2 What is Debt Management Policy?

(1) Overview

Under the FY2024 budget (April-March), the central government plans to issue JGBs equivalent to 182.0 trillion yen, posting a decrease of 23.8 trillion yen from the initial level for FY2023, but still at an extremely high level. Construction Bonds and Special Deficit-Financing Bonds to provide General Account revenues decrease by 0.2 trillion yen from the initial level for the previous year to 35.4 trillion yen. On the other hand, JGBs outstanding at the end of FY2023 totaled up to 1,148.3 trillion yen.

The government raises funds from Financing Bills and Borrowings as well as JGBs. If Financing Bills and Borrowings are included, outstanding government debts excluding government-guaranteed debt came to 1,297.2 trillion yen. Moreover, the government gives guarantees to Incorporated Administrative Agencies in order for them to carry out funding to implement public projects, with this government-guaranteed debt totaling 29.5 trillion yen (Figures are as of the end of FY2023).

The government's fundraising amount or flow has become enormous. Outstanding debts on a stock basis have been increasing continuously. Government debt management affects not only choices of financial assets for economic entities such as corporations and households, but also the flow of funds on a macro-scale, which would eventually influence interest rates. In turn, changes to market interest rates influence government funding activities and the activities of all economic entities.

Based on these points, the government, while trying to mitigate fiscal burden, implements JGB issuance, absorption, distribution and redemption measures to allow government debts (JGBs, Financing Bills, Borrowings, Government-Guaranteed Debt and Subsidy Bonds) to be smoothly accepted at each stage of the national economy. These measures represent "debt management policy." In Japan, based on the following basic goals for the JGB Management Policy, the government carefully implements "communications with the market" through various meetings for the formulation and operation of the JGB Issuance Plan, tries to base JGB issuance fully on market needs, and tackles the diversification of JGB holders by:

(1) To ensure the smooth and secure issuance of Japanese Government Bonds

(2) To minimize medium- to long-term fundraising costs

Meanwhile, any excessive response to temporary or short-term changes in market demand could affect market transparency and predictability for market participants, leading to a rise in medium- to long-term fundraising costs. While a massive government debt issuance is expected in future, the government will try to issue JGBs in a more stable and transparent manner by identifying medium- to long-term demand trends.

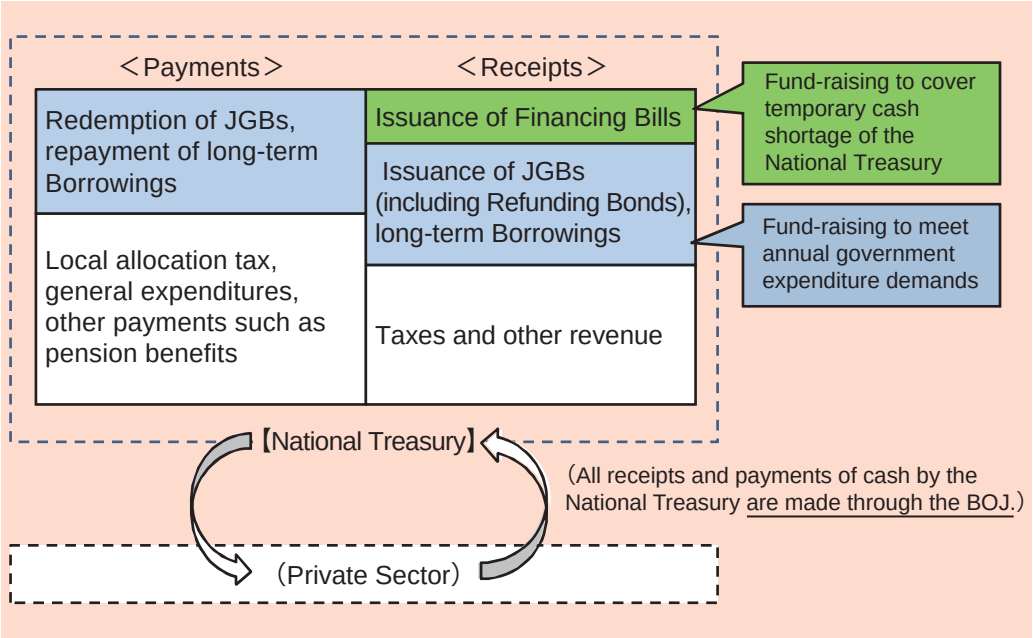
The "Guidelines for Public Debt Management," published by the International Monetary Fund and the World Bank in 2001, describes sovereign debt management as "the process of establishing and executing a strategy for managing the government's debt in order to raise the required amount of funding" and the objective of sovereign debt management as being "to raise the required amount of funding at the lowest possible cost over the medium to long term, consistent with a prudent degree of risk."

(2) Framework of "Government Funding Activities"

Government expenditures should fundamentally be covered by tax and other revenues for the year incurred. To satisfy expenditure demands that cannot be covered by these revenues, the government issues JGBs or carries out Borrowings (☞). The government also issues Financing Bills to cover temporary cash shortages for daily cash management of the National Treasury. The following discusses the framework of these government fundraising activities.

☞ Unlike JGBs, Borrowings are a form of funding that does not involve the issuing of securities.

Fig.1 National Treasury Receipts and Payments



The central government budget consists of the General Account and 13 Special Accounts (as of April 1, 2024), and all receipts and payments in these accounts are managed through the Bank of Japan (BOJ). The government smoothly implements spending within the budget by using JGBs and Borrowings to meet expenditure demand that cannot be covered by tax and other revenues and by issuing Financing Bills to cover temporary cash shortages of the National Treasury as follows.

A. JGBs and Borrowings to meet annual government expenditure demand

The government issues JGBs or carries out Borrowings to satisfy expenditure demand that cannot be covered by tax and other revenues and records funds raised through JGBs and Borrowings as revenues. The government smoothly implements budget spending as needed, by raising funds in this manner.

In addition to planning the government debt management policy, the Financial Bureau of the Ministry of Finance implements the policy by conducting auctions, issuance and redemption of JGBs, and auctions for Borrowings.

B. Financing Bills to cover temporary cash shortages for the National Treasury

Government ministries, agencies or special accounts carry out large quantities of fiscal activities each day. All receipts and payments are made through the BOJ, for integrated

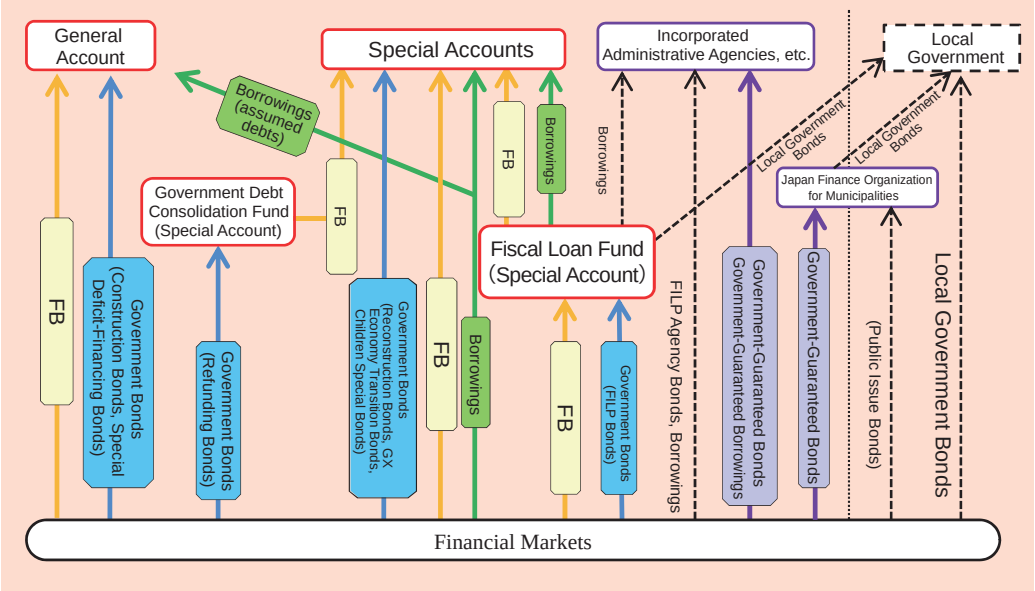
handling in the National Treasury. As explained in section A, the government raises funds with JGBs and Borrowings to meet expenditure demand that cannot be covered by tax and other revenues. However, the government encounters temporary cash shortages and surpluses due to lags for day-to-day receipts and payments of National Treasury funds. The Financial Bureau of the Ministry of Finance makes adjustments through the issuance of Financing Bills in the case of shortage, and through the temporary use of treasury surplus in the case of surplus ("Cash Management in the National Treasury") (☞).

☞ The term "revenue" refers to all income in one fiscal year and the term "income" means received funds that serve as the source of payment to meet the demands arising from the various levels of the State. Financing Bills, which are issued to manage the National Treasury, are not counted as revenue, since Financing Bills are redeemed with the revenue of the same fiscal year.

(3) Debts with Public Characteristics

Besides government debt, there are several forms of public debt including local government bonds and the debts of Incorporated Administrative Agencies, etc. This public debt affects government debt management through the market interest rate formation mechanism.

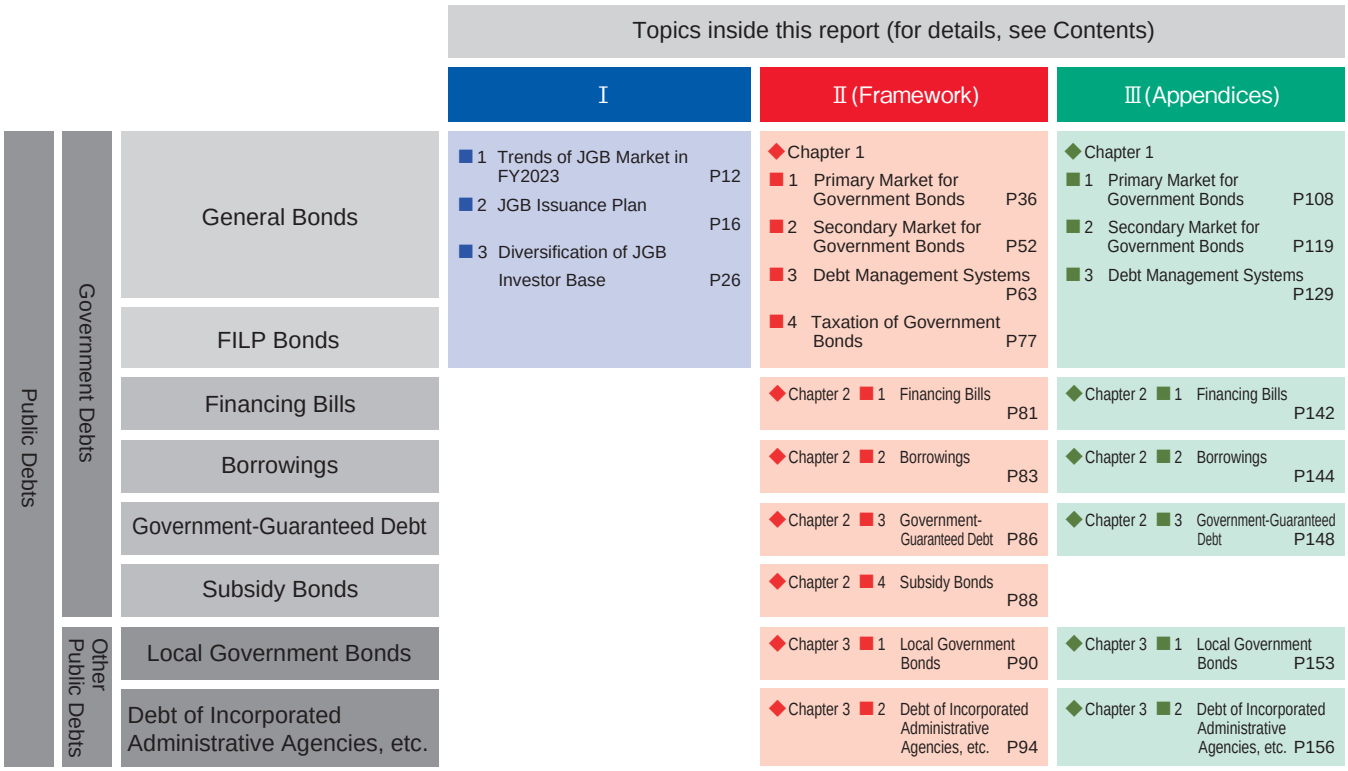
Fig.2 Public Debts (Conceptual Diagram)



Note 1: The highlighted area represents government debts.
Note 2: In addition to these debts, there are government bonds that are held by the Bank of Japan as a means of open market operations.
Note 3: The Government-Guaranteed Bonds issued by the Japan Finance Organization for Municipalities, are issued only for refunding of Government-Guaranteed Bonds converted from the former Japan Finance Corporation for Municipal Enterprises.

Based on the above, the chart below provides an overview of various elements of public debt and lists the relevant reference points in this report.

Fig.3 Various Elements of Public Debts and Relevant Reference Points in This Report



Box 1 JGB Yields

Japanese government bond is a bond the government issues by promising to pay a certain amount of money after a certain period of time. The MOF presets a coupon and maturity for a JGB issuance. While the JGB par value (an amount that a JGB holder will receive upon redemption) remains unchanged, a JGB price at which market participants buy fluctuates depending on the conditions, including supply and demand. For example, a JGB with a par value of 100 yen may be priced at 95 yen, below the par value, or at 105 yen, above the par value. JGB yield is an annual percentage rate of return on the purchase price.

In the case a market participant buys a JGB with the par value of 100 yen, for example, the investment return includes the following:

(1) An annual interest income (an income gain represented by a coupon), and

(2) A gap between the par value and the purchase price (capital gain or loss) that is annualized.

The JGB yield is represented by the following equation.

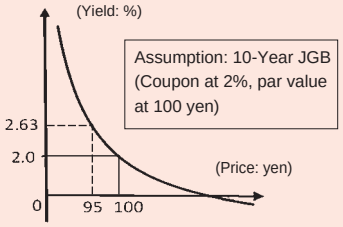
Fig. B1-1 Calculating Yield

$$\text{Yield} = \frac{\text{(1) Annual interest income (yen)} + \text{(2)}\ \dfrac{\text{Par value (100 yen)} - \text{Purchase price (yen)}}{\text{Maturity (years)}}}{\text{Purchase price (yen)}} \times 100$$

(Yield to maturity, simple interest, before tax, %)

The annual interest income in (1) is fixed by the coupon determined upon issuance and will remain unchanged until redemption. However, the purchase price in (2) fluctuates depending on the purchase timing. Therefore, the JGB yield fluctuates. The graph on the right (Fig. B1-2) indicates the relationship between the JGB price and yield in the above equation for a 10-Year JGB that has a 2% coupon and a par value of 100 yen. As the purchase price falls (from 100 yen to 95 yen), the yield rises (from 2.0% to 2.63%). Conversely, as the price rises (from 95 yen to 100 yen), the yield declines (from 2.63% to 2.0%).

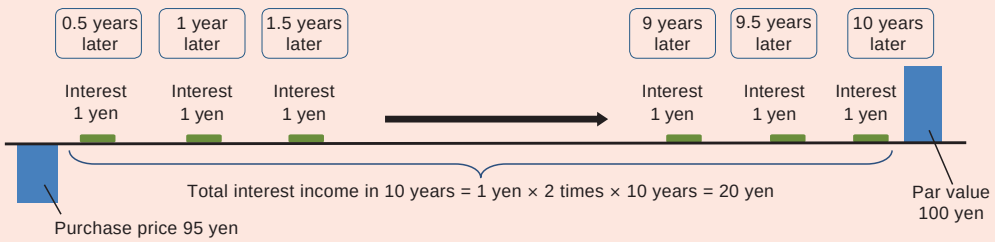
Fig. B1-2 Relationship Between Yield and Price



Note: The figure is for illustrative purposes only.

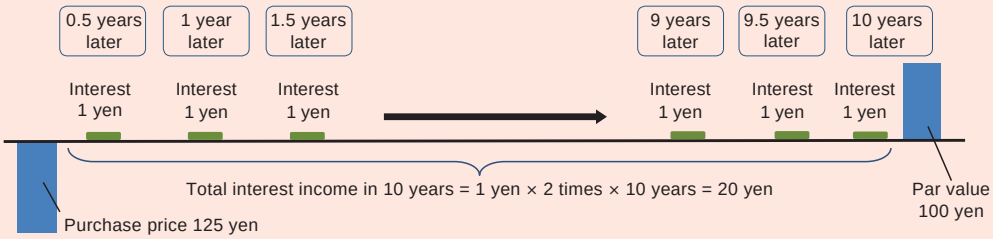
The figure below (Fig. B1-3) shows a cash flow indicating fund receipts and payments from purchasing to redemption for a 10-Year JGB that has a 2% coupon and a par value of 100 yen. If an investor buys the 10-Year JGB at a price of 95 yen and holds it until its redemption, for example, the investor will get a total investment return of 25 yen including the interest income of 20 yen and the gap of 5 yen between the par value and the purchase price. The annual yield (simple interest) comes to approx. 2.63% with the annual interest income of 2 yen and the annual capital gain of 0.5 yen.

Fig. B1-3 Bond Investment Cash Flow
(10-Year JGB priced at 95 yen that has a 2% coupon and a par value of 100 yen)



In recent years, JGB yields had been negative at times. If an investor buys a 10-Year JGB that has a 2% coupon and a par value of 100 yen at a price of 125 yen and holds it until its redemption, for example, the combination of the interest income (20 yen) and the gap (-25 yen) between the par value and the purchase price will bring about a loss (-5 yen) (Fig. B1-4). The combination of the annual interest income (2 yen) and the annual capital loss (-2.5 yen) brings a yield (simple interest) of minus 0.40%.

Fig. B1-4 Bond Investment Cash Flow
(10-Year JGB priced at 125 yen that has a 2% coupon and a par value of 100 yen)



If an investor buys a JGB with a negative yield and holds it until its redemption, the sum of the interest income and the par value will slip below the purchase price, bringing about a loss. However, if the investor sells the JGB before its redemption and the sum of its sale price and the interest income received up until the time of the sale exceeds its initial purchase price, then the investor will net a gain.

Besides the "simple interest" as described above, the yield calculation method may take the form of "compound interest" reflecting the reinvestment of the interest income.

Box 2 “Simple Interest” and “Compound Interest”

There are two methods of calculating “yield”: “simple interest” method and “compound interest” method, and which method is used varies depending on the country and product. Simple interest is a method in which interest is calculated only on the principal that is deposited, whereas compound interest is a method in which the accrued interest is added to the principal, which is then used as the new principal for calculating interest. Normally, for the same interest rate, the total amount of interest income would be greater if compound interest method is used.

In Box 1 "JGB Yields," the explanation is based on simple interest. In the JGB market, yields are generally expressed as "simple interest yields," while in general, they are expressed as "compound interest yields" in the U.S. and European government bonds market.

For example, if you purchase a JGB with the par value of 100 yen, then the relationship between price and compound interest yield can be represented by the following equation.

Fig. B2-1 Relationship between compound interest yield (yield to maturity, before tax, %) and price

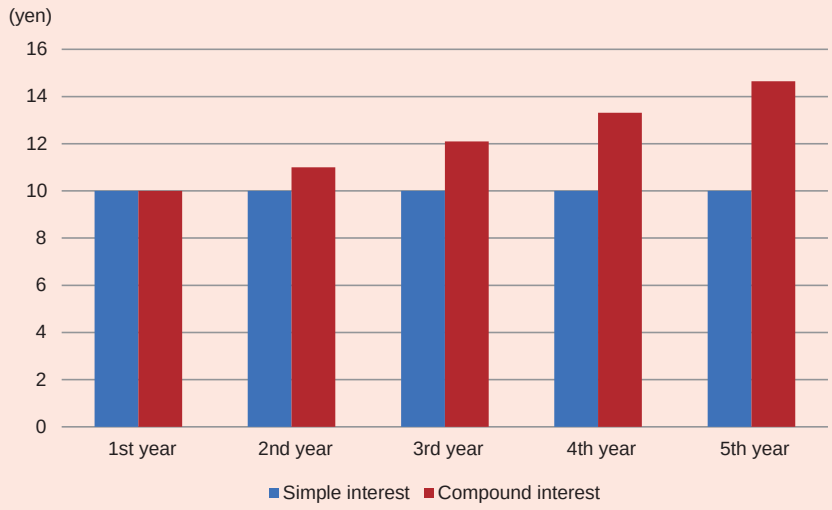
$$\text{Purchase price} = \sum_{t=1}^{\text{Maturity (years)}} \frac{\text{Interest income at time t (yen)}}{(1 + \text{compound interest yield})^{t}} + \frac{\text{Par value (100 yen)}}{(1 + \text{compound interest yield})^{\text{Maturity (years)}}}$$

(Reference) Relationship between simple interest yield (yield to maturity, before tax, %) and price

$$\text{Purchase price} = \frac{\text{Annual interest income (yen)} \times \text{Maturity (years)} + \text{Par value (100 yen)}}{\text{Simple interest yield} \times \text{Maturity (years)} + 100} \times 100$$

The figure below (Fig. B2-2) is a cash flow diagram of investment return (interest income) for a 5-Year Bond (par value of 100 yen) with a 10% coupon (assuming annual interest payments).

Fig. B2-2 Comparison of investment returns between simple interest and compound interest



For a simple interest investment, interest income of 10 yen will accrue as a fixed amount each year, which is calculated from the par value (100 yen) x the coupon rate (10%). For a compound interest investment, the interest income for each year is as follows:

1st year: Par value (100 yen) x coupon rate (10%) = 10 yen
2nd year: Par value (100 yen + 10 yen) x coupon rate (10%) = 11 yen
3rd year: Par value (100 yen + 10 yen + 11 yen) x coupon rate (10%) = 12.1 yen
4th year: Par value (100 yen + 10 yen + 11 yen + 12.1 yen) x coupon rate (10%) = 13.31 yen
5th year: Par value (100 yen + 10 yen + 11 yen + 12.1 yen + 13.31 yen) x coupon rate (10%) = 14.641 yen

There is a large difference in investment return (interest income): 50 yen from simple interest, or 61.051 yen from compound interest. The "compound effect," in which the profits obtained from investment funds grow as they are then reinvested, is characterized by the fact that, the higher the interest rate and the longer the investment period, the greater the effect becomes. Compound interest investment is recognized as one of the methods of asset formation for the future.

Note 1: Compound interest yields are also used in Japan for STRIPS and, in principle, for WI transactions (When-Issued transactions) for bonds with fixed-rate coupons.

Note 2: The "Relationship between compound interest yield and price" is explained on the assumption that interest is paid once a year. If interest is paid twice a year, then the equation would be more complicated because it requires semiannually calculating the compound interest, with half a year as one interest period.