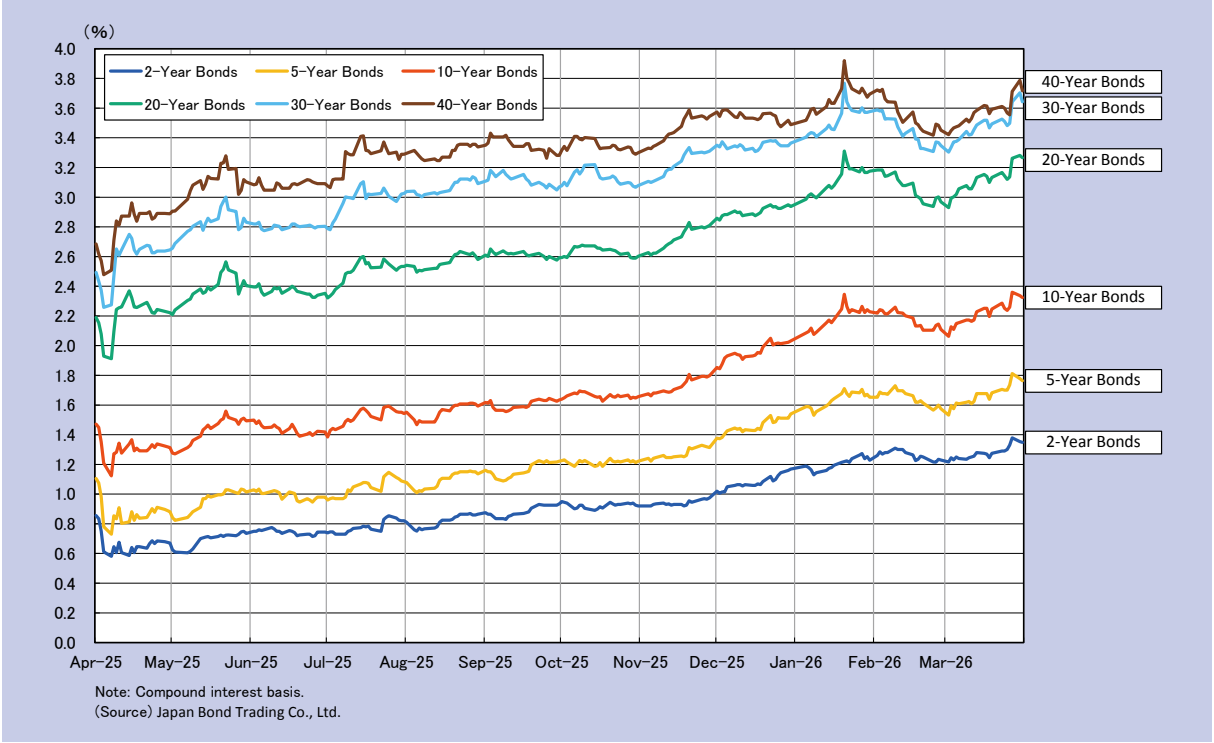
1 Trends of the JGB Market in FY2025

(1) Overview

While the BOJ has continued to reduce the amount of JGB purchases since FY2024, JGB market fluctuates on a daily basis due to various factors, including domestic economic and price trends, JGB supply-demand balance, growing geopolitical risks, and views on public finance. In FY2025, JGB yields have generally increased alongside the following events.

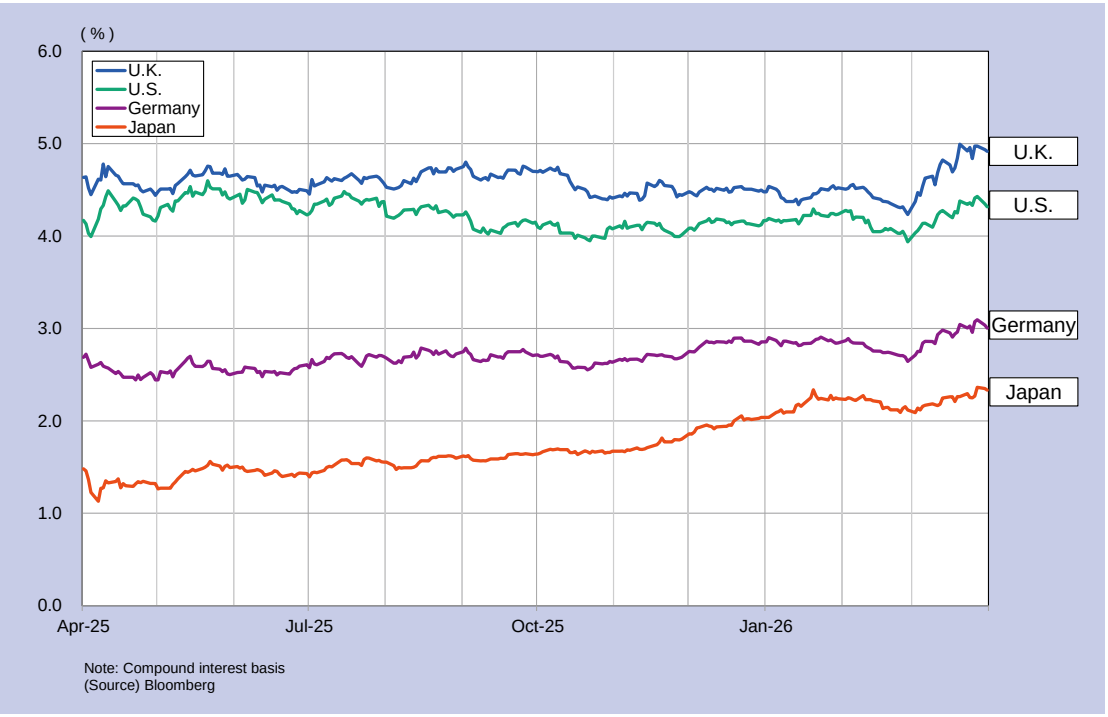
- April 2025: U.S. announcement of its tariff policy
- June 2025: Revision of the JGB Issuance Plan
- July 2025: House of Councillors election
- October 2025: Liberal Democratic Party presidential election
- December 2025: Policy interest rate raised by the BOJ (around 0.50% → around 0.75%)
- January to February 2026: Dissolution of the House of Representatives and general election
- From the end of February 2026: U.S. and Israeli attacks on Iran

Fig. 2-1 JGB Yield Trends by Maturity



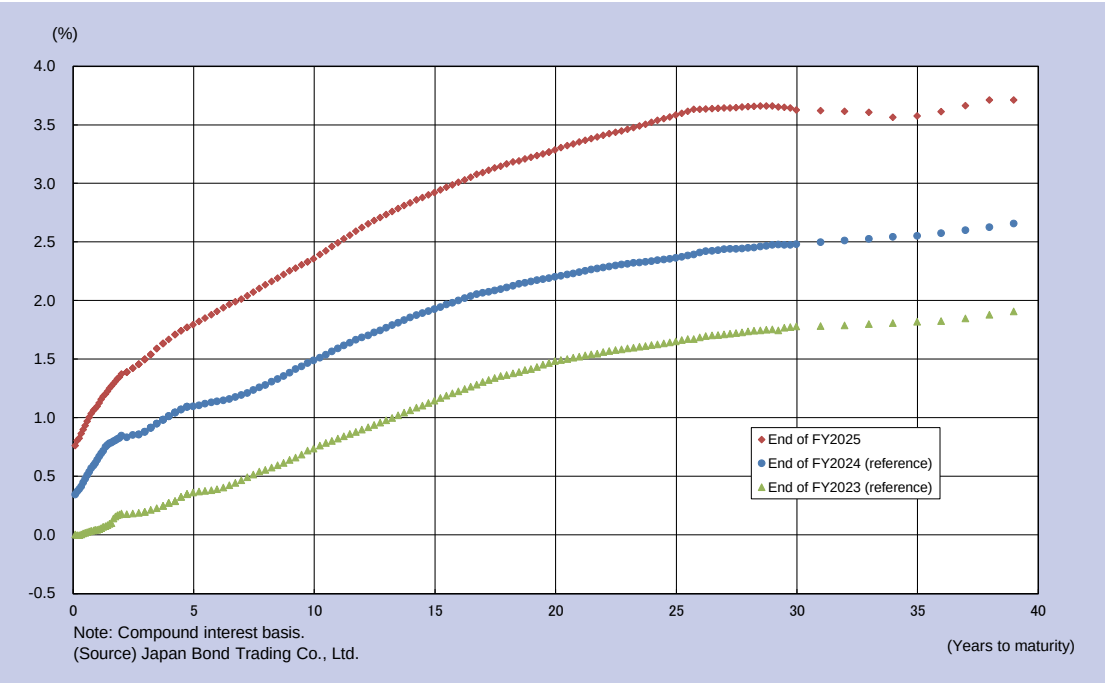
Note: Compound interest basis.
(Source) Japan Bond Trading Co., Ltd.

Fig. 2-2 Changes in 10-Year Government Bond Yields



Note: Compound interest basis
(Source) Bloomberg

Fig. 2-3 Changes in Yield Curve



Note: Compound interest basis.
(Source) Japan Bond Trading Co., Ltd.

(2) Investor Trends

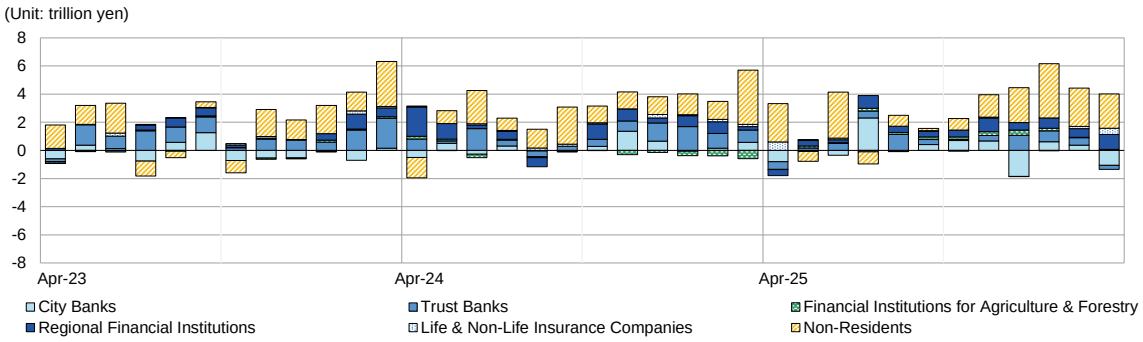
In FY2025, looking at investment trends in JGBs by investor category, a wide range of investors, including foreign investors, institutions managing pension reserves (hereinafter referred to as "pension funds"), city banks, and regional financial institutions, were net buyers of medium- to long-term government bonds (2-Year Bonds, 5-Year Bonds, and 10-Year Bonds (☞)). In response to growing expectations for an interest rate hike by the BOJ and a rise in the expected terminal rate, city banks were net sellers during the April–June quarter and at the end of the October–December quarter and the January–March quarter, but other domestic investors

☞ 5-Year Bonds include Japan Climate Transition Bonds, and 10-Year Bonds include Japan Climate Transition Bonds and Inflation-Indexed Bonds.

were mostly net buyers in months other than April. When short- and medium-term interest rates declined, following the U.S. introduction of reciprocal tariffs in April, city banks, pension funds, and regional financial institutions became net sellers, whereas foreign investors became substantial net buyers. However, as interest rates turned to a rise due to a 90-day suspension of the reciprocal tariffs, domestic investors, other than city banks, generally remained net buyers from May onward. On the other hand, city banks continued to be net sellers until June.

When Japan and the U.S. reached an agreement on reciprocal tariffs in July, and the effects of the tariffs gradually became clear, expectations for interest rate hikes slowly grew and interest rates continued to rise. Most domestic investors continued to be net buyers in and after July in a positive response to improved interest rates. Due to a relative rise in yen interest rates in response to growing expectations for interest rate cuts in the U.S. from August and actual successive interest rate cuts from October, foreign investors continued to be net buyers. Interest rates continued to rise after the Liberal Democratic Party presidential election and the appointment of a new prime minister, and in December, the BOJ raised the policy interest rate to approximately 0.75%. Amid growing expectations for a BOJ rate hike, city banks became net sellers, while other investors remained net buyers. In particular, in response to the successive rate cuts in the U.S. until December, foreign investors' net buying accelerated even after the start of the new year. In March, when interest rates rose due to inflationary concerns on the back of high crude oil prices resulting from rising tension in the Middle East, city banks and pension funds became net sellers, whereas other investors became substantial net buyers.

Fig. 2-4 Net Buying/Selling of Medium- to Long-Term JGBs by Investor Category

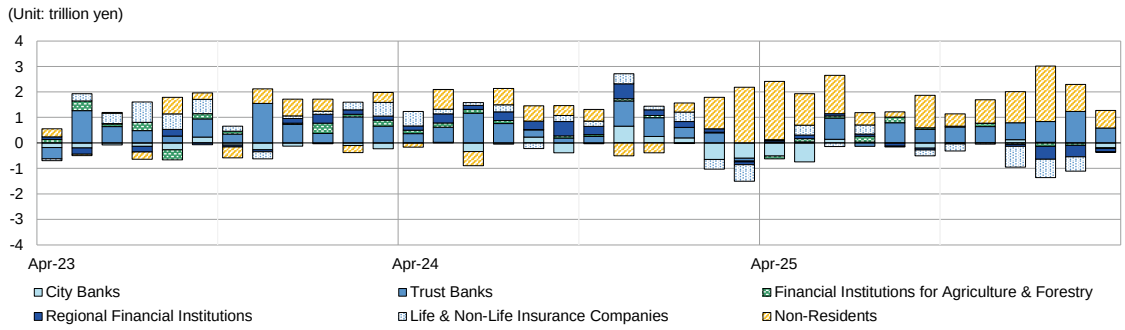


Note: Medium- to long-term JGBs are 2-Year, 5-Year, and 10-Year JGBs. Investors' direct purchases through auctions are excluded. Trust Banks' trading covers their proprietary trading as well as transactions on behalf of pension funds, etc. "Regional Financial Institutions" includes Shinkin Banks.
(Source) Japan Securities Dealers Association

Next, super long-term government bonds (20-Year Bonds, 30-Year Bonds, and 40-Year Bonds) were bought by pension funds and foreign investors, life insurance companies, and regional financial institutions. Pension funds, in order to maintain a fixed asset allocation ratio in their portfolios, are assumed to have sold domestic and foreign stocks that were relatively performing well due to high stock prices, while making significant net purchases of super long-term bonds that were relatively underperforming just as medium- to long-term JGBs. Foreign investors made significant net purchases as rising interest rates relatively increased the attractiveness of investment in super long-term JGBs. In particular, net purchases by foreign investors further accelerated toward the latter half of the fiscal year when interest rates on super long-term bonds rose higher.

On the other hand, life insurance companies had already completed purchases of super long-term bonds intended for responding to the new capital regulation that was to be introduced at the end of March 2026. Thus, in response to a rise in interest rates, the companies sold low-coupon bonds of low unit prices that were purchased in the past, replacing them with high-coupon bonds of high unit prices, but they continued to be net sellers on a face value basis from August onward. Regional financial institutions also remained net sellers from August onward due to similar rotation selling.

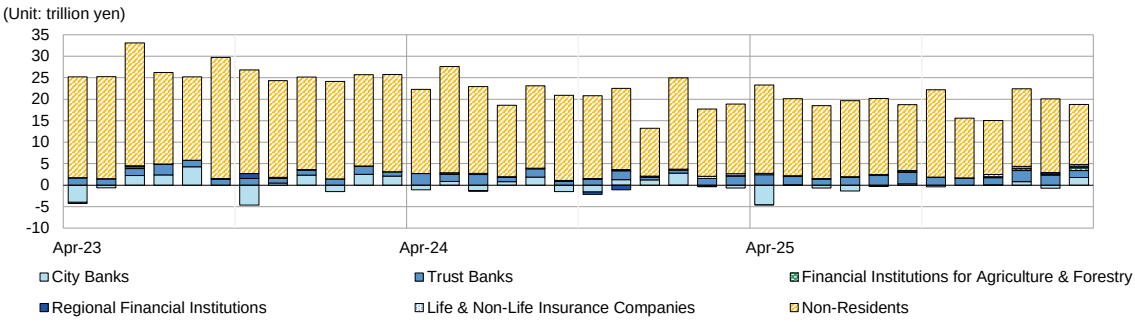
Fig. 2-5 Net Buying/Selling of Super Long-Term JGBs by Investor Category



Note: Super long-term JGBs are 20-Year, 30-Year, and 40-Year JGBs. Investors' direct purchases through auctions are excluded. Trust Banks' trading covers their proprietary trading as well as transactions on behalf of pension funds, etc. "Regional Financial Institutions" includes Shinkin Banks.
(Source) Japan Securities Dealers Association

Foreign investors continued to be the largest buyers of short-term JGBs (Treasury Discount Bills). As the availability of premiums to dollar providers in the currency basis swap market narrowed due to the BOJ's rate hike and the U.S. successive rate cuts, the net buying volume decreased from the previous fiscal year. On the other hand, investment trusts, including MRFs (Money Reserve Funds), continued to purchase T-Bills as investment targets of short-term funds, and after the BOJ raised the policy interest rate to approximately 0.75% in December, pension funds and regional financial institutions also increased net purchases.

Fig. 2-6 Net Buying/Selling of Short-Term JGBs by Investor Category



Note: Short-term JGBs are T-Bills. Investors' direct purchases through auctions are excluded. Trust Banks' trading covers their proprietary trading as well as transactions on behalf of pension funds, etc. "Regional Financial Institutions" includes Shinkin Banks.
(Source) Japan Securities Dealers Association

Fig. 2-7 Trends in 3-Month Dollar-Yen Basis Swaps

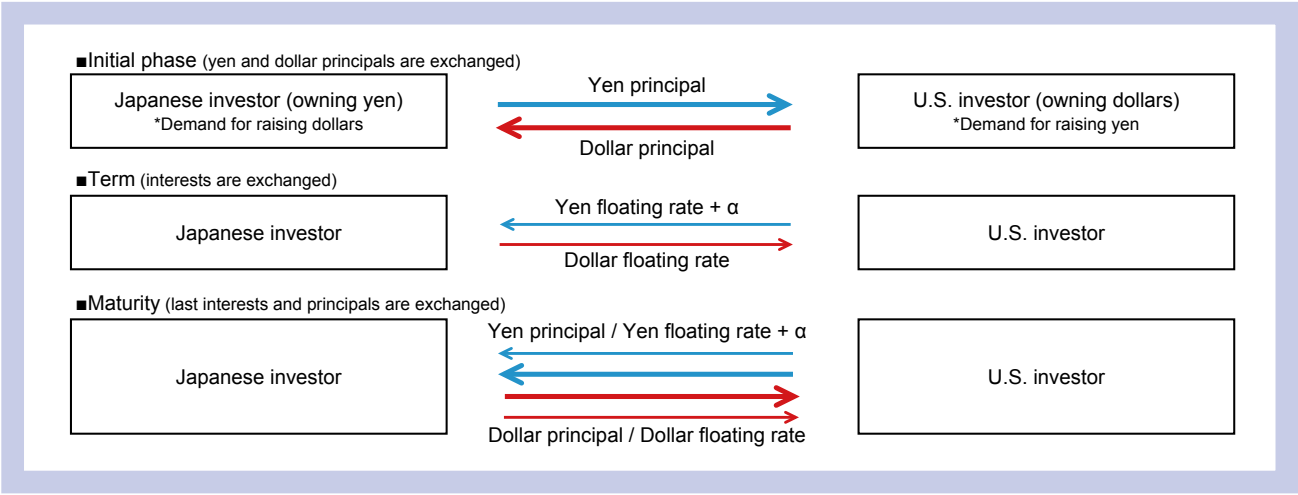
(Reference) Mechanism of Investment Using Currency Basis Swaps

A currency basis swap is a transaction in which the principal amounts in different currencies are exchanged at a predetermined exchange rate and the floating interest rates arising in each currency over the period are swapped. Fig. 2-8 below presents an overview of trading in the dollar-yen currency basis swap (dollar-yen basis) as an example. In the figure, α is the so-called basis spread. Here, "spread" refers to a premium on a yen interest rate (annual rate), which fluctuates depending on supply and demand between the currencies.

If demand is strong for raising yen even at the cost of an increase in yen interest payments, for instance, upward pressure is exerted on α. If demand is strong for raising dollars even at the cost of a decline in yen interest receipts, downward pressure is exerted on α.

In recent years, due to strong demand for dollar funding, α has generally remained negative across most tenors in the dollar-yen basis. This condition, where α is negative, is expressed as a "premium in dollar funding is occurring."

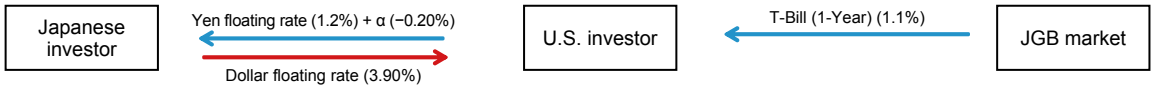
Fig. 2-8 Scheme Diagram of Currency Basis Swap (Dollar-Yen Basis Swap) (In the Case of a 1-Year Maturity)



For instance, if the one-year α (the basis spread of the dollar-yen basis with a one-year maturity) is assumed to be −0.20% (−20bps), when U.S. investors utilize the one-year dollar-yen basis as shown in Fig. 2-8, U.S. investors will incur a "receiving dollar floating rate" and "paying yen floating rate plus α (−20 bps)" over the course of one year. Here, the fact that U.S. investors pay −20 basis points in interest implies that they receive an equivalent amount in interest. Considering various interest rate levels, U.S. investors, in pursuit of receiving this 20 basis points, would achieve a higher yield by swapping dollars for yen to invest in Japanese government bonds rather than investing in U.S. Treasuries.

Fig. 2-9 Comparison Between a U.S. Investor Swapping Dollars to Yen and Investing in JGBs and an Investor Investing in U.S. Treasury Securities (Using 1-Year Dollar-Yen Basis Swap) (Transactions in the Mid-Term Portion of Fig. 2-8)

(1) 1-Year dollar-yen basis swap + T-Bill (1-Year JGB) purchase



→ The U.S. investor earns an annual yield of **4.00%** (= 3.90% − (1.2% + (−0.20%)) + (1.1%))

(2) 1-Year U.S. Treasury purchase

→ The U.S. investor earns an annual yield of **3.70%**.

→ Comparison of (1) and (2) indicates a yield gap of **0.30%** (= 4.00% − 3.70%)

Note 1: Although the yen floating rate and the dollar floating rate in the descriptions above are assumed to remain unchanged, they actually fluctuate.
Note 2: Interest rate swap transactions for fixing the yen floating rate and the dollar floating rate are omitted here to simplify the explanation.

Box 1 JGB Yields

Japanese government bonds are bonds that 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 (the amount that a JGB holder will receive upon redemption) remains unchanged, the 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.

When 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.

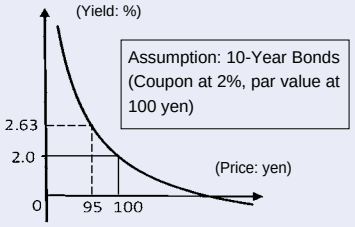
Fig. B1-1 Calculating Yield

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

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

The annual interest income in (1) is fixed by the coupon determined upon issuance and remains unchanged until redemption. However, the purchase price in (2) fluctuates depending on the purchase timing. Therefore, the bond yield fluctuates. The graph on the right (Fig. B1-2) indicates the relationship between the bond price and yield in the above equation for a 10-Year Bonds 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%).

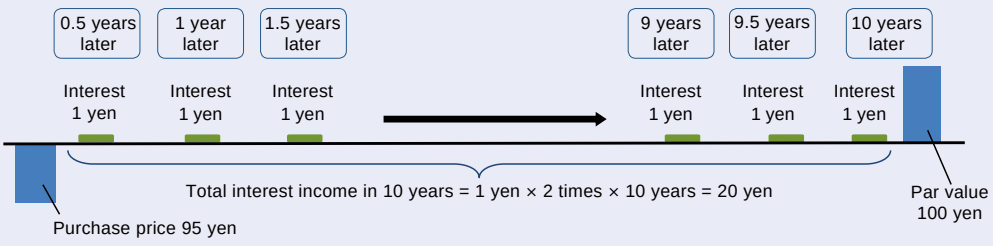
Fig. B1-2 Relationship Between Yield and Price



Note: The figure is for illustrative purposes only.

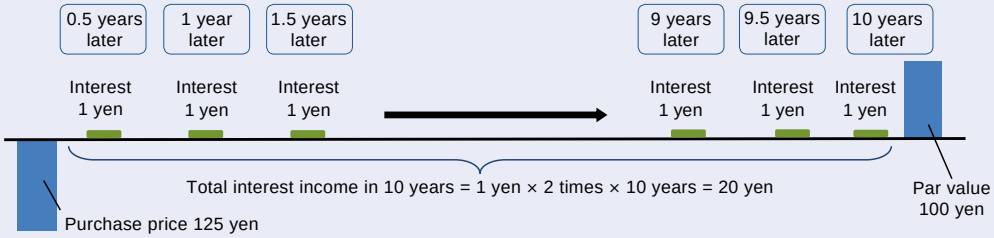
The figure below (Fig. B1-3) shows a cash flow indicating fund receipts and payments from purchasing to redemption for a 10-Year Bonds that has a 2% coupon and a par value of 100 yen. If an investor buys the 10-Year Bonds at a price of 95 yen and holds it until its redemption, for example, the investor 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 an annual interest income of 2 yen and an annual capital gain of 0.5 yen.

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



On the other hand, if an investor buys a 10-Year Bonds 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 Bonds 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 “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

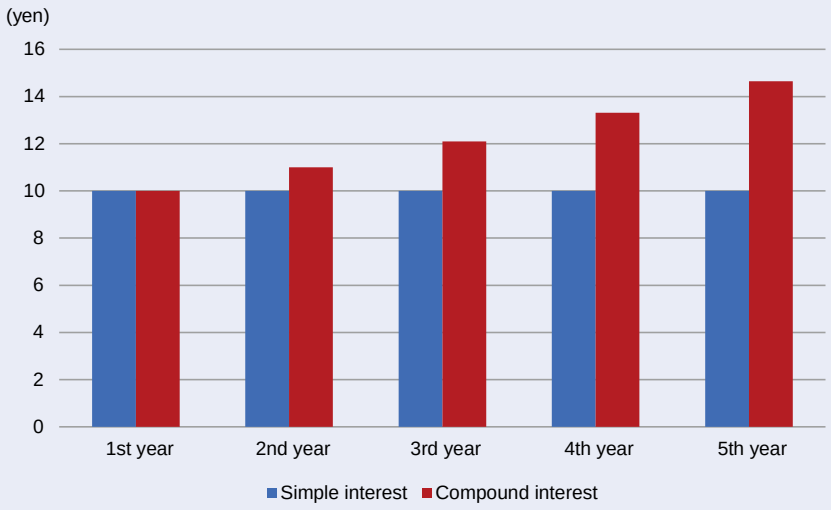
$$\text{Purchase price} = \sum_{t=1}^{\text{Maturity (years)}} \frac{\text{Interest income at time t (yen)}}{(1 + \text{compound interest yield})^{t}} + \frac{\text{Par value (100 yen)}}{(1 + \text{compound interest yield})^{\text{Maturity (years)}}}$$

(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) × the coupon rate (10%). For a compound interest investment, the interest income for each year is as follows:

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