

Mizuho Economic Outlook & Analysis

The Japanese Economy's Adaptability to “A World with Interest Rates”

November 21, 2023

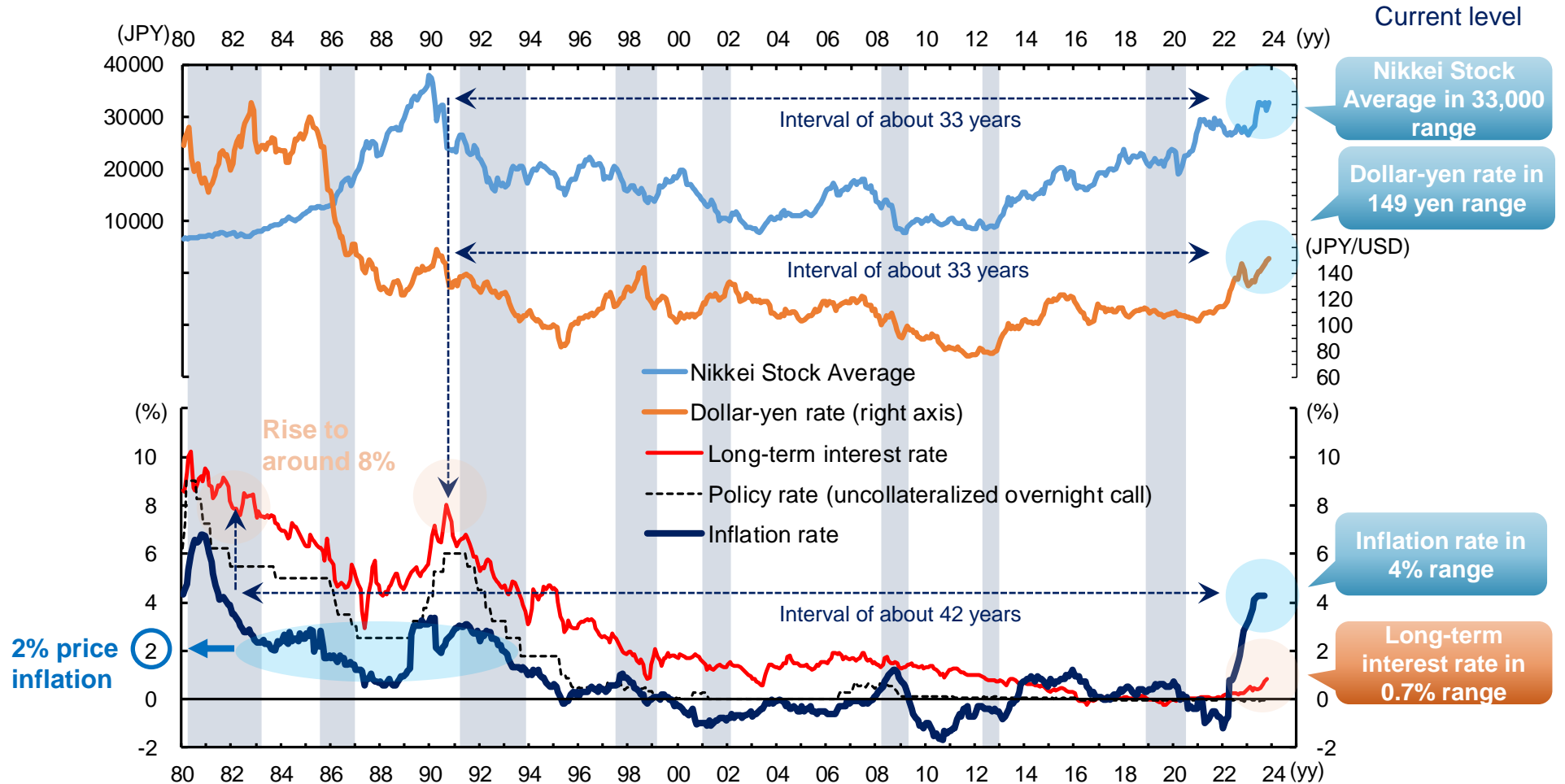
Mizuho Research & Technologies, Ltd.

MIZUHO

The Mizuho logo consists of the word "MIZUHO" in a bold, white, sans-serif font, positioned above a thin, white, curved line that resembles a stylized wave or a bridge.

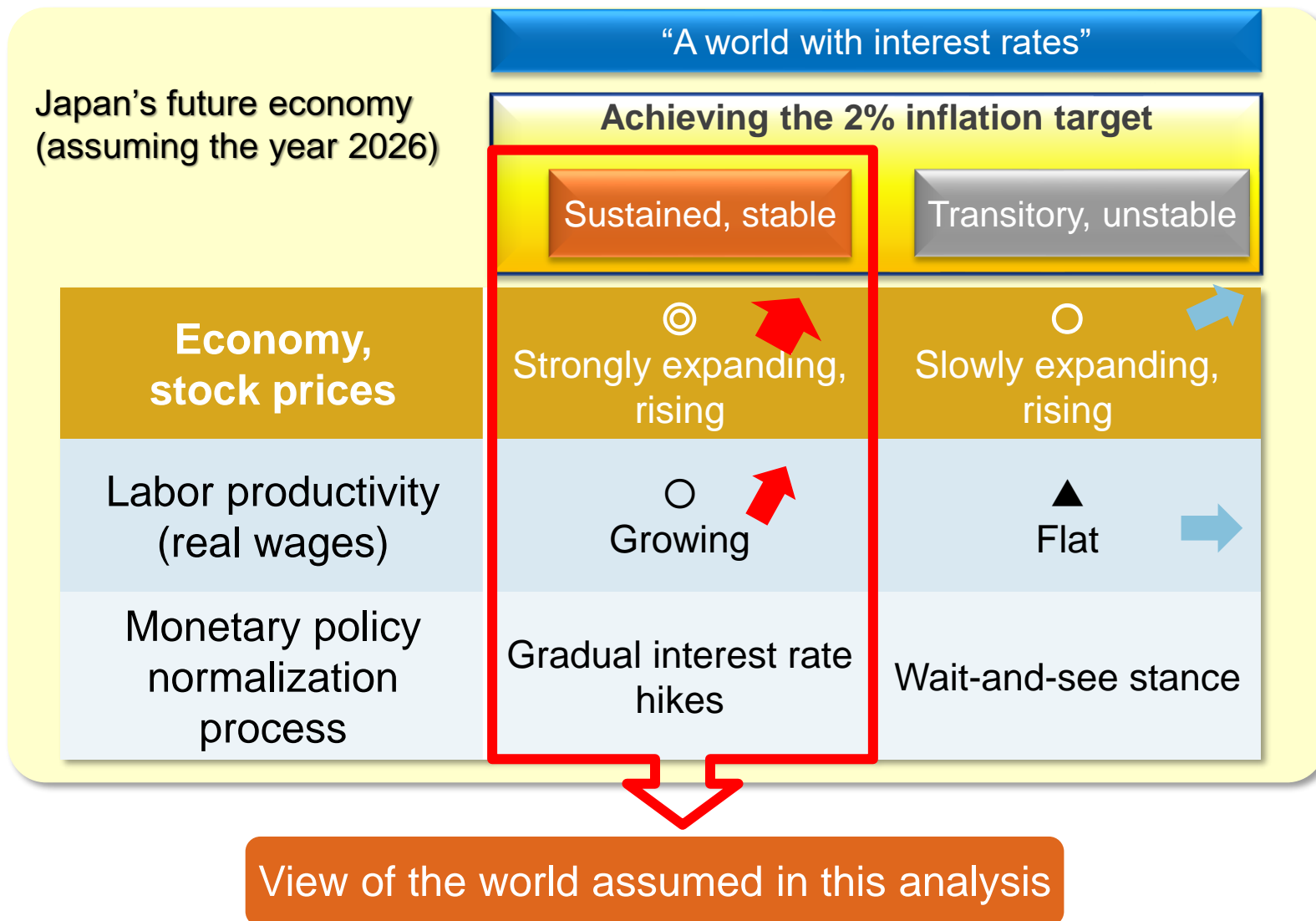
Introduction: Looking back to when Japan had interest rates

Japan's various monetary indicators and changes in inflation rates (since 1980)



Note: 1. Shaded areas represent recession periods. The current level refers to the latest values as of November 20, 2023.
 2. The inflation rate refers to year-on-year volatility in the consumer price index (all items excluding fresh food and energy, consumption tax adjusted).
 3. The long-term interest rate refers to the newly issued 10-year government bond yield. The policy rate represented Source: Made by MHRT based upon IMF and statistics of relevant countries and regions
 Source: Compiled by MHRT.

Introduction: Assuming “a world with interest rates” with the 2% inflation target achieved in a sustained and stable manner

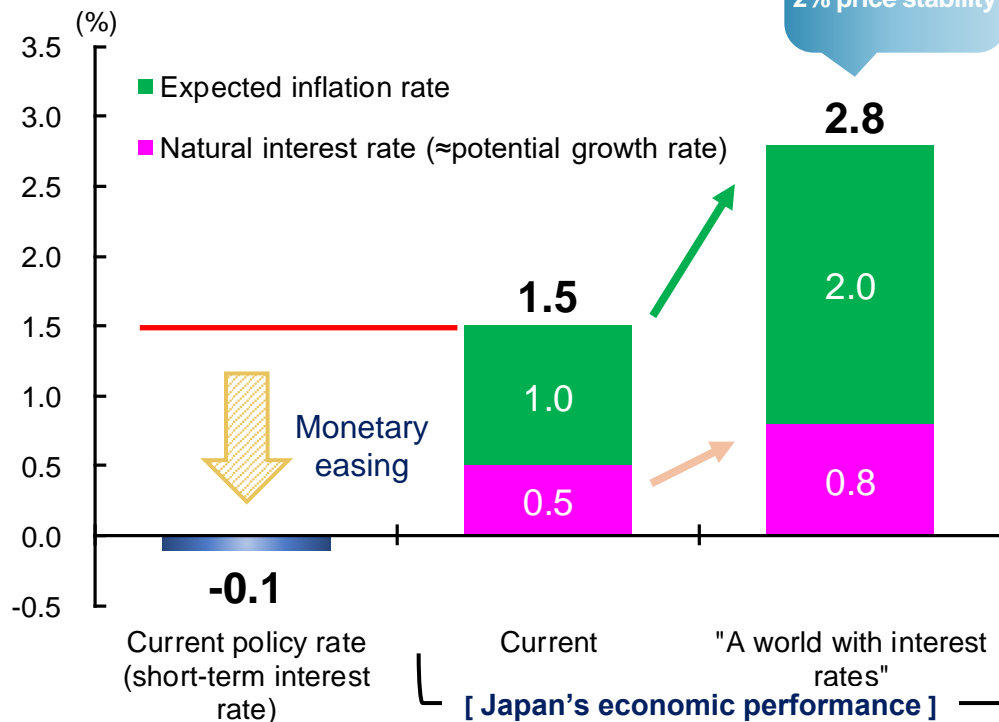


Source: Compiled by MHRT.

Interest rates: Assuming the terminal policy rate at 2.8% and the long-term interest rate at 3.5%

- Japan's policy interest rate assumed in "a world with interest rates" is calculated at 2.8% based on the natural interest rate (potential growth rate) and expected inflation rate.
 - The expected inflation rate is estimated at 2.0% due to the sustained and stable achievement of the price target.
 - The natural interest rate (potential growth rate) is estimated at 0.8% with productivity growth taken into account.
- The long-term interest rate is estimated at 3.5%.
 - The long/short spreads (0.75%pt) after the introduction of quantitative easing (from March 2001) are assumed to be the premiums of the long-term interest rate to the policy rate.

Real economy responding to the terminal policy rate















Source: Compiled by MHRT.

Outlook for the short-term (policy) and long-term interest rates



Note: The long-term interest rate refers to the 10-year government bond yield.
Source: Compiled by MHRT based on data from the Bank of Japan and Refinitiv.

Impact on the real economy (2023 -> 2026): Relatively large benefits to households

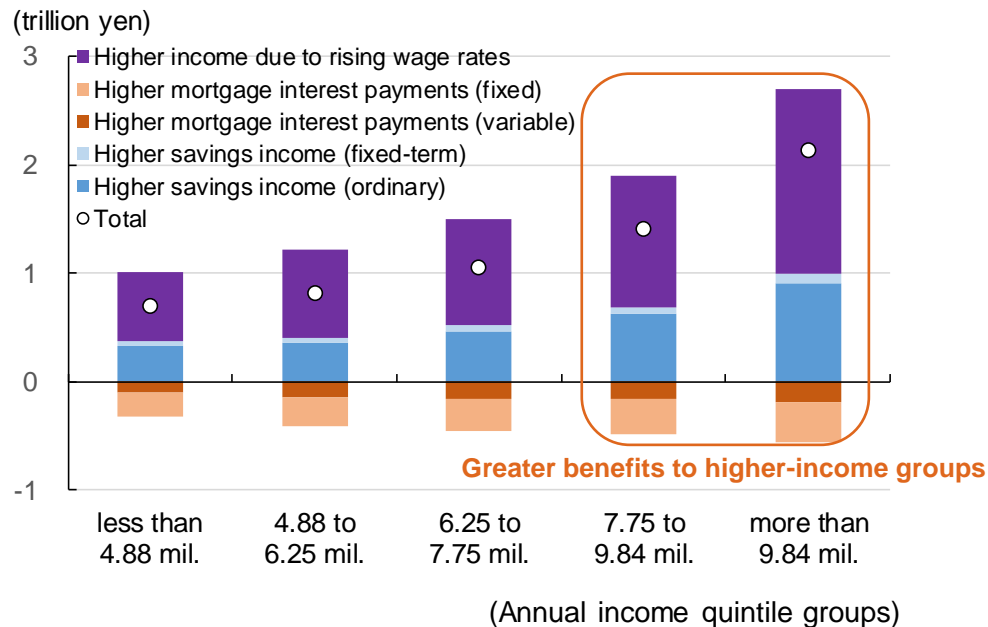
	Growing productivity	Rising interest rates	Overall assessment	Factors and issues by sector
Macroeconomy				<p>(+) Higher labor productivity will boost GDP growth in the medium term.</p> <p>(-) Higher borrowing costs driven by interest rate hikes will exert downward pressure on the economy.</p> <p>(-) Net exports will turn negative due to a stronger yen.</p> <p>-> Overall, positive effects will outweigh the negative, with GDP growth on the upswing.</p>
Households				<p>(+) Real wages will increase with higher labor productivity.</p> <p>(+) Income gains from deposits will rise, bringing large benefits to high-income and middle-aged groups.</p> <p>(-) More mortgage payments will increase the burden on middle-aged people.</p> <p>-> Positive overall due to higher wages and better net interest income/expense.</p>
Enterprises				<p>(+) Higher labor productivity will boost corporate earnings.</p> <p>(-) Interest burden will grow especially in rental and leasing, electricity, gas, real estate, lodging, and food services.</p> <p>(-) A stronger yen will particularly affect export industries, including transportation and electrical machinery.</p> <p>-> Overall, positive effects will be limited due to the increased interest burden.</p>
Government				<p>(+) Tax revenues will increase due to nominal GDP boosted by labor productivity growth and inflation.</p> <p>(-) Debt-servicing costs (interest payments) will rise with higher interest rates.</p> <p>-> The budget will be generally balanced in the short term, but higher debt-servicing costs will surpass tax revenue growth in the medium term.</p>

Note: ▲ means a slightly lower rating than △.
Source: Compiled by MHRT.

Households: Greater benefits to high-income and middle-aged households

- Positive impact of about 6.1 trillion yen on households as a whole
 - The positive impact of higher interest rates and wage hikes will particularly benefit the high-income and middle-aged groups.
 - By annual income groups, about 60% of the total households benefiting from the positive impact will be those with an annual income of 7.75 million yen or more (40% of all households).
 - Estimates by age groups of household heads show that middle-aged households will benefit overall; despite an increased mortgage burden, this group will greatly benefit from higher wages and savings income.

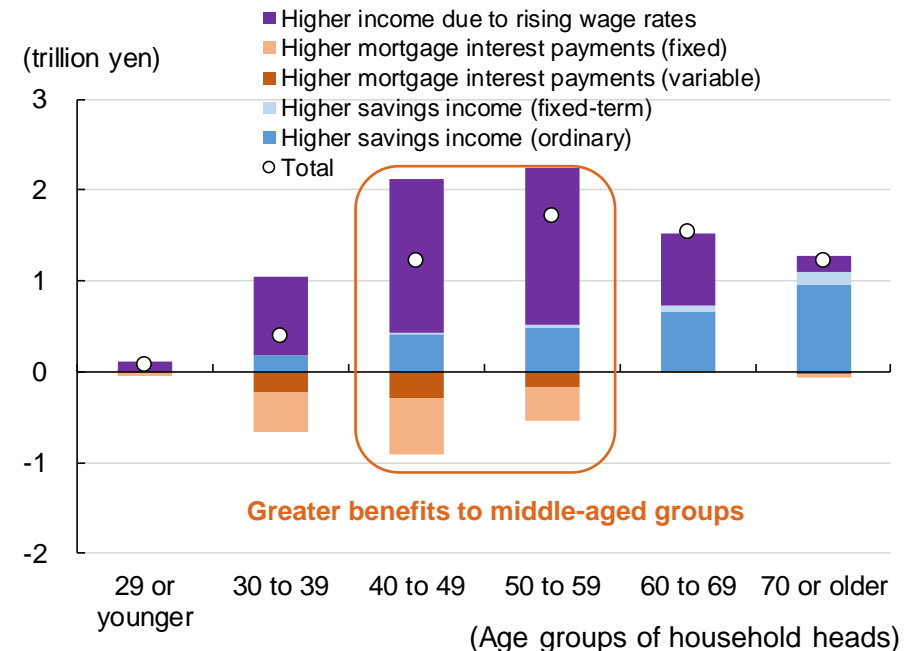
Estimates by annual income groups



Note: : The estimates are based on the assumption that all are working households with two or more persons. Annual income groups are classified according to the 2022 average income of working households with two or more persons.

Source: Compiled by MHRT based on data from the Bank of Japan, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of Internal Affairs and Communications.

Estimates by age groups of household heads



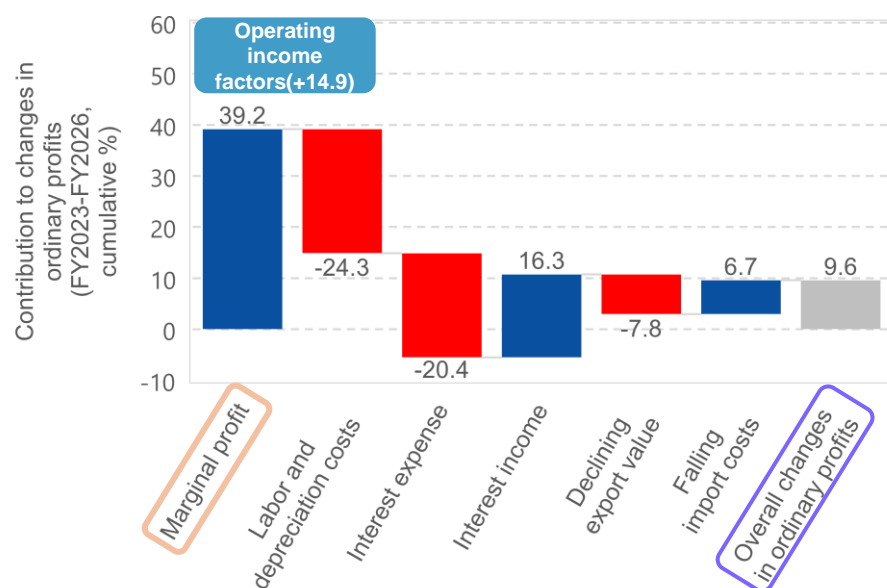
Note: The estimates of savings income include non-working households with two or more persons. The other categories are calculated based on the assumption that all are working households with two or more persons.

Source: Compiled by MHRT based on data from the Bank of Japan, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of Internal Affairs and Communications.

Enterprises: Estimated impact of higher interest rates on corporate earnings

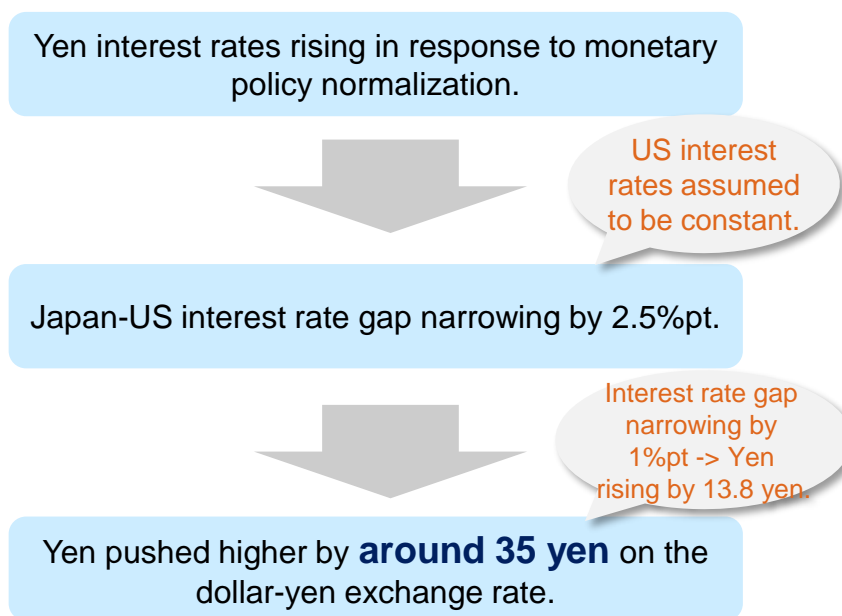
- Profit growth driven by economic expansion will outweigh the negative impact of higher interest rates and a stronger yen, with Japanese companies' ordinary profits increasing by about 10% in four years.
 - Higher profits will be mainly due to sales (marginal profit) rising with the expansion of nominal GDP. However, a sharp rise in the debt interest rate will cause interest income/expense to negatively affect earnings. In terms of foreign exchange, a stronger yen will reduce the export value and squeeze profits.
 - As for the foreign exchange factors, the narrowing interest rate gap between Japan and the United States will push the yen higher by around 35 yen.

Impact of monetary policy normalization on ordinary profits (cumulative for FY2023-FY2026)



Note: : The calculations are based on private nonfinancial corporations with capital of at least 10 million yen. Variable cost growth is assumed to be the same as sales. Marginal profit = net sales - variable costs. Variable costs = sales cost + SG&A expenses - (fixed costs - interest expenses). Fixed costs = labor costs + depreciation costs + interest expense.
 Source: Compiled by MHRT based on the Ministry of Finance, Financial Statements Statistics of Corporations by Industry (Annual and Quarterly).

Assumptions for estimating the yen's appreciation

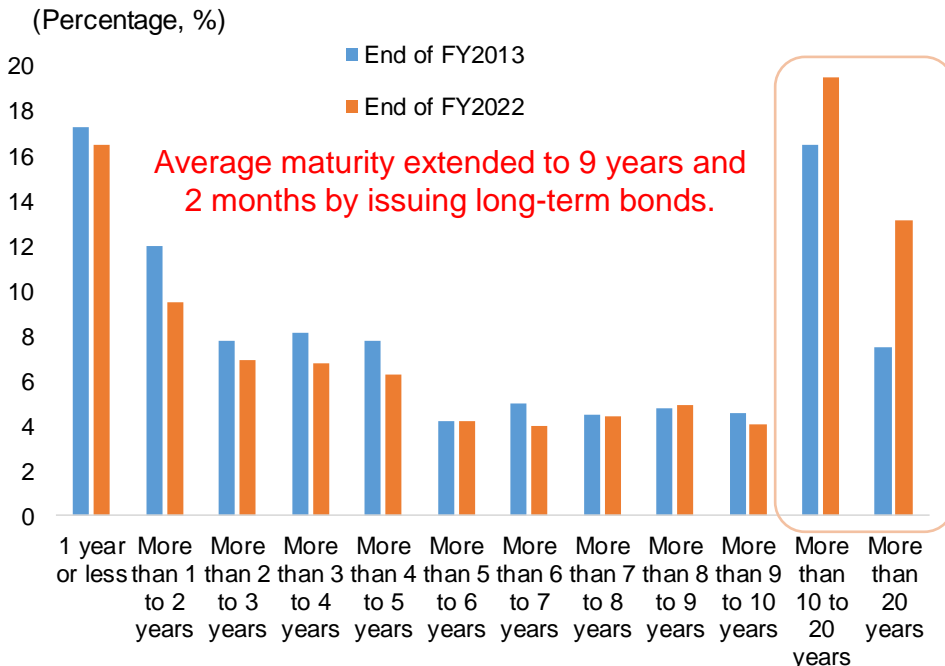


Note: The 5-year JGB yield is assumed to rise from 0.5% to 3.0%.
 Source: Compiled by MHRT.

Government: Revenues/expenditures almost balanced in the short term; rising interest payments straining state finances in the medium term

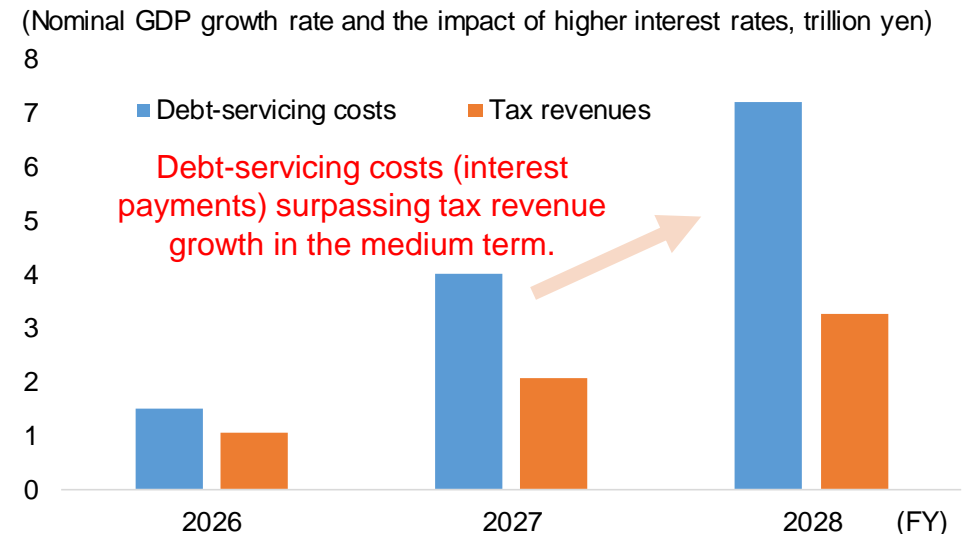
- An increase in tax revenues will lead to more or less balancing the budget in FY2026.
 - The average maturity of government bonds exceeded 9 years. In the short term, higher interest rates will not directly lead to a rapid rise in interest payments.
- In the medium term, rising interest payments due to higher interest rates will surpass tax revenue growth driven by higher nominal GDP.
 - With Japan's huge outstanding government debt, the country's debt-servicing costs (interest payments) will increase gradually, surpassing tax revenue growth accompanied by higher nominal GDP in the medium term.
 - Rising household investments in risk assets will reduce cash and deposits in the long term. Growing concerns about stable financing of government bonds will pose the risk of interest rate hikes.

Outstanding amount of general bonds by period (as of the end of FY2022)



Source: Compiled by MHRT based on data from the Ministry of Finance and other sources.

Projection of the impact on the government's tax revenues and debt-servicing costs



Note: The above figure shows the impact on the government's tax revenues and debt-servicing costs in FY2026 and beyond with a rise of 1.3%pt in nominal GDP growth rate and a cumulative rise of 2.0%pt in long-term interest rates over the period through FY2026, compared with the case of no increases in productivity and interest rates.
Source: Compiled by MHRT based on data from the Ministry of Finance and other sources.

Mizuho Research & Technologies, Ltd.

This publication is compiled solely for the purpose of providing readers with information on a free-of-charge basis and is in no way meant to solicit transactions. Although this publication is compiled on the basis of sources which we believe to be reliable and correct, Mizuho Research & Technologies, Ltd. does not warrant its accuracy and certainty. Readers are requested to exercise their own judgment in the use of this publication. Please also note that the contents of this publication may be subject to change without prior notice. In the event readers do not wish to receive information free of charge from Mizuho Research & Technologies, Ltd., readers are requested to notify their wish to suspend subscription.

MIZUHO