Chapter 1 Government Bonds (JGBs)

1 Primary Market for Government Bonds

JGBs for financing fiscal expenditure are issued in various types, depending on their applicable legal grounds and bond features. This section explains how JGBs are issued.

(1) JGBs by Legal Grounds of Issuance

JGBs can be divided into two main categories: General Bonds, and Fiscal Investment and Loan Program Bonds (FILP Bonds). While the government mainly relies on tax revenue to redeem General Bonds, the redemption and the interest payments on FILP Bonds are covered by the collection of Fiscal Loan receivable. However, both General Bonds and FILP Bonds are jointly issued as JGBs with the same interest rate and maturity. They are the same financial instruments and are treated in the same manner on the market as well.

Fig.2-1 JGBs by Legal Grounds of Issuance

JGBs	General Bonds	Construction Bonds
		Special Deficit-Financing Bonds
		Reconstruction Bonds
		Refunding Bonds
	Fiscal Investment and Loan Program Bonds (FILP Bonds)	

A. General Bonds

General Bonds consist of Construction Bonds, Special Deficit-Financing Bonds, Reconstruction Bonds and Refunding Bonds. Construction Bonds and Special Deficit-Financing Bonds are issued under the General Account and the revenue from their issuance is reported as the government revenue of the General Account.

On the other hand, Reconstruction Bonds are issued under the Special Account for Reconstruction from the Great East Japan Earthquake and Refunding Bonds under the Special Account of Government Debt Consolidation Fund and the revenue from their issuance is reported as the government revenue of each Special Account.

a. Construction Bonds

Article 4, paragraph (1) of the "Public Finance Act" prescribes that annual government expenditure has to be covered in principle by annual government revenue generated from other than government bonds or borrowings. But as an exception, a proviso of the Article allows the government to raise money through bond issuance or borrowings for the purpose of public works, capital subscription or lending. Bonds governed by this proviso of Article 4, paragraph (1) are called "Construction Bonds."

The Article prescribes that the government can issue Construction Bonds within the amount approved by the Diet, and the ceiling amount is provided under the general provisions of the General Account budget (☞).

☞When intending to get approval for this ceiling amount, the government submits to the Diet a redemption plan that shows the redemption amount and the redemption periods for each fiscal year for reference.

b. Special Deficit-Financing Bonds

When estimating a shortage of government revenue despite the issuance of Construction Bonds, the government can issue government bonds based on a special act (☞①) to raise money for the purpose of other than public works and the like. These bonds are generally called "Special Deficit-Financing Bonds."

As is the case with Construction Bonds, the government can issue Special Deficit-Financing Bonds within the amount approved by the Diet and the ceiling amount is provided under the general provisions of the General Account budget (☞②).

Special Deficit-Financing Bond issuance must be made on exceptional cases. Therefore, the government has to minimize the issuance amount as much as possible within the amount approved by the Diet, while taking into account the state of tax and other revenues (☞③).

☞① The "Act on Special Provisions concerning Issuance of Public Bonds to Secure Financial Resources Required for Fiscal Management" allows Special Deficit-Financing Bonds to be issued for five years from FY2016 to FY2020.

☞② The government is also required to submit a redemption plan to the Diet for reference.

☞③ In this context, it is allowed to issue Special Deficit-Financing Bonds until the end of June in the next fiscal year. (deferred issuance in the accounting adjustment term)

c. Reconstruction Bonds

To recover from the Great East Japan Earthquake disasters, the government is supposed to issue Reconstruction Bonds from FY2011 to FY2025 in accordance with the "Act on Special Measures concerning the securing of financial resources to execute measures necessary for recovery from the Great East Japan Earthquake (Reconstruction Funding Act)." While necessary financial resources will be financed with revenues of Special Taxes for Reconstruction, the government will issue Reconstruction Bonds as bridging finance until these revenues are receivable to the government.

The government may issue these Reconstruction Bonds within the amount as approved by the Diet. The ceiling amount is provided under the general provisions of the Special Account budget from FY2012 onwards.

d. Refunding Bonds

Ref: Chapter 1 3 (1) "Redemption System" (P77)

As for General Bonds, Refunding Bonds are issued in order to raise funds for refunding part of matured JGBs. Among General Bonds, as for Construction Bonds and Special Deficit-Financing Bonds, the issuance amount of Refunding Bonds is determined basically in accordance with the 60-year redemption rule. As for Reconstruction Bonds, Refunding Bonds are issued depending on the amount of the revenue from Special Taxes for Reconstruction and profit from sales of stocks in each year (☞).

Refunding Bonds are the JGBs issued through the Special Account for the Government Debt Consolidation Fund (GDCF). Revenues from Refunding Bonds are directly posted to the fund.

In the issuance of Refunding Bonds, the government is not required to seek the Diet approval for the maximum issuance amount. This is because unlike in the case of bonds issued to secure new revenue resources, such as Construction Bonds and Special Deficit-Financing Bonds, issuing Refunding Bonds does not lead to an increase in the total amount of outstanding debt.

☞ In line with tax revenues through the consumption tax increases in and after FY2014, Refunding Bonds are issued for Special Bonds for covering Public Pension Funding, which were issued in FY2012 and FY2013 as bridging finance until tax revenues are assured for the finance of increase of the Government's contribution to the basic national pension, based on the special law for Special Deficit-Financing Bonds legislated in FY 2012.

(Reference) Front-loading issuance of Refunding Bonds

As massive bonds redemption at maturity is expected to continue, the government is allowed to front-load the issuance of Refunding Bonds in order to mitigate the impact of concentration of bonds redemption at maturity, to control substantial volatility of JGB market issuance in each fiscal year and to enable flexible issuance of them in response to financial conditions and so on.

If we know in advance that bonds redemption at maturity will concentrate in a certain fiscal year, leading to a sharp rise in Refunding Bond issuance, then we are able to level off bond issuance on the yearly basis by issuing a certain portion of these bonds ahead of schedule ("FY2008 problem" (☞①)).

Front-loading issuance of Refunding Bonds can also serve to address a sharp fluctuation of fiscal needs without bringing about additional impacts on the market. If front-loading issuance of Refunding Bonds is already scheduled (i.e. scheduled bond issuance amount is larger than the necessary fund-raising amount), and the necessary fund-raising amount has increased, we are able to address the situation without changing the JGB Market Issuance (Calendar Base) by issuing the scheduled front-loading issuance amount as necessary JGBs for that fiscal year (☞②).

Front-loading issuance of Refunding Bonds can be made within the upper limit approved by the Diet in accordance with Article 47, paragraph (1) of the "Act on Special Accounts." The limit is provided in the general provisions of the Special Account budget in each fiscal year.

The gap between "the amount of the front-loading issuance of Refunding Bonds that had been scheduled in the previous fiscal year for this fiscal year" and "those that are scheduled front-loading in this fiscal year for the next fiscal year" can be used as part of this fiscal year's financial resources under the government debt management policy. This is called "adjustment between fiscal years (☞③)" in terms of issuance type in the JGB Issuance Plan.

☞① The problem refers to concentrated bond redemption at maturity in FY2008 resulting from the large-scale 10-Year JGB issuance mainly for economic stimulus purposes in FY1998. To address this problem, the government has coordinated the amount of JGB issuance between fiscal years by buying back JGBs redeemable at maturity in FY2008 and sharply increasing frontloading issuance of Refunding Bonds from FY2004.

☞② The supplementary budget for FY2019 planned the additional issuance of 6,130.3 billion yen in JGBs (including Construction and Special Deficit-financing Bonds). Then, the MOF utilized the front-loading issuance of Refunding Bonds and left the calendar-based JGB market issuance amount unchanged.

☞③ The adjustment includes the difference in the amount of issuance in the accounting adjustment term between the current and the previous fiscal years besides that of front-loading issuance of Refunding Bonds. In the accounting adjustment term, which means a period from April to June, some of Deficit-Financing or Reconstruction Bonds for the previous fiscal year can be issued.

B. Fiscal Investment and Loan Program Bonds (FILP Bonds)

Ref: "FILP Report"

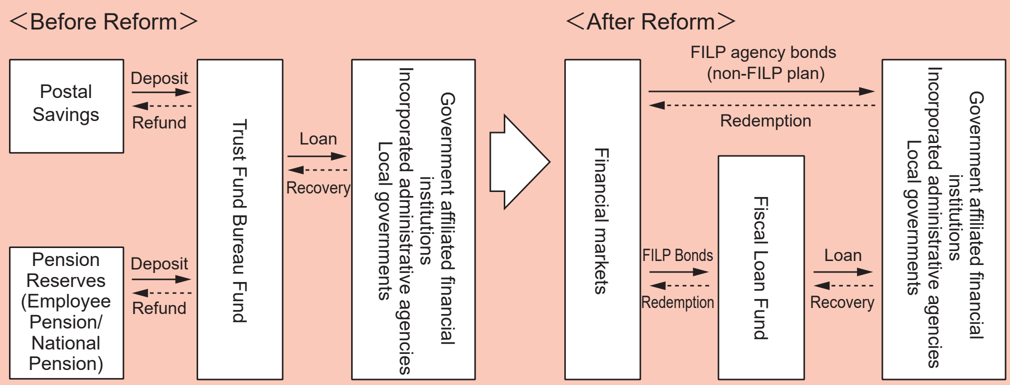
Along with the FY2001 reform of the FILP (Fiscal Investment and Loan Program), the government started issuance of the Fiscal Investment and Loan Program Bonds (so-called FILP Bonds) to raise funds for the investment of the Fiscal Loan Fund. As is the case with other types of government bonds, FILP Bonds are issued based on the credit of the government up to the amount approved by the Diet, and the ceiling amount is provided under the general provisions of the Special Account Budget (Article 62, paragraph (2) of the "Act on Special Accounts") (☞①). Revenues from the FILP Bonds issuance are allotted to the annual revenue for the Special Account for the Fiscal Investment and Loan Program (FILP Special Account).

However, the FILP Bonds are different from Construction Bonds and Special Deficit-Financing Bonds on one account. While future taxes will be used to redeem Construction Bonds and Special Deficit-Financing Bonds, the redemption on the FILP Bonds are covered by the collection of Fiscal Loan receivable. Therefore, when publishing outstanding debt, FILP Bonds are treated differently from General Bonds (☞②).

☞① As with Construction Bonds and Special Deficit-Financing Bonds, the government is required to submit a redemption plan to the Diet for a reference.

☞②Also in the System of National Accounts (SNA), which is created by the United Nations for each country to create economic statistics based on a common standard, FILP Bonds are not classified as debt of the general government.

Fig.2-2 Outline of FILP Reform



Note1: Prior to the reform, FILP funding came from the Trust Fund Bureau Fund (shown above) and also from Postal Life Insurance Funds, the Industrial Investment Special Account and Government-Guaranteed Bonds.
Note2: Trust Fund Bureau Fund includes deposits from special account surplus reserves, other than those shown above.

Note1: After the reform, FILP includes loans to FILP Special Account (Investment Account), Government-Guaranteed Bonds; loans from Postal Savings and Postal Life Insurance to local governments.
Since FY2007, there has been no loan from Postal Savings and Postal Life Insurance to local governments.
Note2: Fiscal Loan Fund includes deposits from special account surplus reserves, other than those shown above.

(2) Types of JGBs

Government bonds are the securities issued by the central government. The central government pays the bondholders interests on the securities on a semiannual basis, except for short-term bonds and redeems the principal amount at maturity (i.e., redemption). The JGBs planned to be issued in FY2020 can be classified into six categories: short-term (6-Month and 1-Year Bonds); medium-term (2-Year and 5-Year Bonds); long-term (10-Year Bonds); super long-term (20-Year, 30-Year and 40-Year Bonds); Inflation-Indexed Bonds (10-Year Bonds); and JGBs for Retail Investors (3-Year Fixed-Rate, 5-Year Fixed-Rate and 10-Year Floating-Rate Bonds).

The short-term JGBs are all discount bonds, which are accompanied by no interest payment during their duration to maturity and redeemed at face value at maturity.

On the other hand, all medium-, long-, super long-term bonds and JGBs for Retail Investors (3-Year Fixed-Rate, 5-Year Fixed-Rate) are the bonds with fixed-rate coupons. With fixed-rate coupon-bearing bonds, the interest calculated by the coupon rate determined at the time of issuance (☞

①) is paid on a semiannual basis until the security matures and the principal is redeemed at face value.

Inflation-Indexed Bonds (JGBi) are securities whose principal amounts are linked to the consumer price index (CPI) (☞②). Thus, although their coupon rates are fixed, the interest payment also fluctuates. The principal amount of JGBi issued in and after 2013 will be guaranteed at maturity (deflation floor). In case where the indexation coefficient (☞③) falls below 1 at maturity, the principal amount for the JGBi will be redeemed at the face value.

JGBs for Retail Investors (10-Year Floating-Rate) and 15-Year Floating-Rate Bonds are JGBs with coupon rates that vary over time according to certain rules. New issuance has been put on hold for the 15-Year Floating-Rate Bonds, however.

Fig.2-3 Types of JGBs

Maturity	Short-term		Medium-term	Long-term
	6-Month	1-Year	2-Year, 5-Year	10-Year
Type of issue	Discount bonds		Coupon-bearing bonds	
Min. face value unit	50,000 yen		50,000 yen	
Issuance method	Public offering BOJ Rollover		Public offering OTC sales (making offerings and accepting subscriptions)	
Auction method	Price-competitive auction/ Conventional-style auction		Price-competitive auction/ Conventional-style auction	
Non-price Competitive Auction	Non-Price Competitive Auction I		Non-Competitive Auction Non-Price Competitive Auction I Non-Price Competitive Auction II	
Transfer	Not restricted		Not restricted	
Frequency of issue (FY2020)	Twice a month	Monthly	Monthly each	

Maturity	Super long-term			JGBs for Retail Investors	Inflation-Indexed Bonds	Floating-Rate Bonds
	20-Year	30-Year	40-Year	3-Year Fixed-Rate, 5-Year Fixed-Rate, 10-Year Floating-Rate	10-Year	15-Year (☞④)
Type of issue	Coupon-bearing bonds					
Min. face value unit	50,000 yen			10,000 yen	100,000 yen	
Issuance method	Public offering			OTC sales (making offerings and accepting subscriptions)	Public offering	—
Auction method	Price-competitive auction/ Conventional-style auction		Yield-competitive auction/ Dutch-style auction	—	Price-competitive auction/ Dutch-style auction	—
Non-price Competitive Auction	Non-Price Competitive Auction I Non-Price Competitive Auction II		Non-Price Competitive Auction II	—	—(☞⑤)	—
Transfer	Not restricted			Restricted (☞⑥)	Not restricted	Not restricted
Frequency of issue (FY2020)	Monthly each		6 times	Monthly each	4 times	—

(Reference) Inflation-Indexed Bonds

The Inflation-Indexed Bonds (JGBi) are bonds whose principals (and relevant interests) fluctuate in line with the core consumer price index (Fig. 2-4). The government began to issue JGBi in March 2004 and suspended their issuance in October 2008 due to a sharp demand decline accompanying the Lehman Shock and other changes. In October 2013, the government resumed JGBi issuance with the principal guarantee upon maturity (Fig. 2-5).

The development of JGBi market has remained a key to address market environment changes after overcoming deflation and to diversify JGB products.

☞① In the case where the period of time between an issue date and the first interest payment date falls short of six months, accrued interest is generated. The accrued interest is an amount representing interest for the period of time where a JGB purchaser does not hold a JGB (six months minus the period of time where the purchaser actually holds the JGB). It is paid by the JGB purchaser upon JGB issuance for adjustment.

☞② Japan's Inflation-Indexed Bonds are indexed to the consumer price index (excluding perishables).

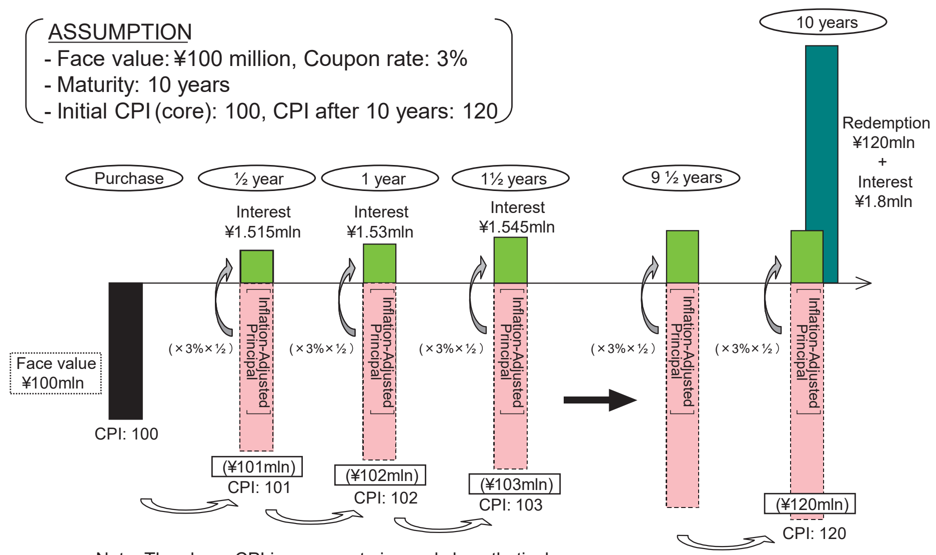
☞③ The indexation coefficient measures how much the CPI changed after an issue date.

☞④ Issuance of 15-Year Floating-Rate Bonds has been suspended since May 2008.

☞⑤ Non-Price Competitive Auction Ⅱ of Inflation-Indexed Bonds has been suspended since May 2020.

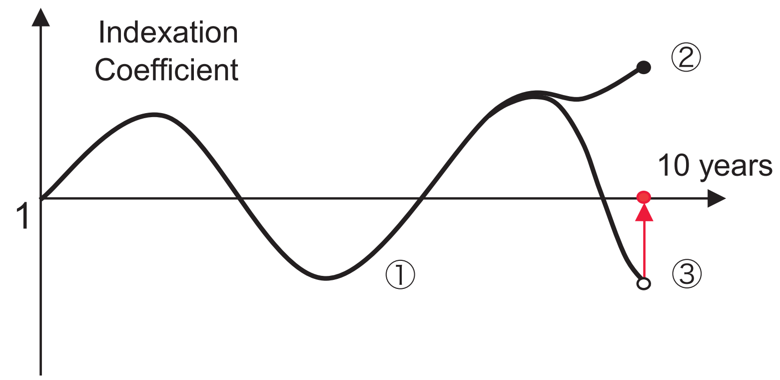
☞⑥ JGBs for Retail Investors can be transferred only to retail investors (including certain trust custodians).

Fig.2-4 Conceptual scheme of Inflation-Indexed Bonds



Note: The above CPI increase rate is purely hypothetical.

Fig.2-5 Deflation Floor (Conceptual Diagram)



①In case where the indexation coefficient is below 1, the inflation-adjusted principal will fall below its face value.
②In case where the indexation coefficient at maturity is above 1, the principal and the interest will be paid based on the inflation-adjusted principal per se.
③In case where the indexation coefficient at maturity is below 1, the principal will be redeemed at its face value.
Note: Deflation floor has no effect on interests during the maturing period or at maturity.

(3) Methods of Issuance

Methods of issuing JGBs are basically divided into three: offerings to the market, sales to retail investors, and offerings to the public sector.

A. Offering to the market

JGBs are principally issued in public offering on market-based issue terms.

a. Auction method

① Price/yield-competitive auction

Price/yield-competitive auction is a method in which each auction participant (☞①)

☞①No new 40-Year JGB coupon rate is given in advance as it is determined based on the result of first yield-competitive auction.

submits a bidding price (or yield) and bidding amount in response to the issue terms (e.g., issuance amount, maturity, coupon rate (☞②)) presented by the MOF, and the issuance price and amount will then be determined based on the bids.

In this type of auction, the issuing authority starts selling first to the highest price bidder in descending order (or to the lowest yield bidder in ascending order) till the cumulative total reaches the planned issuance amount. In Japan, the auction method varies by type of security. One is the conventional (multiple price) method by which each winning bidder purchases the security at one's bidding price; and the other is the Dutch-style (single price/ yield) method by which all winning bidders pay the lowest accepted bid price regardless of their original bid prices (or yields) (☞③).

☞② Auction participants are designated according to Article 5, paragraph (2) of the Ordinance of the Ministry of Finance on Issuance, etc. of National Government Bonds. As of April 1, 2020, there were 233 auction participants.

☞③ The price-competitive conventional auction is used for all JGB issues excluding the 40-year issue subject to the yield-competitive Dutch auction and the Inflation-Indexed Bonds subject to the price-competitive Dutch auction.

② Non-competitive auction

Besides competitive auction, 2-Year, 5-Year and 10-Year Bonds are also issued through non-competitive auction. This approach is to take into account small and medium market participants who tend to submit a smaller bid than their larger counterparts. Biddings for non-competitive auction are offered at the same time as for the price-competitive auction, and the price offered equals to the weighted average accepted price of the price-competitive auction. One can bid for either the price-competitive auction or for the non-price-competitive auction.

The maximum issuance amount is 10% of the planned issuance amount. Each participant is permitted to bid up to 1 billion yen (☞).

☞ The ceiling amount to bid is not applied to the Shinkin Central Bank, the Shinkumi Federation Bank, the Rokinren Bank and the Norinchukin Bank.

③ Non-Price Competitive Auction I & II

Non-Price Competitive Auction I is an auction in which biddings are offered at the same time as for the price-competitive auction. The maximum issuance amount is set at 20% of the total planned issuance amount and the price offered is equal to the weighted average accepted price of the price-competitive auction. Only the JGB Market Special Participants are eligible to bid in this auction. Each participant is allowed to bid up to the amount set based on the result of its successful bids during the preceding two quarters. 40-year or JGBi issues are not subject to Non-Price Competitive Auction I.

Non-Price Competitive Auction II is an auction carried out after the competitive auction is finished. The price offered is equal to the weighted average accepted price in the price-competitive auction or issuance price in Dutch-style competitive auction. Only the JGB Market Special Participants are eligible to bid in this auction. Each participant is allowed to bid up to the amount set based on the result of its bids during the preceding two quarters (☞①). Inflation-Indexed Bonds (☞②) and short-term JGB issues are not subject to Non-Price Competitive Auction II.

☞① Each participant is allowed to bid up to 10%* of one's total successful bids in the competitive auction and Non-Price Competitive Auction I.
(*) The percentage was lowered from 15% to 10% from an auction in January 2020.

☞② From May 2020, the MOF will not conduct Non-Price Competitive Auction Ⅱ for Inflation-Indexed Bonds issues for the time being.

b. Reopening rule

In March 2001, the immediate reopening rule was introduced for the purpose of the enhancement of JGB liquidity, etc. The rule treats a new JGB issue as an addition to an outstanding issue immediately from the issuance day, in principle, if the principal and interest payment dates and the coupon rate for the new issue are the same as those for the outstanding issue. 5-Year Bonds issues are subject to the rule (☞).

☞ As principal and interest payment dates for 2-Year Bonds differ from auction to auction, 2-Year Bonds are not effectively subjected to the reopening rule (Ref: III Chapter 1 1(5) "Principal/Coupon Payment Corresponding to Days of Issuance in FY2020"(P122)).

From the viewpoint of securing market supply of each issue, 10, 20, 30 and 40-year issues in FY2020 are subjected to the following rule, which is more advanced than the immediate reopening rule.

The 10-Year Bonds will be integrated into four issues (integrating April, May and June issues in 2020 into the April 2020 issue, July, August and September issues into the July 2020 issue, October, November and December issues into the October 2020 issue, and January, February and March issues in 2021 into the January 2021 issue) unless interest rates fluctuate wildly (the market yield on an auction day for a new issue deviates from the coupon on the previous issue with the same maturity date by more than 30 basis points). The reopening rule will also be used in principle to integrate 20-Year and 30-Year Bonds each into four issues. The 40-Year Bonds (May, July, September, November, January and March issues) will be integrated into one issue (May issue). In principle, JGBi issues (May, August, November and February issues) will be integrated into one issue (May issue).

B. JGBs and sales system for Retail Investors

Ref: Part I, 4 (1) "JGB Holdings by Retail Investors" (P29)

a. JGBs for Retail Investors

In March 2003, issuance was started on 10-Year Floating-Rate Bonds for Retail Investors (☞) in order to promote JGB holdings among individuals. Moreover, in order to respond to retail investors' various needs and to promote further sales, the government has been improving product features by introducing 5-Year Fixed-Rate and 3-Year Fixed-Rate Bonds.

☞JGBs for Retail Investors are designed not to lose principal. The minimum interest rate of 0.05% is set to prevent the rate from falling to zero or becoming negative.

Issuance of JGBs for Retail Investors rests on their handling and distribution by their handling institutions comprised of securities companies, banks, and other financial institutions as well as post offices (about 980 institutions). The handling institutions are commissioned by the government to accept purchase applications and to sell JGBs to retail investors. Handling institutions are paid a commission by the government corresponding to the handled issuance amounts.

b. New Over-The-Counter (OTC) sales system for selling marketable JGBs

In addition to JGBs for Retail Investors, in October 2007 a new OTC sales system for marketable JGBs was introduced in order to increase retail investors purchase opportunities with regard to JGBs (2-Year, 5-Year, and 10-Year Bonds).

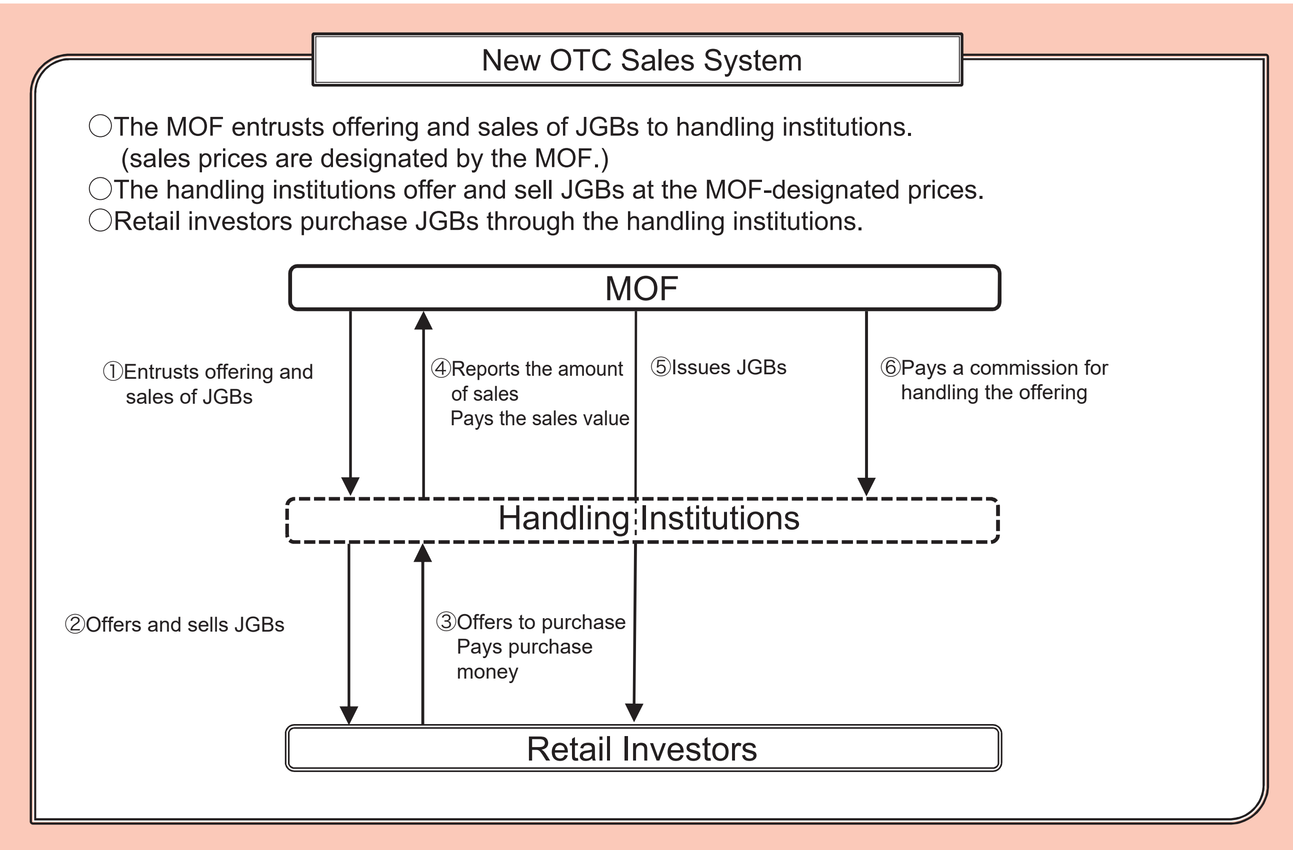
With regard to this new OTC sales system, it allows private financial institutions to engage in subscription-based OTC sales of JGBs in a manner previously exclusive to post offices. This development allows retail investors to purchase JGBs via financial institutions with whom they are familiar, it also allows them to purchase JGBs in a manner that is essentially ongoing. Depending on market yield conditions, however, the acceptance of subscriptions may be suspended.

As with JGBs for Retail Investors, for the new OTC sales system, the government has commissioned financial institutions (about 650 institutions) to conduct subscriptions and sales of JGBs. Note that while these financial institutions are required to accept subscription and sell JGBs at prices defined by the MOF within a defined period, they are not required to purchase any unsold JGBs.

Fig.2-6 Comparison of JGBs for Retail Investors and New Over-The-Counter (OTC) Sales System

	JGBs for Retail Investors			New OTC JGBs		
	10-Year Floating-Rate	5-Year Fixed-Rate	3-Year Fixed-Rate	10-Year Marketable Fixed-Rate Bonds	5-Year Marketable Fixed-Rate Bonds	2-Year Marketable Fixed-Rate Bonds
Maturity	10-year	5-year	3-year	10-year	5-year	2-year
Frequency of issuance	Monthly (12 times a year)			Monthly (12 times a year)		
Purchase units/purchase value limits	Minimum purchase of 10 thousand yen in 10 thousand yen units/No upper limit			Minimum purchase of 50 thousand yen in 50 thousand yen units/Maximum value of 300 million yen per individual application		
Sales price	100 yen per 100 yen of face value (the same in the redemption)			Determined by MOF for each issue(possible to sell at any time on the market. However, the price may change when the bonds are sold before maturity.)		
Purchasers	Limited to retail investors			No restrictions (can also be purchased by corporate entities or condominium associations, etc.)		
Interest rate	Floating-rate	Fixed-rate		Fixed-rate		
Minimum interest rate	Present（0.05%）			Absent		
Redemption before maturity	Once one year has elapsed since issuance, redemption before maturity due to government buy-back shall be possible at any time(there is no principal loss risk). Deduct the two interest payments immediately preceding redemption (pre-tax) x0.79685.			Possible to sell at any time on the market (however, because the price at time of sale shall be the market price at that time, loss/profit shall occur on sale(there is a principal loss risk). Furthermore, there is no scheme for the government to buy-back these bonds before maturity.)		
Introduction (1st issuance)	March, 2003	January, 2006	July, 2010	October, 2007		

Fig.2-7 Flow of New OTC Sales



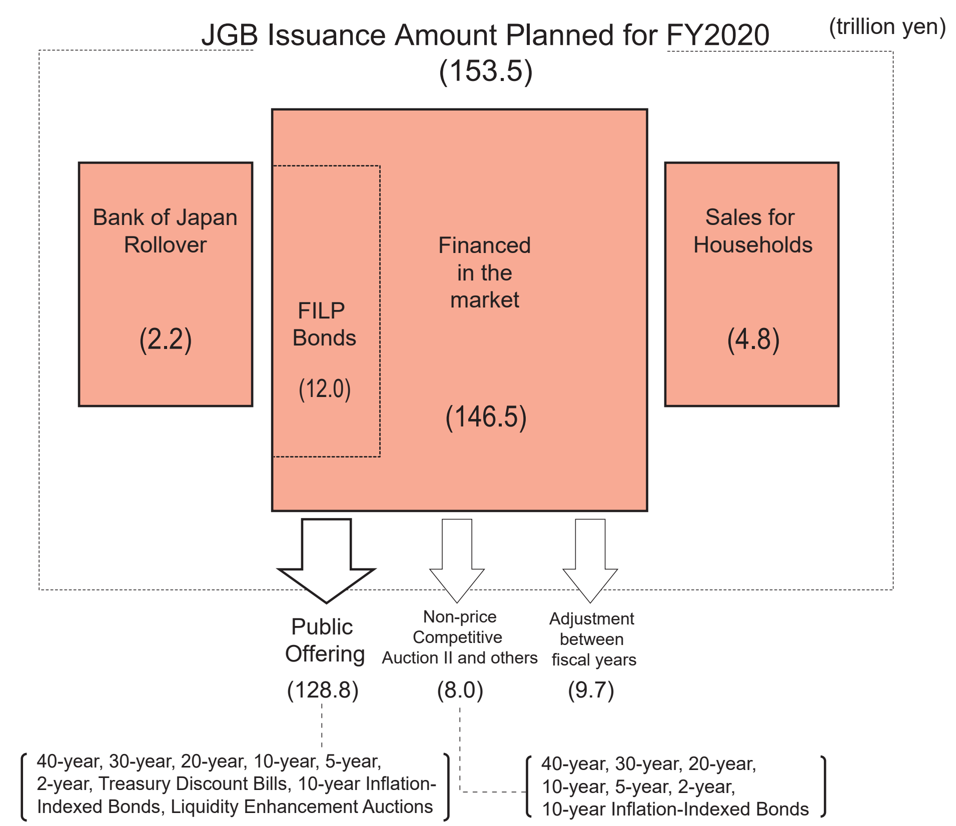
C. Offering to the public sector (Bank of Japan Rollover)

In the Bank of Japan rollover, the BOJ underwrites Refunding Bonds instead of asking the government to redeem part of JGBs that mature after being purchased by the central bank in the market.

While Article 5 of the "Public Finance Act" prohibits the BOJ from underwriting government bonds, the abovementioned BOJ rollover is an exception that is allowed up to an amount authorized by the Diet under a proviso to the Article. Every fiscal year, the MOF requests the BOJ rollover that the central bank accepts after confirming that the rollover will cause no problem with monetary policy.

An increase in the BOJ rollover can reduce the amount of JGBs issued through usual auctions in the market, allowing the MOF to level the effects of fluctuations in the annual JGB redemption amount and fiscal demand on fluctuations in the amount of JGB market issuance through usual auctions. Therefore, the MOF decides on the BOJ rollover request amount based on the annual JGB Issuance Plan, etc.

Fig.2-8 JGB Issuance Amount by Methods of Issuance



Note: figures may not sum up to the total because of rounding.

(4) JGB Market Special Participants Scheme

Amid expectations that JGB issuance in large volumes will continue, the "JGB Market Special Participants Scheme" was introduced in Japan in October 2004 to promote the market's stable absorption of JGBs and to maintain and enhance the liquidity of the JGB market.

This scheme is designed based on the so-called "Primary Dealer System" introduced in major European countries and the U.S. To achieve the abovementioned purpose of the scheme, the MOF grants special entitlements to certain auction participants who carry out responsibilities essential to debt management policies, such as active participation in JGB auctions. The following is an outline of the scheme.

A. Responsibilities of JGB Market Special Participants

- Bidding responsibility:
  In every auction, the Special Participants shall bid for an adequate amount (at least 5% of the planned issue amount) at reasonable prices.
- Purchasing responsibility:
  The Special Participants shall purchase and underwrite at least a specified share of the planned total issue amount (0.5% for short-term zone; and 1% for other zones) in each of the super long-term, long-term, medium-term and short-term zones in auctions for the preceding two quarters.
- Responsibility in the secondary market:
  The Special Participants shall provide sufficient liquidity to the JGB secondary market.
- Provision of Information:
  The Special Participants shall provide information on JGB markets and related transactions to the MOF.

B. Entitlements of JGB Market Special Participants

- Entitlement to participate in the Meeting of JGB Market Special Participants:
  The Special Participants may participate in the Meeting of JGB Market Special Participants to exchange opinions with the MOF.
- Entitlement to participate in Non-Price-Competitive Auctions Ⅰ & Ⅱ :
  The Special Participants may participate in Non-Price Competitive Auction I held concurrently with a normal competitive auction and in Non-Price Competitive Auction II held after a normal competitive auction. These auctions enable Special Participants to obtain JGBs at the weighted average accepted price in a competitive auction (or at the issuance price in a Dutch-style auction) up to the maximum amount preset for each Participant on the basis of the amount of past successful bids (Non-Price Competitive Auction I) and past bids as a whole (Non-Price Competitive Auction II).
- Entitlement to participate in Liquidity Enhancement Auctions:
  The Special Participants may participate in Liquidity Enhancement Auctions that are designed to maintain and enhance the liquidity of the JGB market.
- Entitlement to participate in Auctions for Buy-backs:
  The Special Participants may participate in Auctions for Buy-backs.
- Entitlement to apply for separating and integrating STRIPS Bonds:
  The Special Participants may apply for the separation and integration of STRIPS Bonds.

C. History of the Scheme

- October 2004: JGB Market Special Participants Scheme was introduced, including designation of Special Participants, holding the first round of Meeting of JGB Market Special Participants and launch of Non-Price Competitive Auction II.
- April 2005: Non-Price Competitive Auction I was launched.
- January 2006: Interest rate swap transactions started.
- March 2006: The government bond syndicate underwriting system was abolished.
- April 2006: Liquidity Enhancement Auction was launched.
- January 2009: The maximum bid for Non-Price Competitive Auction II was raised from "10% of one's total successful bids" to "15%" (☞①).
- April 2015: The maximum amount of bidding by each auction participant was reduced from "100% of the planned issuance amount" to "50% of the amount" and the minimum bidding responsibility amount was raised from "3% of the planned issuance amount" to "4% of the amount."
- July 2017: The maximum issuance amount for Non-Price Competitive Auction I was raised from "10% of the total planned issuance amount" to "20% of the amount" and the minimum bidding responsibility amount from "4% of the planned issuance amount" to "5% of the amount."
- January 2020: The maximum bid for Non-Price Competitive Auction II was lowered from "15% of one's total successful bids" to "10%" (☞①).

☞①The maximum amount of bidding would not exceed the amount obtained by multiplying the amount of issuance by the Reference Bidding Coefficient for each Special Participant (amount less than 100 million yen shall be discarded).

(5) Government Bond Administration

A. Items the Bank of Japan handles

The government does not directly undertake the government bond-related administrative tasks, such as issuance and redemption, but entrusts the BOJ with most of those tasks based on Article 1, paragraph (2) of the "Act on National Government Bonds." Those administrative tasks entrusted to the BOJ are as follows (☞).

- Issuance: The BOJ accepts bids from bidders in auctions, notifies amounts of bids accepted, collects payments, issues the securities, and receives and handles revenues.
- Redemption/interest payment: The BOJ pays principal and interests on JGBs, and receives and handles funds to be used for redemption, and makes their disbursement.

☞The BOJ provides these government bond related services through its head office and branches, and through agent financial institutions.

B. The Bank of Japan government bond network system

The Bank of Japan operates the Bank of Japan Financial Network System (BOJ-NET) JGB Services (☞①) to efficiently and safely implement JGB issuance, redemption and other administrative tasks as explained above and the settlement of JGB transactions with its customer financial institutions.

Banks, securities companies, money market brokers, insurance companies, etc. participate in the BOJ-NET JGB Services that implement JGB issuance, redemption and other administrative tasks online.

Under the "Act on Book-Entry Transfer of Corporate Bonds and Shares," at present, JGBs traded between financial institutions are paperless. JGB transfers are done in the form of transfers on accounts managed by the transfer institution (the Bank of Japan) (☞②).

The BOJ-NET JGB Services allow the following procedures to be completed online:

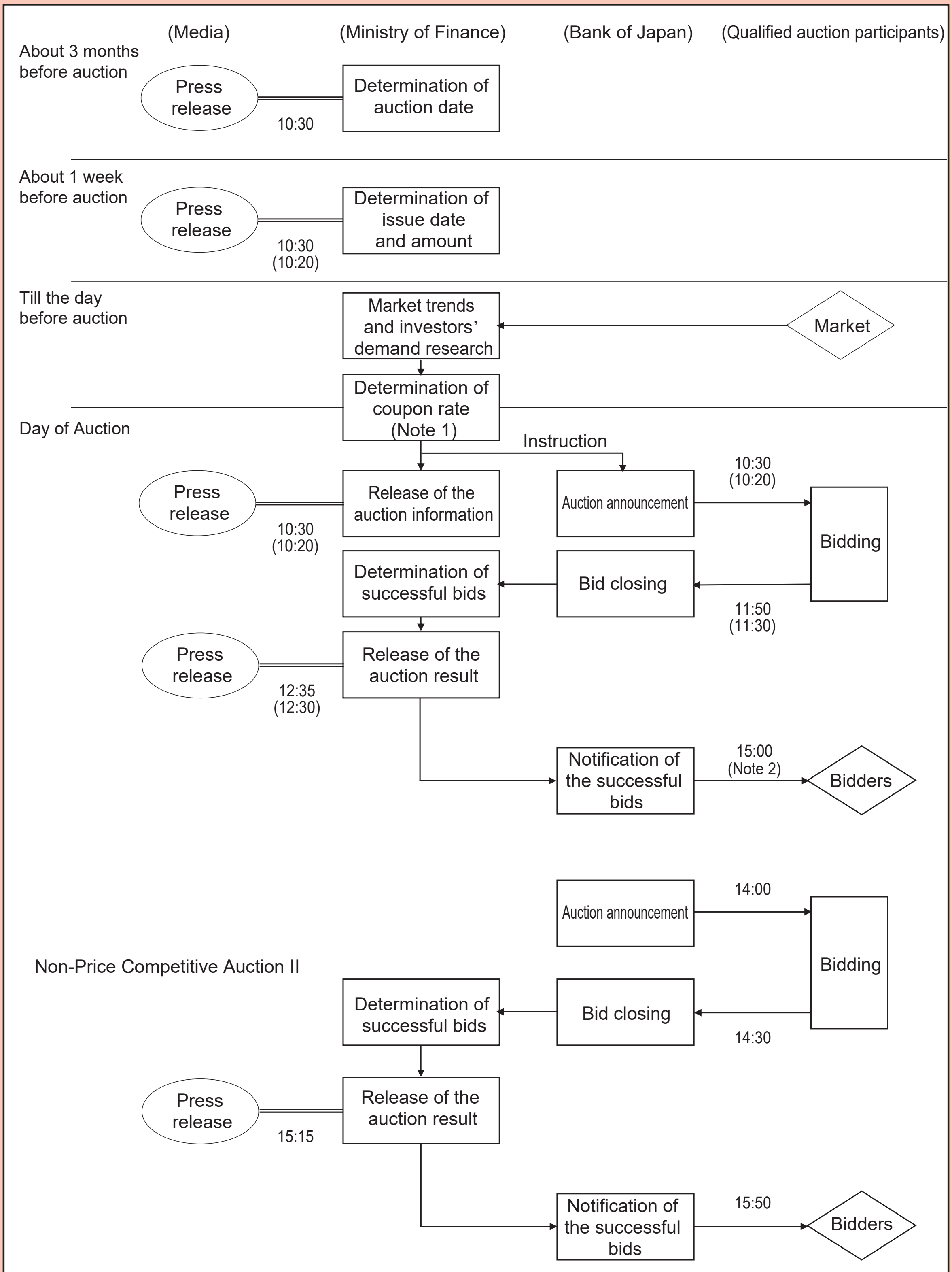
- Notification of offering (from the BOJ to auction participants)
- Bidding (from bidders to the BOJ)
- Counting the number of bidding and reporting to the MOF on total bidding
- Notification of accepted/allocated bids (from the BOJ to bidders)
- Issuance and payment (from the BOJ to purchasers / from purchasers to the BOJ)

☞①The BOJ-NET includes the BOJ-NET current account system as a fund settlement system and the BOJ-NET JGB Services as a JGB settlement system.

☞②JGBs for this mechanism are called Book-entry transfer JGBs, representing those whose ownership is determined by descriptions or records in book-entry accounts as provided by the "Act on Book-Entry Transfer of Corporate Bonds and Shares." (JGB certificates are not issued.)

C. Auction procedures for public offering auction

Fig.2-9 Auction Procedures for Public Offering Auction



Note1: Treasury Discount Bills are discount bonds and have no coupon rates.
Note2: Successful bids in a Liquidity Enhancement Auction are notified at 14:30.
Note3: Time in parenthesis refers to the time for Treasury Discount Bills.
Note4: Non-Price Competitive Auction II is not conducted for Inflation-Indexed Bonds and Treasury Discount Bills.

D. Shortening of Settlement Cycles in Primary JGB Market

In a manner to meet the shortening of the settlement cycle to T+1 for the secondary JGB market (☞), Japan shortened the settlement cycle (between auction and issuance dates) from T+2 to T+1 in principle for auctions from May 1, 2018.

☞Ref: Chapter 1 2(3)C "Shortening of settlement periods" (P67)

At the same time, Japan shortened settlement cycles for coupon-bearing issues (5- to 30-year issues) coming in massive JGB redemption months (March, June, September and December) and a 2-year issue every month.

① Coupon-bearing (5- to 30-year) JGB Issues in Massive Redemption Months

For coupon-bearing (5- to 30-year) JGB issues coming in massive JGB redemption months (March, June, September and December) for which issuance dates had been unified into the 20th day of each month (the next business day if the 20th day falls on a holiday) irrespective of auction dates, settlement cycles were shortened to T+1, with their issuance set to come on the next business day of the auction, as from May 1, 2018.

② Monthly 2-year JGB issue

For a 2-year JGB issue coming every month for which an issuance date had been set at the 15th day (the next business day if the 15th day falls on a holiday) of a month after an auction month irrespective of the auction date, the issuance date was set at the first day (the next business day if the first day falls on a holiday) of a month after an auction month as from May 1, 2018. Initial interest payment and redemption dates were also changed to the first day of each month.

Column 5 Inflation-Indexed Bonds Trend

The development of the Inflation-Indexed Bonds (JGBi) market is a key issue for JGB Management Policy to address market environment changes after overcoming deflation and promote the diversification of JGBs (Reference 1).
This column introduces the major trend of the JGBi market and the MOF's relevant responses since FY2019.

(Reference 1) See Chapter 1 1(2) (Reference) Inflation-Indexed Bonds (P42) for an outline of Inflation-Indexed Bonds.

❶ August-September 2019 Trend

Break-even inflation rates (BEIs), which followed a downtrend from the middle of 2018, weakened as nominal bond yields plunged due to investors' risk-off attitude that grew in response to the escalation of U.S.-China trade disputes in August 2019 (Figs. c5-1 and c5-2 ❶). In Japan, particularly, the BEI remained below 0.1% as the yield on JGBi failed to follow the nominal bond yield.
At the Meeting of JGB Market Special Participants under such situation in September 2019, many market participant surged the MOF to increase the amount of Buy-backs, while maintaining the current amount of issuance to improve the supply-demand balance for JGBi. Based on such opinion, the MOF switched from a 20 billion yen bimonthly Buy-back (every even-numbered month) to a 20 billion yen monthly Buy-back for JGBi in the October-December 2019 quarter.
The BOJ's outright JGBi purchase size (Reference 2) was also raised from 25 billion yen to 30 billion yen in November.

(Reference 2) The BOJ conducts an outright JGBi purchase twice a month (See "Monthly Schedule of Outright Purchases of Japanese Government Bonds (Competitive Auction Method)" released at every month-end on the BOJ Website).

❷ February-March 2020 Trend

After increased JGBi Buy-backs were implemented in the October-December quarter of 2019, Japan's BEI was stabilized at around 0.2% around the turn of the year. As European and U.S. BEIs declined substantially in response to the global novel coronavirus (COVID-19) outbreak expansion and crude oil price crashes from February 2020, however, Japan's BEI fell steeply, slipping far below 0% in mid-March, with JGBi prices dropping below par (Figs. c5-1 and c5-2 ❷). As JGBi are guaranteed to be redeemed at par even in the event of deflation, their prices' slip below par indicated that the JGBi market was not working sufficiently.
At the Meeting of JGB Market Special Participants under such situation in March 2020, many market participants stated that as inflation-indexed government bonds were globally sold, with their supply-demand balance deteriorating, it would be desirable to cut or cancel JGBi issues, or substantially increase JGBi Buy-backs in the April-June quarter. Based on such opinion, the MOF took the following measures:

- The May issue size was cut to 300 billion yen from 400 billion yen planned in the FY2020 JGB Issuance Plan.
- The monthly Buy-back size in the April-June quarter was increased to 50 billion yen from 20 billion yen.
- An additional Buy-back worth 300 billion yen was conducted in March through the price-spread-competitive (multi-price) auction method with a limit of bidding spread with the "standard price."
- Non-price competitive auction II was cancelled for the time being.

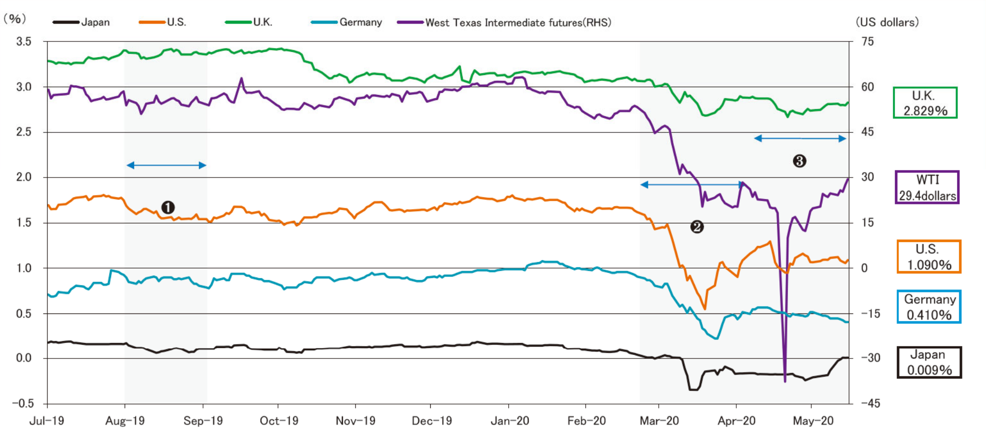
❸ April-May 2020 Trend

These measures led JGBi prices to stop falling but the prices remained below par. As the key crude oil futures price plunged into negative territory temporarily due to rapidly falling crude oil demand amid economic stagnation under the expanding COVID-19 outbreak, a breakdown at a meeting of oil-producing countries on production cuts and potential oil storage capacity shortages, the external environment for inflation-indexed government bonds deteriorated globally, with European and U.S. BEIs entering a downtrend again. Japan's BEI then remained weak at around minus 0.2% (Figs. c5-1 and c5-2 ❸).

At the Meeting of JGB Market Special Participants under such situation in late April 2020, market participants stated that as the supply-demand balance for inflation-indexed government bonds had substantially deteriorated due to their global selling associated with investors' risk-off attitude under the expanding COVID-19 outbreak, declining market liquidity and weak crude oil prices, the planned auction for a 300 billion yen JGBi issue in May could lead supply to far exceed demand. Based on such opinion, the MOF cut the May JGBi issue size to 200 billion yen from 300 billion yen as set in March (with the Buy-back size kept unchanged). As market participants warned that any cut in the JGBi issue size could lead the future continuity of JGBi to be doubted, the MOF noted that the JGBi issue size cut responding to current market conditions was designed to secure the future stable issuance of JGBi.

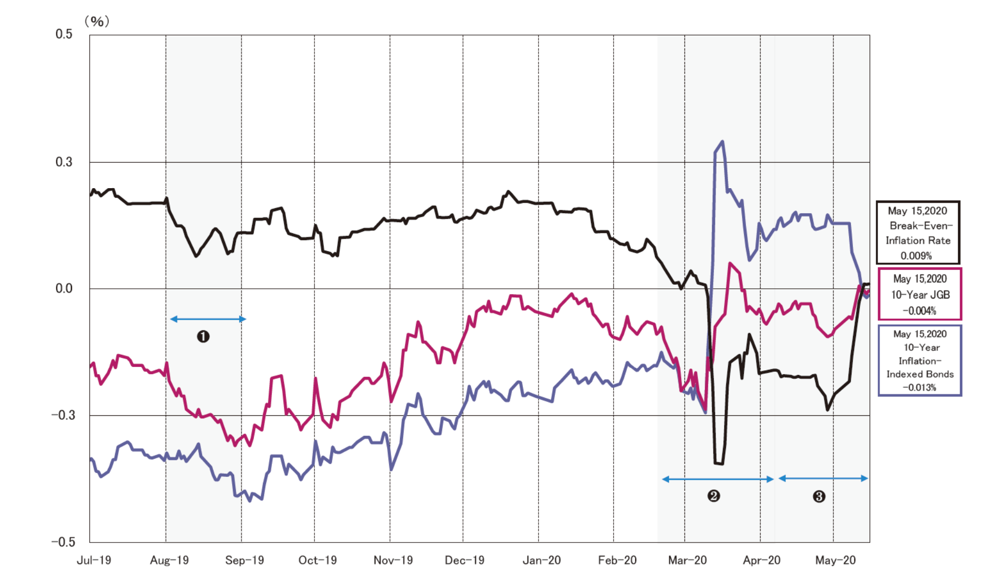
After the auction for the May JGBi issue, the BEI turned positive.

Fig. c5-1 Country-by-Country BEI and Crude Oil Price Trends



(Source) Computed by Ministry of Finance based on Bloomberg and Japan Bond Trading Co.

Fig. c5-2 BEI Trend



(Source) Calculated by Ministry of Finance based on Nikkei QUICK and Bloomberg

Column 6 Debt Management Policies in Foreign Countries

❶ Debt Management Policies, Issuance Plans

In Japan, the basic objectives of the debt management policy are set as: (1) ensuring the smooth and secure issuance of Japanese Government Bonds and (2) minimizing medium- to long-term fundraising costs. In line with these objectives, the government carefully pays attention to market conditions and makes efforts to manage JGBs based on investor needs and market trends. Basically, foreign countries also take almost the same stance on their debt management policies, but they have their unique characteristics.

Further, the JGB Issuance Plan is established in line with annual budget formulation and an annual planned issuance amount for each maturity and other data are published in Japan but methods for publishing such data also vary from country to country. At the end of each fiscal year, Germany publishes the total government bond issue amount and its breakdown by maturity for the following fiscal year. This method is considered similar to that of Japan. On the other hand, the U.S. determines and publishes necessary issuance amounts not on a fiscal year basis but on a quarterly basis, complying with the upper debt limit specified by law. In addition, the timing of information disclosure during the period from the announcement of a planned issuance amount to an actual auction for the issue also varies from country to country (Figs.c6-1 and c6-2).

Fig.c6-1 Debt Management Policies in Japan and Foreign Countries

	Japan	U.S.	U.K.	Germany	France
Debt Management Office	Financial Bureau, Ministry of Finance	Department of the Treasury, Office of Debt Management Department of the Treasury, Bureau of the Fiscal Service	HM Treasury Debt Management Office (DMO)	Bundes ministerium der Finanzen Bundesrepublik Deutschland - Finanzagentur GmbH (German Finance Agency)	Ministère de l'Économie et des Finances, Direction générale du Trésor, Agence France Trésor (AFT)
The Objective of Debt Management Policy	・Ensuring stable smooth issuance of JGBs ・Minimizing medium-to-long term financing costs	・To finance government borrowing needs at the lowest cost over time ・To issue debt in a regular and predictable pattern	To minimise, over the long term, the costs of meeting the government's financing needs, taking into account risk, while ensuring that debt management policy is consistent with the aims of monetary policy.	To keep interest costs as low as possible across a number of years and market phases while limiting the interest rate risks resulting from the portfolio structure.	Raising sufficient funds on the markets to finance the State by keeping the debt burden to taxpayers down to a minimum under optimum conditions of security.
Fiscal Year	April to March next year	October previous year to September	April to March next year	January to December	January to December
Issuance Plan	・Announcement of total JGB issuance amount for the next fiscal year, breakdowns by maturity, and frequency of issuance, etc. in late-December each year.	・Announcement of planned issuance amounts by maturity, auction schedule, etc. on a quarterly basis (February, May, August and November).	・Announcement of total issuance amount for the next fiscal year, breakdowns by maturity, etc. in March each year. ・Announcement of specific details of issues and auction schedule on a quarterly basis.	・Announcement of planned issuance amounts by maturity, auction schedule, New issue/ Reopening, etc. for the next fiscal year in December each year. Thereafter, announcement of auction schedule again on a quarterly basis.	・Announcement of total issuance amount for the next fiscal year in December each year. ・Specific issuance amounts are determined at a meeting with PD held in the week preceding the issuance date.

(Sources) Relevant countries' debt management authorities

Fig.c6-2 Announcement Time of Issuance Amount and Auction Date in Japan and Foreign Countries

	Japan	U.S.	U.K.	Germany	France
In previous fiscal year	Total issuance amount Issues Planned auction amount		Total issuance amount Scheduled auction date	Total issuance amount Issues Planned auction amount Scheduled auction date	Total issuance amount Scheduled auction date
Quarterly basis	Scheduled auction date * Auction date of each month is announced 3 months before.	Planned auction amout Total issuance amount (*2) Issues Scheduled auction date	Issues Scheduled auction date (*3)	Planned auction amount (*1) Scheduled auction date (*3)	
Approximately one week before	Planned auction amount (*1)	Planned auction amount	Planned auction amount		Issues Planned auction amount

Note 1: As for issuance lots per auction announced in the previous fiscal year, the fixed amounts are announced one week before in Japan and again every quarter in Germany.
Note 2: Planned quarterly amounts financed from the market.
Note 3: Scheduled auction date is announced again every quarter.
(Source) Relevant countries' debt management authorities

❷ Government Debt Issuances Growing Due to the Novel Coronavirus Expansion

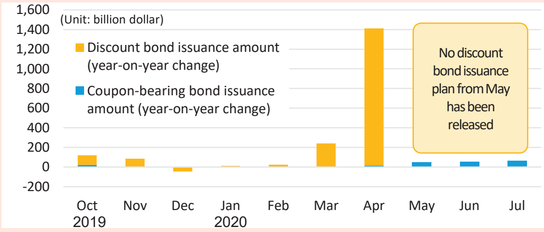
As the Novel Coronavirus (COVID-19) expansion has exerted huge impacts on the world economy, foreign countries have come up with economic assistance packages. Subsequently, they have been forced to raise more funds by changing government bond issuance plans and increasing government bond issuances substantially from the previous year.

In Japan, the first supplementary budget for FY2020 was enacted in April 2020 and the second one in June 2020, leading the planned FY2020 JGB issuance amount to increase by 99.8 trillion yen from the initially planned level (as of June 2020).

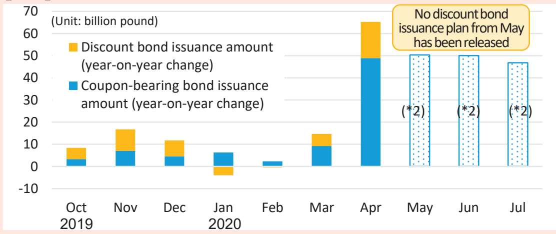
The U.S., Germany and France rapidly increased discount bond issuances from March or April 2020, indicating that they were exploiting discount bonds to quickly raise funds (Fig. c6-3). Bond issuances increased mainly in the 7-year for the U.S., in the 1- to 7-year zone for the U.K. and in the 7- to 15-year zone for Germany (Fig. c6-4). The U.K. nearly quadrupled the frequency of April-July government bond auctions from the initially planned level, while Germany introduced 7- and 15-year government bonds. Foreign countries have thus used various devices to expand government bond issuances.

Fig.c6-3 Government Bond Issuance Changes Accompanying COVID-19 Expansion in Foreign Countries (Trends of Year-on-Year Changes)

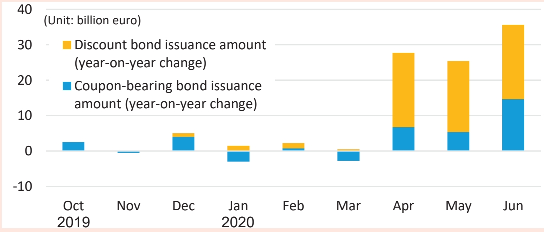
【U.S.】



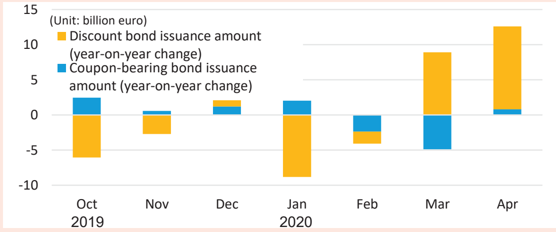
【U.K.】



【Germany】



【France】



Note 1: Coupon-bearing bond include Inflation-Indexed Bonds, floating-rate bonds (for the U.S. alone) and Green Bonds (for France alone).
Note 2: As of April 2020. Data represent results for October 2019 to April 2020 and plans for May-July 2020 for countries where plans are made available.
Note 3: No discount bond issuance plans for May-July 2020 have been released in the U.S. and the U.K. As the U.K. has released only a total coupon-bearing bond issuance amount for the May-July 2020 period, the MOF has estimated monthly amounts.
Note 4: Germany's May-June coupon-bearing bond issuance amount includes unpublished syndication issues (a 15-year issue and a 30-year issue) that are estimated as the same as those planned for the latest month. Its monthly inflation-indexed bond issuance amount for the period is estimated at 580 million euros based on the planned annual issuance amount at 6-8 billion euros.
(Sources) Websites of these countries' respective government debt management authorities

Fig.c6-4 Government Bond Issuance Changes Accompanying COVID-19 Expansion in Foreign Countries (Trends by Maturity and Issue)

【U.S.】 (billion dollar)

		Issuance results for May-July 2019	Issuance plans for May-July 2020	Changes
Coupon-bearing bonds	2-year	120.0	138.0	18.0
	3-year	114.0	132.0	18.0
	5-year	123.0	141.0	18.0
	7-year	96.0	123.0	27.0
	10-year	75.0	90.0	15.0
	20-year	0.0	54.0	54.0
	30-year	51.0	60.0	9.0
Floating Rate Bonds		56.0	64.0	8.0
Inflation-Indexed Bonds		40.0	41.0	1.0
Total		675.0	843.0	168.0

	Issuance results for Apr.-June 2019	Issuance results for July-Sept. 2019	Issuance results for Oct.-Dec. 2019	Issuance results for Jan.-Mar. 2020	Issuance results for Apr.-June 2020
Discount Bonds	▲229.1	126.0	39.9	240.6	2,673.0

【U.K.】 (billion pound)

		Issuance results for April 2019: Issuance amount	Issuance results for April 2019: Frequency of auctions	Issuance results for April 2020: Issuance amount	Issuance results for April 2020: Frequency of auctions	Issuance plans for May-July 2020: Issuance amount	Issuance plans for May-July 2020: Frequency of auctions	Issuance amount per auction	
Coupon-bearing bonds	1～7-year	3.5	1	23.0	6		20	1～5-year	3.25-4
								5～7-year	3-3.75
	7～15-year	3.3	1	17.6	4		13	7～15-year	2.75-3.5
	Over 15-year	2.3	1	15.8	6		10	15～30-year	2-2.75
								Over 30-year	1.75-2.5
Inflation-Indexed Bonds		0.5	—	2.0	1		6	10-year or less	1.25-1.75
								Over 10-year	1-1.5
Total		9.5	3	58.5	17	180.0	49		

(billion pounds)

	Issuance results for Apr.-June 2019	Issuance results for July-Sept. 2019	Issuance results for Oct.-Dec. 2019	Issuance results for Jan.-Mar. 2020	Issuance results for Apr. 2020
Discount Bonds	▲5.5	33.2	4.7	▲24.4	12.9

【Germany】 (billion euro)

		Initial issuance plan for April-June 2020	Revised issuance plan for April-June 2020	Changes
Coupon-bearing bonds	2-year	13.0	15.0	2.0
	5-year	9.0	12.0	3.0
	7-year	0.0	10.0	10.0
	10-year	14.0	17.0	3.0
	15-year	0.0	5.0	5.0
	30-year	3.5	3.0	▲0.5
	Subtotal	39.5	62.0	22.5
Discount Bonds	3-month	2.0	12.0	10.0
	5-month	4.5	12.0	7.5
	6-month	9.0	12.0	3.0
	9-month	0.0	12.0	12.0
	11-month	0.0	12.0	12.0
	12-month	0.0	12.0	12.0
	Subtotal	15.5	72.0	56.5
Total		55.0	134.0	79.0
Inflation-Indexed Bonds		(No revision from "6-8 billion euros a year" as published in the initial issuance plan)		

【France】 (billion euro)

	Initial issuance plan for FY2020	Revised issuance plan for FY2020	Changes
Coupon-bearing bonds Inflation-Indexed Bonds	205.0	245.0	40.0
Discount Bonds	10.0	64.1	54.1

Note 1: As of April-end 2020 (Some data include published data in May 2020 for the U.S. alone).
Note 2: Components may not add up to the total because of rounding.
Note 3: The data of discount bonds in the U.S., U.K., France are net issuance amount. The others are gross issuance amount. The U.S.'s Aplil-June discount bond issuance amount is estimated by MOF.
Note 4: Data for the U.K. are calculated on a revenue basis while data for the other countries are calculated on a nominal value basis.
Note 5: Inflation-Indexed Bonds worth 500 million pounds out of April 2019 issuances and coupon-bearing bonds worth about 3.4 billion pounds out of April 2020 issuances in the U.K. were subjected to gilt tenders that differ from ordinary auctions (reopening existing bonds to supplement ordinary competitive auctions).
Note 6: Germany's May-June coupon-bearing bond issuance amount includes unpublished syndication issues (a 15-year issue and a 30-year issue) that are estimated as the same as those planned for the latest month.
(Sources) Relevant countries' debt management authorities

❸ Bond Types and Issuance Methods

Methods of issuing government bonds adopted in various foreign countries are divided into two types: offering to the market through auctions or other means (marketable bonds) and offering to retail investors without going through the market (non-marketable bonds).

Marketable bonds are normally offered mainly through the public auction method which uses both competitive and noncompetitive auctions. As for competitive auctions, notable is the fact that the U.K., Germany and France employ the multiple price (conventional) method (Note 1) for almost all maturities as is the case of Japan while the U.S. employs the single price (Dutch-style) method for all maturities (Note 2). In addition, the U.K. and France use the syndication method (Note 3) almost every year. Germany plans to use the syndication method in May 2020 for the first time in five years (Fig. c6-5).

Note 1: Auction method by which each winning bidder purchases the security at one's bidding price (or yield).

Note 2: Auction method by which all winning bidders pay the lowest accepted bid price regardless of their original bid prices (or yields).

Note 3: Method of offering/underwriting by a syndication composed of financial institutions, securities companies, etc.

Fig. c6-5 Bond Types and Issuance Methods in Japan and Foreign countries

	Japan	U.S.	U.K.	Germany	France
Short-term	Approx. 2-month, 3-month, 6-month, 1-year (Note 1)	4-week, 8-week, 13-week, 26-week, 52-week, CMB (Note 2)	1-month, 3-month, 6-month, 12-month	3-month, 5-month, 6-month, 9-month, 11-month, 12-month	Less than or equal to 1-year
Medium-term	2-year, 5-year	2-year, 3-year, 5-year, 7-year	1～7-year	2-year, 5-year, 7-year (Note 3)	2～8-year
Long-term	10-year	10-year	7～15-year	10-year	8～50-year (Note 4)
Super Long-term	20-year, 30-year, 40-year	20-year, 30-year (Note 3)	15～55-year	15-year, 30-year (Note 3)	
Others	Inflation-Indexed Bonds (10-year)	Inflation-Indexed Bonds(5-year, 10-year, 30-year) Floating Rate Bonds (2-year)	Inflation-Indexed Bonds (5～55-year)	Inflation-Indexed Bonds(5-year, 10-year, 30-year)	Inflation-Indexed Bonds(2～30-year)
Green Bonds Total Issuance Amount	—	—	—	— (Planned to be issued in the second half of 2020)	25.27 billion euros (Note 5)
Issuance Method	Multiple price (conventional) method (40-year, Inflation-Indexed Bonds: single price/yield (Dutch-style) method)	Single price (Dutch-style) method	Multiple price (conventional) method (Inflation-Indexed Bonds: single price (Dutch-style) method) (Note 6)	Multiple price (conventional) method (Note 7)	Multiple price (conventional) method (Note 6)

Note 1: Approx. 2- and 3-month issues are limited to Financing Bills.
Note 2: CMBs (Cash Management Bills) are issued according to short-term cash flow needs.
Note 3: The U.S. plans to issue 20-Year Bonds in the first half of 2020 for the first time since 1986. Germany plans to issue 7- and 15-Year Bonds in May 2020 for the first time ever. (as of April 2020)
Note 4: Green Bonds are included.
Note 5: Issuance results as of April end 2020.
Note 6: The syndication method is used to issue some super long-term bonds, Inflation-Indexed Bonds and Green Bonds (France).
Note 7: The syndication method was adopted for the first and second 10-Year Inflation-Indexed Bond issues (2006), the first 30-Year Inflation-Indexed Bond issue (2015), the first 15-Year Bond issue (scheduled May 2020) and the 30-Year Bond issue (scheduled June 2020) .
(Sources) Relevant countries' debt management authorities

Green Bonds are issued by business corporations, local governments and other entities to raise funds for renewable energy and other projects that contribute to resolving global warming and other environmental problems.
Government Green Bonds have been issued in 10 countries including France since Poland became the first country to issue such bonds in 2016. France initiated a Green Bond issue worth 7 billion euros in January 2017 and has reopened the issue multiple times annually. Its balance of outstanding government Green Bonds was the highest in the world as of March 2020. In the government bond issuance plan released in December 2019, Germany plans to issue Green Bonds in the second half of 2020. No government Green Bonds were issued in the U.S., the U.K. and Japan by March 2020. If government Green Bonds are to be issued separately from other government bonds, it will have to be cautiously considered that their liquidity could decline to cause a rise in fundraising costs or national burden.
While Japan currently can raise necessary funds by using the existing types of government bonds and does not necessarily have to issue Green Bonds, we are watching domestic and overseas Green Bond-related trends and foreign government debt management authorities' issuance conditions and consideration of such bonds.

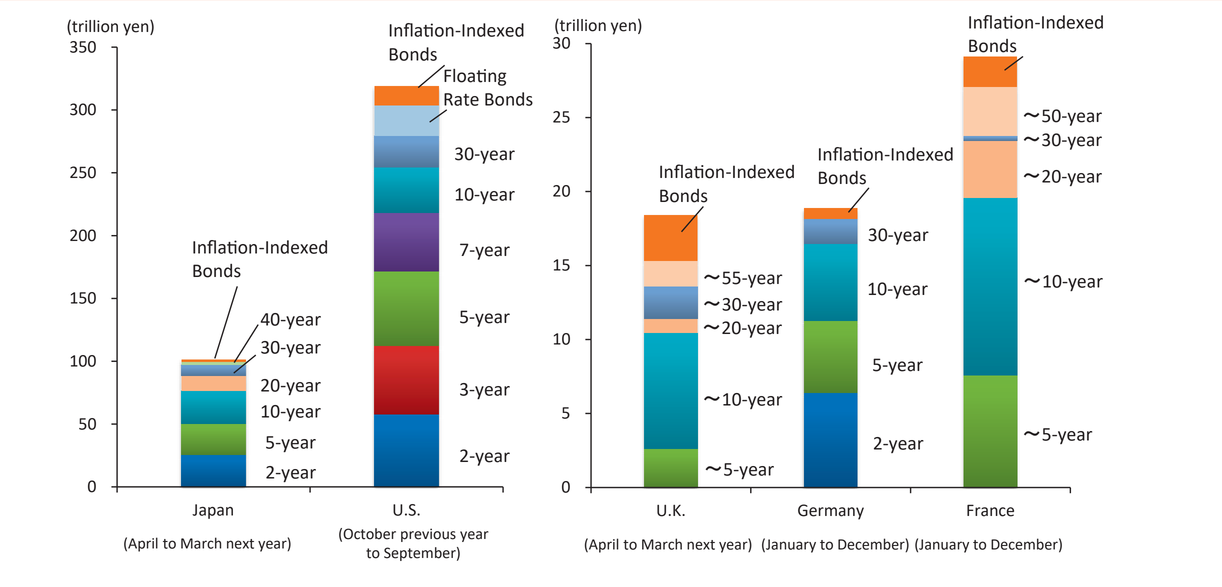
Representative non-marketable bonds are bonds for holdings only by households and other retail investors (savings-type bonds), issued in Japan, the U.S. and the U.K. The U.K. features unique non-marketable bonds that cannot be seen in other countries, including Premium Bonds that offer a monthly prize draw instead of earning interest. Meanwhile, Germany and France issued government bonds for retail investors in the past but have discontinued the issuance.
The U.S. issues a large amount of non-marketable bonds intended for government accounts including government entities and pension funds, which account for approximately 30% of its entire government debt outstanding.

Note: For Japanese government bonds for retail investors, see "Fig. 2-6 Comparison of JGBs for Retail Investors and New Over-The-Counter (OTC) Sales System" (P46).

❹ Medium to Long-Term Bond Issuance Broken down by Type

In Japan, the government issues fixed-rate coupon-bearing bonds with a maturity of 40 years at the longest by striking a balance with market trends and investor needs, etc. As shown by the examples of foreign countries, 5-year or shorter bonds account for about 50 to 60% of all government bonds in the U.S. and Germany while longer bonds account for about 60 to 70% of all such bonds in the U.K. and France. Maturity mixes thus vary widely from country to country. In addition, it is notable that the U.K. and France specify no maturity and divide maturities into rough categories in a flexible manner.
As for Inflation-Indexed Bonds in Japan, the authorities adjust the issuance amount flexibly in response to the market environment and investment needs based on dialogue with market participants. In the U.K. and France among foreign countries, Inflation-Indexed Bonds account for some 10 to 20% of their total issuance amounts being established as a major fundraising means (Fig. c6-6).

Fig. c6-6 Medium to Long-Term Bond Issuance by Type in Major Countries (FY2019)



Note 1: Other than those described above, Liquidity Enhancement Auctions are held in Japan.
Note 2: Foreign currencies are converted into yen using the following exchange rates: 1 USD =107.54 yen, 1 GBP = 133.58 yen and 1 EUR =118.62 yen (as of March 31, 2020).
Note 3: Data for U.K. are calculated on a revenue basis while data for the other countries are calculated on a nominal value basis.
Note 4: U.K. and French data include syndication issues.
(Sources) Relevant countries' debt management authorities

❺ Liquidity Maintenance/Enhancement Measures

Japan has adopted reopening for 20- and 30-Year JGB each into four issues and 40-Year and Inflation-Indexed JGB each into one issue annually in principle and for 10-Year JGB into four issues annually unless yields fluctuate wildly (the gap between the market yield and the coupon on a new issue exceeds 30 basis points). Japan has thus tried to maintain and enhance liquidity by securing a sufficient outstanding value for each issue. Through liquidity enhancement auctions, Japan also reopens issues that have structural liquidity shortages or temporary liquidity shortages due to expanding demand.

Among foreign countries, the U.S. and Germany have adopted reopening for on-the-run issues (excluding 7-year or shorter issues in the U.S.) in principle. In the U.K. and France, the debt management authorities discretionarily reopen any issues whether they are on- or off-the-run (Fig. c6-7).

In Germany, meanwhile, the authority reserves part of each debt issuance amount and gradually sells such reserves or uses them for the repo market in consideration of secondary market conditions. Countries implement various measures to maintain and enhance government bond market liquidity.

Fig.c6-7 Reopening Issuances in Foreign Countries (Excluding Discount Bonds)

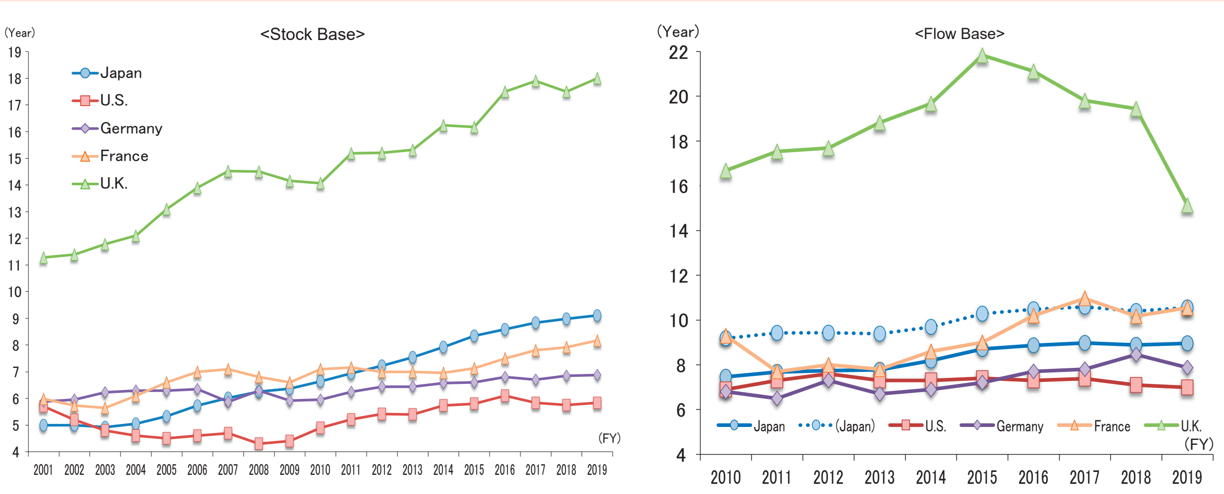
	Japan	U.S.	U.K.	Germany	France
Reopening	・5-year（Note 1） ・10-year（Note 2） ・20-year ・30-year ・40-year ・Inflation-Indexed Bonds	・10-year ・20-year ・30-year ・Floating Rate Bonds(2-year) ・Inflation-Indexed Bonds	・Medium-term（1～7-year） ・Long-term（7～15-year） ・Super Long-term（15～55-year） ・Inflation-Indexed Bonds	・2-year ・5-year ・7-year ・10-year ・15-year ・30-year ・Inflation-Indexed Bonds	・Medium-term（2～8-year） ・Long-term, Super Long-term（8～50-year）(Note 3) ・Inflation-Indexed Bonds
Without reopening	・2-year	・2-year ・3-year ・5-year ・7-year	－	－	－

Note1: Reopening issuance only in case nominal coupon is the same as that of previous issue.
Note2: "Reopening method in principle" except in case of significant change in market environments.
Note3: Green Bonds are included.
(Source) Relevant countries' debt management authorities

❻ Average Maturity

The "stock-base average maturity" is viewed as an important benchmark for assessing refunding risks. Comparison between stock-based average maturities for government bonds in Japan and major foreign countries indicates that the averages range from five to eight years in the U.S., Germany and France (the average stands at as high as about 18 years in the U.K. with super long-term issues accounting for a large share of all government bonds), while the Japanese average bottomed out at 4.9 years at the end of FY2003 and lengthened by approximately 4.2 years in 16 years to 9.1 years at the end of FY2019. The flow-based average maturity in the U.K. substantially shortened from 19.4 years in FY2018 to 15.1 years in FY2019 due to sharp issuance falls for coupon-bearing bond issues maturing in more than 40 years and for Inflation-Indexed Bond issues maturing in more than 20 years (Fig. c6-8).

Fig.c6-8 Average Maturity



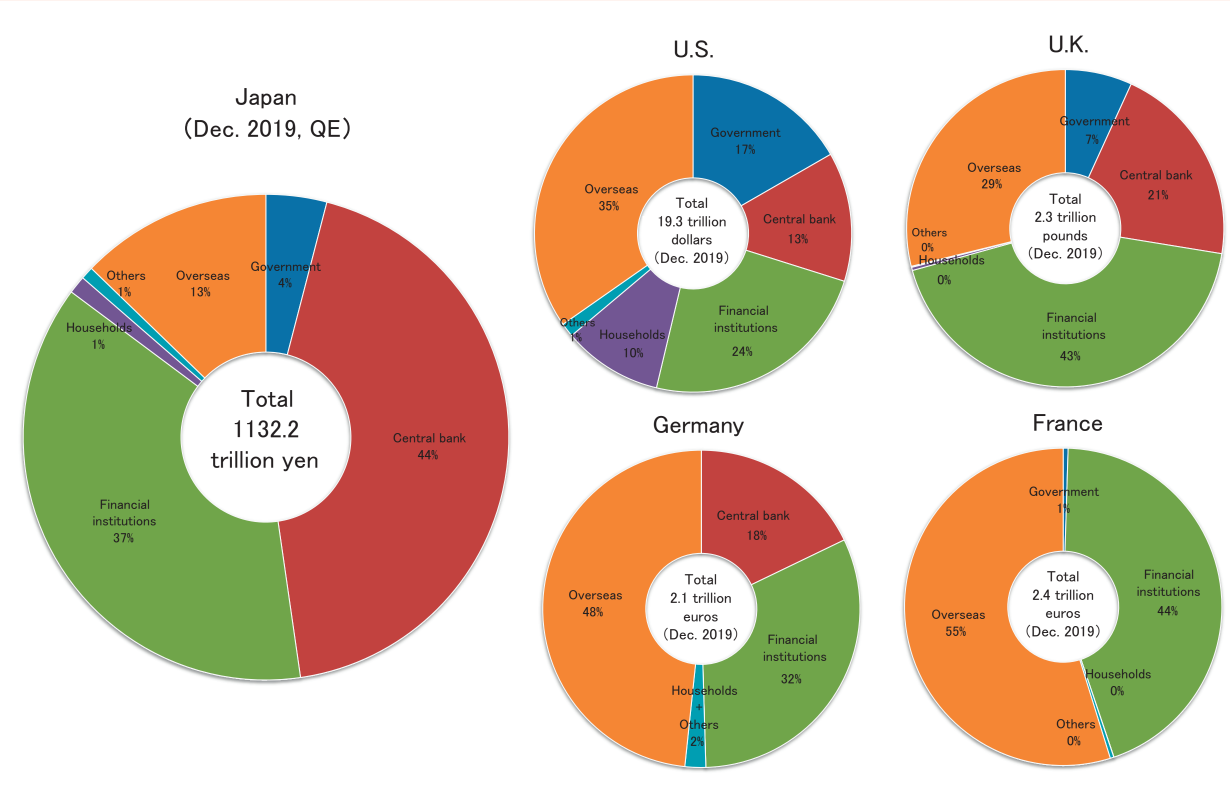
Note 1: Data for Japan represent the average weighted maturity of outstanding General Bonds including Treasury Bills and excluding Financing Bills. Data for other countries include short-term (one-year and shorter) bills.
Note 2: Data for U.K. are calculated on a revenue basis while data for the other countries are calculated on a nominal value basis.
Note 3: Data are for April-March next year for Japan alone and for January-December for other countries.
(Source) OECD, Ministry of Finance

Note 1: Data for Japan represent the average maturity of JGBs for the calendar-based issuance, including Treasury Bills and excluding Financing Bills. Data for the other countries exclude short-term (one-year and shorter) bills.
Note 2: Data for (Japan) exclude Treasury Bills for adaptation to data for the other countries.
Note 3: Data for U.K. are calculated on a revenue basis while data for the other countries are calculated on a nominal value basis.
Note 4: The fiscal year (FY) differs from country to country.
(Source) Estimated by Ministry of Finance based on the data of relevant countries' debt management authorities

❼ Breakdown by Government Bond Holders

A significantly large portion of JGBs are held by Japanese domestic investors including financial institutions. Although the percentage of JGBs held by foreign investors has been on an uptrend recently, it remains at the low level of approximately 13%. On the contrary, bonds of major foreign countries are held in large part by overseas investors who account for approximately 40% in the U.S., approximately 50% in Germany and France (Fig. c6-9).

Fig.c6-9 Breakdown of government bonds by holder category



Note: Japanese government bonds include Fiscal Investment and Loan Program Bonds and Treasury Discount Bills (T-Bills). Data for the U.S exclude holdings by government-controlled public institutions, trust funds, etc. but include non-marketable government bonds held by the Federal Government Employee Retirement Funds, etc. In Germany and France, the total covers municipal bonds (the central bank's share in France is not made available).

(Sources) Japan: Bank of Japan, U.S.: Federal Reserve Board, U.K.: Office for National Statistics, UK Debt Management Office, Germany: Deutsche Bundesbank, France: Banque de France

❽ Primary Dealer System

Primary dealers (“PDs”) originally referred to government-certified dealers in the U.S. Companies designated as PDs are entitled to directly trade with the Federal Reserve Bank of New York when it conducts open market operations and to exchange opinions by participating in periodic meetings with the authorities. At the same time, candidates for PD designation are examined beforehand for their ability to provide market-making services, financial conditions, auction participation records, etc. and after the designation, certain obligations, such as bidding for government bonds, market making and providing information to the authorities, are placed on PDs. In this way, under a certain system, companies with special responsibilities and qualifications in regard to government bond markets are designated as PDs to ensure that the liquidity, efficiency and stability of government bond markets are maintained and improved. Such system is generally called the Primary Dealer System.

Nowadays, various countries have similar systems in place, including Japan's JGB Market Special Participant Scheme. But PDs' responsibilities and qualifications vary from country to country as shown below (Fig. c6-10).

Fig.c6-10 Primary Dealer System

		Japan	U.S.	U.K.	Germany (Note1)	France
Name		JGB Market Special Participants	Primary Dealers	Gilt-edged Market Makers (GEMMs)	Bund Issues Auction Group	Spécialistes en Valeurs du Trésor (SVT)
Introduction time		2004	1960	1986	1990	1987
Number of members (as of March 2020)		21 companies	24 companies	18 companies	36 companies	15 companies
Responsibilities	Bidding	・Participation in all auctions ・5% or more of total planned issuance amount	・Participation in all auctions ・Total planned issuance amount／the number of PDs	・Participation in all auctions ・5% or more of total issuance amount over a rolling 6-month period	—	Participation in all auctions
	Purchasing	<Short-term> 0.5% or more of total planned issuance amount <Excluding Short-term> 1% or more of the said amount	—	2% or more of total issuance amount over a rolling 6-month period	0.05% or more of total issuance amount	2% or more of total issuance amount (Note 2)
	Market making	Providing sufficient liquidity to the JGB secondary market	Maintain a share of Treasury market making activity of at least 0.25 percent.	Having a 2% or more share in the secondary market	—	Having a 2% or more share in the secondary market
	Information provision	Report to the MOF	Report to the New York Fed	Report to the DMO	—	Report to the AFT
Qualifications	Exclusive participation	・Non-Price Competitive Auction Ⅰ (Up to 20% of total issuance amount) ・Non-Price Competitive Auction Ⅱ (Up to 10% of total amounts of bids accepted in the competitive auction and Non-Price Competitive Auction Ⅰ) ・Liquidity Enhancement Auction ・Buy-back Auctions, etc.	—	・Competitive Auctions ・Buy-back Auctions ・Syndication, etc.	・Competitive Auctions ・Non-Competitive Auctions ・Buy-back Auctions, etc.	・Competitive Auctions ・Non-Competitive Auctions (Up to 25% of amounts of bids accepted in the competitive auction) ・Syndication, etc.
	Regular meeting, etc.	Meeting with the MOF (About 5 times a year)	・Meeting with the New York Fed (annually) ・Meeting with U.S. Department of the Treasury (quarterly)	・Meeting with the HM Treasury (annually) ・Meeting with DMO (quarterly)	—	Meeting with the AFT (periodically)

Note 1: Germany's "Bund Issues Auction Group" is similar to the primary dealer system in other countries in that only the group members are allowed to participate in government debt auctions. But the only required qualification for a Bund Issues Auction Group member is a financial institution based in the European Union, and each member, though required to purchase a certain part of each issue, is free from any obligation to make bids in auctions or have consultations with the authorities. Therefore, the German group is viewed as different from the PD group in other countries.
Note 2: Conditions other than those in the table for France's bidding responsibilities include "2% or more of the total issuance amount over the last one year for three of four sectors (short-term, medium-term, long-term and super long-term, and Inflation-Indexed Bonds) and the average for the four sectors at 3% or more of the total issuance amount over the last one year."
(Sources) Relevant countries' debt management authorities

❾ Cooperation between Debt Management Authorities

National debt management authorities can exchange information through international conferences sponsored by international organizations.

These conferences include the OECD (Organization for Economic Cooperation and Development) Working Party on Public Debt Management, the IMF (International Monetary Fund) Public Debt Management Forum, the World Bank Government Borrowers Forum and the ADB (Asian Development Bank) Regional Public Debt Management Forum.

The Japanese debt management authorities have attended these international conferences as much as possible. At most of these conferences, Japanese debt management authority officials have given presentations on Japan's debt management policies and proactively shared information and opinions with their foreign counterparts on debt management policies. Japan has served as a member of the steering committee for the OECD Working Party on Public Debt Management.