuations throughout the fiscal year, while fluctuating in response to economic and price conditions, as well as developments in overseas interest rates.

Looking in detail at the developments in Japanese long-term interest rates, they rose to around 0.25 percent -- the then upper limit on the range of fluctuations -- at the beginning of fiscal 2022, due to upward pressure from the rise in overseas interest rates. The rise in Japanese long-term interest rates paused as the Bank conducted fixed-rate purchase operations and decided at the April 2022 MPM to conduct fixed-rate purchase operations of 10-year JGBs every business day, in principle. Subsequently, amid a further strengthening of upward pressure on interest rates reflecting an increase in overseas interest rates, Japanese long-term interest rates once again reached 0.25 percent on June 10. However, the rise in Japanese long-term interest rates once again paused as the Bank conducted large-scale purchases of JGBs and introduced fixed-rate purchase operations of the CTD issue of JGB futures for consecutive days. Japanese long-term interest rates declined to 0.16 percent toward the first half of August following a considerable decline in overseas interest rates mainly due to heightened concerns over an economic recession in the United States. In September, while overseas interest rates once again rose mainly because markets were increasingly factoring in acceleration in policy rate hikes in the United States, Japanese long-term interest rates also rose to 0.25 percent. Thereafter, Japanese long-term interest rates remained at around 0.25 percent, reflecting the continued uptrend in overseas interest rates and price developments in Japan, although they fell on some occasions in response to the Bank's unscheduled purchases of JGBs and the announcement of an increase in the amount of JGB purchases in the quarterly schedule of outright purchases of JGBs. After the Bank decided to expand the range of 10-year JGB yield fluctuations from the target level: from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points at the December 2022 MPM, long-term interest rates rose considerably and strong upward pressure was exerted on the entire yield curve, reflecting heightened speculation over the Bank's monetary policy, even as the Bank conducted large-scale purchases of JGBs.

At the start of 2023, Japanese long-term interest rates rose to 0.5 percent and the rates remained under strong upward pressure amid increasingly heightened speculation over the Bank's monetary policy, especially ahead of the January 2023 MPM. Once the Bank had decided to maintain its monetary policy and to enhance the Funds-Supplying Operations against Pooled Collateral at the January 2023 MPM, Japanese long-term interest rates fell to a level below 0.4 percent temporarily due to rapid short coverings. However, these rates subsequently rose again and remained at around 0.5 percent, which is the upper limit set on the range of fluctuations. Thereafter, while the measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs, which were implemented on February 27 (see Box 7 for details), caused a substantial decline in the special collateral (SC) repo rate of these issues, there were rapid short coverings of JGBs after the March 2023 MPM, reflecting the Bank's decision to maintain its monetary policy. At the same time, overseas interest rates declined, as market participants paid attention to downward pressure on economic activity and prices due to tightening financial conditions in the United States and Europe against the backdrop of the failures of some U.S. financial institutions and concern over the business conditions of a financial institution in Europe. In this situation, Japanese long-term interest rates also fell significantly.

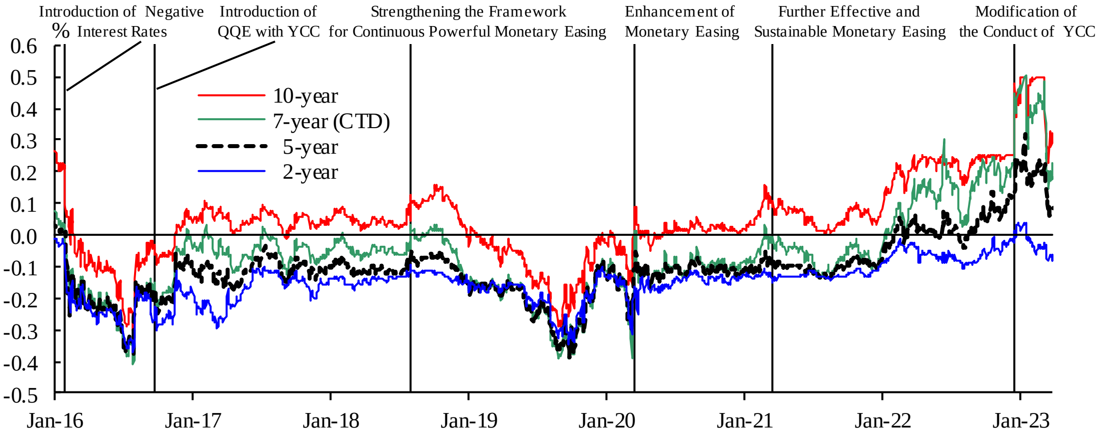
Yields on short- and medium-term JGBs, including 2-year and 5-year JGBs, remained relatively stable within around minus 0.09 to plus 0.07 percent during the first half of fiscal 2022, due to demand from foreign investors and domestic banks. From the beginning of the second half of fiscal 2022, however, the rates followed an uptrend, with the yields on 2-year JGBs temporarily rising into positive territory at the end of 2022 and staying there through the start of 2023. Subsequently, the yields on short- and medium-term JGBs turned downward as the Bank conducted the Funds-Supplying Operations against Pooled Collateral with loan durations of 2 years and 5 years and speculation over the Bank's monetary policy somewhat abated (Chart 3-18).

Yields on super-long-term JGBs rose substantially particularly from around the middle of fiscal 2022, just like yields on long-term JGBs, under strong upward pressure from an increase in overseas interest rates. When the Bank announced an increase in the amount of purchases in the super-long-term zone in the quarterly schedule of outright purchases at the end of October, the rise in the yields temporarily paused. Nevertheless, they rose once again after the December 2022 MPM. Subsequently, the yields fell somewhat significantly, in response to the Bank's large-scale purchases of JGBs and the fiscal year-end demand from domestic investors based on their fiscal year investment plans (Chart 3-18).

Meanwhile, the break-even inflation rate (BEI) for inflation-indexed JGBs, which is calculated as the difference between their yields and those for nominal bonds over the same maturity period, stayed at a high level but thereafter fell from around January 2023 against the backdrop of declining investor demand for inflation-indexed JGBs amid rising volatility of the JGB market (Chart 3-19).

Chart 3-18: Yields on JGBs

(Medium- to Long-Term Zone)



Note: Figures for residual maturity of 7 years are yields on the CTD issue (JGB futures).

(Super-Long-Term Zone)

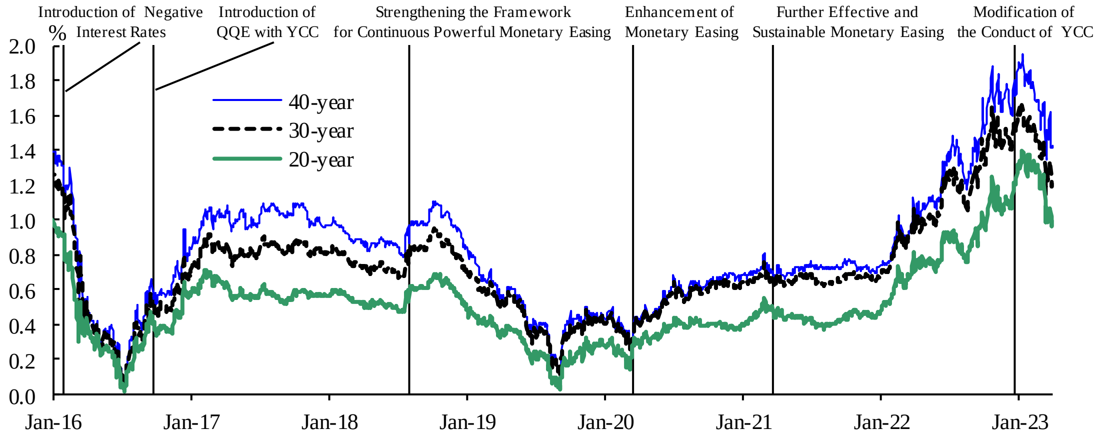
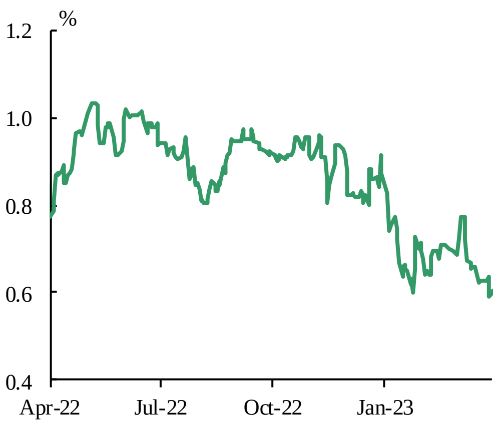


Chart 3-19: Break-Even Inflation Rate



2. Outright Purchase of JGBs[11]

During fiscal 2022, the Bank conducted outright purchases of JGBs flexibly so that long-term interest rates would remain at around 0 percent under QQE with Yield Curve Control (Chart 3-20).

In order to ensure the transparency of its conduct of market operations, the Bank has been releasing the "Outline of Outright Purchases of Japanese Government Securities." With regard to outright purchases of JGBs with the competitive auction method, the Bank, in accordance with the outline, announces a JGB purchase schedule for the coming three months in advance on a quarterly basis and conducts the purchases (Chart 3-21).

Until the MPM held in December 2022, the Bank continued to indicate the purchase size per auction in a specific amount in the quarterly schedule of outright purchases of JGBs. Meanwhile, it adjusted the quarterly purchase size and the purchase frequency per month in a flexible manner, mainly based on the supply and demand conditions of JGBs in each zone. In this regard, in the quarterly schedule for the three months from October to December released at the end of September, the Bank increased the purchase sizes for the three maturity zones of "more than 5 years and up to 10 years," "more than 10 years and up to 25 years," and "more than 25 years." In addition, at the end of October, the Bank announced that it would raise the auction frequency per month from November onward for the two super-long-term maturity zones of "more than 10 years and up to 25 years" and "more than 25 years."

At the December 2022 MPM, the Bank decided to significantly increase the amount of JGB purchases while expanding the range of 10-year JGB yield fluctuations from the target level: from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points. In light of the decision, on December 20, the Bank announced that it would increase the amount of monthly JGB purchases from January through March 2023 from about 7.3 trillion yen to about 9 trillion yen. It also started to announce the amount of purchases in a range form, instead of indicating the specific purchase size. After that, when there arose strong upward pressure on interest rates mainly in January 2023, the Bank conducted purchases in sizes from the midpoint to the upper limit of the range. From February, it conducted purchases primarily in the

[11] Amid strong upward pressure on JGBs throughout the fiscal year, the Bank took various measures to encourage the formation of a yield curve consistent with the guidelines for market operations. Box 3 summarizes the main measures in a chorological order.

short- to medium-term zone, where supply and demand conditions appeared to tighten, in sizes of the lower limit of the range. From the middle of March onward, when declines in long-term interest rates were evident, the Bank conducted purchases in zones including super-long- and long-term zones in sizes of the lower limit of the range. When the supply and demand conditions especially tightened in the middle of March, it conducted purchases in the "more than 25 years" zone in sizes below the lower limit of the range, as an exception.

In addition to these scheduled purchases, the Bank nimbly conducted additional outright purchases of JGBs and increased the amount of purchases even more, taking account of interest rate developments. Specifically, the Bank made sizable additional purchases in June 2022, amid heightened upward pressure on long-term interest rates. In addition, after the Bank decided to make nimble responses for each maturity by increasing the amount of JGB purchases and conducting fixed-rate purchase operations at the December 2022 MPM, it conducted large-scale additional purchases until the January 2023 MPM.

In terms of issues of JGBs eligible for outright purchase, the Bank nimbly excluded issues of JGBs in a wide range of zones from its outright purchases, mainly taking into consideration the developments in financial markets including the supply and demand conditions of individual JGB issues.

With regard to outright purchases of JGBs through the fixed-rate method, the Bank nimbly conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs and fixed-rate purchase operations of these issues for consecutive days until the MPM held in April 2022. At the April 2022 MPM, the Bank clarified that it would offer to purchase 10-year JGBs at 0.25 percent through fixed-rate purchase operations every business day, in principle. Thereafter, it conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs every business day from May 2. In addition, it conducted fixed-rate purchase operations of the CTD issue at 0.25 percent on June 15. Thereafter, it continued to conduct fixed-rate purchase operations of the CTD issue for consecutive days, while adding and changing the CTD issues applicable to the operations in accordance with the rollover of JGB futures contracts.

After deciding to expand the range of 10-year JGB yield fluctuations from the target level at the MPM held in December 2022, the Bank conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs and the CTD issue every business day, while changing the fixed rate applied in the auctions from 0.25 percent to 0.5 percent. Also, it nimbly conducted fixed-rate purchase operations of 2-year, 5-year, and 20-year JGBs at rates equivalent to the levels of indicative market rates at the time as necessary, to encourage the formation of a yield curve consistent with the guidelines for market operations (see Boxes 3 and 5 for details).

As for inflation-indexed JGBs, the Bank continued with purchases worth 60 billion yen per month. It also continued with purchases of floating-rate JGBs worth 30 billion yen once every quarter.

Chart 3-20: Changes in the JGB Yield Curve

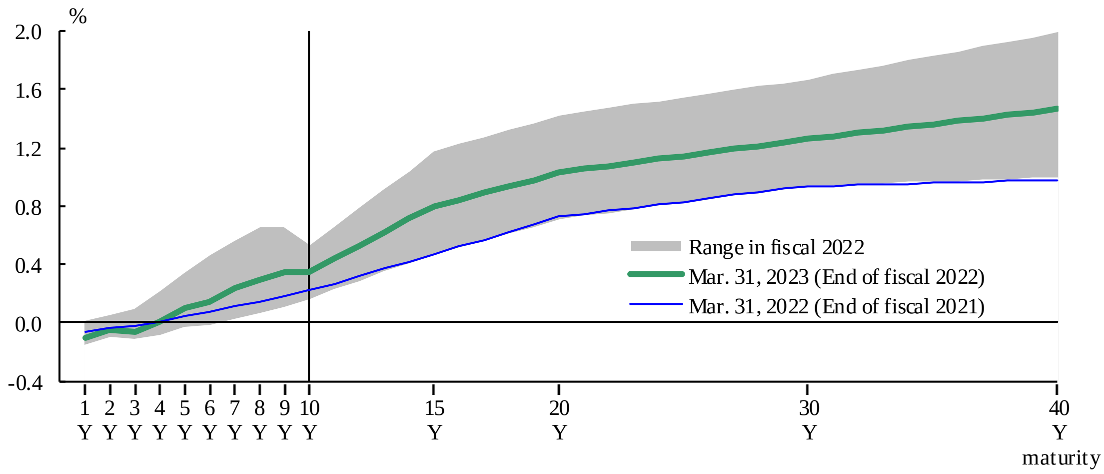


Chart 3-21: Changes in Monthly Schedule of Outright Purchases of JGBs

Residual maturity	Apr-Sep 2022	Oct 2022	Nov-Dec 2022	Jan-Mar 2023
-1Y	1,500	1,500	1,500	1,500
	1	1	1	1
1-3Y	4,750	4,750	4,750	4,250-5,750
	4	4	4	4
3-5Y	4,750	4,750	4,750	5,000-6,500
	4	4	4	4
5-10Y	5,000	5,500	5,500	5,750-7,750
	4	4	4	4
10-25Y	1,250	2,500	2,500	2,000-4,000
	2	2	3	4
25Y-	500	1,000	1,000	1,000-3,000
	2	2	3	3
Inflation-indexed bonds	600	600	600	600
	1	1	1	1
Floating-rate bonds	300	300		300
	Once a quarter	Once a quarter		Once a quarter

Notes: 1. From top to bottom, figures are the offered amount per auction (100 million yen) and the frequency of auctions.
2. The shaded areas indicate increases or decreases of amounts of purchases.
3. Purchase sizes of these auctions listed above are approximate.

Box 3: The Bank's Responses to Heightened Upward Pressure on Interest Rates in Fiscal 2022

As described in the main text, yields on JGBs remained under strong upward pressure throughout fiscal 2022, mainly due to a rise in overseas interest rates and speculation over the Bank's monetary policy (Box Charts 3-1 and 3-2). In this situation, the Bank took various measures to implement the guidelines for market operations in which the target level of 10-year JGB yields is around 0 percent. This box summarizes the Bank's main responses to heightened upward pressure on interest rates and the background of the responses in chronological order.

Fixed-rate purchase operations, fixed-rate purchase operations for consecutive days, and clarification of the conduct of fixed-rate purchase operations for consecutive days (April 20-28)

In the beginning of fiscal 2022, overseas interest rates continued to rise amid concern over acceleration in the pace of a reduction in monetary accommodation in the United States, and Japanese long-term interest rates temporarily rose to 0.25 percent in the evening of April 19.

In this situation, the Bank conducted fixed-rate purchase operations of three on-the-run issues of 10-year JGBs on April 20. With a reasonable amount of bids submitted for the operations, the Bank announced at 4 p.m. of the same day that it would conduct fixed-rate purchase operations for consecutive days from April 21 through 26. Moreover, at 4 p.m. of April 26, it again announced that it would conduct fixed-rate purchase operations for consecutive days from April 27 through 28. At the MPM held on April 27 and 28, 2022, the Bank clarified how it would conduct fixed-rate purchase operations for consecutive days by deciding that it would offer to purchase 10-year JGBs at 0.25 percent every business day through fixed-rate purchase operations, unless it was deemed highly unlikely that any bids would be submitted.

As a result of these measures, upward pressure on interest rates in the long-term zone eased. However, selling pressure in the super-long-term zone, which is not the target maturity under the yield curve control, continued. Consequently, the yield curve steepened (Chart 3-18).

The Bank has been making public the guidelines for the conduct of fixed-rate purchase operations for three on-the-run issues of 10-year JGBs that it would set the yield spread so that the bonds with the highest yield among the three on-the-run issues would be purchased at the rate equivalent to the upper limit on the range of fluctuations of long-term interest rates (about 0.25 percent at that time). The Bank conducted the fix-rate operations in accordance with these guidelines, even when there was a divergence in the yields among the three issues due mainly to the supply and demand conditions.

Additional outright purchases of JGBs, an increase in the amount of purchases, and introduction of fixed-rate purchase operations for the CTD issue (June 13-17)

From the beginning of June 2022, overseas interest rates once again began to rise. In this situation, Japanese long-term interest rates also increased to a level close to the upper limit of the range of fluctuations. Amid sizable selling primarily by foreign investors in the JGB futures market, the yield on JGBs with a remaining maturity of 8 to 9 years exceeded 0.25 percent and bids were made to fixed-rate purchase operations for consecutive days on a daily basis. Under such circumstances, the Bank announced at 2 p.m. on June 13 that it would conduct an additional purchase of JGBs with a residual maturity of "more than 5 years and up to 10 years" on June 14. Furthermore, given the further increase in the yields thereafter, it increased the offer amount at the actual auction on June 14. At 12:20 p.m. on the same day, the Bank also announced that it would conduct additional purchases of JGBs and increase the amounts of the scheduled purchases on the next business day and at 1 p.m. it conducted unscheduled purchases of JGBs with residual maturities of "more than 10 years and up to 25 years" and "more than 25 years."

Because a rise in interest rates led by the JGB futures market continued even with these unscheduled operations, the Bank on June 15 conducted fixed-rate purchase operations for the CTD issue (fixed-rate applied in the auction was 0.25 percent). Furthermore, at 2:30 p.m. on the same day, the Bank also announced that it would conduct fixed-rate purchase operations on consecutive days from June 16 through 17.

While yields in the 7-year maturity zone clearly fell owing to fixed-rate purchase operations for the CTD issue for consecutive days, arbitrage trading between the JGB cash and futures markets was restrained and the price difference between the two markets considerably widened. For this reason, the Bank at 5 p.m. on June 17 announced that it would conduct fixed-rate purchase operations of the CTD issue for consecutive days from the following week for the time being and that it would relax the terms and conditions for the Securities Lending Facility of the CTD issues. As a result, there was improvement in the environment for arbitrage trading and the price difference in the two markets (see Box 4 for details).

Additional outright purchases of JGBs, an increase in the amount of purchases, and an increase in the purchase size announced in the quarterly schedule of outright purchases of JGBs (September 21-October 28)

As overseas interest rates rose further from September through October 2022, strong upward pressure was again exerted on Japanese interest rates. Under such circumstances, bids were made on a daily basis to fixed-rate purchase operations for consecutive days, and interest rates significantly rose mainly in the super-long-term zone, reflecting the sluggish results of the auctions of 20-year JGBs. Meanwhile, volatility also increased. In response to this situation, the Bank conducted additional outright purchases of JGBs and increased the amount of scheduled purchases. Moreover, the Bank raised the monthly purchase sizes for the three zones from "more than 5 years and up to 10 years" to "more than 25 years" by 550 billion yen in total in the quarterly schedule of outright purchases of JGBs (October-December 2022) released at the end of September. Additionally, in the revised version of the quarterly schedule of outright purchases of JGBs (October-December 2022) released on October 28, it raised the auction frequency per month of the super-long-term zone ("more than 10 years and up to 25 years" and "more than 25 years") from twice to three times each, thereby increasing the monthly purchase sizes of these two zones by an additional 350 billion yen. As the Bank took these measures, super-long-term interest rates fell, partly owing to a pause in the rise in overseas interest rates. However, long-term interest rates remained at around 0.25 percent amid heightened speculation over the Bank's monetary policy, and the yields on JGBs with a remaining maturity of 8 to 9 years continued to exceed 0.25 percent.

Additional outright purchases of JGBs, an increase in the amount of purchases, fixed-rate purchase operations for the medium- and super-long-term maturity zones, and the Funds-Supplying Operations against Pooled Collateral with a loan duration of 2 years (December 20, 2022-January 16, 2023)

At the MPM held on December 19 and 20, 2022, the Bank decided to modify the conduct of yield curve control in order to improve market functioning and encourage a smoother formation of the entire yield curve. Specifically, the Bank, while significantly increasing the amount of JGB purchases, expanded the range of 10-year JGB yield fluctuations from the target level: from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points, and set the rate applied in fixed-rate purchase operations for 10-year JGB for consecutive days at 0.5 percent. The Bank also decided to further increase the purchase amount and conduct fixed-rate purchase operations nimbly for each maturity zone (see Box 5 for the developments in the market after the expansion in the range of fluctuations).

As described in the main text, the Bank, in the quarterly schedule of outright purchases of JGBs (January-March 2023), raised the amount of monthly JGB purchases from 7.3 trillion yen to about 9.0 trillion yen. The Bank also started to announce the purchase size per auction in a range form, instead of indicating the specific purchase size, in order that it could flexibly adjust the amount of purchases for each zone while carefully examining developments in the supply and demand conditions in the JGB market at the time of each purchase, given the high uncertainty over the outlook for Japanese interest rates reflecting developments in overseas interest rates.

Following the release of the decision at the MPM, interest rates in the market rose significantly. In light of this, the Bank in the afternoon of the same day nimbly conducted unscheduled outright purchases of JGBs in four maturity zones and fixed-rate purchase operations for on-the-run issues of 2-year, 5-year, and 20-year JGBs. While the rates at which these fixed-rate purchase operations were conducted were decided based on the indicative market rates at that time, the Bank conducted fixed-rate purchase operations for on-the-run issues of 5-year JGBs, whose interest rates had significantly risen, at rates lower than the market rates to contain a rise in interest rates in line with the intentions of the decision at the MPM, taking also into account the indicative market rates of on-the-run issues of 2-year JGBs.

Thereafter, the Bank also conducted unscheduled purchases of JGBs for consecutive days taking into account the continued upward pressure on interest rates amid heightened speculation over the Bank's monetary policy. It also nimbly conducted fixed-rate purchase operations for on-the-run issues of 2-year and 5-year JGBs at the yields at the close of the market on the previous business day with a view to preventing a further rise in short- and medium-term interest rates from spreading to the entire yield curve. Furthermore, with the upward pressure on interest rates observed in the cash JGB market as well as in other markets including the swap market, the Bank announced on December 29 that it would conduct the Funds-Supplying Operations against Pooled Collateral with the fixed-rate method for loans with a duration of 2 years on January 4, 2023 to stabilize longer-term interest rates at a lower level not only in the cash JGB market but also in other markets without directly affecting supply and demand conditions of cash JGBs.

At the beginning of 2023, further upward pressure was exerted on interest rates against the backdrop of increasingly heightened speculation over the Bank's monetary policy ahead of the January 2023 MPM. Under such circumstances, there were large amounts of bids for the fixed-rate purchase operations and the Bank also conducted large-scale JGB purchases including unscheduled operations. As a result, the amount of the Bank's JGB purchases reached approximately 23 trillion yen in January 2023, a record high for a single month (Box Chart 3-3). Moreover, the Bank's holdings of both the three on-the-run issues of 10-year JGBs and the CTD issue, which were subject to the fixed-rate purchase operations for consecutive days, exceeded 100 percent of their respective total amounts issued before the January 2023 MPM.[12]

Enhancement of the Funds-Supplying Operations against Pooled Collateral (from January 18)

At the MPM held on January 17 and 18, 2023, the Bank decided to enhance the Funds-Supplying Operations against Pooled Collateral (see Box 6 for details). In light of the decision, the Bank announced at 1 p.m. on the same day that it would conduct the Funds-Supplying Operations against Pooled Collateral with a loan duration of 5 years through the variable rate method, in which interest rates on the loans were determined by multiple-rate competitive auctions, and it offered purchases of 1 trillion yen in the operations on January 23. Subsequently, the Bank worked to curb a rise in interest rates when upward pressure was exerted on interest rates by taking advantage of both additional JGB purchases and the Funds-Supplying Operations against Pooled Collateral with relatively long loan durations. Under these circumstances, short- and medium-term interest rates turned downward after the January 2023 MPM.

Market operations concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs (from February 16)

After the MPM held in December 2022, the use of the Securities Lending Facility increased markedly, as there was sizable short selling based on the premise to continue to use the facility over the long term. In response to this development, the Bank announced that it would implement measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs on February 16. This was to ensure the appropriate use of the Securities Lending Facility in line with its purpose as a means to provide a temporary and secondary source of JGSs, and to facilitate the Bank's market operations (see Box 7 for details). Through these measures, the use of the facility in

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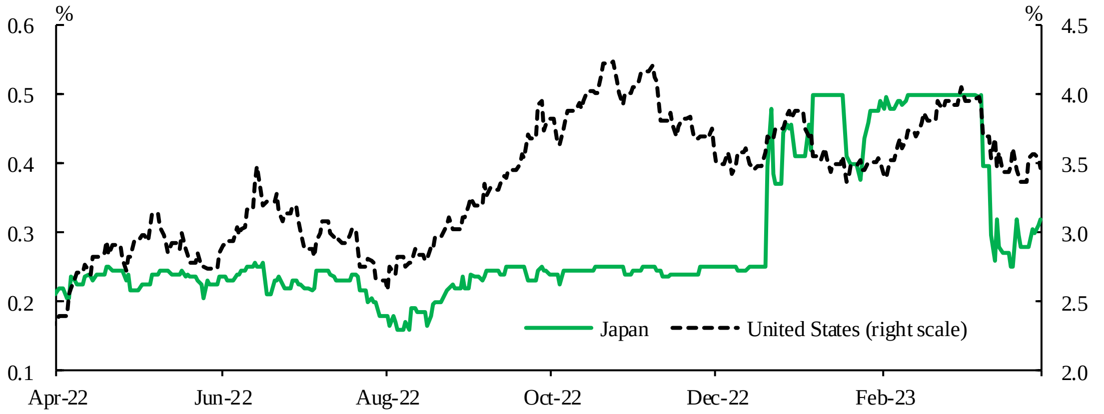
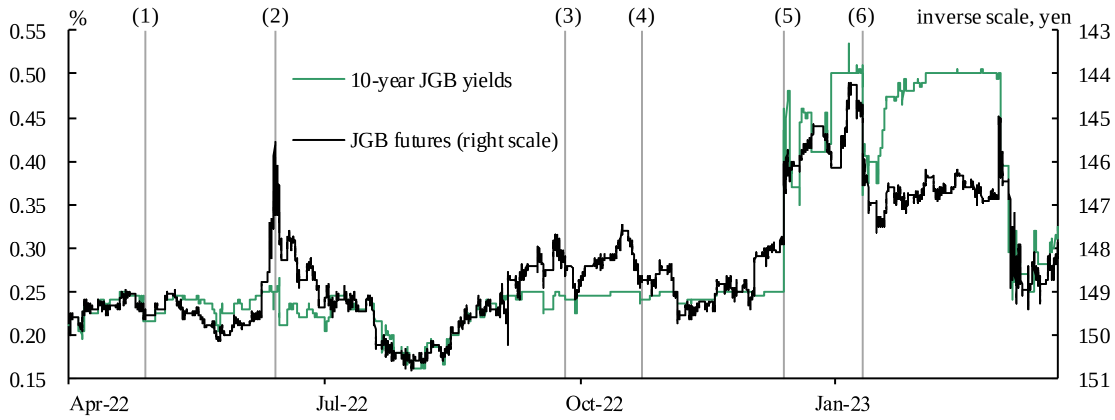
[12] Subsequently, the situation where the Bank's holdings of these issues exceeded 100 percent of their respective total amount issued was resolved as the Bank introduced measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs (see Box 7 for details). Further, the distortion of the yield curve also was reduced with the resolution of this situation (see Box 5 for details).

line with its purpose was facilitated. Moreover, there were rapid short coverings after the MPM held in March 2023 in light of the Bank's decision at the meeting to maintain its monetary policy, and overseas interest rates fell in response to the issues concerning some financial institutions in the United States and Europe. Under these circumstances, Japanese long-term interest rates decreased significantly.

Box Chart 3-1: Long-Term Yields in Japan and United States

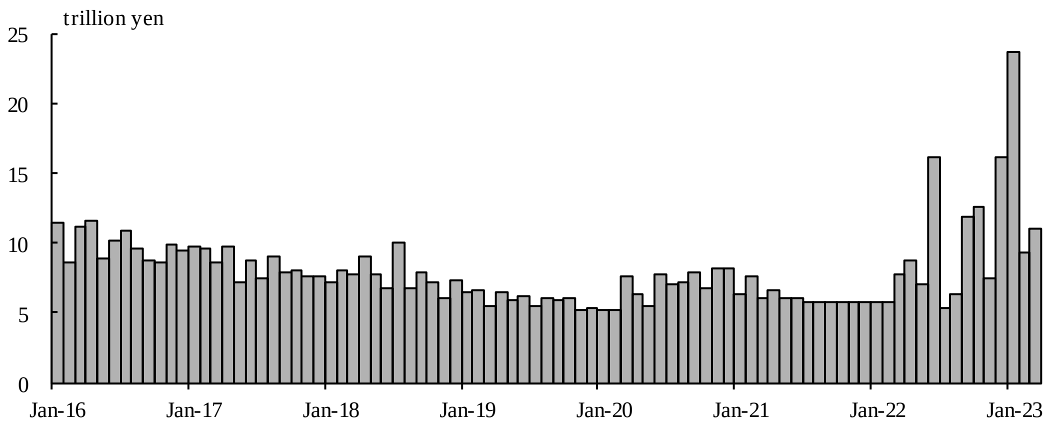


Box Chart 3-2: 10-Year JGB Yields and JGB Futures



(1) MPM on April 27 and 28, 2022
(2) Introduction of the fixed-rate purchase operations of the CTD issue
(3) Announcement of the quarterly schedule of outright purchases of JGBs (October-December 2022)
(4) Announcement of the quarterly schedule of outright purchases of JGBs (October-December 2022) <revised>
(5) MPM held on December 19 and 20, 2022
(6) MPM held on January 17 and 18, 2023

Box Chart 3-3: Amounts of the Bank's Monthly Purchases of JGBs



Box 4: Introduction of Fixed-Rate Purchase Operations for the CTD Issue and Relaxation of the Terms and Conditions for the Securities Lending Facility for the CTD Issues

In the JGB market in June 2022, strong upward pressure was exerted on the entire yield curve, primarily in the 7-year zone -- which corresponds to the residual maturity of the CTD issue, the cheapest issue among deliverable cash JGB issues in a JGB futures contract -- amid sizable selling of JGB futures mainly by foreign investors. In response, the Bank on June 15, 2022 conducted fixed-rate purchase operations for the CTD issue at 0.25 percent with no upper limit on the amount of purchases. As upward pressure on interest rates remained even after the operations, the Bank announced its decision to conduct the fixed-rate purchase operations for the CTD issue for multiple days (fixed-rate purchase operations for consecutive days).

As a result of these operations, yields on JGBs in the 7-year maturity zone firmly declined. On the other hand, arbitrage trading which involves selling cash JGBs and buying JGB futures decreased due to concerns about liquidity of the CTD issues that took into account the scale of selling in the JGB futures market, and some existing arbitrage positions were closed out to cut losses. As a result, prices of JGB futures dropped and the co-movement between the JGB cash and futures markets decreased significantly (Box Charts 4-1 and 4-2).

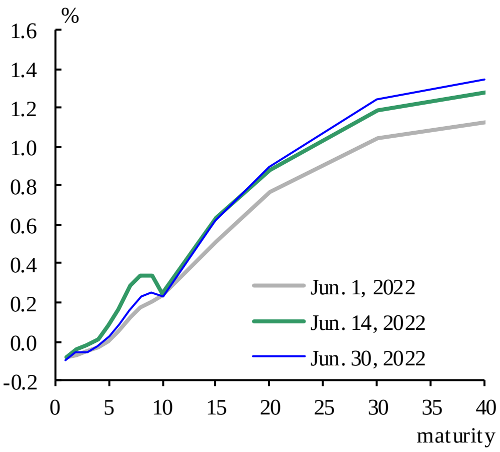
Given these situations, the Bank announced on June 17 the relaxation of the terms and conditions for the Securities Lending Facility of the CTD issues, in order to ensure stability in the market by easing excessive tightening in supply and demand of JGSs in the repo market. Specifically, the Bank increased the upper limit on consecutive purchases of the same issue from 50 business days to 70 business days to enable the use of the facility until the delivery settlement date of the rollover and relaxed the conditions for the reduction of the repurchase amount.[13] In response to the introduction of these measures, concerns over liquidity of the CTD issues eased, and this facilitated arbitrage trading which took advantage of the price difference between the JGB futures and cash markets. Consequently, the prices of JGB futures increased and the net basis, which shows the divergence between the prices of JGB futures and cash JGBs, declined (Box Charts 4-2 and 4-3). On the same day, the Bank also announced that it would conduct fixed-rate purchase operations of the CTD issue for consecutive days for an extended period of time, for the appropriate conduct of the yield curve control.

[13] See section IV.1 for the details of the measures.

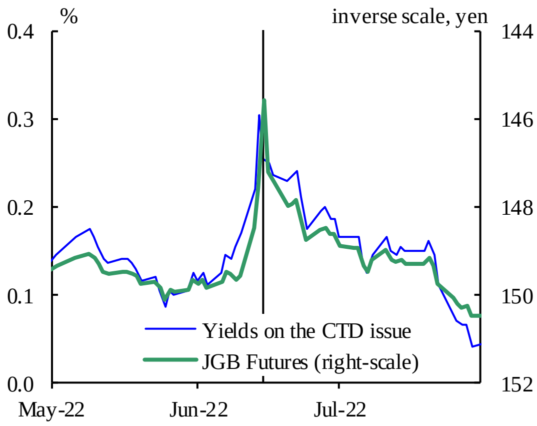
The Bank continued to implement these measures while changing the issues applicable and adjusting the upper limit on consecutive purchases of the same issue, in order to prevent disruptions in the market at the timing of the rollover of JGB futures contracts. While there remained persistent selling of JGB futures amid speculation over the Bank's monetary policy, the net basis again widened temporarily before and after the rollover of JGB futures contract, and when the yields on JGBs in the 7-year zone temporarily reached close to the rate at which fixed-rate purchase operations were conducted, for example before an MPM, due to strong upward pressure on interest rates. However, the extent of the widening was controlled to a certain level due to arbitrage trading between the JGB cash and futures markets (Box Chart 4-3). Under these circumstances, the amount outstanding of JGB futures substantially increased over fiscal 2022 (Box Chart 4-4).

Moreover, the Bank reduces the repurchase amount of the CTD issues under the Securities Lending Facility, in response to requests from market participants, if the reduction is deemed to contribute to improving the liquidity without excessively easing supply and demand conditions taking into account, for example, the situation of sales and purchases, as well as lending, of the applicable issues in the market. In fact, the Bank implemented a certain amount of reduction throughout the fiscal year to improve the liquidity of the CTD issue.

Box Chart 4-1: Changes in the Yield Curve

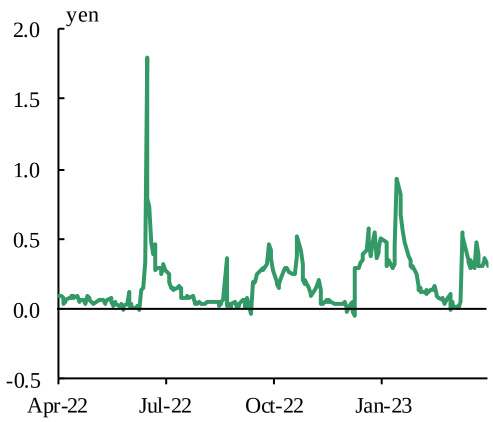


Box Chart 4-2: Yields on the CTD Issue and JGB Futures

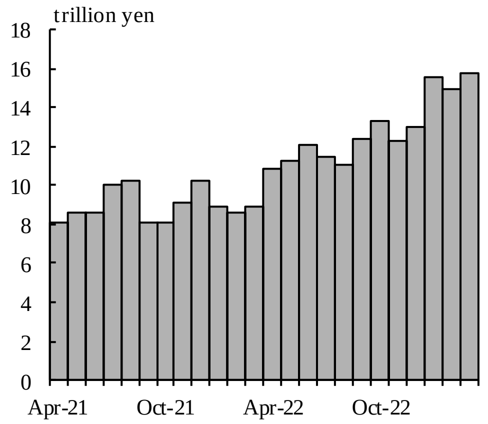


Note: The vertical line indicates the introduction of the fixed-rate purchase operations of the CTD issue (June 15, 2022).

Box Chart 4-3: Net Basis for JGB Futures



Box Chart 4-4: Amounts Outstanding of JGB Futures



Note: Figures are as of the month-end.

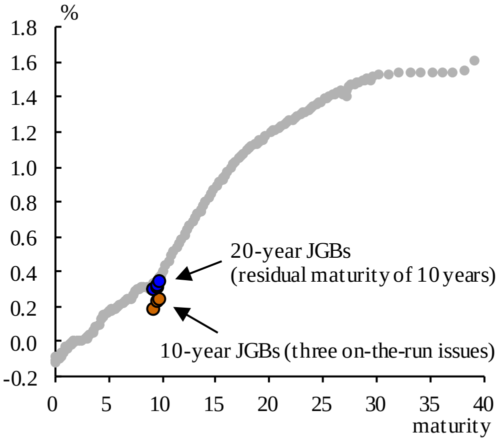
Box 5: JGB Markets after the Expansion of the Range of 10-Year Yield Fluctuations at the December 2022 MPM

After the spring of 2022, JGB yields remained under significant upward pressure due to the rise in overseas interest rates and speculation over the Bank's monetary policy. Against this backdrop, 10-year JGB yields hovered near the upper limit on the range of the fluctuations under the yield curve control. However, the functioning of JGB markets deteriorated, particularly in terms of relative relationships among yields with different maturities and arbitrage relationships between the JGB cash and futures markets (Box Charts 5-1 and 5-2). In response to this, the Bank decided at the MPM held in December 2022 to modify the conduct of yield curve control in order to improve market functioning and encourage a smoother formation of the entire yield curve, while maintaining accommodative financial conditions. Specifically, while significantly increasing the amount of JGB purchases, the Bank expanded the range of 10-year JGB yield fluctuations from the target level: from between around plus and minus 0.25 percentage points to between around plus and minus 0.5 percentage points.

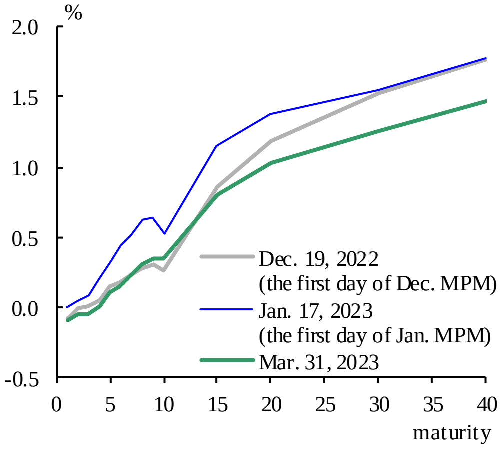
Strong upward pressure on interest rates, however, continued after the December MPM as speculation over the Bank's monetary policy heightened. At the beginning of 2023, 10-year JGB yields rose to 0.5 percent, and yields on JGBs with a remaining maturity of less than 10 years stayed at over 0.5 percent. Under these circumstances, the Bank worked to curb the upward pressure on interest rates by conducting large purchases of JGBs and other measures, as described in the main text. As a result, the supply and demand conditions of JGBs tightened further, with the amount of the Bank's JGB purchases reaching a monthly record high in January 2023, and distortions in the yield curve temporarily increased (Box Chart 5-3).

Subsequently, the situation subsided at one point as the Bank maintained its accommodative stance at the MPMs held in January and March 2023. The Bank also took various measures concerning its market operations to encourage the smooth formation of a yield curve consistent with the guidelines for market operations, while giving consideration to market functioning. For example, the Bank conducted the Funds-Supplying Operations against Pooled Collateral, whose enhancement was decided at the January MPM. It also implemented measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs (see Boxes 6 and 7 for details of these measures). Reflecting these measures and the impact of a decline in overseas interest rates toward the end of March, distortions in the yield curve, which had been increasing, started to decrease (Box Charts 5-2 and 5-3). On the other hand, liquidity indicators, such as the bid-ask spread and market depth, remained at low levels (Box Charts 5-4 and 5-5). The Bank continues to monitor the impact of market operations on JGB markets.

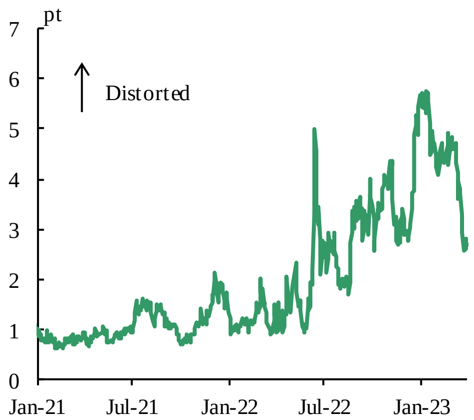
Box Chart 5-1: Yield Curve by JGB Issue (as of December 19, 2022)



Box Chart 5-2: Changes in the Yield Curve

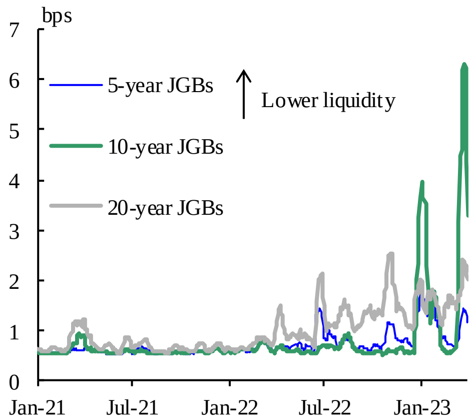


Box Chart 5-3: Distortion in the Yield Curve



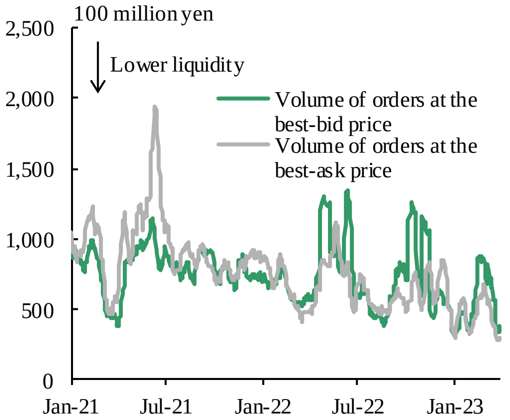
Note: Figures are calculated by summing up the absolute values of the differences between the yield curve estimated using a spline function and the actual yield curve by JGB issue.

Box Chart 5-4: Bid-Ask Spreads (On-the-Run Issues)



Notes: 1. Figures indicate the average of bid-ask spreads in inter-dealer transactions with a 1-second frequency. Bid-ask spreads are calculated only for time periods in which both best-bid and best-ask were submitted.
2. 10-day backward moving average.

Box Chart 5-5: Market Depth



Notes: 1. Figures are calculated by summing up the median of volume of orders at the best-ask and the best-bid prices with a 1-second frequency per issue.
2. 10-day backward moving average.

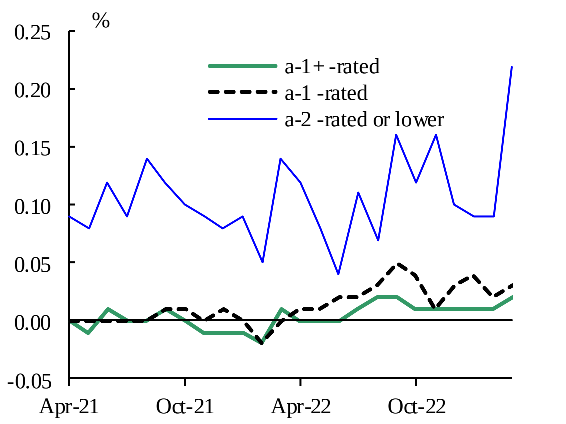
D. Developments in the CP Market and Outright Purchases of CP

1. Developments in the CP Market

During fiscal 2022, CP issuance rates stayed at around 0 to 0.02 percent, mainly for issues with high ratings. From July 2022 onward, CP issuance rates somewhat rose on some occasions on the back of a decline in collateral demand due to the phasing out of the Special Operations in Response to COVID-19, an increase in the amount outstanding of CP, and heightened speculation over the Bank's monetary policy (Chart 3-22).

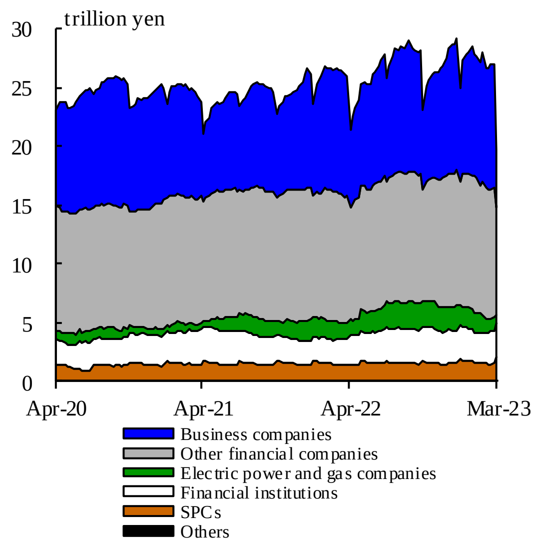
The amount outstanding of CP remained at a high level throughout the fiscal year. Other financial companies (including leasing companies and nonbanks) continued to issue CP in significant amounts. Also, CP issuance was conducted mainly by electric power and gas companies and energy-related business companies against the backdrop of a rise in firms' funding needs for working capital due mainly to a surge in commodity prices including those of crude oil. As a result, the amount outstanding of CP reached 29 trillion yen in August and December 2022 (Chart 3-23).

Chart 3-22: CP Issuance Rates



Notes: 1. 1-month rates.
2. CP issuance rates of business companies (including electric power and gas companies) and other financial companies (including leasing companies and nonbanks) on a monthly basis.

Chart 3-23: Amount Outstanding of CP



Note: "Business companies" excludes "Electric power and gas companies" and "Other financial companies."

2. Outright Purchases of CP

Throughout fiscal 2022, the Bank offered twice a month to purchase CP amounting to 400 billion yen per auction (Chart 3-24). This was in line with the Bank's guidelines for asset purchases that it would purchase CP at about the same pace as prior to the COVID-19 pandemic, so that its amount outstanding would gradually return to the pre-pandemic level, namely, about 2 trillion yen.[14]

The lowest accepted bid yields for outright purchases of CP were in negative territory until July 2022, and remained at around 0 percent in the latter half of the fiscal year (Chart 3-25). They rose somewhat on some occasions from January to February 2023, due to an increase in the amount outstanding of CP, as well as speculation over the Bank's monetary policy. The Bank continued to set the lower limit on bid rates for each offer with a view to inducing appropriate pricing of CP and ensuring stability in financial markets.

Chart 3-24: Offered Amounts of Outright Purchases of CP

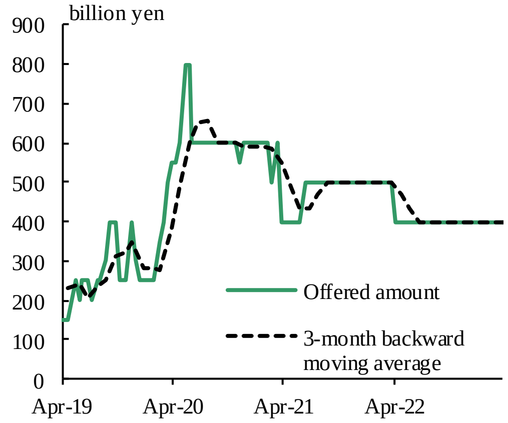
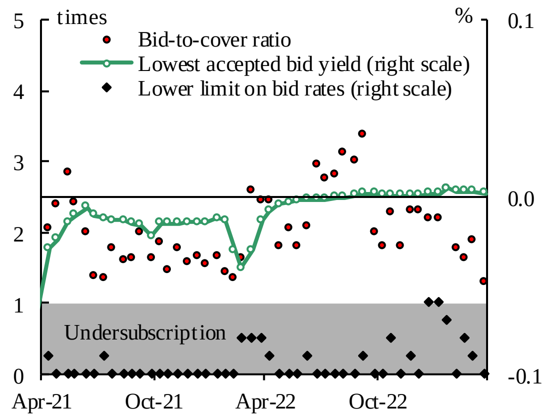


Chart 3-25: Bid-to-Cover Ratios and Lowest Accepted Bid Yields of Outright Purchases of CP



[14] This guideline for asset purchases was in place until the MPM held on January 17 and 18, 2023. Subsequently, the Bank decided on the guidelines for asset purchases at the MPM held on March 9 and 10, 2023 that it would maintain the amount outstanding of CP at about 2 trillion yen. The maximum amount outstanding of a single issuer's CP to be purchased and its ratio to the total amount outstanding, which were originally set at 100 billion yen and 25 percent, respectively, were relaxed until the end of March 2023 to respond to the COVID-19 pandemic. Specifically, they were respectively set at 100 billion yen and 50 percent from April to September 2022, and at 100 billion yen and 37.5 percent from October 2022 to March 2023.

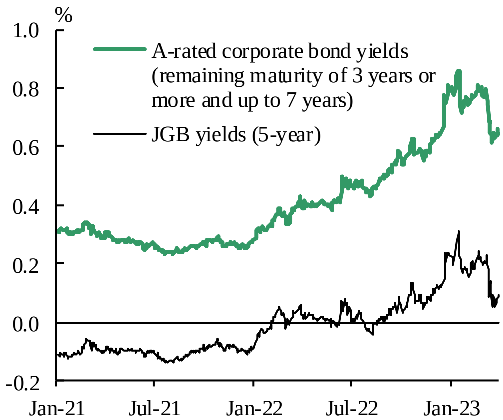
E. Developments in the Corporate Bond Market and Outright Purchases of Corporate Bonds

1. Developments in the Corporate Bond Market

Corporate bond yields rose in tandem with JGB yields, which are the base rates (Chart 3-26). In the secondary market, the yield spreads between corporate bonds and JGBs widened moderately, as corporate bond investors' stance became cautious amid rapid policy rate hikes by central banks mainly in the United States and Europe, in the face of continued global inflationary pressure. From December 2022 to January 2023, the spreads widened reflecting investors' cautious stance on corporate bonds against the backdrop of the deterioration in the functioning of JGB markets and a rise in volatility in such markets. Thereafter, the spreads remained flat toward the end of March 2023 (Chart 3-27).

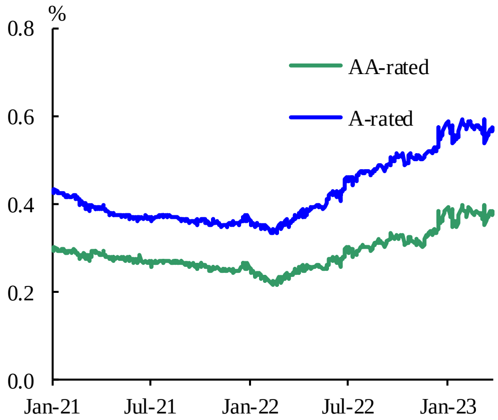
Meanwhile, the issuance amount of corporate bonds increased at a pace slower than fiscal 2021, partly due to deceleration in their issuance in response to investors' cautious stance on longer-term corporate bonds (Chart 3-28).

Chart 3-26: Yields on Corporate Bonds and JGBs



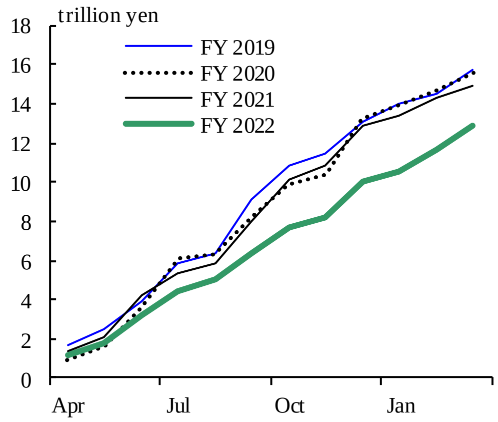
Note: Rated by R&I. The same applies to Chart 3-27.

Chart 3-27: Yield Spreads between Corporate Bonds and JGBs



Note: Corporate bonds with a remaining maturity of 3 years or more and up to 7 years.

Chart 3-28: Cumulative Issuance of Straight Corporate Bonds from the Start of the Fiscal Year



Notes: 1. Figures are as of the month-end.
2. On a nominal basis. Privately offered bonds are excluded.

2. Outright Purchases of Corporate Bonds

The Bank offered once a month to purchase corporate bonds amounting to 75 to 100 billion yen per auction. This was in line with the Bank's guidelines for asset purchases that it would purchase corporate bonds at about the same pace as prior to the COVID-19 pandemic, so that their amount outstanding would gradually return to the pre-pandemic level, namely about 3 trillion yen.[15]

The Bank offered to purchase corporate bonds amounting to 100 billion yen from April through July 2022. It reduced the amount of purchases to 75 billion yen in August and September 2022, as demand for selling corporate bonds to the Bank was expected to decline due to a seasonal slowdown in the pace of new issuance, as well as some postponements of new issuance amid investors' cautious stance. The Bank subsequently increased the amount of purchases back to 100 billion yen from October through December 2022, based on the issuance conditions of corporate bonds and needs for selling them. From January 2023 onward, it continued to purchase corporate bonds amounting to 100 billion yen, taking into account the decision at the MPM held in December 2022 that it would adjust the amount outstanding of corporate bonds with due consideration to their issuance conditions. As

[15] The maximum amount outstanding of a single issuer's corporate bonds to be purchased and its ratio to the total amount outstanding, which were originally set at 100 billion yen and 25 percent, respectively, were relaxed to respond to the COVID-19 pandemic. Specifically, they were respectively set at 250 billion yen and 30 percent from April to September 2022, and at 200 billion yen and 30 percent from October 2022 to March 2023. On December 20, 2022, the Bank announced that it would set them at 200 billion yen and 30 percent until September 2023, following the decision made at the MPM held on December 19 and 20, 2022 that the Bank would adjust the amount outstanding of corporate bonds with due consideration to their issuance conditions.

the amount of the Bank's purchases declined compared to the previous fiscal year, the amount outstanding of corporate bonds purchased followed a moderate downtrend throughout fiscal 2022 and it stood at 8.0 trillion yen at the end of March 2023 (Chart 3-29).

The lowest accepted bid yields for outright purchases of corporate bonds rose, albeit with fluctuations, in tandem with a rise in JGB yields, which are the base rates. The Bank continued to set the lower limit on bid rates for each offer with a view to inducing appropriate pricing of corporate bonds and ensuring stability in financial markets (Chart 3-30).

Chart 3-29: Amounts Outstanding of Corporate Bonds Purchased and Amounts of Monthly Purchases of Corporate Bonds

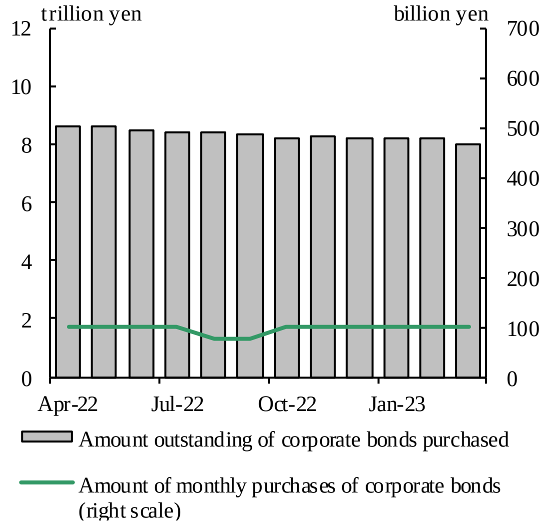
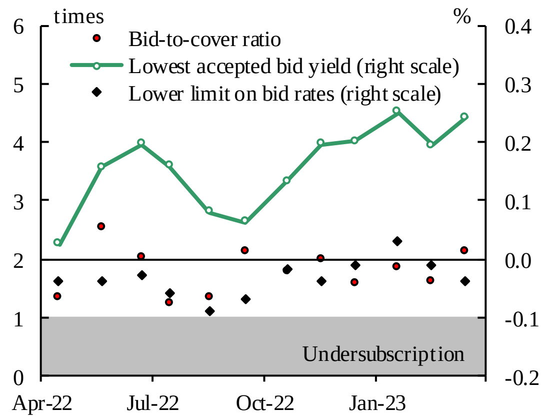


Chart 3-30: Bid-to-Cover Ratios and Lowest Accepted Bid Yield of Outright Purchases of Corporate Bonds



F. Developments in the FX Swap Market and Supply of U.S. Dollar Funds

1. Developments in the FX Swap Market

In the FX swap market, U.S. dollar funding costs (short-term FX swap-implied U.S. dollar rate from the yen) rose through fiscal 2022 mainly due to an increase in the U.S. dollar overnight index swap (OIS) rate, as the Fed proceeded with policy rate hikes. After mid-March 2023, the costs further went up on some occasions due to an increase in the U.S. dollar funding premium. This was against the backdrop of heightened uncertainty about the financial sector in the United States and Europe, which was triggered by the collapse of some U.S. financial institutions and concern over the business conditions of a financial institution in Europe.

Looking at the details, the U.S. dollar funding premium temporarily rose toward the end of 2022, with increased demand from investors obtaining U.S. dollar funds in advance for use over the end of December. The heightened demand was partly due to concerns over the possibility that some foreign banks would reduce their U.S. dollar fund supply as in preceding years in consideration of the impact on their global systemically important bank (G-SIB) scores. After the start of 2023, the pace of increase in the U.S. dollar OIS rate decelerated in tandem with a decline in the pace of policy rate hikes by the Fed. Also, the U.S. dollar funding premium fell due to the dissipation of the year-end factor. After mid-March, as described earlier, the U.S. dollar funding premium increased, reflecting demand for precautionary dollar funding and investors becoming cautious about supplying dollar funds for a longer term, amid a global deterioration in risk sentiment (Charts 3-31 and 3-32).

Chart 3-31: U.S. Dollar Funding Costs through Short-Term FX Swaps

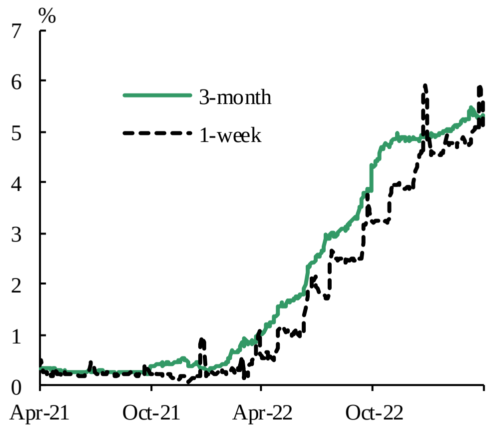
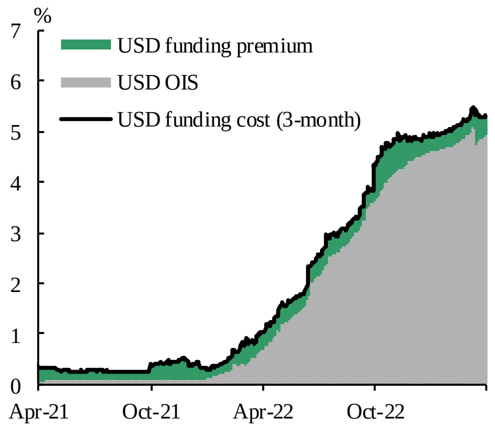


Chart 3-32: Breakdown of U.S. Dollar Funding Costs through Short-Term FX Swaps



Note: The U.S. dollar funding costs through short-term FX swaps are the total funding costs of raising yen at JPY OIS and converting the proceeds into dollars through FX swap transactions.

2. Supply of U.S. Dollar Funds

The U.S. Dollar Funds-Supplying Operations are to be used as a backstop for such cases as when market participants find difficulty in obtaining U.S. dollars despite adequate efforts to obtain them in the markets due to heightened tensions in the U.S. dollar money markets, or when there is a substantial rise in the U.S. dollar funding rate.

During fiscal 2022, the Bank offered 1-week operations on a weekly basis in principle until March 17, 2023. From March 20, it offered the 1-week operations every business day, as central banks including the Bank enhanced U.S. dollar operations as a coordinated action (see section IV.8).

Turning to the use of the operations, counterparties only used the operations in very small sums for training purposes throughout the fiscal year. Even after the U.S. Dollar Funds-Supplying Operations were enhanced from March 20, no counterparties used the operations, as no particular problems were seen in Japanese banks' U.S. dollar funding.

The framework of the Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations was used only sporadically in small sums for the purpose of verifying administrative preparedness.

G. Outright Purchases of Other Assets

1. Outright Purchases of ETFs

The Bank conducted outright purchases of ETFs as necessary with an upper limit of about 12 trillion yen on the annual pace of increase in the amount outstanding, in accordance with the guidelines for asset purchases decided at the MPMs.

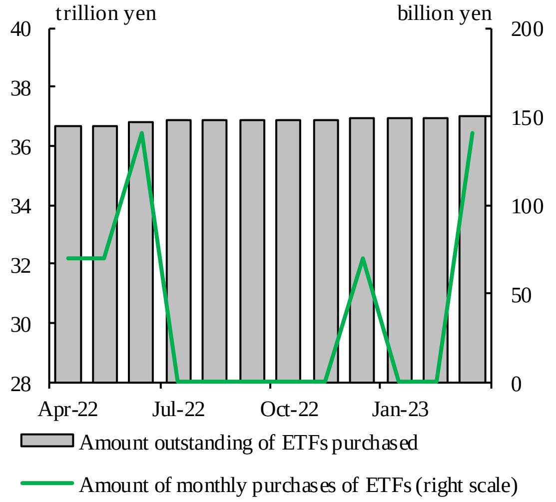
In this situation, during fiscal 2022, the Bank conducted a total of seven outright purchases, with each amounting to about 70 billion yen. These resulted in the amount outstanding of ETFs purchased by the Bank at the end of March 2023 standing at 37.0 trillion yen. Moreover, the amount of monthly purchases of ETFs (based on trade date) ranged from 0 to 140.2 billion yen during fiscal 2022 (Chart 3-33). In addition, the Bank did not purchase ETFs composed of stocks issued by "firms that are proactively investing in physical and human capital" during fiscal 2022.

2. Outright Purchases of J-REITs

The Bank purchased J-REITs as necessary with an upper limit of about 180 billion yen on the annual pace of increase in the amount outstanding, in accordance with the guidelines for asset purchases decided at the MPMs.

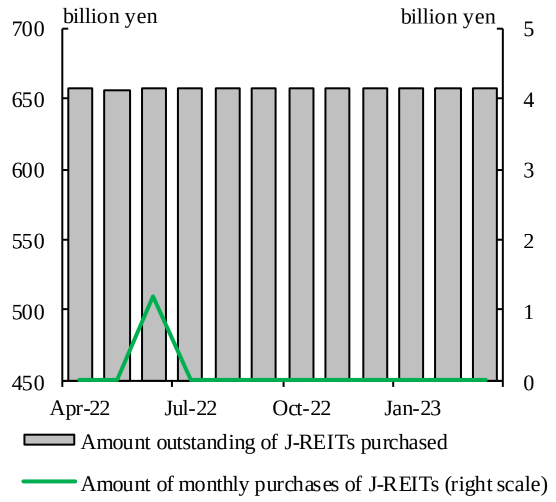
As a result, the Bank conducted one purchase during fiscal 2022 of about 1.2 billion yen, and the amount outstanding of J-REITs purchased by the Bank at the end of March 2023 stood at 657 billion yen (excluding accrued dividends receivable). The amount of monthly purchases of J-REITs (based on trade date) ranged from 0 to 1.2 billion yen during fiscal 2022 (Chart 3-34).

Chart 3-33: Amounts Outstanding of ETFs Purchased and Amounts of Monthly Purchases of ETFs



Note: "Amount of monthly purchases of ETFs" is based on trade date. The same applies to Chart 3-34.

Chart 3-34: Amounts Outstanding of J-REITs Purchased and Amounts of Monthly Purchases of J-REITs

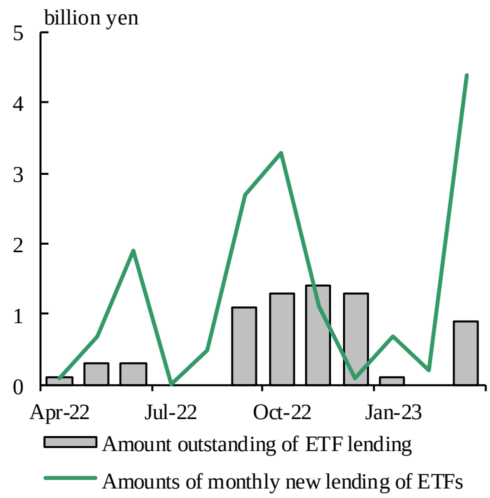


Note: "Amount outstanding of J-REITs purchased" excludes accrued dividends receivable.

3. ETF Lending Facility

The Bank lent its holdings of ETFs a total of 39 times during fiscal 2022, and the amount outstanding at the end of March 2023 stood at 0.9 billion yen. Moreover, the amount of new lending made monthly (based on trade date) ranged from 0 to 4.4 billion yen during fiscal 2022 (Chart 3-35).

Chart 3-35: Amounts Outstanding of ETF Lending and Amounts of Monthly New Lending of ETFs



Note: "Amounts of monthly new lending of ETFs" is based on trade date.

H. Other Operations

1. Special Funds-Supplying Operations to Facilitate Financing in Response to the Novel Coronavirus (COVID-19)

Although the impact of COVID-19 remained in some segments of small and medium-sized firms in particular, financial positions, including of these firms, had been on an improving trend. Given these developments, it was decided at the MPM held on September 21 and 22, 2022 to phase out the Special Operations in Response to COVID-19 (see section IV.2).

In fiscal 2022, the Bank offered these operations once a month from April to September 2022. The duration of loans was set at 6 months. From October onward, following the decision to phase out the operations, the Bank offered to provide funds against government-supported loans through the end of December 2022, and funds against non-government-supported loans through the end of March 2023, each once a month with the durations of loans set at 3 months.

Turning to the use of the operations, the amount outstanding of funds provided through the operations declined significantly from April to September 2022, due to the maturing of fund-provisioning against private debt pledged as collateral, for which new loan disbursement was completed at the end of March 2022. Meanwhile, active bidding continued for fund-provisioning against non-government-supported loans, while bids were limited for fund-provisioning government-supported loans partly due to a change in the incentive for using them.[16] From October to December 2022, the amount outstanding of funds was generally flat. From January to March 2023, the amount outstanding of funds declined moderately due to the maturing of fund-provisioning against government-supported loans, for which new loan disbursement was completed at the end of December 2022 (Chart 3-36).

Looking by sector, city banks and trust banks, regional banks, and *shinkin* banks continued to submit bids to a certain extent, mainly for fund-provisioning against non-government-supported loans. On the other hand, limited bids were submitted by *tanshi* companies and others, which had mainly used fund-provisioning against private debt pledged as collateral (Chart 3-37).

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[16] From April 2022 onward, the applied interest rate for fund-provisioning under the Interest Scheme to Promote Lending was revised from 0.1 percent to 0 percent and the amount to be added to the Macro Added-on Balances was revised from twice the amount outstanding of funds they received to the amount outstanding itself.

Chart 3-36: Amounts Outstanding of Special Operations in Response to COVID-19 and the Number of Eligible Counterparties

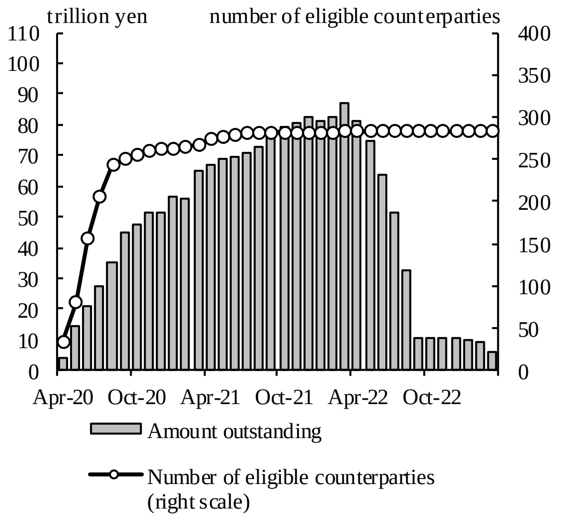
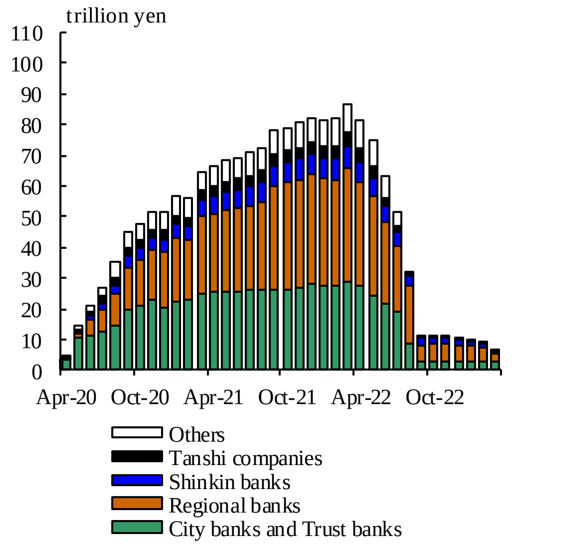


Chart 3-37: Amounts Outstanding of Special Operations in Response to COVID-19 by Sector



2. Funds-Supplying Operations against Pooled Collateral

The Bank continued to offer the Funds-Supplying Operations against Pooled Collateral with a fixed interest rate of 0 percent and 2-week terms at a pace of roughly once every two weeks, in principle, throughout the fiscal year. From September 27, 2022, it conducted these operations without setting an upper limit on the amount of fund-provisioning, in light of the decision made at the MPM held on September 21 and 22, 2022.[17]

After the start of 2023, the volatility in the JGB market remained elevated, mainly due to the rise in overseas interest rates and heightened speculation over the Bank's monetary policy. Against this background, the Bank conducted the Funds-Supplying Operations against Pooled Collateral with a loan duration of 2 years amounting to about 9 trillion yen at a fixed interest rate of 0 percent to stabilize longer-term interest rates not only in the cash JGB market but also in other markets at a lower level without directly affecting supply and demand conditions of cash JGBs.

After the Bank decided to enhance the Funds-Supplying Operations against Pooled Collateral at the MPM held on January 17 and 18, 2023, including the extension of the duration of loans disbursed through the variable-rate method, in which interest rates on the loans were determined by multiple-rate competitive auctions, to within 10 years (see section IV.6), it also conducted the operations with a loan duration of 5 years amounting to about 4 trillion yen through the variable-rate method (Chart 3-38).

Turning to the use of the operations, demand for 2-week term loans was sluggish. For 2-year and 5-year term loans, active bidding was seen, with bids submitted from a broad range of sectors for such purposes as arbitraging with cash JGBs and yen interest rate swaps (see Box 6 for details). As a result, the amount outstanding of the operations stood at 14.0 trillion yen at the end of March 2023, a significant increase of 13.5 trillion yen from a year earlier (Charts 3-39 and 3-40).

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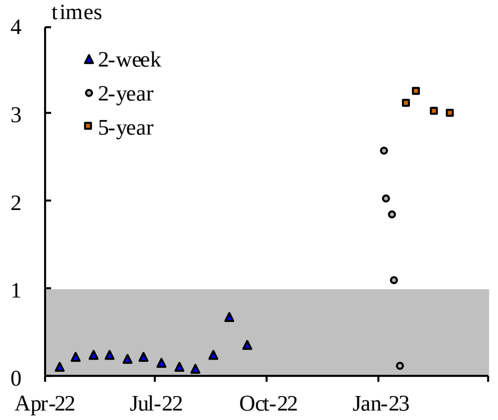
[17] In order to support financing, mainly of small and medium-sized firms, even after the expiration of the Special Operations in Response to COVID-19, and with a view to meeting a wider range of financing needs, the Bank decided to set no upper limit on the amount of fund-provisioning under the Funds-Supplying Operations against Pooled Collateral, for which various types of collateral are accepted.

Chart 3-38: Implementation of the Funds-Supplying Operations against Pooled Collateral (with a Loan Duration of More Than 1 Year)

100 million yen, percent per annum

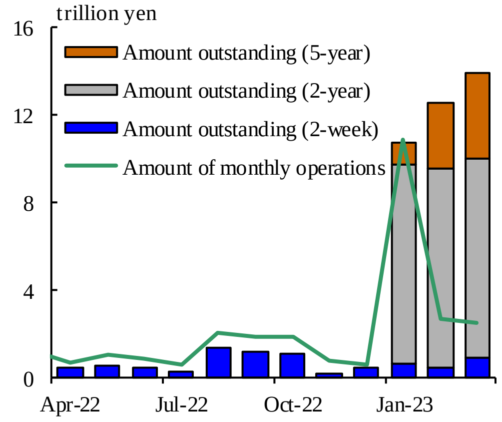
Offer date	Term	Interest rate on loans	Amounts offered	Bid-to-cover ratio	Average successful bid rate	Pro-rata rate
Jan. 4, 2023	2Y	Fixed rate (0%)	10,000	5.82	0.000	0.000
Jan. 5	2Y	Fixed rate (0%)	20,000	2.58	0.000	0.000
Jan. 6	2Y	Fixed rate (0%)	20,000	2.03	0.000	0.000
Jan. 12	2Y	Fixed rate (0%)	20,000	1.85	0.000	0.000
Jan. 13	2Y	Fixed rate (0%)	20,000	1.11	0.000	0.000
Jan. 18	2Y	Fixed rate (0%)	10,000	0.12	0.000	0.000
Jan. 23	5Y	Variable-rate method	10,000	3.13	0.145	0.110
Jan. 31	5Y	Variable-rate method	10,000	3.26	0.142	0.100
Feb. 14	5Y	Variable-rate method	10,000	3.03	0.121	0.100
Feb. 28	5Y	Variable-rate method	10,000	3.02	0.133	0.110

Chart 3-39: Bid-to-Cover Ratios of the Funds-Supplying Operations against Pooled Collateral



Note: Figures for "2-week" from September 27, 2022 onward are not shown in the chart, since the operations were conducted with no upper limit on the amount of fund-provisioning.

Chart 3-40: Amounts Outstanding and Amounts of Monthly Operations of the Funds-Supplying Operations against Pooled Collateral



Box 6: Enhancement of the Funds-Supplying Operations against Pooled Collateral

As explained in the main text, the Bank decided at the MPM held in January 2023 to enhance the Funds-Supplying Operations against Pooled Collateral as a means to stabilize longer-term interest rates not only in the cash JGB market but also in other markets at a lower level without directly affecting supply and demand conditions of cash JGBs. This box reviews the use of the Funds-Supplying Operations against Pooled Collateral by sector, the background to bidding, and market developments before and after the operations, with a focus on the operations with a loan duration of 5 years, which were conducted after the enhancement of the operations, but also including the operations with a loan duration of 2 years which had been conducted before the enhancement.

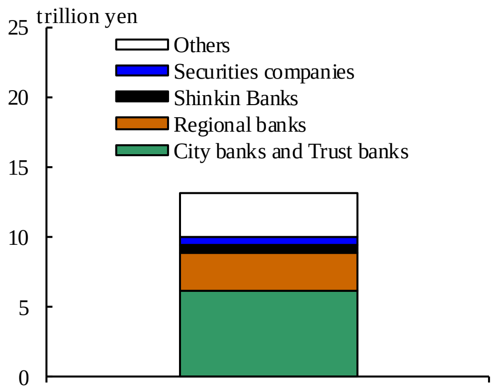
Looking at the use of the Funds-Supplying Operations against Pooled Collateral (with a loan duration of more than 1 year) by sector reveals that a wide range of sectors, including major banks such as city banks and trust banks, regional financial institutions such as regional banks and *shinkin* banks, and securities companies, used the operations (Box Chart 6-1). Against the background of these uses, there was a strong demand for the operations with a duration of 5 years, and there was bidding exceeding 3 trillion yen for an offer of 1 trillion yen at each of the 4 operations conducted in fiscal 2022 (Chart 3-38).

As the background of bidding for the operations, financial institutions often cited the use of the operations to purchase cash JGBs or for the purpose of arbitrage trading with Japanese yen interest rate swaps. In addition, some mentioned they used the operations for the purpose of risk management in terms of asset-liability management (ALM). The purchases of cash JGBs and arbitrage trading with Japanese yen interest rate swaps are considered to curb a rise in interest rates. Moreover, the use of the operations for the purpose of ALM risk management indirectly reduces the upward pressure on cash JGB yields as it curbs the use of other measures to reduce interest rate risk, such as the fixed-rate interest payments in Japanese yen interest rate swaps and the selling of JGB futures. Furthermore, such use of the operations leads to a prolongation of the duration on the liability side, thereby bringing about an additional interest rate risk-taking capacity on the asset side. Thus, it is expected that the operations would also have medium- to long-term impacts on interest rates.

Regarding the counterparties' stance in using the operations from the perspective of collateral pledged to the Bank, the amount outstanding of collateral pledged to the Bank, mainly JGBs and T-bills, rose by about 13 trillion yen between the end of 2022, before the conduct of the operations with a loan duration of 2 years, and the end of March 2023 (Box Chart 6-2). This suggests that, in addition to using the operations within the scope of the collateral already pledged, some pledged, for example, newly purchased JGBs, T-bills, and others as collateral, and maintained or increased their collateral capacity to use the operations.

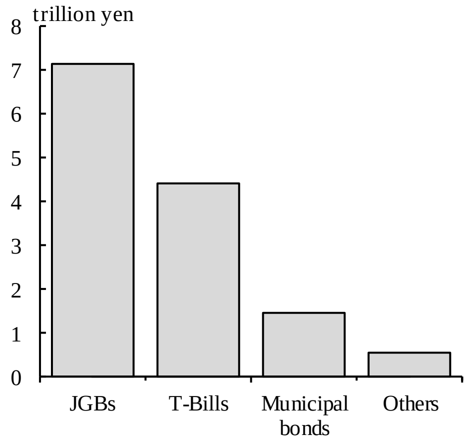
As shown above, the operations are expected to have impacts on interest rates not only in the cash JGB market but also in other markets through being used for various purposes. In fact, the JGB yields in the 2-year and 5-year zones -- which corresponded to the loan durations of the operations -- decreased toward late February after the enhancement of the operations (Box Chart 6-3). It should be noted that such yield developments reflected various impacts including those other than the operations. However, the operations are considered to have exerted their intended effects through the financial institutions' behavior including the use of the operations.

Box Chart 6-1: Amounts Outstanding of Funds-Supplying Operations against Pooled Collateral by Sector (as of End-March 2023)

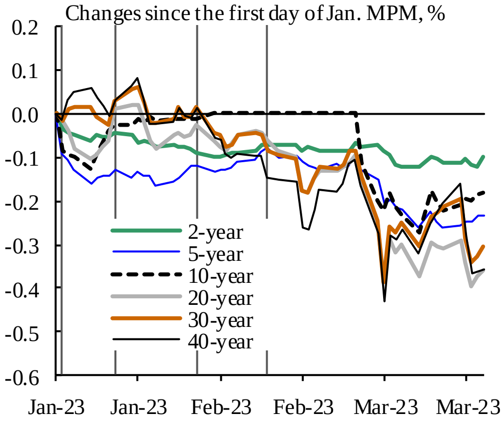


Note: Figures are the sum of 2-year and 5-year term loans.

Box Chart 6-2: Amounts Outstanding of Collateral Pledged by the Bank of Japan (Changes from End-December 2022 to End-March 2023)



Box Chart 6-3: JGB Yields by Maturity after Enhancement of Funds-Supplying Operations against Pooled Collateral



Note: The vertical lines indicate the announcement dates of the conduct of the Funds-Supplying Operations against Pooled Collateral with a loan duration of 5 years.

3. Growth-Supporting Funding Facility

During fiscal 2022, the Bank disbursed loans in June 2022 under the main rules for the Growth-Supporting Funding Facility introduced in June 2010 and revised in October 2019 (new loan disbursements under these rules were completed in June 2022). In addition, the Bank disbursed loans once a quarter, four times in total, under the special rules for the U.S. dollar lending arrangement introduced in April 2012 for investments and loans denominated in foreign currencies (new loan disbursements under these rules were completed in June 2022 and only the rollovers of loans are allowed from September 2022 onward) (Chart 3-41).

At the end of March 2023, the outstanding balance of loans under the main rules reached 4.8 trillion yen (a decrease of 0.9 trillion yen from a year earlier). The outstanding balance of loans under the special rules for the U.S. dollar lending arrangement amounted to 17.7 billion U.S. dollars (a decrease of 1.4 billion U.S. dollars from a year earlier) (Chart 3-42).

Chart 3-41: Loan Disbursement under the Growth-Supporting Funding Facility

(Main rules)

100 million yen

48th (May 27, 2022)	Outstanding balance of loans (as of end-Mar. 2023)
3,160	47,971.41 (11,736.75)

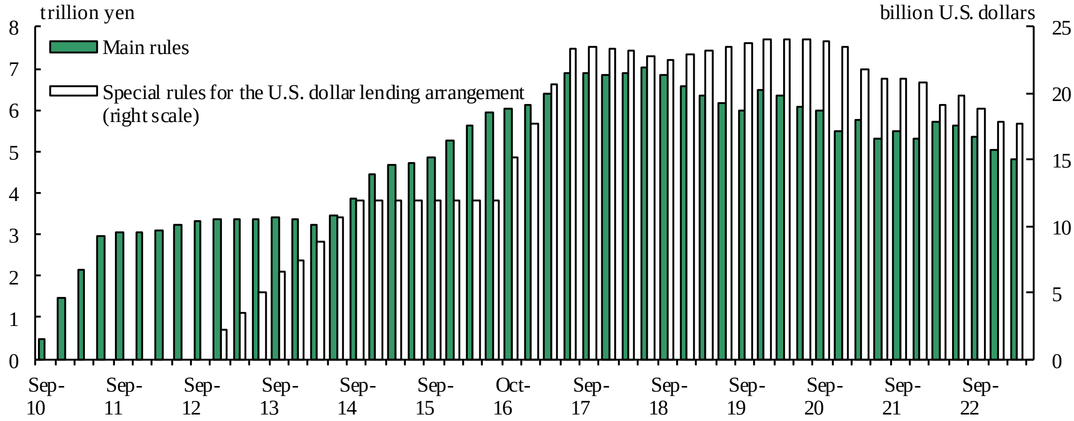
(Special rules for the U.S. dollar lending arrangement)

million U.S. dollars

40th (May 27, 2022)	Outstanding balance of loans (as of end-Mar. 2023)
2,558	17,709

Notes: 1. The date in parentheses is the offer day, and the value denotes new loans.
2. The outstanding balance of loans under the main rules includes the outstanding balance of loans under the special rules for equity investments and asset-based lending (3.8 billion yen) and that of small-lot investments (2.141 billion yen), both of which expired.
3. The value in parentheses below the outstanding balance of loans under the main rules is the outstanding balance of loans to financial institutions that are members of central organizations (financial institutions that do not hold current accounts at the Bank).

Chart 3-42: Amounts Outstanding of the Growth-Supporting Funding Facility



Note: "Main rules" includes the outstanding balance of loans under the special rules for equity investments and asset-based lending and that of small-lot investments, both of which expired.

4. Stimulating Bank Lending Facility

During fiscal 2022, the Bank disbursed loans once a quarter, four times in total, under the Stimulating Bank Lending Facility (Chart 3-43). As a result, the outstanding balance of the operations stood at 65.1 trillion yen at the end of March 2023, an increase of 9.2 trillion yen from a year earlier (Chart 3-44). This took place against the background of regional financial institutions and others moving to secure macro add-on balances in their current accounts in response to the phasing out of the Special Operations in Response to COVID-19.

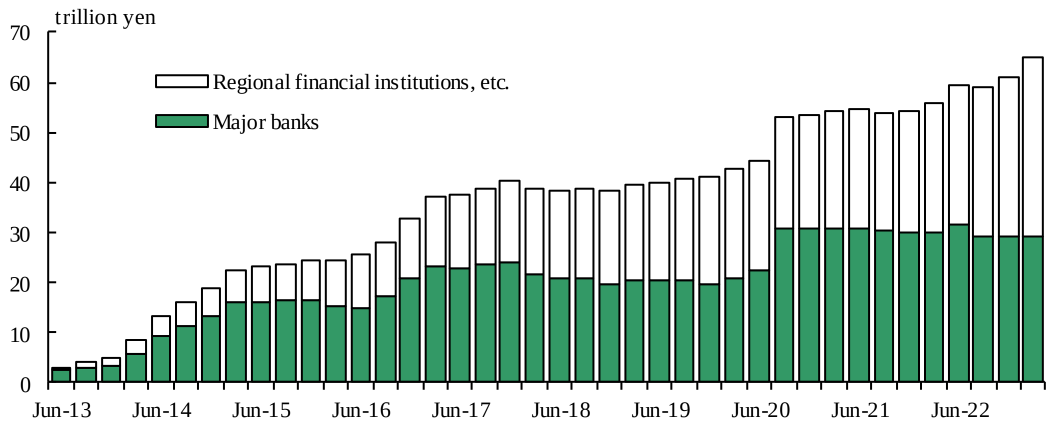
Chart 3-43: Loan Disbursement under the Stimulating Bank Lending Facility

100 million yen

Jun. 2022 (Jun. 16)	Sep. 2022 (Sep. 12)	Dec. 2022 (Dec. 12)	Mar. 2023 (Mar. 15)	Outstanding balance of loans (as of end-Mar. 2023)
46,265	30,590	36,712	78,260	650,943 (22,941)

Notes: 1. The date in parentheses is the offer day, and the value denotes new loans.
2. The value in parentheses below the outstanding balance of loans is the outstanding balance of loans to financial institutions that are members of central organizations (financial institutions that do not hold current accounts at the Bank).

Chart 3-44: Amounts Outstanding of the Stimulating Bank Lending Facility



5. Funds-Supplying Operation to Support Financial Institutions in Disaster Areas

During fiscal 2022, the Bank offered the operations quarterly, four times in total (Chart 3-45). The duration of loans was set at 2 years.

The outstanding balance at the end of March 2023 stood at 171.6 billion yen, a decrease of 360.8 billion yen from a year earlier.

Chart 3-45: Loan Disbursement under the Funds-Supplying Operation to Support Financial Institutions in Disaster Areas

100 million yen

16th (May 13, 2022)	17th (Aug. 17)	18th (Nov. 16)	19th (Feb. 15, 2023)	Outstanding balance of loans (as of end-Mar. 2023)
0	381	93	346	1,716

Note. The date in parentheses is the offer day, and the value denotes new loans.

6. Funds-Supplying Operations to Support Financing for Climate Change Reponses

During fiscal 2022, the Bank offered the operations once every six months, twice in total. With the number of eligible counterparties increased from 43 to 73, counterparties from a wide range of sectors used the operations. As a result, the outstanding balance at the end of March 2023 stood at 4.4 trillion yen (Chart 3-46).

Chart 3-46: Loan Disbursement under the Funds-Supplying Operations to Support Financing for Climate Change Responses

100 million yen

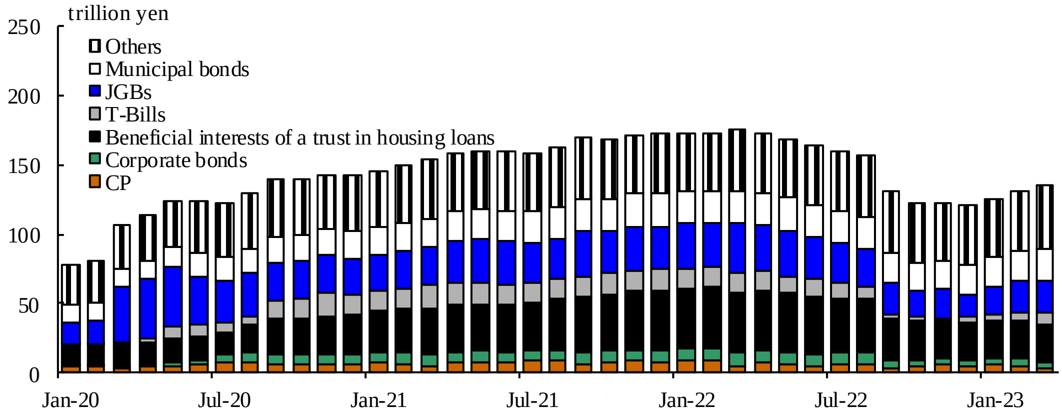
2nd (Jul. 20, 2022)	3rd (Jan. 27, 2023)	Outstanding balance of loans (as of end-Mar. 2023)
15,953	28,261	44,214

Note. The date in parentheses is the offer day, and the value denotes new loans.

7. Collateral Pledged to the Bank of Japan

As a result of a decline in the amount outstanding of funds provided through the Special Operations in Response to COVID-19 from April through December 2022, the amount outstanding of collateral pledged to the Bank from financial institutions decreased significantly, mainly in private debt pledged as collateral such as beneficial interest of a trust in housing loans. Due to an increase in the use of the Funds-Supplying Operations against Pooled Collateral, the amount outstanding of collateral, mainly JGBs, pledged to the Bank from financial institutions increased from January 2023 (Chart 3-47).

Chart 3-47: Amounts Outstanding of Collateral Accepted by the Bank of Japan



I. SC Repo Market and Supply of JGSs

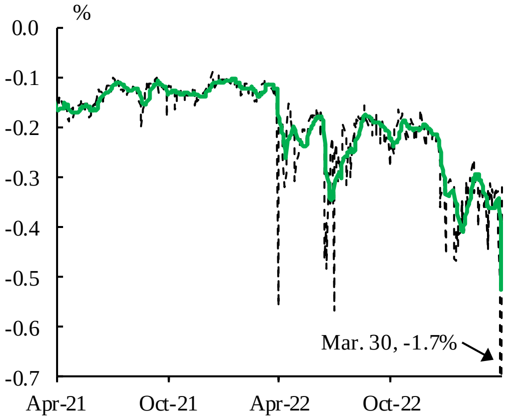
1. Developments in the SC Repo Market

During fiscal 2022, the SC repo rate stayed below (the securities borrowing costs remained above) the fiscal 2021 level, because the supply and demand conditions of JGBs in the repo market tightened with the Bank continuing with large-scale purchases of JGBs (Chart 3-48). The SC repo rate temporarily dropped somewhat sharply, as market participants decreased securities lending toward the end of the fiscal year as in previous years.

Looking at the details, in June 2022, the SC repo rate fell as the supply and demand conditions of JGBs tightened in the repo market due to the Bank's conduct of large-scale unscheduled purchases of JGBs amid the strong upward pressure on Japanese interest rates in response to the rising overseas interest rates and to a large amount of bids submitted for the fixed-rate purchase operations for three on-the-run issues of 10-year JGBs and the CTD issue. After the December MPM, the SC repo rate dropped further as the Bank purchased a large amount of JGBs by increasing the purchase size in the quarterly schedule of outright purchases of JGBs (for January-March 2023) and conducted unscheduled purchases of JGBs on successive days in response to the continued strong upward pressure on interest rates arising from heightened speculation over the Bank's monetary policy.

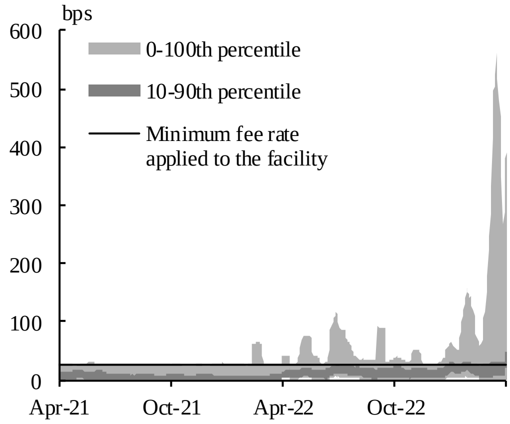
The GC-SC spreads widened, as the Bank continued with large-scale purchases of JGBs throughout the fiscal year. The supply and demand conditions of many issues tightened (Chart 3-49). Especially, the SC repo rate fell sharply for the issues subject to the fixed-rate purchase operations (three on-the-run issues of 10-year JGBs and the CTD issue). This was due to the tightening of their supply and demand conditions as a result of sizable bids submitted for fixed-rate purchase operations when strong upward pressure on interest rates arose.

Chart 3-48: SC Repo Rates



Note: 1. SC repo rates are calculated by volume-weighted average of all traded issues for T/N trades.
2. The bold line indicates 10-day backward moving average.

Chart 3-49: GC-SC Spreads



Notes: 1. For the GC repo rate, the Tokyo Repo Rate, for which transactions are carried out on the same day as SC repo (T/N), is used.
2. The GC-SC spreads are calculated using all individual issues traded on JBOND.
3. Each percentile is calculated using 10-business-day backward moving averages.
4. The minimum fee rate applied to the facility is the lowest fee if it varies by issue.

2. Securities Lending Facility

The amounts of bids accepted for the Securities Lending Facility rose significantly due to the tightening of supply and demand conditions of JGBs amid the Bank's continued large-scale purchases of JGBs. In particular, as the purchases of JGBs grew considerably from the end of 2022 through the beginning of 2023, including bids for the fixed-rate purchase operations, the amounts of bids accepted for the Securities Lending Facility further rose (Chart 3-50). This was attributable not only to the tightening supply and demand conditions of JGBs but also to sizable short selling of three on-the-run issues of 10-year JGBs based on the premise to continue to use the facility over the long term and large amounts of bids for fixed-rate purchase operations submitted via market participants who seemed to have become counterparties of such short selling.

Given these developments, the Bank announced on February 16, 2023 that it would implement measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs. This was to ensure the appropriate use of the Securities Lending Facility in line with its purpose as a means to provide a temporary and secondary source of JGSs, and to facilitate the Bank's market operations. From February 27, the Bank thus raised the minimum fee rate and lowered the upper limit on the amount of sales per issue for the issues of which supply and demand conditions in the repo market could be deemed excessively tightened over the long term (see Box 7 for details).

The Bank continued with measures -- which it originally introduced as temporary, exceptional measures in March 2020 -- to increase the number of JGB issues offered and raise the upper limit on the number of issues allowed for the submission of bids by a counterparty per auction. In addition, from February 27, 2023, the Bank offered the operations for issues subject to the measures concerning the Securities Lending Facility for the three on-the-run issues of 10-year JGBs separately from those for other issues. As a result, the number of auctions in fiscal 2022 reached a record high of 526 (Chart 3-51).[18]

Chart 3-50: Acceptance of Bids through the Securities Lending Facility

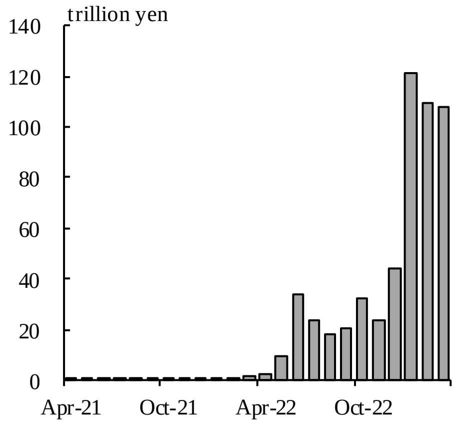
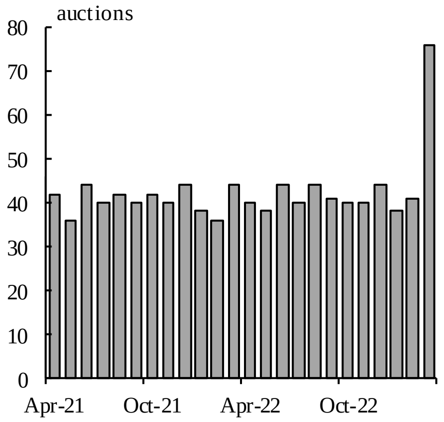


Chart 3-51: Number of Securities Lending Facility Auctions



J. Complementary Lending Facility

During fiscal 2022, the use of the facility remained at an extremely low level. This reflected the ample fund supply to financial markets by the Bank under powerful monetary easing, which created strong perceptions of abundant liquidity in money markets.

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[18] In the afternoon of September 14, 2022, the Bank made an additional offer under the Securities Lending Facility, mainly in response to the settlement delays resulting from an error in the computer connection system at the Bank.

Box 7: Measures concerning the Securities Lending Facility for Three On-the-Run Issues of 10-Year JGBs

With respect to three on-the-run issues of 10-year JGBs, between the December 2022 MPM and January 2023 MPM, there was sizable short selling based on the premise to continue to use the Securities Lending Facility over the long term and large amounts of bids for the fixed-rate purchase operations submitted via market participants who seemed to have become counterparties of such short selling. As a result, the amount of usage of the Securities Lending Facility surged (Box Chart 7-1) and the Bank's holdings of these issues exceeded 100 percent of their respective total amounts issued. This situation continued even after the January MPM. As such, there was concern that, if such trades increased further, there would be disruptions in terms of market functioning such as the difficulty in the delivery of JGBs.

Given these developments, the Bank announced on February 16 that it would implement measures concerning the facility as necessary from February 27. These measures included a revision to the minimum fee rate (from 0.25 percent to, in principle, 1.0 percent) and a reduction of the upper limit on the amount of sales per issue for three on-the-run issues of 10-year JGBs of which supply and demand conditions in the repo market could be deemed excessively tightened over the long term. This was to ensure the appropriate use of the facility in line with its purpose as a means to provide a temporary and secondary source of JGSs, and to facilitate the Bank's market operations.[19]

After this announcement, of the three on-the-run issues of 10-year JGBs, no successful bid was made for #367 and #368 issues at the liquidity enhancement auction conducted on February 24, and therefore there was no additional supply to the market. This caused concern that the supply and demand conditions in the repo market of these issues would excessively tighten over the long term. Given this situation, the Bank revised the minimum fee rate and lowered the upper limit on the amount of sales per issue for both issues from February 27 with a view to keeping the cost of using the facility high enough to ensure the appropriate use of the facility in line with its purpose. Of these measures, the Bank decided to carry out the reduction of the upper limit on the amount of sales per issue gradually to avoid causing excessive disruptions in the issues' settlements in the market. With these measures, the average rate of successful bids for these two issues under the facility fell

[19] At the same time, the Bank announced that if the yields of these issues in the secondary market were not expected to reach 0.5 percent as a result of the measures implemented for the Securities Lending Facility, the Bank would not necessarily conduct fixed-rate purchase operations for consecutive days for the issues.

significantly, which led to a considerable fall in the SC repo rate. In addition, as the cost of maintaining short positions rose greatly, demand to cover short positions increased in the market. As a result, yields on both issues fell sharply.

With respect to these two issues, while the abovementioned measures were taken, the Bank reduced the repurchase amount at a reasonable scale under the Securities Lending Facility in response to requests from financial institutions.[20] In addition, successful bidding was made at the liquidity enhancement auction on March 23. Consequently, the amount outstanding of the issues in the market gradually grew toward the end of March and their supply and demand conditions in the repo market improved somewhat. Nonetheless, because their supply and demand conditions seemed to remain tight taking into account, for example, the trading volume and the rate of SC repo transactions, the Bank continued to implement the abovementioned measures for these two issues (Box Charts 7-2 and 7-3).

Meanwhile, the Bank also implemented the abovementioned measures for 10-year JGB #369 from March 10 because its supply and demand conditions in the repo market had tightened significantly as a reasonable volume of bids had been submitted to the fixed-rate purchase operations ahead of the March MPM. However, the Bank decided to exclude the issue from the abovementioned measures from March 22, because, for example, the SC repo rate no longer exceeded the upper limit on selling yields greatly under the Securities Lending Facility, mainly due to increasingly covered short positions of JGBs (Box Chart 7-4).

While the abovementioned measures encouraged the appropriate use of the Securities Lending Facility in line with its purpose, the amount outstanding of three on-the-run issues of 10-year JGBs in the market rose mainly due to the reduction of the Bank's repurchase amount under the facility and new issuance in liquidity enhancement auctions. This resolved the situation where the Bank's holdings of these issues exceeded 100 percent of their respective total amounts issued.

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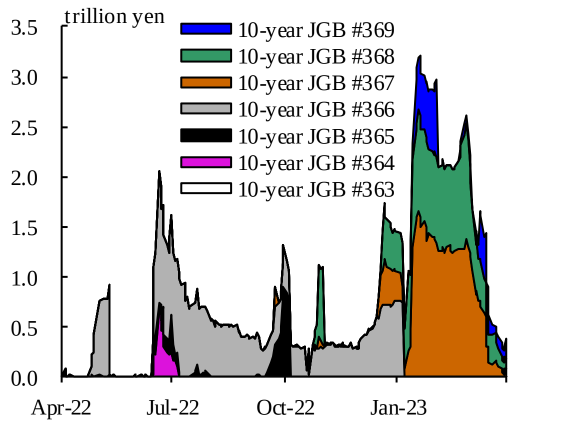
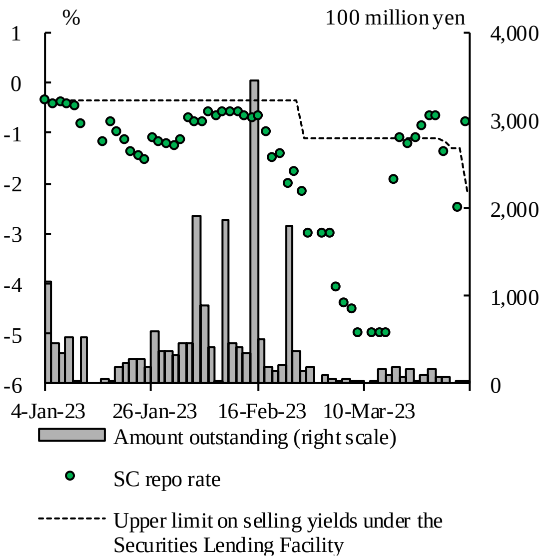
[20] Under the facility, financial institutions may request a reduction in repurchase amount by the Bank if there is no prospect for successful delivery. The Bank accepts this request with a stipulated fee if it is deemed necessary. To smoothly carry out the reduction for the issues subject to the abovementioned measures, the Bank also allowed the use of the facility as a special case for the counterparties who ran into difficulties in making delivery under the facility on the previous day until the reduction of repurchase amount by the Bank was implemented.

Box Chart 7-1: Acceptance of Bids through the Securities Lending Facility for Three On-the-Run Issues of 10-Year JGBs

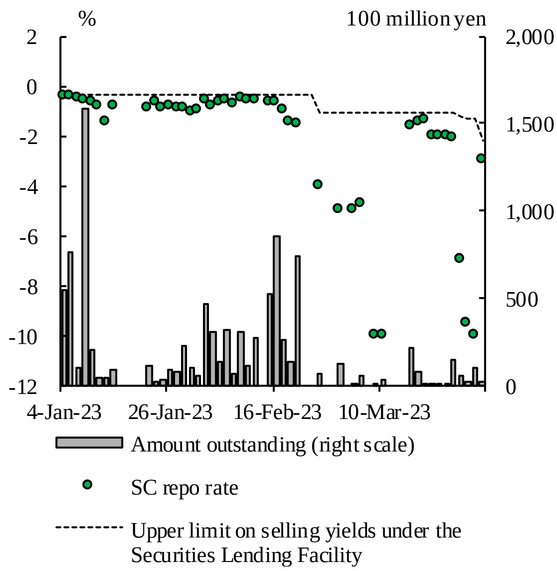


Note: Three on-the-run issues of 10-year JGBs at each time point.

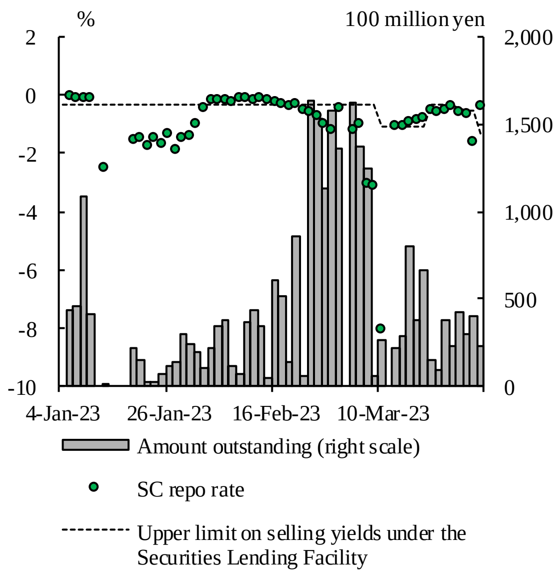
Box Chart 7-2: Developments in the SC Repo Market (10-Year JGB #367)



Box Chart 7-3: Developments in the SC Repo Market (10-Year JGB #368)



Box Chart 7-4: Developments in the SC Repo Market (10-Year JGB #369)



IV. Changes in the Frameworks Related to Market Operations

1. Relaxation of the Terms and Conditions for the Securities Lending Facility of the CTD Issues

On June 17, 2022, the Bank decided to implement the following measures concerning the Securities Lending Facility of the CTD issues for the time being, in order to ensure stability in the market by easing excessive tightening in supply and demand of JGSs in the repo market. These measures were effective from June 17 and remained in place throughout fiscal 2022.

(i) Increase in the Upper Limit on Consecutive Purchases of the Same Issue

The Bank decided to increase the upper limit from a maximum of 50 business days to the number of days that enables the consecutive use of the facility until the delivery settlement date of the JGB futures[21], in principle.

(ii) Extension of the Issues to be Applicable for the Relaxed Conditions for the Delivery of CTD Issues

The Bank expanded the issues applicable to the relaxation from the CTD issues of which the share of the Bank's holdings in the market exceeds 80 percent to all CTD issues regardless of the share of the Bank's holdings, in principle.

2. Phasing Out of the Special Operations in Response to COVID-19

At the MPM held on September 21 and 22, 2022, the Bank made the following decisions regarding the Special Operations in Response to COVID-19.

(i) Regarding the fund-provisioning against non-government-supported loans in response to COVID-19, mainly to small and medium-sized firms, the Bank decided to extend the implementation period by six months and complete the fund-provisioning at the end of March 2023. It also decided to provide three-month funds once a month during the extended implementation period.

(ii) Regarding the fund-provisioning against government-supported loans in response to COVID-19, mainly to small and medium-sized firms, the Bank decided to extend the implementation period by three months and complete the fund-provisioning at the end of December 2022. It also decided to provide three-month funds once a month during the extended implementation period.

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[21] In principle, a maximum of 70 business days from June 17, 2022; a maximum of 75 business days from September 1, 2022; a maximum of 80 business days from November 30, 2022; and a maximum of 85 business days from March 1, 2023.

3. Amendment to the Purchasing Method for ETFs by Issue

At the MPM held on October 27 and 28, 2022, the Bank decided to take into account the holding cost of each ETF and other factors in purchasing ETFs. Hence, on December 1, 2022, the Bank adopted the purchasing method for ETFs by issue in which it purchases the issue with the lowest trust fee rate, in principle.

4. Extension of the Fund-Provisioning Measure to Stimulate Bank Lending

At the MPM held on January 17 and 18, 2023, the Bank decided to extend by one year the deadline for loan disbursements under the Fund-Provisioning Measure to Stimulate Bank Lending, with a view to continuing to promote further active lending by financial institutions and stimulate credit demand of firms and households.

5. Establishment of Special Rules for Financial Cooperatives regarding the Funds-Supplying Operations to Support Financing for Climate Change Responses

At the MPM held on January 17 and 18, 2023, the Bank decided to introduce a framework for enabling financial institutions that do not have a current account at the Bank to use the Funds-Supplying Operations to Support Financing for Climate Change Responses through their central organizations, with a view to supporting a wide range of private sector efforts on climate change.

6. Enhancement of the Funds-Supplying Operations against Pooled Collateral

At the MPM held on January 17 and 18, 2023, the Bank decided to enhance the Funds-Supplying Operations against Pooled Collateral with a view to facilitating market operations, and made the following decisions.

(i) The Bank decided to change the duration of loans disbursed through the variable-rate method from within one year to within 10 years.

(ii) The Bank decided to change the interest rate on loans disbursed through the fixed-rate method from 0 percent to a rate that could be determined by the Bank at each loan disbursement in order to encourage the formation of a yield curve that is consistent with the guidelines for market operations, taking into account market prices of JGBs for each maturity.

7. Measures concerning the Securities Lending Facility for Three On-the-Run Issues of 10-year JGBs

On February 16, 2023, the Bank decided to implement the following measures concerning the Securities Lending Facility for three on-the-run issues of 10-year JGBs of which supply and demand conditions in the repo market could be deemed excessively tightened over the long term, in order to ensure the use of the Securities Lending Facility in line with its purpose and facilitate the Bank's market operations.[22]

(i) Revision to the Minimum Fee Rate

The Bank decided to raise the rate from 0.25 percent to 1.0 percent, in principle.

(ii) Reduction of the Upper Limit on the Amount of Sales per Issue

As for the issues for which the minimum fee rate is revised, the Bank decided to lower the upper limit on the amount of sales per issue from "the amount outstanding of the Bank's holdings[23]," if the Bank specifically deems it necessary. The Bank also decided not to offer the Securities Lending Facility in the afternoon, in principal, for the issues of which the upper limit on the amount of sales is lowered.

8. Enhancement of the U.S. Dollar Funds-Supplying Operations

On March 20, 2023, the Bank agreed with the Bank of Canada, the Bank of England, the European Central Bank, the Fed, and the Swiss National Bank to increase the frequency of 1-week U.S. dollar operations from weekly to daily as a coordinated action to enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements. Based on this agreement, the Bank significantly expanded the offer schedule of the U.S. Dollar Funds-Supplying Operations.

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[22] On March 13, 2023, the Bank decided to continue implementing these measures for 10-year JGBs #367 after April 5, 2023 as necessary.

[23] Deducting the amount needed for sales of the issue conducted before the Securities Lending Facility, in principle.

V. Actions to Enhance Dialogue with Market Participants

Under QQE with Yield Curve Control, the Bank carefully examines the developments and functioning of financial markets, as well as the impacts of its market operations. The Bank also conducts daily market monitoring and various market surveys, such as the Bond Market Survey and the Tokyo Money Market Survey, with a view to further deepening dialogue with market participants.

Furthermore, the Bank's Financial Markets Department undertook various initiatives in fiscal 2022 related to dialogue with market participants as follows. Such dialogue was conducted utilizing online conference and conference call systems, due to the remaining impact of COVID-19.

1. Holding of the Meeting on Market Operations

The Meeting on Market Operations, which is held twice a year with eligible counterparties for market operations, was held on October 13, 2022, and February 17, 2023. At these meetings, the Bank explained and exchanged opinions with participants on (1) recent developments in financial markets and market operations, (2) liquidity in, and functioning of, the JGB markets, and (3) the interest rate benchmark reform (transition from LIBOR) as well as the results of the Tokyo Money Market Survey and the Market Functioning Survey concerning Climate Change.[24]

2. Holding of the Bond Market Group Meeting

The Bond Market Group Meeting, which in principle is held twice a year with bond market participants, was held on June 7, 2022 and December 5 and 6. At these meetings, the Bank explained and exchanged views with participants on (1) the results of the Bond Market Survey, (2) liquidity in the JGB market, and (3) recent developments in the financial markets and market operations.[25]

3. Dialogue with the Study Group for Activation of Short-Term Money Markets

The Bank participated in the Study Group for Activation of Short-Term Money Markets, comprising

[24] See below for summaries of the Meeting on Market Operations held in fiscal 2022.
The October 2022 meeting
https://www.boj.or.jp/en/paym/market/rel221014a.pdf
The February 2023 meeting
https://www.boj.or.jp/en/paym/market/mkt230220a.pdf

[25] For details, see the Bank's website (https://www.boj.or.jp/en/paym/bond/index.htm/).

representatives of businesses that conduct short-term money market transactions, and actively supported the deliberations and initiatives by market participants for the activation of short-term money markets. Moreover, the Bank hosted a working-level meeting with the group, which in principle is held once a year, with the Study Group for Activation of Short-Term Money Markets on November 28, 2022. The Bank exchanged opinions on the contents of "Market Operations in Fiscal 2021" and the Bank's approach to central bank digital currency, among others.

4. Initiatives Taken by the Cross-Industry Forum on Interest Rate Benchmarks

In March 2022, the Cross-Industry Forum on Interest Rate Benchmarks was established with the Bank serving as secretariat, following the reorganization of the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks. The Forum provides opportunities to exchange opinions for a wide range of market participants and interest rate benchmark users, aiming to facilitate smooth transactions referencing Japanese yen interest rate benchmarks in the Japanese markets.

After the first meeting was held on April 21, 2022, meetings were held on September 9 and December 13, 2022, as well as March 28, 2023, to exchange opinions on follow-ups to the transition from LIBOR in and outside Japan, and trends in alternative interest rate benchmarks, among others.[26]

[26] For details, see the Bank's website (https://www.boj.or.jp/en/paym/market/i_forum/index.htm).

Reference: Numbers of Auctions and Eligible Counterparties for Market Operations

numbers

	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Number of eligible counterparties
Outright purchases of JGBs	280	302	208	790	57
Outright purchases of T-Bills	46	50	43	44	56
Outright purchases of CP	27	27	24	24	37
Outright purchases of corporate bonds	12	24	24	12	37
Outright purchases of ETFs	69	56	8	7	—
Outright purchases of J-REITs	54	58	2	1	—
Lending of ETFs	—	97	55	39	11
Funds-Supplying Operations against Pooled Collateral	45	27	27	36	351
Growth-Supporting Funding Facility	60	38	20	14	160
Stimulating Bank Lending Facility	16	10	4	4	216
Funds-Supplying Operation to Support Financial Institutions in Disaster Areas	24	15	6	4	40
Special Operations in Response to COVID-19	1	17	12	12	283
Funds-Supplying Operations to Support Financing for Climate Change Responses	—	—	1	2	73
Purchases of JGSs with repurchase agreements	3	0	8	0	56
Sales of JGSs with repurchase agreements	6	0	0	0	56
U.S. Dollar Funds-Supplying Operations	59	161	62	57	88
Securities Lending Facility	306	490	488	526	58
Securities Lending to Provide JGSs as Collateral for the U.S. Dollar Funds-Supplying Operations	13	31	5	4	48
Total	1,021	1,403	997	1,576	—

Notes: 1. The number of auctions (excluding outright purchases of ETFs and J-REITs and lending of ETFs) is the number of the Bank's notifications of auction guidelines (offers) to eligible counterparties.
2. The number of eligible counterparties is as of end-March 2023. The number of eligible counterparties for the Funds-Supplying Operations against Pooled Collateral is that for the Funds-Supplying Operations against Pooled Collateral at all offices (of which 42 counterparties are also eligible for the Funds-Supplying Operations against Pooled Collateral at the Head Office).
3. The number of outright purchases of ETFs excludes purchases of ETFs to support firms proactively investing in physical and human capital.
4. The number of "Funds-Supplying Operation to Support Financial Institutions in Disaster Areas" includes the number of funds-supplying operations to support financial institutions in disaster areas of the Great East Japan Earthquake and of the 2016 Kumamoto Earthquake before they were abolished.
5. The number of "Special Operations in Response to COVID-19" in fiscal 2019 indicates the number of Special Funds-Supplying Operations to Facilitate Corporate Financing regarding the Novel Coronavirus (COVID-19). In fiscal 2022, the fund-provisioning against government-supported loans and the fund-provisioning against non-government-supported loans are counted as one auction even when the notifications of the auction were made separately.

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