# Medium-Term Economic Outlook (Fiscal Years 2020 to 2030)

Economy

*Section 1*

# Medium-Term Economic Outlook for the Next 10 Years (Fiscal Years 2020 to 2030)

October 2020 NLI Research Institute

# Medium and Long-Term World Economic and Financial Outlook (Summary)

RESEARCH

Economy

[World economy] The growth rate declined significantly in 2020. It will increase to a slightly higher level, but will decline to around 3% toward the second half of the forecast period.

- ✓ The growth rate of emerging countries will continue to exceed that of advanced countries. However, it will decline to the 3.5%–4.0% range in the latter half of the forecast period on the grounds that it will take a relatively long time for emerging countries to adapt to viruses, and the damage to their economies will be permanent and severe. The potential growth rate will decline due to the declining birthrate and aging population.

[Japanese economy] The average real GDP growth rate for 10 years up to FY 2030 will be 1.5%.

- ✓ In fiscal 2020, the economy will mark a record negative growth of minus 5.8%, but this will be followed by higher growth for some time.
- ✓ Real GDP will recover to the pre-Corona level (FY 2019) in FY 2023.
- ✓ The average rate of increase in consumer prices (total excluding fresh food) during the 10 years up to FY 2030 will be 1.3%.

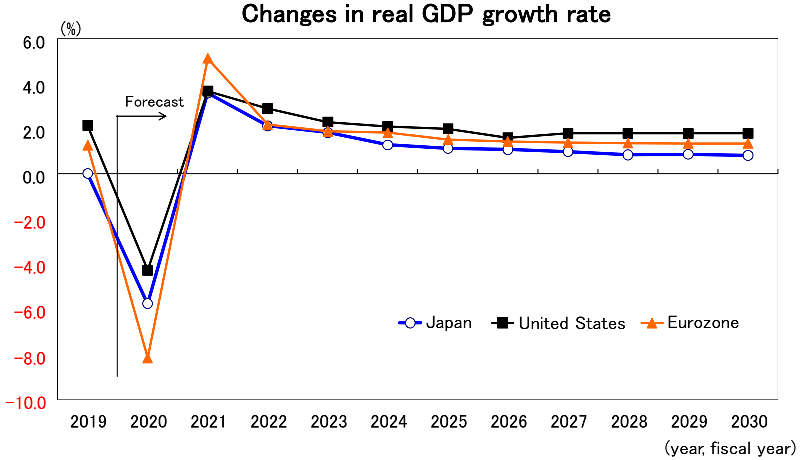
[Long-term interest rate] Long-term interest rates will rise in the second half of the forecast period following the normalization of monetary policy.

- ✓ In the United States and Europe, the pace of increase in interest rates will accelerate due to a rise in policy interest rates. In Japan, long-term interest rate will be on an upward trend due to the increase in the guidance target, but it will not reach 1% by the end of the forecast period.

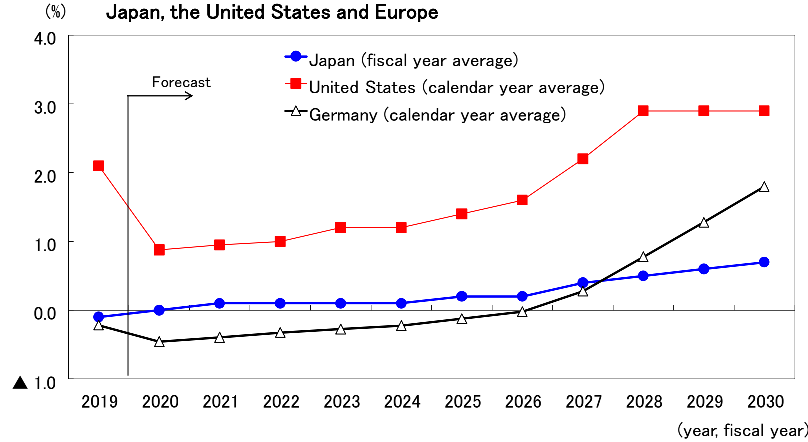
[Exchange rate] Toward the middle of the forecast period, the yen will depreciate against the dollar, and then the yen will appreciate against the dollar.

- ✓ Yen will depreciate due to risk-taking yen-selling and U.S. interest rate hike; then the yen will appreciate in the end due to the Bank of Japan's exit strategy.

Changes in real GDP growth rate




Prospects for long-term interest rates (10-year government bond yield) in Japan, the United States and Europe



# Medium and Long-Term World Economic and Financial Outlook (Summary)



(% of previous year. 〈 〉 indicates contribution)

## Japanese economy

| | FY 2019 Actual | FY 2020 Forecast | FY 2021 Forecast | FY 2022 Forecast | FY 2023 Forecast | FY 2024 Forecast | FY 2025 Forecast | FY 2026 Forecast | FY 2027 Forecast | FY 2028 Forecast | FY 2029 Forecast | FY 2030 Forecast | [annual average] 11−20 | 21−30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal gross domestic expenditure | 0.8 | ▲4.5 | 3.2 | 2.6 | 2.6 | 2.2 | 2.2 | 2.2 | 2.3 | 1.9 | 1.6 | 1.5 | 0.6 | 2.2 |
| (nominal GDP) (¥trillion) | (552.5) | (527.9) | (544.8) | (558.9) | (573.5) | (586.1) | (598.7) | (611.9) | (626.3) | (638.1) | (648.5) | (658.4) | | |
| Real Gross Domestic Expenditure (real GDP) | 0.0 | ▲5.8 | 3.6 | 2.1 | 1.8 | 1.3 | 1.1 | 1.1 | 1.0 | 0.8 | 0.9 | 0.8 | 0.2 | 1.5 |
| Domestic demand | 〈0.2〉 | 〈▲3.8〉 | 〈2.8〉 | 〈1.9〉 | 〈1.8〉 | 〈1.4〉 | 〈1.3〉 | 〈1.2〉 | 〈1.2〉 | 〈1.1〉 | 〈1.1〉 | 〈1.0〉 | 〈0.5〉 | 〈1.5〉 |
| Private Demand | 〈▲0.4〉 | 〈▲4.2〉 | 〈2.6〉 | 〈1.5〉 | 〈1.5〉 | 〈1.1〉 | 〈1.1〉 | 〈1.0〉 | 〈1.0〉 | 〈0.8〉 | 〈0.7〉 | 〈0.7〉 | 〈0.2〉 | 〈1.2〉 |
| Private Consumption | ▲0.5 | ▲5.3 | 4.3 | 2.2 | 1.9 | 1.3 | 1.2 | 1.3 | 1.1 | 0.9 | 0.8 | 0.8 | ▲0.2 | 1.6 |
| Private Residential Investment | 0.6 | ▲7.0 | ▲0.6 | 0.3 | 0.9 | ▲0.2 | 0.3 | ▲0.2 | 0.4 | 0.2 | ▲0.3 | ▲0.3 | 0.2 | 0.0 |
| Private Non−Resi. Investment | ▲0.3 | ▲6.3 | 1.9 | 2.4 | 3.0 | 2.5 | 2.2 | 1.8 | 1.9 | 1.8 | 1.9 | 1.5 | 1.7 | 2.1 |
| Public Demand | 〈0.6〉 | 〈0.4〉 | 〈0.2〉 | 〈0.3〉 | 〈0.3〉 | 〈0.3〉 | 〈0.3〉 | 〈0.2〉 | 〈0.2〉 | 〈0.3〉 | 〈0.3〉 | 〈0.3〉 | 〈0.3〉 | 〈0.3〉 |
| Government Consumption | 2.3 | 1.0 | 0.5 | 1.1 | 1.1 | 1.1 | 0.9 | 0.8 | 0.8 | 1.1 | 1.3 | 1.2 | 1.2 | 1.0 |
| Public Investment | 3.3 | 3.7 | 1.4 | 1.8 | 1.6 | 1.5 | 1.3 | 0.7 | 0.7 | 0.7 | 1.0 | 1.0 | 1.3 | 1.2 |
| Net Exports of Goods & Services | 〈▲0.2〉 | 〈▲1.9〉 | 〈0.8〉 | 〈0.3〉 | 〈▲0.0〉 | 〈▲0.2〉 | 〈▲0.2〉 | 〈▲0.1〉 | 〈▲0.2〉 | 〈▲0.3〉 | 〈▲0.2〉 | 〈▲0.2〉 | 〈▲0.3〉 | 〈▲0.0〉 |
| Export of goods and services | ▲2.6 | ▲12.3 | 10.5 | 4.0 | 2.7 | 2.7 | 2.7 | 2.6 | 2.4 | 2.3 | 2.4 | 2.5 | 0.6 | 3.5 |
| Import of goods and services | ▲1.5 | ▲0.8 | 4.8 | 2.2 | 2.6 | 3.4 | 3.4 | 3.0 | 3.2 | 3.3 | 3.1 | 3.0 | 2.4 | 3.2 |
| Industrial Production | ▲3.8 | ▲10.2 | 6.6 | 3.3 | 2.1 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | ▲1.2 | 1.6 |
| Domestic corporate Goods Price | 0.1 | ▲1.7 | 1.0 | 0.9 | 1.5 | 1.3 | 1.5 | 1.6 | 1.4 | 1.1 | 0.7 | 0.8 | 0.2 | 1.2 |
| Consumer Prices | 0.5 | ▲0.3 | 0.6 | 0.8 | 1.2 | 1.2 | 1.3 | 1.5 | 1.8 | 1.6 | 1.3 | 1.2 | 0.5 | 1.2 |
| Consumer Prices (excluding fresh food) | 0.6 | ▲0.5 | 0.6 | 0.8 | 1.2 | 1.2 | 1.3 | 1.5 | 1.8 | 1.6 | 1.3 | 1.2 | 0.5 | 1.3 |
| excluding consumption tax | (0.1) | (▲1.0) | (0.6) | (0.8) | (1.2) | (1.2) | (1.3) | (1.5) | (1.8) | (1.6) | (1.3) | (1.2) | (0.2) | (1.3) |
| Unemployment rate (%) | 2.3 | 3.5 | 3.7 | 3.5 | 3.3 | 3.2 | 3.0 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 3.3 | 3.1 |
| Current account balance (¥trillion) | 19.7 | 16.6 | 14.9 | 11.9 | 8.9 | 5.5 | 3.5 | 1.1 | 0.1 | ▲0.5 | ▲0.9 | ▲2.0 | 14.2 | 4.2 |
| (Ratio to nominal GDP) | (3.6) | (3.1) | (2.7) | (2.1) | (1.6) | (0.9) | (0.6) | (0.2) | (0.0) | (▲0.1) | (▲0.1) | (▲0.3) | (2.6) | (0.8) |
| Consumption Tax Rate (%) end of period | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | − | − |
| Exchange Rate (yen/dollar) Average | 109 | 107 | 109 | 110 | 111 | 112 | 114 | 115 | 114 | 113 | 112 | 111 | 104 | 112 |
| Call Rate (Guided target,%) end of period | − | − | − | − | − | − | − | − | 0.10 | 0.10 | 0.10 | 0.10 | − | − |
| 10 year JGB yield (%) Average | ▲0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.4 | 0.5 | 0.6 | 0.7 | 0.3 | 0.3 |
| Crude oil price (CIF, Dollar/Barrel) Average | 68 | 41 | 53 | 55 | 57 | 58 | 60 | 61 | 63 | 65 | 66 | 68 | 76 | 61 |

(Sources) Cabinet Office "National Accounts", Ministry of Economy, Trade and Industry "Indices of Industrial Production", Ministry of Internal Affairs and Communications "Consumer Price Index", "Labour Force Survey", Bank of Japan "Corporate Goods Price Index " and the others

## U.S. economy

| | 2019 Actual | 2020 Forecast | 2021 Forecast | 2022 Forecast | 2023 Forecast | 2024 Forecast | 2025 Forecast | 2026 Forecast | 2027 Forecast | 2028 Forecast | 2029 Forecast | 2030 Forecast | annual average 11−20 | 21−30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal GDP (% YoY) | 4.0 | ▲ 3.3 | 5.1 | 4.5 | 4.1 | 4.1 | 4.2 | 3.9 | 4.1 | 4.1 | 4.1 | 4.0 | 3.3 | 4.3 |
| Real GDP (% YoY) | 2.2 | ▲ 4.3 | 3.7 | 2.9 | 2.3 | 2.1 | 2.0 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 | 1.6 | 2.2 |
| Domestic Demand (% Contribution) | 2.4 | ▲ 4.9 | 4.3 | 3.1 | 2.5 | 2.2 | 2.1 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 2.3 |
| Private Consumption (% YoY) | 2.4 | ▲ 4.8 | 5.3 | 3.4 | 2.8 | 2.4 | 2.3 | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 | 1.7 | 2.6 |
| Fixed Capital Formation (% YoY) | 1.9 | ▲ 4.1 | 3.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.0 | 1.8 | 1.8 | 1.8 | 1.8 | 4.1 | 2.2 |
| External Demand (% Contribution) | ▲ 0.2 | 0.7 | ▲ 0.6 | ▲ 0.2 | ▲ 0.2 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.1 | ▲ 0.2 |
| Consumer Prices (% YoY) | 1.8 | 0.9 | 1.4 | 2.1 | 2.2 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 | 1.7 | 2.2 |
| Current account balance (Ratio to nominal GDP) | ▲ 2.2 | ▲ 2.2 | ▲ 1.7 | ▲ 2.2 | ▲ 2.2 | ▲ 2.3 | ▲ 2.3 | ▲ 2.3 | ▲ 2.4 | ▲ 2.4 | ▲ 2.4 | ▲ 2.4 | ▲ 2.2 | ▲ 2.3 |
| FF target interest rate (Target Cap,%)year−end | 1.75 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.50 | 0.75 | 1.50 | 2.50 | 2.50 | 2.50 | 0.8 | 1.1 |
| 10 year govt. bond yield (%), average | 2.1 | 0.9 | 1.0 | 1.0 | 1.2 | 1.2 | 1.4 | 1.6 | 2.2 | 2.9 | 2.9 | 2.9 | 2.2 | 1.8 |

# Medium and Long-Term World Economic and Financial Outlook (Summary)

Economy

## Eurozone economy

| | 2019 Actual | 2020 Forecast | 2021 Forecast | 2022 Forecast | 2023 Forecast | 2024 Forecast | 2025 Forecast | 2026 Forecast | 2027 Forecast | 2028 Forecast | 2029 Forecast | 2030 Forecast | annual average 11–20 | annual average 21–30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal GDP (% YoY) | 3.0 | ▲ 7.8 | 6.4 | 3.6 | 3.4 | 3.4 | 3.1 | 3.1 | 3.1 | 3.1 | 3.0 | 3.0 | 1.4 | 3.5 |
| Real GDP (% YoY) | 1.3 | ▲ 8.2 | 5.1 | 2.2 | 1.9 | 1.8 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.3 | 1.9 |
| Domestic Demand (% Contribution) | 1.8 | ▲ 6.8 | 5.0 | 2.2 | 2.0 | 1.8 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 0.0 | 0.2 |
| Private Consumption (% YoY) | 1.3 | ▲ 8.3 | 6.8 | 2.0 | 1.7 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | ▲ 0.1 | 2.0 |
| Fixed Capital Formation (% YoY) | 5.7 | ▲ 11.7 | 4.4 | 5.0 | 4.5 | 3.0 | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.5 | 0.6 | 2.7 |
| External Demand (% Contribution) | ▲ 0.5 | ▲ 1.4 | 0.2 | ▲ 0.0 | ▲ 0.1 | ▲ 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| Consumer Prices (% YoY) | 1.2 | 0.4 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.2 | 1.6 |
| Current account balance (Ratio to nominal GDP) | 2.7 | 1.7 | 1.8 | 1.8 | 1.6 | 1.2 | 1.0 | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 2.2 | 1.0 |
| Exchange rate EUR/USD | 1.12 | 1.13 | 1.15 | 1.15 | 1.15 | 1.14 | 1.13 | 1.12 | 1.13 | 1.15 | 1.18 | 1.20 | 1.21 | 1.15 |
| Exchange rate EUR/JPY | 122 | 122 | 125 | 127 | 128 | 128 | 128 | 129 | 129 | 130 | 132 | 133 | 124 | 129 |
| ECB Intervention Rate (%),year-end | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.75 | 1.25 | 0.21 | 0.23 |
| German 10 year govt. bond yield (%), average | ▲ 0.2 | ▲ 0.5 | ▲ 0.4 | ▲ 0.3 | ▲ 0.3 | ▲ 0.2 | ▲ 0.1 | ▲ 0.0 | 0.3 | 0.8 | 1.3 | 1.8 | 0.8 | 0.3 |

## Chinese economy

| | 2019 Actual | 2020 Forecast | 2021 Forecast | 2022 Forecast | 2023 Forecast | 2024 Forecast | 2025 Forecast | 2026 Forecast | 2027 Forecast | 2028 Forecast | 2029 Forecast | 2030 Forecast | [mean value] 11–20 | [mean value] 21–30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal GDP (% YoY) | 7.8 | 4.8 | 7.2 | 7.3 | 7.1 | 7.1 | 7.0 | 6.2 | 5.5 | 5.5 | 5.5 | 5.5 | 9.7 | 6.4 |
| Real GDP (% YoY) | 6.1 | 2.0 | 5.5 | 5.3 | 5.1 | 5.1 | 5.0 | 4.2 | 3.5 | 3.5 | 3.5 | 3.5 | 6.8 | 4.4 |
| Consumer Prices (% YoY) | 2.9 | 2.8 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 |
| Annual interest rate (%),year-end | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 2.1 | 1.5 |
| USD / CNY (Standard value ,annual average) | 6.9 | 6.7 | 6.5 | 6.3 | 6.1 | 5.9 | 5.8 | 5.8 | 5.9 | 5.9 | 6.0 | 6.0 | 6.5 | 6.0 |

## Emerging economies

| | 2019 Actual | 2020 Forecast | 2021 Forecast | 2022 Forecast | 2023 Forecast | 2024 Forecast | 2025 Forecast | 2026 Forecast | 2027 Forecast | 2028 Forecast | 2029 Forecast | 2030 Forecast | [mean value] 11–20 | [mean value] 21–30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP (% YoY) | 3.6 | ▲ 3.9 | 5.8 | 4.3 | 4.4 | 4.4 | 4.4 | 4.1 | 3.8 | 3.8 | 3.8 | 3.8 | 3.9 | 4.3 |
| China | 6.1 | 2.0 | 5.5 | 5.3 | 5.1 | 5.1 | 5.0 | 4.2 | 3.5 | 3.5 | 3.5 | 3.5 | 6.8 | 4.4 |
| India | 4.2 | ▲ 10.4 | 9.7 | 4.9 | 5.8 | 6.4 | 6.3 | 6.2 | 6.1 | 6.1 | 6.0 | 6.0 | 4.8 | 6.3 |
| Brazil | 1.1 | ▲ 6.9 | 3.8 | 3.0 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | ▲ 0.1 | 2.5 |
| Russia | 1.3 | ▲ 6.7 | 3.5 | 3.2 | 2.5 | 2.0 | 1.7 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 0.7 | 1.9 |
| ASEAN4 | 4.6 | ▲ 3.7 | 5.7 | 4.7 | 4.7 | 4.7 | 4.6 | 4.5 | 4.5 | 4.4 | 4.4 | 4.3 | 4.1 | 4.7 |

(Note)Emerging economies are classified according to IMF standards. ASEAN4 are Malaysia, Thailand, Indonesia and the Philippines.

Economy

## Section 1-1. Global Economic Trends

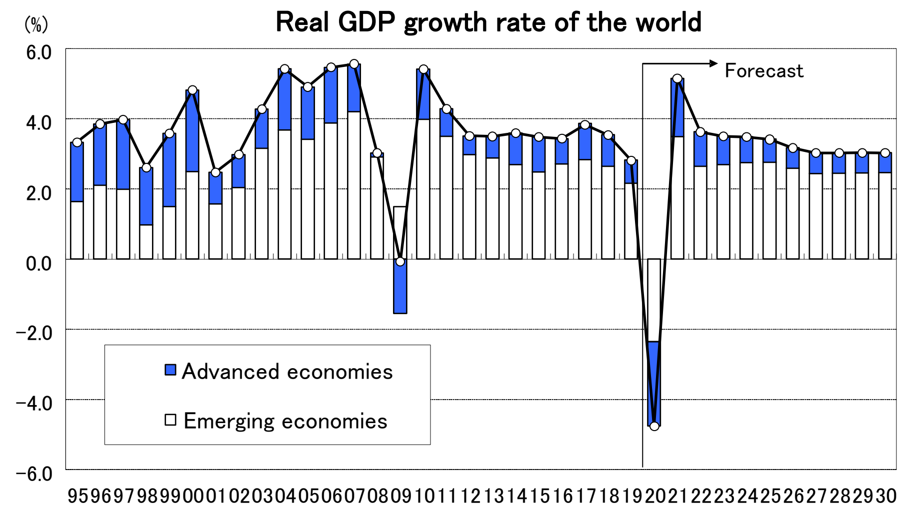
# The world economy: sudden pandemic stop

RESEARCH

Economy

- Unresolved spread of infection
  - ✓ The spread of the novel coronavirus led to restrictions on people's activities, bringing the world economy to a sudden halt. At present, activities are limited in the areas and industries where the risk of infection has increased, and measures such as stricter border controls and social distancing are still being taken in many countries.
  - ✓ Assumptions of the outlook
    - – It is assumed that they will not return to the economic and social activities as they were before the coronavirus disaster in a short period of time, but will also not be forced to restrict their activities severely again.
  - ✓ In the long run, the government debt and nonperforming loans of private sector, which soared due to the coronavirus disaster, will continue to weigh on economic recovery even after having adapted to the virus.

- The growth rate dropped significantly in 2020 and it will increase to a slightly higher level, but will decline to around 3% toward the second half of the forecast period.
  - ✓ The world's real economic growth rate was affected by the coronavirus disaster, decelerating sharply from 2.8% in 2019 to negative 4.8% in 2020. After that, it will increase to a slightly higher level due to the rebound from the coronavirus disaster, but will decline to around 3% in the latter half of the forecast period.




(Note)Weighted average with PPP (purchasing power parity) weights. Actual figures are from the IMF and forecasts are from the NLI Research Institute.

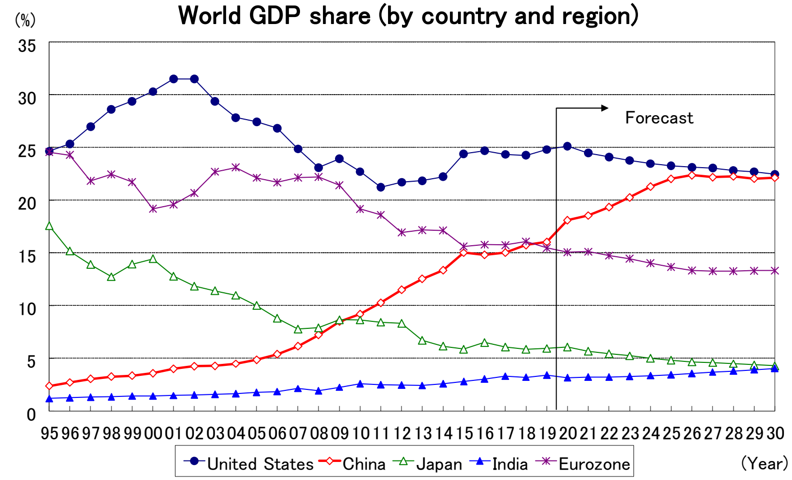
# The world economy: The United States will maintain the position of world's largest economy 10 years from now.

Economy

- The share of emerging economies in the global economy has increased from about 20% in 2000 to about 40% in 2019. Although the growth rate of emerging countries will gradually decline, the share will increase to nearly 50% by 2030 due to the continued high growth relative to that of advanced countries.
  - ✓ The United States will remain the world's largest economy in 10 years due to the slowing growth of the Chinese economy and the appreciation of the dollar against the yuan caused by the recovery of the U.S. economy.
  - ✓ The size of India's economy will rise to a level close to that of Japan at the end of the forecast period.

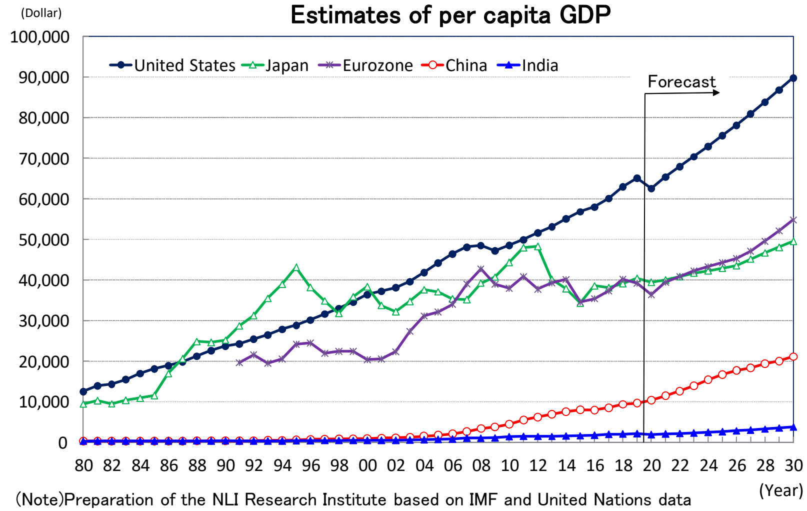
- Japan's per capita GDP (dollar base) is just above 60% of that of the United States (2019).
  - ✓ Against the United States ･･･ From over 60% now to below the 60% level in 10 years, the gap between Japan and the United States will widen slightly.
  - ✓ Against China ･･･ The gap between Japan and China narrowed from 4 times the current level to 2 times in 10 years.
  - ✓ Against India ･･･ In 10 years, the gap between Japan and India will narrow from about 19 times the current level to about 13 times in ten years.

World GDP share (by country and region)




(Note) Dollar basis. Actual figures are from the IMF and forecasts are from the NLI Research Institute.

Estimates of per capita GDP




(Note)Preparation of the NLI Research Institute based on IMF and United Nations data

Economy

# Section 1-2. Outlook for the Japanese Economy

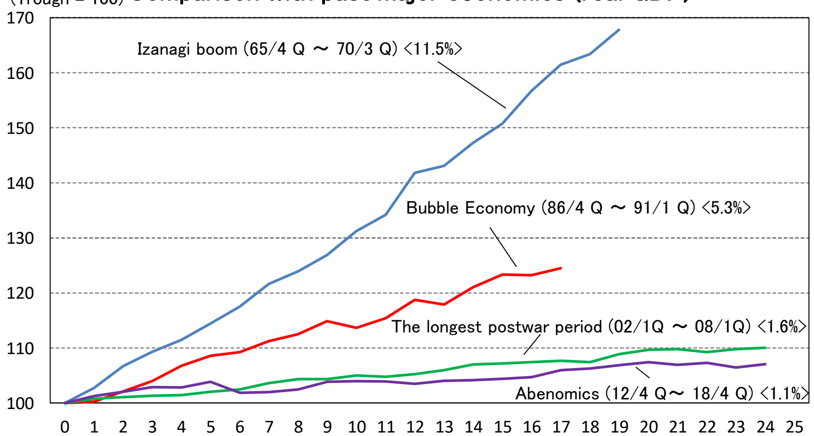
# Abenomics: Looking back at the economy

RESEARCH

Economy

- The Japanese economy has entered a recessionary phase after peaking in October 2018, mainly due to sluggish exports reflecting a slowdown in overseas economies.
  - ✓ The "Abenomics boom," which began at the same time as the inauguration of the Abe administration, has had a 71 month recovery period, which is second longest following the "the longest postwar period" (73 months).
  - ✓ The economic growth rate during this period averaged 1.1% per year, which is lower than the past economic booms.
- Corporate sector (export + investment) was strong, while household sector (consumption + housing) was weak.
  - ✓ Looking at the growth by type of demand from 4Q 2012 to 4Q 2018 (annual average), exports (5.0%) and capital investment (3.2%) showed relatively high growth, but private consumption (0.4%) and housing investment (0.0%) showed growth far below the real GDP growth rate (1.1%).
- Private consumption contributed little to boosting economic growth.
  - ✓ Although wages per employee did not increase, the number of employees increased significantly, resulting in a high increase in employee compensation.
  - ✓ Reduction of pension benefits, gradual increase of pension insurance premium rate, consumption tax increase, etc., reduced real disposable income.
  - ✓ Lower propensity to consume, particularly among young people, also restrained growth in consumption.

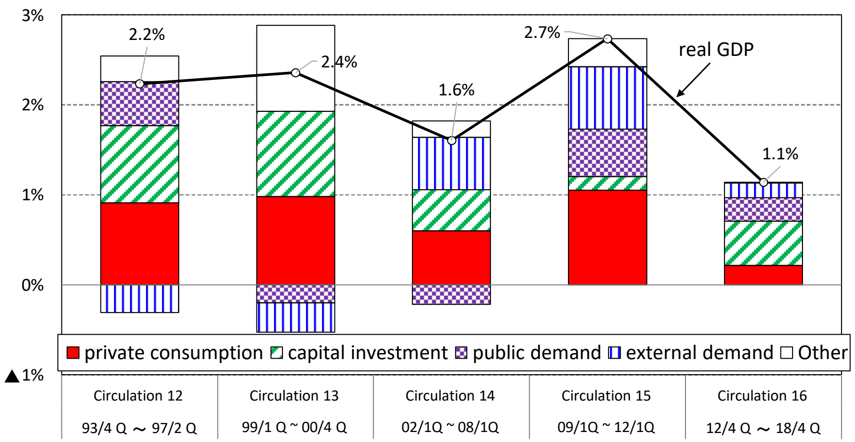
(Trough = 100) **Comparison with past major economies (real GDP)**




(Note)< >Figures in parentheses are annual average growth rates. (transition quarter)

(Source) Cabinet Office "National Accounts (GDP statistics)"

**Contribution of demand components to economic recovery (1990 and later)**




(Note)Contributions by Demand Item to Real GDP Growth Rate (annual average)

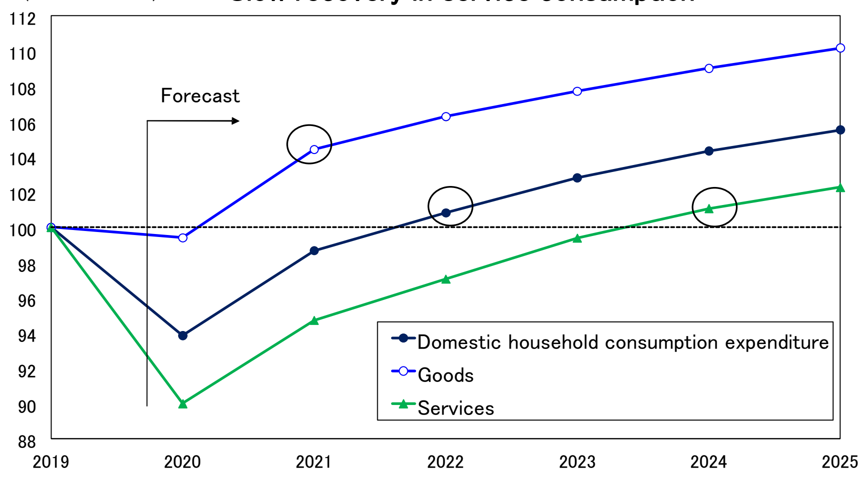
(Source) Cabinet Office "National Accounts (GDP statistics)"

# Impact of novel coronavirus infection



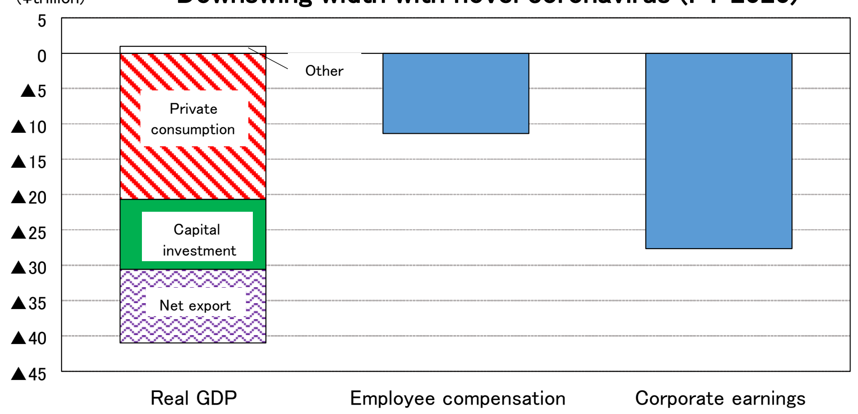
- Real GDP decreased by 10.1% in the 3 quarters from 4Q 2019 to 2Q 2020.
  - ✓ After a sharp drop in domestic demand due to the consumption tax hike in October 2019, both domestic and external demand worsened rapidly from the end of FY 2019 to the beginning of FY 2020, when the effects of the novel coronavirus infection became apparent.
  - ✓ The GDP decline by 10.1% is larger than the decline from the 2Q 2008 to the 1Q 2009 (4 quarters), which was over 8.6% before and after the global financial crisis.
- The pace of recovery is likely to remain moderate compared to the sharp downturn.
  - ✓ The practice of the "new way of life" is a constant restraint on service expenditures such as dining out, lodging and entertainment. Consumption of goods has been picking up since June after the declaration of the state of emergency was lifted, but the recovery of consumption of services is weak.
  - ✓ An increase in the number of jobless people and deterioration in corporate earnings have undermined the foundation of economic activity, putting downward pressure on the economy. The major economic indicators for FY 2020 will be significantly lower than the last forecast (October 2019), and a decline in employee compensation will lead to a decline in personal consumption and decline in corporate profits, which will delay the recovery of capital investment.

Slow recovery in service consumption




(Source) Cabinet Office "National Accounts"

Downswing width with novel coronavirus (FY 2020)



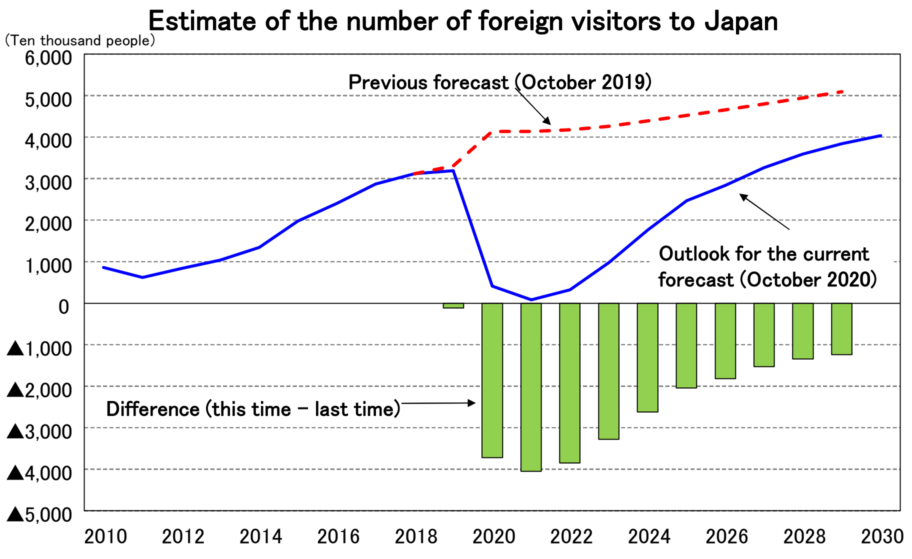

(Note)The margin of decline is the difference between the current forecast for fiscal 2020 (October 2020) and the previous forecast (October 2019). Corporate income is the operating surplus of nonfinancial corporations.

(Source) Cabinet Office "National Accounts (GDP statistics)"

# Almost no inbound tourist demand



- After April 2020, inbound tourist demand almost disappeared due to entry restrictions following the spread of the novel coronavirus infection.
  - ✓ Efforts are gradually being made to ease entry restrictions, such as granting new entry to foreign nationals with medium- to long-term residency qualifications, including those in the business, medical, and educational fields, and foreign students. However, it will take considerable time for the entry of tourists, who account for nearly 90% of foreign visitors, to be approved.
  - ✓ The trend to replace overseas business trips with remote meetings is likely to continue even after the coronavirus convergence, thus suppressing the number of business-related foreign visitors to Japan over the long term.
  - ✓ A decline in the number of guest rooms due to bankruptcies in the hotel industry and a reduction in the scale of business will also slow the recovery in demand over the medium to long term.
- The number of foreign visitors to Japan will recover from the 2019 figure of 30 million in 2027 and reach the government's 2020 target of 40 million in 2030.
  - ✓ Compared with the last forecast (October 2019), the level at the end of the current forecast period is around 10 million lower.




(Source) Japan National Tourist Organization "Trends in the number of foreign visitors to Japan"

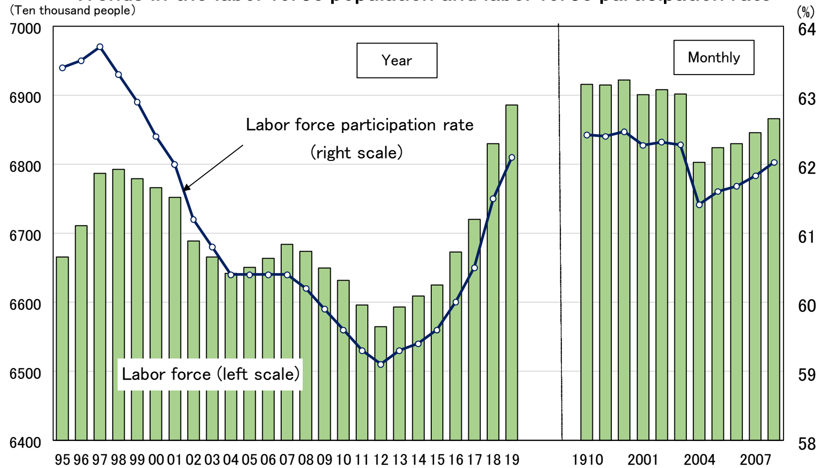
# The upward trend in the labor force participation rate will continue

RESEARCH

Economy

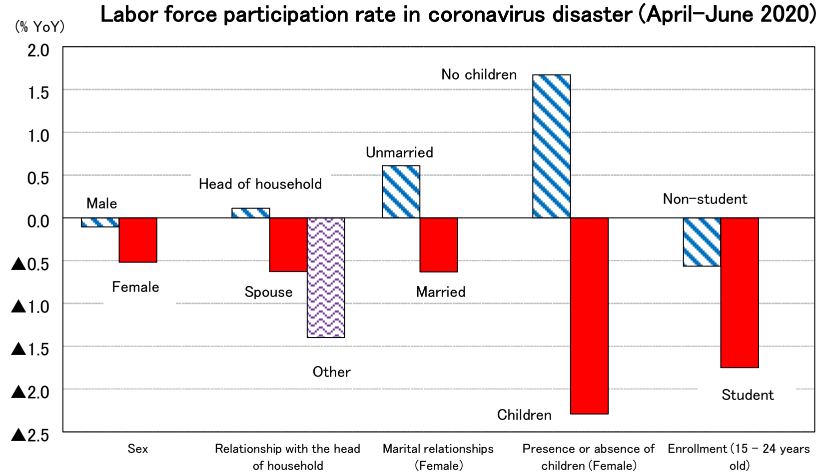
- <u>The labor force population increased for 7 consecutive years, reaching a record high of 68.86 million in 2019.</u>
  - ✓ The population of Japan has been decreasing since its peak in 2008, and the working-age population (15 ~ 64 years old) has been decreasing since its peak in 1995.
  - ✓ A significant increase in the labor force participation rate, particularly among women and the elderly, is a factor in the increase in the labor force.
- <u>Following the declaration of a state of emergency, the labor force participation rate declined significantly in April 2020.</u>
  - ✓ Many of those who lost their jobs due to the suspension of economic activity left the labor market without looking for jobs
  - ✓ Labor force participation rate has been recovering gradually since May, and as of August, it has almost recovered to the 2019 average level.
- <u>In the coronavirus disaster, the labor force participation rate declined significantly among women with children and students.</u>
  - ✓ The labor force participation rate in the coronavirus disaster varies depending on the situation in which the person is placed, but this trend is likely to disappear as economic activity resumes.

**Trends in the labor force population and labor force participation rate**




(Source) Statistics Bureau , Ministry of Internal Affairs and Communications "Labor force survey"

**Labor force participation rate in coronavirus disaster (April–June 2020)**




(Sources) Statistics Bureau , Ministry of Internal Affairs and Communications "Labor Force Survey (basic aggregation) (Detail aggregation)"

# It will be possible to avert a sharp decline in the labor force

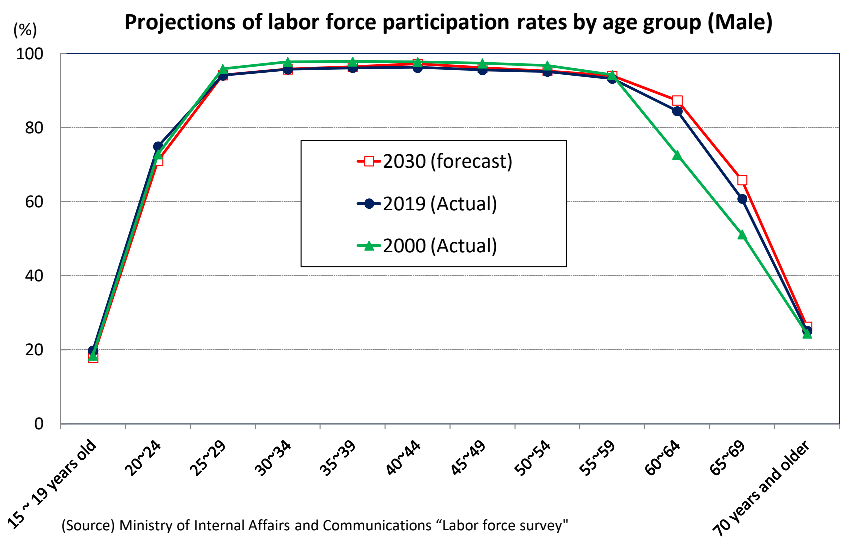
RESEARCH

Economy

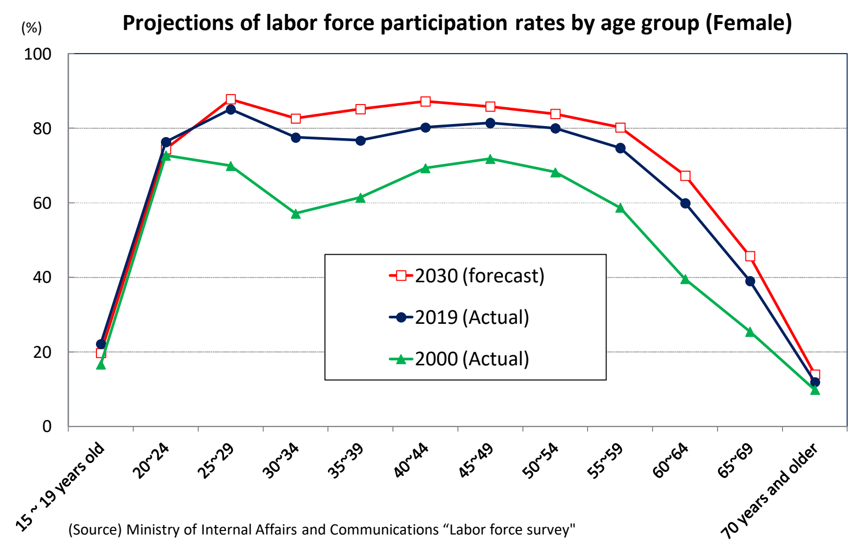
- Although the pace of population decline is expected to accelerate and further aging of the population is expected in the future, a further increase in the labor force participation rate of women and the elderly will prevent a significant decline in the labor force.

- We assume an increase in the labor force participation rate for women in all age groups aged 25 and older, and for men in all age groups aged 60 and older.

- With the projected increase in the labor force participation rate of elderly people and women, the decrease in the labor force by 2030 will be 870,000 (Annual average minus 0.1%).
  - ✓ If we assume that the labor force participation rate by gender and age group will not change in the future, it will decrease from 2019 by 6 million or more (Annual average minus 0.9%).




(Source) Ministry of Internal Affairs and Communications "Labor force survey"

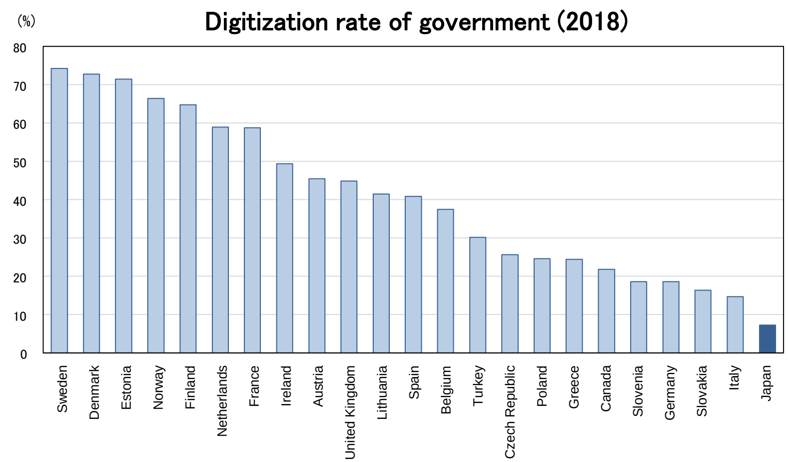



(Source) Ministry of Internal Affairs and Communications "Labor force survey"

# The novel coronavirus accelerates digitization

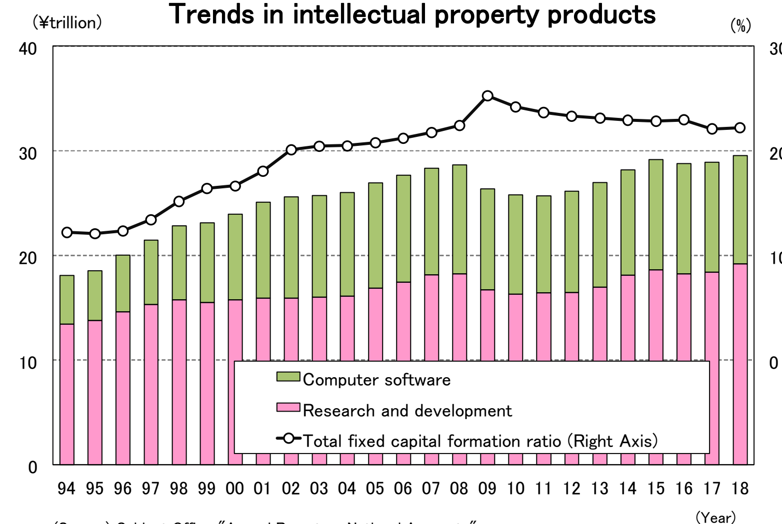
- The spread of the novel coronavirus will lead to digitization.
  - ✓ Telecommuting, online video tools, online medical examination, and more.
  - ✓ The digitization of government services has been delayed in Japan, as symbolized by the fact that the payment of special fixed benefits was not carried out smoothly in comparison with other countries.
- Investment in intangible assets such as software and R & D will accelerate in the future.
  - ✓ As AI, IoT, 5G are introduced to improve the convenience of society and create innovation, investment in software, R & D, and other intangible assets is likely to increase faster than investment in plants, machinery, and other tangible fixed assets.
- Intangible investment may boost potential growth rate.
  - ✓ Intangible investment as a percentage of total fixed capital investment in Japan is at a high level compared to that of other advanced countries, but has been declining since peaking in 2009.
  - ✓ Intangible investment is expected to contribute to an increase in capital stock and total factor productivity.

Digitization rate of government (2018)




(Source) OECD
(Note)Percentage of individuals completing administrative procedures via websites

Trends in intellectual property products




(Source) Cabinet Office "Annual Report on National Accounts"

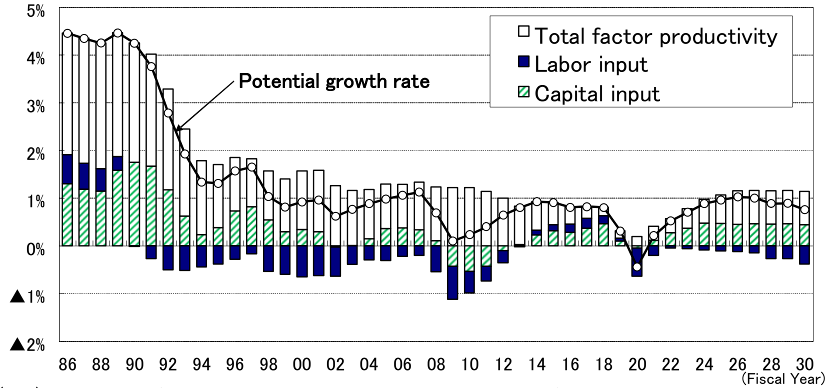
# Although the potential growth rate is currently negative, it will recover to around 1% by the mid-2020s.





- Japan's potential growth rate dropped from the 4% level in the 1980s to almost zero after the global financial crisis. By the middle of the 2010s, it had recovered to about 1%, but since then it has been on a downward trend, reaching 0.3% in FY 2019.
  - ✓ Labor input has been a negative contribution since the early 1990s, but since 2014 it has been slightly positive due to the increased labor participation of women and the elderly.
  - ✓ After the global financial crisis, capital input became negative once and has since turned positive, reflecting a recovery in capital investment. However, the margin of increase has narrowed due to a slowdown in capital investment since FY 2018. Total factor productivity (TFP) has been on a declining trend over the long term and is currently in the low 0% range.
- In FY 2020, the potential growth rate dropped to minus 0.4%.
  - ✓ This was due mainly to the negative contribution of labor input from the economic suspension caused by the spread of the novel coronavirus infection.
- The potential growth rate is expected to recover to about 1% by the mid-2020s, but will decrease to below 1% toward FY 2030.
  - ✓ Looking ahead, the decrease in labor input will be narrowed due to improvements in the labor market accompanying the economic recovery; the increase in capital input will be widened due to a recovery in capital investment; and the rate of increase in total factor productivity will increase due to progress in digitization (utilizing AI and IoT), work style reform, etc.
  - ✓ In the latter half of the 2020s, the potential growth rate will decline slightly due to the expansion of the negative range of labor input caused by the further progress of population decline and the aging of society with fewer children.

**Contribution decomposition of potential growth**




(Note)Figures up to FY 19 are estimates based on actual values. Figures from FY 20 onwards are estimates based on projected values.

(Sources) Cabinet Office "Annual Report on National Accounts", "Fixed Capital Stock Bulletin", Ministry of Internal Affairs and Communications "Labor force survey" and the others

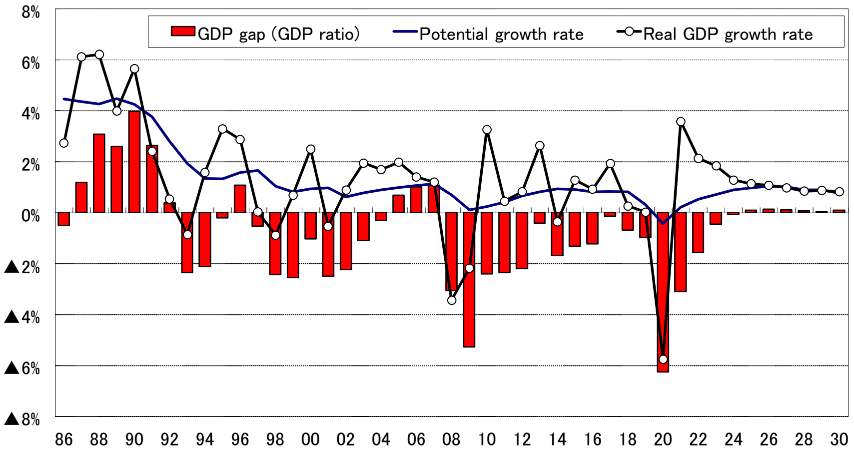
# Real GDP growth expected to average 1.5% over the next 10 years

RESEARCH

Economy

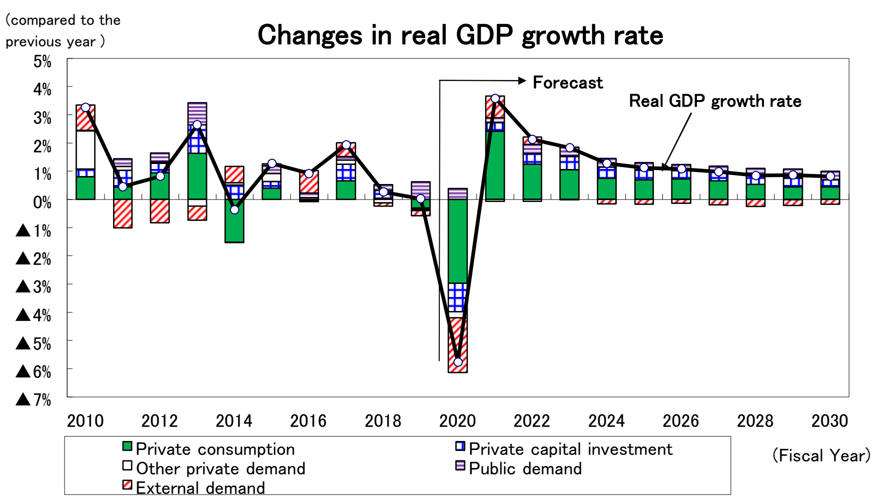
- The real GDP growth rate recorded the largest negative growth ever in FY 2020 at minus 5.8%, followed by high growth in FY 2021 at 3.6%, FY 2022 at 2.1%, and FY 2023 at 1.8%.
  - ✓ The GDP gap in fiscal 2020 is expected to drop to minus 6%. The real GDP growth rate will continue to be higher than the potential growth rate in the process of closing the GDP gap
  - ✓ After the mid-2020s when the GDP gap is resolved, the growth rate will converge with the potential growth rate. The growth rate will be around 1% in the mid-2020s and decline to below 1% toward FY 2030.
- The average growth rate for FY 2021 to FY 2030 will be 1.5%.
  - ✓ The average growth rate of 1.5% for the next 10 years is significantly higher than that of 0.2% for the past 10 years (FY 2011 to 2020). The average growth rate for the past 10 years includes FY 2020, which is expected to decline significantly due to the impact of the new coronavirus. The average growth rate for the next 10 years includes FY 2021 to 2023, which will be a higher growth rate in reaction to the decline.
  - ✓ Excluding these effects, the real average growth rate over the past 10 years and for the next 10 years is approximately 1%.

Changes in potential growth rate and GDP gap




(Source) Cabinet Office "Annual Report on National Accounts"

Changes in real GDP growth rate



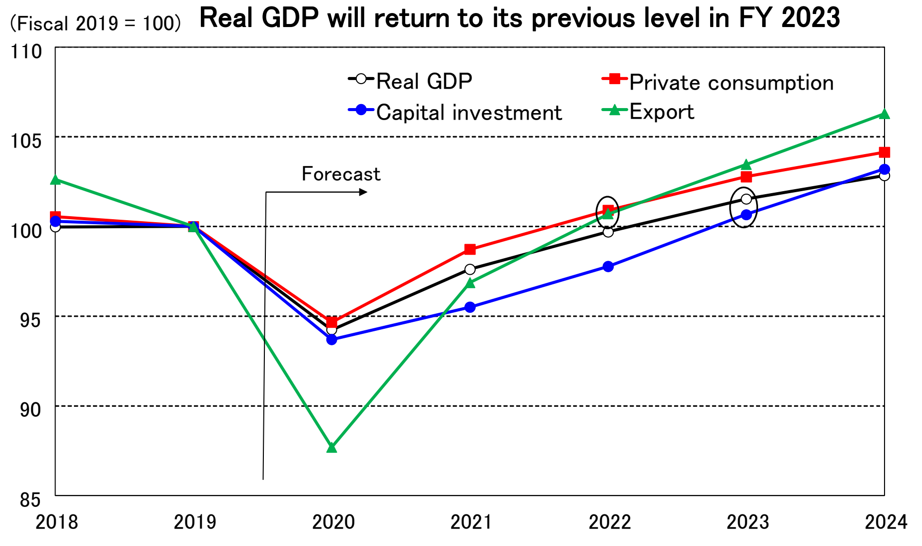

(Source) Economic and Social Research Institute , Cabinet Office "Annual Report on National Accounts"

# Real GDP will return to pre-coronavirus level in FY 2023

RESEARCH

Economy

- Real GDP is expected to recover to the pre-coronavirus level (FY 2019) in FY 2023
  - ✓ Although the recovery of service consumption in the private sector is delayed, private consumption will recover to the pre-coronavirus level in FY 2022 partly because of the quick recovery of goods consumption due to pent-up demand.
  - ✓ The return to the previous level of capital investment will be delayed until FY 2023, because it will take time for the rapidly declining level of corporate profits to return to the previous level, and because there is a high possibility that the restraint on capital investment will be strengthened by experiencing a sharp decline in demand due to the novel coronavirus.
  - ✓ Although the slump in inbound tourist demand for exports will be prolonged, the pace of recovery in exports of goods, which account for about 80% of total exports (Achievements in Fiscal 2019), will be fast. As a result, exports will recover to the previous level in FY 2022.



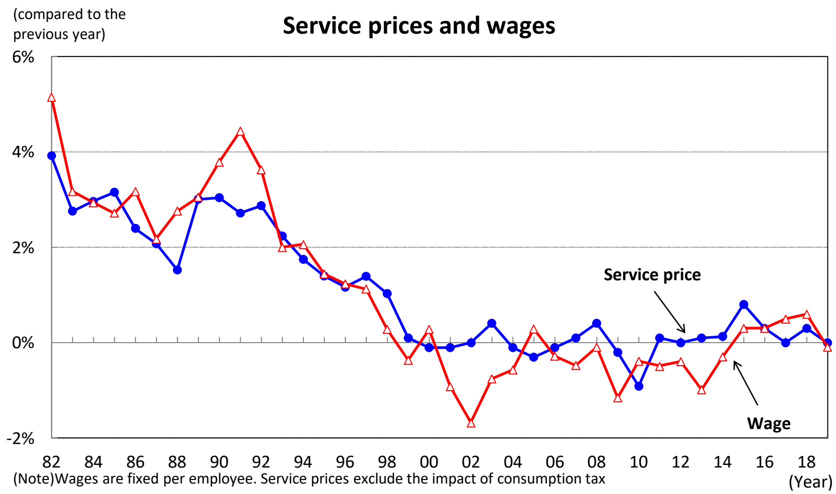

(Source) Cabinet Office "National Accounts (GDP statistics)"

# The consumer price inflation rate (total excluding fresh food) for the next 10 years will be 1.3% on average



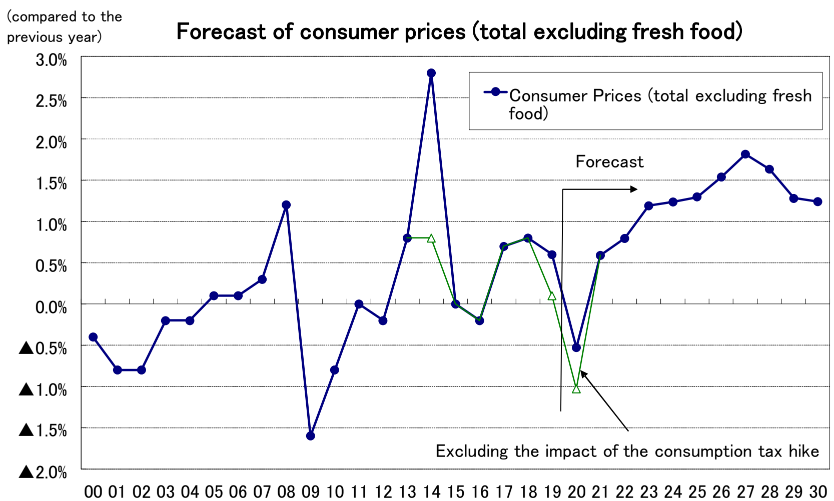
- Stagnant service prices, which are closely linked to wages, are one reason for the price slump.
  - ✓ Even though the environment surrounding wage increases was quite favorable, the highest wage increase rate in the spring wage negotiations during the Abenomics period was only 0.5%, excluding regular wage increases.
  - ✓ While companies maintain a cautious stance on wage setting, the stagnant rate of wage increases has been attributed to the fact that the level of wage increase claims by workers did not rise against the backdrop of deflationary sentiment.

- The average rate of increase in consumer prices (total excluding fresh food) over the next 10 years will be 1.3%.
  - ✓ The GDP gap is substantially negative, and although downward pressure from the supply and demand side will remain strong for a while, downward pressure on prices will gradually weaken as the GDP gap improves from FY 2021.
  - ✓ Rising import prices due to rising crude oil prices and the continued weakening of the yen toward the middle of the forecast period are also factors pushing up prices.
  - ✓ In FY 2020, the inflation rate decreased to minus 1.0%, the first negative figure in 4 years. Since FY 2021, it will continue to increase, and in FY 2027 it will rise to 1.8%.
  - ✓ Although the BOJ's target for price stability of 2% will not be achieved, the inflation rate will be above 1% because the accommodative stance on monetary policy will be maintained.




(Note)Wages are fixed per employee. Service prices exclude the impact of consumption tax

(Sources) Statistics Bureau , Ministry of Internal Affairs and Communications "Consumer price index" , Ministry of Health , Labor and Welfare "Monthly Labor Survey "



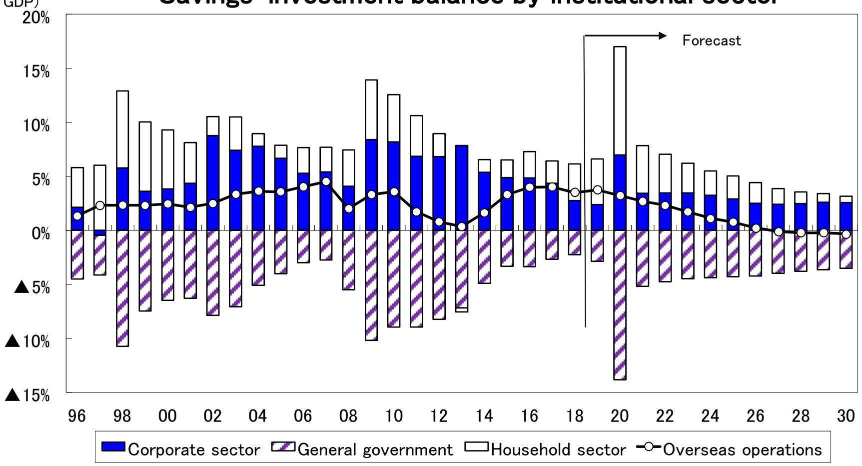

(Source) Statistics Bureau , Ministry of Internal Affairs and Communications "Consumer Price Index" (Fiscal Year)

# Current account balance will turn to deficit in the second half of the 2020s



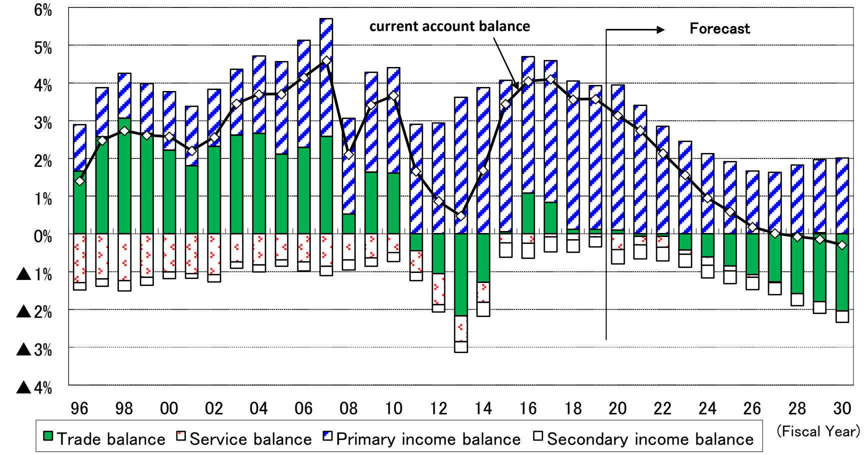
- With regard to the savings-investment balance at present, as a result of the emergency economic measures in response to the novel coronavirus pandemic, the general government deficit (lack of savings) has expanded rapidly, while the surplus of corporations and households (excess savings) has expanded significantly.
- As for the future, although the government's saving shortfall will decrease, the excess savings of corporations and households will also decrease. As a result, the current account balance will turn to deficit, albeit slightly, toward the end of the forecast period.
  - ✓ Households: The household savings rate rose sharply due to the provision of special fixed amount benefits, but then will continue to decline due to the aging population, and then turn negative, albeit slightly, in FY 2030.
  - ✓ Corporations: Savings surplus will shrink due to higher capital investment and higher interest payments at the end of the forecast period as interest rates rise.
  - ✓ Government: The deficit will decrease as the economy normalizes, but due to the fact that full-scale fiscal reconstruction will not be implemented—such as the consumption tax rate being left unchanged—even in FY 2030, the deficit will remain at the 3% level.

Savings–investment balance by institutional sector




(Source) Cabinet Office "National Accounts"

Trends in current account balance




(Sources) Ministry of Finance "Balance of Payments Statistics", Cabinet Office "Annual Report on National Accounts"

# Fiscal balance: No surplus at the end of the forecast period

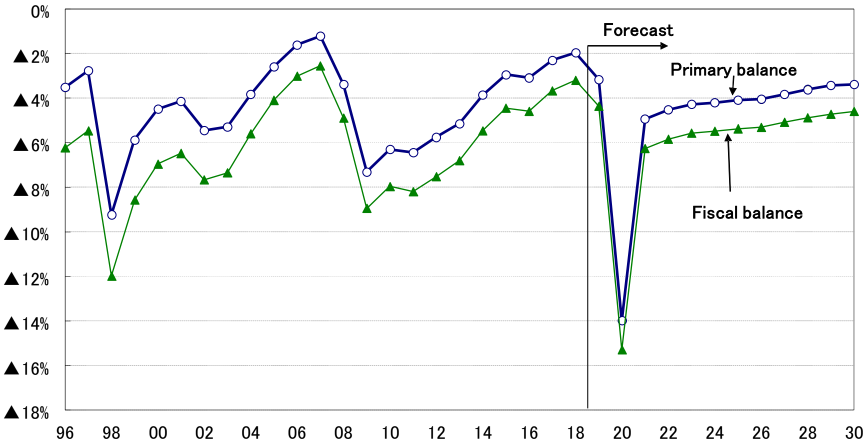
■ The primary deficit of government (ratio to nominal GDP) is expected to be 3.4% in FY 2030.

- ✓ Although further improvement in the basic fiscal balance was expected as a result of the consumption tax rate increase in October 2019, the deficit will expand sharply in FY 2020 to minus 14.0% of nominal GDP due to the expansion of fiscal expenditures and the decline in tax revenues caused by the novel coronavirus infection.
- ✓ A primary balance surplus cannot be achieved at the end of the forecast period.

■ Outstanding national and local government debt is expected to approach 1,450 trillion yen in FY 2030.

- ✓ The ratio of outstanding debt to nominal GDP will soar to about 226% in FY 2020. After that, since nominal GDP will grow at a relatively high rate, the increase will be held back, but in FY 2030 it will remain at about 220%.

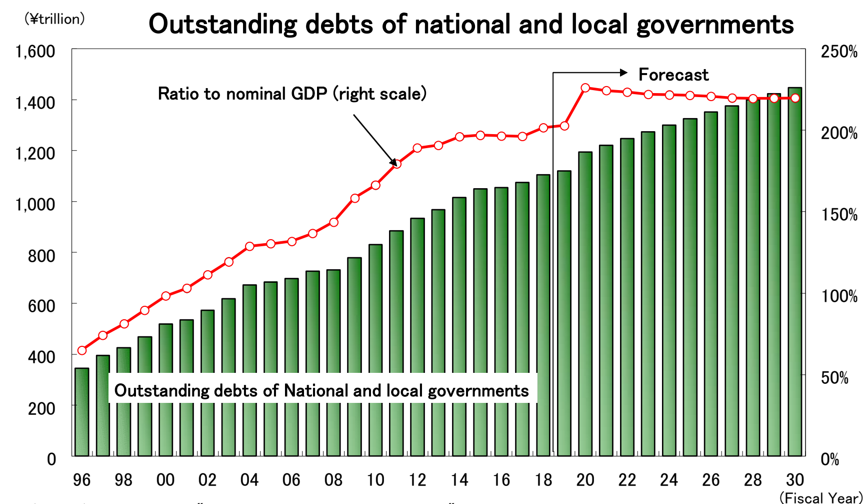
Fiscal balance of national and local governments (ratio to nominal GDP)




(Note)The primary balance is the balance minus net interest payments (Before FISIM adjustment).

(Source) Cabinet Office "Annual Report on National Accounts"

Outstanding debts of national and local governments




(Source) Cabinet Office "Annual Report on National Accounts"

Economy

# Section 1-3. Financial Market Outlook

# Long-term and short-term interest rates in major economies: rising in the second half of the forecast period as monetary policy normalizes

RESEARCH

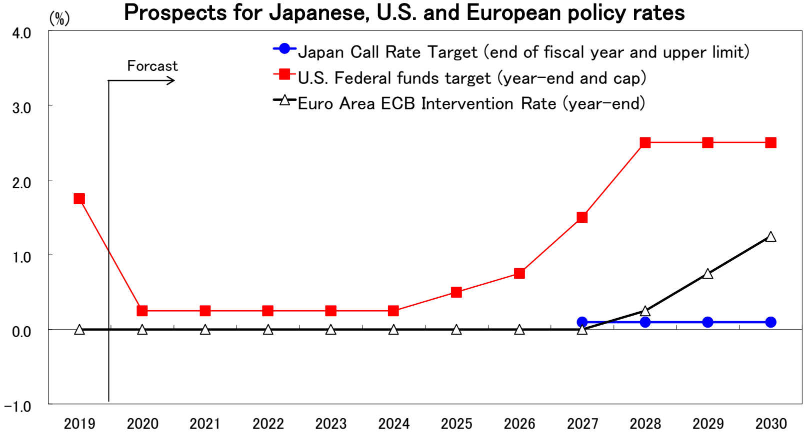
Economy

- The central banks of Japan, the United States, and Europe, in response to the economic slowdown caused by the expansion of the novel coronavirus, began to ease monetary policy in March 2020.

- The Eurozone will begin raising interest rates in the second half of the forecast period, following the United States.
  - ✓ The U.S. will maintain the current rate of 0.25% (upper limit) for a while, and then start raising the rate in 2025 and by 2028 to 2.50%.
  - ✓ In 2027, ECB will start to reduce its negative interest rate. In 2028, it will start raising the interest rate to 1.25% by the end of the forecast period.
  - ✓ BOJ will end negative interest rate policy in FY 2027 and will reinstate uncollateralized call rate target (up to 0.10%).

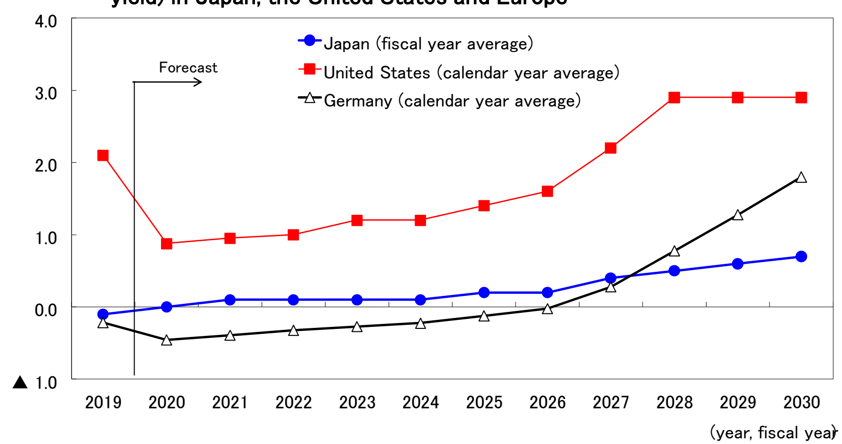
- Long-term interest rates will rise as monetary policy normalizes.
  - ✓ The long-term interest rate in Japan will remain around 0% since the Bank of Japan will keep its target at "about zero percent" toward the middle of the forecast period.
    After the start of the exit strategy in 2027, the rate will start to rise due to an increase in the guidance target, but it will not reach 1% by the end of the forecast period.
  - ✓ The U.S. long-term interest rate will be rising at an accelerated pace from the start of the rate hike in 2025, reaching 2.9% in 2028. It will remain flat thereafter.
  - ✓ After the German long-term interest rate remains in a negative zone, the pace of interest rate hike will accelerate after the start of normalization and will reach 1.8% at the end of the forecast period.

**Prospects for Japanese, U.S. and European policy rates**




(Note)Currently, Japan does not set the call rate as a guiding target for monetary policy, so the graph will be interrupted until the call rate is again set as a guiding target. (year, fiscal year)

**Prospects for long-term interest rates (10-year government bond yield) in Japan, the United States and Europe**



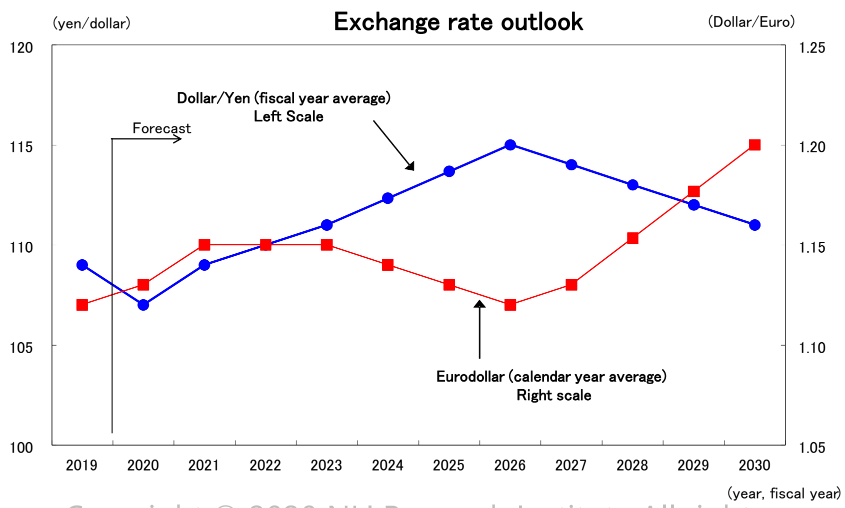
# Exchange rate: yen will depreciate against the dollar in the middle of the forecast period, and then yen will appreciate against the dollar toward FY 2030

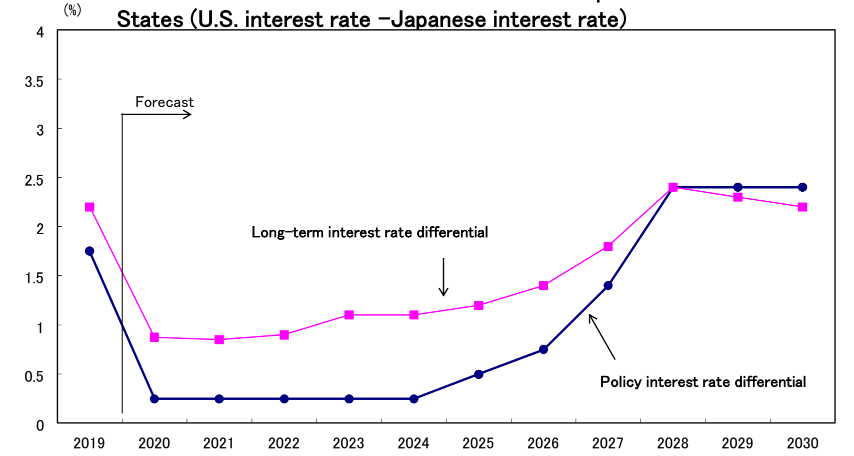


- Yen will depreciate against the dollar toward the middle of the forecast period.
  - ✓ In FY 2026, 1 U.S. dollar will be worth 115 yen due to yen-selling in favor of risk following the economic recovery in Japan and overseas, and dollar-buying following the recovery of U.S. long-term interest rates.

- After that, the yen will appreciate against the dollar toward the end of the forecast period.
  - ✓ While the exit strategy of the Bank of Japan's monetary policy is being pursued, the direction of the monetary policy of Japan and the U.S. will be reversed as the U.S. stops raising interest rates during the latter half of the forecast period.
  - ✓ The prospect that Japan's inflation rate will continue to fall below that of the U.S. will also drive the yen higher in terms of purchasing power parity.
  - ✓ However, keeping long-term interest rates low and decreasing Japan's current account surplus to a deficit will prevent the yen from appreciating further. At the end of the forecast period, the yen will remain at 111 yen to the dollar.

- The euro/dollar rate will be on a strong trend after the euro weakens once.
  - ✓ Euro will weaken through 2026 as U.S. long-term interest rates rise.
  - ✓ From 2027 onwards, the euro will rebound as the ECB normalizes monetary policy and the U.S. interest rate hike will be halted.
  - ✓ The expectation that prices in the Eurozone will continue to rise below those in the U.S. will also drive the euro higher in terms of purchasing power parity.



(Note)The policy interest rate in Japan until FY 2026 is assumed to be zero.

Economy

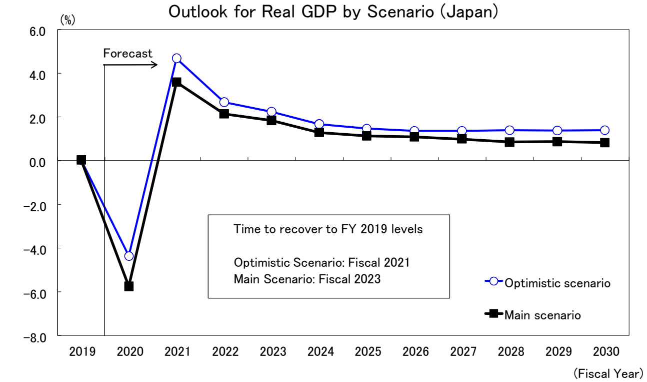
## Section 1-4. Alternative Scenarios

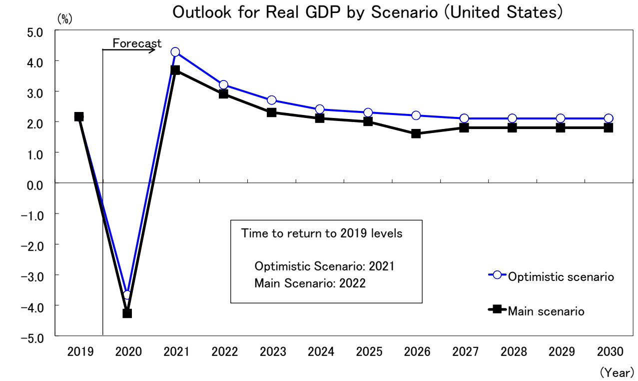
# Alternative scenario (optimistic scenario): economic outlook

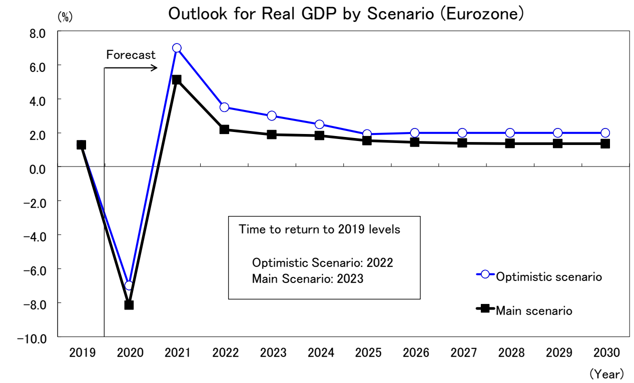
RESEARCH

Economy

- <u>Early resolution of novel coronavirus infections and a smooth recovery of the global economy relative to the main scenario.</u>
  - ✓ Although negative growth in 2020 is inevitable in Japan, the United States and Europe, the pace of recovery will be rapid from 2021.
  - ✓ With the convergence of the virus, the movement of people and the face-to-face service industry will recover quickly, and the digital transformation and growth strategies of each country, having been accelerated by the corona disaster, will lead to higher growth.
  - ✓ The U.S. will continue to enjoy high economic growth because the current income tax cut will become permanent. In addition, aggressive infrastructure investment increases the potential growth rate. Continued expansionary fiscal policy will continue to push economic growth beyond 2% as of 2021.
  - ✓ In the Eurozone, investment related to “green” and “digital” will be accelerated with the help of the EU recovery fund, and an early economic recovery will be achieved. Digitization also increases productivity and boosts potential growth to 2%.
  - ✓ China will maintain a growth rate of around 6.0% over the next 10 years due to increased investment in infrastructure.
  - ✓ In addition to continuing economic growth far exceeding the potential growth rate, the interest rate differential between Japan and overseas will widen on the back of high growth in the U.S., and yen will depreciate, causing consumer prices to rise at a pace exceeding the Bank of Japan's forecast.
  - ✓ The rate of increase in consumer prices in Japan will reach 2% in FY 2025 and stay around 2% thereafter.



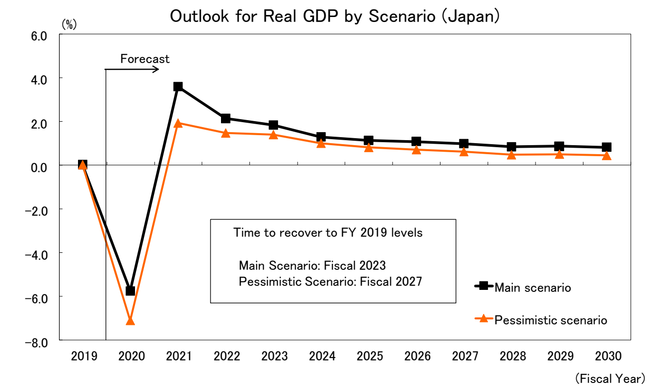
# Alternative scenario (pessimistic scenario): economic outlook

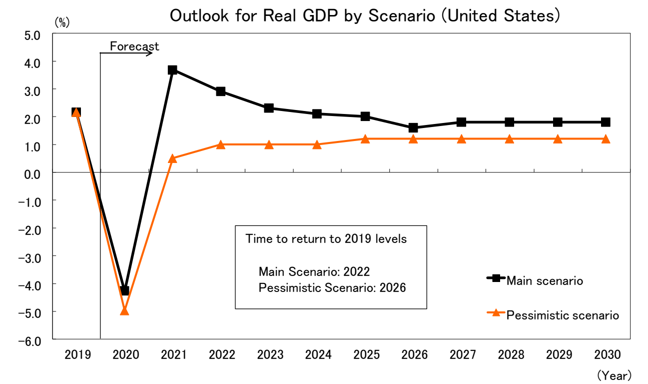
RESEARCH

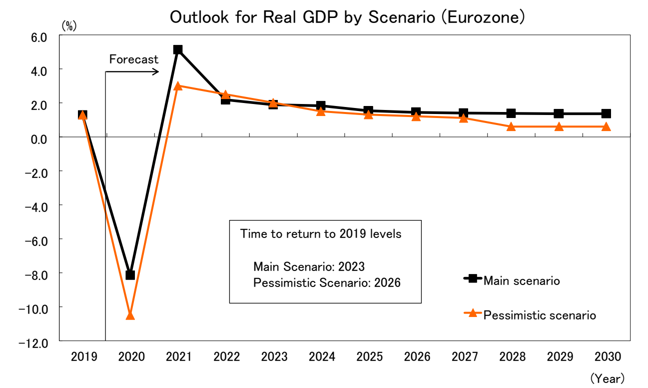
Economy

- Global economy continues to stagnate as the time to adapt to novel coronavirus is prolonged

  - ✓ The increasing infectivity and virulence of the novel coronavirus will again increase the risk of medical collapse in many parts of the world, necessitating strict containment policies.
  - ✓ Services that involve contact are culled. Government debt and non-performing loan problems will become serious, and the fiscal strength of the governments and financial institutions will decline significantly.
  - ✓ US-China relations will worsen further as they blame each other for the novel coronavirus issue.
  - ✓ In the U.S., while economic activities are limited, such as by a prolonged period of social distancing, the growth rate will be pushed down by limited economic measures amid a lack of scope for fiscal expansion, and low growth of around 1% will continue for the next 10 years.
  - ✓ China's economic activity is again limited by the re-spread of the novel coronavirus, which will turn negative in 2020. Starting then, economic activities will be restrained, and the country will not be able to return to high growth, with the growth rate after 10 years falling to 2.0%.
  - ✓ In the Eurozone and Japan, external demand, including inbound tourism, will decline due to the stagnation of the global economy, and the growth rate over the next 10 years will consistently fall far below the main scenario.
  - ✓ Japan's consumer price inflation rate will remain on a deflationary trend until the middle of the forecast period, and will remain at an average of 0.1% over the next 10 years.



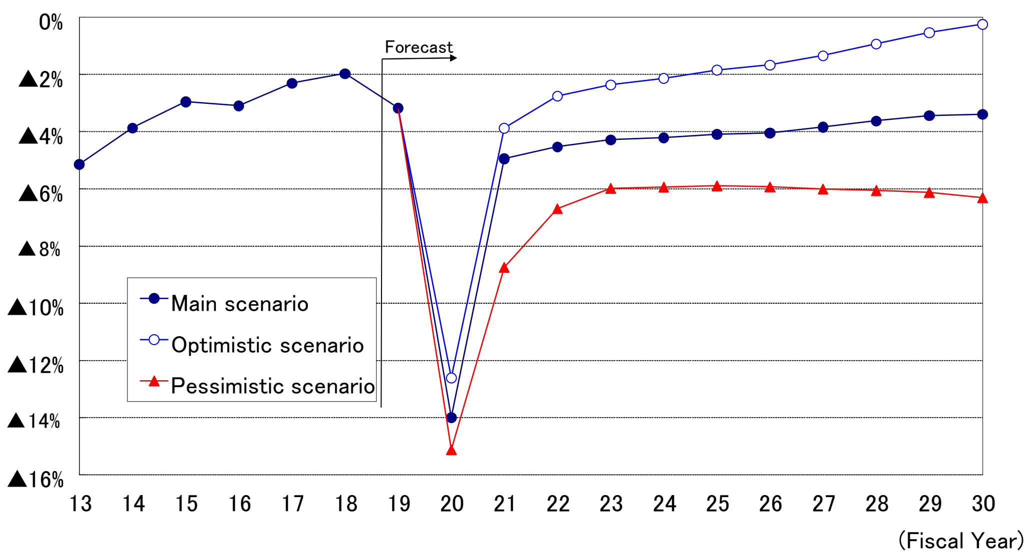



# Alternative scenario (optimistic and pessimistic): fiscal balance outlook



- Even under an optimistic scenario, Japan will not achieve a primary surplus.
  - ✓ Because the nominal GDP growth rate will be 3.1% on average over the next 10 years—which is 0.8% higher than in the main scenario forecast—the deficit in the primary budget balance is smaller than in the main scenario.
  - ✓ Even in FY 2030, Japan will not achieve a primary budget surplus, leaving a deficit of 0.2% of nominal GDP.
  - ✓ The fiscal balance, including net interest payments, will not improve as much as the primary balance because interest rates are higher than in the main scenario.
- Under the pessimistic scenario, the primary budget deficit will continue to expand.
  - ✓ Due to the impact of the novel coronavirus infection, the growth rate will be lower than in the main scenario. The nominal GDP growth rate during the 10 years from FY 2021 to FY 2030 will be only 1.1% on average, so the primary budget deficit at the end of the forecast period will be 6.3% of nominal GDP.

Comparison of primary balance (ratio to nominal GDP) by scenario



# Alternative scenario (optimistic and pessimistic): financial market outlook

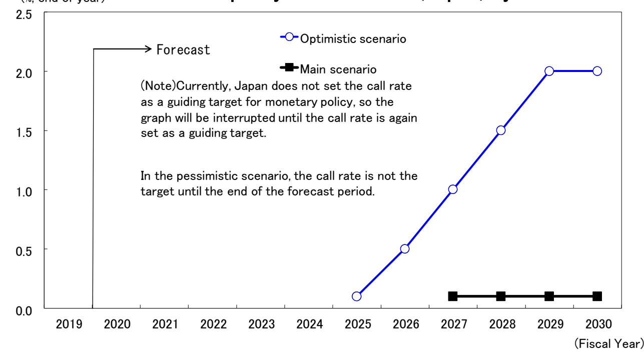
## Optimistic scenario: a sharp rise in interest rates and strong dollar.

- ✓ The impact of the novel coronavirus will subside at an early stage and the economies of the United States and other countries will recover smoothly. As a result, the start of interest rate hikes in the U.S. and Europe will be earlier, and the range of interest rate hikes will expand.
- ✓ Japan's inflation rate will reach 2% in FY 2025.
  The Bank of Japan will move up the start of its exit strategy (end of negative interest rate and revival of target for uncollateralized call) to 2025. It will abolish its target for guiding long-term interest rates, starting the rate hike in FY 2026.
- ✓ Japanese long-term interest rates will remain relatively low until FY 2024, but from FY 2025, when the induced target is abolished, it will rise quickly and significantly in response to the rate hikes, investors' risk appetite, and a rise in overseas interest rates.
- ✓ The dollar will rise sharply against the yen due to the favorable recovery of the U.S. economy and the widening interest rate gap between Japan and the United States caused by the early rate hikes in the U.S. In FY 2024, the yen will depreciate to 120 yen against the dollar.
  After that, the yen will appreciate against the dollar due to the Bank of Japan's exit strategy and the end of the U.S. interest rate hike, but the yen will be evaluated lower than in the main scenario.

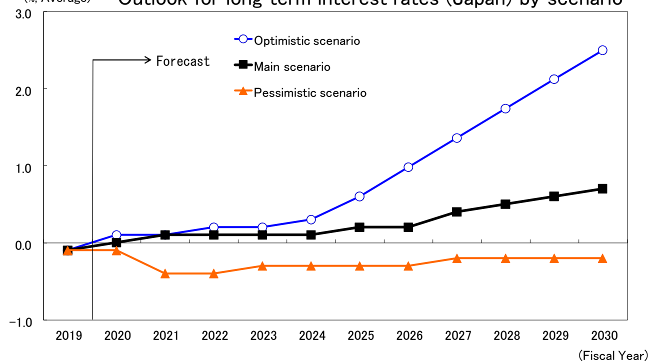
## Pessimistic scenario: low interest rates, yen will appreciate.

- ✓ As the time needed to adapt to the novel coronaviruses is prolonged, the global economy continues to stagnate, and the U.S. policy rate will remain at 0.25% toward the end of the forecast period. The Eurozone could not move to an exit strategy and maintain its policy interest rate at 0% for the long term.
- ✓ Japan continues monetary easing throughout forecasting period as prices remain low.
- ✓ Japan's long-term interest rate falls to minus 0.4% in line with the cut in the target. After the middle of the forecast period, the negative interest rate will go up slightly due to a moderate recovery in U.S. long-term interest rates and due to concerns about adverse side effects—but the margin of long-term interest rate will remain negative.
- ✓ As the U.S. economy and interest rates remain sluggish and the market becomes risk-averse, the yen's appreciation against the dollar will advance in the early part of the forecast period. Toward FY 2022, the yen will appreciate to 95 yen against the dollar, and will continue to stay below 100 yen.

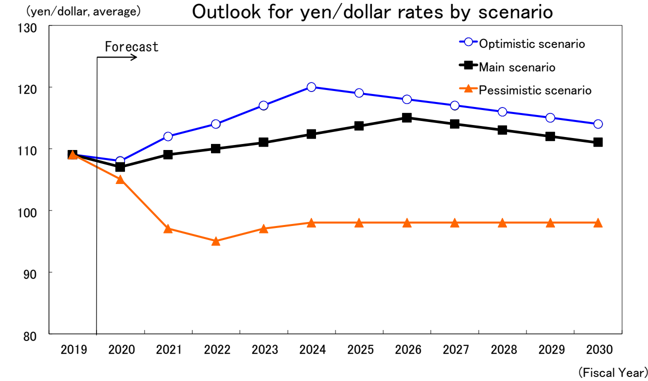
(%, end of year) Outlook for policy interest rates (Japan) by scenario




(%, Average) Outlook for long-term interest rates (Japan) by scenario




(yen/dollar, average) Outlook for yen/dollar rates by scenario



# Comparing Main and Alternate Scenarios



[Main Scenario]

| | FY 2019 Actual | FY 2020 Forecast | FY 2021 Forecast | FY 2022 Forecast | FY 2023 Forecast | FY 2024 Forecast | FY 2025 Forecast | FY 2026 Forecast | FY 2027 Forecast | FY 2028 Forecast | FY 2029 Forecast | FY 2030 Forecast | [annual average] 11-20 | 21-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP (Japan) | 0.0 | ▲5.8 | 3.6 | 2.1 | 1.8 | 1.3 | 1.1 | 1.1 | 1.0 | 0.8 | 0.9 | 0.8 | 0.2 | 1.5 |
| Real GDP (United States) | 2.2 | ▲4.3 | 3.7 | 2.9 | 2.3 | 2.1 | 2.0 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 | 1.6 | 2.2 |
| Real GDP (Eurozone) | 1.3 | ▲8.2 | 5.1 | 2.2 | 1.9 | 1.8 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.3 | 1.9 |
| Real GDP (China) | 6.1 | 2.0 | 5.5 | 5.3 | 5.1 | 5.1 | 5.0 | 4.2 | 3.5 | 3.5 | 3.5 | 3.5 | 6.8 | 4.4 |
| Call Rate (Induction target ,end of period) | — | — | — | — | — | — | — | — | 0.10 | 0.10 | 0.10 | 0.10 | — | — |
| Federal funds target rate (year-end) | 1.75 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.50 | 0.75 | 1.50 | 2.50 | 2.50 | 2.50 | 0.83 | 1.13 |
| ECB intervention rate (year-end) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.75 | 1.25 | 0.21 | 0.23 |
| Japan 10year govt. bond (fiscal year average) | ▲0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.4 | 0.5 | 0.6 | 0.7 | 0.3 | 0.3 |
| U.S. 10year govt. bond(annual average) | 2.1 | 0.9 | 1.0 | 1.0 | 1.2 | 1.2 | 1.4 | 1.6 | 2.2 | 2.9 | 2.9 | 2.9 | 2.2 | 1.8 |
| Germany 10year govt. bond(annual average) | ▲0.2 | ▲0.5 | ▲0.4 | ▲0.3 | ▲0.3 | ▲0.2 | ▲0.1 | ▲0.0 | 0.3 | 0.8 | 1.3 | 1.8 | 0.8 | 0.3 |
| JPY/USD (fiscal year average) | 109 | 107 | 109 | 110 | 111 | 112 | 114 | 115 | 114 | 113 | 112 | 111 | 104 | 112 |
| USD/EUR (annual average) | 1.12 | 1.13 | 1.15 | 1.15 | 1.15 | 1.14 | 1.13 | 1.12 | 1.13 | 1.15 | 1.18 | 1.20 | 1.21 | 1.15 |
| JPY/EUR (annual average) | 122 | 122 | 125 | 127 | 128 | 128 | 128 | 129 | 129 | 130 | 132 | 133 | 124 | 129 |

[optimistic scenario]

| | FY 2019 Actual | FY 2020 Forecast | FY 2021 Forecast | FY 2022 Forecast | FY 2023 Forecast | FY 2024 Forecast | FY 2025 Forecast | FY 2026 Forecast | FY 2027 Forecast | FY 2028 Forecast | FY 2029 Forecast | FY 2030 Forecast | [annual average] 11-20 | 21-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP (Japan) | 0.0 | ▲4.4 | 4.7 | 2.7 | 2.2 | 1.7 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.3 | 2.0 |
| Real GDP (United States) | 2.2 | ▲3.7 | 4.3 | 3.2 | 2.7 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 1.7 | 2.5 |
| Real GDP (Eurozone) | 1.3 | ▲7.0 | 7.0 | 3.5 | 3.0 | 2.5 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.4 | 2.8 |
| Real GDP (China) | 6.1 | 3.0 | 10.0 | 6.5 | 6.1 | 6.4 | 6.1 | 5.8 | 6.1 | 5.9 | 5.7 | 5.5 | 6.9 | 6.4 |
| Call Rate (Induction target ,end of period) | — | — | — | — | — | — | 0.10 | 0.50 | 1.00 | 1.50 | 2.00 | 2.00 | — | — |
| Federal funds target rate (year-end) | 1.75 | 0.25 | 0.25 | 0.25 | 0.50 | 1.00 | 1.75 | 2.75 | 3.00 | 3.00 | 3.00 | 3.00 | 0.83 | 1.85 |
| ECB intervention rate (year-end) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 1.00 | 1.50 | 2.00 | 2.00 | 2.00 | 0.21 | 0.90 |
| Japan 10year govt. bond (fiscal year average) | ▲0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.6 | 1.0 | 1.4 | 1.7 | 2.1 | 2.5 | 0.3 | 1.0 |
| U.S. 10year govt. bond(annual average) | 2.1 | 1.1 | 1.3 | 1.3 | 1.5 | 2.0 | 2.7 | 3.5 | 3.7 | 3.7 | 3.7 | 3.7 | 2.2 | 2.7 |
| Germany 10year govt. bond(annual average) | ▲0.2 | ▲0.4 | ▲0.2 | ▲0.0 | 0.5 | 1.1 | 1.7 | 2.3 | 2.8 | 2.8 | 2.8 | 2.8 | 0.8 | 1.7 |
| JPY/USD (fiscal year average) | 109 | 108 | 112 | 114 | 117 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 104 | 116 |
| USD/EUR (annual average) | 1.12 | 1.14 | 1.17 | 1.16 | 1.15 | 1.17 | 1.18 | 1.19 | 1.21 | 1.22 | 1.24 | 1.25 | 1.21 | 1.19 |
| JPY/EUR (annual average) | 122 | 122 | 130 | 132 | 135 | 140 | 140 | 140 | 142 | 142 | 142 | 143 | 124 | 139 |

[pessimistic scenario]

| | FY 2019 Actual | FY 2020 Forecast | FY 2021 Forecast | FY 2022 Forecast | FY 2023 Forecast | FY 2024 Forecast | FY 2025 Forecast | FY 2026 Forecast | FY 2027 Forecast | FY 2028 Forecast | FY 2029 Forecast | FY 2030 Forecast | [annual average] 11-20 | 21-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP (Japan) | 0.0 | ▲7.1 | 1.9 | 1.5 | 1.4 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 | 0.1 | 0.9 |
| Real GDP (United States) | 2.2 | ▲5.0 | 0.5 | 1.0 | 1.0 | 1.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.6 | 1.1 |
| Real GDP (Eurozone) | 1.3 | ▲10.5 | 3.0 | 2.5 | 2.0 | 1.5 | 1.3 | 1.2 | 1.1 | 0.6 | 0.6 | 0.6 | 0.0 | 1.4 |
| Real GDP (China) | 6.1 | ▲1.0 | 3.7 | 4.2 | 4.0 | 3.7 | 3.6 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 6.5 | 3.1 |
| Call Rate (Induction target ,end of period) | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Federal funds target rate (year-end) | 1.75 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.83 | 0.25 |
| ECB intervention rate (year-end) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 |
| Japan 10year govt. bond (fiscal year average) | ▲0.1 | ▲0.1 | ▲0.4 | ▲0.4 | ▲0.3 | ▲0.3 | ▲0.3 | ▲0.3 | ▲0.2 | ▲0.2 | ▲0.2 | ▲0.2 | 0.3 | ▲0.3 |
| U.S. 10year govt. bond(annual average) | 2.1 | 0.5 | 0.7 | 0.9 | 1.0 | 1.0 | 1.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 2.1 | 1.1 |
| Germany 10year govt. bond(annual average) | ▲0.2 | ▲0.5 | ▲0.7 | ▲0.8 | ▲0.8 | ▲0.7 | ▲0.7 | ▲0.6 | ▲0.6 | ▲0.6 | ▲0.5 | ▲0.5 | 0.8 | ▲0.6 |
| JPY/USD (fiscal year average) | 109 | 105 | 97 | 95 | 97 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 104 | 98 |
| USD/EUR (annual average) | 1.12 | 1.13 | 1.06 | 1.00 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.21 | 1.02 |
| JPY/EUR (annual average) | 122 | 120 | 104 | 95 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 124 | 100 |

(Note)US, Eurozone, China calendar year
(provenance) NLI Research Institute